Patient satisfaction and loyalty to the private hospitals in Sana'a, Yemen

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Abstract

Objective. To evaluate patients' satisfaction and loyalty to private hospitals and to identify factors influencing patient loyalty.

Design. A cross-sectional, population-based study was conducted between May and September of 2005.

Setting. Sana'a, the capital city of the Republic of Yemen.

Participants. Eight hundred and nineteen respondents who were admitted for at least 1 day in a private hospital within last 6 months from the date of interview.

Main Outcome Measures. The scores on the modified SERVQUAL market research instrument including six domains (tangibility, reliability, responsiveness, assurance, empathy and cost) that identify perceptions of service quality. In addition, the respondents were asked whether or not they would return to the same facility when they need future medical care (loyalty).

Results. Loyalty was higher among females [odds ratio (OR) = 1.44; $P < 0.05$], among those reporting higher reliability scores (OR = 1.24; $P < 0.01$), higher assurance scores (OR = 1.2; $P < 0.01$) and higher empathy scores (OR = 1.13; $P < 0.05$) and also among those reporting higher cost (OR = 1.15; $P < 0.05$). No significant association was found between patient loyalty and, tangibility and responsiveness score.

Conclusions. Improvements are required to achieve high-quality healthcare services in the private hospitals in Yemen and increase loyalty among patients. Findings from this study could inform private sector healthcare development in low- and middle-income countries.

Keywords: user's perception of quality, SERVQUAL, potential patients' Loyalty Private Hospital, Yemen

Introduction

The government of Yemen, just like those of other developing countries, has been providing a wide range of free healthcare services for a long period of time. Since early 1990s, the healthcare system has faced difficulties improving the quality and availability of healthcare services due to the increasing magnitude and variety of health problems; unprecedented growth rates of population; increasing demand for health care and a shortage of public funds [1]. Accordingly, the Ministry of Public Health and Population (MoPHP) realized that the public sector alone is no longer capable of providing necessary health care for the people of Yemen. Instead, it has encouraged development and expansion of the private healthcare sector in order to complement the existing public sector [2].

The private sector was given the opportunity to play a wider role in the provision of medical services. There has been a remarkable growth of private hospitals, pharmacies, clinics and diagnostic centers in Yemen during the 1990s [3]. The private sector shares 30% of available hospital beds, 40–50% of the total number of patient contacts and 60% of total healthcare expenditure [1]. According to the Annual Health Statistical Report (2002–2003), there were 92 private hospitals operating in Yemen with 37 of them in Sana'a, the capital city of the Republic of Yemen [4].

In spite of the fact that the role of private healthcare sector was increasingly important for the population in Yemen, there has been limited monitoring of private hospitals. This led to provision of low-quality healthcare services that failed to meet the expectations of patients [1, 5, 6]. One

goal of any private healthcare service provider is to increase the loyalty of patients. This is especially true for private sector providers in Yemen. The private hospitals are paid mainly out of pocket expenditure by patients and in few cases they are paid via mutual agreements with the patient's employer. To enhance loyalty, the managers of private health-care facilities often provide incentives to their clients such as a free check up within a period of 2 weeks after the first visit or offering discounts on bills.

According to prior research, patient loyalty is enhanced when patients are satisfied by their use of a healthcare facility [7]. Private hospitals that fail to meet the expectations of patients will lose market share [8, 9]. Owners, managers and healthcare providers in private facilities should recognize the importance of continuous monitoring and evaluation of quality of services. Quality is a key factor in the utilization of healthcare services of different facilities [10].

Between 1983 and 1988, Parasuraman *et al.* [11] jointly worked for the definition of service quality and developed SERVQUAL as an instrument to measure service quality. Several prior publications indicate a positive relationship between service quality and patient satisfaction with hospital care and a willingness to return to the hospital, or even to recommend it to family or friends [12–14]. However, to our knowledge, there was no study which has linked patient loyalty to perceptions of quality as assessed by SERVQUAL. The main objective of this study is to measure patients' perceptions of quality of healthcare services provided in private hospitals using the SERVQUAL instrument and to identify factors affecting the patient loyalty to private facilities.

Methods

A cross-sectional, population-based study was conducted between May and September of 2005 in Sana'a, the capital city of the Republic of Yemen. The Sana'a city has population of about 1.5 million. All users of private hospitals who live in Sana'a were considered eligible. The sample size of the study was determined using Epi-Info (version 6.0) with 95% confidence interval. To compare the expected reported prevalence of reporting, a return to the same health facility between 20 and 23%, the total number of respondents required was 683.

A stratified systematic sampling was used. Our initial intent was to conduct exit interview on inpatients just before discharge from hospital in order to avoid recall bias. However, we were not allowed to meet the patients inside the private hospitals. Therefore, one in every 10 houses, in 10 districts of Sana'a, were chosen for the household survey. The first house in each district was selected randomly by simple lottery and the rest of the houses were checked in a clockwise approach. The inclusion criteria comprised adult patients of age 18 years and above who were admitted for at least 1 day in a private hospital within the last 6 months from the date of interview, mentally coherent and willing to participate in the survey. Parents who accompanied with admitted children were also included as respondents in the study. Finally, 819 respondents were selected for question-naire interview. Since hospitalization is a rare event in people's life, we assume that the respondents can recall their experience during their stay in hospital very well and the time difference would not affect our findings.

The original SERVQUAL developed by Parasuraman [15] designed to measure consumers' assessment of quality of services was used, which included 22 items representing five distinct dimensions of service quality (tangibility, reliability, responsiveness, assurance and empathy). Many studies reviewed the original questionnaire and made some modifications and/or added questions, which are suitable for hospitals [16–18]. In this study, we added six more questions to the original five domains of SERVQUAL questionnaire. In addition, the costing domain with two questions was appended in order to assess the impact of healthcare cost on the perception of service quality [18–20]. The final questionnaire used 30 questions and 6 domains on service quality.

The original SERVQUAL questionnaire used the gap score between perception and expectation. However, several researchers argued that gap score cannot provide any additional information beyond that already contained in the perceptions component of the SERVQUAL [21–23]. In this study, only perception score was used as many studies have demonstrated that the dominant contributor to the gap score was perception [23–27].

The questionnaire also included socio-demographic information about the respondents and whether they are willing to visit the same facility if needed next time. A four-point Likert scale was used ranging from strongly disagree [1] to strongly agree [4] in order to assess the level of perception on service quality provided. We decided to use four points in order to apprehend without difficulty and to avoid mid-point bias, which can usually occur in the Likert scale with odd numbers.

A new scoring technique was used in this study. Each of the domains was scored by multiplying the number of the variables in that particular domain by the Likert score (varying from 1 * number of domain variables to 4 * number of domain variables). The overall perception score vary from 30 (30 variables * 1) to 120 (30 variables * 4). The domain score was divided into three categories as poor, acceptable and good. Detail grouping according to domain is shown in Table 1.

The original SERVQUAL questionnaire was translated to Arabic by using EORTC Quality for life group translation procedure [28]. Forward and backward translation was done independently before pilot-testing. Minor revision was done on the questionnaire based on the findings from the pilot testing. The study has followed the ethical aspects of con-ducting a survey issued by the WHO [29].

Data analysis was carried out by 'Stata version 11.0 soft-ware'. Descriptive analysis was done to show the respon-dents' satisfaction with the quality of health services with respect to the different attributes, domains and overall per-ception. Binary logistic regression was used in order to

Table 1 The dimension of service quality

Variables		Measurement
Tangibility: poor (7–17); acceptable (18–21); good (22–28)	Organization Cleanliness Lighting Waiting space Comfortable chairs Well furnished Good diagnostic equipment	Strongly disagree (1); disagree (2); agree (3); strongly agree (4)
Reliability: poor (7–17); acceptable (18–21); good (22–28)	Keeping promises Good services Sympathy Qualified and experienced doctors Qualified and experienced staff Accurate billing Organized records	
Responsiveness: poor (6–15); acceptable (16–18); good (19–24)	Quick services Quick response Organized time tables Respond to comments Enough staff Helping patients	
Assurance: poor (4–10); acceptable (11–12); good (13–16)	Comfort and safety Confidence Experience handling Staff patience	
Empathy: poor (4–10); acceptable (11–12); good (13–16)	Individual care Priority to patients Affection Equality	
Costing: poor (2–5); acceptable (6); good (7–8)	Reasonable costs Cost versus quality	

Overall perception: calculation of the domains [poor (30–75); acceptable (76–90); good (91–120)].

identify factors influencing the overall assessment of quality and the potential patient loyalty [30]. The model goodness-of-fit was assessed using the – Hosmer–Lemeshow test [Pearson $\chi^2 = 835.99$; Prob $> \chi^2 = 0.1832$].

Results

Most of the respondents are aged 20–29 years old (54.5%). Both male and female are almost equally represented. About 43.6% of the respondents have secondary school certificate. Of respondents, 42.1% visited a private hospital within the last month prior to the interview. Almost 90% of the respondents used a vehicle to reach the desired private hospital.

Table 2 summarizes the degree of respondents' satisfaction with respect to the different domains and overall perception. About two-thirds of the respondents were satisfied with the quality of service provided by private hospitals. We asked respondents whether they would be willing to go back the same health facility for possible future need. Among all respondents, 40.2% are willing to go back to the same private hospital for needed healthcare services and 15.5% of them decided that they would never go back to the same facility. For the remaining, they were unsure whether they would revisit the facility.

We carried out descriptive analysis of loyalty with the different variables and domains and the results are presented in Table 3. The estimated coefficients and odd ratios of binary logit model for potential patient loyalty are presented in Table 4.

Apart from gender, there is no association between socio-demographic characteristics of respondents and potential patients' loyalty. Compared with males, females had 1.44 odds of using the same private health facility. Among domain variables; reliability, assurance, empathy and cost had significant associations with patients' willingness to use the facility again. For each one unit increase in reported service quality in each domain, respondents had 1.24, 1.2, 1.13 and 1.15 the odds of using that particular hospital again in the respective domain. No significant association was seen between potential patient's loyalty and the domains of tangibility and responsiveness.

Table 2 Respondents' satisfaction with respect to the SERVQUAL domains

Domain	Poor, n (%)	Acceptable, n (%)	Good, n (%)
Tangibility	167 (20.4)	408 (49.8)	244 (29.8)
Reliability	273 (33.3)	313 (38.2)	233 (28.4)
Responsiveness	316 (38.6)	295 (36.0)	208 (25.4)
Assurance	294 (35.9)	321 (39.2)	204 (24.9)
Empathy	484 (59.1)	185 (22.6)	150 (18.3)
Costing	473 (57.8)	232 (28.3)	114 (13.9)
Overall perception	280 (34.2)	305 (37.2)	234 (28.6)

Table 3 Descriptive analysis of the different variables with potential patients' loyalty

Variable	Yes (n = 329)	Maybe and no (n = 490)
Age in years [mean (SD)]	29.78 (9.269)	28.42 (8.592)
Sex %		
Female	51.7	49.4
Male	48.3	50.6
Education %		
Illiterate	7.6	5.3
Read and write	12.2	10.2
Secondary	43.8	43.4
Under graduate	31.3	38
Postgraduate	5.2	3.1
Last visit %		
<month	44.7	40.4
1–3 months	31.6	31.2
>3 months	23.7	28.4
Mean of transport %		
Walking	7.6	12.2
Vehicle	92.4	87.8
Tangibility [mean (SD)]	21.57 (3.131)	19.17 (4.258)
Reliability [mean (SD)]	22.02 (3.290)	17.39 (4.034)
Responsiveness [mean (SD)]	18.47 (3.226)	14.78 (3.971)
Assurance [mean (SD)]	12.65 (2.112)	10.15 (2.648)
Empathy [mean (SD)]	11.60 (2.503)	8.97 (2.503)
Costing [mean (SD)]	5.62 (1.339)	4.43 (1.547)

Table 4 Estimated coefficients for potential patient loyalty

Variables	Coefficient	Odds ratio (95% CI)[a]
Intercept	−8.442	
Age (years)	−0.006	0.993 (0.971–1.017)
Female	0.362**	1.437 (1.009–2.046)
Education[b]		
Illiterate	0.077	1.080 (0.366–3.184)
Read and write	−0.152	0.858 (0.312–2.359)
Secondary	−0.414	0.660 (0.252–1.730)
Undergraduate	−0.197	0.821 (0.316–2.128)
Last visit[c]		
<month	−0.176	0.838 (0.537–1.306)
1–3 months	−0.140	0.868 (0.547–1.377)
Mean of transport[d]		
Walking	−0.228	0.795 (0.431–1.468)
Tangibility	0.033	1.033 (0.980–1.089)
Reliability	0.215***	1.239 (1.155–1.330)
Responsiveness	−0.022	0.977 (0.904–1.056)
Assurance	0.182***	1.199 (1.078–1.335)
Empathy	0.121**	1.128 (1.027–1.239)
Cost	0.143**	1.154 (1.011–1.332)

Log-likelihood (LR) = −397.77538, LR $\chi^2(15)$ = 307.97, Prob $> \chi^2$ = 0.0000, pseudo R^2 = 0.2791.
[a]Comparing those responding 'Yes' with those responding 'Maybe' or 'No.'
[b]The reference category for 'Education' = postgraduate.
[c]The reference category for 'Last visit' ≥3 months.
[d]The reference category for 'Mean of transport' = vehicle.
**Significant at 5%, ***significant at 1%.

Discussion

The main objective of the study was to provide to the decision-makers of government and private sector insights about patient perceptions of the quality of services and potential patient loyalty to private hospitals. The study has revealed that most of respondents are between 20 and 39 years old, equal sex distribution, and not highly educated. These results are compatible with the age, sex and educational level shown by the annual statistical health report for 2006, issued by the MoPHP [31].

To succeed, private hospitals need to gain patient loyalty. Retaining this loyalty is critical for their revenue and sustainability. Patient loyalty is a strategic service objective of the private hospitals to retain and/or expand the market. Patient satisfaction is the effective way to achieve customer loyalty. If administrators and health service providers of the private sector know what aspects of service quality are the most important to their patients and have mechanisms to prioritize and ensure that these are in place, this will facilitate patient satisfaction and willingness to use the facility again.

A relatively high percentage of the respondents reported that a poor perception of quality overall (34.2%). Accordingly, we are still seeing thousands of Yemeni patients seeking quality health care abroad spending more than 500 million US$ annually [32]. This amount of money could have been better invested in the Yemeni private health sector in order to provide better services, and subsequently improve revenue generation and job opportunity for private sector in the country.

We found that age, education, the time of the last visit and the facilities used did not have a measurable relationship with the respondents' loyalty to the private hospitals in Yemen. The study has shown that females tend to be more loyal to the facility and willing to go back. This might be because they are more predisposed to develop close relationship with the staff of the hospital especially when since most of the paramedical

staffs working in the private hospitals in Yemen are females. In addition, according to the cultural context of Yemen, female customers are more comfortable to discuss with healthcare providers of the same gender.

The willingness to go back to the same facility is affected by the level of improvement in the cost, assurance, reliability and empathy of the private hospitals. This study has shown that tangibility and responsiveness have lesser role in the patients' loyalty and willingness to go back to the same facility. Since cost domain is revealed as one of the key determinants for potential patients' loyalty, managers and owners of the private hospitals in Yemen should be very careful in setting the reasonable price compared with the service provided in the facilities. Several evidences showed that price of the health care was a major deterrent to many people who would like to use healthcare services [33–37].

Findings from several studies proved the importance of interpersonal component of service quality in customer's satisfaction of the respective healthcare facility [38, 39]. A similar result was found in our study. Empathy and assurance, which mainly represent interpersonal communication had strong influence on patient's willingness to come back to the hospital. Generally, hospital manager pay attention on improvement of building and facility. However, interpersonal component of service quality should not be ignored in quality improvement. The results in Table 2 also showed significant proportion of the respondent rated them as poor.

So far, no study investigated the willingness of patients to go back to the same facility and to determine which variables and domains have an impact on patients' loyalty to the hospitals. Yet, in a different context, a study conducted in solo and group clinics in Taipei by Lin has found that all service quality dimensions except assurance are significant [40], where by one unit increase in the reliability score is associated with a 0.25 unit increase in potential patient's loyalty score, followed by responsiveness (0.22), empathy (0.18) and tangibles (0.12).

There is no documentation of longitudinal studies of return-to-provider behavior using data covering the universe of healthcare encounters of panel patients. The results of this study and many other studies support the fact that better service quality leads to better patient satisfaction and eventually to loyal patients who are willing to go back or recommend the facility to another customer. Nevertheless, more work needs to be done to explore this factor on long-term basis and study thoroughly all the factors that influence patients' attitudes and behavior.

The original SERVQUAL includes 22 items representing five distinct dimensions of service quality. Many studies reviewed the original questionnaire and made some modifications and/or added questions, which are suitable for the study context. However, no study considered to have equal score in each domain. We would suggest exploring this area in future study in order to validate the research instrument and its possible impact on study findings.

Conclusion

Our study found gender, reliability, assurance, empathy and cost as key determinants for potential patient's loyalty in private hospitals in Yemen. Because of the ever stronger emphasis on cost containment, changing customer attitudes, and stiff competition, many of the successful hospitals of the next decade will position themselves as 'high-quality' healthcare providers. Findings from our study could be effectively implied in strategic planning for improvement of quality of care provided by private hospitals in Yemen.

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