Patients' Satisfaction with Healthcare Services at Private and Public Hospitals in Aseer Region

ABSTRACT

Assessments of patients' satisfaction with provided health care is important, not only as a measure of the quality of care patients receive, but also in identifying potential areas for improving the content of care provided by physicians. Research proved that improving patient satisfaction with physician increases the likelihood that a patient will return to a given health care provider.-

Aim of Study: To assess patients' satisfaction with healthcare services at private and governmental hospitals in Aseer Region, 2020.

Methodology: Following a cross sectional design, two hospitals were included, a governmental hospital and a private hospital. A total of 400 patients were interviewed according to a consecutive sampling technique

Conclusions: In both public and private hospitals, quality of provided health services is significantly less than that expected across all components of patients' satisfaction. In public hospitals, higher quality of received health services is perceived by older patients. In private hospitals, higher quality of received health services is v older and male patients and those who have health insurance. Both received and expected quality of health services are significantly higher in private than public hospitals.

INTRODUCTION

Assessments of patients' satisfaction with provided health care is important, not only as a measure of the quality of care patients receive,[1-2] but also in identifying potential areas for improving the content of care provided by physicians.[3] Research proved that improving patient satisfaction with physician increases the likelihood that a patient will return to a given health care provider.[4]

Several reviews have summarized the factors associated with patient satisfaction with medical care. These include the sociodemographic characteristics of the patient the structural, organizational, and financial characteristics of medical care quality of care technical skills, intelligence, and qualifications of the provider and positive health outcomes.[1]

There are very few studies that have examined the relationship between health care and patient satisfaction.[5] In a study of members in one large health maintenance organization, Fincham and Wertheimer[6] found that physicians' health care practices were positively associated with patient satisfaction. In a study of patients receiving care from residents in an outpatient facility of a university medical center, Robbins and colleagues[5] -

found that the provision of health education by physician was related to patient satisfaction with general care provided by the physician.

Patient satisfaction is a widely recognized indicator of quality of care.[7,8] A product of expectation and experience, patient satisfaction or dissatisfaction occurs as the processes of medical care unfold. [9].

Patient satisfaction data have been used routinely in both private and governmental hospitals. The quality in health care is demonstrated through some indicators, as patient adherence to treatment recommendations, rates of malpractice litigation, and patient retention over time. Because patient satisfaction is related to each of these, it can be used as a readily obtained proxy for them[10-12].

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AIM OF STUDY

This study aims to assess patients' satisfaction with healthcare services at private and governmental hospitals in Aseer Region, 2016.

OBJECTIVES

This study presented a report on:

(1) Patients' satisfaction with care processes and providers at both private and governmental hospitals in Aseer Region, 2016;

(2) Areas that show low satisfaction toward the provided health services in Aseer Region, 2016.

STUDY RATIONALE

Patient satisfaction surveys can help identify ways of improving health care practice that can be ultimately translated into better care and happier patients. It has been stated that unless a physician is not interested at all in information, a patient satisfaction survey can be useful

Every organization is concerned with "satisfaction" of the users of its products or services, whether they are "clients", "customers", "consumers" or "patients". Satisfaction, like many other psychological concepts, is easy to understand but hard to define. The concept of satisfaction overlaps with similar themes such as happiness, contentment, and quality of life. Satisfaction is not some pre-existing phenomenon waiting to be measured, but a judgment people form over time as they reflect on their experience. A simple and practical definition of satisfaction would be the degree to which

desired goals have been achieved. Patient/client satisfaction is an attitude – a person's general orientation towards a total experience of health care.

Satisfaction comprises both cognitive and emotional facets and relates to previous experiences, expectations and social networks. [13]

Meredith and Wood [14] have described patient satisfaction as 'emergent and fluid'. It also has been described as a particularly passive form of establishing consumer's views. Satisfaction is achieved when the patient/client's perception of the quality of care and services that they receive in healthcare setting has been positive, satisfying, and meets their expectations.

Patient satisfaction has become an established indicator of quality health care [15], yet Mahon [16,17] observed that there are few theoretical under-pinning for this important concept. [18,19]

"Satisfaction" is studied in the fields of sociology, psychology, marketing and health care management. Although the focus of interest in each discipline tends to be different, common themes do exist, especially in the approach to satisfaction found in marketing which draws on conceptual developments presented in the sociology and psychology literatures. [20,21]

Consumer satisfaction with health care has gained widespread recognition as a measure of quality, especially since the publication of the 1983 NHS Management Inquiry and its call for the assessment of user opinion.[22] This has arisen partly because of the desire for greater involvement of the consumer in the health care process and partly because of the links demonstrated to exist between satisfaction and patient compliance in areas such as appointment keeping, intentions to comply with recommended treatment and medication use.[23,24]

Since high quality clinical outcome is dependent on compliance which, in turn, is dependent on patient satisfaction, the latter has come to be seen as a legitimate health care goal and therefore a prerequisite of quality

care. In other words, health care cannot be high quality unless the patient is satisfied. [25]

Therefore, satisfying patients is a fundamentally sound principle. An understanding of the nature of satisfaction is desirable if health care providers are to deliver quality care and succeed in today's rapidly changing business and economic environment. [26, 27]

Theories explaining satisfaction

It has been assumed that "satisfaction" embodies patient evaluation of services.[28] Singh [4] proposed the notion that patient satisfaction is a multi-dimensional evaluation of various aspects of health care received in a specific episode.[29] However, Williams et al. [30] found that processes by which patients' experiences were transformed into "evaluations" of the service were complex.[31]

There is a direct link between satisfaction and *perceived* health service quality.[32] Patient satisfaction has been shown to be linked with their general expectations about care [33], or with previous experiences with the health care system. [34]

Mummalaneni and Gopalakrishna [35] found that patient perceptions of satisfaction may be based on many variables, including a facility's environmental aesthetics, the availability of high tech equipment, a physician's comforting bedside manner, the answers given to questions, or a

facility's amenities.[36]

It is also of the conceptual models of consumer satisfaction. It proposes that the consumer compares his/her perceptions of the product or service against a 'pre-purchase' comparison level or standard, the most widely researched being consumer expectations.[37] Satisfaction is then mediated by the size and direction of disconfirmation - the difference between an individual's pre-purchase expectations and the performance or quality of the product or service. As far as services are concerned, this quality assessment comprises consumer perceptions of a number of service attributes: [38]

- *Reliability:* ability to perform the promised service dependably and accurately
- *Responsiveness:* willingness to help customers and provide prompt service
- *Assurance:* employees' knowledge and courtesy and their ability to inspire trust and confidence
- *Empathy:* caring, individualized attention given to customers
- *Tangibles:* appearance of physical facilities, equipment, personnel, and written materials.

The Disconfirmation theory proposes that, all things being equal, the higher one's expectations, the less likely that service or product performance can meet or exceed them, the result being reduced satisfaction or even dissatisfaction. This has led some observers to recommend deliberately under-promising the service to increase the likelihood of meeting or exceeding customer expectations.[39]

Zeithaml and Bitner [40] argued, however, that while under-promising makes expectations more realistic, thereby narrowing the gap between expectations and perceptions, it may also reduce the competitive appeal of the offer.[41]

Patient satisfaction - the health care perspective

Locker and Dunt [42] noted that the preoccupation of most researchers was with identifying sociodemographic correlates of satisfaction rather than developing a solid sociopsychological theoretical understanding. A number of studies have been conducted to find out more about how patients evaluate the care they receive and to develop conceptual models of patient

satisfaction, with most including the role of expectations as a central component of the satisfaction process. Oliver [37], for example, examined flu shots and found that positive disconfirmation (i.e., perceived performance above that expected) increased consumer satisfaction, while negative disconfirmation (i.e., perceived performance below that expected) decreased consumer satisfaction.

Health care studies

Patient satisfaction and consumer satisfaction are not one and the same thing. The marketing-oriented conceptual model does not easily fit, or is simply inappropriate for, many common medical scenarios. The most commonly-cited reservation concerns the role that expectations, which are central to the consumer model, play in determining satisfaction with health care. [26]

The work of Linder-Peltz [43] on the interaction between patient expectations and perceptions is seen to be particularly influential in this respect. Findings from this research suggest that disconfirmation theory might not be an entirely appropriate model for the health care setting. The first is that, in spite of being the most important antecedent social-psychological variable, patient expectations could only account for 8% of the variance in satisfaction and, together with values and perceptions (of the service received), only 10% of the variation. According to this study there is little evidence to suggest that satisfaction is *largely* the result of fulfilled expectations and values.

Linder-Peltz's second important finding is that expectations have an effect on satisfaction independent of other variables (i.e., irrespective of their fulfillment) leading the author to conclude that beliefs about doctor conduct prior to an encounter play a significant role in determining subsequent evaluations of the doctor conduct, irrespective of what (s)he actually did or was perceived to have done. It suggests that patients are likely to express satisfaction no matter what care the doctor gives, at least in the setting of the present study. Practically, the independent effect of expectations on satisfaction with doctor conduct implies that clinic staff - and particularly doctors themselves - can ensure the satisfaction (favorable ratings) of their clients by engendering positive expectations. With regard to health services research, this finding suggests that knowledge of patients' expectations can tell a great deal about how they will later rate the visit. [43]

Zeithaml et al. [44] noted that, while consumers ultimately judge the quality of services on their perceptions of the technical outcome provided and how that outcome was delivered (process quality), many professional services are highly complex and a clear outcome is not always evident. This is certainly true as regard many health care scenarios where the technical quality of the service - the actual competence of the provider or effectiveness of the outcome - is not easy to judge. The patient may never know for sure whether the service was performed correctly or even if it was needed in the first place. For example, the greater the perceived technical nature of

treatment the more likely it is that many service users will not believe in the legitimacy of holding their own expectations, or of their evaluations. [45]

In addition, if a service user is coming into contact with the system for the first time then expectations, which for many have been formed through past experience, might be waiting formation. In both cases a patient might wish for the health professional to adopt a paternalistic role in the relationship ('doctor knows best') while they themselves remain a passive partner. [20]

Donabedian [46] described quality of health care as a trilogy comprising 'structure, process and outcome'. However, Zeithaml et al. [44] argued that service users who cannot judge the technical quality of the outcome effectively will base their quality judgements on structure and process dimensions such as physical settings, the ability to solve problems, to empathize, time-keeping, courtesy and so on.

The satisfaction processes are likely to differ in the same individual depending on the severity of the condition he or she presents with. Patients will probably use different criteria to judge the management of a life-threatening emergency as compared to a routine health check and evaluation may differ depending upon whether it is the patient or the health professional who identifies the problem in the first place. Clearly, health care is not homogeneous; it is a distinctive, complex mixture of emotion, the tangible and the intangible, and its consumption cannot be viewed in entirely

the same light as that for a consumer product such as a television or a washing machine. [20]

METHODOLOGY

Study design

This is a cross sectional, health care services research study.

Study setting

This study has been conducted at two hospitals, the first is a governmental hospital and the other is a private hospital.

(200 from the governmental hospital and 200 from the private hospital). A study tool has been used for data collection which included patients' interview data sheet, the Arabic version of SERVQUAL scale.

Results: In both study hospital, patients' provided quality of provided health services was significantly less than that expected across all components of patients' satisfaction ($p<0.001$ for all components), with responsiveness having the wider percent differences between expected and received services. Regarding the "equipment" component in the public hospital, the mean scores for quality of received health services to patients differed significantly according to their age groups ($p<0.001$). Female patients had significantly higher expected quality than male patients ($p=0.047$). Regarding the "reliability" component in the public hospital, the quality of received health services to patients, differed significantly according to their age groups ($p=0.010$). Those having insurance received significantly higher quality of health services than unemployed and those with no insurance ($p=0.037$, respectively). Regarding the "responsiveness" component in the

public hospital, the quality of received health services to patients, differed significantly according to their age groups (p=0.007). Regarding the "assurance" component in the public hospital, the quality of received health services to patients was significantly better provided to patients having insurance (p=0.011). Regarding the "empathy" component in the public hospital, the quality of received health services to patients, differed significantly according to their age groups (p=0.044), with best received quality for older patients (aged 25-35 years). Regarding the "equipment" component in the private hospital, the quality of received health services to

patients, differed significantly according to their age groups (p<0.001). Significantly higher quality of health services was received by males (p=0.002), and patients who have insurance (p=0.010). Regarding the "reliability" component in the private hospital, the quality of received health services to patients, differed significantly according to their age groups (p<0.001). Significantly higher quality of health services was received by males (p<0.001), and employed patients (p<0.001). Regarding the "responsiveness" component in the private hospital, the quality of received health services to patients, differed significantly according to their age groups (p<0.001). Significantly higher quality of health services was received by males (p<0.001), and patients with sufficient income (p=0.028). Regarding the "assurance" component in the private hospital, the quality of received health services to patients, differed significantly according to their age groups (p<0.001). Significantly higher quality of health services was received by males (p<0.001). Regarding the "empathy" component in the private hospital, the quality of received health services to patients, differed significantly according to their age groups (p<0.001). Significantly higher quality of health services was received by males (p=0.003), and employed (p<0.001). Saudi patients had consistently higher expected health services than non-Saudi patients in both study hospitals. Both expected and received quality of health services components of equipment, reliability, and responsiveness in in the private hospital were significantly higher than that expected and received in the public hospital. Received assurance component was significantly better in the private hospital than the public one (p=0.001).

Sampling

A total of 400 patients were interviewed according to a consecutive sampling technique (200 from the governmental hospital and 200 from the private hospital). The sample size for this research has been decided according to the EPI-2000 computer software for sample size determination, with probability for type I error (α) = 0.05 and a power (1-β) of 0.80.

Study tools

Tools for data collection will include the following:

1- Patients' interview data sheet: to collect personal data of the interviewed patient.

2- The Arabic version of SERVQUAL will be used. SERVQUAL is a multi-item scale developed to assess customer perceptions of service quality in service and retail businesses.[38] The scale decomposes the notion of service quality into five constructs as follows:

- Tangibles - physical facilities, equipment, staff appearance, etc.

- Reliability - ability to perform service dependably and accurately
- Responsiveness - willingness to help and respond to customer need
- Assurance - ability of staff to inspire confidence and trust
- Empathy - the extent to which caring individualized service is given

SERVQUAL represents service quality as the discrepancy between a customer's expectations for a service offering and the customer's perceptions of the service received, requiring respondents to answer questions about both their expectations and their perceptions.[38] The use of perceived as opposed to actual service received makes the SERVQUAL measure an attitude measure that is related to satisfaction.[38] The internal consistency reliability of the total survey was assured by obtaining a Cronbach's alpha of 0.88. [47]

Procedure

- The directors of study hospitals were visited and a copy of the proposal and the data collection tools were delivered to him and the objectives as well as the methodology of the study were fully explained to them. Their official approval and support were solicited.
- A pilot study was performed on 20 patients in order to test the validity, clarity of the questionnaire. Any ambiguity or difficulty in the statements were dealt with accordingly. Consequently, the final form of the questionnaire has been reached.
- Patients attending the hospitals' clinics were interviewed so as to investigate their satisfaction toward the provided health care service.

Data analysis

Collected data were verified prior to computerized data analysis. The Statistical Package for Social Sciences (SPSS version 22.0) was used for that purpose. Descriptive statistics were calculated, and the appropriate tests of significance were applied accordingly. Results were presented using tables and/or graphs accordingly.

Budget

This study was fully funded by the researcher.

RESULTS

Table (1) Personal characteristics of study sample

Personal characteristics	Public		Private		p value
	No.	%	No.	%	
Age groups					
● <25 years	60	30.0	42	21.0	
● 25-35 years	87	43.5	94	47.0	
● >35 years	53	26.5	64	32.0	0.106
Gender					
● Male	115	57.5	132	66.0	
● Female	85	42.5	68	34.0	0.080
Nationality					
● Saudi	189	94.5	187	93.5	
● Non-Saudi	11	5.5	13	6.5	0.674
Marital status					
● Single	59	29.5	50	25.0	
● Married	141	70.5	150	75.0	0.312
Educational status					
● Illiterate	23	11.5	23	11.5	
● Primary	47	23.5	39	19.5	
● Intermediate	47	23.5	42	21.0	
● Secondary	53	26.5	50	25.0	
● University	30	15.0	46	23.0	0.345
Employment					
● Employed	164	82.0	149	74.5	
● Unemployed	36	18.0	51	25.5	0.069
Income					
● Insufficient	23	11.5	13	6.5	
● Sufficient	150	75.0	147	73.5	
● Can save	27	13.5	40	20.0	0.070
Having insurance					
● Yes	10	5.0	63	31.5	
● No	190	95.0	137	68.5	<0.001

Table (1) shows that most participants at public and private hospitals aged 25-35 years (43.5% and 47%, respectively). More than half of participants in both types of hospitals were males (57.5% and 66%, respectively) and the majority were Saudi (94.5% and 93.5%, respectively). They were mostly married (70.5% and 75%, respectively). The highest percentages of participants were secondary level educated (26.5% and 25%, respectively). Most participants were employed (82% and 74.5%, respectively), with sufficient income (75% and 73.5%, respectively). Only 5% of patients in public hospitals had insurance, compared with 31.5% of those in private hospitals, with statistically significant difference ($p<0.001$). However, there were no significant differences in other patients' personal characteristics according to their type of hospital.

Table (2): Differences between expected and obtained scores (Mean±SD) for components of patients' satisfaction in the public hospital

Components of satisfaction	Expected			Received			Difference (%)			P value
	Mean	±	SD	Mean	±	SD	Mean	±	SD	
Equipment	18.2	±	2.3	11.5	±	3.8	33.5	±	21.5	<0.001
Reliability	23.3	±	2.6	13.7	±	4.8	38.4	±	22.5	<0.001
Responsiveness	18.1	±	2.6	10.2	±	4.0	39.5	±	24.8	<0.001
Assurance	17.9	±	2.6	11.0	±	3.8	34.3	±	23.3	<0.001
Empathy	17.7	±	2.7	10.6	±	3.5	35.8	±	23.2	<0.001

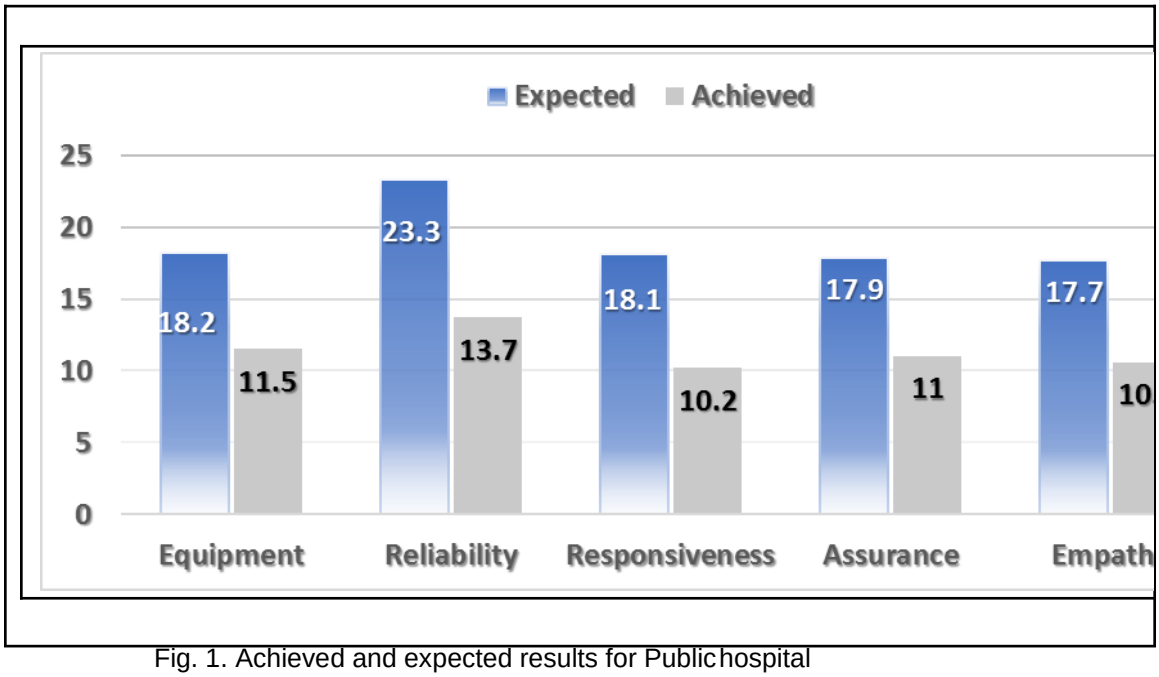

Fig. 1. Achieved and expected results for Public hospital

Table (2) and Figure (1) show that, in the public hospital, patients' provided quality of provided health services was significantly less than that expected across all components of patients' satisfaction ($p<0.001$ for all components), with responsiveness and reliability having the wider percent

differences between expected and received services (39.5±24.8% and 38.4±22.5%, respectively).

Table (3): Differences between expected and obtained scores (Mean±SD) for components of patients' satisfaction in the private hospital

Components of satisfaction	Expected			Received			P-value
	Mean	±	SD	Mean	±	SD	
Equipment	19.0	±	1.8	13.1	±	2.6	<0.001
Reliability	24.2	±	1.6	16.2	±	3.0	<0.001
Responsiveness	18.8	±	2.0	11.9	±	2.5	<0.001
Assurance	18.4	±	2.6	12.2	±	3.2	<0.001
Empathy	17.9	±	2.7	10.2	±	2.7	<0.001

Fig. 2. Achieved and expected results for Private hospital

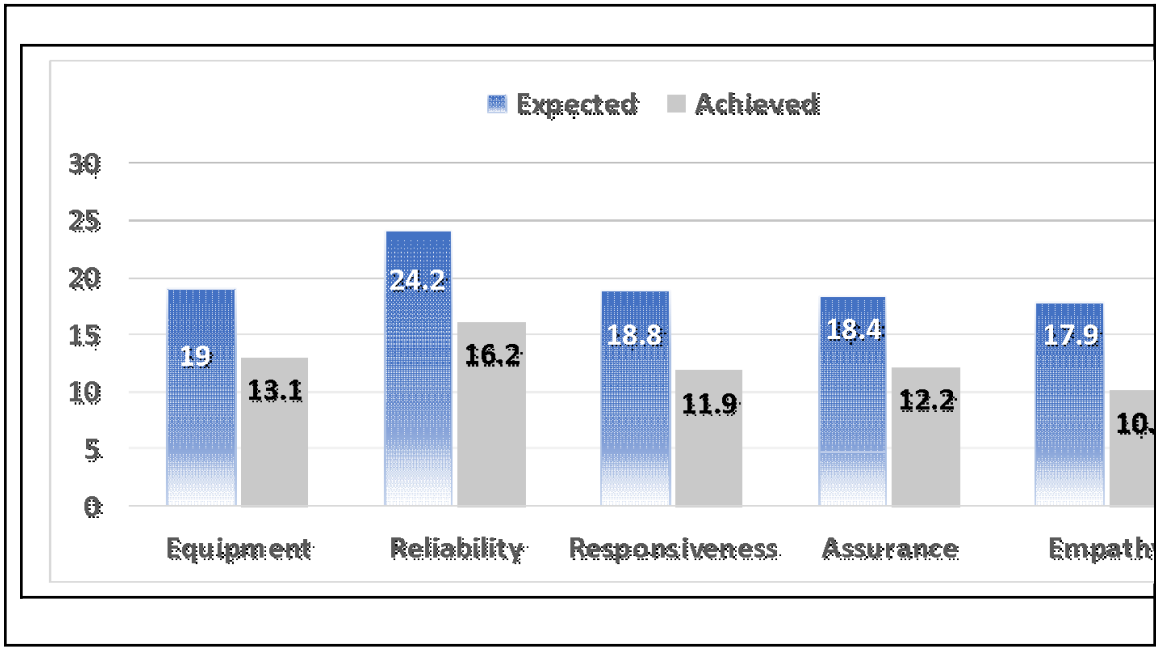

Table (3) and Figure (2) show that, in private hospitals, patients' provided quality of provided health services was significantly less than that expected across all components of patients' satisfaction ($p<0.001$ for all components), with empathy and responsiveness having the wider percent differences between expected and received services (38.4±17% and 34.4±13.6%, respectively).

Table (4): Differences in patients' equipment scores (Mean±SD) in the public hospital according to their personal characteristics

Personal characteristics	Expected	Received
	Mean ± SD	Mean ± SD
Age groups		
• <25 years	17.8 ± 2.6	10.0 ± 4.4
• 25-35 years	18.5 ± 2.0	11.9 ± 3.0
• >35 years	18.2 ± 2.3	12.7 ± 3.6
P-value	0.202	<0.001
Gender		
• Male	17.9 ± 2.5	11.5 ± 4.1
• Female	18.6 ± 1.9	11.6 ± 3.4
P-value	0.047	0.810
Nationality		
• Saudi	18.4 ± 2.1	11.5 ± 3.9
• Non-Saudi	15.5 ± 3.1	11.9 ± 1.3
P-value	<0.001	0.730
Marital status		
• Single	18.0 ± 2.1	11.4 ± 4.8
• Married	18.3 ± 2.3	11.6 ± 3.3
P-value	0.374	0.744
Educational status		
• Illiterate	18.6 ± 1.7	11.9 ± 2.4
• Primary	18.1 ± 2.0	11.3 ± 3.5
• Intermediate	18.1 ± 2.5	10.9 ± 3.9
• Secondary	18.3 ± 2.4	12.2 ± 3.9
• University	18.2 ± 2.4	11.2 ± 4.6
P-value	0.938	0.467
Employment		
• Employed	18.2 ± 2.3	10.1 ± 3.2
• Unemployed	18.2 ± 2.2	10.9 ± 5.1
P-value	0.995	0.193
Income		
• Insufficient	18.0 ± 2.0	10.6 ± 5.4
• Sufficient	18.4 ± 2.2	11.3 ± 3.5
• Can save	17.6 ± 2.5	11.0 ± 3.2
P-value	0.286	0.741
Having insurance		
• Yes	18.5 ± 1.6	13.5 ± 5.2
• No	18.2 ± 2.3	11.4 ± 3.7

P-value	0.688	0.090

Table (4) shows that regarding the "equipment" component in the public hospital, the mean scores for quality of received health services to patients differed significantly according to their age groups ($p<0.001$), with best received quality for older patients (aged > 35 years). Female and Saudi patients had significantly higher expected quality than males and non-Saudi patients ($p=0.047$ and $p<0.001$, respectively). However, quality of received health services related to equipment in the public hospital did not differ significantly according to patients' gender, nationality, marital status, educational status, employment, income or having insurance.

Table (5): Differences in patients' reliability scores (Mean±SD) in the public hospital according to their personal characteristics

Personal characteristics	Expected	received
	Mean ± SD	Mean ± SD
Age groups		
• <25 years	22.9 ± 2.9	12.3 ± 4.1
• 25-35 years	23.5 ± 2.4	14.0 ± 4.5
• >35 years	23.5 ± 2.5	14.9 ± 5.6
P-value	0.320	0.010
Gender		
• Male	23.2 ± 2.6	13.7 ± 4.8
• Female	23.5 ± 2.5	13.8 ± 4.7
P-value	0.330	0.776
Nationality		
• Saudi	23.6 ± 2.0	13.8 ± 4.8
• Non-Saudi	18.0 ± 4.9	13.3 ± 3.7
P-value	<0.001	0.742
Marital status		
• Single	23.3 ± 2.3	13.4 ± 5.5
• Married	23.3 ± 2.7	13.9 ± 4.5
P-value	0.915	0.552
Educational status		
• Illiterate	23.8 ± 1.9	14.3 ± 3.5
• Primary	22.9 ± 3.1	13.5 ± 4.2
• Intermediate	23.4 ± 2.2	13.4 ± 4.9
• Secondary	23.2 ± 2.7	14.4 ± 5.0
• University	23.7 ± 2.5	13.1 ± 5.7
P-value	0.661	0.686
Employment		
• Employed	23.2 ± 2.7	13.3 ± 4.7
• Unemployed	23.8 ± 1.8	12.3 ± 4.3
P-value	0.254	0.182
Income		
• Insufficient	23.1 ± 2.9	11.7 ± 4.5
• Sufficient	23.4 ± 2.6	14.1 ± 4.7
• Can save	23.1 ± 1.8	13.7 ± 4.8
P-value	0.826	0.077
Having insurance		
• Yes	24.2 ± 0.9	16.8 ± 5.8
• No	23.3 ± 2.6	13.6 ± 4.7

P-value	0.276	0.037

Table (5) shows that regarding the "reliability" component in the public hospital, the quality of received health services to patients, differed significantly according to their age groups (p=0.010), with best received quality for older patients (aged > 35 years). Saudi patients had significantly higher expected quality than non-Saudi (p<0.001). Those having insurance received significantly higher quality of health services than unemployed and those with no insurance (p=0.037, respectively). However, quality of received health services related to reliability in the public hospital did not differ significantly according to patients' gender, nationality, marital status, educational status, employment or income.

Table (6): Differences in patients' scores for responsiveness (Mean±SD) in the public hospital according to their personal characteristics

Personal characteristics	Expected	Received
	Mean ± SD	Mean ± SD
Age groups		
• <25 years	17.4 ± 3.4	9.1 ± 3.1
• 25-35 years	18.4 ± 2.2	10.4 ± 4.0
• >35 years	18.5 ± 2.0	11.4 ± 4.6
P-value	0.032	0.007
Gender		
• Male	17.9 ± 2.7	10.3 ± 4.0
• Female	18.5 ± 2.4	10.1 ± 4.0
P-value	0.127	0.712
Nationality		
• Saudi	18.4 ± 2.5	10.2 ± 4.1
• Non-Saudi	14.5 ± 2.0	10.1 ± 3.0
P-value	<0.001	0.899
Marital status		
• Single	17.8 ± 3.0	10.1 ± 4.4
• Married	18.3 ± 2.4	10.3 ± 3.8
P-value	0.198	0.812
Educational status		
• Illiterate	18.4 ± 2.4	10.7 ± 2.9
• Primary	18.1 ± 2.5	10.0 ± 3.5
• Intermediate	17.8 ± 2.8	9.8 ± 4.0
• Secondary	18.3 ± 2.7	10.9 ± 4.4
• University	18.3 ± 2.4	10.0 ± 4.7
P-value	0.799	0.642
Employment		
• Employed	18.1 ± 2.6	9.7 ± 3.9
• Unemployed	18.4 ± 2.3	9.0 ± 3.6
P-value	0.445	0.261
Income		
• Insufficient	17.7 ± 3.4	8.3 ± 3.8
• Sufficient	18.0 ± 2.4	10.5 ± 3.9
• Can save	17.8 ± 2.6	10.5 ± 3.9
P-value	0.833	0.051
Having insurance		
• Yes	20.0 ± 0.0	11.8 ± 5.6
• No	18.0 ± 2.6	10.2 ± 3.9

P-value	0.020	0.208

Table (6) shows that regarding the “responsiveness” component in the public hospital, the quality of received health services to patients, differed significantly according to their age groups (p=0.007), with best received quality for older patients (aged > 35 years). Saudi patients, those with sufficient income and those having insurance had significantly higher expected quality of health services (p<0.001, p=0.012 and p=0.020, respectively). However, quality of received health services related to reliability in the public hospital did not differ significantly according to patients’ gender, nationality, marital status, educational status, employment, income or having insurance.

Table (7): Differences in patients' scores for assurance (Mean±SD) in the public hospital according to their personal characteristics

Personal characteristics	Expected	Received
	Mean ± SD	Mean ± SD
Age groups		
• <25 years	17.4 ± 2.6	10.5 ± 3.6
• 25-35 years	18.3 ± 2.4	10.9 ± 3.8
• >35 years	17.7 ± 2.8	11.9 ± 3.9
P-value	0.136	0.125
Gender		
• Male	17.9 ± 2.6	10.9 ± 4.0
• Female	17.9 ± 2.6	11.2 ± 3.6
P-value	0.904	0.562
Nationality		
• Saudi	18.1 ± 2.4	11.1 ± 3.9
• Non-Saudi	13.5 ± 2.2	10.0 ± 2.4
P-value	<0.001	0.356
Marital status		
• Single	17.9 ± 2.8	11.7 ± 3.8
• Married	17.9 ± 2.5	10.7 ± 3.8
P-value	0.854	0.085
Educational status		
• Illiterate	18.2 ± 2.1	10.9 ± 2.7
• Primary	17.7 ± 2.7	10.8 ± 3.6
• Intermediate	17.7 ± 2.7	10.8 ± 4.1
• Secondary	17.8 ± 2.8	11.5 ± 3.9
• University	18.5 ± 2.3	11.1 ± 4.4
P-value	0.623	0.884
Employment		
• Employed	17.8 ± 2.7	11.1 ± 3.7
• Unemployed	18.3 ± 2.1	10.6 ± 4.2
P-value	0.344	0.497
Income		
• Insufficient	17.8 ± 2.8	11.0 ± 3.9
• Sufficient	18.1 ± 2.4	11.0 ± 3.9
• Can save	17.5 ± 3.0	11.4 ± 3.4
P-value	0.493	0.051
Having insurance		
• Yes	19.7 ± 0.5	14.0 ± 3.1
• No	17.8 ± 2.6	10.9 ± 3.8

P-value	0.022	0.011

Table (7) shows that regarding the “assurance” component in the public hospital, the quality of received health services to patients was significantly better provided to patients having insurance (p=0.011). Saudi patients, those with sufficient income and those having insurance had significantly higher expected quality of health services (p<0.001, p=0.021 and p=0.022, respectively). However, quality of received health services related to reliability in the public hospital did not differ significantly according to patients’ gender, nationality, marital status, educational status, employment status, or income.

Table (8): Differences in patients' scores for empathy (Mean±SD) in the public hospital according to their personal characteristics

Personal characteristics	Expected	Received
	Mean ± SD	Mean ± SD
Age groups		
• <25 years	16.8 ± 2.9	9.7 ± 2.6
• 25-35 years	18.0 ± 2.7	11.1 ± 3.4
• >35 years	18.4 ± 2.1	10.9 ± 4.4
P-value	0.004	0.044
Gender		
• Male	17.6 ± 2.8	10.7 ± 3.5
• Female	18.0 ± 2.6	10.4 ± 3.6
P-value	0.321	0.612
Nationality		
• Saudi	18.0 ± 2.5	10.6 ± 3.6
• Non-Saudi	13.8 ± 2.4	10.5 ± 1.6
P-value	<0.001	0.893
Marital status		
• Single	17.6 ± 2.9	10.6 ± 3.8
• Married	17.8 ± 2.6	10.6 ± 3.4
P-value	0.529	0.996
Educational status		
• Illiterate	18.0 ± 2.5	10.7 ± 2.6
• Primary	17.8 ± 2.5	10.2 ± 3.0
• Intermediate	17.3 ± 2.8	10.4 ± 3.8
• Secondary	17.7 ± 2.9	11.0 ± 3.8
• University	18.2 ± 2.7	10.7 ± 4.1
P-value	0.689	0.877
Employment		
• Employed	17.9 ± 2.7	10.4 ± 3.6
• Unemployed	17.1 ± 2.6	9.9 ± 2.9
P-value	0.118	0.371
Income		
• Insufficient	17.5 ± 2.6	9.0 ± 3.3
• Sufficient	18.0 ± 2.6	10.8 ± 3.6
• Can save	17.4 ± 2.9	10.9 ± 3.4
P-value	0.436	0.060
Having insurance		
• Yes	19.6 ± 0.8	11.8 ± 3.3
• No	17.6 ± 2.7	10.5 ± 3.5

P-value	0.025	0.270

Table (8) shows that regarding the "empathy" component in the public hospital, the quality of received health services to patients, differed significantly according to their age groups (p=0.044), with best received quality for older patients (aged 25-35 years). Saudi patients, those with sufficient income and those having insurance had significantly higher expected quality of health services (p<0.001, p=0.013 and p=0.025, respectively). However, quality of received health services related to reliability in the public hospital did not differ significantly according to patients' gender, nationality, marital status, educational status, employment, income or having insurance.

Table (9): Differences in patients' equipment scores (Mean±SD) in the private hospital according to their personal characteristics

Personal characteristics	Expected	Received
	Mean ± SD	Mean ± SD
Age groups		
• <25 years	19.1 ± 2.0	12.0 ± 3.5
• 25-35 years	19.2 ± 1.7	12.8 ± 2.3
• >35 years	18.8 ± 1.7	14.4 ± 1.6
P-value	0.315	<0.001
Gender		
• Male	19.0 ± 1.5	13.5 ± 2.7
• Female	19.1 ± 2.1	12.4 ± 2.2
P-value	0.914	0.002
Nationality		
• Saudi	19.1 ± 1.7	13.2 ± 2.5
• Non-Saudi	18.7 ± 2.3	12.8 ± 3.4
P-value	0.461	0.677
Marital status		
• Single	19.2 ± 1.2	12.9 ± 3.1
• Married	19.0 ± 1.9	13.0 ± 2.4
P-value	0.403	0.813
Educational status		
• Illiterate	18.4 ± 2.8	13.5 ± 2.9
• Primary	19.1 ± 1.5	13.5 ± 3.0
• Intermediate	19.2 ± 1.5	12.9 ± 2.2
• Secondary	18.8 ± 1.9	13.0 ± 2.7
• University	19.3 ± 1.1	13.0 ± 2.2
P-value	0.178	0.753
Employment		
• Employed	19.0 ± 1.6	12.6 ± 2.1
• Unemployed	19.1 ± 2.2	12.9 ± 3.3
P-value	0.929	0.453
Income		
• Insufficient	19.1 ± 1.3	13.6 ± 1.3
• Sufficient	19.0 ± 1.8	13.3 ± 2.6
• Can save	19.2 ± 1.8	12.3 ± 2.5
P-value	0.747	0.057
Having insurance		
• Yes	19.1 ± 2.0	13.5 ± 2.5
• No	19.0 ± 1.6	12.4 ± 2.7

P-value	0.827	0.010

Table (9) shows that regarding the "equipment" component in the private hospital, the quality of received health services to patients, differed significantly according to their age groups ($p<0.001$), with best received quality for older patients (aged > 35 years). Significantly higher quality of health services was received by males ($p=0.002$), and patients who have insurance ($p=0.010$). However, quality of received health services related to equipment in the private hospital did not differ significantly according to patients' nationality, marital status, educational status, employment, or income.

Table (10): Differences in patients' reliability scores (Mean±SD) in the private hospital according to their personal characteristics

Personal characteristics	Expected	Received
	Mean ± SD	Mean ± SD
Age groups		
• <25 years	24.2 ± 1.5	15.1 ± 3.8
• 25-35 years	23.7 ± 1.9	15.5 ± 2.5
• >35 years	24.9 ± 0.5	17.9 ± 2.2
P-value	<0.001	<0.001
Gender		
• Male	24.2 ± 1.7	16.8 ± 3.0
• Female	24.2 ± 1.5	15.0 ± 2.7
P-value	0.957	<0.001
Nationality		
• Saudi	24.3 ± 1.4	16.2 ± 3.0
• Non-Saudi	22.1 ± 2.3	16.2 ± 3.2
P-value	<0.001	0.984
Marital status		
• Single	23.9 ± 2.0	15.6 ± 2.9
• Married	24.0 ± 1.4	16.0 ± 2.9
P-value	0.687	0.399
Educational status		
• Illiterate	24.2 ± 1.8	16.3 ± 2.6
• Primary	23.9 ± 1.8	16.6 ± 3.4
• Intermediate	24.5 ± 1.2	15.8 ± 3.1
• Secondary	24.3 ± 1.5	15.8 ± 3.1
• University	24.0 ± 1.7	16.5 ± 2.4
P-value	0.608	0.668
Employment		
• Employed	24.2 ± 1.6	15.6 ± 2.7
• Unemployed	24.2 ± 1.5	15.9 ± 3.4
P-value	0.884	0.523
Income		
• Insufficient	25.0 ± 0.0	16.4 ± 2.7
• Sufficient	24.2 ± 1.6	16.4 ± 2.9
• Can save	24.0 ± 1.6	15.2 ± 3.1
P-value	0.146	0.079
Having insurance		
• Yes	24.2 ± 1.5	15.6 ± 3.0
• No	24.2 ± 1.7	16.4 ± 2.9

P-value	0.974	0.084

Table (10) shows that regarding the "reliability" component in the private hospital, the quality of received health services to patients, differed significantly according to their age groups ($p<0.001$), with best received quality for older patients (aged > 35 years). Saudi patients had significantly higher expected quality than non-Saudi ($p<0.001$). Significantly higher quality of health services was received by males ($p<0.001$), and employed patients ($p<0.001$). However, quality of received health services related to reliability in the private hospital did not differ significantly according to patients' nationality, marital status, educational status, income or having insurance.

Table (11): Differences in patients' responsiveness scores (Mean±SD) in the private hospital according to their personal characteristics

Personal characteristics	Expected	Received
	Mean ± SD	Mean ± SD
Age groups		
• <25 years	18.5 ± 2.2	10.6 ± 2.7
• 25-35 years	18.6 ± 2.0	11.6 ± 2.2
• >35 years	19.4 ± 1.6	13.3 ± 2.1
P-value	0.024	<0.001
Gender		
• Male	18.9 ± 1.9	12.4 ± 2.4
• Female	18.7 ± 2.0	11.0 ± 2.5
P-value	0.490	<0.001
Nationality		
• Saudi	19.0 ± 1.8	12.0 ± 2.5
• Non-Saudi	15.8 ± 2.3	11.7 ± 2.8
P-value	<0.001	0.719
Marital status		
• Single	18.6 ± 2.3	11.5 ± 2.9
• Married	18.7 ± 1.8	12.1 ± 2.4
P-value	0.742	0.121
Educational status		
• Illiterate	19.1 ± 1.9	11.8 ± 2.9
• Primary	18.6 ± 1.9	12.0 ± 2.8
• Intermediate	18.7 ± 1.7	12.2 ± 2.0
• Secondary	19.1 ± 1.9	11.5 ± 2.7
• University	18.6 ± 2.2	12.2 ± 2.1
P-value	0.639	0.698
Employment		
• Employed	18.8 ± 1.9	12.0 ± 2.3
• Unemployed	18.7 ± 2.2	11.4 ± 2.9
P-value	0.661	0.135
Income		
• Insufficient	19.8 ± 0.4	11.9 ± 1.3
• Sufficient	18.7 ± 1.9	11.2 ± 2.3
• Can save	18.7 ± 2.2	11.4 ± 3.1
P-value	0.142	0.578
Having insurance		
• Yes	18.8 ± 1.7	11.5 ± 2.3
• No	18.8 ± 2.1	12.1 ± 2.6

P-value	0.998	0.090

Table (11) shows that regarding the "responsiveness" component in the private hospital, the quality of received health services to patients, differed significantly according to their age groups ($p<0.001$), with best received quality for older patients (aged > 35 years). Saudi and married patients had significantly higher expected quality than non-Saudi and single patients ($p<0.001$ and $p=0.027$, respectively). Significantly higher quality of health services was received by males ($p<0.001$), and patients with sufficient income ($p=0.028$). However, quality of received health services related to responsiveness in the private hospital did not differ significantly according to patients' nationality, marital status, educational status, employment, or having insurance.

Table (12): Differences in patients' assurance scores (Mean±SD) in the private hospital according to their personal characteristics

Personal characteristics	Expected	Received
	Mean ± SD	Mean ± SD
Age groups		
• <25 years	18.6 ± 2.3	10.8 ± 3.3
• 25-35 years	17.5 ± 3.0	11.4 ± 3.1
• >35 years	19.5 ± 1.4	14.4 ± 2.0
P-value	<0.001	<0.001
Gender		
• Male	18.8 ± 2.4	13.2 ± 3.0
• Female	17.5 ± 2.9	10.4 ± 2.7
P-value	0.001	<0.001
Nationality		
• Saudi	18.6 ± 2.5	12.3 ± 3.0
• Non-Saudi	15.4 ± 2.7	10.6 ± 5.0
P-value	<0.001	0.059
Marital status		
• Single	18.0 ± 3.1	11.6 ± 3.5
• Married	18.2 ± 2.4	12.1 ± 3.0
P-value	0.624	0.329
Educational status		
• Illiterate	18.5 ± 2.4	12.0 ± 3.9
• Primary	18.6 ± 2.5	13.0 ± 3.0
• Intermediate	18.5 ± 2.7	11.9 ± 3.2
• Secondary	18.4 ± 2.4	12.1 ± 2.9
• University	17.9 ± 3.0	12.1 ± 3.3
P-value	0.757	0.542
Employment		
• Employed	18.4 ± 2.7	11.8 ± 3.1
• Unemployed	18.3 ± 2.3	11.6 ± 2.8
P-value	0.727	0.684
Income		
• Insufficient	19.8 ± 0.4	12.9 ± 1.2
• Sufficient	18.3 ± 2.6	12.4 ± 3.1
• Can save	18.1 ± 2.8	12.0 ± 3.7
P-value	0.094	0.630
Having insurance		
• Yes	18.5 ± 2.6	12.5 ± 3.0
• No	18.1 ± 2.6	11.6 ± 3.6

P-value	0.381	0.060

Table (12) shows that regarding the “assurance” component in the private hospital, the quality of received health services to patients, differed significantly according to their age groups ($p<0.001$), with best received quality for older patients (aged > 35 years). Saudi patients had significantly higher expected quality than non-Saudi patients ($p<0.001$). Significantly higher quality of health services was received by males ($p<0.001$). However, quality of received health services related to assurance in the private hospital did not differ significantly according to patients’ nationality, marital status, educational status, employment, income or having insurance.

Table (13): Differences in patients' empathy scores (Mean±SD) in the private hospital according to their personal characteristics

Personal characteristics	Expected	Received
	Mean ± SD	Mean ± SD
Age groups		
• <25 years	17.3 ± 2.8	9.5 ± 2.8
• 25-35 years	17.8 ± 2.8	10.3 ± 3.0
• >35 years	18.3 ± 2.3	11.3 ± 3.4
P-value	0.040	<0.001
Gender		
• Male	17.9 ± 2.7	10.8 ± 3.0
• Female	17.7 ± 2.6	9.8 ± 3.2
P-value	0.539	0.003
Nationality		
• Saudi	18.0 ± 2.6	10.4 ± 3.2
• Non-Saudi	14.5 ± 2.4	10.0 ± 2.5
P-value	<0.001	0.520
Marital status		
• Single	17.9 ± 2.8	10.1 ± 3.4
• Married	17.8 ± 2.6	10.5 ± 3.0
P-value	0.838	0.244
Educational status		
• Illiterate	18.1 ± 2.6	10.4 ± 2.5
• Primary	17.8 ± 2.7	10.3 ± 3.0
• Intermediate	17.4 ± 2.8	10.3 ± 3.2
• Secondary	17.9 ± 2.7	10.5 ± 3.4
• University	18.1 ± 2.5	10.6 ± 3.2
P-value	0.447	0.955
Employment		
• Employed	17.9 ± 2.7	10.2 ± 3.2
• Unemployed	17.6 ± 2.7	9.7 ± 2.8
P-value	0.319	0.322
Income		
• Insufficient	18.2 ± 2.5	10.1 ± 3.0
• Sufficient	17.9 ± 2.7	10.7 ± 3.1
• Can save	17.3 ± 2.8	9.8 ± 3.3
P-value	0.221	0.249
Having insurance		
• Yes	17.9 ± 2.9	10.7 ± 2.7
• No	17.3 ± 2.6	10.3 ± 3.2

P-value	0.056	0.348

Table (13) shows that regarding the “empathy” component in the private hospital, the quality of received health services to patients, differed significantly according to their age groups ($p<0.001$), with best received quality for older patients (aged > 35 years). Saudi patients had significantly higher expected quality than non-Saudi patients ($p<0.001$). Significantly higher quality of health services was received by males ($p=0.003$), and employed ($p<0.001$). However, quality of received health services related to empathy in the private hospital did not differ significantly according to patients’ nationality, marital status, educational status, income or having insurance.

Table (14): Differences in patients' satisfaction scores (Mean±SD) according to hospital type

Components of patients' satisfaction	Public	Private	P-value
	Mean ± SD	Mean ± SD	
Equipment			
● Expected	18.2 ± 2.3	19.0 ± 1.8	<0.001
● Received	11.5 ± 3.8	13.1 ± 2.8	<0.001
Reliability			
● Expected	23.3 ± 2.6	24.2 ± 2.0	<0.001
● Received	13.7 ± 4.8	16.2 ± 3.0	<0.001
Responsiveness			
● Expected	18.1 ± 3.0	18.8 ± 2.0	0.004
● Received	10.2 ± 4.0	11.9 ± 2.5	<0.001
Assurance			
● Expected	17.9 ± 2.6	18.4 ± 2.6	0.062
● Received	11.0 ± 3.8	12.2 ± 3.2	0.001
Empathy			
● Expected	17.7 ± 2.7	17.9 ± 2.7	0.590
● Received	10.6 ± 3.5	10.2 ± 2.7	0.215

Table (14) shows that both expected and received quality of health services components of equipment, reliability, and responsiveness in in the private hospital were significantly higher than that expected and received in the public hospital. Moreover, received assurance component (but not the expected) was significantly better in the private hospital than the public one (p=0.001). However, the empathy component of patients' satisfaction did not differ significantly according to type of hospitals.

DISCUSSION

Patient satisfaction represents a key marker for the quality of health care delivery which needs to be studied repeatedly for smooth functioning of the health care systems. [48] Patient is the best judge since he/she accurately assesses, and his/her inputs help in the overall improvement of quality health care provision through the rectification of the system weaknesses by the concerned authorities. [49]

Therefore, the present study aimed to assess patients' satisfaction with healthcare services at private and governmental hospitals in Aseer Region.

Results of this study indicated that personal characteristics of patients in public hospitals did not differ from those in private hospitals, regarding their age, gender, nationality, marital status, educational status, employment or income. However, only 5% of patients in public hospitals had insurance, compared with 31.5% of those in private hospitals, with statistically significant difference ($p<0.001$).

The significant difference between participants regarding having insurance is quite understandable since public hospitals in Saudi Arabia provide totally free health care services, while private hospitals usually provide costly health care services.

This study revealed that in both public and private hospitals, patients' provided quality of provided health services was significantly less than those expected across all components of patients' satisfaction ($p<0.001$ for all components), with responsiveness and reliability having the wider percent differences between expected and received services in public hospitals while empathy and responsiveness having the wider percent differences between expected and received services in private hospitals.

These results indicate low levels of patients' satisfaction toward all aspects of health services, since satisfaction is expressed by the extent of an individual's experience compared with his/her expectations. [50]

These findings are in accordance with those reported by several studies. In UK, Silvestro [51] reported that patients at a National Health Service breast cancer screening unit were most dissatisfied with received care, comfort and responsiveness. In Dar es Salam, Tanzania, Khamis and Njau [52] found that of all dimensions used to assess patients' level of satisfaction in Mwananyamala Public Hospital, respondents were least satisfied with reliability, empathy, and responsiveness. They noted that patients' perception of health care providers' behavior, such as respect, influence their views toward received quality of care.

In India, Mohan and Kanagaluru [50] reported that the gender analysis of patients' satisfaction with respect to various hospital-related services revealed that patients are more satisfied with tangibles attribute, e.g.,

cleanliness of the bed sheets and pillow covers, while they were least satisfied with empathy and responsiveness attributes, i.e., behavior and response of staff toward patients.

In the United Arab Emirates, Al-Neyadi et al. [53] reported that inpatients in public hospitals were satisfied with the services provided in terms of tangibles, reliability, empathy, and assurance but were unsatisfied regarding the responsiveness of such services. On the other hand, the inpatients in private hospitals were very satisfied with the assurance of the services provided; satisfied with the tangibles, reliability, and empathy dimensions of the services; and uncertain regarding the responsiveness of the services.

Al-Abri and Al-Balushi [54] recommended that healthcare managers need to direct more efforts toward those highly ranked attributes to initiate improvement strategies in areas of health services that are unsatisfactory from the patient's perspective.

Therefore, hospital administrators in Aseer Region are advised to consider improving hospital staff responsiveness (i.e., willingness to help customers and provide prompt service) [38] to raise their patients' satisfaction.

Findings of this study showed that most mean SERVQUAL constructs scores for expected and received services differed significantly according to some patients' personal characteristics, both in public and private hospitals.

Regarding age of participant patients, it has been observed that younger patients (aged <25 years) in both public and private hospitals had almost consistently the least expected and received mean scores for all SERVQUAL constructs, i.e., equipment, reliability, responsiveness, assurance and empathy.

Similarly, Nguyen et al. [55] in France, and Jenkinson et al. [56] in Scotland concluded that the strongest and most consistent determinant of patients' personal characteristics associated with higher patient satisfaction is older age.

Bener and Ghuloum [57] explained the age-difference in patient satisfaction by a cohort effect, with younger generations having greater expectations and older patients do not complain about the services offered and they try to cope up with problems thinking of their old age.

In the current study, it was shown that in public hospitals, apart from "equipment" where females had significantly higher mean scores for expected services, these scores did not differ significantly according to patients' gender. Moreover, mean scores for received services in public hospitals did not differ significantly according to patients' gender. On the other hand, in private hospitals, apart from "assurance" where males had significantly higher mean scores for expected services, these scores did not

differ according to patients' gender, while males had significantly higher mean scores for received services in all five constructs.

These findings are in accordance with those reported by Mohan and Kanagaluru [50] in India, who found that according to gender analysis of patient satisfaction with respect to various hospital related services, male patients were more satisfied in comparison with female patients. Similarly, Bener and Ghuloum (2013), in Qatar, found that men tend to be significantly more satisfied with mental health care services than women in most satisfaction attributes.

This finding may be explained by the fact that in the local culture of Saudi Arabia, women are more conservative and their exposure to the public is limited. This culture might be the reason for the less satisfaction among female patients.

In the present study, regarding participant patients' nationality, it was shown that non-Saudi patients, in both public and private hospitals had significantly lower mean scores for expected services in all five constructs, except equipment scores in private hospitals. On the other hand, there were no significant differences according to nationality regarding to mean scores of received services in both public and private hospitals.

Similarly, Alturki and Khan [58], in Alahsah, Eastern Region of the Kingdom of Saudi Arabia, found that the satisfaction level among Saudi patients was least in comparison with non-Saudis.

This finding can be explained by the fact that non-Saudi patients always consider themselves as "guests" who have lower expectations and can easily feel grateful and appreciating toward received health service, hence they are more satisfied with received health care services. On the other hand, Saudi patients consider provision of health care services as their right that should be fully and perfectly received.

The present study showed that participant patients with health insurance had consistently higher mean scores of expected and received services in both public and private hospitals.

This finding is in accordance with that reported by Abo Ammo et al. [59] in Lebanon and Fenny et al. [60], in Ghana, who noted that a higher proportion of insured patients were satisfied with the overall quality of care compared with those who were uninsured. They explained this finding by that the key predictors of overall satisfaction are the less waiting time, friendliness of staff and satisfaction of the consultation process.

Regarding participant patients' marital status, educational status, employment, or income there were no significant differences regarding mean scores of expected or received services in both public and private hospitals.

Fall [61], in Senegal, reported no significant differences in patients' satisfaction regarding their income or educational level. However, Chari et al. [62], in Cyprus, observed that married patients had higher overall evaluation scores compared with unmarried patients.

Alturki and Khan [58], in Alahsah, Saudi Arabia, reported low levels of satisfaction among patients with low educational background and the satisfaction levels were found improving as patients' educational level was improved. On the contrary, Abu Ammo et al. [59], in Lebanon, reported that patients with elementary education level were significantly more satisfied than patients with postgraduate education level.

Jose et al. [63] emphasized that patient characteristics should be considered for fair adjustment of patient satisfaction studies in order to be utilized in benchmarking with other healthcare institutions. Nevertheless, Al-Abri and Al-Balushi [54] noted that findings of studies which examined the association between demographic factors with patient satisfaction are conflicting.

Shou-Hisa et al. [64] reported that a national survey performed in different accredited hospitals of Taiwan found that patient characteristics such as age, gender and education level only slightly influenced patient satisfaction.

In contrast, in Norway, Bjertnaes et al. [65] reported that the results of a national survey of 63 hospitals in five health regions showed that patients' age, gender, and education level were not significant predictors of the overall patient satisfaction.

Results of the present study showed that attributes of quality of health services in private hospitals were consistently higher than those in public hospitals.

Several studies reported the similar findings. In Turkey, Tengilimoglu et al. [66] reported thin private hospitals provided the greatest satisfaction on most of the quality of services issues examined. Moreover, Chari et al. (2016), in Cyprus, reported that patients in private hospitals showed higher scores in all evaluated dimensions compared to the patients hospitalized in public hospitals.

Therefore, results of the current study indicate that it is essential to improve provided health care services so as to narrow the gap between expected and received health services, both in public and private hospitals. Personal characteristics which are significantly associated with patients' satisfaction are to be considered by healthcare administrators who are eager to improve patients' satisfaction

CONCLUSIONS

In both public and private hospitals, the quality of health services provided is much lower than that expected across all components of patient satisfaction. The quality of health services received and expected is much higher in private hospitals than in public hospitals. Older patients view higher quality of health services received in Public hospitals and for private hospitals, the highest quality of health services received are the elderly, male patients and those who have health insurance.

Ethical Approval and consent

The entire necessary official Approval were fully secured before data collection. Collected data were kept strictly confidential and were used only for research purposes from Hospitals. Patient's consent has been personally obtained prior to data collection.

RECOMMENDATIONS

Based on findings of the present study, the following can be recommended:

- Quality of health care services provided by public and private hospitals should be continuously assessed.
- The criteria and guidelines for optimal provided health services should be followed by hospitals so as to improve all aspects of patients' satisfaction, especially responsiveness.
- Further studies are needed to assess provided health care services at different health care levels and other areas of Saudi Arabia.

REFERENCES

1- Aharony L, Strasser S. Patient satisfaction: what we know about and what we still need to explore. Med Care Rev 1993, 50:49-79.

2- Koehler WF, Fottler MD, Swan JE. Physician-patient satisfaction: equity in the health services encounter. Med Care Rev 1992; 49: 455-84.

3- Rubin HR, Gandek B, Rogers WH, Kosinki M, McHorney C, Ware JE. Patients, ratings of outpatient visits in different practice settings. JAMA 1993; 270:835-40.

4- Singh J. A multifaceted topology of patient satisfaction with a hospital. J Health Care Marketing 1990; 10:8-21.

5- Robbins JA, Bertakis KD, Helms LJ, Azari R, Callahan EJ, Creten DA. The influence of physician practice behaviors on patient satisfaction. Fam Med 1993; 26:17-20.

6- Fincham JE, Wertheimer AI. Predictors of patient satisfaction in a health maintenance organization. J Health Care Marketing 1986; 6:5-11.

7. Donabedian A. The quality of care: how can it be assessed? JAMA 1988; 260(12):1743–1748.

8. Press I. Patient Satisfaction: Defining, Measuring, and Improving the Experience of Care. Chicago: Health Administration Press; 2002.

9- Wolosin, RJ (2005): The Voice of the Patient: A National, Representative Study of Satisfaction With Family Physicians. Qual Manag Health Care 2005; 14(3):155–164.

10. Federman AD, Cook EF, Phillips RS, et al. Intention to discontinue care among primary care patients: influence of physician behavior and process of care. J Gen Intern Med 2001; 16(10):668–674.

11. Kravitz RL. Measuring patients' expectations and requests. Ann Intern Med 2001; 139(9, pt 2):881–888.

12. Hickson GB, Federspiel CF, Pichert JW, Miller CS, Gauld-Jaeger J, Bost P. Patient complaints and malpractice risk. JAMA 2002; 287(22): 2951–2957.

13. Keegan O, McDarby, V, Tansey, A, McGee, H. Community involvement in A/E satisfaction survey, 2003.

14. Meredith P, Emberton M, Wood C. New directions in information for patients. BMJ 1995; 311:4-.

15. Oswald SL, Turner DE, Snipes RL, Butler D. "Quality Determinates and Hospital Satisfaction," Marketing Health Services, 1998; 18(1):18-22.

16. Mahon PY. An Analysis of the Concept of Patient Satisfaction as it Relates to Contemporary Nursing Care. Journal of Advanced Nursing, 1996; 24 (6):1241-1248

17. Draper M, Hill S. The role of patient satisfaction in surveys in a national approach to hospital quality management. Commonwealth Department of Health and Family Services, Canberra, 1995.

18. Woodside AG, Frey LL, Daly RT. Linking service quality, customer satisfaction, and behavioral intention. J Health Care Mark. 1989; 9(4):5-17.

19. Reid AC, Hollis CW. Patient Expectations and Satisfaction – Drivers to Improving Medical Practice. ANZMAC Visionary Marketing for the 21st Century: Facing the Challenge, 2000; pp. 1047-1052.

20. Newsome PR, Wright GH. A review of patient satisfaction: 1. Concepts of satisfaction. Br Dent J. 1999; 186(4):161-5.

21. Cardozo R. An experimental study of consumer effort, expectation and satisfaction. J Market Res 1965; 2: 244–249.

22. Peterson R. Measuring customer satisfaction: Fact and artifact. J Acad Market Sci 1992; 20: 61–71.

23. Patterson P, Johnson L, Spreng R. Modeling the determinants of customer satisfaction for business-to-business professional services. J Acad Market Sci1997; 25: 4–17.

24. Willson P, McNamara J. How perceptions of a simulated physician-patient interaction influence intended satisfaction and compliance. Social Sci and Med 1982; 16: 1699–1704.

25. Vuori H. Patient satisfaction - an attribute or indicator of the quality of care. Qual Rev Bull 1987; 13: 106–108.

26. Newsome PRH, Wright GH. Patient Management: A review of patient satisfaction: 1. Concepts of satisfaction. British Dental Journal 1999; 186:161 – 165.

27. Howard J, Sheth J. The theory of buyer behaviour. New York: Wiley, 1969.

28. Hunt H. Overview and future research direction. In Hunt H (ed) Conceptualization and measurement of consumer satisfaction and dissatisfaction. Cambridge, MA: Marketing Science Institute, 1977.

29. Heinemann AW, Fisher WP Jr., Gershon R. Improving Health Care Quality with Outcomes Management. Journal of Prosthetics and Orthotics, 2006; 18(1S): 46-50.

30. Williams B, Coyle J, Healy D. The meaning of patient satisfaction: an explanation of high reported levels. Soc Sci Med. 1998; 47(9):1351-9.

31. Taylor SA, Cronin JJ Jr. Modeling patient satisfaction and service quality. J Health Care Mark. 1994 Spring;14(1):34-44.

32. Licata JW, Mowen JC, Chakraborty G. Diagnosing perceived quality in the medical service channel. J Health Care Mark. 1995 Winter; 15(4):42-9.

33. Gilbert FW, Lumpkin JR, Dant RP. Adaptation and Customer Expectations of Health Care Options. Journal of Health Care Marketing. 1992;12(3):46–55.

34. John J. Referent Opinion and Health Care Satisfaction. Journal of Health Care Marketing. 1994 Summer; 14(2):24–30.

35. Mummalaneni V, Gopalakrishna P. Mediators versus Moderators of Patient Satisfaction. Journal of Health Care Marketing, 1995; 15:16-26.

36. Oliver RL. Satisfaction: A Behavioral Perspective on the Consumer, New York, McGraw Hill, 1997.

37. Oliver R. A cognitive model of the antecedents and consequences of satisfaction decisions. J Market Res 1980; 17: 460–469.

38. Parasuraman A, Berry L. SERVQUAL: a multiple item scale for measuring consumer perceptions of service quality. J Retail 1988; 1: 12-40

39. Davidow W, Uttal B. Service companies: focus or falter. Harvard Bus Rev 1989; pp. 77–85.

40. Zeithaml V, Bitner M. Services marketing. New York: McGraw-Hill, 1996

41. Boulding W, Kalra A, Staelin R, Zeithaml V. A dynamic process model of service quality. J Marketing Res 1993; 30: 7–27.

42. Locker D, Dunt D. Theoretical and methodological issues in sociological studies of consumer satisfaction with medical care. Soc Sci Med 1978; 12: 283–292.

43. Linder-Pelz S. Toward a theory of patient satisfaction. Soc Sci Med 1982; 16: 577-582.

44. Zeithaml V, Parasuraman A, Berry L. Delivering quality service. New York: The Free Press, 1990.

45. Williams B. Patient satisfaction: A valid concept? Soc Sci Med 1994; 38: 509–516.

46. Donabedian A. Explorations in quality assessment and monitoring: Vol 1: The definition of quality and approaches to its assessment. Ann Arbor, MI: Health Administration Press, 1980.

47. Bahadori M, Mousavi SM, Sadeghifar J, Haghi M. Reliability and Performance of SEVQUAL Survey in Evaluating Quality of Medical Education Services. Int J Hosp Res 2013; 2(1):39-44.

48. Almujali AA, Alshehy AH, Ahmed A, Ismail MFS. Assessment of enablement effect of consultation on patients attending primary health centers in Qatar. Middle East J Family Med 2009; 7: 3-6.

49. Ahmad I, Din S. Patients Satisfaction from the Health Care Services. Gomal Journal of Medical Sciences 2010; 8(1): 95-97.

50. Mohan RM, Kanagaluru SK. A study on the satisfaction of patients with reference to hospital services, International Journal of Business Economics & Management Research, 2011; 1(3).

51. Silvestro R. Applying gap analysis in the health service to inform the service improvement agenda. International Journal of Quality & Reliability Management, 2005; 22 (3): 215-33.

52. Khamis K, Njau B. Patients' level of satisfaction on quality of health care at Mwananyamala hospital in Dar es Salaam, Tanzania. BMC Health Services Research 2014; 14:400.

53. Al-Neyadi HS, Abdallah S, Malik M. Measuring patient's satisfaction of healthcare services in the UAE hospitals: Using SERVQUAL, International Journal of Healthcare Management 2016; 1-9.

54. Al-Abri R, Al-Balushi A. Patient Satisfaction Survey as a Tool Towards Quality Improvement. Oman Medical Journal 2014; 29(1):3-7.

55. Nguyen Thi PL, Briancon S, Empereur F, Guillemin F. Factors determining inpatient satisfaction with care. Soc Sci Med 2002; 54(4):493-504.

56. Jenkinson C, Coulter A, Bruster S, Richards N, Chandola T. Patients' experience and satisfaction with Health Care: Results of a questionnaire study of specific aspects of care. Quality Safety Health Care, 2003;11:335-339.

57. Bener A, Ghuloum S. Gender difference on patients' satisfaction and expectation towards mental health care. Niger J Clin Pract 2013; 16:285-291.

58. Alturki M, Khan TM. A study investigating the level of satisfaction with the health services provided by the Pharmacist at ENT hospital, Eastern Region Alahsah, Kingdom of Saudi Arabia. Saudi Pharmaceutical Journal 2013; 21(3): 255-260.

59. Abu Ammo M, Abu-Shaheen AK, Kobrosly S, Al-Tannir MA. Determinants of Patient Satisfaction at Tertiary Care Centers in Lebanon. Open Journal of Nursing, 2014; 4: 939-946.

60. Fenny AP, Enemark U, Asante FA, Hansen KS. Patient Satisfaction with Primary Health Care – A Comparison between the Insured and Non-Insured under the National Health Insurance Policy in Ghana. Glob J Health Sci. 2014; 6(4): 9–21.

61. Fall N. Satisfaction of Health Care Users with the Quality of Health Care Services in Senegal: A Multi-Level Approach. Modern Economy, 2017; 8: 1135-1149.

62. Chari F, Jelastopulu E, Sapountzi-Krepia D, et al Patient Satisfaction in Public and Private Hospitals in Cyprus. International Journal of Caring Sciences 2016; 9(3): 781-791.

63. Jose MQ, Nerea G, Amaia B, Felipe A, Antonio E, et al. Predictors of patient satisfaction with hospital health care, Health Services Research, 2006; 6(102).

64. Shou-Hisa C, Ming-Chin Y, Tunguang C. Patient satisfaction with and recommendation of a hospital: effects of interpersonal and technical aspects of hospital care. International Journal for Quality in Health Care 2003; 15(4):345-355.

65. Bjertnaes OA, Sjetne IS, Iversen HH. Overall patient satisfaction with hospitals: effects of patient-reported experiences and fulfilment of expectations. BMJ Qual Saf. 2012; 21(1):39-46.