

# Self Assessment of Motahari Hospital, Jahrom, Iran Based on European Foundation for Quality Management (EFQM) Model

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**Abstract Introduction:** Assessment helps the organizations' managers to identify the strong as well as the weak points and, at the same time, develop programs for the organizations' improvement. Therefore, the present study aimed to evaluate the performance of Motahari hospital, Jahrom, Iran based on the EFQM model. **Methods:** In this interventional study, 58 managers of Motahari hospital took part in two self-assessment in order to evaluate the performance of the hospital through the workshop approach in 2010-2011. The strength points as well as the areas for improvement obtained from the primary self-assessment were analyzed and action plans were developed. After conducting the action plans in the hospital, the performance of the hospital was assessed again and the results were gathered based on the EFQM model and RADAR logic. **Results:** The hospital's total score was obtained as 71 and 145 in the primary and the final self-assessment, respectively. Overall, the findings of the study revealed the improvement of quality in all the 9 criteria of the EFQM model, particularly the society results (24%), partnerships and resources (12%), and strategy (12%). **Discussion:** According to the results of the present study, action plans must focus on the areas which are most beneficial for the hospital.

**Keywords:** EFQM, assessment, excellence models, quality assessment, hospital

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## 1. Introduction

Organizations are continually under pressure for improving their performance and, as a result, they have to compare their performance with global standards [1]. Moreover, improving an organization's performance depends on investigation, gaining knowledge about the degree of improvement and achieving the goals, and identifying the challenges it may face and can be achieved through performance assessment [2].

Overall, the best method for assessing an organization's performance is making use of comprehensive, multi-criteria models which tend to evaluate different aspects of the organizations. European Foundation for Quality Management (EFQM) model is one of the best examples of such models, which not only enables the organizations to evaluate their rate of success in conducting programs in different periods of time, but it also helps them to compare their performance to that of other, particularly most successful, organizations [3]. Nine components of the EFQM model, their relationship, and their related percentages are presented in Figure 1.

In EFQM model, self-assessment is in fact a comprehensive, regular review of the activities as well as the resources of the organization which is carried out by

the staff of the organization based on strategic indexes. In fact, self-assessment in EFQM model refers to the presentation of improvement opinions by the staff of the organizations. Moreover, the outcomes of self-assessment in this model include the strength points and the areas for improvement. Of course, the areas for improvement are finally converted into action plans and executed [5].

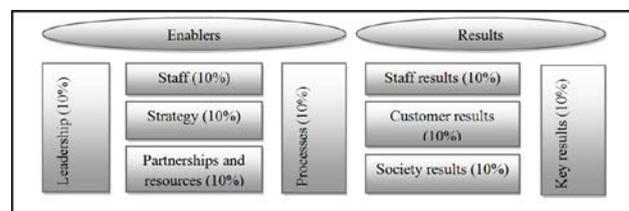


Figure 1. Criteria and scores of EFQM model [4]

Nowadays, in line with the execution of Total Quality Management [TQM] models in organizations, improvement of the existing approaches for effective management of healthcare organizations has also been emphasized because of the increase of the patients' expectations from healthcare providers. Furthermore, improvement of quality is of utmost importance in hospitals, as one of the major organizations which provide healthcare services. Therefore, assessing the performance of the hospitals, which play a major role in improving the

society's health, can be of great help in providing the ground for identifying the strength points as well as the areas for improvement and achieving the continuous improvement of quality [6]. Consequently, the present study aims to evaluate Motahari hospital, Jahrom, Iran based on the EFQM model in order to determine the strength points as well as the areas for improvement. It also aims to execute the EFQM model in this hospital in order to determine its effect on quality improvement and help maintain the superiority of the hospital through performing the necessary interventions.

## 2. Materials and Methods

The present study was an interventional one including a pre-test as well as a post-test which was conducted in Jahrom Motahari hospital, affiliated to Jahrom University of Medical Sciences Iran in 2011. Motahari hospital is a public one which has 158 beds and 400 personnel [7]. The research environment of the present study included 58 senior and intermediate managers of this hospital.

At first, through a workshop, the model was taught to the hospital managers and they took part in the primary self-assessment. Then, they were divided into 5 groups and scored both the criteria and the sub-criteria of the EFQM model. It should be noted that the self-assessment was performed through the workshop approach and the criteria of the EFQM model were scored based on RADAR scoring system. In general, RADAR consists of 5 sections of results, approach, deployment, assessment, and review [8]. Then, based on the existence or lack of documents in different hospital wards, the scores of the criteria were categorized into 5 levels of verbal actions and few considerable, accurate, and comprehensive observations. Table 1 is an example of the scoring table based on the EFQM model utilized by the managers.

**Table 1. EFQM self-assessment form [2]**

Group...	Policy and strategy			
		Approach	Deployment	Assessment and review
Policies and strategies are conducted in the hospital through a framework of key processes, including:	Documents and evidences regarding approach, deployment, assessment, and review			
Key processes designed and established for achieving the hospital policies and strategies.				
Policies and strategies are introduced to the stakeholders and their knowledge of the policies and strategies is evaluated.				
Strategic actions are planned, aligned, and operationalized and there are programs for monitoring and assessment.				
Reporting mechanisms have been created all through the hospital.				

After all, the scores obtained in each criterion were entered into the Excel software and adjusted and

standardized by the managers. In addition, the scores obtained from self-assessment in different sections were discussed by the hospital's Excellence Committee and the hospital's strength points and areas for improvement were determined. After prioritizing the hospital's areas for improvement, they were converted into action plans and executed in all hospital wards. Then, the managers took part in the final self-assessment and scored the hospital. Finally, the data gathered from the two self-assessments were analyzed and compared through descriptive statistics and Excel software.

## 3. Results

The results of the primary self-assessment (first stage) through the EFQM model in Motahari hospital revealed the most strength points to be related to staff, partnerships and resources, and processes and the least strength points to be related to strategy and society results. Furthermore, based on the issues discussed in the hospital's Excellence Committee (2<sup>nd</sup> stage), the results of the primary stage of the plan showed that the most areas for improvement were related to partnerships and resources, while the least areas for improvement were related to customer results as well as staff results (Table 2).

**Table 2. Strength points and areas for improvement of Motahari hospital, Jahrom, Iran**

EFQM criteria	Areas for improvement	Strength points
Leadership	24	6
Strategy	16	0
Staff	24	7
Partnerships and resources	28	7
Processes	24	7
Sum of the enablers	<b>116</b>	<b>27</b>
Customer results	9	1
Staff results	9	1
Society results	10	0
Key results	10	3
Sum of the results	<b>38</b>	<b>5</b>
Total	<b>154</b>	<b>32</b>

In the 3<sup>rd</sup> stage of the plan, the results of the primary self-assessment were discussed in the Excellence Committee and the hospital's strength points and areas for improvement were determined. The results revealed 154 areas for improvement regarding both the enablers and the results in Motahari hospital, which shows that the hospital is still in the primary stages of growth and excellence. In the 4<sup>th</sup> stage, the improvement projects were executed in the hospitals with the help of the senior managers. Table 3 presents the results of this stage, which were in fact some of the improvement projects conducted in the hospital and led to its growth based on the criteria of the EFQM model.

**Table 3. Improvement projects conducted in Motahari hospital, Jahrom, Iran**

	Improvement project	Related criterion
1	Establishment of hospital Excellence Committee	Leadership
2	Regulation of the meeting of the staff, patients and those accompanying them, and the students with those in charge of the hospital	Leadership
3	Planning and executing educational programs regarding management and organizational excellence concepts for the managers and the staff	Leadership
4	Conducting benchmarking studies in required fields, visiting top centers, and creating learning opportunities	Strategy
5	Developing an strategic, operational program	Strategy
6	Designing a system for encouraging the staff and making relationships with payment systems	Staff
7	Establishing accrual accounting in the hospital	Partnerships and resources
8	Implementing the HIS system in the hospital	Partnerships and resources
9	Establishing the process management system	Processes
10	Planning and establishing a system for measuring the degree of customer satisfaction and developing the process of using the results of customer feedback for improving the processes	Customers

After conducting the improvement programs, the final self-assessment was performed in the 5<sup>th</sup> stage of the plan. According to the results, based on the workshop approach, the total score of Motahari hospital, Jahrom, Iran was reported as 71 and 145 in the primary and the final self-assessments, respectively. Besides, the distribution of the scores for the 9 criteria of the EFQM model in the primary

and the final self-assessments is as follows: leadership: 7% and 15%, strategy: 4% and 16%, staff: 7% and 11%, partnerships and resources: 8% and 20%, processes: 10% and 15%, customer results: 13% and 15%, staff results: 5% and 11%, society results: 4% and 28%, and key results: 13% and 14% (Table 4).

**Table 4. Comparison of the primary and final self-assessments of Motahari hospital, Jahrom, Iran based on the EFQM excellence model**

	Criterion	Maximum	Result of primary self-assessment	Result of final self-assessment	Difference
1	Leadership	100	7	15	+8
2	Strategy	100	4	16	+12
3	Staff	100	7	11	+4
4	Partnerships and resources	100	8	20	+12
5	Processes	100	10	15	+5
6	Customer results	150	13	15	+2
7	Staff results	100	5	11	+6
8	Society results	100	4	28	+24
9	Key results	150	13	14	+1
Total score		1000	71	145	+74
Total score of the enablers section		500	36	77	+41
Total score of the results section		500	35	68	+33

According to Table 4, concerning the enablers section, the highest excellence was observed in strategy and partnerships and resources, while the lowest excellence was detected in the staff. Regarding the results section, on the other hand, the highest excellence was revealed in society results, while the lowest excellence was observed in key results. Figure 2 depicts the comparison of the results of the primary and final self-assessments of Motahari hospital based on the EFQM model criteria.

continuous part shows a considerable improvement of quality after the intervention (11-28%). As Figure 2 depicts, 3 criteria of society results (24%), partnerships and resources (12%), and strategy (12%) have had more than 10% quality improvement. However, the lowest improvement of quality was observed in key results (1%).

### 4. Discussion and Conclusion

Certainty about an organization’s proper performance depends on its appropriate assessment. In fact, assessment in organizations is performed in order to make sure about the appropriate performance of the programs which have been seriously begun and for which investments have been provided and, at the same time, improve or change the program. In doing so, the necessary information is gathered through appropriate methods, patterns, and techniques and reported to the decision makers. In fact, assessment aims to provide this information for decision making and make attempts for improving the program [9].

Based on what was mentioned above, assessment is a systematic method for learning from experience which makes use of the acquired lessons to improve the current activities and develop programming by choosing other solutions. This consists of analytical assessment in different stages of the management process. Therefore, assessment can be of great help in allocating human as



**Figure 2.** Comparison of the results of the primary and final self-assessments of Motahari hospital, Jahrom, Iran

The dotted part on this figure represents a low level of hospital quality in the primary self-assessment based on the EFQM model criteria (4-13%). On the other hand, the

well as financial resources to both current and future programs [10].

In general, healthcare organizations aim to improve, maintain, or restore the people's health and in case their services are effective, their performance is considered as desirable. Therefore, healthcare services are required to be continuously evaluated [11]. Assessment of hospitals or other healthcare organizations has to be performed regarding at least 3 categories of instruments, including outputs, staff quantity as well as quality, and physical facilities, methods which refers to determining the effectiveness of using human as well as financial resources and the reliability of the hospital policies and its current procedure, and results which refers to the judgment about the effectiveness of the final outcome of the profits gained by the patients and the society [12].

According to what was mentioned above, since the EFQM model includes all the mentioned components, it can be an appropriate comprehensive model for evaluating the hospitals' performance. Therefore, EFQM model was utilized in the present study in order to determine the strength points as well as the areas for improvement in Motahari hospital, Jahrom, Iran. This study also aimed to investigate the effect of the EFQM model on quality improvement and help maintain the superiority of the hospital through performing the necessary interventions. The findings of the present study revealed the score of 71 in the primary self-assessment, which shows that this hospital is still at the beginning stages of organizational excellence and necessitates the improvement of quality in different aspects, particularly strategy and society results.

On the other hand, Moeller conducted a study in 2001 and revealed that more than 50% of Germany's hospitals got 200-300 out of 1000 in the primary self-assessment. This shows the huge difference between the hospital under the present study and the hospitals of developed countries [13].

In another study, Nasrollahpour et al. [2000] reported the score of 200 for self-assessment of some of Iran's universities through the EFQM model [14].

The results of this study also revealed that executing the EFQM model in the hospital under study had increased the self-assessment total score from 71 to 145 which shows that this model has been quite effective in identifying the areas for improvement and improving them.

In the same line, Nabitz et al. (2000) conducted the EFQM model in a hospital and showed that after almost 2 years, 50% of the hospital projects had considerably improved [4].

Regarding the enablers section of the EFQM model, the findings of the present study showed that policy and strategy as well as partnerships and resources had considerably improved after conducting the improvement projects in Motahari hospital, Jahrom, Iran; in a way that 24 out of 74 increased scores in the final assessment were related to these two criteria. In the hospital under study, the total score of strategy had increased from 4 to 16 and that of partnerships and resources had reached from 8 to 20. Overall, the following criteria revealed to have a key role in the excellence of the hospital under study:

1. Short-term improvement projects
2. Improvement projects conducted by the hospital and supported by the university or the ministry of health

The results of the present study showed the lowest excellence in the enablers section to be related to the criterion of staff; in a way that the total score of this criterion had increased from 7 to 11. This finding is in line with the findings of the study conducted by Eghbal et al. (2007) which showed the most strength points of the organization under study to be related to policy and strategy and the major areas for improvement to be related to the staff results [15]. This finding is also consistent with the results of the research performed by Paula Vallejo (2007) which was conducted in the department of psychiatry of a hospital in Spain in 2003-2004. In that study, the lowest score was attributed to the staff results; however, the score of this criterion increased to 23 after 2 years of conducting training courses and holding congresses [16]. According to these findings, the low degree of improvement in this criterion might result from the hospital managers' lack of sufficient attention to motivation, satisfaction, and the services provided for the hospital staff. Therefore, hospital managers should identify the factors which lead to the staff's dissatisfaction and try to improve them.

In the study conducted by Nasrollahpour (2011), after conducting the EFQM model, the highest improvement was observed in the key performance results and the society results [14].

Nevertheless, the results of the present study were in contrast with the findings of the study conducted by Maleki and Izadi (2005) in two social security hospitals in Tehran. In that study, the highest and the lowest scores were related to the key results of performance and the society results, respectively [6].

Regarding the improvement of the hospital scores in all the 9 criteria of the EFQM model, the findings of the present study were consistent with those of the study conducted by Sandra Varnero et al. in one of the hospitals of Italy in 2006-2007 [17]. In the same line, Elena Sanchez et al. (1995-2003) investigated the effect of the EFQM model in 31 hospitals and health centers in Spain and revealed the improvement of quality in all the 9 components of the model [18].

According to Figure 2, the highest improvement in the results section was related to the society results, which confirms the successful execution of the projects related to this criterion. Furthermore, comparison of the results of the two self-assessments showed that out of the total score of 500 related to the enablers section, the hospital score had increased from 36 to 77. Moreover, out of the total score of 500 related to the results section, the hospital score had reached from 35 to 67. This shows the effect of the interventions conducted on the 5 criteria related to the enablers on the hospital results.

Based on Figure 3, in comparison to Kingdom educational institute, Amsterdam hospital, and Hasheminejad hospital, Tehran, Iran, the hospital under the present study gained lower scores and was at the beginning stages of excellence [19,20,21]. This figure also shows that regarding the staff results, the findings of the present study are consistent with those of the studies conducted by Longbottom and Osseo in 2002 [19] and Udo Nabitz in 2006 [20], while they are in contrast with the results of the research performed by Dehnavieh et al. in 2005 [21]. Similar results have also been obtained regarding the society results in the present study.

As shown in various studies, EFQM model can be utilized for improvement of the projects, verification of the professional activities, and validation [22]. Moreover, this model can be used in order to evaluate the organizations' present status and identify its strong points, weak points, barriers, and limitations and, as a result, help the managers to achieve the goal of organizational improvement and eliminate the deficiencies [14]. Furthermore, Moeller (2001) believes that this model can be used as a systematic quality management approach for gaining competitive advantages in organizations [13].

The findings of the present study showed that Motahari hospital is at the beginning of the excellence path and has to pass a lot of ups and downs in future. Moreover, the hospital employees believe that they are on their way toward excellence and more attempts as well as coordination is needed for achieving the total quality management. They also know that they are faced with activities, such as process management, knowledge management, and gaining the customers', partners', and society's satisfaction, and in order to move toward excellence, they need to learn well and make use of appropriate techniques. Therefore, improving the hospital based on the EFQM model and achieving excellence require activities, such as conducting the staff's educational system, executing the hospital managers' assessment system, complete establishment of the structure of board of trustees hospitals, developing both horizontal and vertical job improvement paths for the staff, taking the motivational factors into account, and improving the staff's satisfaction.

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