Factors associated with patient loyalty in private healthcare sector in Egypt

Rania Ahmed Aly El Garem
Department of Management, New Giza University, Giza, Egypt
Amira Fouad
Department of Business Administration, Faculty of Commerce, Cairo University, Cairo, Egypt, and
Hassan Mohamed
Hull University Business School, University of Hull, Hull, UK

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Abstract

Purpose – This paper explores the effect of perceived service quality, trust, perceived value and perceived cost on patient satisfaction and loyalty as well as exploring the moderating role of the sociodemographic factors.
Design/methodology/approach – The data were gathered from 462 patients via a structured questionnaire, while structural equation modeling was utilized for the analysis.
Findings – Results indicated that trust, perceived value and patient satisfaction have important roles in shaping the patient loyalty, while patient satisfaction was found to fully mediate the patient's perceived service quality. Loyalty relationship was also found to partially mediate the trust–loyalty relationship. Nonetheless, the patient's satisfaction–loyalty relationship was found to be only moderated by the age factor.
Practical implications – Implications are provided to the Egyptian private hospitals in order for them to formulate improvement plans as well as set higher standards of conduct.
Originality/value – This original research is the first one, up to the researcher knowledge, that explores the drivers of patient satisfaction in the private hospitals in Egypt.

Keywords Perceived service quality, Trust, Perceived value, Perceived cost, Patient satisfaction, Patient loyalty and sociodemographic factors

Paper type Research paper

1. Introduction

Recently, the healthcare industry has witnessed major restructuring in terms of its service delivery system with the aim of surviving in a fierce competitive environment (Shabbir *et al.*, 2017; Gambarov *et al.*, 2017). This restructuring has resulted in a higher competition, a maturation of the industry and a decrease of the funding sources (Emanuel and Dubler, 1995) Egyptian healthcare service is provided using several channels, such as the free governmental universities, the private-owned hospitals, the medical care organizations and the health insurance system (El-Shazly *et al.*, 2000). Future implications show that the healthcare sector in Egypt can be encountered with some problems, considering that the large base of the young

Since submission of this article, the following author(s) have updated their affiliations: Hassan Mohamed is at the Department of Business Administration, Faculty of Commerce, Cairo University, Cairo, Egypt.

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population will be soon transformed to an aging one (Central Agency for Public Mobilization & Statistics, CAPMAS. Cairo, Egypt, 2022). While there is now an extensive number of providers that patients can choose from Mostafa (2005), maintaining and developing customer loyalty presents itself as a vital business strategy, and a unique source of competitive advantage, for healthcare establishments (Moliner, 2009). Admittedly, marketers have realized that providing a superior service quality will yield a favorable impact on consumers' satisfaction as well as loyalty (Gambarov *et al.*, 2017; Laohasirichaikul *et al.*, 2010).

In their studies, both Moreira and Silva (2015) and Singh and Sirdeshmukh (2000) argued that trust and satisfaction are drivers of loyalty, the prospect theory also indicates that customers would take into consideration the cost of the service when making their evaluations (Bolton and Lemon, 1999). Similarly, satisfaction with the waiting experience is argued to be highly affected by the perception–expectation gap (Maister, 1985). In the same way, many studies showed that, across various countries and/or types of healthcare services, patients who return to their same providers and make positive recommendations about them are the most satisfied ones (Kumar and Sharma, 2022; Zineldine, 2006). At last, evaluations of the different aspects of the services, as it is widely acknowledged by the different social psychological theories, are moderate/mediated by individual preferences, patients' equity feelings during the transaction, disconfirmation between what is wanted and the actual gains, and the social comparisons (Padma *et al.*, 2009).

Looking at previous literature, that there is scarce evidence on how perceived cost contributes positively to patient's satisfaction and their loyalty toward healthcare providers. Furthermore, the study is also driven by the need to resolve the contradictory results reported by the several scholars in relation to the extent to which gender can affect patients' satisfaction and their loyalty (e.g. Astuti and Nagase, 2014; Ndubusi, 2006; Berry, 2002; McDougall and Levesque, 2000). Accordingly, this research attempts to discover the key antecedents that contribute to enhancing and improving the patients' satisfaction and patients' loyalty in the healthcare sector in Egypt.

This study seeks to enrich the marketing literature by formulating a thorough framework that explores the antecedents of the patient's satisfaction and loyalty in Egypt. Accordingly, the research objectives are (1) to discover how perceived service quality, trust, perceived value and perceived cost influence patient loyalty, while also investigating the mediating role of patient satisfaction and to (2) investigate the moderating role of the sociodemographic factors in the relationship between the patient satisfaction and the patient loyalty. We start by presenting, first, the literature on the factors associated with patient loyalty in private hospitals, second, the hypotheses and the conceptual model, third, the methodology incorporated in the study, fourth, the analysis and findings of the research hypotheses and, fifth, a number of implications that should help hospitals' managers to realize patients' satisfaction and loyalty. The final section of the paper will also indicate the limitation and the suggested opportunities for the future research.

2. Theoretical background

2.1 Patient satisfaction and patient loyalty: the concept and their importance

Customer loyalty could be described using two different approaches; the "behavioral approach" and the "attitude approach" (Dick and Basu, 1994). Based on the behavioral approach, the actual repurchase behavior is the defining trait of customers' loyalty (Cunningham, 1961). In contrast, Fournier and Yao (1997) argued that the attitude-based approach of customer loyalty emphasizes only on the "intention to repurchase". In the healthcare context, patients' loyalty is reflected in their continuous preference for particular healthcare service provider, even when they are presented with alternatives. Hence, loyal patients are seen as information channels (Chang *et al.*, 2013) since their past experiences and word of mouth became a major source of information for others; customers are now less reliant on physicians as means to choose the "right" hospital and more prone to the other patients' points of view (Kurz and Wolinsky, 1985).

Such customers can behave as brand zealots as well, shielding providers from unfavorable commentary (Aggarwal, 2004); consequently, lowering the costs related to retaining existing customers (Ehrenberg and Goodhardt, 2000). It is indicated that maintaining only 5% or more of customers can yield in an increase of profits with almost 100% (Dayan *et al.*, 2022; Atinga *et al.*, 2011) whereas, negative word of mouth could make hospitals lose around $6,000–$400,000 of revenues over the lifetime of a single patient (Strasser *et al.*, 1995). Brennan (1995) investigated the possibility of utilizing the normative decision theory (NDT) to overcome the challenge of measuring satisfaction of patients. He highlighted that patient satisfaction represents the patients' assessment of whether the provider has acknowledged their expectations/preferences. Therefore, patient satisfaction reflects the service quality of the hospital (JCI, 2017), builds patient's trust and long-term relationships (Gaur *et al.*, 2011; Moliner, 2009), can result in patient loyalty (Dayan *et al.*, 2022; Fatima *et al.*, 2018; Chahal and Mehta, 2013) and his/her inclination to return (Kessler and Mylod, 2011).

2.2 Antecedents of patient satisfaction and patient loyalty

2.2.1 Perceived service quality. Based on the expectancy disconfirmation theory, Parasuraman *et al.* (1985) derived their model, in which service quality was described to be the variance between customers' expectations and actual perceptions of the provided service. In a healthcare context, perception of the service quality is reliant on determining if the service rendered has been the best, in terms of the results it yielded, met client's expectations and was done while taking into the doctor/patient relationship (Martinez, 1999). Despite having shared a theory of origin, service quality and customer satisfaction are fundamentally distinct notions (Lee, 2023; Keshavarz and Jamshidi, 2018; Rodger *et al.*, 2015; Rivera and Croes, 2010). Patient satisfaction is the cognitive and emotive evaluation of the total experience, while service quality is a cognitive judgment about the qualities and attributes of the service provided (Lee, 2023; Dauda and Lee, 2016; Tian-Cole and Cromption, 2003).

Managers frequently measure patient satisfaction to assist performance appraisal and resource allocation (Crilley *et al.*, 2012). Nonetheless, it is recognized that managers can have little control on customers' satisfaction because it is mostly subjective and appraisal may be influenced by a variety of outside variables and emotions (Rodger *et al.*, 2015). In contrast, service providers have strong influence on the characteristics of service quality since it is a cognitive assessment of the services and facilities that are offered (Rodger *et al.*, 2015). As a result, the evaluation of perceived service quality provides practitioners and service providers with crucial data (Crilley *et al.*, 2012). However, many studies have revealed how the quality of a service can be a determinant factor in customer satisfaction, customer retention and customer loyalty (Anabila *et al.*, 2021; Lonial and Raju, 2015; Elleuch, 2008; Reichheld and Sasser, 1990). As mentioned by Gaur *et al.* (2011) when we consider patient satisfaction in regard to loyalty, numerous studies have discovered that patient satisfaction is important in creating loyalty intentions (Fatima *et al.*, 2018; Kessler and Mylod, 2011). Also Gambarov *et al.* (2017) found that there is a significant positive correlation between service quality and Loyalty; where increasing the service quality perception leads to increases of patient loyalty by 63.1%. Service quality, customer satisfaction, trust and commitment are prerequisites for loyalty (Fitriani *et al.*, 2020). Researchers have also shown that the surroundings, customer-friendly employees, communication, reactivity and customer satisfaction are factors that influence loyalty (Kurz and Wolinsky, 1985). The elements (i.e. "medical mistakes," "cost of treatment," "quality service," "competence" and "availability") that have a strong influence on patient satisfaction and that also have a favorable influence on patient loyalty were examined by Kian and Heng (2015). Thus, the first 2 hypotheses are stated as follows:

H1. There is a significant positive relationship between perceived service quality and patient satisfaction.

H2. There is a significant positive relationship between perceived service quality and patient loyalty.

2.2.2 Trust. Trust reflects individuals' readiness to devote their valuable assets (i.e. time, personal information, money, etc.) for a particular system/organization (Oza *et al.*, 2006). Considering how difficult it is to evaluate a healthcare service before purchasing it, trust is thus an essential variable in the medical field (Chang *et al.*, 2013; Moliner, 2009). Consequently, having a trust in the provider is a cornerstone for developing customer loyalty (Reichheld and Schefter, 2000). Other researchers explored trust and satisfaction in relation to patients' commitment, in specific, patients' commitment, satisfaction and trust were found to be strongly positively correlated by Kandemir and Işik (2017), Shabbir *et al.* (2016) and Spake and Bishop (2009) studies. Patient commitment and satisfaction were found to be positively significant, according to Cetinturk (2016). These findings suggest that in order to foster a commitment to the healthcare service, it is vital to sustain both patient satisfaction and patient trust (Moliner, 2009). Patients believe that the healthcare facility has satisfied their demands when they receive the necessary medical care, fostering a dynamic interaction between the two parties (ÇINAROĞLU, 2014). Also, Gambarov *et al.* (2017) were studying the correlation between trust and service quality. Their Results concluded that trust and service quality are significantly and strongly related to each other; where a 62.6% change in trust can be explained by a change in service quality.

Despite the susceptibility of patients and their reliance on the judgment of healthcare professionals, the cultivation of trust can strengthen the bond between a patient and their healthcare provider, fostering a collaborative and confidential environment in their care (Ozawa, 2010). Patients are more likely to keep a relationship with the institution and be more eager to return if they think the personnel is reliable and truthful. When patients are more likely to suggest the hospital to their family members and friends, they become more likely to return (Isa *et al.*, 2019). People may be more helpful and loyal if they believe the businesses, they are working with are trustworthy, which can minimize the risk of a transaction between market participants (Morgan and Hunt, 1994). Likewise, Loyalty and trust have been positively linked by Krishnan *et al.* (2016). Accordingly, many studies explored the role of trust in building patient loyalty in the healthcare institutions, with a clear indication that trust can highly prompt patient loyalty (Sumaedi *et al.*, 2014; Padma *et al.*, 2009; Moliner, 2009). Accordingly, H3 and H4 are stated as follows:

H3. There is a positive significant relationship between trust and patient satisfaction.

H4. There is a positive significant relationship between trust and patient loyalty.

2.2.3 Perceived value. Customer value is the "consumer's overall assessment of the utility of a product based on perceptions of what is received and what is given" (Zeithaml, 1988), which mostly has been viewed as the trade-off between the benefits and the cost. More specifically, the term indicates how customers define the quality in relation to the price (Etgar and Malhotra, 1981). Prior literature (e.g. Polo-Peña *et al.*, 2012; Caruana and Fenech, 2005; Cronin *et al.*, 2000; Zeithaml, 1988) found that the concept of perceived value is considered an important determinant of positively affecting consumer behavior as it can increase consumers' loyalty and their satisfaction levels.

Along these lines, Bolton and Lemon (1999) utilized the prospect theory to explain the way service failures/loss as well as service recovery/gain can influence customers' constant assessment of the provided service; they considered that the price is the financial sacrifice/loss endured for the sake of the service. Hence, the equity theory establishes a relationship between price and satisfaction (Patterson *et al.*, 1997). Correspondingly, price-based prescriptions have been widely used to gain customers satisfaction (Lobo *et al.*, 2014) since money-back guarantee is a favored method in achieving customer satisfaction (Heskett *et al.*, 1990). Accordingly, Høst and

Knie-Andersen (2004) found that price has a strong impact on customer satisfaction as well as customer loyalty. A substantial correlation between perceived rivalry and satisfaction was discovered by Høst and Knie-Andersen (2004). According to Dabholkar *et al.* (1996), participants frequently cite price as a satisfaction element. When price impression was examined comparatively rather than absolutely, Varki and Colgate (2001) likewise found a strong link between price judgments and satisfaction. Additionally, market analysts are in favor of the idea that customer happiness should be based on value, and therefore price, although service quality is not typically thought of as being based on price. Customers who are satisfied are more willing to accept price rises (lower price elasticity), which might improve profit (Beerli *et al.*, 2004). Also, in their research, Gonçalves *et al.* (2020) found that price perception is considered to be a significant variable in realizing patient intentions to revisit medical healthcare services, however, its effect on patient satisfaction is still remaining unclear (Lobo *et al.*, 2014).

Thus, H5 and H6 are stated as follows:

H5. There is a significant negative relationship between perceived value and patient satisfaction.

H6. There is a significant negative relationship between perceived value and patient loyalty.

2.2.4 Perceived cost. Taylor (1994) indicated that a service waiting time is "the time from which a customer is ready to receive the service until the time the service commences". In the healthcare services context, the perceived cost which represents the waiting time between the customer's arrival time to the waiting/consulting room and his/her leaving time of the hospital/clinic (Qin and Prybutok, 2013). Previous studies found that perceived service cost is considered as an important antecedent to customer satisfaction (Spathis *et al.*, 2004). It is also considered a vital indicator of the service quality (Kotler *et al.*, 2012). However, only few studies have investigated the impact of perceived service cost on patient's service quality perception (e.g. Dimitriadis, 2011; Spathis *et al.*, 2004; Tam, 2004). Most studies on waiting time specifies that the longer the customers have to wait, the less favorable their evaluation of service will be (Taylor, 1995). For instance, Bar-dayan *et al.* (2002) discovered that the length of time servicemen had to wait at the clinic was a significant factor in their dissatisfaction. According to Probst *et al.* (1997) patients who did not have to wait a long time have become more satisfied. Low patient satisfaction and lower desire to return were the results of longer delays, according to Camacho *et al.*'s (2006) research. It may also drive customers to lead consumers to cancel the service or to decide not to use it in the future (Bielen and Demoulin, 2007). Along the same lines, many studies stress that delays could yield adverse impacts on service satisfaction (Li, 2010). Indeed, Davis and Vollmann (1990) concluded that customer satisfaction is negatively associated with perceived cost. Accordingly, H7 and H8 are stated as follows:

H7. There is a significant negative relationship between perceived cost and patient satisfaction.

H8. There is a significant negative relationship between perceived cost and patient loyalty.

2.3 The relationship between patient satisfaction and patient loyalty

Extant literature on evaluating the efficacy of healthcare initiatives focuses on how satisfied patients are with their doctor visits. Patient satisfaction is considered when a patient enters the healthcare industry. It illustrates how successfully healthcare professionals satisfy the requirements and expectations of their patients while maintaining a high level of service. Satisfaction in the domain of services relates to the idea that the customer is the final user of the item or service. Numerous research has established a connection between customer

loyalty and service provider satisfaction throughout the years. Several empirical studies pointed out that there is a positive relationship between patient satisfaction and loyalty (Fitriani *et al.*, 2020; Amin and Nasharuddin, 2013; Chang *et al.*, 2013). Likewise, Mortazavi *et al.* (2009) emphasized that satisfaction and loyalty were so correlated that a single unit increase in the former could lead to an increase in the latter by 54–77%, within the private healthcare industry. Hence, H9 is stated as follows:

H9. There is a significant positive relationship between patient satisfaction and patient loyalty.

2.4 The mediating role of patient satisfaction

Many researchers argue that service quality can indirectly affect customer loyalty through satisfaction, which would serve as a mediator variable (Sharma, 2017; Ladhari, 2009).

Moreover, Padma *et al.* (2009) has also confirmed the indirect relationship between trust and intention through satisfaction. In addition, Pantouvakis and Bouranta (2014) concluded that, even in public hospitals where price is usually regarded as a symbolic cost to the customer, price perception significantly affects customer satisfaction and loyalty. Similarly, Law *et al.* (2004) indicated that a number of service-related factors, including the perceived cost, can highly impact consumers' return frequency and satisfaction. Therefore, H10–H13 are stated as follows:

H10. Patient satisfaction significantly mediates the relationship between perceived service quality and patient loyalty.

H11. Patient satisfaction significantly mediates the relationship between trust and patient loyalty.

H12. Patient satisfaction significantly mediates the relationship between perceived value and patient loyalty.

H13. Patient satisfaction significantly mediates the relationship between perceived cost and patient loyalty.

2.5 The role of the sociodemographic factors as moderators in the relationship between patient's satisfaction and loyalty

Based on the social identity theory, there are certain demographic, situational, environmental and psychosocial factors that moderate the attitudes (Zhang *et al.*, 2018; Platow *et al.*, 1997). In the healthcare service industry, patients' needs and preferences might differ according to age, gender and income (Naidu, 2009). Specifically, Grazier *et al.* (1986) stressed that age could influence customers' degree of information processing, which, by turn, is vital for evaluating service quality (Cole and Balasubramanian, 1993). In fact, age seems to be a very consistent predictor of older patients' satisfaction; as a result of the accumulated investments in a certain brand, older people are more prone to become loyal to that brand (Quintana *et al.*, 2006). However, younger people are in a constant need to look for information on the new brands (Ross *et al.*, 1993). Moreover, several studies were concerned about the influence of gender on buying behavior (e.g. Homburg and Giering, 2001; Jasper and Lan, 1992; Slama and Tashlian, 1985; Zeithaml, 1985). Women were found to be more involved in the purchasing activities compared to men as well as their purchasing behavior is found to be strongly influenced by their evaluation of personal interaction processes (Slama and Tashlian, 1985). In addition, Ndubusi (2006) and Berry (2002) highlighted that there is a direct relationship between patient satisfaction and patient loyalty based on gender. Both genders, males and females, will be loyal to the health service providers if they are able to maintain and enhance good

relationships with their patients. On the contrary, Astuti and Nagase (2014) found that the satisfaction of female patients and thus, their loyalty is relatively higher than male patients. This result also was consistent with the findings of McDougall and Levesque (2000), who reported that female patients can show higher satisfaction and loyalty toward the health service provider compared to male patients.

Therefore, Homburg and Giering (2001) found that gender has a significant moderating effect on the satisfaction–loyalty relationship. Additionally, Mummalaneni and Gopalakrishna (1995) revealed that income was the only sociodemographic characteristic found to have an influence on patient satisfaction. However, several studies (e.g. Fitri *et al.*, 2016; Ulfa, 2012) reported that income has no direct impact on patient loyalty as they found no differences between patients' different levels of income (high income vs low income) to patient loyalty. On the other hand, Zeithaml (1985) found that high income patients can be less loyal to the health service providers since they can shift to any other health service without having to worry about the costs of the new health service compared to low-income patients. According to Cooil *et al.* (2007) income is considered a negative moderator on patient loyalty.

Hence, in analyzing the effect of income as a moderator factor, it was found that the relationship between the satisfaction with the product and the loyalty is weaker for high income consumers than it is for low-income ones (Homburg and Giering, 2001). Accordingly, H14–H16 are stated as follows:

H14. Age significantly moderates the relationship between patient satisfaction and patient loyalty.

H15. Gender significantly moderates the relationship between patient satisfaction and patient loyalty.

H16. Income significantly moderates the relationship between patient satisfaction and patient loyalty.

According to the aforementioned research hypotheses, the following Figure 1 reflects the relationships among all the research constructs.

3. Research methodology

3.1 Measures

Prior to the data collection, an initial set of dimensions was utilized from the previous literature; with appropriate levels of validity and reliability. The chosen items were reviewed by experts, and the questionnaire was adjusted accordingly before being translated into Arabic (by operating back-translation). The survey tool was pretested on 30 patients to ensure the clarity of the questions. The outcome of the pretesting brought about a few changes, such as enhancing the wording of the patient loyalty items and removing some of the items that were vague, repetitive, unnecessary, or complicated. The questionnaire's items were measured using a five-point Likert scale (where 1 = strongly disagree, 5 = strongly agree). While, the sociodemographic characteristics were considered to be the moderating factors. The perceived service quality scale was divided into 38 items based on the work of Qin and Prybutok (2013) as well as Qin *et al.* (2015), where 6 items were used to measure the tangibility, 2 items were used to measure the professionalism of hospital staff, 3 items were used to measure the interaction, 3 items were used to measure the accessibility, 4 items were used to measure the efficiency, 2 items were used to measure the technical quality, 5 items were used to measure the reliability, 3 items were used to measure the responsiveness, 6 items were used to measure the assurance, 2 items were used to measure the communication and the baksheesh (or the tips) was measured by 2 items which was drawn from Andaleeb (2000), while trust in the hospital was measured with 4 items from Moorman *et al.* (1992), the

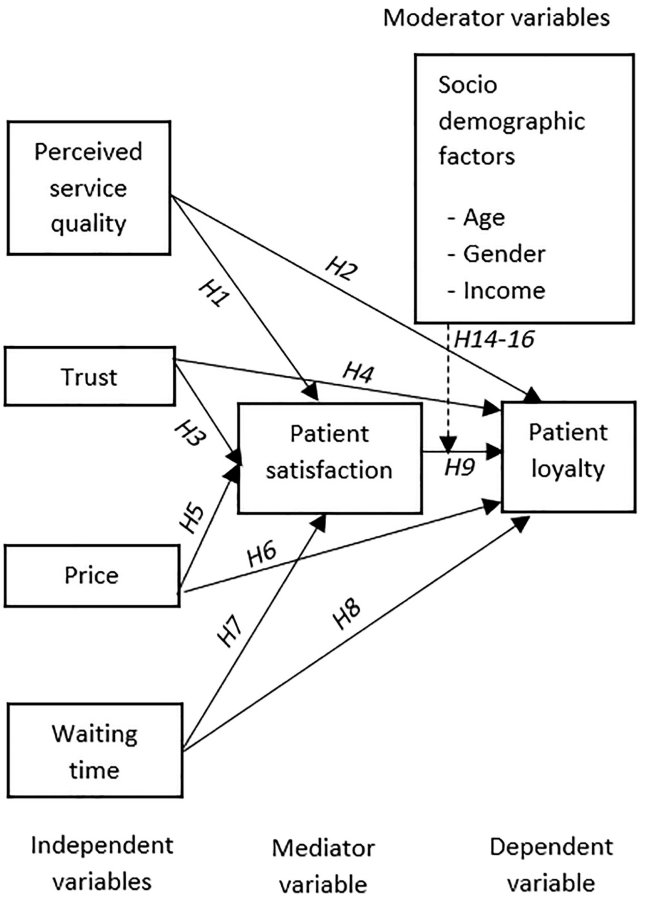

Figure 1.
The proposed model

Source(s): Figure1 by authors

perceived value (i.e. price) was measured with 4 items from Dodds and Monroe (1991), perceived cost (i.e. waiting time) was measured with 5 items from Donabedian (1966), patient satisfaction was measured with 5 items from Greenfield and Attkisson (1989) and, finally, patient loyalty was measured with 4 items from Zeithaml *et al.* (1996) (Review Appendix).

3.2 The population and sample of the study

The population in this research comprises all the outpatients who were waiting for different medical services from other clinic specialties in 62 Egyptian private hospitals out of the 292 private hospitals existing in Greater Cairo (Egyptian Ministry of Health, 2019). The Ministry of Health considers the private hospitals to be health institutions that contain within them more than 15 beds and 2 operating rooms (Lawyers Association, 2015); hence, those health institutions that contain less than such requirements are considered only medical centers. A convenience nonprobability sample was utilized for this study. The interviews were conducted with patients who were already present and waiting for admission, including those who are receiving or have received inpatient or outpatient services in private hospitals. Out of

the 525 patients surveyed, 503 returned their questionnaires and 462 of these were deemed valid for data analysis. This sample size meets the recommended minimum requirement, as suggested by Hair *et al.* (2014).

3.2.1 Sample characteristics. As can be clearly seen from Table 1, the females represent 50.9% of the sample, 40.6% of the sample are aged between 30 years old and less than 45 years old, and almost half of the sample has a bachelor's degree (45.1%). Also, more than 85% of the sample have wages that range from 1,500 LE to less than 10,000 LE per month. Most of the respondents are also married (38.7%), while those who are married with sons are 36.6%. Only 1.7% of the respondents were visiting the surveyed hospital for the first time, whereas the others had visited the private hospital at least two times (98.3%).

3.2.2 Data analysis and results. Structural Equation Modeling two-stage approach (SEM) was used to test the conceptual model; the first stage aims to build the measurement model, while the second stage aims to test the structural model, direct and indirect hypotheses, using Smart PLS v. 3.2.6 (Ringle *et al.*, 2015). In this regard, partial least squares–structural equation modeling (PLS-SEM) enables examining paths between the latent factors that are measured using multiple indicators and estimating multiple and interrelated dependence relationships. In addition, it can be run with skewed distributions, multicollinearity and small sample sizes. Thus, an increasing number of marketing researches are starting to use it as a multivariate technique (Hair *et al.*, 2012), as well as in Avkiran (2018). The researcher will apply two-stage approach of SEM that consists of confirmatory factor analysis (CFA) stage and then a hypothesis testing stage (Hair *et al.*, 2014). This approach reflects seven steps of SEM that have been proposed by Hair and Anderson (2010) and six steps by Malhotra (2010). Therefore, the researchers will begin with CFA, direct relationships testing, mediation test and, at last, the multigroup analysis (MGA).

3.2.2.1 Measurement model. As indicated in Table 2, the model meets the convergent validity, since all average variance extracted (AVEs) are above 0.5 (Hair and Anderson, 2010;

Sample description		Frequency	%
Gender	Male	226	48.9
	Female	235	50.9
Age	Less than 18	22	4.8
	18 to less than 30	132	28.6
	30 to less than 45	187	40.6
	45 to less than 60	76	16.5
	60 and more	44	9.5
Education level	Illiterate	62	13.8
	High school	134	29.8
	Graduate	203	45.1
	Postgraduate	51	11.3
Income	1,500 to less than 3,500 LE	159	40.3
	3,500 to less than 5,000 LE	100	25.3
	5,000 to less than 10,000 LE	81	20.5
	10,000 LE and more	55	13.9
Marital status	Single	78	16.9
	Married	179	38.7
	Married and have sons	169	36.6
	Divorced/widowed	36	7.8
Number of visits	First visit	8	1.7
	2–5 times	262	56.7
	6 times and more	192	41.6
	Nonhigh class	240	51.9

Source(s): Table 1 by authors

Table 1.
Sample characteristics

Table 2.
Measurement model results

Constructs/ quality criteria	Average variance extracted (AVE)	Construct validity Discriminant validity using Fornell–Larcker criterion Patient satisfaction	Price	Perceived service quality	Trust	Waiting time	Patient loyalty	Construct reliability Cronbach's alpha	Composite reliability CR
Patient satisfaction	0.908	0.953						0.965	0.975
Price	0.798	0.624	0.894					0.908	0.941
Perceived service quality	0.780	0.851	0.646	0.883				0.964	0.972
Trust	0.875	0.893	0.641	0.832	0.936			0.951	0.966
Waiting time	0.560	−0.504	−0.422	−0.576	−0.477	0.748		0.822	0.863
Patient loyalty	0.898	0.902	0.647	0.813	0.879	−0.502	0.947	0.961	0.972

Source(s): Table 2 by authors

Malhotra, 2010). As well as, discriminant validity using Fornell–Larcker criterion has been also established, since the square root of each AVE is higher than the squared correlations between a construct and all other constructs at the same model. Accordingly, all of the valid constructs are reliable according to Cronbach's alpha and composite reliability (CR) criteria (above 0.7). However, to get the valid and reliable constructs, the researchers applied the CFA for the composed items of perceived service quality, using the average items' scores of each dimension. Moreover, to keep the constructs valid and reliable, the composed variable AVG_Tips was eliminated since its loading was less than 0.4 (Hair *et al.*, 2014).

3.2.2.2 Structural model: direct hypotheses testing. As it is reflected in Table 3, only four hypotheses (H2, H3, H4 and H9) were supported with a 99.9% confidence level, whereas three other hypotheses were not supported (H1, H7 and H8) with confidence level 95%. Moreover, H5 has been rejected because of its negative formulation, however, it has been accepted in its positive form at 99% confidence level. Lastly, H6 has been rejected for both its insignificant and opposite direction hypothetical relationship. In addition, this measurement model, with its constructs and relationships, explains 83.6% of the patient satisfaction and the 84.7% of patient loyalty. Accordingly, the proposed model has a fairly good explanation power.

3.2.2.3 Indirect hypotheses testing (mediation test). Table 4 shows that the mediation analysis is conducted based on Preacher and Hayes' (2008, 2004) work, which indicates that the mediation effect is measured by dividing the indirect effect over the total effect (i.e. the direct + the indirect effect); if the proportion of the mediation effect was less than 0.2, then there would be no mediation, if it ranged between 0.2 and 0.8, then there would be a partial mediation, and if it was over 0.8, then there would be a full mediation (Nitzl *et al.*, 2016; Hair *et al.*, 2014; Hayes, 2013). Along the same lines, Sobel (1982) assumptions to test the mediation effect are:

(1) Direct effect without a mediator, from the independent factor to the dependent factor, is significant.

(2) Direct effect from the independent factor to the mediator factor is significant.

(3) Direct effect from the mediator factor to the dependent factor is significant.

As shown in Table 4, H10 has been supported by a full mediation relationship, while H11 has been supported by a partial mediation relationship. However, H12 has not been supported

Hypotheses		β	Calculated t-value	p-values	Result
H1	Perceived service quality → Patient satisfaction	0.368	7.326	0.000	Supported***
H2	Perceived service quality → Patient loyalty	0.036	0.782	0.435	Not supported
H3	Trust → Patient satisfaction	0.597	13.008	0.000	Supported***
H4	Trust → Patient loyalty	0.315	5.445	0.000	Supported***
H5	Price → Patient satisfaction	0.021	0.700	0.484	Rejected
H6	Price → Patient loyalty	0.084	3.080	0.002	Rejected
H7	Waiting time → Patient satisfaction	−0.022	−0.888	0.375	Not supported
H8	Waiting time → Patient loyalty	−0.034	−1.494	0.136	Not supported
H9	Patient satisfaction → Patient loyalty	0.527	10.174	0.000	Supported***

Note(s): Patient satisfaction $R^2 = 0.836$ and Patient loyalty $R^2 = 0.847$
***Significance level is 99.9%, p-value < 0.001, t-value ± 3.09
**Significance level is 99%, p-value < 0.01, t-value ± 2.326
* Significance level is 95%, p-value < 0.05, t-value ± 1.645
Source(s): Table 3 by authors

Table 3.
Direct hypotheses testing results

Hypothesis		B	*t*-value*	*P*-value	Decision
Step (1) direct effect without mediator					
H10	Perceived service quality → Patient loyalty	0.230	4.654	0.000	Go to step (2)
H11	Trust → Patient loyalty	0.630	13.566	0.000	Go to step (2)
H12	Price → Patient loyalty	0.095	3.184	0.002	Go to step (2)
H13	Waiting time → Patient loyalty	−0.046	1.790	0.074	No mediation
Step (2) indirect effect = Independent to mediator. Mediator to dependent					
H10	Perceived service quality → Patient loyalty	0.194	6.404	0.000	Go to step (3)
H11	Trust → Patient loyalty	0.315	7.502	0.000	Go to step (3)
H12	Price → Patient loyalty	0.011	0.698	0.486	No mediation
Step (3) total effect = Indirect effect + independent to dependent					
H10	Perceived service quality → Patient loyalty	0.230	4.583	0.000	Go to step (4)
H11	Trust → Patient loyalty	0.630	13.645	0.000	Go to step (4)
Step (4) VAF = Indirect effect/total effect					
H10	Perceived service quality → Patient loyalty	0.194/0.230 = 0.843			Full mediation
H11	Trust → Patient loyalty	0.315/0.630 = 0.500			Partial mediation

Note(s): *Two-tail hypotheses testing was applied in the mediation test
Source(s): Table 4 by authors

Table 4. Hypotheses testing H10–H13 mediation test—H10-H13

because the direct effect without a mediator was significant but only in the opposite direction. This means that the indirect relationship was not significant at 95% confidence level; therefore, there is no significant mediation effect. Furthermore, H13 has not been supported since the direct effect without a mediator was nonsignificant at 95% confidence level; consequently, there is no mediation effect.

3.2.2.4 Indirect hypotheses testing (moderation test—multigroup analysis). Table 5 illustrates the testing of the categorical moderation analysis using an MGA methodology. Consequently, H14 was supported since all comparisons with group 1 in age factor had significant difference, in regard to the satisfaction–loyalty relationship, at confidence level 95%. However, H15, H16, H17 and H18 were not supported at the same level of confidence.

4. Discussion

The results suggest that perceived service quality had significant impacts on satisfaction ($\beta = 0.368$; $p = 0.000$), therefore, H1 was supported. This is aligned with most of the previous research (e.g. Dayan *et al.*, 2022; Fatima *et al.*, 2018; Amin and Nasharuddin, 2013; Kessler and Mylod, 2011).

In contrast, the findings show that perceived service quality, non-significantly, positively affects the patient loyalty ($\beta = 0.036$; $p = 0.435$), therefore, H2 was not supported, but H10 which, measures the mediation role of satisfaction at the above-mentioned relationship, was fully supported. This result contradicts most of the previous patient loyalty studies (e.g. Shabbir *et al.*, 2016; Chahal and Mehta, 2013).

Trust has shown a significant impact on patient satisfaction ($\beta = 0.597$, $p = 0.000$) and patient loyalty ($\beta = 0.315$, $p = 0.000$), which means that H3 and H4 were supported. These findings support the majority of the previous research on the relationship between trust and loyalty in the healthcare context (e.g. Sumaedi *et al.*, 2014; Chang *et al.*, 2013; Moliner, 2009).

Furthermore, the present study showed that the relationship between the Perceived value (prices) and patient's satisfaction ($\beta = 0.021$, $p = 0.484$) and loyalty ($\beta = 0.084$, $p = 0.002$) is

Age						
H	Values $\beta_{(t\text{-value})}{}^{Sig.}$					Decision
	Group one, Less than 18, $n = 22$	Group two, 18 to less than 30, $n = 132$	Group three, 30 to less than 45, $n = 187$	Group four, 45 to less than 60, $n = 76$	Group five, 60 and more, $n = 44$	
H14	0.731 (8.011) 0.000	0.923 (59.480) 0.000	0.900 (41.683) 0.000	0.914 (43.338) 0.000	0.934 (32.900) 0.000	Supported
	Difference Path Values $\beta_{(t\text{-value})}{}^{Sig.}$					
	(|Age(1.0) - Age(2.0)|)	(|Age(1.0) - Age(3.0)|)	(|Age(1.0) - Age(4.0)|)	(|Age(1.0) - Age(5.0)|)	(|Age(2.0) - Age(3.0)|)	
	0.192 (3.680) 0.000	0.169 (2.421) 0.016	0.183 (2.974) 0.004	0.203 (2.735) 0.008	0.023 (0.811) 0.418	
	(|Age(2.0) - Age(4.0)|)	(|Age(2.0) - Age(5.0)|)	(|Age(3.0) - Age(4.0)|)	(|Age(3.0) - Age(5.0)|)	(|Age(4.0) - Age(5.0)|)	
	0.009 (0.366) 0.715	0.011 (0.346) 0.730	0.014 (0.381) 0.703	0.034 (0.735) 0.463	0.020 (0.582) 0.562	

Gender			
H15	Group one, Males, $n = 226$	Group two, Females, $n = 225$	Difference Path	Not supported
	Values $\beta_{(t\text{-value})}{}^{Sig.}$			
	0.884 (50.513) 0.000	0.926 (62.411) 0.000	0.042 (1.851) 0.065	

Income						
H16	Group one, 1500 to less than 3500 LE, $n = 159$	Group two, 3500 to less than 5000 LE, $n = 100$	Group three, 5000 to less than 10000 LE, $n = 81$	Group four, more than 10000, $n = 55$		Not supported
	Values $\beta_{(t\text{-value})}{}^{Sig.}$					
	0.898 (48.353) 0.000	0.923 (50.928) 0.000	0.893 (22.938) 0.000	0.897 (20.629) 0.000		
	Difference Path Values $\beta_{(t\text{-value})}{}^{Sig.}$					
	(|Income(1.0) - Income(2.0)|)	(|Income(1.0) - Income(3.0)|)	(|Income(1.0) - Income(4.0)|)	(|Income(2.0) - Income(3.0)|)	(|Income(2.0) - Income(4.0)|)	(|Income(3.0) - Income(4.0)|)
	0.024 (0.894) 0.372	0.005 (0.139) 0.890	0.001 (0.032) 0.974	0.030 (0.740) 0.460	0.026 (0.643) 0.521	0.004 (0.067) 0.947

Source(s): Table 5 by authors

Table 5. Hypotheses testing H14–H16 using MGA

positive but not significant, which means that H5 and H6 were not supported. This result is also confirmed by Parasuraman *et al.* (1991) who found that many customers believe that the more money they will have to pay, the better the service they should receive. However, the findings of this research contradict the stream of literature that indicates that the fixed price (everyday low price) strategies are advised for loyal customers' satisfaction and rewarding (Ortmeyer *et al.*, 1991). In addition, Bolton and Lemon (1999) found that satisfied consumers, or those who are presented with discounts on the price, will use the product/service more frequently.

Moreover, the findings of the current research revealed that perceived cost, nonsignificantly, negatively affects patient satisfaction ($\beta = 0.022$, $p = 0.375$) and patient loyalty ($\beta = 0.0.034$, $p = 0.136$), which means that H7 and H8 were not supported. This is consistent with Qin and Prybutok (2013) who found that the relationship between perceived cost, patient satisfaction and patient loyalty is nonsignificant. However, the result of this research contradicts the literature that concluded that perceived cost significantly reduces customers' satisfaction loyalty (Li, 2010). Nonetheless, there is still evidence that customers' evaluations can be adversely impacted by any delays at the point of service delivery (Mehra, 2016; Bielen and Demoulin, 2007).

Likewise, Results revealed that patient satisfaction positively and significantly affects patient loyalty ($\beta = 0.527, p = 0.000$), which means that H9 is supported. This finding is also in accordance with the work of Dayan *et al.* (2022), Anabila *et al.* (2019) and Athanassopoulos *et al.* (2001).

The findings have also indicated that patient satisfaction fully mediates the relationship between perceived service quality and the patient loyalty (VAF = 84.3%), accordingly, H10 was supported. This result in accordance with the findings of other studies (e.g. Dayan *et al.*, 2022; Fatima *et al.*, 2018; Cheng *et al.*, 2008; Shabbir *et al.*, 2016).

Nonetheless, the relationship between trust and patient loyalty is partially mediated by patient satisfaction (VAF = 50%). Therefore, H11 was supported, which is consistent with Platonova *et al.* (2008) study that found that patient satisfaction mediates the relationship between trust and patient loyalty in the healthcare context.

In contrast, the result indicates that the price–loyalty relationship is not mediated by patient satisfaction. Accordingly, H12 was rejected; although the direct effect without the mediator is significant, however, in the opposite direction. Also, the indirect relationship was nonsignificant at a 95% confidence level. This result is contradictory to the previous research findings, since Qin and Prybutok (2013) found that the relationship between price and patient loyalty is partially mediated by satisfaction. Moreover, Zarei *et al.* (2014) found that overall satisfaction partially mediates the relationship between price and behavioral intentions as well as Fatima *et al.* (2018) found that if patients pay large amount of money in private hospitals for their medical treatment, they rely on forming high expectations and after experiencing services, if they are not satisfied with the provided services, they get dissatisfied and unhappy toward the condition of hospitals outdoor places, i.e. cafeteria, parking, etc. An explanation of this paper's result could be in the fact that most Egyptian patients rely on third party payers, such as insurance scheme and contracts with trade unions, which makes many of them pay only a small amount of the prices, while others may not pay at all.

Similarly, the results show that patient satisfaction doesn't mediate the relationship between perceived cost (i.e. waiting time) and patient loyalty. Accordingly, H13 was also rejected; since the direct effect without a mediator is nonsignificant at 95% confidence level. This finding is in line with that of Qin and Prybutok (2013), who found that the relationship between perceived cost and patient loyalty is not mediated by the satisfaction. Also, Dayan *et al.* (2022) found that there is no direct relationship between waiting time satisfaction and outpatient satisfaction. However, this result contradicts some previous research findings that found that satisfaction is a mediator in the relationship between waiting time and customer loyalty (e.g. Bielen and Demoulin, 2007; Law *et al.*, 2004).

Additionally, this research presented another interesting finding about the sociodemographic factors. The results clearly prove that H14 was *supported* since all comparisons with group 1 in *age* factor had significant difference in regards to the patient's satisfaction–loyalty relationship, at confidence level 95%. In fact, age is found to be a major moderating variable to the relationship between satisfaction and loyalty. Hence, the result of our findings is consistent with most of the researches that argued that information processing decreases with age; older people have lower level of information processing; thus, their responses to satisfaction shifts could also change (Roedder and Cole, 1986). Whereas, H15 and H16 were *rejected* at the same level of confidence, which indicates that gender is not a moderator to the relationship between patient satisfaction and loyalty.

From the above mentioned we can conclude that the present study contributes to the existing literature by finding that patient satisfaction fully mediates the relationship between perceived service quality and patient loyalty. This finding was confirmed by a number of prior literature studies (e.g. Dayan *et al.*, 2022; Shabbir *et al.*, 2016; Cheng *et al.*, 2008). However, this result was contradicting to the majority of previous literature (e.g. Shabbir *et al.*, 2016; Chahal and Mehta, 2013). In addition, our results revealed a nonsignificant relationship between perceived service

quality on patient loyalty. However, the findings report a significant relationship between perceived service quality on satisfaction. Consistent with the majority of previous literature, we also found a significant positive relationship between trust on patient satisfaction and patient loyalty in the healthcare sector (e.g. Sumaedi *et al.*, 2014; Chang *et al.*, 2013; Moliner, 2009). The present study also showed that there is no significant relationship between perceived value and patient satisfaction and between patient loyalty. This result is consistent with Parasuraman *et al.*'s (1991) findings as they also reported that consumers believe that they will get a better healthcare service, only when they pay more money. However, the findings of this study contradict with a decent number of previous studies that indicate that fixed pricing strategies are advised for loyal customers' satisfaction and rewarding (Ortmeyer *et al.*, 1991). Furthermore, the findings of the current research revealed that there is no significant relationship between perceived cost and patient satisfaction, and patient loyalty. This result was also aligned with Qin and Prybutok (2013) who reported a nonsignificant relationship between perceived cost, patient satisfaction and patient loyalty. The current research also contributes to the existing literature by finding that the price–loyalty relationship is not mediated by patient satisfaction, which contradicts with the majority of previous studies (e.g. Fatima *et al.*, 2018; Zarei *et al.*, 2014; Qin and Prybutok, 2013). The present study also reported that age moderates the relationship between satisfaction and loyalty. However, gender and income are not moderating the relationship between patient satisfaction and loyalty as our results found that there is no significant relationship between them and this is confirmed with the findings of Abekah-Nkrumah *et al.* (2021) who found in their studies that such sociodemographic characteristics such as gender do not have any effect on patient satisfaction and loyalty within the health institutions studied.

5. Theoretical contributions

The current research contributes to the existing literature by presenting a comprehensive framework that enables healthcare service providers in Egypt to boost patients' satisfaction and improve their loyalty. This is achieved by identifying the key factors that positively contribute to increasing the quality of healthcare services provided. One of the main aims for this study was to resolve the contradicting results presented in the prior literature regarding the role of gender. The results showed that there is no significant relationship between gender and patients' satisfaction or patients' loyalty. Additionally, the study contributes to the current literature by indicating how patient satisfaction fully mediates the relationship between perceived service quality and patient loyalty (Fatima *et al.*, 2018). Therefore, healthcare service providers in Egypt should make greater efforts to regularly assess and monitor the perceived service quality of the healthcare hospitals and services in order to measure the patient satisfaction and improve their loyalty. Furthermore, the research aims to fill some gaps from the previous literature. Specifically, there has been scarce evidence on how perceived cost can play a role in increasing patient's satisfaction and patients' loyalty within the healthcare service sector. In addition, the current study shed the light on the most important factors that affecting patients' satisfaction and patient's loyalty in Egypt, which helps eliminating and reducing the problems that may hinder the quality of the health service. Thus, it contributes positively to maintaining and enhancing patients' satisfaction as a crucial element in improving the quality of healthcare service in Egypt (Moliner, 2009). Having highly satisfied patients can help in increasing their retention, trust and their loyalty toward the healthcare service providers (Zineldine, 2006).

6. Managerial implications and recommendations

Based on our findings as well as the insights gained from the exploratory phase, there are some recommendations that might help the private hospital managers. The results are very useful to establish improvement plans, set higher standards of conduct and periodically

measure the patients' level of trust by identifying the number of paid follow-ups, since patient satisfaction is considered one of the most crucial factors in determining the success of the healthcare service. Furthermore, based on the findings of the current research, the health sector industry should pay greater attention to boost patients' satisfaction, which can guarantee their long-term loyalty and increase the patient retention. Thus, the Egyptian Ministry of Health and Population should encourage the private hospitals to design patient satisfaction surveys to assess patients' satisfaction on a regular basis and helps in measuring the quality of the healthcare service. Creating patient satisfaction surveys can help the healthcare sector in monitoring and measuring the performance of doctors and hospitals. It also helps in reflecting the quality of the care provided in the hospitals (Cohen *et al.*, 1996). Additionally, private hospitals can increase patients' satisfaction by reducing the number of inpatient mortalities via ensuring that all the healthcare providers are adhering to the guidelines and attending intensive trainings to improve the quality of healthcare provided and consequently, enhance patients' satisfaction levels (Adler, 2016).

In addition, managers should also undertake marketing research and surveys for setting accurate pricing and assessing what patients expect to pay for certain services, which should also be relative to their competitors. Also, they can depend on the indirect marketing channels (e.g. WOM) for better reachability; for example, by offering free diagnostics and treatment for school students or developing patient education programs (e.g. diabetes or heart diseases). In addition, they should make sure to maintain and develop retention programs, which provide rewards/bonuses for loyal customers. Additionally, the Egyptian Ministry of Health and trade unions have an essential role that includes revising the Egyptian accreditation standards to ensure real implementation of quality as well as encouraging the private hospitals to apply for the Joint Commission International (JCI) Accreditation (JHAP, 2016). The JCI is a part of a global enterprise nonprofit organization that addresses all dimensions of accreditation, quality care and patient safety. One way for that to happen would be by seeking to reproduce the strategy of the Jordanian Health Accreditation Program that made a major impact on the increased quality of healthcare in Jordan (Zineldine, 2006) and on the improvement of Jordan's medical tourism potential. As regards to the elder patients, hospitals must develop special regimen, such as making regular checkups that includes physical examination and investigation (e.g. treatments for chronic diseases like cardiovascular diseases) and supporting the costs of their treatments.

7. Limitations and future research

The following four limitations may affect the generalization of findings. Nonetheless, such limitations could present fruitful aspects for the future research. First, the sample of the research consisted of the private hospitals only; hence, further research might include the remaining small medical centers or outpatient clinics. Likewise, studying various clinics would advance the research results on how various patients in the same medical center respond to the research model. Also, a convenience sample was used; therefore, generalization should be done with certain degree of caution. Second, this study developed a research model that investigate the factors influencing patient satisfaction and loyalty in the private hospitals in Egypt. Accordingly, a cross-cultural study would enhance the generalization of the findings. Third, a seven-point Likert type scale would reflect more detailed and in-depth insights for the analysis.

Fourth, future researchers should further explore the complex relationships that exist between perceived value and perceived cost, on one hand, and patient satisfaction and patient loyalty, on the other hand. Likewise, studying different sociodemographic factors might help in finding different perspectives. Finally, this paper investigated hospital service quality,

patient satisfaction and patient loyalty based on the perspective of patients; however, it didn't investigate the perspective of the service providers, physician and medical staff.

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Appendix

A- perceived service quality
(1) Tangibility
1. The hospital physical facilities were visually attractive and comfortable (e.g. waiting rooms, television, chairs)
2. I could easily access information regarding the hospital. (Through web site, by telephone,..)
3. I could easily find a parking space
4. The professional appearance of the doctors, nurses and the other hospital staff
5. Periodic cleaning and disinfection of inpatient rooms, waiting areas and clinics
6. The smell in the hospital is pleasant
(2) Professionalism of hospital staff
7. The doctors are knowledgeable and skilled
8. Nurses are knowledgeable and skilled
(3) Interaction
9. Doctors effectively communicate with my family
10. The doctors are always listening to what I have to say
11. The staff is always listening to what I have to say
(4) Accessibility
12. The hospital is accessible to me by phone
13. It is easy to schedule an appointment
14. I was able to get an appointment at a time convenient to me
(5) Efficiency
15. The medical care I received was coordinated and comprehensive, including referrals
16. The caregiver was consistent
17. The medical care internal and external to the hospital collaborated well
18. Billing information was accurate
(6) Technical quality
19. I left the hospital feeling encouraged about my treatment
20. The quality of the care I received at the hospital was excellent
(7) Reliability
21. The hospital medical staff performed the correct medical care in the first time
22. The hospital staff maintained accurate and organized records and documentation of the patient's medical history
23. Prescription of efficient and reliable medicines
24. Prescription of affordable medicines
25. The fees and charges were consistent
(8) Responsiveness
26. The hospital provided the medical services at the time promised
27. The staff was willing to help patients
28. Accessibility at odd hours in case of emergencies
(9) Assurance
29. The physicians were courteous and friendly
30. The hospital staff were courteous and friendly
31. The physicians made me feel safe and relaxed in their transaction
32. I trust my doctor's judgment about my medical care
33. I sometimes worry that my doctor may not keep the information we discuss totally private
34. I trust my doctor to tell me if a mistake was made about treatment
(10) Communication
35. The doctors and staff explained to me possible side effects or adverse reactions
36. My family is kept informed about my medical status
(11) Baksheesh/Tips
37. Services were not provided properly without tips
38. Hospital staff expected tips (Baksheesh)
B-Price
39. The price of the medical service I received was reasonable

(*continued*)

Table A1.
Variables' measures

40. The hospital offered the medical service at an appropriate cost
41. The medical service I received was good for the price
42. It was worth taking this healthcare service rather than the others
C- Waiting time
43. Actual waiting time from the time I entered to the hospital till the time that the nurse brought me to the clinic or treatment room was longer than expected
44. Actual waiting time till the time that I made the other needed procedures (to be referred to another doctor, analysis, X-rays, . . .) was longer than expected
45. Total time spent in the hospital from the time that I entered the waiting area till the time that I left the hospital after treatment was longer than expected
46. The waiting lists are reasonable
47. The time I have to wait in the waiting room is all right
D- Trust in the hospital
48. I think my hospital is trustworthy
49. In critical situations, I can rely on my hospital
50. The employees of my hospital are strongly encouraged to solve my problems
51. Overall, I fully trust this hospital
E- Patient satisfaction
52. My feelings toward the hospital are positive
53. I feel good about coming to this hospital for my treatment
54. Overall, I am satisfied with the hospital and the service it provides
55. I feel satisfied that the results of my treatment are the best that can be achieved
F- Patient loyalty
56. I will say positive things about this hospital
57. I will recommend this hospital to someone who seeks my advice
58. I will encourage friends and relatives to visit this hospital
59. I will consider this hospital my first choice when I need medical care

Table A1. **Source(s):** Appendix by authors

Corresponding author
Hassan Mohamed can be contacted at: h.m.mohamed-2019@hull.ac.uk