

Contributions of Patients Satisfactions for Improving the Health Services According to The Total Quality Management at The Al-Mawani Teaching Hospital, Basra, Iraq

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Abstract

The aim of this study is to identify the relationship between patient satisfaction in improving health services through the use of elements of comprehensive quality management in Al-Mawani Teaching Hospital in Basra, which is one of the hospitals with a capacity of 400 beds, where a sample of 612 inpatient, representing 10%, was taken from a population of 6102 patients. Recumbent for the first semester of 2024. Data was collected using a questionnaire. The data was analyzed by SPSS and Minitab statistical software and the results were showed that the Health services at Al-Mawani Teaching Hospital was satisfied by patients according to the five factors of the Total Quality Management (TQM) so, it can be concluded that the TQM factors affected the Health service at the hospital under study.

1.Introduction

Total Quality Management is defined as “a management philosophy concerned with people and work processes that focuses on customer satisfaction and improves organizational performance” (Sadikoglu et al, 2014). Over the past few decades, quality pioneers such as Juran & Gryna, 1988 and Crosby, 1986 have developed and Deming, 1980 and Ishikawa, 1985 the initial building blocks of total quality management, so they proposed certain proposals in the field of total quality management, which were widely accepted all over the world (Lalit et al, 2020). Know a day many governmental and private health institutions (hospitals) at the regional and local levels have witnessed a significant development in the quality of health services. At the present time, as a result of its adoption of the application of the philosophy of quality management, as a strategy aimed at continuous improvement in the level of quality of health services provided to beneficiaries (patients). The goal of the senior management in the Iraqi Ministry of Health, especially the Basra Health Directorate, is that it aspires to provide the best health services to beneficiaries by adopting the application of quality management in its institutions. Therefore, their support for researchers played a major role in choosing the subject and field of the study. Through their research titled “ Contributions of patients satisfactions for improving the Health Services according to the Total Quality Management at the Al-Mawani Teaching Hospital, Basra, Iraq” the researchers will attempt to prove that applying the elements of Total Quality Management correctly will lead to improving health services by applying a questionnaire list for hospitalized patients that approved by the Ministry of Health to evaluate the performance of hospitals, including, Al-Mawani Teaching Hospital in Basra.

2. Research Methodology

This research is a cross-sectional study which was conducted in Al-Mawani Teaching Hospital which represents the research sample for the period from 1st of January 2024 to 31th of March 2024. This topic was chosen due to the researcher's interest in applying the elements of total quality management to improve the health services of these institutions, as well as identifying the reality of the total quality management system in the hospital sample of the research. The researchers chose the Al-Mawani Teaching Hospital on the basis of the criterion of the large size of the hospital (400 beds), its distinguished location in the governorate, as well as the large number of visitors it has and the cooperation of its employees with researchers from all administrative levels.

2.1 Research problem:

The problem of the Research was represented by the following questions:

- 1- What is the Contributions of patient's satisfactions for improving the Health Services according to the Total Quality Management at the Al-Mawani Teaching Hospital in Basra?
- 2- Is there a relationship between the elements of Total Quality Management and health service improvement in Al-Mawani Teaching Hospital in Basra?

2.2 The importance of the Research:

- 1- Importance to society through improving the level of health services provided to them, providing high-quality services, fulfilling their desires, and satisfying their health needs.
- 2- The importance for the health sector: Choosing Al-Mawani Teaching Hospital provides an action plan for the rest of the hospitals in the Basra Health Directorate to improve the quality of health services in them.

2.3 Objectives of the Research:

The Research aims to achieve the following:

- 1- Diagnosing health service problems at Al-Mawani Teaching Hospital.
- 2- Analyzing the reality of the elements of Total Quality Management in the Al-Mawani Teaching Hospital from the researcher's point of view.
- 3- Finding the role of the elements of total quality management as an independent variable in improving health service in Al-Mawani Teaching Hospital as a dependent variable.
- 4- Providing recommendations based on the results of the study to decision makers.

2.4 Data collection

In this Research, the researchers used a questionnaire list for hospitalized patients that approved by the Ministry of Health to evaluate the performance of hospitals, including, Al-Mawani Teaching Hospital in Basra. This questionnaire was made periodically every three months (quarterly) and the sample was taken represent at least (10 %) of the hospitalized patients in the hospital wards (this percentage is determining by the ministry of health). We chose the first quarter of 2024 year begun from 1st of January 2024 to 31th of March 2024, the number of hospitalized patients during this quarter were (6102). After obtaining an official approval, (612) forms were distributed to hospitalized patients in the research sample, and all of them were recovered, and the percentage was (100%). The questionnaire was distributed by the researchers and the patient were asked to answer freely and honestly. A guarantee of anonymity was provided. The patient was told that the information was for scientific research only. The questionnaire aimed to collecting data on the socio-demographic characteristics: age, sex, education qualification, job and other questions about patient satisfaction. For the (Illiterate patients and some patients who can read & write) they need the help of the person accompanying the patient for writing the patients opinions in the forms.

2.5 The hypothetical model building

Systematic treatment of the study problem in light of its theoretical framework and field implications requires designing a hypothetical diagram (designed by the researchers) that includes the independent variables and dependent variables. Figure (1) shows the hypothetical diagram of the study model.

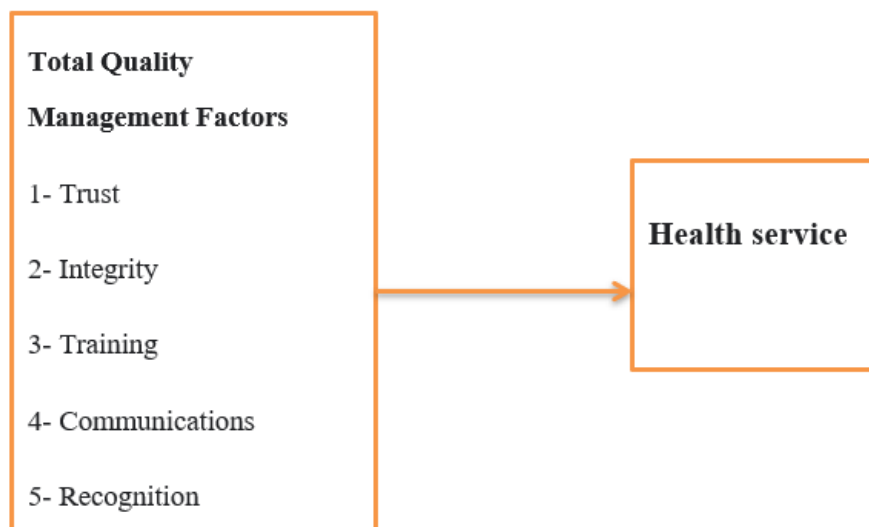


Figure (1): The relationship between the TQM and Health Service

2.6 Questioner designing

In this Research, the researchers used a questionnaire list for hospitalized patients that approved by the Ministry of Health to evaluate the performance of hospitals, the questioner consists of first part, a general information about the patients such as age, gender, qualification, jobs and second part were information about the satisfaction of the patients. The researchers divided the second part questions according to the five factors of the TQM which are trust, integrity, training, communication, recognition and answers for these questions are: patients were satisfied, somewhat satisfied and not satisfied by the health services. The following are the questions of second part according to the five factors of the TQM used in this research:

1. The element of trust include the following questions:

- The hospital staff has the knowledge and experience to deal with your medical condition.
- The hospital is committed to the appointment it sets for you for examination or review.
- You advise your friends and relatives to visit the same hospital.
- Health services are provided fairly and without discrimination.
- Accuracy in calculating the financial amounts for your hospitalization costs.

2. Integrity element include the following questions:

- The hospital's response to your medical condition (immediately) and without delay.
- The patient lounges are fully prepared for all medical cases.
- Questions about your medical condition are answered.
- The employees respond to your complaints and take them into consideration.
- Visit medical and health staff regularly and continuously.

3. Training component include the following questions:

- The quality of food provided to you is proportional to your medical condition (quantitative and qualitative).
- The staff working in the hospital shows high skill in performance.
- Did the workers ask you for tips in the form of tips, directly or indirectly?

- Laboratory, x-ray and ultrasound services are available at the hospital.
- The medications and medical supplies that were prescribed to you are available inside the hospital.

4. Communications component include the following questions:

- Your needs are met in a spirit of friendliness and kindness.
- The doctors communicate with you well.
- The nursing staff communicated well with you.
- The extent of personal interest in your medical condition.
- Community customs and traditions are considered in the details of health service provision.

5. Recognition element include the following questions:

- The modernity and suitability of the medical equipment available in the hospital for examination and work.
- Signs inside the hospital clearly indicate the locations of services and health services.
- The cleanliness of the hall in which he resides.
- Amenities are available (water, ventilation, heating, and no noise)
- Bed sheets are changed regularly and regularly when needed.
- The bathrooms are clean and have soap and water.

2.7 Research Limits:

The research limitations can be summarized, such as:

- 1- This research was done only in the Al-Mawani Teaching Hospital, so it is recommended that future research cover other hospitals.
- 2- This research specified only element of total quality management.
- 3-This research has implemented a cross-sectional design using a questionnaire to collect data, it should be noted that longitudinal research design can be used by other studies to withdraw evidence of causality between factors over time.

2.8 Ethical consideration

The official permissions of the Basra health directorate were done, informed consent was obtained from all participants. An assurance of anonymity was provided. The patients were told that the information is for scientific research only.

3. Theoretical Side

3.1 Patient satisfaction

Patient satisfaction is a patient's perception of care compared to expected care (Farahani et al., 2014). Patients' perceptions of the quality of health services provided to them are considered one of the most important means of evaluating and improving the level of services. Therefore, this concept has been studied in many types of studies. Researchers are usually interested in the concept of customer satisfaction in general and patient satisfaction in particular, as a result of comparing the recipient's experience with his or her expectations. Initial expectations are the main determinant of satisfaction, and if perceived service quality falls below expectations, the result will inevitably be dissatisfaction with the service (Tam, 2007). (Kotler,2014) defined satisfaction as feeling happy because one has something or has achieved something of value. According to (Mulisa et al 2017), patient satisfaction is a set of patients' attitudes and perceptions towards health services. (Manzoor et al. 2019) defined patient satisfaction as "the state of pleasure or happiness that patients feel while using a health service." The study by (Naik et al. 2010) showed that patient satisfaction is the degree of congruence

between the customer's expectations and the perceived performance of the service provided to him. (Zaineldin, 2006) argues that patient satisfaction can be measured by collecting subscale scores for characteristics associated with the experience of receiving health care. While (Oliver's, 1981) definition, (Zaineldin, 2006) defined patient satisfaction as an assessment of the extent to which the health service meets the patient's expectations and preferences. (Zaineldin, 2006) added that according to psychological theories, the patient's evaluation of certain situations is related to personal feelings and incompatibility between desires and outcomes, as well as individual preferences and social comparisons. (Naidu, 2009) also defined patient satisfaction as an evaluation of the dimensions of health care; It can be predicted by factors associated with such care, such as empathy, reliability, and responsiveness. It can also be evaluated through medical procedures, the availability and continuity of services, the patient's confidence in the level of service provided to him, and the efficiency of service provision. Regarding the assessment of patient satisfaction, the study by (Atinga et al., 2011) used one phrase to make this evaluation, which was embodied in asking patients: "Are you satisfied with the level of services provided in the hospital?" (Kang and James, 2004) used the following statements to evaluate patient satisfaction: "The service I received was not what I expected," "I am satisfied with my decision to use this service," "Using this service was a good experience for me," "My experience with this service for me, this place will never happen again."

3.2 Total Quality Management (TQM)

Total Quality Management means managing all elements of organizational processes, practices, systems, methodologies and all stakeholders. The main goal of total quality management is to create a climate in the organization where all resources are used creatively and effectively, which gives employees confidence in management (Khurniawan et al.,2020).

The application of total quality management is a form of strategy to compete with the improvement of all aspects of the organization such as products, people and the environment, through the implementation of total quality management, as the organization's management will focus more on implementing continuous improvement so that the organization becomes better, when applying total quality management to the organization's strategy, the strategy will always change every period, changes in the very frequent strategy will cause confusion to the current human resources, in addition to that the management will always change its work system and retrain it according to the goals to be achieved (Arifin et al.,2022).

3.3 Elements of total quality management

There are eight elements of Total Quality Management: (Sunil et al.,2021), (Yardan et al.,2018), (Toth&Jonas.,2014)

1- Ethics: ethics is basically the principle of discipline, the discipline of good and evil in any situation. Multifaceted issues represent the organizational level and individual level of ethics. Organizational ethics is a comprehensive code of professional ethics that applies to all employees, and they are expected to follow it closely in carrying out their work. Individual ethics include personal rights or errors.

2- Integrity: total quality management has an element of integrity that implies honesty, morals, values, impartiality, respect for facts, and sincerity. The integrity feature is what clients (internal or external) expect and deserve to receive. Lack of integrity is perceived as duplicity and it is believed that total quality management would not survive in an environment of duplicity.

3- Trust: after studying ethics and integrity, the role of trust is very important. Trust is a by-product of integrity and ethical conduct. Without trust, the total quality management framework cannot be built. Trust ensures complete participation from different members. It allows for accountability that encourage the pleasure of ownership and encourages commitment.

4- Training: training has a strong relationship with the productivity of employees. The better the training, the more productive workers become. Training employees periodically instils thoroughness in the implementation

of total quality management. The departmental level of implementation of total quality management is undertaken by the supervisors. They also help in making sure their employees gain better knowledge.

5- Teamwork: in order to use resources effectively, it is necessary to work as-a team. Teamwork is a crucial aspect of total quality management, which is essential in making a business successful. Through the use of this tool, the company will receive faster and more efficient solutions to problems. Teamwork helps in getting better and more permanent solutions to improve various processes and operations. 6- Leadership: this is perhaps the most important element of total quality management. Without leaders, the organization cannot stand up. Leadership is omnipresent in the organization. A manager is expected to provide inspirational goals and vision, and at the same time define strategic steps to move forward in the business, which are comprehensible for all the employees, which are some of the requirements of leadership in total quality management. For total quality management to succeed in the business, the supervisor must commit to directing its employees.

7- Recognition: recognition should be provided for the suggestions made, as well as for the achievements of teams and individuals. This gives employees the morale boost to work more efficiently. Employees want to receive recognition for themselves and their teams. 'Detecting and recognizing employees are the most important job of a supervisor.' As people are recognized, their self-esteem, productivity, quality, and the effort required can change significantly. Recognition is the most effective when given to employees immediately after their actions.

8- Communications: communication unites everything. It means connectivity for every person in the organization. From the foundation to the roof of the total quality management house, everything is joined by the strong mortar of communication. It acts as a dynamic link between all the elements of total quality management. To reinforce communication, it is important to maintain a strong relationship of ideas between the sender and the recipient. The success of total quality management requires communication among all the stakeholders of the organization, including suppliers which are external to the organization.

3-4 Basic requirements for successful implementation of total quality management:

1- Commitment: it requires senior management to recognize the basic concepts and requirements of the total quality management philosophy, to be trained, to have a correct vision and policy for its application and to be committed to applying it, and it has the effect of providing full support to all employees at the administrative levels to achieve the goals of the organization. (Cases, 2011)

2- Culture: culture is a step for successful implantation of TQM. Therefore, before changes take effect in the culture and attitude of the organization, suitable training and awareness is necessary. (Sunil et al.,2021)

3- Continuous improvement: it as a strategic framework for the efforts made to improve the quality of services and the quality of employees and products that aim to satisfy customers. (Supriyanto et al.,2019)

4- Focus on the customer: a customer - oriented approach ensures the intention of the organization is to attain perfection with no defects and giving comprehensive satisfaction to the end-user. The users could be internal to the company or external. :(Sunil et al.,2021)

5- Control: a process control exercise through monitoring and regular checks ensures no deviation from the intended course of implementation. :(Sunil et al.,2021)

3-5 Quality Measurement Tools

It is well known to all organizations around the world that the initial and essential stage for improvement is measurement. Emphasis on using data to make decisions is the heart of all quality initiatives (Martinez et al.,2015). Tool is a set of methods and techniques that are used to measure and evaluate the quality of services. Graphs, Root Cause Analysis, Sampling, Deviation Analysis, Checklist, Manufacturing Drawings are just some of the common tools for measuring quality, and there are many others used in this field. Appropriate tools should be selected according to the purpose and nature of the product or service.

3-6 Health service

Health system includes a complex set of structural relationships between populations and institutions that have an impact on health .(Lambrini et al.,2021) Health institutions are organizations that need to implement the quality system for a comprehensive way of dealing with people's lives and any mistake or neglect that will cause death or increase the suffering of patients .(Saghiro, 2012) Health services are that part of the health system, which focuses specifically on the provision of health care services in the society.(Lambrini et al.,2021)

3-7 The Quality in Health Services

The concept of quality of health care means different things to different stakeholders involved in the health care system. (Pai &Chary, 2016) The quality of healthcare is one of the most frequently mentioned concepts in health policy principles and is currently high on the agenda of policy makers. (Bass et al, 2019) At the international level, quality is receiving increasing attention in the context of the Sustainable Development Goals. (SDGs), as they include the urgent need to achieve global health coverage, including access to qualitative basic health care services and access to safe, effective, qualitative, and affordable basic medicines and vaccines for all. These positions are also reflected in the World Health Organization (WHO) reports published in 2018, which constitute a handbook of national quality policies and strategies and a guide facilitating a global understanding of quality as part of global health coverage aspirations. (WHO,2018)

3-8 The importance of Quality in Health Services

Quality is one of the main factors for business excellence because it has a significant impact on the sustainability of the organization, and is part of its strategy to maintain customer loyalty, as well as improve overall performance. (Rombe &A. Tolla,2016)

Some researchers believe that the importance of quality of service is highlighted by the following:

- 1- The quality of customer service affects the development of the comprehensive capabilities of workers.
- 2- The quality of customer service affects the employment of employees.
- 3- The quality of customer service was linked to a certain degree with the satisfaction of the beneficiaries of the organization's services.
- 4- The quality of customer service is linked to the self-initiative of the employees of the organization. (Zeng, 2018)

3-9 The dimensions of Quality in Health Services

Patient satisfaction is a manifestation of the patient's feelings and the level of feelings that arise as a feedback response from the health services they receive. Satisfaction will be achieved if the patient's expectations are met by the reality of the services they receive. There are 5 dimensions that represent the patient's perception of the quality of health services, namely:

- 1- reliability which measures the ability to provide services as promised accurately and reliably.
- 2- responsiveness, namely the ability to provide services as quickly as possible.
- 3- assurance associated with providing a sense of security and trust to patients.
- 4- empathy, namely the ability to give sincere personal attention to patients.
- 5- tangible where service providers are required to be able to display maximum resources in their services both in terms of equipment and service providers. (Handayani , 2016)

4. Data Analysis

4.1 descriptive statistics of the patient's demographic data

Statistical description data was obtained by applying SPSS software version 26, in tables (1) and (2) demographic information for patients under study was shown

Table (1) Patients demography statistical description

	N	minimum	maximum	mean		std. deviations
	statistics	statistics	statistics	Statistic	std. error	statistics
Age	612	1	5	3.68	.045	1.105
Sex	612	1	2	1.34	.019	.476
Education	612	1	6	2.56	.057	1.416
Job	612	1	5	2.45	0.53	1.316
Knowledge	612	1	3	1.18	.017	.410

Table (2) demography analysis

Sequence	Indicator	Frequency	Percentage
Age			
1	Less than 20	24	3.9 %
2	20-29	77	12.6 %
3	30-39	129	21.1 %
4	40-49	225	36.7 %
5	Larger than 50	157	25.7 %
Gender			
1	Male	401	65.5 %
2	Female	211	34.5 %
Educational qualification			
1	Illiterate	194	31.7 %
2	Read & write	137	22.4 %
3	Secondary certificate	109	17.8 %
4	Diploma	91	14.9 %
5	Basic university	78	12.7 %
6	Higher education	3	0.5 %
Job			
1	Housewife	127	20.8 %
2	Winner	322	52.6 %
3	Student	11	1.8 %
4	Employee	65	10.6 %
5	Retired	87	14.2 %

4.2 Output data description

1- age character:

- The first age group is “under 20 years old”, which includes (24) patients. These individuals represent (3.9 %) of the total sample, it was smallest group in the sample.
- As for the second age group, “20-29 years” it includes (77) patients, representing (12.6 %). This category represents a slightly larger percentage compared to the previous category.

- The age group “30-39 years” includes (129) patients, who represent (21.1 %) of the sample. This category of larger percentage compared to the previous categories.
- The age group “40-49 years” includes (225) patients, constituting (36.7 %) of the sample. and it is the most common group in the sample.
- Finally, the age group “over 50 years” includes (157) patients, constituting (25.7 %) of the sample. This suggests that older individuals are more present in the sample.

2- gender character:

There are (401) males, constituting (65.5 %) of the sample, compared to (211) females, constituting (34.5 %) of the sample. It is clear from these data that the sample contains a greater proportion of males than females, with a ratio of approximately two-thirds for males and one - third for females.

3- educational qualification character:

- In terms of educational qualification, the largest category is “Illiterate”, which includes (194) patients, constituting (31.7 %) of the sample. This means that nearly third of the sample cannot read and write.
- The second category is “reads and writes” and it includes (137) patients, constituting (22.4 %) of the sample, which means knows how to read and write without obtaining formal educational certificates.
- The group holding a “secondary certificate” includes (109) patients, constituting (17.8 %) of the sample. This category represents a relatively smaller percentage compared to the previous categories.
- The “Diploma” category includes (91) patients, who constitute (14.9 %) of the sample. This percentage is lower than in the secondary certificate category.
- As for the “Basic university” category, it includes (78) patient, constituting (12.7 %) of the sample. This category smaller than percentage of diploma and secondary certificate holders.
- Finally, the “higher degree” category includes only three patients, constituting (0.5 %) of the sample, indicating the paucity of those with higher degrees.

4- Job character:

- In terms of occupation, the largest category is “Winner”, which includes (322) patient, constituting (52.6 %) of the sample. This percentage represents approximately half of the sample. This means that half of the sample earns their livelihood from various sources.
- The second category is “housewife”, and it includes (127) patient, constituting (20.8%).
- As for the “student” category, it includes only (11) patient, constituting (1.8 %) of the sample. This category represents a very small percentage of the sample.
- The “employee” category includes (65) patient, who constitute (10.6 %) of the sample, which means that the percentage of employees in the sample is not large.
- Finally, the category “retired” includes (87) patient, constituting (14.2 %) of the sample, indicating a moderate proportion of retired in the sample

4.3 Hypotheses tests:

In order to conclude whether patients are satisfied by the hospital services under study according to the factors of the TQM which lead to satisfy the objective of this study and then we can conclude whether the TQM will affect the health services, we have to apply the statistical hypotheses tests,) Starnes and Tabor, 2018), the theory of this tests can be summarized as follows

Null Hypotheses = patients are not satisfied by the Health services according to the TQM factors

Alternative Hypotheses = patients satisfied by the Health services according to the TQM factors

we reject the null hypotheses if the calculated t statistics was greater than tabulated t, this statistically can be written as follows

$$H_0 = 1$$

$$H_a > 1$$

at 97.5 % confidence limits, t-tests were calculated for all the 5 TQM factors by using Minitab statistical software as shown in table (3)

It can be shown that all calculated t – statistics were greater than the t in the table with 97.5% confidence limits and degree of freedom= 611

We reject H_0 and accept H_a for all TQM factors and can be concluded that the patients were satisfied by the health services according their answer for all the TQM factors and this will lead that TQM affected the health services at Al Mawani teaching hospital.

Table (3) One side - One sample T tests 97.5% confidence level

Ho: $\mu = 1$					
Ha: $\mu > 1$					
	N	mean	std deviation	T value	P- value
trust	612	1.206	.15742	18.95	0.000
integrity	612	1.1137	.17655	15.94	0.000
training	612	1.0859	.18116	11.46	0.000
communication	612	1.0984	.21145	11.51	0.000
recognition	612	1.1539	.25206	11.51	0.000

5. Discussion

The results of this study showed that the Health services at Al-Mawani Teaching Hospital was satisfied by patients according to the five factors of the Total Quality Management (TQM) so, it can be concluded that the TQM factors affected the Health service at the hospital under study. These results were reinforced by a study in Libya which their results showed a statistically significant impact of total quality management element on the quality of healthcare services at the Tripoli Medical Center in Libya. (Abduljaleel, R, 2023)

Also, other study concluded that the philosophy of total quality management has become important in many health institutions, as it gives it another dimension, as it focuses on meeting the patient's needs and satisfying his declared and undeclared desires and expectations, in addition to creating an integrated state in the organizational structure between activities and functions and adopting one team to start. In working with the least errors and achieving the maximum gains at the lowest costs, this requires providing, in the first place, the support of senior management, conviction in comprehensive quality management as a modern administrative approach, and working to spread the culture of comprehensive quality at all levels and among all employees. (Belmerdassi, 2020)

6. Conclusions and recommendations

5.1 Conclusions:

1- There is high confidence among hospitalized patients in the procedures of workers at the Al-Mawani Teaching Hospital in Basra.

2- There is a very high level of staff integrity in dealing with patients hospitalized at Al-Mawani Teaching Hospital in Basra.

- 3- There is high communication between patients hospitalized and workers at all levels at Al-Mawani Teaching Hospital in Basra.
- 4- There is satisfaction by patients hospitalized with the standards set regarding equipment, general cleanliness, and all facilities at the Al-Mawani Teaching Hospital in Basra according to the TQM
- 5- This study is shown that TQM affect the health services at the Al- Mawani Teaching Hospital

5.2 Recommendations:

Based on the conclusions, set of recommendations can be were stated which are:

- 1- Continues updating of total quality management guides to serve as a road map for the hospital's work.
- 2- build more effective training programs for hospital workers because of the training has a strong relationship with employee productivity.
- 3-This research was done only in the Al-Mawani Teaching Hospital, so it is recommended that future research cover other hospitals in the region.
- 4-This research has implemented a cross-sectional design using a questionnaire to collect data, so it is recommended longitudinal research design to be used by other studies to withdraw evidence of causality between factors.

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