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

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crossref http://dx.doi.org/10.5755/j01.ie.24.4.4749

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 sector 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 (Schneiderjans, 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 et 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 (Lisace 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 (Liu 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 number 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 (χ²=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 (χ²=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 (χ²=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.
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 (n=380)

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>No Idea</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>Standard difference</td>
<td>%</td>
<td>Standard difference</td>
<td>%</td>
</tr>
<tr>
<td><strong>Distance</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health center of South of Tehran</td>
<td>0.9</td>
<td>-0.3</td>
<td>2.0</td>
<td>1.0</td>
<td>3.4</td>
</tr>
<tr>
<td>Rey Health Network</td>
<td>2.0</td>
<td>1.3</td>
<td>1.0</td>
<td>-0.5</td>
<td>3.5</td>
</tr>
<tr>
<td>Eslamshahr Health Network</td>
<td>0.0</td>
<td>-1.1</td>
<td>0.0</td>
<td>-1.3</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1.1</td>
<td>1.5</td>
<td>2.9</td>
<td>9.9</td>
<td>84.7</td>
</tr>
<tr>
<td><strong>Costs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health center of South of Tehran</td>
<td>1.8</td>
<td>0.3</td>
<td>2.3</td>
<td>-0.5</td>
<td>0.9</td>
</tr>
<tr>
<td>Rey Health Network</td>
<td>2.0</td>
<td>0.3</td>
<td>6.0</td>
<td>1.8</td>
<td>6.0</td>
</tr>
<tr>
<td>Eslamshahr Health Network</td>
<td>0.0</td>
<td>-1.0</td>
<td>0.0</td>
<td>-1.3</td>
<td>1.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1.6</td>
<td>2.9</td>
<td>2.4</td>
<td>9.8</td>
<td>83.3</td>
</tr>
<tr>
<td><strong>Time</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health center of South of Tehran</td>
<td>1.1</td>
<td>-0.2</td>
<td>1.8</td>
<td>-0.9</td>
<td>2.0</td>
</tr>
<tr>
<td>Rey Health Network</td>
<td>2.0</td>
<td>1.4</td>
<td>5.0</td>
<td>3.0</td>
<td>2.3</td>
</tr>
<tr>
<td>Eslamshahr Health Network</td>
<td>0.0</td>
<td>-1.4</td>
<td>0.0</td>
<td>-2.1</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1.1</td>
<td>2.4</td>
<td>1.8</td>
<td>7.4</td>
<td>87.3</td>
</tr>
</tbody>
</table>

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 towards quality of human resource were quite positive.

Considering the obtained results ($\chi^2=268.41, p-value < 0.05$), 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 ($\chi^2=205.95, p-value < 0.05$), 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.

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.
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 (Carasu et al., 2011), Spain (Gene-Badia et al., 2012), Italy (Deli 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 (Niknai 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 Koponen 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 (Altmann & 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 Koponen 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 to questions related to this issue. A difference was seen between the participants’ answers to this issue.

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.

Acknowledgement
The authors would like to thank the subjects who participated in the present study. This study was supported by a grant from the Health Deputy of Tehran University of Medical Sciences. None of the authors had any personal or financial conflicts of interest. Sh. L. and O. Kh. designed the study, collected data and analyzed and wrote the manuscript. A. D. and J. A. supervised the study.

References


Achtsoringo įtaka sveikatos priežiūros paslaugų prieinamumui ir kokybei dalyvių požiūriu

Santrauka

Mažėjantis produktyvumas ir didėjantys išlaidos verčia tiek valstybės, tiek privatių įmonių ir organizacijas taikyti įvairias veiklos efektuvumo didinimo strategijas. Kliūtys sekmingai verslo pėleveli, tokios kaip netikrumas dėl ateities ekonominės križės sąlygomis, tesiniam apribojimui, išteklių ribotumui ir kitai veiksniui, skatina organizacijas iš naujo apvartinti savo struktūrą, valdymo būdą, strategiją bei išsiaiškoti priemonių, kaip iššūkio nuolomus konkurencijos sąlygomis.

Višeisis sektoriaus valdymo metu susiduria su tam tikros, šiems būdingomis problemomis. Tai itin skatina skatinti, kaip aiškinti ir suprasti dauguma veikimo būdą, teigianti, kad būtų paskatintas įmonei veiklos efektuojama ir sustiprintas teikiamų paslaugų konkurencingumas rinkoje.


Rey sveikatos priežiūros tinklų paslaugomis besinaudojančių respondentų ir 84,9 proc. Eslamshahro tinklui priklausančių pacientų požiūriu į laiką įvertino visiškai sutinkinai, o paslaugų kokybę požiūriu į patenka tarp dešimties, dvi tūkst. šalyse, įvairaus pobūdžio ir dydžio organizacijose. Nustatyta, kad jį patenka tarp dešimties, daugiausiai naudotų valdymo priemonių tiek Europoje, tiek Švedijos Amerikoje, tiek bendrijo paskyros maštymu (Potokas ir kt., 2012).


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The article has been reviewed. Received in July, 2013; accepted in October, 2013.