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The Impact of Outsourcing in Terms of Access and Quality of Health Services from Participants Attitude

Shima Lashgari[1], Alireza Delavari[2], Omid Kheirkhah[3], Jurgita Antucheviciene[4]

[1, 2, 3]*Tehran University of Medical Sciences*
No 49, Italy st. Ghods st. Keshavarz Blvd. Tehran, Iran
e-mail: shimalashgari@yahoo.com; delavari@tums.ac.ir; kheyrkhah@farabi.tums.ac.ir

[4]*Vilnius Gediminas Technical University*
Sauletekio al. 11, LT-10223, Vilnius, Lithuania
e-mail: jurgita.antucheviciene@vgtu.lt

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Reduced productivity and increased costs force governmental and private organizations and enterprises to use various strategies to be effective. While, in addition to the above mentioned, governmental organizations are faced with some more cases. One of these cases is stewardship activity, which compels them to increase outsourcing services.
On the basis of the increasing healthcare system efficiency, outsourcing of services was proposed and performed as one of the strategic doctrine in health services of Tehran University of Medical Sciences. The authors aimed to collect information from health sectors in order to describe participants' attitudes towards the availability of the health services by establishing associative health centers. In this cross-sectional study, access and quality were assessed using a valid and reliable questionnaire "attitude evaluation of service recipients in associative health centers towards access and quality of healthcare services". Issues such as distance, time and cost in the dimension of access and also quality of the physical space, equipment, human resource, and services in the dimension of quality were evaluated from the view point of recipients of associative health centers in South of Tehran, Rey and Eslamshahr health networks. Adults (n=380) referring to the associative health centers completed the questionnaire. Chi-square test was used to compare the difference between participants' attitude towards these three health networks. A positive attitude towards improvement of distance and time of access to health centers, and reduction of costs by establishing associative health centers were observed. Also positive attitude towards quality of physical space, equipment, human resource, and services was found.
The findings indicate that inauguration of associative health centers has an effective role on increasing the access and quality of healthcare for the population covered by Tehran University of Medical Sciences. Accordingly, in the case of continuing of outsourcing and stability of allocating credit, good and high quality services can be provided.

Keywords: *outsourcing, health care services, associative health centers, access, quality.*

Introduction

In our days issues like increase of competition pressure, business difficulties, resource limitation, technological anfractuosity and specialization of duties, expediencies of environmental evolutions, lack of assurance in future, increase of costs, inordinate enlargement of some organizations especially in governmental part, and law limitations not only cause organizations to reconsider their management patterns, but also tend to use new strategies in order to achieve competition merits in current world of business. One of these strategies that organizations utilize is concentration to main adequacy and assignment of some of their duties to external providers, which is called outsourcing (Cheshberah & Mortazavi, 2007). That means the process of transferring services already performed internally to an external supplier, while supervising through contract and/or partnership management (Laamanen *et al.*, 2008). Peculiarities of offshoring, domestic outsourcing and supplier changes, with a special emphasis on sunk costs, and market thickness, also their effect on productivity are subject to extensive empirical analysis (Schwoerer, 2013; Jabbour, 2013).

Defining expectations via some standards, a host organization outsources a function, which can be more subjective when coped with an outsourced service (Liston *et al.*, 2007). Outsourcing is different from giving privilege, because instead of non-sate provider, an organization determines what kind of services will be given, where, and how the function will be measured. Outsourcing is different from the internal agreement between two governmental organizations due to some cooperative communications, that obstacle the law enforcement against the other side (Loevinsohn, 2008).

Nowadays, outsourcing is an essential element of companies due to rapidly growing globalization, competition, and transformation of operational environment (Nenonen, 2011). Because of perceiving advantages of outsourcing, all forms of public and private departments in business, government, medical, and educational institutions desire to outsource some of operations, which are not in their value chain (Schniederjans, 2005). For the purpose of boosting the efficiency of their activities, the principle of outsourcing is especially useful for the public sector (Meidute & Paliulis, 2011). Suggested e-Government strategy, aimed at improving efficiency in government and providing better

services to citizens, outlines seven guiding principles, including outsourcing among them (Wangwe e*t al.,* 2012).

Using creative ways, organizations are able to have some innovations in their laws and instructions. As stated by industry analysts, outsourcing service, which resulted in cost reduction, is one of the innovations mentioned above (Daly, 2011). Outsourcing is a good strategy for companies to improve their productivity and competitiveness. In our days the strategy becomes acceptable worldwide. It appears between the top ten most commonly used management tools in North America, Europe, and also on Global average (Potocan *et. al.,* 2012). However, there are concerns that outsourcing in developed countries resulted in losing jobs of unskilled and semi-skilled workers (Chung, 2007) or can increase skilled-unskilled wage inequality (Anwar *et al.*, 2013; Anwar, 2013). Notwithstanding, many studies show that outsourcing causes a great success and cost reduction (Vanarase, 2007), also it becomes as a necessity for competitive success in modern organizations (Mani, 2008). Besides domestic outsourcing, reduction of labor costs, improved competitiveness, strategic decisions taken and reduction in other costs are the main motivations for firms to engage in international outsourcing (Ok, 2011).

Health system as an organization is not an exception to this rule. These organizations are known as public health services provider that are beneficial in promotion of human health. Adequate health care is one of the fundamental requirements for the provision of human health thus health systems must provide such a necessary and vital health care for healthy development of individuals, families, and communities all around the world (Ministry of Health and Medical Education of IRI, 2011).

Modern public health system is undergoing a remarkable transition, moving from discrete interventions to address infectious diseases to broad social, cultural and economic reforms to address the root causes of ill health (Gostin *et al.*, 2004). Weakness of the present system is influenced by the growing pressure due to the changes in life expectancy and population changes (Parliament by the Secretary of State for Health of Britain, 2009). On the other hand, health costs are rising while health services are suffering from difficulties in efficiency and quality (Lisac *et al.*, 2008). Timeliness and accuracy of patient care can be improved by applying non-standard healthcare systems (Kunstova & Potancok, 2013).

It seems that providers' services have not enough productivity in many parts. Usually a successful outsourcing activity depends on the selection of the appropriate provider (Liou *et al.,* 2011; Hsu *et al.*, 2013). Low productivity in this subject is due to restrictions on the use of human resources, financial resources, and low motivations of current workforce in the field of increasing efficiency, responding to client, and enhancing existing services and new services (Olfat & Barati, 2010).

Tehran University of Medical Sciences in line with the article 192 (The third economic, social and cultural program of Islamic Republic of Iran, 2000) and the article 88 (The fourth economic, social and cultural program of Islamic Republic of Iran, 2004) uses outsourcing as a means of developing and enhancing organizational productivity (Abolhassani *et al.*, 2009) and the program has begun from 2005 at the Tehran University of Medical Sciences. The current research has been designed in order to get the effect of outsourcing.

The research problem is measuring the benefits of outsourcing not only as a means of enhancing organizational productivity, but also evaluating the impact of outsourcing from participants' attitudes towards the availability of services.

The object of the presented research is a case of outsourcing of services and establishing of associative health centers in Tehran University of Medical Sciences.

The aim of the research is to analyze the impact of outsourcing is in terms of access and quality of healthcare services from participants' attitude and to validate the positive effect of outsourcing.

The research methods used are statistically valid interviewing of recipients of healthcare services and mathematical statistical analysis of responses.

The paper is organized as follows. Study design, also designing of questionnaire, measuring its reliability and validity are presented in the first part of the paper. The results of the study are presented and positive effect of outsourcing is validated applying mathematical statistical analysis in the second part of the paper. The results and study limitations are discussed as well as conclusions provided.

Methods of research

Study design

In the cross-sectional study, access and quality were assessed by using a valid and reliable questionnaire "attitude evaluation of service recipients in associative health centers towards access and quality of healthcare services".

The study was conducted at the Tehran University of Medical Sciences. Participants of this study are recipients of free of charge healthcare services such as family planning, child care, maternal care, and elderly care from associative health centers in all of the covered areas of Tehran University of Medical Sciences including South of Tehran, Rey, and Eslamshahr health networks.

Of 107 associative health centers covered, 19 centers were chosen with systematic random method. Of 19 chosen centers, 11 centers were from South of Tehran, 5 centers were from Rey health network, and 3 centers were from Eslamshahr health network. During data gathering, the purpose and methodology of the study were clarified for each recipient in the chosen associative health centers that they were invited to participate in this study.

Questionnaire

Using the questionnaire "attitude evaluation of service recipients in associative health centers towards access and quality of healthcare services", the participants' opinion about availability and quality of associative health centers was investigated.

To ensure a suitable and appropriate questionnaire, we defined all aspects that should be considered in construction of the questionnaire i.e. importance of distance, cost, and time as essential items in access and quality of physical environment, quality of equipment, quality of human resource, and services (current and new) as essential items in quality. The general content and specific items of the questionnaire were initially derived from interviewing

professionals and literature available in the research study (Ghayomzade, 2011) by the main researcher. The research team consisting of experts in the field of public health and management assessed the preliminary items and provided structured comments. Irrelevant and unsuitable items were eliminated or changed based on experts' advice.

The questionnaire consisted of few demographic questions such as age and gender. Also this part included a question on the type of received services. The answer had four choices comprising family planning, child care, maternal care, and elderly care.

The 54-question questionnaire including access and quality of healthcare service was extracted from interviewing professionals and literature available in the research study. Questions related to "access" were divided into three categories: 1) Distance, 2) Cost, and 3) Time. Questions related to "quality" were divided into four categories: 1) Quality of the physical environment, 2) Quality of equipment, 3) Quality of human resource, and 4) Services (existing and new).

In the questionnaire, the answers were scored based on 5-point Likert criteria ranging from one point, as strongly disagree, to five points, as strongly agree. In the practice section, every question was scored one point.

Reliability and validity measurement of questionnaire

In the first phase, the questionnaire was sent to eight experts in the field of the research and health sciences. After calculating content validity ratio (CVR), CVR of 12 questions was lower than 75 % and content validity index (CVI) was equal to 0.84 that was higher than the standard rate (CVI > 0.79). In the second phase, those 12 questions were omitted and the questionnaire was sent to those eight experts again. CVR and CVI were obtained 75 % and 0.91 respectively.

In the third phase, internal consistency was used in order to calculate the reliability. 40 copies of the questionnaire were referred to as a pilot study which revealed good internal consistency (Cronbach's alpha α=0.86).

Statistical analysis

There was not any information about an approach of associative health centers' visitors, about the availability and quality of health care. Therefore, probability (p) and reliability (1-p) were considered 0.5. To have a significant difference between participants' attitude towards associative health centers among South of Tehran, Rey and Eslamshahr health networks, we found that a sample size of 380 was sufficient with 95 % confidence interval and 5 % margin of error.

Data obtained from the questionnaires were entered into SPSS 20 (SPSS Inc., Chicago, IL, USA) and were analyzed via chi-square test.

Results of the study

Characterization of respondents

Demographic data collected by the questionnaire included gender and age. Of 380 participants, 369 participants were women, which equals to 97.1 %, and 8 of them were men, which equals to 2.1 %, and 3 of them did not answer to the question on gender.

The average age of women participating the project was equal to 29.8, the median was equal to 29, and the mod was equal to 32. The average of men's age was equal to 42.5, the median was equal to 34.5 and the mod did not calculated due to the low member of men.

It was shown that 55 % of participants were referred for just one service and 45 % of them received more than two services. Also 44 % of the people received family planning service, 41 % of them received child care service, 12 % of them received maternal care service, and 3 % of them received elderly care service.

The data were divided into two main parts; the first part is about the access and the second one is about the quality.

The impact of outsourcing in terms of access

The access part was divided into three subparts including distance, cost, and time.

The data related to abovementioned subparts were analyzed and elaborated respectively bellow and also are presented in Table 1 (Estimation of percent and standard difference in attitudes of visitor towards access of associative health centers in health centers of South of Tehran, Rey, and Eslamshahr Health networks in 2012).

According to the results of Chi-square test (χ^2=16.65, p-value < 0.05), a significant difference was seen between the participants' answers related to access distance of associative health centers in South of Tehran, Rey and Eslamshahr health networks. Attitudes of 81.6 % of participants in South of Tehran, 86.5 % of participants in Rey health network, and 93.2 % of participants in Eslamshahr health network towards the reduction of access distance of health services in associative health centers were quite positive. Other attitudes to the issue are shown in Table 1. It can be concluded from the distance part of Table 1 that the contribution referred to associative health centers in all three abovementioned areas is quite positive in relation to reduction of access distance.

Based on the results of Chi-square test (χ^2=16.97, p-value > 0.05), there was any significant difference between the participants' answers among three areas regarding the reduction of access cost of health services. It should be noted that attitude of 83.9 % of participants in the south of Tehran, 76 % of participants of Rey health network and 93.2 % of participants of Eslamshahr health network towards this issue is "strongly agree". Other attitudes towards reduction of access cost are shown in Table 1. It can be concluded from the cost part of Table 1 that participants' attitude towards the reduction of access cost is quite positive.

There was no significant difference between the participants' answers among three areas about reduction of access time to services with establishing associative health centers (χ^2=35.78, p-value > 0.05). However, it is noteworthy that the attitude of 89.2 % of participants of South of Tehran, 78.9 % of participants of Rey health network, and 94.4 % of participants of Eslamshahr health network was "strongly agree" towards this issue. Other attitudes towards this issue are shown in time part of Table 1. It can be concluded that participants' attitudes of associative health centers are quite positive towards the reduction of access time.

The impact of outsourcing in terms of quality

Data of the quality part which was divided into physical environment, equipment, human resource, and services were analyzed and described below.

Table 1

Estimation of percent and standard difference in attitudes of visitor towards access of associative health centers in health centers of South of Tehran, Rey, and Eslamshahr Health networks in 2012 (n=380)

	Strongly Disagree		Disagree		No Idea		Agree		Strongly Agree	
	%	Standard difference	%	Standard difference	%	Standard difference	%	Standard difference	%	Standard difference
Distance										
Health center of South of Tehran	0.9	-0.3	2.0	1.0	3.4	0.6	12.0	1.4	81.6	-0.7
Rey Health Network	2.0	1.3	1.0	-0.5	3.5	0.5	7.0	-1.3	86.5	0.3
Eslamshahr Health Network	0.0	-1.1	0.0	-1.3	0.0	-1.9	6.8	-1.1	93.2	1.0
Total	1.1		1.5		2.9		9.9		84.7	
Costs										
Health center of South of Tehran	1.8	0.3	2.3	-0.5	0.9	-1.4	11.0	0.6	83.9	0.1
Rey Health Network	2.0	0.3	6.0	1.8	6.0	2.3	10.0	0.1	76.0	-0.8
Eslamshahr Health Network	0.0	-1.0	0.0	-1.3	1.7	-0.3	5.1	-1.2	93.2	0.8
Total	1.6		2.9		2.4		9.8		83.3	
Time										
Health center of South of Tehran	1.1	-0.2	1.8	-0.9	2.0	0.4	5.9	-1.4	89.2	0.5
Rey Health Network	2.0	1.4	5.0	3.0	2.3	0.8	11.7	2.8	78.9	-1.6
Eslamshahr Health Network	0.0	-1.4	0.0	-2.1	0.0	-1.8	5.6	-0.9	94.4	1.0
Total	1.1		2.4		1.8		7.4		87.3	

The estimation of percent and standard difference in attitudes of visitors towards quality of associative health centers in health centers of South of Tehran, Rey, and Eslamshahr Health networks in 2012 is presented in Table 2.

No significant difference was seen between the participants' answers about the quality of the physical environment in abovementioned areas (χ^2=106.70, p-value > 0.05). Nevertheless, it is considerable that the attitude of 87.2 % of participants of South of Tehran, 70.1 % of participants of Rey health network, and 89.4 % of participants of Eslamshahr health network was "strongly agree" towards the quality of the physical environment. Other attitudes towards this issue are shown in Table 2. It can be concluded from quality of physical environment part of Table 2 that participants' attitudes of associative health centers are quite positive towards the quality of physical environment.

Given the result of quality of equipment Chi-square test (χ^2 = 49.29, p-value < 0.05), significant difference between the participants' answers was seen among the service recipients of associative health centers. Attitude of 83.2 % of service recipients of South of Tehran, 72.7 % of service recipients of Rey health network and 76.3 % of service recipients of Eslamshahr health network was quite positive towards quality of equipment related to abovementioned health centers. Other participants' reported attitudes to this issue are shown in quality of equipment part of Table 2. It can be concluded that participants' attitudes of covered areas of Tehran University of Medical Sciences towards quality of equipment were quite positive.

The result of Chi-square test (χ^2 =221.32, and p-value < 0.05) shows that there was a significant difference between the answers of participants of associative health centers in South of Tehran, Rey and Eslamshahr health networks about the quality of human resource. Attitude of 93.2 % of participants of South of Tehran, 77.4 % of participants of Rey health network, and 93.5 % of participants of Eslamshahr health network was "strongly agree" to the questions related to this issue. Other participants' attitudes towards this issue are shown in quality of human resource part of Table 2. It can be concluded that participants' attitudes of covered areas of Tehran University of Medical Sciences towards quality of human resource were quite positive.

Considering the obtained results (χ^2 =268.41, p-value < 0.05), significant difference was seen between the answers of participants of associative health centers in South of Tehran, Rey and Eslamshahr health networks about current services provided. Attitude of 89.3 % of participants of South of Tehran, 70.6 % of participants of Rey health network, and 84.9 % of participants of Eslamshahr health network was "strongly agree" to the questions related to current services. Other participants' attitudes towards this issue are shown in current services part of Table 2. It can be concluded that participants' attitudes of associative health centers related to areas of Tehran University of Medical Sciences to current services were quite positive.

Given the results of Chi-square test (χ^2 =205.95, p-value < 0.05), significant difference was seen between the answers of participants of associative health centers in South of Tehran, Rey and Eslamshahr health networks about new services provided. Attitude of 71.1 % of participants of South of Tehran, 70.6 % of participants of Rey health network, and 84.9 % of participants of Eslamshahr health network was "strongly agree" to the questions related to new services. Other participants' attitudes towards this issue are shown in new services part of Table 2. It can be concluded that participants' attitudes of associative health centers related to areas of Tehran University of Medical Sciences toward new services were quite positive.

Discussion

The study is the first and to date the only one in Iran assessing access and quality of healthcare services in associative health centers in covered areas of Tehran University of Medical Sciences.

According to the findings of current study on the 19 associative health centers located in health center of South of Tehran, Rey and Eslamshahr health networks, the access and quality of the healthcare services were increased after five years of establishing those centers.

Table 2

Estimation of percent and standard difference in attitudes of visitor towards quality of associative health centers in health centers of South of Tehran, Rey, and Eslamshahr Health networks in 2012 (n=380)

	Strongly Disagree		Disagree		No Idea		Agree		Strongly Agree	
	%	Standard difference	%	Standard difference	%	Standard difference	%	Standard difference	%	Standard difference
Quality of physical environment										
Health center of South of Tehran	0.3	-0.7	0.6	-1.3	5.1	-1.0	6.7	-3.5	87.2	1.7
Rey Health Network	1.0	2.1	1.5	1.3	8.8	3.1	18.5	6.8	70.1	-3.5
Eslamshahr Health Network	0.0	-1.2	1.4	0.9	2.9	-2.3	6.3	-2.1	89.4	1.3
Total	0.4		1.0		5.8		9.8		83.0	
Quality of equipment										
Health center of South of Tehran	0.3	-0.6	1.0	-0.4	6.6	-2.5	8.9	-2.7	83.2	1.9
Rey Health Network	0.6	1.2	1.3	0.6	11.7	3.6	13.7	2.5	72.7	-2.2
Eslamshahr Health Network	0.2	-0.5	1.2	0.1	8.4	0.2	13.9	2.0	76.3	-0.8
Total	0.3		1.1		8.2		10.9		79.4	
Quality of human resource										
Health center of South of Tehran	0.2	-1.7	0.3	-3.2	1.9	-0.9	4.4	-5.4	93.2	2.1
Rey Health Network	1.0	2.5	2.7	5.7	3.6	3.3	15.3	9.7	77.4	-4.1
Eslamshahr Health Network	0.5	0.0	0.5	-1.2	0.6	-2.6	5.0	-2.2	93.5	1.2
Total	0.5		1.0		2.1		7.4		89.1	
Current services										
Health center of South of Tehran	0.4	-2.0	0.6	-2.4	3	-3.7	6.7	-5.7	89.3	3.3
Rey Health Network	1.8	4.4	2.6	5.4	9	7.6	16.1	6.8	70.6	-5.1
Eslamshahr Health Network	0.1	-1.9	0.1	-2.4	2.3	-2.9	12.6	2.2	84.9	0.4
Total	0.7		1.0		4.5		10.1		83.7	
New services										
Health center of South of Tehran	12.3	3.2	1.1	-2.4	6.4	-6.1	9.2	-1.7	71.1	3.1
Rey Health Network	5.5	-2.0	2.5	-0.1	20.9	2.4	12.1	0.4	58.9	-0.6
Eslamshahr Health Network	1.7	-3.2	8.3	4.8	40.0	8.0	17.8	2.5	32.2	-5.0
Total	8.5		2.6		16.0		11.4		61.5	

Outsourcing is shifting functions or activities internally done to an external provider. It occurs when an organization contracts with another organization to provide services or products of major functions or activities. Outsourcing differs from alliances, partnerships, or joint ventures in that the flow of resources is one-way, from the provider to the user. Typically, there is no profit sharing or mutual contribution (Belcourt, 2006).

Outsourcing of healthcare services is used in different parts of the world like India (Kshetri, 2011 and Kshetri & Dholakia, 2011; Pringle, 2012), Romania (Carauşu *et al.*, 2011), Spain (Gene-Badia *et al.*, 2012), Italy (Del Vecchio & De Pietro, 2011), and Turkey (Mollahaliloglu *et al.*, 2009). Similarly, outsourcing is in use for more than a decade in Iran (Farahbakhsh *et al.*, 2011). It is worth mentioning that outsourcing of healthcare services is categorized in two main parts including primary health care and medical care. It has been paid more attention to medical care in Iran, although primary health care was outsourced first in East Azerbaijan and then in Tehran. Covered population and services provided by centers in Tehran and East Azerbaijan are approximately alike (Nikniaz *et al.*, 2006). Previous studies and researches of other authors have revealed controversial effects of outsourcing on quality of health care services. Edwards (2005) showed that markets are suggested to increase responsiveness to need, improve flexibility of the health care system, and give more choice.

Effects on quality of services have been reported to be both positive and negative (Edwards, 2005).

However, the findings of the current research are consistent with the studies performed by Koponena *et al.* (2010), and McKinlay & Marceau (2012), which indicated that outsourcing of healthcare services, has beneficial effect on access, equity, quality and effectiveness of health services.

It is important to note that people pay more attention to quality of health care services in comparison to other services provided. For example, people might tolerate a $15,000 economy car instead of a $100,000 luxury car, but a few would accept as a substitute for a $20,000 surgery instead of a $1,000 one (Altman & Gunderman, 2008). This may be due to lower level of consumers' readiness to sacrifice quality for lower prices. Hence it seems that increasing health care quality is important in the people' attitude.

Access to healthcare services is an important matter in primary health and medical care. The results in our study showed the increase in access similar to findings of Koponena *et al.* (2010) and McKinlay & Marceau (2012). Especially in areas with worrisome inaccessibility of primary care, outsourcing resulted in high levels of satisfaction. Regarding the study limitation, a comparison between governmental health centers and associative health centers may confirm our study results and reveal further details on this issue.

Conclusions

The aim of the research is achieved and the positive effect of outsourcing is validated. The results indicate that the attitude of participants towards accessibility and quality has been improved by establishing associative health centers in covered areas of Tehran University of Medical Sciences.

The most important item in terms of access is distance reduction. Attitudes of 81.6 % of participants in South of Tehran, 86.5 % of participants in Rey health network, and 93.2 % of participants in Eslamshahr health network

towards the reduction of access distance of health services in associative health centers were positive. Consequently, this item further can be improved by establishing new centers.

The most important items in terms of quality are quality of equipment, quality of human resources, and current services. Positive attitudes of service recipients towards quality of equipment ranged from 72.7 % to 83.2 %. No significant difference was seen between the participants' answers in separate health networks (p-value > 0.05).

There was a significant difference between the answers of participants of associative health centers in South of Tehran, Rey and Eslamshahr health networks about the quality of human resource (p-value < 0.05). Attitude of 77.4 % to 93.5 % of respondents was "strongly agree" to the questions related to this issue.

Also a significant difference was seen between the answers of participants to the questions related to current services. However, attitudes are positive in all health networks analyzed and ranging from 70.6 % to 89.3 %. Accordingly, this should stimulate to keep services in the adequate level. Also new services should be provided.

The research validated that outsourcing is an effective major change in the healthcare system, reflecting the need for further purposeful modification of the healthcare market.

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References

Abolhassani, F., Ghanbari, A., & Salmani-Nadoshan, M. R. (2009). Healthcare Outsourcing. Tehran: Nashre Pooneh.

Altman, D. J., & Gunderman, R. B. (2008). Outsourcing: A Primer for Radiologists. *Journal of the American College of Radiology*, 5(8), 893-899. http://dx.doi.org/10.1016/j.jacr.2008.03.005

Anwar, S. (2013). Outsourcing and the skilled-unskilled wage gap. *Economics Letters*, 118(2), 347-350. http://dx.doi.org/10.1016/j.econlet.2012.11.024

Anwar, S., Sun, S., & Valadkhani, A. (2013). International Outsourcing of Skill Intensive Tasks and Wage Inequality. *Economic Modelling*, 31, 590-597. http://dx.doi.org/10.1016/j.econmod.2012.12.027

Belcourt, M. (2006). Outsourcing - The Benefits and the Risks. *Human Resource Management Review*, 16, 269–279. http://dx.doi.org/10.1016/j.hrmr.2006.03.011

Carausu, E. M., Stirbate, P., & Indrei, L. L. (2011). Public health in Orhei County-Realities and Opportunities. *Revista Medico-Chirurgicala Societatii de Medici si Naturalisti din Iasi,* 115(1), 200-7.

Cheshberah, M., & Mortazavi, S. M. (2007). Effectiveness Outsourcing Management. Tehran: Ketabe Mehraban Nashr Agency.

Chung, W. (2007). Outsourcing, Firm Performance and Market Exit. Faculty of the Graduate School of the University of Colorado in Partial Fulfillment of the Requirement for the Degree of Doctor of Philosophy, Department of Economics.

Daly, R. (2011). Annual Outsourcing Survey Shows Continued Growth in Healthcare Services, But with Resistance Among Some Providers. *Modern Healthcare*, 41(36), 1-5.

Del Vecchio, M., & De Pietro, C. (2011). Italian Public Health Care Organizations: Specialization, Institutional Deintegration, and Public Networks Relationships. *International Journal of Health Services: Planning, Administration, Evaluation*, 41(4), 757-74. http://dx.doi.org/10.2190/HS.41.4.i

Edwards, N. (2005). Using Markets to Reform Health Care. *British Medical Journal*, 331, 1464-6. http://dx.doi.org/10.1136/bmj.331.7530.1464

Farahbakhsh, M., Nikniaz, A., Sadegh-Tabrizi, J., & Zakeri, A. (2011). Comparing Performance of Public and Cooperative Health Centers. *Zahedan Journal Research Medical Sciences*, 14(2), 117-121.

Gene-Badia, J., Gallo, P., Hernandez-Quevedo, C., & Garcia-Armesto, S. (2012). Spanish Health Care Cuts: Penny Wise and Pound Foolish? *Health Policy*, 106(1), 23-28. http://dx.doi.org/10.1016/j.healthpol.2012.02.001

Ghayomzade, M. R. (2011). Barriers and Facilitators of Participatory and Public Health Services at Sites Covered by Tehran University of Medical Sciences; The Tehran University of Medical Sciences, Partial Fulfillment of the Requirements for the Degree of Master of Public Health.

Gostin, L., Boufford, J. l., & Mattinez, R. M. (2004). The Future of the Public'S health: Vision, Values, and Strategies - U. S. Population Health has Taken a Backseat to other Political Interests for too Long. *Public Health*, 96-107.

Hsu, C. C., Liou, J. J. H.; & Chuang, Y. C. (2013). Integrating DANP and Modified Grey Gelation theory for the Selection of an Outsourcing Provider. *Expert Systems With Applications*, 40(6), 2297-2304. http://dx.doi.org/10.1016/j.eswa.2012.10.040

Jabbour, L. (2013). Market Tthickness, Sunk Costs, Productivity, and the Outsourcing Decision: an Empirical Analysis of Manufacturing Firms in France. *Canadian Journal of Econiomics-Revue Canadienne d Economique*, 46(1), 103-134. http://dx.doi.org/10.1111/caje.12007

Koponena, A. M., Laamanen, R., Simonsen-Rehn, N., Sundell, J., Brommels, M., & Suominen, S. (2010). Psychosocial Work Environment and Emotional Exhaustion- Does a Service Provision Model Play a Role? *Health Policy*, 94, 111-119. http://dx.doi.org/10.1016/j.healthpol.2009.09.002

Kshetri, N. (2011). The Healthcare Off-Shoring Industry in Developing Economies, Institutional and Economic Foundations: an Indian Case. *International Journal of Health Care Quality Assurance*, 24(6), 453-470. http://dx.doi.org/10.1108/09526861111150716

Kshetri, N., & Dholakia, N. (2011). Offshoring of Healthcare Services: the Case of US-India Trade in Medical Transcription Services. *Journal of Health Organization & Management*, 25(1), 94-107.

Kunstova, R., & Potancok, M. (2013). How to Measure Benefits of Non-Standard Healthcare Systems. *Inzinerine Ekonomika-Engineering Economics*, 24(1), 119-125.

Laamanen, R., Simonsen-Rehn, N., Suominen, S., Ovretveit, J., & Brommels, M. (2008). Outsourcing Primary Health Care Services, How Politicians Explain the Grounds for their Decisions. *Health Policy*, 88, 294-307. http://dx.doi.org/10.1016/j.healthpol.2008.04.001

Liou, J. J. H., Wang, H. S., Hsu, C. C., & Yin, S. L. (2011). A Hybrid Model for Selection of an Outsourcing Provider. *Applied Mathematical Modelling*, 35(10), 5121-5133. http://dx.doi.org/10.1016/j.apm.2011.04.020

Lisac, M., Blum, K., & Schlette, S. (2008). Health Systems and Health Reform in Europe. *Intereconomics*, 184-218. http://dx.doi.org/10.1007/s10272-008-0253-z

Liston, P., Byrne, P. J., & Heavey, C. (2007). An Evaluation of Simulation to Support Contract Costing. *Computers & Operations Research*, 34, 3652–3665. http://dx.doi.org/10.1016/j.cor.2006.01.007

Loevinsohn, B. (2008). Performance-Based Contracting for Health Services in Ddeveloping Countries: a Toolkit. Washington, DC: The International Bank for Reconstruction and Development/ The World Bank. http://dx.doi.org/10.1596/978-0-8213-7536-5

Mani, D. (2008). Essays on the Organiziation and Value of Outsourcing Relationships. The University of Texas at Austin in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy; The University of Texas at Austin.

McKinlay, J. B., & Marceau, L. D. (2012). From Cottage Industry to a Dominant mode of Primary Care: Stages in the Diffusion of a Health Care Innovation (Retail Clinics). *Social Science & Medicine*, 75(6), 1134-1141. http://dx.doi.org/10.1016/j.socscimed.2012.04.039

Meidute, I., & Paliulis, N. K. (2011). Feasibility Study of Public-Private Partnership. *International Journal of Strategic Property Management*, 15(3), 257-274. http://dx.doi.org/10.3846/1648715X.2011.617860

Ministry of Health and Medical Education, Policy Council. (2011). IR Iran Health Reform Plan Based on the Model of Islamic - Iran's Progress.

Mollahaliloglu, S., Kavuncubasi, S., Gursoz, H., Agirbas, I., Ari, H. O., Oncul, H. G., Akdag, R., & Younis, M. Z. (2009). Outsourcing Profile in the Turkish Health Care System. *Journal of Health Care Finance*, 35(4), 74-82.

Nenonen, S. (2011). Fatal Workplace Accidents in Outsourced Operations in the Manufacturing Industry. *Safety Science*, 49, 1394-1403. http://dx.doi.org/10.1016/j.ssci.2011.06.004

Nikniaz, A., Farahbakhsh, M., Sadegh-Tabriz,i J., Farahi-Shahgoli, J., Hasanzade, A., & Jahanbin, H. (2006). Comparing Private Sector unions and Public Health Centers in the Field of Non-Communicable Disease Care and Patient Satisfaction. *Journal of Health Administration*, 33(9), 7-16.

Ok, S. T. (2011). International outsourcing: Empirical Evidence from the Netherlands. *Journal of Business Economics and Management*, 12(1), 131-143. http://dx.doi.org/10.3846/16111699.2011.555383

Olfat, L., & Barati, M. (2010). Introduction to Outsourcing Focusing on the Banking and Financial Institutions. Tehran: Pejvak Tehran.

Parliament by the Secretary of State for Health of Britain. (2009). Shaping the Future of Care Together. Richmond: Office of Public Sector Information, Information Policy Team.

Pingle, S. (2012). Occupational Safety and Health in India: Now and the Future. *Industrial Health*, 50(3), 167-71. http://dx.doi.org/10.2486/indhealth.MS1366

Potocan, V., Nedelko, Z., & Mulej, M. (2012). Influence of Organizational Factors on Management tools Usage in Slovenian Organizations. *Inzinerine Ekonomika-Engineering Economics*, 23(3), 291-300.

Schniederjans, M. J. (2005). Focused Issue on Operations Research and Outsourcing. *Computers & Operations Research,* 32, 2493-2494. http://dx.doi.org/10.1016/j.cor.2004.12.001

Schworer, T. (2013). Offshoring, Domestic Outsourcing and Productivity: Evidence for a Number of European Countries. *Review of World Economic*, 149(1), 131-149. http://dx.doi.org/10.1007/s10290-012-0139-9

The Forth Economic, Social and Cultural Program of Islamic Republic of Iran. (2004) Management and Planning Organization IRI.

The Third Economic, Social and Cultural Program of Islamic Republic of Iran. (2000) Management and Planning Organization IRI.

Vanarase, V. A. (2007). Total Value-Based Outsourcing. Touro University International, College of Business Administration in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy in Business Administration.

Wangwe, C. K., Eloff, M. M., & Venter, L. (2012). A Sustainable Information Security Framework for e-Government – Case of Tanzania. *Technological and Economic Development of Economy,* 18(1), 117-131. http://dx.doi.org/10.3846/20294913.2012.661196

Shima Lashgari, Alireza Delavari, Omid Kheirkhah, Jurgita Antuchevičienė

Autsorsingo įtaka sveikatos priežiūros paslaugų prieinamumui ir kokybei dalyvių požiūriu

Santrauka

Mažėjantis produktyvumas ir didėjančios išlaidos verčia tiek valstybės, tiek privačias įmones ir organizacijas taikyti įvairias veiklos efektyvumo didinimo strategijas. Kliūtys sėkmingai verslo plėtrai, tokios kaip netikrumas dėl ateities ekonominės krizės sąlygomis, teisiniai apribojimai, išteklių ribotumas ir kiti veiksniai, skatina organizacijas iš naujo apsvarstyti savo struktūrą, valdymo būdą, strategiją bei ieškoti priemonių, kaip išlikti nuožmios konkurencijos sąlygomis.

Viešasis sektorius valdymo metu susiduria su tam tikromis, jiems būdingomis problemomis. Tai itin skatina ieškoti novatoriškų ir pozityvių sprendimų. Valstybės įmonės ir organizacijos, turėdamos valdytojo teises, gali dalį savo funkcijų perleisti išorės tiekėjams. Jos gali plėsti užsakomųjų paslaugų taikymą bei įgyvendinti vieną iš verslo organizacijų valdymo principų – autsorsingą. Autsorsingo pagrindinis pranašumas tarp kitų verslo organizacijų valdymo principų yra tas, jog gali panaudoti išorėje esančius išteklius, kad būtų padidintas įmonės veiklos efektyvumas ir sustiprintas teikiamų paslaugų konkurencingumas rinkoje.

Autsorsingas, kaip verslo organizacijų valdymo principas, yra gana plačiai nagrinėtas mokslinėje literatūroje. Publikacijose apibrėžiama sąvoka bei pateikiama samprata, nes šio termino interpretacija yra gana plati ir įvairi (Cheshberah ir Mortazavi, 2007; Laamanen ir kt., 2008; Loevinsohn, 2008). Tyrėjai nagrinėja jo ypatumus rinkos sąlygomis, lygindami juos su kitais valdymo principais. Pastaruoju metu gana dažnas išsamių empirinių studijų objektas yra autsorsingo įtaka produktyvumui (Schwoerer, 2013; Jabbour, 2013). Galima įžvelgti silpnąsias šio valdymo būdo puses, susijusias su darbo jėgos poreikio mažėjimu bei darbo užmokesčio skirtumų tarp kvalifikuotos ir nekvalifikuotos darbo jėgos didėjimu (Chung, 2007; Anwar, 2013; Anwar ir kt., 2013). Tačiau dažniausiai atlikti tyrimai patvirtina tai, jog taikant autsorsingo priemones, galima labai sumažinti veiklos kaštus, garantuoti konkurencingumą ir sėkmę įmonei (Varanase, 2007; Mani, 2008; Ok, 2013). Dėl šios priežasties, nagrinėjamoji strategija tampa priimtina įvairiose šalyse, įvairaus pobūdžio ir dydžio organizacijose. Nustatyta, kad ji patenka tarp dešimties, dažniausiai naudojamų valdymo priemonių tiek Europoje, tiek Šiaurės Amerikoje, tiek bendrai pasaulio mastu (Potocan ir kt., 2012).

Šiame tyrime autoriai nagrinėja specifiniais bruožais pasižyminčią veiklos sritį – sveikatos priežiūros paslaugų teikimą. Todėl šiuo atveju svarbu užtikrinti ne tik sveikatos priežiūros teikiančios įstaigos, kaip verslo subjekto veiklos efektyvumą, bet ir kokybiškų, prieinamų visoms vartotojų grupėms paslaugų teikimą. Siekiant pagerinti sveikatos priežiūros sistemos efektyvumą, Teherano medicinos universitetas, vadovaudamasis Irano Islamo Respublikos trečiąja (2000 m.) bei ketvirtąja (2004 m.) ekonominės, socialinės ir kultūrinės plėtros programomis, įgyvendino sveikatos priežiūros paslaugų autsorsingą. Reforma pradėta vykdyti 2005 metais, įsteigiant asociatyvius sveikatos priežiūros centrus. Atlikto *tyrimo tikslas* – pagrįsti autsorsingo efektą dalyvių (paslaugų vartotojų) požiūriu. Tyrimo metu nagrinėta autsorsingo įtaka sveikatos priežiūros paslaugų prieinamumui ir kokybei.

Autoriai surinko informaciją ir atliko išsamų tyrimą, norėdami išanalizuoti dalyvių požiūrį į sveikatos priežiūros paslaugų teikimo pokyčius bei nustatyti paslaugų vartotojų poreikių tenkinimo (ar netenkinimo) pobūdį, įsteigus asociatyvius sveikatos priežiūros centrus. Taikyti empiriniai bei matematiniai statistiniai metodai. Paslaugų prieinamumas ir kokybė vertinami atlikus asmenų, besinaudojančių asociatyvių centrų teikiamomis paslaugomis, apklausą. Paslaugų prieinamumo vertinimas susideda iš trijų segmentų: atstumo (nuotolio iki sveikatos priežiūros paslaugas teikiančio centro), laiko (reikalingo įstaigai pasiekti) bei kainos (paslaugų kainų tinkamumo vartotojams). Kokybė vertinama šiais aspektais: fizinės aplinkos kokybės, įrangos kokybės, žmogiškųjų išteklių kokybės ir paslaugų (esamų bei naujų) kokybės.

Atsitiktinių būdu atrinkta 19 centrų iš 107, patenkančių į Teherano medicinos universiteto aptarnaujamą teritoriją. Apklausta 380 respondentų, besinaudojančių asociatyvių sveikatos priežiūros centrų, priklausančių Pietų Teherano, Rey ir Eslamshahro tinklams, paslaugomis. Toks imties dydis yra pakankamas statistinei analizei atlikti ir išvadoms su 95 proc. tikimybe pateikti. Respondentams pateikti 54 klausimai, parengti remiantis literatūros analize bei profesionalų, dirbančių analizuojamoje srityje, apklausa. Atsakymų variantai formuluojami naudojant 5 pakopų Likerto skalę („visiškai nesutinku", „nesutinku", „neturiu nuomonės", „sutinku", „visiškai sutinku"). Apklausos metu surinkta informacija apdorota *SPSS 20 programa*. Respondentų nuomonių suderinamumas analizuotas taikant χ^2 (chi kvadrato) kriterijų.

Nustatyti reikšmingi skirtumai išanalizavus Pietų Teherano, Rey ir Eslamshahro sveikatos priežiūros tinklų paslaugomis besinaudojančių respondentų atsakymus. Prieinamumo aspektu, pozityvus respondentų požiūris į laiką bei kainą sutapo, statistiškai reikšmingo skirtumo nenustatyta (p-reikšmė > 0,05). Tačiau nuotolį iki sveikatos priežiūros teikiančio asociatyvaus centro, respondentai įvertino gana skirtingai. „Visiškai sutinka", jog šiuo aspektu paslaugų prieinamumas padidėjo 93 proc. respondentų, besinaudojančių Ray tinklui priklausančių centrų paslaugomis. Tuo tarpu pokyčius pozityviai vertina tik 81 proc. Pietų Teherano tinklo pacientų. Tai yra statistiškai reikšmingas skirtumas (χ^2=16,65; p-reikšmė < 0,05).

Kokybės vertinimo aspektu, respondentų požiūris į fizinės aplinkos kokybę sutapo, t. y. statistiškai reikšmingo skirtumo nenustatyta (χ^2=106,70; p-reikšmė > 0,05). Įrangos kokybę respondentai įvertino gana skirtingai. „Visiškai sutinka", jog šiuo aspektu paslaugų kokybė pagerėjo nuo 72 proc. iki 83 proc. respondentų, besinaudojančių skirtingiems sveikatos priežiūros paslaugas teikiantiems tinklams priklausančių centrų paslaugomis (χ^2=49,29; p-reikšmė < 0,05). Nagrinėjant žmogiškųjų išteklių kokybę, pokyčius teigiama linkme akcentavo nuo 77,4 iki 93,5 proc. respondentų. Tai statistiškai reikšmingas skirtumas (χ^2=221,32; p-reikšmė < 0,05).

Nagrinėjant sveikatos priežiūros centrų teikiamų paslaugų kokybę, labiausiai išsiskyrė Pietų Teherano respondentų nuomonė. Su teiginiais apie esamų bei naujų paslaugų kokybę „visiškai sutiko" atitinkamai 89,3 ir 71,1 proc. apklaustų asmenų. Į klausimus apie kokybę teigiamai atsakė 70,6 proc. Rey sveikatos priežiūros tinklų paslaugomis besinaudojančių respondentų ir 84,9 proc. Eslamshahro tinklui priklausančių pacientų. Nors atsakymų tendencija panaši, tačiau paslaugų kokybės vertinimo skirtumai regionuose statistiškai reikšmingi (p-reikšmė < 0,05).

Šios analizės rezultatai iš dalies sutampa su anksčiau atliktais kitų autorių tyrimais. Edwards (2005) teigia, kad autsorsingo principų taikymas sveikatos priežiūros institucijose paslaugų kokybę gali ne tik pakelti, bet ir pabloginti. Tačiau Koponena ir kt., (2010) ir McKinlay ir Marceau, (2012) teigia, kad sveikatos priežiūros paslaugų autsorsingas naudingas paslaugų prieinamumo, kokybės ir efektyvumo aspektu. Autorių atlikto empirinio tyrimo Teherano medicinos universiteto aptarnaujamoje teritorijoje rezultatai bei išvados, pagrįstos matematinės statistikos metodais, neprieštarauja Koponena ir kt., (2010), McKinlay ir Marceau (2012) teiginiams.

Atlikus tyrimą padaryta išvada, jog vyrauja pozityvus dalyvių požiūris į įgyvendintą reformą ir autsorsingo principų pritaikymą. Nustatyta, jog įsteigus asociatyvius sveikatos priežiūros centrus, pagerėjo paslaugų prieinamumas visų pirma atstumo, taip pat ir laiko bei kainos požiūriu. Be to, palankiai įvertinta paslaugų kokybė, personalo kvalifikacija, medicininės įrangos bei aplinkos kokybė. Svarbu išlaikyti esamą paslaugų kokybės lygį bei siūlyti rinkai naujas paslaugas. Atlikta analizė parodė, kad autsorsingas gali būti efektyvi priemonė, padedanti įvairaus pobūdžio įmonėms bei organizacijoms sumažinti išlaidas bei padidinti veiklos efektyvumą, kartu nepažeidžiant ir kitų rinkos dalyvių (vartotojų) interesų, užtikrinant teikiamų paslaugų kokybę bei prieinamumą.

Raktažodžiai: *autsorsingas, sveikatos priežiūros paslaugos, asociatyvūs sveikatos priežiūros centrai, prieinamumas, kokybė.*

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