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THE EFFECT OF SERVICE QUALITY ON PATIENT SATISFACTION AND THE TRUST AS A MODERATOR
EVIDENCE FROM MISURATA MEDICAL CENTER

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Abstract

In order for hospitals to develop in developing countries such as Libya, they must focus on developing the technological and operational side of the service provided to adhere to the requirements of the World Health Organization. To truly become competitive and continuing viable over the long term, hospitals are also required to attend to their services to ensure that the level of patient care and services are provided to the highest quality. Consequently, the main objective of this paper is to explore the level of services provided by doctors and medical staff at Misurata Medical Central Hospital (MMC) about the variables of reliability, care, responsiveness, assurance, and empathy. The MMC has been very successful in attracting more patients, and their achievements have made, increased the hospital trust in the whole country of Libya and could provide valuable guidance to other hospitals in Misurata region and in other hospitals in Libya to improve their practices. The population was defined as all visiting patients to MMC, whereas the study's sample is 500 patients who visit for treatment in the days of distributing the questionnaires. The findings showed that in respect of the level of services experienced, doctors and medical staff are more successful in engaging in the empathy and assurance dimensions of services quality than the responsiveness and reliability dimensions. Overall, it seems that the nurses adequately addressed all dimensions measured in the study.

Key Words: *Healthcare, Service Quality, Patient Satisfaction, Trust, SERVQUAL*

تأثير جودة الخدمة على رضا المرضى وثقتهم كوسيط:
دليل من مركز مصراتة الطبي

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الملخص

لكي تطور المستشفيات في الدول النامية مثل ليبيا يجب التركيز على تطوير الجانب التكنولوجي والتشغيلي للخدمة المقدمة لتتوافق مع متطلبات منظمة الصحة العالمية. لكي تصبح المستشفيات قادرة على المنافسة حقًا وتستمر في الاستمرار على المدى الطويل، يتعين عليها أيضًا الاهتمام بخدماتها والتأكد من أن مستوى خدمة المرضى المقدمة ذات جودة عالية. وبالتالي فإن الهدف الرئيسي من هذه الورقة هو استكشاف مستوى الخدمة المقدمة من قبل الأطباء والطاقم الطبي في مستشفى مصراتة الطبي حول متغيرات الموثوقية والاستجابة والضمان والتعاطف. لقد نجح مستشفى MMC بنجاح كبير في جذب المزيد من المرضى، وقد أدت إنجازاتهم إلى زيادة ثقة المستشفيات في ليبيا بأكملها ويمكن أن تقديم إرشادات قيمة للمستشفيات الأخرى في مصراتة وليبيا لتحسين ممارساتها. كما تم تعريف جميع المرضى الزائرين لمركز مصراتة الطبي، في حين اقتصرت عينة الدراسة على 500 مريض من متلقي العلاج في أيام توزيع الاستبيانات. وأظهرت النتائج أنه فيما يتعلق بمستوى الخدمة التي يتمتع بها الأطباء والطاقم الطبي، فإنهم أكثر نجاحًا في أبعاد التعاطف والضمان لجودة الخدمة من أبعاد الاستجابة والموثوقية. وبشكل عام، يبدو أن الممرضات تناولن بشكل كاف جميع الأبعاد التي تم قياسها في الدراسة.

الكلمات المفتاحية: الرعاية الصحية، جودة الخدمة، رضا المرضى، الثقة، نموذج جودة الخدمة.

1. Introduction

Healthcare is one of the most important components in human life. Disease or illness can prevent a person from doing a host of activities one could have easily done when very strong and the demand for healthcare services is growing worldwide especially in the developing countries. Due to technological advancement in the recent years, health care service provider's practices have also changed dramatically. Health care system is now a challenge for every government, state, political parties and insurance agencies due to high competition in the field. The health care system that was dominated by nonprofit/public hospitals is now provided increasingly by the private sector. This competition results in a satisfying patient through improvement in service quality dimensions, building trust and getting a positive trust.

In most of developing countries such as Libya with no health insurance policy to cover the cost of healthcare treatment, patients have to cover the cost of their treatment from their pockets. In fact, more than one-third of the population in developing countries cannot afford valuable healthcare treatment. The sensitivity of cost of treatment in developing countries is visible with the richer segment of the population using the best public and private hospitals, and the poorer section preferring self-care or the public hospitals.

As stated by Dr. Ahmed Barakat (2010) and according to his research on the public hospitals in Benghazi, Libya, during the last decade, there were huge numbers of patients' criticisms about poor healthcare delivery services. Most of the noticeable concerns were about the few qualified and reliable physicians and nurses, the impolite manner of the service providers at all levels, the poor functional buildings, the insufficient basic infrastructure, the non-fashionable medical equipment, the ineffective medical supplies, the absence of qualified hygiene procedures, the low number of drugs supplied and its poor quality, and so on. Consequently, these factors motivated the patients who could choose better alternatives to change their approach. Most of them chose to use private health care services such as specialized clinics, private hospitals, private laboratory, polyclinics, private consultation rooms, private drug stores; which were providing a better quality of health care, highly effective treatment, and good user-provider interaction. Others, such as urban users with financial ability, choose to travel abroad to take advantage of services and supplies in the more advanced countries.

Therefore, the objective of the study is:

To evaluate patient's satisfaction using SERVQUAL model at MMC in Libya, and to evaluate the moderating effect of trust in the relationship between the service quality and patient satisfaction.

2. Literature review:
2.1 Patient satisfaction:

Patients' satisfaction is a concept that is closely related to quality. The term has been defined from at least two perspectives. One, patients' satisfaction is seen as a measure of how healthcare products and services supplied by health systems meet or surpass the expectations of patients (Parasuraman et al., 1985). Patient satisfaction dimensions can include interactions with providers, the ease of access, the burden of costs, and environmental issues such as cleanliness of the health care facility (Taylor, 1999). Regardless of the definition, patients' satisfaction is seen as a key indicator of quality within health systems.

Vinagre and Venes (2008) offer a distinction between the term's quality and satisfaction. They suggest that quality is a judgment or evaluation that concerns performance pattern, which involves several service dimensions specific to the service delivered. Quality is believed to be determined more by external

cues such as price and trust. Satisfaction, however, is a global consumer response in which consumers reflect on their pleasure level. Satisfaction is based on service delivery predictions or norms that depend on past experiences, driven by conceptual cues such as equity or regret.

Tucker III and Adams (2001) demonstrate that several of the variables in the concepts satisfaction and quality are cross-referenced by their operational definitions. These cross-referenced variables challenge the notion that the two concepts are distinct and separate. However, empirical evidence has not always supported these dimensions (Vinagre and Neves, 2008). When testing the integrative model of health quality and satisfaction, Tucker III and Adams (2001) Song& Tucker, A. (2016). found that the performance of a physician and issues related to access to a health facility predict 74% of the variation in the delivery of quality healthcare services. Studies evaluating the quality of services offered by health providers in other parts of the world and especially in Libya are not readily available.

Numerous theories and constructs have been advanced to help explain patients' satisfaction and factors that may influence the level of satisfaction a patient may have a medical encounter. Broadly, there are two approaches to examining patients' satisfaction. One theory suggests that patients can understand their healthcare experience and thus judge its quality (Parasuraman et al., 1985). The second theory holds that patients' satisfaction as an attitude is the summation of the very subjective evaluations of the dimensions of the care experience (Kalaja 2023) (Tucker III, 2002). This theory views patients' satisfaction as a patterned way of thinking and behavior.

Convenience: Lebow (1983) considered that all inquiries into both the felt adequacy of treatment and of surrounding setting are specific aspects that may include reactions to the quality of care, to its helpfulness, its cost and continuity, the availability and accessibility of the practitioner, and the reaction to supporting services accessibility of the practitioner, and the reaction to supporting services. Drain (2001) concluded that patient satisfaction studies enable patients to select health care clinician's facilities or insurance plans but less satisfied patients are more likely to seek health care elsewhere (Avis, 1995; Gellert, el at., 2023) .

If receipt of care, guidance, and support were to help patients make genuinely informed choices about interventions, it would be likely to impact on the operational delivery of services. A study by James (1992) describes a nurse who worked previously in an acute hospital setting and then moved to another job in hospice. Soon after starting work in that hospital, the nurse described that she left her old job due to busy routines which can get in the way of and undermine effective communication hospitals were established in response to an identified need for environments better suited for terminally ill patients, for whom palliative care rather than curative treatment was appropriate. Communication and trust between patients and practitioner are a central part of health care.

Quality of care: Hospitals are emphasizing the enhanced quality of care along with the improvement of technology. Researchers explained the quality of health services in several factors; namely efficiency, optimality, legitimacy, and equity. Therefore, adaptation of modern quality service from manufacturing and other servicing industry has changed the situation of quality of care. The combination of conventional and modern health care techniques had led to the modern era of quality health care management (Almandhar, 2004). When physicians recognize and address patient expectations, satisfaction is higher not only for the physician: it may help to remember that patients frequently show up at a visit desiring information more than they desire a specific action (Carolyn, 2007; lee, el at., 2023).

Out of pocket cost: the survey of seven countries conducted by the commonwealth fund shows that Americans have the highest out-of-pocket costs and the most difficulty paying medical bills. Even though they have the most expensive health-care system, they are more likely to skip care because of cost and experience with medical errors. Patients in Canada, the Netherlands, and the United Kingdom rarely reported not getting needed medical care because of costs (Medline, 2007).

2.2 Service Quality:

The majority of service quality studies refer to Parasurman et al.'s (1985) definition where, theoretical, quality is the gap between patient's expectation and perception of services rendered along the quality dimensions. As will be refined on later in this research, service quality is widely accepted to be based on multiple dimensions (Naidu, 2009).

Service quality involves the comparison of expectation and perception. Parasuraman et al. (1985) conducted some in-depth interviews with executives in four nationally recognized service firms and a set of focus group interviews with customers to explore possible factors closely associated with service quality. The results of this qualitative research suggested ten determinants of service quality: Reliability, Responsiveness, Access, Competence, Security, Communication, Credibility, Courtesy, Understanding/ knowing the customers, and Tangibles. This structure was similar to other authors' suggestions about dimensions of patient satisfaction (Duggirala et al., 2008). Additionally, a review of measures in service marketing research conducted by Adil (2013) confirmed that among numerous measures, SERVQUAL is the most prominent instruments used for assessing service quality in different service sectors:
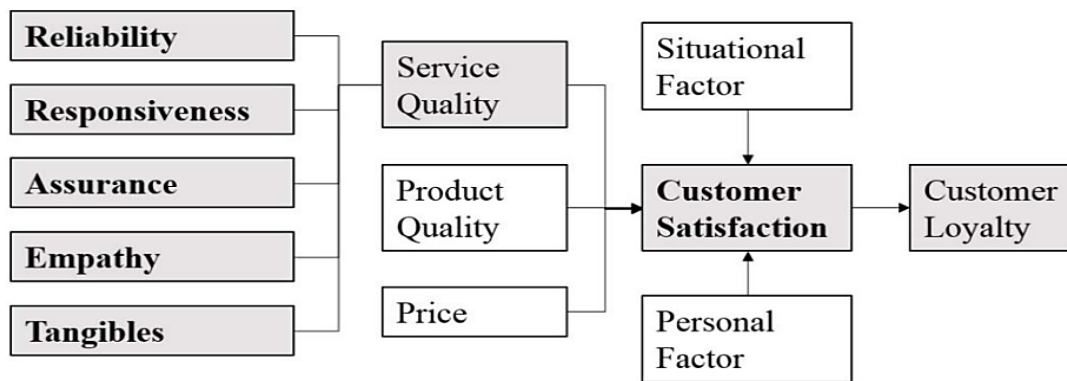
**Figure 2. Relationship between Satisfaction
and SERVQUAL Dimensions: Source: Wilson et al., 2012**

Up to date, the management of public hospitals and other healthcare organizations in Libya has mainly focused on investments in the technical aspects of health care to improve the capacity of diagnosis and treatment for patients. As a result, the quality of hospital care in the context of the interpersonal relationship between patients and hospital staff has been partly ignored.

The reality in Libya is that patient satisfaction surveys have not been conducted in recent years, at least in Misurata city. Additionally, there are no longer contemporary surveys reported the validity and reliability of the instruments. Moreover, none of the surveys distinguished dimensions related to the concept of patient satisfaction. The reasons for such shortcomings may include a lack of literature review in the concept of patient satisfaction, no valid and reliable questionnaire set available, and no guideline for using satisfaction data to evaluate the quality of hospital care. Furthermore, public hospital services in Vietnam are currently one-way services. People seeking health care usually receive services largely provided by public hospitals. There is almost no two-way interaction between hospitals and patients. The patients' role is usually passive and dependent, regarding accessing to public hospitals' services.

Most of the measures of health care quality are developed in the western world and may not necessarily be appropriate in the developing world which has different health systems. A large gap remains in understanding what quality of care data the consumers would find useful and a major challenge remains in educating patients about these issues and presenting them with information in styles that will help them make decisions. This study offers data on the quality of services offered by MMC in Libya.

2-3- Trust

Trust is a relational notion between people, people and organisations, and people and events. Patient's trust in the physician can be defined as a collection of expectations that the patients have from their doctor. It can also be defined as a feeling of reassurance or confidence in the doctor. It is an unwritten agreement between two or more parties for each party to perform a set of agreed upon activities without 'fear of change from any party'. This is especially true in

relationships that result from a lack of choice or occur in a context of asymmetry, such as that between the healthcare provider and patient. Thus, trust is a set of expectations that the healthcare provider will do the best for the patient, and with good will, recognising the patient's vulnerability. Trust facilitates cooperation between people (known to each other and/or strangers) that is catalysed, facilitated and sustained by trust. Trust is fundamental to effective interpersonal relations and community living.(Mechanic D, Meyer S:2000; Melki, et al. 2021) It forms a fundamental basis in the provision of healthcare.

2-4- Service Quality Theories

The service quality model of Parasuraman et al. (1985) is extensively used as a conceptual framework for assessing and measuring service quality delivery in healthcare services as depicted in Figure 3. The model points out that consumers' quality perceptions are influenced by a series of four unique gaps manifesting in the organizations. The Gap perspective views quality as the difference (gap) between expected and perceived quality of care on different dimensions, these dimensions are characterized by terms which describe the service experience (Reliability, Tangibles, Empathy, etc.). Figure 3 below illustrates the various gaps and their relationships in the Service Quality Gap Model as described by Parasuraman et al. (1985). Of the five gaps, the consumer gap (Gap 5) is considered the most important gap. The other four proposed gaps in this model can be said to influence and result in the perception-expectation difference.
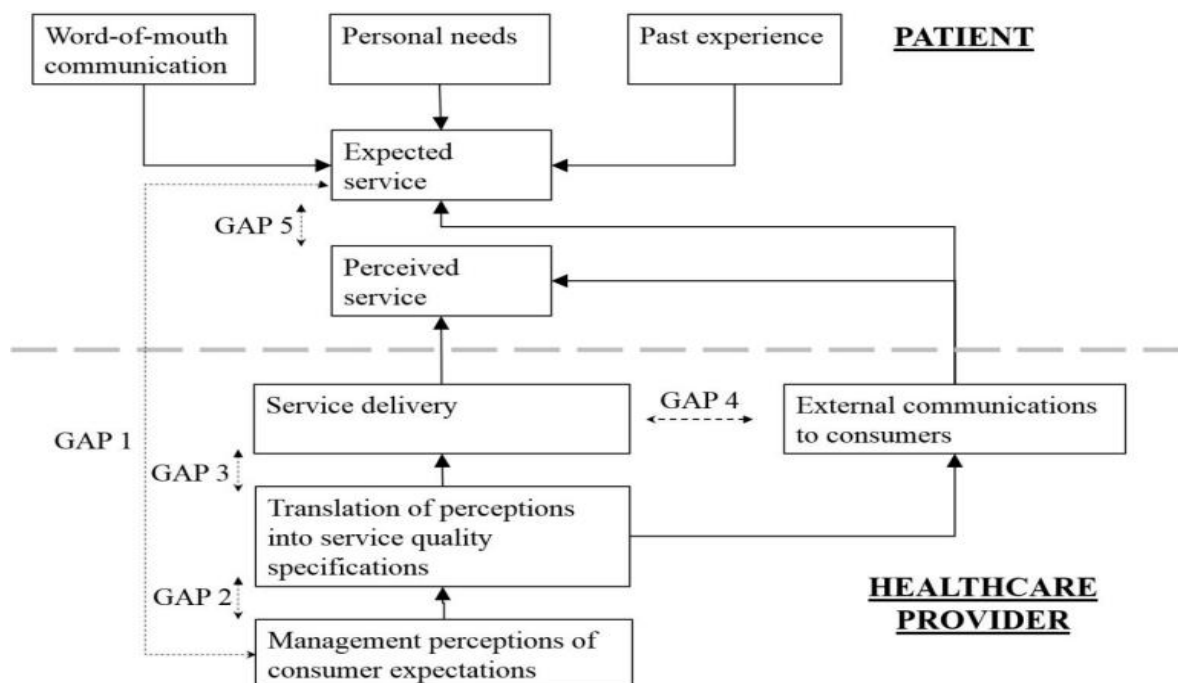

Figure 3. Service Quality Gap Model : Source: Zeithaml et al., 1988

Since the service is human health, how the trust perceived is important. In parallel to this, since the patients get treatment at health care organizations towards their choices, it is important to estimate the trust depending on

patients/customer perceptions (Satir, 2006). According to Herbig & Milewicz (1993), an organization's trust is consisting of trust that the organizations establish it by keeping its promises and achieve it in time, Satir (2006) illustrates the following dimensions to affect patients/customers perceptions of corporate trust, service quality and, communication. Research by Power (2005) states the importance of a positive trust to a hospital, as patients now have more choices in the healthcare providers they can choose. Because of this, hospitals need to continue to enhance the clinical and experimental quality of the patient care and effectively communicates their performance in the communities they serve.

2-5- Hypotheses development

2-5-1 Tangible:

Tangibles constitute the vital component that deals with the physical surrounding of the hospitals, thus the hospital should have up-to-date facilities, modern-looking equipment as well as adequate seating for patients. These facilities in some way influence the personal judgment of patients to perceive that healthcare delivery is of a quality standard. The patients revealed that physical facilities in relation to equipment and logistics ensure patients' welfare. This finding is noted earlier in studies by Al-Hawary, (2011); Ceelik and Sehribanoglu, (2012); Senarath et al., (2014) that tangibility in terms of physical environment, cleanliness, seating and modern clinical equipment has a larger effect on perception of quality healthcare of hospital in Jordan and Turkey. Perceived tangibility is a significant dimension for patient satisfaction with quality healthcare delivery, as the model indicates an increase in tangibles will increase patients' satisfaction of service of the hospital.

H1: There is a positive relationship between Tangible and patient satisfaction.

2-5-2 Reliability

This dimension mainly implies nurses and medical staff demeanor and sharing behaviors to patients. This makes patients feeling positive and confident. It is different from Assurance above that makes patients confident to be cured and taken care properly. The dimension Reliability also comprises operating hours of the hospital that should be convenient, and therefore reliable regarding accessing the hospital services. This aspect was also named as Accessibility (Sitzia & Wood, 1997; Sharma,et.al ,2023). Consequently, enhancing good skills in the interpersonal interaction between patients and nurses/medical staff would improve the satisfaction of patients. According to Ahuja, et al., (2011) Reliability was consistently rated as the top dimension of service quality by almost all.

H2: There is a positive relationship between Reliability and patient satisfaction.

2-5-3   Responsiveness

Responsiveness relates to the level of openness, receptiveness, sensitivity, and awareness of the staff and the duration of time that patients have to wait to be served by the hospital staff. This aspect is mostly related to timely responses from doctors and nurses/midwives, waiting time for lab tests, and waiting time for administrative procedures such as referral or discharging ones. In short, for Libyan patients, waiting time is perceived as the manner of response to patients' needs. In fact, waiting time has been viewed as a separate dimension of patient satisfaction (Atinga et al., 2011). Aldana et al., (2001) confirms that a significant reduction in waiting time is more significant to patient satisfaction in healthcare delivery. Moreover, Atinga, et al., (2011) confirmed that waiting time is a valuable tool for measuring perceived quality healthcare from the perspective of patients who utilize healthcare service.

H3: *There is a positive relationship between Responsiveness and patient satisfaction.*

2-5-4   Assurance

Assurance in this study includes aspects that make patients confident, be assured that they will be examined, diagnosed, and treated by good doctors with good professional skills; be taken care of by good nurses and receive individual attention; be treated courteously by hospital staff. This dimension, therefore, encompasses interpersonal relationship, concern, and responsiveness, as coded from discussions of focus groups, noted above. Most of the literature indicates that assurance is one of the most important dimension for patients to be satisfied with the hospital services as stated by, John (1991) that service quality perceptions in hospitals could be improved through improving assurance between patients and healthcare providers (Yousapronpaiboon and Johnson 2013). Kumari et al., (2009) and Sharma et al., (2023), indicate that assurance is a key determinant of quality healthcare and if upheld in hospitals will ensure patient satisfaction.

H4: *There is a positive relationship between Assurance and patient satisfaction.*

2-5-5   Empathy

Patients perceived empathy as a relevant service quality dimension that deals with how staff emotionally responds to the care of patients. This dimension clearly spells out how staff respond to patients needs and promptly deliver services on time. Study by Zaim et al., (2010) indicate that empathy is a significant service quality measure of patient satisfaction with healthcare delivery at public hospitals in Turkey. Moreover, Yousapronpaiboon and Johnson (2013), indicate that empathy is one of the five possible dimensions that had a significant influence on service quality.

H5: *There is a positive relationship between Empathy and patient satisfaction.*

2-5-6   The moderation effect of trust between service quality dimensions and patient satisfaction

Trust is a precious and valuable commodity; it takes time to build and need continuous improvement to maintain, Organizations have different and various reasons to be concerned about their trusts. It is apparent that the most motivating factor is a professional pride, but a change in the trust of health care organizations can influence financial and overall performance. Negative trust could affect hospital's ability to raise funds, charitable donations that are important sources of income for not-for-profit healthcare organizations and for the public healthcare organizations. Trust in this study was used as a moderator in the relationship between service quality and patient satisfaction, most studies, indicated that trust has a positive effect on patient satisfaction, and the reason for that is due to that trust can play while choosing health care provider in general or physician specifically (Hussain, 2012, Hibbard et al. 2005).

H6: *There is a moderating effect of trust in the relationship between the Tangible and patient satisfaction.*

H7: *There is a moderating effect of trust in the relationship between the Reliability and patient satisfaction.*

H8: *There is a moderating effect of trust in the relationship between the Responsiveness and patient satisfaction.*

H9: *There is a moderating effect of trust in the relationship between the Assurance and patient satisfaction.*

H10: *There is a moderating effect of trust in the relationship between the Empathy and patient satisfaction.*

3. Methodology:

This study was conducted on the patient of MMC in the city of Misurata, quantitative techniques were used to analyze the primary data in order to test hypotheses of the research, survey strategy was adopted through convenient sampling, surveys allow the collection of a big amount of data from a big population in a profoundly economical way. The population of the study is the number of patients who come for treatments the in the MMC. The sample of the research is limited to the patients who visit for treatment in the days of distributing the questionnaires, and they must be above the age of eighteen and the sample size was 500 patients. The data that was collected was analyzed through smart-pls. 2. using different statistical methods to find out the impact of the service quality on patients' satisfaction and to evaluate the moderating effect of trust on the relationship between service quality dimensions and patients' satisfaction.

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4. The findings:

4.1 Assessment of the Measurement Model

This section presents the results of the study by using SmartPLS .2 to analyze the data collected. This included path modeling and then bootstrapping (Chin, 1998; Gudergan, Ringle, Wende, & Will, 2008; Ringle, Wende, & Will, 2005). A total of 500 re-samples were used to generate the standard error of the estimate and t-values. As stated by Chin, Marcolin, and Newsted (2003), PLS can give more accurate estimates of moderator effects by accounting for the error that attenuates the estimated relationships and improves the validation of theories (Helm, Eggert, & Garnefeld, 2010; Henseler & Fassott, 2010). First, the researcher tested the convergent validity, which is the degree to which multiple items to measure the same concept are in agreement. Next, we proceeded to test the discriminant validity in which the measures are not a reflection of some other variables and it is indicated by the low correlations between the measure of interest and the measures of other constructs (Cheung & Lee, 2010). Discriminant validity can be examined by comparing the squared correlations between constructs and variance extracted for a construct (Fornell & Larcker, 1981). Finally, the researcher used the Cronbach's alpha coefficient to assess the inter-item consistency of our measurement items (J. C. Nunnally & Bernstein, 1994).

The analysis started with confirmatory factor analysis (CFA) to test the item reliability, convergent validity, and discriminant validity of the measurements scales. As shown in Tables 1 and 2, all the items loading exceeded the minimum cut off point of .50 (Gefen & Straub, 2000); thus, the internal consistency was achieved. In terms of convergent validity, all the composite reliability (CR) values were above .70 (Chin, 2010; Requelme & Rios, 2010) and the average variance extracted (AVE) values meet the minimum criteria of .50 (Henseler, Ringle, & Sinkovics, 2009; Rodgers & Pavlou, 2003). For discriminant validity (see Table 3), the value of AVE was square rooted and testified against the intercorrelations of the construct with other constructs in the research model (Chin, 2010; Komiak & Benbasat, 2006) and all the values noted as greater than each of the constructs correlations (Chin, 2010), hence, the measurement model satisfactory achieved. In order to testify the reliability of the variables, Cronbach's alpha (see Table 2) was used to validate the reliability of the variables and the minimum cut off point must above .70 (Cronbach, 1951). Thus, all the internal reliabilities of scales were ranged from 0.833 to .0898 which was clearly acceptable. Hence, the measurement model was satisfactory and provided sufficient evidence in terms of reliability, convergent validity, and discriminant validity.

Table 1. Loadings and Cross Loadings

	AS	EMP	PHY	REL	TRT	RES	TAN
As1	**0.706**	0.351	0.322	0.502	0.289	0.387	0.395
As2	**0.878**	0.470	0.443	0.446	0.386	0.491	0.522
As3	**0.868**	0.422	0.423	0.366	0.364	0.462	0.454
As4	**0.870**	0.454	0.406	0.351	0.370	0.437	0.468
As5	**0.615**	0.611	0.645	0.312	0.249	0.250	0.262
Emp1	0.338	**0.648**	0.326	0.477	0.098	0.396	0.366
Emp2	0.411	**0.853**	0.447	0.454	0.145	0.520	0.494
Emp3	0.442	**0.870**	0.448	0.453	0.155	0.502	0.510
Emp4	0.478	**0.886**	0.451	0.476	0.189	0.542	0.525
Emp5	0.415	**0.611**	0.245	0.312	0.249	0.250	0.362
Phy2	0.303	0.350	**0.897**	0.359	0.392	0.314	0.216
Phy3	0.343	0.364	**0.873**	0.544	0.413	0.204	0.233
Phy4	0.484	0.410	**0.898**	0.476	0.381	0.256	0.360
Phy5	0.405	0.487	**0.828**	0.472	0.373	0.528	0.280
Rel1	0.383	0.424	0.466	**0.788**	0.467	0.510	0.260
Rel2	0.427	0.467	0.483	**0.870**	0.350	0.332	0.283
Rel3	0.436	0.479	0.497	**0.865**	0.334	0.245	0.204
Rel4	0.378	0.440	0.466	**0.842**	0.329	0.268	0.527
Rel5	0.454	0.503	0.350	**0.849**	0.315	0.360	0.303
Trt1	0.323	0.180	0.363	0.406	**0.787**	0.307	0.297
Trt2	0.293	0.135	0.308	0.303	**0.762**	0.217	0.275
Trt3	0.371	0.221	0.359	0.275	**0.815**	0.323	0.366
Trt4	0.300	0.169	0.355	0.323	**0.769**	0.235	0.333
Trt5	0.352	0.194	0.353	0.345	**0.777**	0.338	0.362
Res1	0.296	0.381	0.334	0.468	0.126	**0.625**	0.363
Res2	0.503	0.538	0.486	0.258	0.342	**0.833**	0.233
Res3	0.538	0.492	0.480	0.339	0.341	**0.892**	0.379
Res4	0.485	0.533	0.524	0.373	0.312	**0.853**	0.408
Res5	0.315	0.411	0.445	0.312	0.249	**0.650**	0.362
Tan1	0.365	0.336	0.324	0.301	0.347	0.348	0.518
Tan2	0.491	0.493	0.252	0.308	0.361	0.313	**0.841**
Tan3	0.339	0.486	0.295	0.309	0.404	0.383	**0.877**
Tan4	0.471	0.520	0.480	0.540	0.245	0.380	**0.831**
Tan5	0.315	0.411	0.245	0.312	0.249	0.350	**0.662**

Note: **REL** = Reliability , RES = Responsiveness AS= Assurance EMP= Empathy TAN=Tangibility TRT= Trust

Table 2. Results of measurement model

Model construct	Items	Loading	AVE	CR	R Square	Cronbachs Alpha
AS	As1	0.706	0.632	0.894	0.000	0.854
	As2	0.878				
	As3	0.868				
	As4	0.870				
	As5	0.615				
EMP	Emp1	0.648	0.612	0.885	0.000	0.838
	Emp2	0.853				
	Emp3	0.870				
	Emp4	0.886				
	Emp5	0.611				
PHY	Phy2	0.897	0.765	0.929	0.600	0.897
	Phy3	0.873				
	Phy4	0.898				
	Phy5	0.828				
REL	Rel1	0.788	0.711	0.925	0.000	0.898
	Rel2	0.870				
	Rel3	0.865				
	Rel4	0.842				
	Rel5	0.849				
TRT	Trt1	0.787	0.612	0.887	0.000	0.841
	Trt2	0.762				
	Trt3	0.815				
	Trt4	0.769				
	Trt5	0.777				
RES	Res1	0.625	0.606	0.883	0.000	0.833
	Res2	0.833				
	Res3	0.892				
	Res4	0.853				
	Res5	0.650				
TAN	0.365	0.841	0.575	0.867	0.000	0.806
	0.491	0.877				
	0.339	0.831				
	0.471	0.662				
	0.315	0.841				

Note: REL = Reliability , RES = Responsiveness AS= Assurance   EMP= Empathy
TAN=Tangibility TRT= Trust, PHY= Patient Satisfaction

Table 3. Discriminant Validity of Constructs

	AS	EMP	PHY	REL	TRT	RES	TAN
AS	**0.795**						
EMP	0.422	**0.782**					
PHY	0.512	0.534	**0.874**				
REL	0.495	0.551	0.586	**0.843**			
TRT	0.420	0.232	0.445	0.424	**0.782**		
RES	0.554	0.604	0.689	0.618	0.365	**0.778**	
TAN	0.373	0.594	0.613	0.684	0.419	0.586	**0.758**

Note: Diagonals represent the square root of the average variance extracted (AVE) while the other entries represent the correlations

Note: REL = Reliability , RES = Responsiveness AS= Assurance EMP= Empathy TAN=Tangibility TRT= Trust, PHY= Patient Satisfaction.

4.2. Assessment of the Structural Mode

Next, Figure 2 and Table 4 present the results of the hypotheses testing. The results showed that the direct relationship between the five dimensions of SERVQUAL and patient satisfaction. The REL does not has positive significant relationship with PHY, meanwhile REL. RES, AS, EMP, and TAN it is t-values exceeded 1.645 significant levels (statistically significant at .05 levels) have a positive direct relationship with PHY. Thus, the hypothesis H1 was not supported meanwhile H2, H3, H4. H5 were accepted.

Table 4. Summary Results of the Model Constructs.

Relationship	Standard Deviation (STDEV)	Standard Error (STERR)	t-value	decision
AS -> PHY	**0.057**	**0.057**	**1.774**	**Supported**
EMP -> PHY	**0.061**	**0.061**	**3.195**	**Supported**
REL -> PHY	**0.066**	**0.066**	**0.716**	**Not Supported**
RES -> PHY	**0.087**	**0.087**	**2.138**	**Supported**
TAN -> PHY	**0.082**	**0.082**	**3.245**	**Supported**

Note: REL = Reliability , RES = Responsiveness AS= Assurance EMP= Empathy TAN=Tangibility TRT= Trust, PHY= Patient Satisfaction.

4.3.   The assessment of moderating effect

The result if this section is shown in table 5 and figure3, The results showed that trust does not Moderate the relationship between all SERVQAUL dimensions namely: Reliability, Responsiveness, Assurance, Empathy, Tangibility and patient satisfaction. Accordingly, the H6, H7,H8,H9,H10 are not supported.

Table 5. Summary Results of the Model Constructs with moderator effect

	Standard Deviation (STDEV)	Standard Error (STERR)	t-value	decision
AS * TRT -> PHY	0.100	0.100	0.695	Not Supported
EMP * TRT -> PHY	0.178	0.178	0.211	Not Supported
REL * TRT -> PHY	0.145	0.145	0.329	Not Supported
RES * TRT -> PHY	0.189	0.189	0.312	Not Supported
TAN * TRT -> PHY	0.220	0.220	0.586	Not Supported

Note: REL = Reliability , RES = Responsiveness AS= Assurance EMP= Empathy TAN=Tangibility TRT = Trust, PHY= Patient Satisfaction.

5. Conclusion

The impact of service quality on patient satisfaction is essential to healthcare development in Libya. The Ministry of Heath together with service providers are key-runners to achieving quality healthcare by providing the best care to patients. Patients attending any hospital are responsible for spreading the good picture of the hospital, and therefore satisfaction of patients visiting the hospital is equally important for the hospital management. The Misurata Central Hospital policy is to deliver a free and wide-ranging health care service to Libyan patients. To achieve this, Misurata central Hospital has been expanding and developing its services to meet the patient needs.

Appropriate service quality leads to satisfied patients who can become loyal customers as is known in other service related sectors. These patients have positive experiences which can create a spin-off effect when utilizing other medical services from the hospital, tending to enhance the trust of the hospital. This survey identifies that the consumer, in addition to providers, is a key player in the processes of defining and measuring quality and his/her voice provides an important component to the process. The incorporation of those dimensions related to how the consumer defines the experience of health care can be important for a more comprehensive service quality.

In conclusion, even though the trust does not significantly moderate the relationship between SERVQUAL dimensions and patient satisfaction, this study demonstrates that the overall patients with Misurata Central Hospital services are moderately satisfied. The major factors contributing to satisfaction included the tangibles and reliability under the SERVQUAL dimensions which include the availability of equipment, the availability of treatment facilities, the hospital is well maintained, and the availability of professional doctors and medical staff. Additionally, patients are averagely satisfied due to the convenience, courtesy, quality of care and the physical environment of the hospital which was measured

under the patient satisfaction variable. Moreover, as the results indicated, the trust does not moderate the relationship between service quality and patient satisfaction.

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