

A Study of the Feasibility of Employing the Total Quality Management (TQM) Model at Kashan University of Medical Sciences

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ABSTRACT

Total Quality Management (TQM) refers to the application of modern management to institutions for improving the level of product quality and services. In this study, we sought to investigate the possibility of employing this type of management at Kashan University of Medical Sciences. To examine this question, the department of Human Resources may be of great help since it constitutes a most important area in any organization, including the university. By observing the staff's knowledge and attitude, one can obtain a reliable idea of the institution's managing structure and see whether or not the TQM model is feasible. After analyzing the findings collected in the questionnaires, the following results were obtained: 1 – In the first questionnaire, related to the managers' knowledge, the average of correct answers to the first eight questions was 86.37%, and the average of correct answers to the remaining 32 questions was 69%. Both values are higher than the lowest values for this study (60%), which suggests that the managers' knowledge and attitude is appropriate for implementing the TQM model at this University.

2 – As regards the second questionnaire for assessing the staff's knowledge, the average of correct answers to the first eight questions was 74.5% and the average of correct answers to the remaining 32 question was 62%. Both averages are higher than the minimum acceptable for this study (60%). The results suggest that the employees' knowledge and attitude is appropriate for implementing the TQM model at this University. It is time for those involved in health care institutions to design and employ appropriate and practical models of management that are consistent with the Iranian culture and that, in turn, include TQM concepts and principles.

KEYWORDS: Medical University - Management - Comprehensive (inclusive) - Quality - Quality in Health Care – TQM.

INTRODUCTION

The concept of quality has been categorized for centuries and continues to be an important topic. From the time of the Old Testament to the industrial and computerized ages, views on quality have remained unchanged, except for the dimensions which have altered or expanded (3). Today the world has witnessed the gradual breaking of economic and economics frontiers and seen a global economic system without boundaries become a reality. Customers are now the group with the most freedom to choose out of various industrial products, services, etc. In such a system, consumers may resemble kings in the sense that the success or failure of their organizations (commercial - industrial and service sectors) is in their hands. In a system where the customer is the most important agent, the necessary conditions must be met as to attain customer satisfaction (6).

Evidence shows that Total Quality Management (TQM) as an important management strategy has had considerable success in non-industrial and industrial organizations, in the field of quality of goods and services (2). TQM has been proved to even increase productivity, organizational performance and customer satisfaction. In light of the strategy's success, the possibility opens up of employing this method more widely in different countries and improving organizational efficiency. Certainly, the effective deployment of any new management strategy or style requires a great deal of preparation, for example, that entailing such internal factors as the cultural aspects of management and staff, and the latter's commitment to implement the model. The effective deployment of TQM in any organization will require manufacture and services apparatuses, institutional investments, as well as familiarity with the method's principles and concepts. (3.) Therefore, managing and employee organizations need such preparation, whether their nature is scientific or cultural. Understanding, as well as preparing for, organizational culture in connection with TQM principles takes sociological study; and apparently with no bases in cultural and

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legal contexts for the method's implementation, its quality and efficiency will be lacking.(5,9)

The fact that TQM principles are a philosophy and ideology coming from a dominant culture and its beliefs will have an effect on the ways in which the organization puts in practice the method towards a more efficient productivity. (8) The question in this case is whether or not Kashan University of Medical Sciences might be open enough to take on such an administrative culture. Do the institution's managers and employees show a logical and reasonable attitude to accept and implement TQM culture? Regarding the central management structure, is there an appropriate context for achieving and applying the universal principles of TQM, a new current of productivity that nonetheless comes from the dominant culture? In the present study, we sought to answer these questions.

MATERIALS AND METHODS

The research involved the descriptive method and the research community included 128 managers and 1200 employees affiliated to the Kashan hospital and the Aran Bidgol Health Network, out of which 55 managers and 91 employees were chosen as sample. Two questionnaires for managers and employees have been selected as sample, while two model questionnaires for managers and employees were used as research tools and methods. Each questionnaire was used to determine the managers and employees' level of knowledge and their attitudes (the resolution) about the TQM basic concepts. These derive from Deming's 14 points, Crosby's 4 principles and Juran's 6 principles. Within these guiding ideas are included the continuous process of improvement of services that focus on clients' needs and satisfaction, management commitment, conflict resolution, quality and decision-making as regards quality, and staff's collaboration and continuing education. These were the parameters considered for assessment.

Stratified sampling method with proportional allocation was done so that the number of sample for the research community was broken down for each of the prorated health centers. Multiple choice questionnaires 1 and 2 were handed out to the group targeted. In order to determine the questionnaires' formal validity and key terms' accuracy, their content was evaluated by Health Care Management professors; a senior manager in the health centers involved in this research; two experts in psychology; a psychiatrist; three doctors; ten Directors and ten employees from the health centers. The necessary changes to the questionnaire's last version were made following their comments. To determine the questionnaire's internal consistency, the test-retest method was used. Ten questionnaires were distributed within an interval of ten days. The answers' consistency was measured; the coefficient stability for questionnaire 1 was 85% and for questionnaire 2, 80%.

Each questionnaire included 40 questions. The first 8 questions of each questionnaire were related to management and staff's knowledge. If the average of results is more than the minimum acceptable of 60%, the managers and staff's knowledge and attitude is considered as appropriate. Questions 9 to 40 were related to TQM's eight basic elements. Every four questions were allocated to one specific concept. An average of more than the minimum acceptable (60%) of questions answered indicates a good possibility of implementing TQM in the centers.

RESULTS

The study focused on 55 managers and 91 employees. For questionnaire 1, 45 out of the 55 questionnaires distributed were acceptable. Questionnaire 2 was distributed to 79 employees, out of which 72 were acceptable. 22 managers and 49 employees chosen for the study have a Bachelors' degree. Most managers have 8 to 12 years of experience, while the employees have 6 to 10 years. Most managers are 32 to 36 years old, and the employees are within the 23-31 age range. Table 1 shows that the average percentage of correct answers by managers, for questionnaire 1's first eight questions, was 86.37%, while the average percentage reached by employees, for questionnaire 2's first eight questions, and was 74.5%.

Table 1: Managers and Staff's Knowledge of TQM at the University

Question	Percentage of correct answers by managers	Percentage of correct answers by staff
1	95%	85%
2	83%	82%
3	69%	26%
4	90%	88%
5	86%	75%
6	90%	80%
7	88%	80%
8	90%	80%

The research’s findings regarding each questionnaire’s questions 9 to 40 were related to the managers and staff’s attitude toward the concepts reflected in TQM’s eight basic elements. Tables 2 shows that the managers and staff ’s scored the most points for questions 1 and 8, while question 2 showed the fewest points scored. Questions 1, 5, and 8 had more than a 60%-response rate, and the other concepts were ranked as lower than the acceptable 60%. Comparison between managers and employees in terms of average percentage of correct answers involving the four concepts mentioned above demonstrates that managers, more than employees, came up with the correct answers.

Table 2: Percentage of Answers to Questions Related to TQM’s Eight Basic Elements

Concept	Percentage of correct answers by managers	Percentage of correct answers by staff
continuous process of improvement of services	93%	85%
focus on clients’ needs and satisfaction	52%	40%
management commitment	53%	55%
conflict resolution	57%	51%
quality and decision-making as regards quality	68%	72%
Quality	58%	46%
staff’s collaboration	73%	61%
continuing education	93%	58%
Average	69%	62%

Figures 1 and 2 illustrate the average percentage of questions related to the TQM eight basic elements. Answers by managers represented a 69%, while those by employees reached 62%.

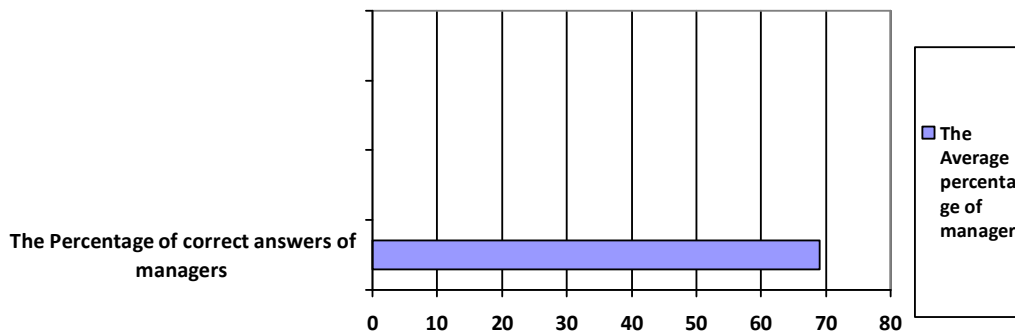


Figure 1: average percentage of questions related to the TQM eight basic elements of managers

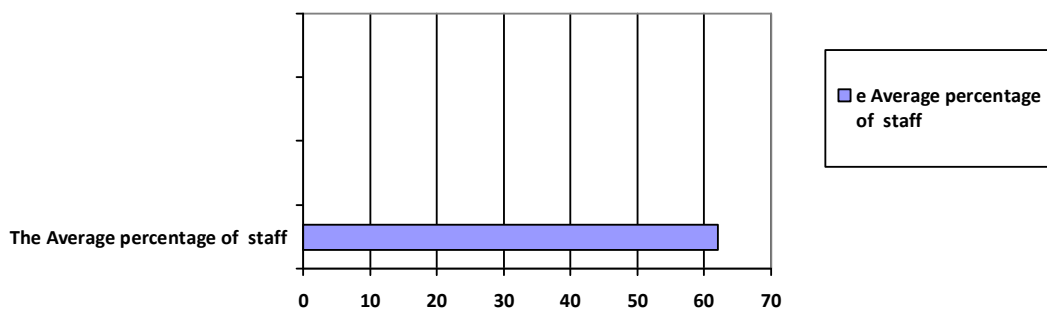


Figure 2: average percentage of questions related to the TQM eight basic elements of staff

Conclusion

In the managers and staff’s responses to one the questionnaire’s first eight questions, the result as to knowledge of TQM was 86.37% and 74.5%, respectively, which is more than acceptable (60%). Thus, the managers and staff’s knowledge is appropriate. Although the managers’ knowledge is better than that of employees, some TQM training

programs have been put into place, specifically the FOCUS PDCA from the beginning of 2001. This training was taken by both managers and staff at University of Kashan, and the staff at the Aran Bidgol Health Network. Training hours for managers (at least 100 hour per year) were more than the hours of training for employees (at least 40 hours per year) which is why the managers surpassed employees in terms of knowledge.

Average percentage of correct answers by managers and employees to questions 9 to 40, related to TQM's eight basic elements, was 69% and 62%, respectively, which is more than the minimum acceptable (60%).

Therefore, from the perspective of managers and staff, employing the TQM is possible; still, the managers are better prepared than the staff. As for customer-related factors, such as customer needs and satisfaction, management commitment and conflict resolution, the score was lower than the expected number. Focus on client by the health care provider is not good enough. That is, the organizations are not customer-oriented. The result is contrary to the ethics at Kashan University of Medical Science.

This conclusion leads to a question of priority. It is an important question; however, it is beyond the scope of the present study. Further attention and research in this area is nonetheless necessary. Given that the hospital managers and staff's knowledge and attitude was above the minimum acceptable assumed in this study, it is possible to employ TQM in the centers under consideration. However, as just stated above, further work needs to be done regarding management and staff in connection with customer-oriented areas.

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