

## Implementation of Total Quality Management and its Effect on Employees' Performance

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**Abstract:** Due to the growing prominence of total quality management (TQM) in health care, the present study conducted to identify the set of TQM practices for its successful implementation in healthcare hospitals.

The results of the present study will help the managers and practitioners to adopt TQM program successfully in their hospitals and will open new dimensions for other researchers in this area, contributing to the knowledge in enhancing the implementation of TQM philosophy.

The answers give a clear idea of the availability of the principle of total quality management in the Royal Care International Hospital (RCIH) and Omdurman Maternity Hospital (OMH) regard the involvement of people and process approach. The managers should be more interest in assessment tools to measure the implementing quality plans. The motivation of employees which is most important in employee commitment and organization success through their performance, and they should focus in application of total quality concepts to increase the satisfaction of customers internal & external. and the availability of the principle of total quality management in the RCIH and OMH regard the involvement of people and process approach. And by upgrading the level of professional performance, there will be a high level of medical care and thus we obtain customer satisfaction.

We found that there is a direct relationship between the levels of service performance provided and the extent of applying the total quality management which will automatically increase the customer satisfaction. And we notice that the employee was satisfied with what the overall quality concepts in RCIH and OM hospital have provided.

Conclusion: Efforts should be focused on motivate the employees depending on their performance and establishing effective assessment tools to measure the progress in quality plans implemented, also they are need more concerning in measuring the performance indicators of every department in the hospital.

**Word key:** Total Quality Management, Health Care System, Health Organizations, Quality Management Principles

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### I. Introduction:

Quality is the key component and success factor to any organization to increase organizational performance, productivity and improve employees' performance [1]. Due to the growing global competition in quality management principles, active quality management becomes highly important for leadership and management of the entire organization, where meeting customers' needs is the important key to organizational success [2].

TQM term describes the attitude, culture, and organization of any association or company; that attempts to offer consumers with services and products which serve their needs. This culture demands a certain amount of quality in all the phases of the operations. Processes get done properly from the first time, combined with processes of eradicating defects from operations (Hashmi, 2010). Managers and quality practitioners have well accepted this approach as a change management quality method which plays a crucial function in management development. Various researchers have affirmed TQM as a strategy to enhance flexibility, productivity, effectiveness, and competitiveness of a business to satisfy customers' demands as the source of sustainable competitive advantage for business organizations as a way of achieving excellence, building a right first-time attitude, acquiring efficient and dynamic business solutions, pleasing customers and suppliers, and beyond all as a method of intensifying organizational performance by a continuous increase in the activities of an organization [3,4]. Quality and performance management in healthcare settings becomes more demanding due to lack of effective methods for enhancing performance, leadership, accountability, managerial skills and poor strategic planning [5,6]. This, therefore, warrants effective quality management approach, such as TQM is implemented, assessed or monitored appropriately to improve competitiveness, effectiveness and flexibility [7].

These days, health organizations face many challenges that can be classified into four major areas: increases in the cost of health services, rapidly growing technology dependence, pressure on health organizations

to decrease costs and improve quality to cope with the international organizations that establish standards and give licenses [8,9], and finally satisfying patients' needs, a major demand requiring hospitals to maintain high quality services [10]. Such challenges force health planners to adopt a system that can manage health care in a measurable way to offer a high quality service, which is the aim of the quality management programs in hospitals [11].

One of the main objectives of hospital is to provide adequate care and treatment of its patients. Its principal product is medical, surgical and nursing services to the patient and its central concern is life and health of the patient. As a service organization, the hospitals need to recognize the importance of consumer satisfaction and relationship management. They need to develop better understanding of patient-provider relationship and established long-term patient-provider bond [12]. The organizations effort to measure the patient's satisfaction offers number of economic advantages such as retaining customers, reducing defections, sustaining competitive pressures, bringing new customers through referrals to them.

Patients come to the hospital to get cured of illness. Therefore, they have every right to expect and receive care, proper treatment and all necessary information. Hospital should be able to meet the expectations of the patients and patient parties which involve physical, mind and spiritual attention to the need and requirements of the patient. The patients in general develop loyalty towards provider based upon the experiences with their stay in the hospitals. Their interaction with the doctors, nurses, cleaners, gatekeepers, bill handlers have significant impact in forming impression of the hospital in stay. The level of satisfaction and perceived service quality influence the patient willingness to visit again the particular hospital. Quality of patient care has always been one of the most important factors in hospital performance. Quality in healthcare/hospitals requires adequately trained medical providers give appropriate treatment to the needy patients. Because research on the implementation of Total Quality Management (TQM) has been limited, particularly in developing countries, this study aims to find the effect of implementation of total quality management in health services sector and its impact on customer satisfaction.

## II. Research Methodology:

**Study design:** descriptive and analytical approach, which depends on the state of facilities services Sudanese regime applicable to the study of total quality management in addition to the statistical analysis of the questionnaire.

**Royal Care International Hospital – (RCIH):** Is private hospital, it is a multi-disciplinary hospital focusing on advanced health care services, in addition to the Center for Continuing Education and Research according to the latest advanced scientific methods, to present a very carefully care for patients built on the fundamentals of quality, cooperation, empathy, development and ethics.

**Omdurman Maternity Hospital – (OMH):** It a specialized hospital for the purpose of raising maternal and newborn care, as natural development for the midwifery school. The Omdurman maternity hospital is the largest hospital for gynecology and obstetrics at the level of Sudan.

**Sample size of the employees:**

Royal Care International Hospital Employees will participate in my study:

$$n_0 = \frac{(z)^2(p)(q)}{(d)^2}$$

$$z = 1.96 \quad p = 0.3 \quad q = 0.7 \quad d = 0.05$$

$$n_0 = 323$$

**Medical staff** =  $n_{strata} = \frac{n}{N} * n_0 = 600/1500 * 323 = 129$

**Workers** =  $700/1500 * 323 = 151$

**Administrative Staff** =  $200/1500 * 323 = 43$

Omdurman Maternity Hospital Employees will participate in my study:

$$n_0 = \frac{(z)^2(p)(q)}{(d)^2}$$

$$z = 1.96 \quad p = 0.2 \quad q = 0.8 \quad d = 0.05$$

$$n_0 = 246$$

**Medical staff** =  $n_{strata} = \frac{n}{N} * n_0 = 559/913 * 246 = 129$

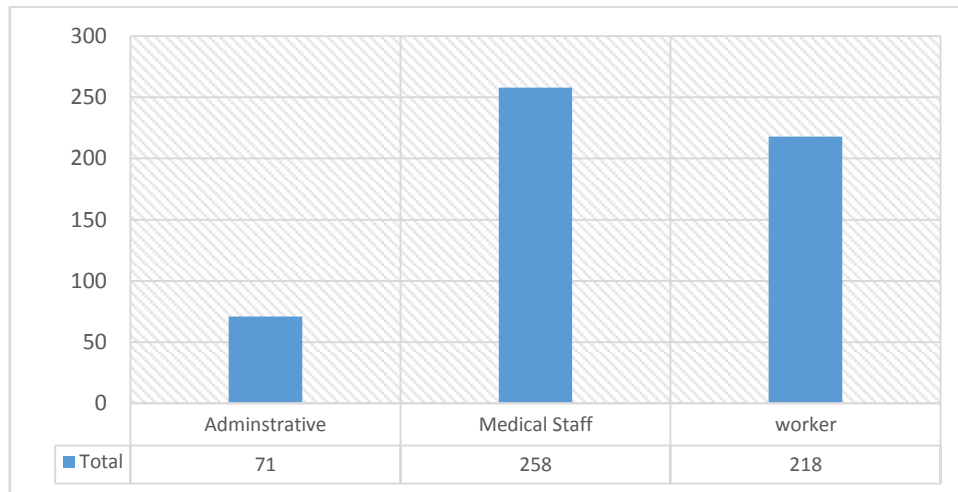
**Workers** =  $250/913 * 246 = 67$

**Administrative Staff** =  $104/913 * 246 = 28$

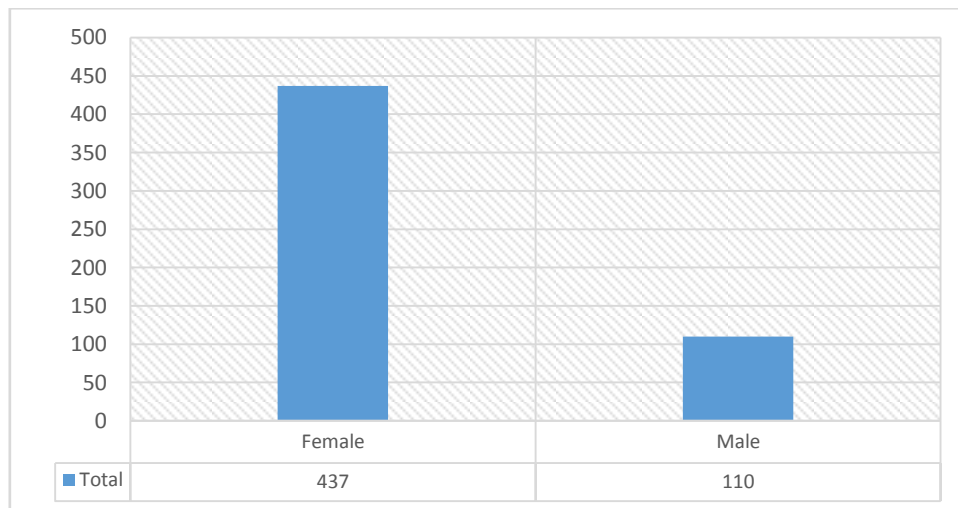
**Significance of the research:** To know the effect of the application of Total Quality Management in the **Royal Care International Hospital** (private sector) and **Omdurman Maternity Hospital** (Government sector) to improve the performance and the reflection as good service to increase the customer satisfaction.

**III. Results:**

A total of 547 questionnaires were delivered to two hospitals, the employee's distributed as 71 in administration (12.97), 258 as medical staff (47.17) and 218 workers (39.86) in both hospitals. According to gender distributed 437 females (79.89) and 110 males (20.11). Approximately 60% of the participants had an age less than 30 years old, about 28% less than 40 years old while about 10% bigger than 40 years old.



**Figure 1.** show Frequency distribution of all employee in both hospitals RCIH & OMH



**Figure 2.** show frequency distribution of all employee according to their gender

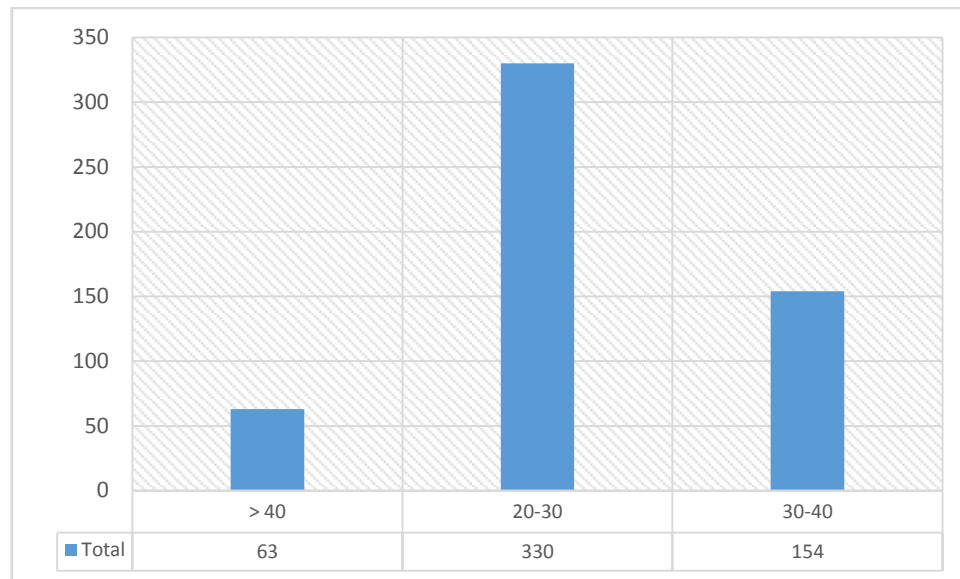


Figure 3. show frequency distribution of age for all employee

Table 1. show answer of all questionnaire questions in RCIH and OMH

Questions	Agree strongly		Agree		Neural		Disagree		Disagree strongly	
	RCIH	OMH	RCIH	OMH	RCIH	OMH	RCIH	OMH	RCIH	OMH
The hospital has a clear and specific vision	97	48	137	105	34	25	42	30	13	16
Representatives of all departments and employees participate in drafting the vision	36	19	168	112	43	26	61	48	15	19
There is a clear mission in the hospital and clearly defined and declared	53	27	186	116	53	38	18	26	13	17
Representatives of all departments and employees participate in drafting the mission	45	26	143	89	67	42	54	50	14	17
Leadership is working on activating the role of the Total Quality Management	56	35	156	102	57	31	43	36	16	20
All employees participate in the implementation of total quality management activities	51	33	171	105	43	28	35	36	23	22
The hospital provides all the resources necessary to implement quality programs	46	21	130	84	74	47	52	51	21	21
The proportion of the implementation of the quality plan in the hospital and a clear follow-up	40	18	144	94	65	37	58	58	16	17
There is a great benefit from the results of field research and quality workshops and programs in improving hospital performance	57	30	109	70	68	44	61	59	28	21
The hospital uses a variety of assessment tools to measure progress in implementing quality plans	38	23	112	75	44	30	106	74	20	22
The employees are motivated financially and morally	55	29	92	53	44	38	107	76	25	28
All hospital employees are involved in implementing hospital development plans	57	40	121	64	35	22	91	77	19	21
The existence of an effective and rapid mechanism to deal with complaints and suggestions	38	24	111	58	41	33	86	69	47	40
One of the advantages of the TQM methodology is finding performance indicators and how to measure them	47	28	151	78	48	37	59	63	18	18
Increased satisfaction of internal clients (employees) and external clients (customers) with the application	59	34	95	49	39	34	95	76	35	31

of comprehensive quality concepts										
The hospital's reputation improved externally after implementing the comprehensive quality programs	77	48	109	66	58	41	50	42	29	27
There is a clear contingency plan to distribute tasks and responsibilities to all hospital employees in crises	75	46	103	63	58	38	63	52	24	25
Total quality management has made optimal use of material and human resources	65	33	101	59	48	38	66	55	43	39
Total quality programs have contributed to reducing errors and improving processes	57	29	119	81	59	40	65	51	23	23
The hospital's financial performance has improved since the start of implementing the principles of total quality	59	25	87	58	71	50	54	52	52	39
The application of total quality has led to an improvement in the level of professional performance of workers, which has led to the provision of high level of medical care	63	39	90	61	68	39	64	53	38	32
Patients problems are dealt with seriously	65	41	114	80	56	31	50	43	38	29
There is support and promotion of morale and there is a commitment to career among workers	45	27	135	81	62	44	65	52	16	20
The level of performance of the services currently provided after the application of the overall quality is better than the previous period	42	19	121	84	82	52	60	47	18	22
In general, I am satisfied with what the overall quality concepts of the hospital have provided	60	26	124	86	25	20	86	65	28	29

#### IV. Discussions:

The findings of this study were discussed in relationship to the availability of a TQM unit and the extent of TQM principle implementation in main two hospitals at Khartoum state–Sudan.

Figure 1. shows frequency distribution of all employee in both hospitals RCIH & OMH were the total number of employee was 547 employee's distributed as 71 in administration, 258 as medical staff and 218 workers in both hospitals. The gender in the two hospital distributed to male and female as follow 437 females and 110 males (fig 2). The age group divided to three group 20-30, 30-40 and bigger than 40, were the employee in range 20-30 was 330, from 30-40 was 154 while the employee bigger than 40 was 60 as shown in figure 3. The first question in the employee questionnaire is The hospital has a clear and specific vision: in RCIH the majority of answers pointed to agree with percent 42.4%, while the OMH employees agree also with percent 46.8%.

Representatives of all departments and employees participate in drafting the vision: the answer at RCIH agree with percent 52%, also the OMH employees agree with percent 50%. The third question in the employee questionnaire is There is a clear mission in the hospital and clearly defined and declared: the answer in RCIH agree with percent 57.6%, while the OMH employees agree also with percent 51.7%

Representatives of all departments and employees participate in drafting the mission: in RCIH the most of them were agree with percent 44.3%, also the OMH employees agree with percent 39.7%. The answer of question 2 & 4 show that (RCIH) and (OMH) they are interested in participate their employees in drafting the vision & mission.

Leadership is working on activating the role of the Total Quality Management: the answer in RCIH was agree with percent 48.3%, also the OMH employees agree with percent 45.5%.

All employees participate in the implementation of total quality management activities: in RCIH the employees agree with percent 52.9%, while the OMH employees agree also with percent 46.8%. The seventh question is The hospital provides all the resources necessary to implement quality programs: in RCIH the majority of them answer with agree with percent 40.2%, while the OMH employees agree also with percent 37.5%. Through the answers to questions 6 & 7 it become clear to us the availability of the principle of total quality management in the (RCIH) and (OMH) regard the involvement of people and process approach.

The proportion of the implementation of the quality plan in the hospital and a clear follow-up: in RCIH the majority of answers agree with percent 44.6%, also the OMH employees agree with percent 41.9%. There is a great benefit from the results of field research and quality workshops and programs in improving hospital performance: in RCIH the employee agree with percent 33.7%, also the OMH employees agree with percent

31.2%. We conclude from the above that the (RCIH) and (OMH) have researches that support continuous improvement programs. The tenth question is The hospital uses a variety of assessment tools to measure progress in implementing quality plans: in RCIH the answer agree with percent 34.7% then the answer disagree with 32.8% also the same with OMH employees the agree with percent 33.4% and the disagree with percentage 33%.

The employees are motivated financially and morally: the answer at RCIH was disagree with percent 33%, also at OMH employees disagree with percent 33.9%.

From the above that the (RCIH) and (OMH) weren't concerned about motivation the employees which is most important in employee commitment and organization success through their performance.

The twelfth question is All hospital employees are involved in implementing hospital development plans: in RCIH the majority of answers was agree with percent 37.4%, while the OMH employees disagree with percent 34.3%.

The existence of an effective and rapid mechanism to deal with complaints and suggestions: the employees in RCIH agree with percent 34.4%, while the OMH employees disagree with percent 30.8%. One of the advantages of the TQM methodology is finding performance indicators and how to measure them: the answer's in RCIH agree with percent 46.7%, also the OMH employees agree with percent 34.8%. The fifteenth question is Increased satisfaction of internal clients (employees) and external clients (customers) with the application of comprehensive quality concepts: in RCIH the answers agree & disagree was equal with percent 29.4% for each, while the OMH employees disagree with percent 33.9%. From the above that the (OMH) & (RCIH) must focus in application of comprehensive quality concepts to increase the satisfaction of customers (internal & external).

The hospital's reputation improved externally after implementing the comprehensive quality programs: the employees answer in RCIH give similar answer agree & disagree with percent 33.7% for each, while the OMH employees agree with percent 29.4%.

There is a clear contingency plan to distribute tasks and responsibilities to all hospital employees in crises: the employees in RCIH found that the ratio of agree & disagree was equal with percent 31.6% for each, while the OMH employees agree with percent 28.1%. The eighteenth question is Total quality management has made optimal use of material and human resources: the employee answer in RCIH was agree with percent 31.2%, also the OMH employees agree also with percent 26.3%.

Total quality programs have contributed to reducing errors and improving processes: the employees in RCIH were agree with percent 36.8%, also the OMH employees agree with percent 36.1%. Through the answers to questions 18 & 19 it became clear to us the availability of the principle of total quality management in the (RCIH) and (OMH) regard the involvement of people and process approach.

Question twenty is The hospital's financial performance has improved since the start of implementing the principles of total quality: the employees answer in RCIH were agree with percent 26.9%, also the OMH employees agree with percent 25.8%.

The application of total quality has led to an improvement in the level of professional performance of workers, which has led to the provision of high level of medical care: the employees in RCIH agree with percent 27.8%, also the OMH employees agree with percent 27.2%. And by upgrading the level of professional performance, there will be a high level of medical care and thus we obtain customer satisfaction.

Patients problems are dealt with seriously: the answer of employees in RCIH agree with percent 35.3%, also the OMH employees agree with percent 35.7%. Question twenty-three is There is support and promotion of morale and there is a commitment to career among workers: in RCIH agree with percent 41.7%, also the OMH employees agree with percent 36.1%.

The level of performance of the services currently provided after the application of the overall quality is better than the previous period: the employee answers in RCIH agree with percent 37.4%, also the OMH employees agree with percent 37.5%. We found that there is a direct relationship between the levels of service performance provided and the extent of applying the total quality management which will automatically increase the customer satisfaction. Question twenty-five in the employee questionnaire is In general, I am satisfied with what the overall quality concepts of the hospital have provided: the answers from the employees in RCIH agree with percent 38.3%, also the OMH employees were agree with percent 38.4%. From the above that the majority of RCIH & OMH employee they were satisfied with what the overall quality concepts of the hospital have provided.

## **V. Conclusion:**

Finally, the results of the present study will help the managers and practitioners to adopt TQM program successfully in their hospitals and will open new dimensions for other researchers in this area, contributing to the knowledge in enhancing the implementation of TQM philosophy.

Efforts should be focused on motivate the employees depending on their performance and establishing effective assessment tools to measure the progress in quality plans implemented, also they are need more concerning in measuring the performance indicators of every department in the hospital.

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