

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

## **ABSTRACT**

**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

(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 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 ( $p = 0.001$ ).

**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,<sup>1-2</sup> but also in identifying potential areas for improving the content of care provided by physicians.<sup>3</sup> Research proved that improving patient satisfaction with physician increases the likelihood that a patient will return to a given health care provider.<sup>4</sup>

Several reviews have summarized the factors associated with patient satisfaction with medical care. These include the sociodemographic characteristics of the patient (e.g., being older and female); better health status; positive attitudes and expectations; the structural, organizational, and financial characteristics of medical care (traditional fee-for-service, greater physician choice, lower cost, increased access, availability, and convenience of care); continuity of care; quality of care (technical skills, intelligence, and qualifications of the provider); interpersonal aspects of care (strong communication skills of the provider); and positive health outcomes.<sup>1</sup>

There are very few studies that have examined the relationship between health care and patient satisfaction.<sup>5</sup> In a study of members in one large health maintenance organization, Fincham and Wertheimer<sup>6</sup> 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<sup>5</sup>

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.<sup>7,8</sup> A product of expectation and experience, patient satisfaction or dissatisfaction occurs as the processes of medical care unfold. When patients are asked about satisfaction with their care, they implicitly review their experiences and compare them with expectations. Experiences that exceed expectations lead to satisfied patients, while those that fail to meet expectations cause dissatisfaction. Patient satisfaction represents “the voice of the patient,” feedback that reflects responses to experiences created by health care workers<sup>9</sup>.

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<sup>10-12</sup>.

## **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.

## **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 will investigate and report:

- (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.

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.<sup>13</sup>

Meredith and Wood<sup>14</sup> 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<sup>15</sup>, yet Mahon<sup>16</sup> observed that there are few theoretical under-pinning for this important concept. Draper and Hill<sup>17</sup> argued that benchmarking of patient satisfaction may be unreliable because patient satisfaction is poorly understood and not a unitary concept. Woodside et al.<sup>18</sup> regarded patient’s satisfaction as a special form of consumer attitude – that is, as post experience phenomenon reflecting how much a patient liked or disliked the service.<sup>19</sup>

“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.<sup>20</sup>

Consumers' satisfaction is at the very core of modern marketing theory and practice which is based on the notion that organizations survive and prosper through meeting the needs of their customers. Ever since the first satisfaction studies in the 1960s <sup>21</sup>, there has been a proliferation of research on this subject with an estimated 15,000 academic and trade articles published on consumers' satisfaction during the 1980's and 1990's alone.<sup>22</sup>

This interest is mainly due to the fact that for a business to be successful in the long run it must satisfy customers, while simultaneously satisfying its own objectives. The satisfied customer is an indispensable means of creating a sustainable advantage in a competitive environment.<sup>23</sup>

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. 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.<sup>24</sup>

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.<sup>25</sup>

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.<sup>26</sup>

### **Marketing perspective of consumer satisfaction**

Originally, marketing literature described consumer satisfaction as being an outcome resulting from the consumption experience, i.e., the buyer's cognitive state of being adequately or inadequately rewarded for the sacrifices he/she has undergone.<sup>27</sup>

More recent definitions described satisfaction as a complex evaluative process, to evaluate whether *the (consumption) experience happened to be at least as good as it was supposed to be*'. This approach is much more widely accepted since, compared to the outcome-oriented approach, it takes into account the social-psychological determinants of satisfaction that is the perceptions, evaluations and comparisons which precede an evaluation.<sup>28</sup>

Heinemann et al.<sup>29</sup> noted that patient satisfaction reflects expectations, prior health care experiences, and quality of health care. Patients might measure high on a satisfaction scale less as a result of quality care than as a result of being impressed with a specialist's authoritative

opinion, a doctor's caring touch, or an expensive device. The relevant question to ask is: To what extent will managing this measure contribute to the quality of the processes and outcomes produced? It is possible that a focus on satisfaction could produce high measures bearing no relationship to the quality of the relevant processes and outcomes.

### **Theories explaining satisfaction**

It has been assumed that “satisfaction” embodies patient evaluation of services. Singh <sup>4</sup> proposed the notion that patient satisfaction is a multi-dimensional evaluation of various aspects of health care received in a specific episode. However, Williams et al. <sup>30</sup> found that processes by which patients’ experiences were transformed into “evaluations” of the service were complex. Patient satisfaction is not necessarily exactly the same thing as a quality medical service.<sup>31</sup>

Nevertheless, there is a direct link between satisfaction and *perceived* health service quality.<sup>32</sup> Patient satisfaction has been shown to be linked with their general expectations about care <sup>33</sup>, or with previous experiences with the health care system. <sup>34</sup>

Mummalaneni and Gopalakrishna <sup>35</sup> 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 including parking and accessibility to public transport.

Customer satisfaction is usually related to prior expectations and conceptualized as an evaluation that the experience was at least as good as it was supposed to be. If the actual performance exceeds expectations, consumers are likely to form strong feelings of satisfaction.<sup>36</sup>

This theory is by far, the most dominant 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.<sup>37</sup> 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:<sup>38</sup>

- *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; the higher the perceived level of performance, the more likely that expectations will be exceeded, resulting in increased satisfaction. This has led some observers to recommend deliberately under-promising the service to increase the likelihood of meeting or exceeding customer expectations.<sup>39</sup>

Zeithaml and Bitner <sup>40</sup> 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. Research also indicates that under-promising may have the inadvertent effect of lowering customer perceptions, especially in situations where consumers have little experience with a product or service. On the other hand, raising consumers' expectations prior to use often results in increased perceptions about performance, even though the product or service may have performed poorly.<sup>41</sup>

### **Patient satisfaction - the health care perspective**

Locker and Dunt <sup>42</sup> 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 <sup>37</sup>, 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. <sup>26</sup>

The work of Linder-Peltz <sup>43</sup> 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.<sup>43</sup>

Zeithaml et al.<sup>44</sup> 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.<sup>45</sup>

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.<sup>20</sup>

Donabedian<sup>46</sup> described quality of health care as a trilogy comprising 'structure, process and outcome'. However, Zeithaml et al.<sup>44</sup> 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 entirety

the same light as that for a consumer product such as a television or a washing machine.<sup>20</sup>

## **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.

### **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 ( $\alpha$ ) = 0.05 and a power ( $1-\beta$ ) 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.<sup>38</sup> 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.<sup>38</sup> The use of perceived as opposed to actual service received makes the SERVQUAL measure an attitude measure that is related to satisfaction.<sup>38</sup> The internal consistency reliability of the total survey was assured by obtaining a Cronbach's alpha of 0.88.<sup>47</sup>

### **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.

**Administrative and Ethical Considerations**

All the necessary official permissions were fully secured before data collection. Collected data were kept strictly confidential and were used only for research purposes. Patient's consent has been personally obtained prior to data collection.

**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	0.106
• 25-35 years	87	43.5	94	47.0	
• >35 years	53	26.5	64	32.0	
Gender					
• Male	115	57.5	132	66.0	0.080
• Female	85	42.5	68	34.0	
Nationality					
• Saudi	189	94.5	187	93.5	0.674
• Non-Saudi	11	5.5	13	6.5	
Marital status					
• Single	59	29.5	50	25.0	0.312
• Married	141	70.5	150	75.0	
Educational status					
• Illiterate	23	11.5	23	11.5	0.345
• 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	
Employment					
• Employed	164	82.0	149	74.5	0.069
• Unemployed	36	18.0	51	25.5	
Income					
• Insufficient	23	11.5	13	6.5	0.070
• Sufficient	150	75.0	147	73.5	
• Can save	27	13.5	40	20.0	
Having insurance					
• Yes	10	5.0	63	31.5	<0.001
• No	190	95.0	137	68.5	

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

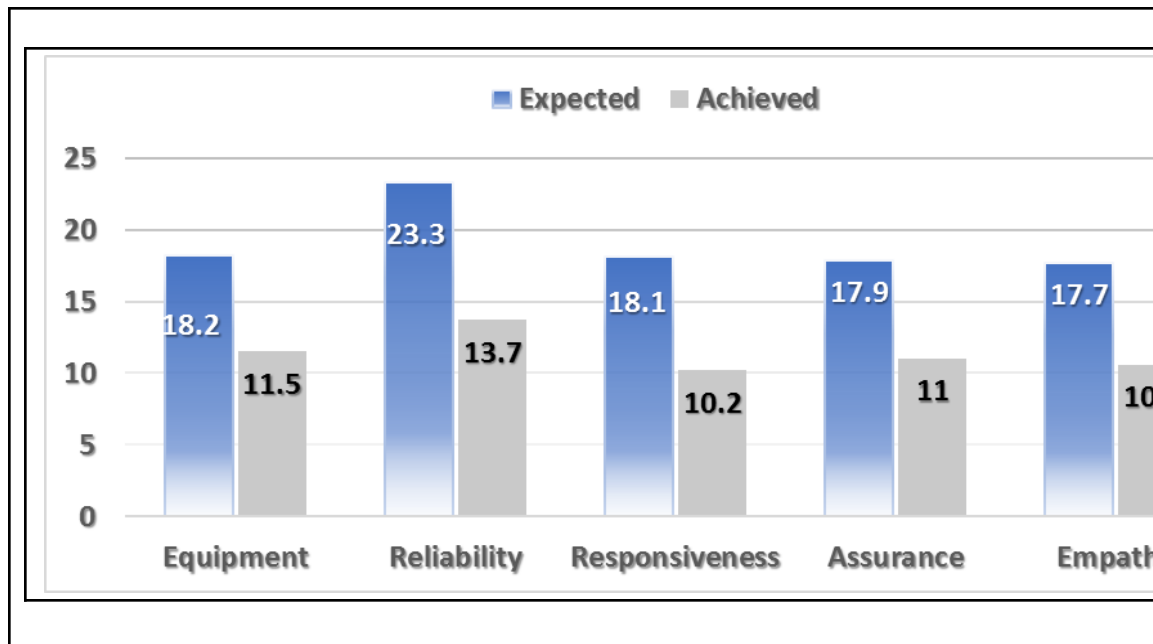


Fig. 1. Achieved and expected results for Public hospital

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 ( $39.5 \pm 24.8\%$  and  $38.4 \pm 22.5\%$ , 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

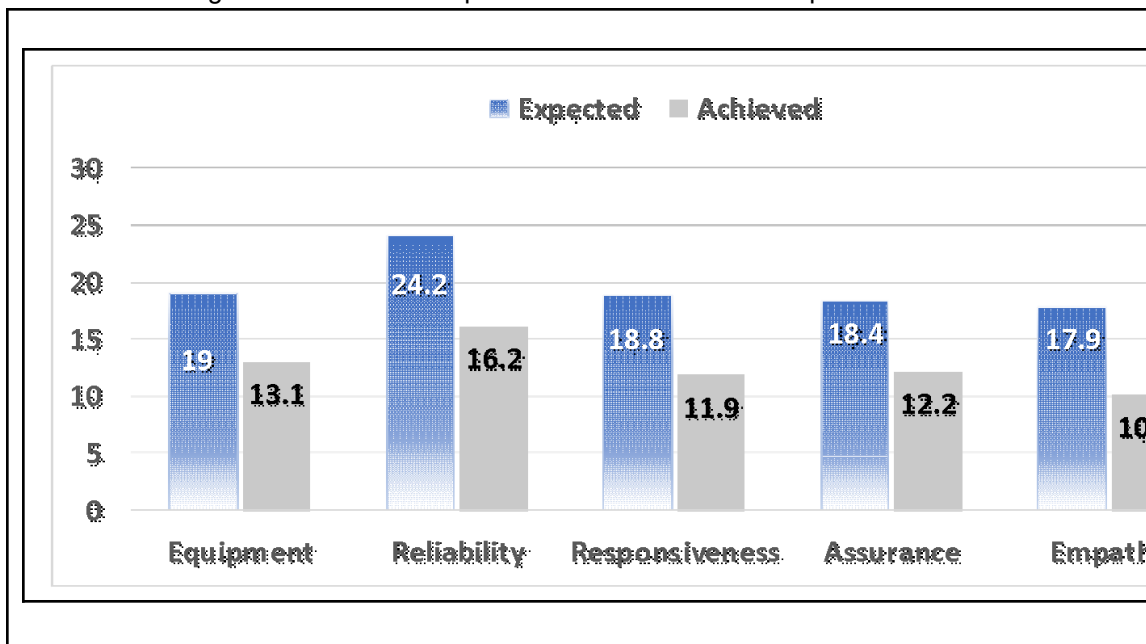


Table (3) and Figure (2) show that, in private hospitals, patients’ provided quality of provided health services was significantly less than that expected across all components of patients’ satisfaction ( $p < 0.001$  for all components), with empathy and responsiveness having the wider percent differences between expected and received services ( $38.4 \pm 17\%$  and  $34.4 \pm 13.6\%$ , 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
<b>Age groups</b>				
• <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	
<b>Gender</b>				
• Male	17.9	± 2.5	11.5	± 4.1
• Female	18.6	± 1.9	11.6	± 3.4
P-value	0.047		0.810	
<b>Nationality</b>				
• 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	
<b>Marital status</b>				
• Single	18.0	± 2.1	11.4	± 4.8
• Married	18.3	± 2.3	11.6	± 3.3
P-value	0.374		0.744	
<b>Educational status</b>				
• 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	
<b>Employment</b>				
• Employed	18.2	± 2.3	10.1	± 3.2
• Unemployed	18.2	± 2.2	10.9	± 5.1
P-value	0.995		0.193	
<b>Income</b>				
• 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	
<b>Having insurance</b>				
• Yes	18.5	± 1.6	13.5	± 5.2
• No	18.2	± 2.3	11.4	± 3.7

P-value	0.688	0.090
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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
<b>Age groups</b>				
• <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	
<b>Gender</b>				
• Male	23.2	± 2.6	13.7	± 4.8
• Female	23.5	± 2.5	13.8	± 4.7
P-value	0.330		0.776	
<b>Nationality</b>				
• 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	
<b>Marital status</b>				
• Single	23.3	± 2.3	13.4	± 5.5
• Married	23.3	± 2.7	13.9	± 4.5
P-value	0.915		0.552	
<b>Educational status</b>				
• 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	
<b>Employment</b>				
• Employed	23.2	± 2.7	13.3	± 4.7
• Unemployed	23.8	± 1.8	12.3	± 4.3
P-value	0.254		0.182	
<b>Income</b>				
• 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	
<b>Having insurance</b>				
• Yes	24.2	± 0.9	16.8	± 5.8
• No	23.3	± 2.6	13.6	± 4.7

P-value	0.276	0.037
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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
<b>Age groups</b>				
• <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	
<b>Gender</b>				
• Male	17.9	± 2.7	10.3	± 4.0
• Female	18.5	± 2.4	10.1	± 4.0
P-value	0.127		0.712	
<b>Nationality</b>				
• 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	
<b>Marital status</b>				
• Single	17.8	± 3.0	10.1	± 4.4
• Married	18.3	± 2.4	10.3	± 3.8
P-value	0.198		0.812	
<b>Educational status</b>				
• 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	
<b>Employment</b>				
• Employed	18.1	± 2.6	9.7	± 3.9
• Unemployed	18.4	± 2.3	9.0	± 3.6
P-value	0.445		0.261	
<b>Income</b>				
• 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	
<b>Having insurance</b>				
• Yes	20.0	± 0.0	11.8	± 5.6
• No	18.0	± 2.6	10.2	± 3.9

P-value	0.020	0.208
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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
<b>Age groups</b>				
• <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	
<b>Gender</b>				
• Male	17.9	± 2.6	10.9	± 4.0
• Female	17.9	± 2.6	11.2	± 3.6
P-value	0.904		0.562	
<b>Nationality</b>				
• 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	
<b>Marital status</b>				
• Single	17.9	± 2.8	11.7	± 3.8
• Married	17.9	± 2.5	10.7	± 3.8
P-value	0.854		0.085	
<b>Educational status</b>				
• 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	
<b>Employment</b>				
• Employed	17.8	± 2.7	11.1	± 3.7
• Unemployed	18.3	± 2.1	10.6	± 4.2
P-value	0.344		0.497	
<b>Income</b>				
• 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	
<b>Having insurance</b>				
• Yes	19.7	± 0.5	14.0	± 3.1
• No	17.8	± 2.6	10.9	± 3.8

P-value	0.022	0.011
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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
<b>Age groups</b>				
• <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	
<b>Gender</b>				
• Male	17.6	± 2.8	10.7	± 3.5
• Female	18.0	± 2.6	10.4	± 3.6
P-value	0.321		0.612	
<b>Nationality</b>				
• 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	
<b>Marital status</b>				
• Single	17.6	± 2.9	10.6	± 3.8
• Married	17.8	± 2.6	10.6	± 3.4
P-value	0.529		0.996	
<b>Educational status</b>				
• 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	
<b>Employment</b>				
• Employed	17.9	± 2.7	10.4	± 3.6
• Unemployed	17.1	± 2.6	9.9	± 2.9
P-value	0.118		0.371	
<b>Income</b>				
• 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	
<b>Having insurance</b>				
• Yes	19.6	± 0.8	11.8	± 3.3
• No	17.6	± 2.7	10.5	± 3.5

P-value	0.025	0.270
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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
<b>Age groups</b>				
• <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	
<b>Gender</b>				
• Male	19.0	± 1.5	13.5	± 2.7
• Female	19.1	± 2.1	12.4	± 2.2
P-value	0.914		0.002	
<b>Nationality</b>				
• 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	
<b>Marital status</b>				
• Single	19.2	± 1.2	12.9	± 3.1
• Married	19.0	± 1.9	13.0	± 2.4
P-value	0.403		0.813	
<b>Educational status</b>				
• 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	
<b>Employment</b>				
• Employed	19.0	± 1.6	12.6	± 2.1
• Unemployed	19.1	± 2.2	12.9	± 3.3
P-value	0.929		0.453	
<b>Income</b>				
• 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	
<b>Having insurance</b>				
• Yes	19.1	± 2.0	13.5	± 2.5
• No	19.0	± 1.6	12.4	± 2.7

P-value	0.827	0.010
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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
<b>Age groups</b>				
• <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	
<b>Gender</b>				
• Male	24.2	± 1.7	16.8	± 3.0
• Female	24.2	± 1.5	15.0	± 2.7
P-value	0.957		<0.001	
<b>Nationality</b>				
• 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	
<b>Marital status</b>				
• Single	23.9	± 2.0	15.6	± 2.9
• Married	24.0	± 1.4	16.0	± 2.9
P-value	0.687		0.399	
<b>Educational status</b>				
• 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	
<b>Employment</b>				
• Employed	24.2	± 1.6	15.6	± 2.7
• Unemployed	24.2	± 1.5	15.9	± 3.4
P-value	0.884		0.523	
<b>Income</b>				
• 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	
<b>Having insurance</b>				
• Yes	24.2	± 1.5	15.6	± 3.0
• No	24.2	± 1.7	16.4	± 2.9

P-value	0.974	0.084
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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
<b>Age groups</b>				
• <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	
<b>Gender</b>				
• Male	18.9	± 1.9	12.4	± 2.4
• Female	18.7	± 2.0	11.0	± 2.5
P-value	0.490		<0.001	
<b>Nationality</b>				
• 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	
<b>Marital status</b>				
• Single	18.6	± 2.3	11.5	± 2.9
• Married	18.7	± 1.8	12.1	± 2.4
P-value	0.742		0.121	
<b>Educational status</b>				
• 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	
<b>Employment</b>				
• Employed	18.8	± 1.9	12.0	± 2.3
• Unemployed	18.7	± 2.2	11.4	± 2.9
P-value	0.661		0.135	
<b>Income</b>				
• 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	
<b>Having insurance</b>				
• Yes	18.8	± 1.7	11.5	± 2.3
• No	18.8	± 2.1	12.1	± 2.6

P-value	0.998	0.090
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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
<b>Age groups</b>				
• <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	
<b>Gender</b>				
• Male	18.8	± 2.4	13.2	± 3.0
• Female	17.5	± 2.9	10.4	± 2.7
P-value	0.001		<0.001	
<b>Nationality</b>				
• 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	
<b>Marital status</b>				
• Single	18.0	± 3.1	11.6	± 3.5
• Married	18.2	± 2.4	12.1	± 3.0
P-value	0.624		0.329	
<b>Educational status</b>				
• 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	
<b>Employment</b>				
• Employed	18.4	± 2.7	11.8	± 3.1
• Unemployed	18.3	± 2.3	11.6	± 2.8
P-value	0.727		0.684	
<b>Income</b>				
• 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	
<b>Having insurance</b>				
• Yes	18.5	± 2.6	12.5	± 3.0
• No	18.1	± 2.6	11.6	± 3.6

P-value	0.381	0.060
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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
<b>Age groups</b>				
• <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	
<b>Gender</b>				
• Male	17.9	± 2.7	10.8	± 3.0
• Female	17.7	± 2.6	9.8	± 3.2
P-value	0.539		0.003	
<b>Nationality</b>				
• 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	
<b>Marital status</b>				
• Single	17.9	± 2.8	10.1	± 3.4
• Married	17.8	± 2.6	10.5	± 3.0
P-value	0.838		0.244	
<b>Educational status</b>				
• 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	
<b>Employment</b>				
• Employed	17.9	± 2.7	10.2	± 3.2
• Unemployed	17.6	± 2.7	9.7	± 2.8
P-value	0.319		0.322	
<b>Income</b>				
• 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	
<b>Having insurance</b>				
• Yes	17.9	± 2.9	10.7	± 2.7
• No	17.3	± 2.6	10.3	± 3.2

P-value	0.056	0.348
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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 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.<sup>48</sup> 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.<sup>49</sup>

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.<sup>50</sup>

These findings are in accordance with those reported by several studies. In UK, Silvestro<sup>51</sup> 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<sup>52</sup> 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<sup>50</sup> 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.<sup>53</sup> 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<sup>54</sup> 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)<sup>38</sup> 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. <sup>55</sup> in France, and Jenkinson et al. <sup>56</sup> 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 <sup>57</sup> 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 <sup>50</sup> 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 <sup>58</sup>, 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. <sup>59</sup> in Lebanon and Fenny et al. <sup>60</sup>, 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 <sup>61</sup>, in Senegal, reported no significant differences in patients' satisfaction regarding their income or educational level. However, Chari et al. <sup>62</sup>, in Cyprus, observed that married patients had higher overall evaluation scores compared with unmarried patients.

Alturki and Khan <sup>58</sup>, 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. <sup>59</sup>, in Lebanon, reported that patients with elementary education level were significantly more satisfied than patients with postgraduate education level.

Jose et al. <sup>63</sup> 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 <sup>54</sup> noted that findings of studies which examined the association between demographic factors with patient satisfaction are conflicting.

Shou-Hisa et al. <sup>64</sup> 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.<sup>65</sup> 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.<sup>66</sup> reported that 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

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

- 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.

## 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.

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