The Scientific Journal of University of Benghazi

www.sjuob.uob.edu.ly

The Role of Total Quality Management (TQM) in Improving the Health Services Provided at the Benghazi Medical Center (BMC)

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Received: 15 / 11 / 2020; Accepted: 31 / 12 / 2020

الملخص:

في أماكن الرعاية الصحية ، يتزايد حث العملاء / المرضى على جودة الخدمات. أصبحت إدارة الجودة والأداء في أماكن الرعاية الصحية أكثر تطلبًا بسبب عدم وجود طرق فعالة لتعزيز قيادة الأداء والمساءلة والمهارات الإدارية وضعف التخطيط الاستراتيجي. ولذلك ، فإن هذا يستدعي تنفيذ نهج فعال لإدارة الجودة ، مثل إدارة الجودة الشاملة (TQM) ، أو تقييمه أو رصده بشكل مناسب لتحسين القدرة التنافسية والفعالية والمرونة. أجريت هذه الدراسة الوصفية على (117) مريضا من مختلف الأقسام السريرية للمرضى الذين تم ادخالهم الي مركز بنغازي الطبي (BMC) ، ليبيا ، خلال الفترة من يونيو إلى مارس 2020. تم طرح أسئلة علي جميع المرضى من خلال نموذج الاستبيان و تم استخدام الوزن النسبي في الإحصاء لتوضيح أهمية كل محور وتأثيره على جودة تقديم الخدمة من وجهة نظر المرضى والاهتمام بها من خلال إدارة الجودة الشاملة. تبين أن (87٪) من المرضى كانت مدة إقامتهم من (2-9 أيام) والوزن النسبي هو متوسط "الحصول عليها في مكتب الاستقبال" (4.2) ، بينما ضعيف من" غرفة الانتظار " (3.9). وكان الوزن النسبي لرأي المرضى حول الفحوصات والتحليلات الإشعاعية متوسط ، وجودة خدمة معتدلة من وجهة نظر رأي المريض الخلاصة: هناك مستوى منخفض من الخدمات الصحية الجيدة التي تقدمها المستشفيات العامة ، ونقص في الخدمة التي يقدمها التمريض للمرضى.

الكلمات المفتاحية:

الرعاية الصحية، إدارة الجودة الشاملة، رضا المرضى.

Abstract

In healthcare settings, clients/patients urge for quality in services have been increasing. 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. This, therefore, warrants, effective quality management approach, such as Total Quality Management (TQM) , is implemented, assessed or monitored appropriately to improve competitiveness, effectiveness and flexibility.This descriptive study was conduct on (117) patients from various clinical departments of inpatients admitted to Benghazi Medical Center (BMC), Libya during period from Jun to March 2020. All patients were asked questions through the questionnaire form. The relative weight was used in the statistics to clarify the importance of each axis and its effect on the quality of service provision from the patients' point of view and attention to it through the total quality management.It was found that (87%) of patients were their length of stay from (2-9 days). The relative weight is the average of "receive it at the reception desk" (4.2), while is poor of "waiting room" (3.9). The patients 'opinion about radiological examinations and analyzes obtained with a moderate average relative weighted, and moderate service quality from patient opinion view .There is a low level of quality health services provided by public hospitals, and a deficiency in the service provided by the nursing towards the patients.

Keywords: Health services , total quality management, patients satisfaction .

1. INTRODUCTION

Quality has become one of the most important factors in global competition today. Intensifying global competition and increasing demand by customers for better quality have caused more and more companies to realize that they will have to provide quality product and /or services in order to successfully compete in the marketplace. (1)

Quality management has become an important issue in healthcare organizations (hospitals) during the last couple of decades.(2)

The dimensions of quality are technical competence, accessibility, effectiveness, good relations, efficiency, continuity safety and amenities, realization and development with a focus on Inspection to Quality Control, then to Quality Assurance, and finally to TQM.(3)

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.(3)

2. TOTAL QUALITY MANAGEMENT (TQM) :

In healthcare services, there are three definitions distinguished TQM from other approaches:

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One is that TQM is a "Comprehensive strategy of organizational and attitude change for enabling personnel to learn and use quality methods, in order to reduce costs and meet the requirements of patients and other customers.

A second definition by Donabedian refers to quality as "the maximization of patient's satisfaction considering all profits and losses to be faced in a healthcare procedure"[(1)].

TQM is a management method: "TQM/CQI – Continuous Quality Improvement – is about two things: a management philosophy and a management method". They propose four distinguishing functions", which are often defined as the essence of good management, which includes:

- Empowering clinicians and managers to analyze and improve process.
- Adopting a norm that customer preferences are the primary determinants of quality and the term "customer" includes both the patients and providers in the process.
- Developing a multidisciplinary approach which goes beyond conventional departmental and professional lines; and
- Providing motivation for a rational data-based cooperative approach to process analysis and change.[(2)]

In healthcare settings, clients/patients urge for quality in services have been increasing. 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. This, therefore, warrants effective quality management approach, such as TQM is implemented, assessed or monitored appropriately to improve competitiveness, effectiveness and flexibility.[(4)]

3. METHODS:

This descriptive study was conduct on (117) patients from various clinical departments (Department of Internal Medicine, Department of Obstetrics and Gynecology and Department of Surgery) of inpatients admitted to Benghazi Medical Center (BMC), Libya during period from June to March 2020. All patients were asked questions through the questionnaire form to identify the level of quality of health services provided by the Benghazi Medical Center from the patient's point of view and try to find out the requirements for implementing the Total Quality Management (TQM) at the Benghazi Medical Center.[(5)] The questionnaire contains seven Axes: (The method of reception, patients opinion about radiological examinations and analyzes, patients 'opinion about their doctors' treatment, patients 'opinion about the treatment of paramedical staff, patients 'opinion on monitoring their health condition, patients 'opinion about amenities, patients' opinion about hospital institutions in general). The relative weight was used in the statistics to clarify the importance of each axis and its effect on the quality of service provision from the patients' point of view and attention to it through the total quality management, this importance is determined through using the graduated scale of the relative weight, which consists of five levels: (5) scores represent good, (4) represent average, (3) represent poor, and (2) represent poor.

4. RESULTS:

The result showed that the sample of the study was 117 patients, (77 %) of them was female, and (42 %) of them aged more than 41 years . About (87 %) of the study sample had length of stay from 2-9 days , and it is considered a very short period of stay , and (43%) of them from Obstetrics and Gynecology Department.

Table 1. Characteristics of Patients in Benghazi Medical Center

Type	Valid Percent %
Sex	
Male	23 %
Female	77%
Age	
Less than 21-30 years	32 %
years31-41	26 %
More than 41 years	42 %
Length of stay	
days2-9	87 %
10-17 days	9 %
18-25 days	4 %
Department	
Department of Obstetrics and Gynecology	43 %
Department of Medicine	38 %
Department of Surgery	19 %

According to the results of the method of reception with average relative weight "4.2" for " Do you agree with how you will receive it at the reception desk?" ,and therefore this criteria is in the moderate score for service quality in BMC.

Table 2: Represents the method of reception

The first axis: the method of reception		
the question	**Average relative weight**	**Valid percent %**
Do you agree with how you will receive it at the reception desk?	4.2	56%
Is the waiting room appropriate?	3.9	18%
Was the waiting time before the examination or treatment appropriate?	4.1	26%

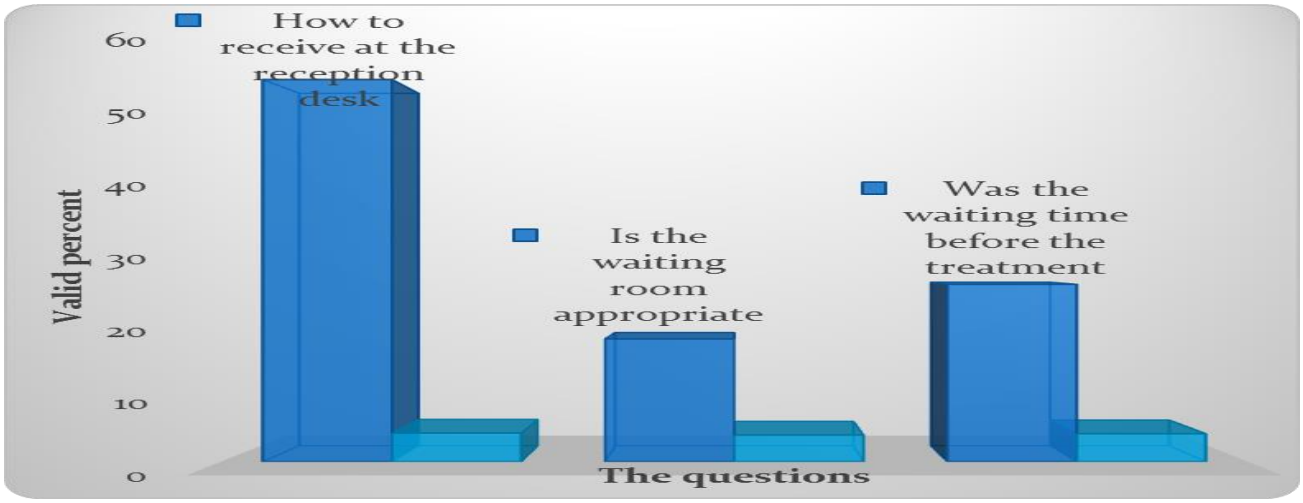


Figure 1: The method of reception

The patients 'opinion about radiological examinations and analyzes in Table 3 obtained with a moderate average relative weighted, which " waiting period for the result" was ", indicating moderate score for service quality in BMC.

According to the results of the patients opinion about their doctors' treatment , with average relative weight "4.4 " for " Do you agree with the attention of the attending physician to your

health condition?" ,and therefore this criteria is in the good score.

The average scores that represent "the patients 'opinion about the treatment of paramedical staff" in Table 5, were below 60%

for all identified principles, indicating poor service quality in BMC .

According to the results of the patients 'opinion about following up on their health condition, with average relative weight "4.3 " for " If you had surgery, did I give you full explanations about it?" , this criteria is the moderate score for service quality in BMC.

Table 3 : Represents the patients 'opinion about radiological examinations and analyzes

The second axis: patients 'opinion about radiological examinations and analyzes		
the question	**Average relative weight**	**Valid Percentage%**
Does the hospital have devices and equipment related to x-rays and medical tests?	4	25%
If your health condition needed to do x-rays or tests, did you easily do it?	4.1	35%
If you had analyzes or scans, was your waiting period for the x-rays and examinations appropriate?	4.3	40%

Table 4 : Represents the patients 'opinion about their doctors' treatment

The third axis: patients 'opinion about their doctors' treatment		
the question	**Average relative weight**	**Valid percent %**
Did you manage to meet the doctors easily?	4.2	%45
Do you agree with the attention of the attending physician to your health condition?	4.4	%20
Are the number of visits to the doctor appropriate?	4	%16
Do you agree with the explanations of the tests presented to you by the doctors?	4.1	%19

Table 5 : Represents the patients 'opinion about the treatment of paramedical staff

Fourth Axis: Patients 'opinion about the treatment of paramedical staff The		
the question	**Average relative weight**	**Valid percent %**
Do you agree to the treatment and courtesy of the nurses with you?	3.8	%26
If you need help from the nurses, will they rush to serve you?	3.6	%21
Are you satisfied with the sponsorship of the paramedical staff?	4	%53

Table 6: Represents the patients 'opinion about following up on their health condition

The fifth Axis: Patients 'opinion about following up on their health condition		
the question	**Average relative weight**	**Valid percent%**
If your health condition needed surgery, was your waiting period satisfactory?	3.8	%25
If you had surgery, did I give you full explanations about it?	4.3	%63
If you had surgery, did I provide you with psychological follow-up before and after?	2.5	%12

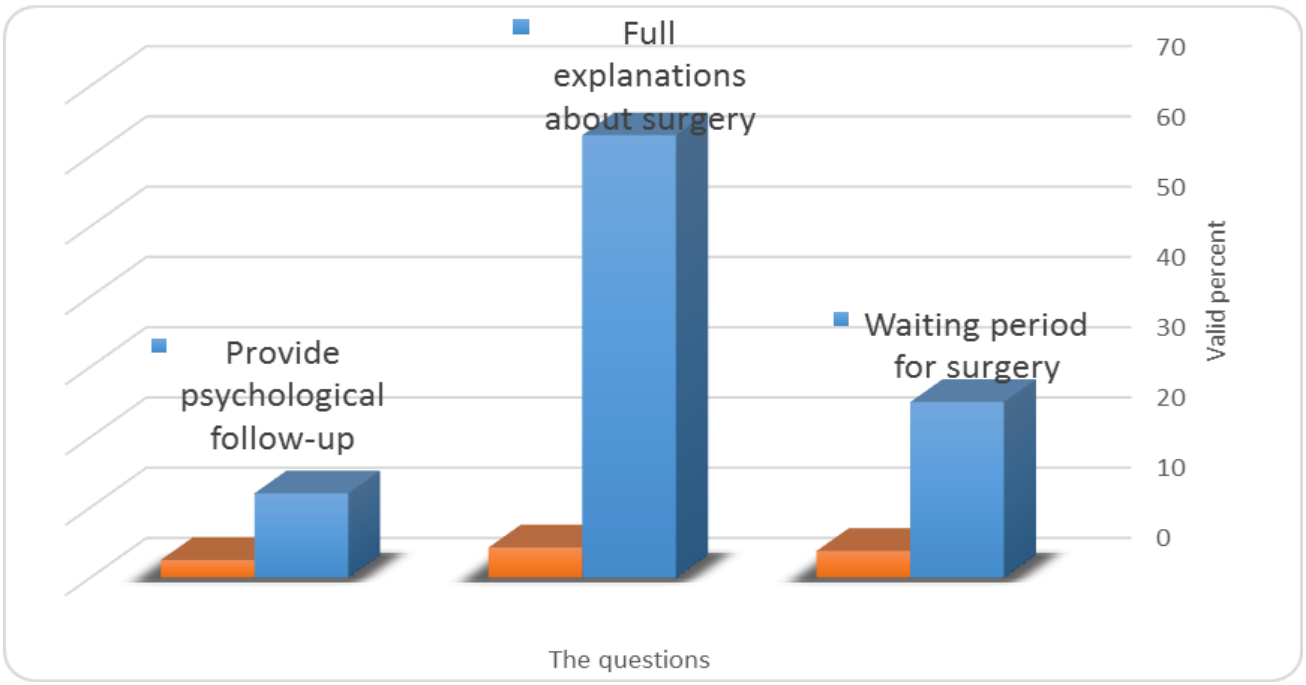


Figure 2 : The patients 'opinion about following up on their health condition

Table 7 shows the average relative weight was poor for " Is the quality and quantity of the meals provided appropriate?" "3.5", while was good for, "Do you agree with the comfort of the bed in the room" "4.4".

As presented in Table 8 , the average relative weight was moderate for " Do you agree with the reputation of the Benghazi Medical Center" "4.2 ", while was poor for " If you had possibilities for treatment in a private institution, would you have chosen the Benghazi Medical Center for treatment there ? " "3.7 ".

Table 7: Represents patients 'opinion about amenities

axis: Patients 'opinion about amenities The six		
the question	**Average relative weight**	**Valid Percent%**
Do you have a good impression about the room you are staying in?	4	%17
Does the equipment fit in the room?	3.6	%12
Is the quality and quantity of the meals provided appropriate?	3.5	%10
Do you agree with the comfort of the bed in the room?	4.4	%33
Are you satisfied with the level of calm in the clinic?	4.2	%28

Table 8: Represents the patients 'opinion about hospital institutions in general

The seventh axis: patients 'opinion about hospital institutions in general		
the question	**Average relative weight**	**Valid percent %**
Do you agree to the cleanliness of the vicinity of the Benghazi Medical Center?	4	%38
Do you agree with the geographical location of the Benghazi Medical Center appropriate?	4.1	%28
Do you agree with the reputation of the Benghazi Medical Center?	4.2	%20
If you had possibilities for treatment in a private institution, would you have chosen the Benghazi Medical Center for treatment there?	3.7	%14

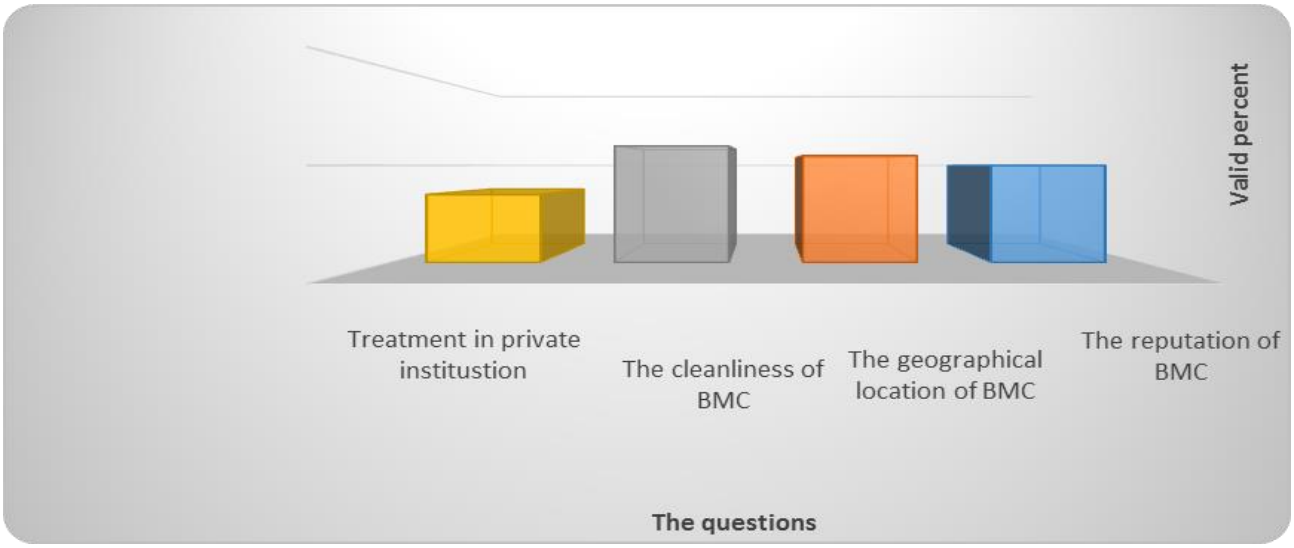


Figure 3: The patients 'opinion about hospital institutions in general

5. DISCUSSION:

Hospitals are by nature complex organizations and the complexity is compounded in service hospitals with perceived notion of service deficiencies. Quality has emerged as a major issue in health care sector and TQM has been accepted as a major long-term strategic initiative towards continuously improving quality of health care. The current study revealed that the length of stay in Benghazi Medical Center has the highest percent was for(2-9 days) (87%) (Table1), this period is short stay in the hospital ,and this is consistent with study in France (2002) that concluded the length of stay was less than one week, and the factors associated with less inpatient stay maybe poor hospital services and bad care quality programs.[6]

The waiting time before the examination or treatment had a moderate score 4.1 and the second percent (26%) (Table 2) , this is similar to study in Uganda (2018), which found in their study that majority reported to have waited for over 5hours before seeing clinicians/which indicated that clinicians reported late on duty and left earlier than expected, making services inaccessible to patients.[7]

The present study revealed that" the patients 'opinion about their doctors' treatment " has the moderate relative weight and was observed in all domains , whereas the score was 4 and 4.4 and This represents the doctor's behavior in dealing with patients (Table 4), this is consistence with study in China (2019) revealed that the physician's behavior is used as a moderator variable, Therefore, in this sector, the working conditions and surroundings are not healthy, and the workload and numerous patients are solely responsible for the physician/doctors' rudeness. However, in public sector hospitals governments should focus on hiring additional staff to overcome the workload.[8]

The current study finding a poor to moderate relative weight score 3.6 and 4 for " the patients 'opinion about the treatment of

paramedical staff " (Table 5), this identifies the relationship between the patients satisfaction and nursing care , and this is consistence with a study in Brazil (2014) which founded a weak to moderate correlation between nursing care quality and patient satisfaction, This is for a reason the omission of nursing care can also be linked with the lack of or deficient organization and planning of managerial and scientific care demands.[9]

In our study, the highest percent was for " If you had surgery, did I give you full explanations about it?" (63 %) (Table 6), and this is in consistence with a study in Turkey (2011), which found the lowest satisfaction score was for " type of information", today, patients increasingly want to learn more about their health conditions and want to participate in the planning, organization and decision making of services related to their health conditions. The importance of giving patients enough time to talk, listening to them and keeping them well-informed has been a major theme in nursing research, If empathy and patient information are good, patients will have less stress, will be more attentive and more compliant.[10]

The present study finding the lowest percent was for " Is the quality and quantity of the meals provided appropriate? " (10%) (Table 7), this is inconsistence with study in India (2015), which concluded that the food is the most important factor on healthcare quality.[11]

The moderate relative weight score of "the geographical location of the Benghazi Medical Center" (table 8), and 'the hospital have devices and equipment related to x-rays and medical tests" (table3), in the current study is consistence with study in Malaysia (2019) which displayed that a number of items successfully loaded on 5 broad dimensions of tangible quality, namely : "convenient location of the hospital ", and 'visually appealing cabin, equipment and available physical facilities" is the most significant factor that affect care receivers' satisfaction.[12]

6. CONCLUSION:

There is a low level of quality health services provided by public hospitals, and a deficiency in the service provided by the nursing towards the patients , and there are deficiencies the cleanliness and sterilization of the hospital , and the devices and equipment not in sufficient quantity. We also recommend the supporting health institutions with advanced information technologies to increases the level of quality of health services provided by hospital, and Identify the patient's needs as a starting point for determining health services specifications. There is needed to training doctors and workers on quality programs, and breaking the barrier between doctors and patients and creating the language of dialogue between them.

7. AKNOWLEDGMENTS:

The authors thanks everyone who helped him in this research and everyone who provide him valuable information and wise guidance.

8. CONFLICT OF INTEREST:

The authors declare that they have no conflict of interest.

9. REFERENCES:

1. Neetha K, Srinivas T R, Ramachandra C G, Manjunatha B. A Study on Implementation of Total Quality Management (TQM) in Hospital to Improve Service Quality. ijettjournal. 2016: 2231-5381.
2. Balasubramanian M. Total Quality Management [TQM] in the Health care Industry- Challenges, Barriers and Implementation Developing a Framework for TQM Implementation in a Healthcare Setup . Science Journal of Public Health. 2016; 4(4): 271-278 .
3. Mine H, Mohammed R. TWAT I, Muhsin H . Total quality management implementation in the healthcare industry: Findings from Libya. AIMI Journal .. 4 -212017 ;(3):
4. Macide A O ,Bamise F O . Implementation of Total Quality Management and its Effect on Employees' Performance in a Teaching Hospital in Oyo State, Nigeria . Public H Open Acc 2018, 2(3): 000129.
5. Mohammed Z. The role of Total Quality Management in Improving the Health Service. Algeria.2016.
6. Nguyen P, Briancon S , Empereur F, Guillemin F. Factors determining inpatient satisfaction with care. Social Science and Medicine.2002;(4):439-504.
7. Ochan A, Aaron K, Aliyu S , Mohiuddin M , Bamaiyi P. Patients' Satisfaction with Healthcare Services Received in Health Facilities in Bushenyi District of Uganda. International Journal of Science and Healthcare Research.2018;3(1):2455-7587.
8. Manzoor F , Wei L , Hussain A , Asif M , Ali Shah S . Patient Satisfaction with Health Care Services; An Application of Physician's Behavior as a Moderator. International Journal of Environmental Research and Public Health .2019;(16)3318.
9. Freitas J, Silva A , Minamisava R , Bezerra A , Sousa M . Quality of nursing care and satisfaction of patients attended at a teaching hospital. 2014;22(3):454-60.
10. KOÇ Z, SAĞLAM Z , ŞENOL M . Patient Satisfaction with the Nursing Care in Hospital. Turkiye Klinikleri J Med Sci 2011;31(3):629-40.
11. Ross D, Venkatesh R . An Empirical Study of the Factors Influencing Quality of Healthcare and Its Effects on Patient Satisfaction.2015;4(2):2347-6710.
12. Zubayer M, Hoque S. Health Care Service Quality and In-patients Satisfaction: an Empirical Investigation on Health Scape's Tangible Quality.2019;7(5):39-55.