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The mediating role of hospital image: The impact of care cost and service quality on patient satisfaction

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Abstract
The primary goal of this research is to empirically examine the function of hospital image in mediating the relationship between care cost, healthcare service quality, and patient satisfaction. Eight hospitals in the Syrian capital, Damascus, were chosen to conduct this research. The patients were selected based on a random sampling method. As a result, N=270 questionnaires were considered for statistical analysis and testing the proposed model. Furthermore, patients regularly admitted to the hospital were chosen to have more experience with the services delivered by the related healthcare provider. The statistical results indicated that the hospital image partially mediates the relationship between financial factors, service quality (medical staff caring, procedural process, and tangibility), and patient satisfaction. Interestingly, our result highlighted that care cost (β= 0.472) has more influence on hospital image than service quality (β= 0.307), while service quality (β= 0.431) has more effect on patient satisfaction than care cost (β= 0.259). Our results illustrated the significance of reducing care costs, increasing consultation time, and minimizing waiting time, to increase patient satisfaction and improve hospital image. Our study calls on hospital managers in the healthcare sector not to sacrifice the quality of care at the expense of care costs.

Keywords: Hospital image; service quality; care cost; patient satisfaction; Syrian healthcare

Introduction

In the healthcare industry, the emergent of global competition pushes patients to emphasis on getting cost-effective clinical outcomes. In developing countries, governments are increasing their focus on the quality of healthcare to maintain and boost a healthy lifestyle within the general population. Besides, policymakers try to overcome financial burdens associated with healthcare related-expenses. However, it is still far from its counterpart in developed countries. Besides, the medical care financing mechanisms have not succeeded in providing sufficient financial insurance for citizens that covers basic medical needs. This situation leads to an increase in paid health spending and out-of-pocket expenses (Pauly et al., 2006). Healthcare requires a new management philosophy by establishing a high-quality service tailored to the patients' needs and by delivering better patient outcomes. In comparison to developed countries, developing countries still have a paucity of practical knowledge in understanding the impact of service quality on health outcomes. Besides, it is still a perplexing approach for health policymakers how to efficiently utilize private and public capital to finance healthcare projects and accomplish national health targets in a sustainable manner (AlOmari, 2021). In a competitive market, healthcare providers must cautiously adopt effective strategies to meet patients' requirements, provide low-cost care services, and reduce health disparities (Donabedian, 1996). In general, public and private expenditures on healthcare have been consistently increased, while strategies and policies have been set to reduce the government's share of healthcare expenditure by shifting the financial burdens to the private sector (Lim, 2004). In this study a quantitative approach has been adopted to gather data from patients in eight private hospitals located Damascus.

Oliver (1980) proposed the Expectation Confirmation Theory (ECT). Based on ECT, the customer's response to the service quality was caused by comparing the actual services with what the customer

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expected from the service provider. Patient satisfaction happens when a patient's perceived service quality is better than their expectations. In addition, according to Skogland and Siguaw (2004), three types of satisfactions may occur: (1) Natural feeling: when the actual performance matches the standards. (2) Satisfaction (positive disconfirmation): when the actual performance is better than the standards. (3) Dissatisfaction (negative disconfirmation): when the actual performance is worse than the standards. Besides, Huang indicated that satisfaction wielded the strongest endogenous influence on continued use (Huang, 2019). Moreover, *Social Cognitive Theory (SCT)* was proposed by Bandura (1988), giving an explanation related to individual behaviour in terms of an uninterrupted, dynamic, and reciprocal relationship between the individual and the surroundings. Medical professionals have to look for a chance to intervention, making a valuable opportunity to help patients realize the type of disease they have and encourage them, in a friendly way based on trust, to take quick action to comply with medication procedures in order to recover quickly.

In 2011, the unrest in Syria led to an unprecedented health catastrophe and it is estimated that a budget of USD 1.5 billion to reconstruct the healthcare sector in Syria (Ebens et al., 2016). The Ministry of Health (MoH) works unceasingly to handle difficulties in a proactive and timely manner, and it continues to make efforts to reform the healthcare system in order to provide Syrians with the highest health services possible. Moreover, the Syrian ministry of health (MoH) and the world health organization (WHO) stated that there has been a persistent problem in the healthcare sector for the past few years, including medical equipment and infrastructure (Ebens et al., 2016; Syrian Ministry of Health, 2017). On the other hand, little is known about healthcare complaint management systems in low-income countries in comparison to developed countries. There is a deficiency of exit options that appears to have compelled patients to stay silent and loyal even if they are unsatisfied with care services (Gurung et al., 2017). Therefore, it is essential to look for soliciting feedback from patients (Stelfox et al., 2005).

The Syrian ministry of health (MoH) revealed that there is a need to conduct an assessment relating to healthcare services in public and private healthcare hospitals (Syrian Ministry of Health, 2017). Furthermore, The World Health Organization (WHO) highlighted that more in-depth analyses on healthcare services in hospitals should also be conducted on a periodic basis. Furthermore, most countries require dramatically improved monitoring capacity of healthcare services in order to swiftly detect and treat infection (Burrer et al., 2020; World Health Organization, 2020). In addition, previous studies indicated that there is a gap in assessing patient's perception regarding care cost (Alumran et al., 2020; Javed et al., 2019; Jennings et al., 2015). During financial shortfalls at hospitals and when quality is imperfectly observed by patient, financially constrained healthcare providers have incentives to lower their product quality to increase cash flows in the short run (Adelino et al., 2018). Patients will think that the cost of care (financial element) is acceptable if they receive high-quality medical services, and their satisfaction with private hospitals will improve as a result (Guo et al., 2020). Hence, there is still inconsistencies and mixed findings regarding the role of care cost on healthcare outcomes.

The purpose of this study is to examine the impact of cost of care, hospital image and service quality (medical staff caring, procedural process, and tangibility) on patient satisfaction. Besides, we aim to empirically analyse the mediation role of hospital image on the relationship between financial aspects, healthcare service quality, and patient satisfaction. Furthermore, hospital administrators in Syrian hospitals may utilize our conceptual model to evaluate, analyse, and improve their operational performance as well as compare their actions to those of their competitors in the healthcare industry.

Literature Review

Relationship between care cost and patient satisfaction

In a competitive market, the significant impact of care costs on customer healthcare outcomes is different between developing and developed countries (Fornell, 1992). Switching costs play a significant role only when customer-perceived value or customer satisfaction is higher than the average value (Yang & Peterson, 2004). The relationship between service quality and cost is influenced by the type of patients and the characteristics of hospitals selected for the analysis (Fleming, 1991). However, the marginal cost differs over the range of quality and depends on the initial level of quality (Donabedian, 1985). River and Glover (2008) proposed a developed model to identify factors that have essential influence on patient satisfaction while maintaining high quality of service at lower costs. They indicated that it was not clear how to improve the performance and reduce the cost of services simultaneously. Another study found that switching cost does not have a significant moderating effect on the association of customer loyalty with customer satisfaction and perceived value (Yang & Peterson, 2004). Rahman and Osmangani (2015) examined a model containing five elements to measure patients' satisfaction with private healthcare service providers in Bangladesh. Among the five dimensions, the majority of patients assessed service quality and

satisfaction based on functional and technical qualities, internal and external influences, costs, and corporate image. Rose et al. (2004) developed a model to examine the impact of social support and patient education on overall service quality from patients' perceptions. Three different regression models (overall, public and private) were built to provide a more holistic understanding of hospital service quality in public and private hospitals in Malaysia (Kuala Lumpur). The findings showed technical quality is the most important factor in service quality for both hospitals. However, the cost dimension is insignificant in determining service quality from patients' perception, particularly for Malaysian private hospitals. Switching behaviour is influenced by cost, inconvenience, service failures, and insufficient staff responses. On the other hand, Anbori et al. (2010) highlighted that the cost of medical care services, empathy, assurance, and reliability are essential elements to achieve patient loyalty in the private healthcare sector in Yemen. Alumran et al. (2020) indicated that patient's financial concerns need to be investigated that has impact on the improvement of the overall quality of health care services at Saudi Arabia's health care system.

During the financial crisis, many people lost their health insurance (Kotz, 2009). World health organization called attention to the high proportion of healthcare spending paid out of pocket in most developing countries. For example, out-of-pocket expenditure as per cent of total health expenditure in some Arabic countries: Egypt (58.0%), Iraq (36.5%), Jordan (23.5%), Lebanon (34.3%) and Syria (53.9%). Furthermore, in developing countries, the governments' expenditure on healthcare as per cent of general government expenditure is low. For example: in Egypt (5.5%), Iraq (6.0%), Jordan (13.5%), Lebanon (10.7%) and Syria (5.3%) (World Health organization, 2015). Health insurance influences whether and when people receive necessary medical treatment, where they receive it, and, ultimately, how healthy they are. The insurance system has been proven to significantly increase the patient's satisfaction and loyalty (Ratnawati et al., 2020). Insurance services for households with problems in paying for health care is imperative. Patients should be provided by broader set of insurance services that will help them avoid the negative effects of not being able to afford necessary health care. the health patterns of the future may reflect the effects of stress because of precarious insurance coverage (Clayton Smith et al., 2005). Lack of health insurance is a key barrier to accessing adequate health treatments, and it is directly linked to poor functioning, increased morbidity and mortality, a lack of continuity of care, and growing health care expenditures. High satisfaction with the quality of health care obtained and with care experiences leads to lower cost expenditures (Coddington & Sands, 2008). Because of growing concerns about the affordability of healthcare, there is a great interest in understanding the relationship between medical care quality and care cost. Although expanding insurance coverage is an important step in healthcare reform, and this change must also address the underlying issues of quality and cost. The restructuring of the healthcare delivery system needs leadership, dedication, and resources. Healthcare reform can be achieved by building a performance measurement strategy and integrating healthcare service quality into decisions about monetary and non-monetary benefits (O'Kane et al., 2008). Besides, patients, especially in developing countries, should be charged for healthcare according to their ability to pay to improve their compliance behavior towards medical treatment. The obvious way of doing this is by funding healthcare from a progressive taxation system or through a social insurance system. Based on the previous discussion, we proposed the following hypothesis:

H1: There is a significant relationship between financial aspect and patient satisfaction.

Relationship between service quality and patient satisfaction

In the healthcare industry, researchers and marketers are more focused on measuring technical and functional quality rather than patient satisfaction (Gill & White, 2009; Kasiri et al., 2017). However, other studies measured service quality as an antecedent of patient satisfaction and their behavioural intention (Ghosh, 2014; R. Sharma et al., 2011; V. Sharma, 2017). There is no consensus concerning the relationship between service quality and patient satisfaction in the hospital industry (Amin & Nasharuddin, 2013). Even though there are different antecedents to customer satisfaction, namely, perceived value (Choi et al., 2004; Gounaris et al., 2007), price and ethical practice (Hamenda, 2018), confidence (Gaur et al., 2011), healthcare provider behaviours, explicit communication and word-of-mouth (Mazzei et al., 2009) but service quality receives special attention from service marketers because it has a greater effect on customer satisfaction, and influences the buyer's loyalty and intention to purchase the service more than other antecedents (AlOmari, 2020). Some researchers found all service quality components have significant effect on satisfaction (Li et al., 2015; Shafiq et al., 2017). However, it is not always that all service quality dimensions have the same impact on patient satisfaction (PS), patient's loyalty (PL), word of mouth (WOM) and behavioural intention (BI) (Aliman & Mohamad, 2016; Kitapci et al., 2014). Many researchers still argue about the downsides of implementing the SERVQUAL instrument in measuring service quality, such

as convergent and discriminant validity, applicability in different service settings, and cultural context (Ladhari, 2009). In addition, in the healthcare setting, the SERVQUAL model does not contain information regarding admission/discharge procedures, patients' privacy, food delivery system, cost of service, and social responsibility. Due to some drawbacks in the SERVQUAL model, tuning the instrument is indispensable. Therefore, some researchers either added or modified items to the SERVQUAL scale (Al-Borie & Sheikh Damanhouri, 2013), or created their own instrument to measure quality of service from patient's perception (Rose et al., 2004). In addition, there is still ambiguity regarding how many dimensions should be used to measure service quality in healthcare organization (Padma et al., 2010; Zineldin, 2006).

Grönroos (1984) argued that service quality is divided into two parts: the technical dimension (the quality of what is given, such as the efficacy of a hospital's clinical operations) and the functional component (how the service is delivered). Naik et al. (2015) indicated that first Impression bout the provided service, clinical caring, nurse caring, quality of communication, housekeeping and food services as well as overall service experience had a significant positive influence on patient satisfaction. Swallmeh et al. (2018) explored the experience of forty-two patients in emergency department in a main teaching hospital in Ireland using qualitative interviewing. The proposed model consists of consists of six modules: reliability, assurance, empathy, responsiveness, information and accessibility. Lupo (2016) presented a model of total healthcare service quality that includes six factors: healthcare professionals, responsiveness, connections, support services, accessibility, and tangibles. The SERVQUAL fuzzy analytic hierarchy process (AHP) approach was used to build the integrated framework. The findings indicated that efforts should be made to improve several aspects of service quality, including healthcare personnel (understanding patients' demands, communication skills, dependability, teamwork capacity), and responsiveness (easiness of registration and admission, waiting time). Since the findings were inconsistent and there is still some controversy regarding how to measure service quality, there is a need to further investigate the nature of service quality dimensions in a healthcare setting. In this study, the service quality construct consists of three dimensions for measuring the medical staff's caring procedural process, and tangibility.

Relationship between quality of medical staff care and patient satisfaction

In the competitive healthcare market, a good patient-doctor relationship and effective communication must be established and maintained to build patient loyalty (Ginter et al., 2018). The fundamental factors that have an impact on patients' satisfaction are: the friendly behaviour of hospital staff, the amount of provided information regarding patients' conditions, and their medical care treatment. Besides, the communication skills of medical and paramedical staff reflect the professionalism of healthcare providers and are considered as a substantial determinant of patient satisfaction (Naik et al., 2015). On the other hand, patients recommend a healthcare provider only if they are satisfied and feel that employees empathise with them during clinical treatment (Chaniotakis & Lymperopoulos, 2009). Doctors' interpersonal skills were considered to play a decisive role in determining a doctor's performance and delivering healthcare service quality (AlOmari, 2022; Van Den Assem & Dulewicz, 2015). Baalbaki et al. (2008) highlighted that overall satisfaction and nurse response were shown to have the highest association in both emergency and inpatient departments with $\beta = 0.503$ and $\beta = 0.490$, respectively. They found that admission waiting time and competence of doctors are significantly related to overall satisfaction related to service encounters with $\beta = 0.574$ and $\beta = 0.688$, respectively. Furthermore, the capability of medical professionals, particularly nurses at reception, to communicate in a warm and empathetic manner is a key driver of satisfaction (Scotto et al., 2009). Owusu-Frimpong et al (2010) reported that more than two thirds of private and public healthcare users disagreed that doctors listen carefully, and more than half did not spend fifteen minutes with them. However, other researchers found that the most significant determinants were the availability of nurses at the time of requirement and spending sufficient time with patients. Besides, there is a strong causal relationship between professional nursing care and improving patient outcomes. In addition, nurse communication had the largest effect on patient ratings (Chahal & Mehta, 2013; Griffiths et al., 2016). Tucker (2004) pointed out that medical personnel, particularly nurses, were overburdened with non-medical tasks such as patient paperwork and medical supplies, resulting in them spending very little time providing direct patient care. Previous study indicated that health service medical professionals especially doctors should be trained to communicate with customers in a positive way to reduce conflict and increase harmony. Patients are looking for innovative styles in healthcare treatment and diagnosis, in addition to medical staff that give them sufficient time to alleviate the pressure and uncertainty during this process (AlOmari, 2022). Communication between nurses and patients must be constantly monitored, and special effort should be taken to establish appropriate communication channels that may improve patient satisfaction with nursing care (Lotfi et al., 2019). On the other hand, patient experiences with nurse interactional skills were mixed, with negative and ineffective interactions and being not

informed or not involved in decision making. This often had an impact on the patient's mental health and wellbeing (Blackburn et al., 2019).

Relationship between quality of procedural process and patient satisfaction

One of the drawbacks of the SERVQUAL model (Parasuraman et al., 1991) is that it does not contain information regarding admission and discharge procedures (Ladhari, 2009). Amin and Nasharuddin (2013) found that procedural quality (discharge and admission) is a fundamental factor in evaluating the healthcare service quality. Similarly, Manaf et al. (2012) indicated that the registration service has a higher correlation with patient satisfaction than the service of doctors, which shows the importance of patient experience with the counter service. In developing countries, bureaucracy is characterized by several levels of hierarchical roles. A bureaucratic system's complicated set of regulations frequently results in lengthy delays. This leads to a lack of flexibility and, in turn, inefficiency in healthcare services (Mosadeghrad, 2014). Too much bureaucracy in healthcare institutions can not only impede innovation and progress, but it can also be financially costly. Besides, waiting times for hospital admission and discharge are a daily thing in all hospitals (Watts & Gardner, 2005). Overcrowding in hospital departments has been related to negative patient outcomes as well as a reduction in healthcare financial profit (El-Eid et al., 2015; Watts & Gardner, 2005).

Relationship between tangibility and patient satisfaction

Tangibles have been defined as the appearance of personnel, physical facilities, and equipment (Parasuraman, A., Zeithaml, V., Berry, 1988). More comfortable ambient environment in hospital would cause a positive patient's perception (Harris et al., 2002). Swan et al. (2003) reported that more appealing hospital rooms had a potential influence on patient evaluation. Patients preferred appealing rooms and gave more positive estimations than those in normal rooms. However, there were no significant differences regarding nurse communication behaviour (such as replying to calls, explaining skills, treatment and home care) between room types. Cleaning and disinfecting hospital rooms is a critical issue to reduce healthcare associated infections (HAI). Therefore, effective strategies should be implemented to secure environmental cleaning in hospitals and to prevent the spread of microbial infections that are a main outcome of surface contamination (Han et al., 2015). Furthermore, expenditure on improvements to cleaning practices should be given the same priority as medical equipment and medications. Deshwal et al. (2014) found the highest dissatisfaction area was in clinic facilities, where half the respondents felt that medical equipment was not up-to-date, with insufficient beds that created a negative impression. In a previous study, we indicated that the tangible dimension played a significant role in balancing the deficiency in other service quality dimensions (AlOmari, 2020). Because there is still some ambiguity about how to evaluate service quality, more research into the link between service quality dimensions and customer satisfaction in a hospital context is needed. Hence, we proposed the following hypothesis:

H2: There is a significant relationship between hospital's service quality and patient satisfaction.

Relationship between care cost, service quality, satisfaction and hospital image

Previous research studies have shown that high quality service leads to the retention of existing customers as well as attracting of new ones, better corporate image, higher satisfaction, increasing loyalty, improve profitability and reduce cost (Hair et al., 2016; Reichheld & Sasser, 1990; Wang et al., 2004). Similarly, Padma (2010) indicated that hospital infrastructure, hospital image and trustworthiness were the significant predictors of patient satisfaction in private hospitals. Wu (2011) found that hospital image (independent variable) has a significant direct effect on service quality and loyalty, while there is no significant relationship between hospital image and patient satisfaction. Similarly, Wai Lai (2019) revealed that corporate image had a significant direct influence on service quality, perceived value, reputation, and customer satisfaction. In addition, Cham et al. (2016) demonstrated that hospital brand image had a direct effect on perceived service quality, while word of mouth had a significant direct effect on hospital brand image. On the other hand, Fornell (1992) reported that corporate image could be an indicator to customer satisfaction, which reflects customer behaviour towards the services rendered. In the private sector, a good reputation represents a vital marketing strategy that leads to better relationships between government and private service providers (PSPs) as well as to higher customer satisfaction. Corporate image has an impact on patient satisfaction and the perceived quality of service (Wallin Andreassen, 1994). Brand image comprises both functional attributes and experiential components that are taken from the customer experience of the offered service. Therefore, customer experience is considered as a key issue from the customer's point of view (Padgett & Allen, 1997). The corporate image is recognized and developed in the consumers' mind through good professional relationships and warm communication behaviour (emotional

dimension) (Keller, 2013). However, Song et al. (2019) highlighted that brand image had a strong significant direct effect on satisfaction and trust. Kim et al. (2008) considered hospital image as a dependent variable. As a result, they found that trust and patient satisfaction had a significant positive direct effect on hospital image. Based on the previous discussion, more research is needed on the role of hospital image in the links between service quality, financial aspects, and patient satisfaction. Therefore, we proposed the following hypotheses:

H3: There is a significant relationship between financial aspect and hospital image.
H4: There is a significant relationship between service quality and hospital image.
H5: There is a significant relationship between hospital image and patient satisfaction.
H6: Hospital image mediates the relationship between financial aspect and satisfaction.
H7: Hospital image mediates the relationship between service quality and satisfaction.

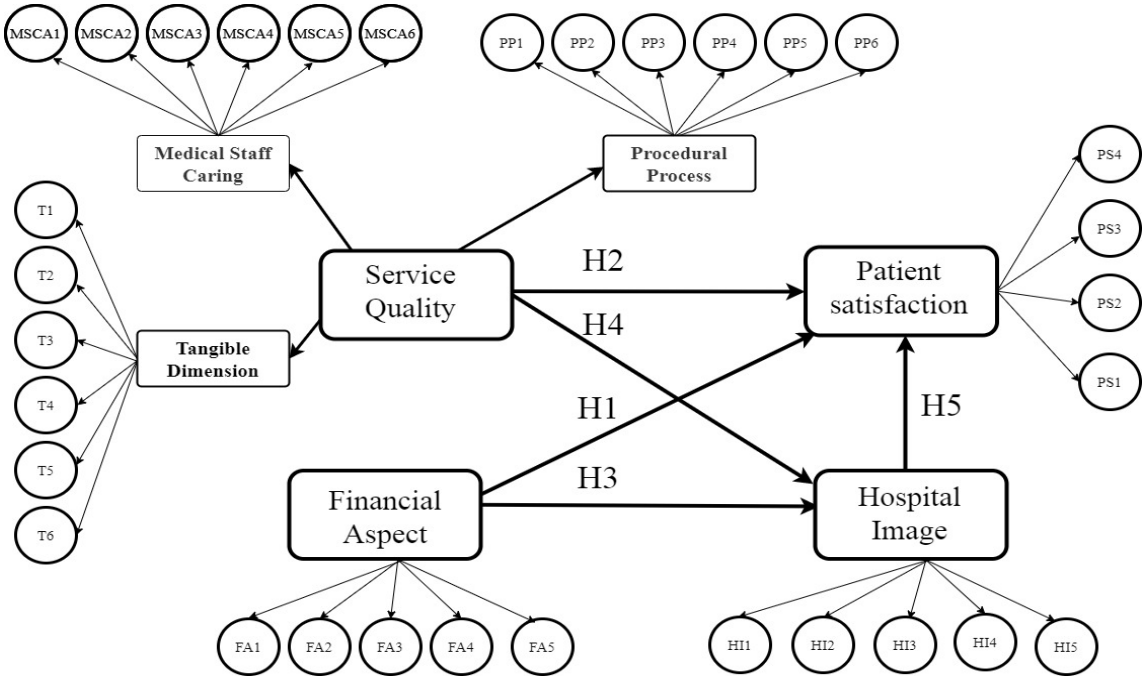

Figure 1. The conceptual framework

Research Method

This study conducted in 2019, eight hospitals in the Syrian capital, Damascus, were chosen to conduct this survey. The patients were selected based on a random sampling method. In total, 530 questionnaires were completed and returned. However, 260 questionnaires were not concerned due to mistakes in filling out data. As a result, N=270 questionnaires were considered for statistical analysis and testing of the proposed model. In addition, we tried to select patients who were frequently admitted to the hospital, so they had more experience with the services delivered by the related healthcare provider.

The questionnaire used in this research study was based on literature review of previous research works on developing scales to measure healthcare outcomes. The questionnaire included one part related to the characteristics of respondents. As a result: (male: 176, female: 94); marital status (single: 119, married: 151); age (20-30 group: 33, 31-40 group: 60, 41-50 group: 102, 51-60 group: 70, above 60 group: 5). The second part contained the scales to measure patient satisfaction, hospital image, financial aspect and service quality. Patient satisfaction has four items (PS1, PS2, PS3, PS4) which adapted from Hu et al. (2011). The hospital image construct has five items (HI1, HI2, HI3, HI4, HI5), which adapted from Chahal and Kumari (2010) as well as Andreassen and Lindestad (1998). The financial aspect has five items (FA1, FA2, FA3, FA4, FA5) that is adapted from Marshall et al. (1993). Under service quality construct there are three dimensions (18 items): medical staff caring items (MSCA1, MSCA2, MSCA3, MSCA4, MSCA5, MSCA6) adapted from Gaur et. al (2011) and SERVQUAL model; quality of procedural process items (PP1, PP2, PP3, PP4, PP5, PP6) adapted from Marshall et. al (1993); and tangibility items (T1, T2, T3, T4, T5, T6) adapted from SERVQUAL model as well as Chahal and Kumari (2010). We used a 5-point Likert

scale ranging from "Strongly Disagree" (1-point) to "Strongly Agree" (5-point) to measure all items. The questionnaire was translated into the Arabic language to eliminate language bias. A certified translator initially translated the English version of the questionnaire into Arabic. Another translator translated the Arabic version of the questionnaire back into English. Their findings were compared to those of the original questionnaire. The final Arabic translation was then distributed to two academics, two physicians, three hospital administrators, and one nurse. The questionnaire was ready to deliver when all of them agreed on the translated version. Before collecting the data, consent from the patients was obtained. All participants were informed that their involvement is voluntary and that they are permitted to exit at any point during the study. Consistent with the purpose of this research, this study relied on positivism philosophy, cross sectional setting, and deduction approach.

Result and Discussion

Exploratory factor analysis (EFA) was implemented using SPSS (version 23.0) software: principal component extraction method was used to eliminate the items; eigenvalue was selected greater than one; orthogonal rotation (Varimax method) was selected because it produced the most satisfactory result; factor loading value should be more than 0.50 (Hair Jr, Joseph F., Black, William C., Babin, Barry J., Anderson, 2010). After applying exploratory factor analysis (EFA), items with squared multiple correlation less than 0.50, or item-to-total correlation coefficients less than 0.30 were also eliminated. To check reliability, the internal consistency was assessed by calculating the Cronbach alpha value. The results indicated that all values were more than (0.70), therefore, the proposed instruments are reliable. The result of EFA presented in **Table 1**. In the theoretical model, constructs were appraised through confirmatory factor analysis (CFA) using AMOS (version 24.0). There is no agreement regarding an acceptable ratio for ($\chi 2$/df), but it is recommended to be less than five (Hooper et al., 2008). The Goodness of Fit Index (GFI) is scaled between 0 and 1.0 (the higher value indicates better model fit) where a cut-off point of 0.9 has been recommended for this index (Hooper et al., 2008). The Root mean square error of approximation (RMSEA) has been calculated to measure model fit (using 0.01, 0.05, and 0.08 to indicate excellent, good, and mediocre fit, respectively). While there is no outstanding criteria for evaluating model fit, researchers suggest that a variety of indices are required to secure model fitness. They recommended the use of at least three indices, including one index from each category (Hair Jr, Joseph F., Black, William C., Babin, Barry J., Anderson, 2010; Hooper et al., 2008). Table 1 shows the constructs of the conceptual framework that consists of four construct (32 items): Financial aspect (five items), service quality (eighteen items), hospital image (five items) and patient satisfaction (four items).

Table 2 shows that for the given indices, the fitness values of all constructs in the conceptual model are good. Besides, the fitness of the proposed model is excellent through the given values: Relative Chi-square (1.868), CFI (0.923), IFI (0.924), NFI (0.849), TLI (0.916) and RMSEA (0.057). In addition, for the service quality construct, the standardized regression weight (SRW) values for medical staff caring (MSCA), quality of procedural process (PP) and tangibility (T) are 0.89, 0.90 and 0.60 respectively. The statistical analysis revealed that the average variance extracted (AVE) for constructs calculated and all values were more than (0.5) critical value. In addition, the factor loading for all items were higher than (0.5).

Table 1. Results of exploratory factor analysis (EFA)

Construct	Dimension	No. of items	Cronbach Alpha
	Financial aspect	5	0.840
Service Quality	Medical staff caring	6	0.793
	Procedural quality	6	0.905
	Tangibility	6	0.899
	Hospital image	5	0.889
	Patient satisfaction	4	0.799

According to the statistical analysis, hypothesis H1 was supported. There is a significant relationship between financial aspect and patient satisfaction. Hence, in order to satisfy Syrian patients, healthcare providers should make care cost suitable so patients have to perceive no financial burdens. Our findings are consistent with those of the previous studies that the care cost has a significant effect on patient satisfaction (Mazzei et al., 2009; Rivers & Glover, 2008). Hypothesis H2 was supported that service quality has impact on patient satisfaction. This finding is in line with previous studies (Gill & White, 2009; Li et

al., 2015). Our findings highlighted that the financial aspect affects hospital image (β= 0.472, *P*=0.000). Hence, hypothesis H3 was supported. In other words, hospital managers should pay attention on the financial aspect of medical services by reducing the care cost and make it reasonable in order to improve their image in the healthcare market. Our findings highlighted that service quality influences hospital image. The hospital's image grows as a result of better care services provided by the staff. Therefore, hypothesis H4 was accepted. In other words, hospital administrators need to know how their customers evaluate their services in comparison to other hospitals in order to determine their strengths and areas for growth as well as improve their image in the healthcare market. Lagrosen et al. (2005) reported that corporation should adopt the values of quality services in order to increase profitability, productivity and to create a positive company image. Besides, service providers have to implement effective instruments to improve functioning quality. Kandampully and Hu (2007) indicated that service quality has a significant impact on corporation image. Our finding also highlighted that hospital image has a significant direct influence on patient satisfaction. Therefore, hypothesis H5 was supported. Our study disclosed that a good image of the hospital will be able to increase the Syrian patient satisfaction. Our result consistent with previous study by Padma (2010). Form the above discussion, hypotheses H1, H2, H3, H4, H5 were accepted. As a result, maintaining a strong image of the healthcare organisation and delivering high-quality services, in addition to reducing care costs, leads to improved customer satisfaction. Interestingly, the financial aspect (β= 0.472, *P*=0.000) has more influence on hospital image than service quality (β= 0.307, *P*=0.000), while service quality (β=0.431, *P*=0.000) has more effect on patient satisfaction than financial aspect (β=0.259, *P*=0.000). Table 3 shows the result of structural equation modelling (SEM) regarding the effects of financial factor and service quality on patient satisfaction and hospital image.

Table 2 The fit-indices of constructs (Chi-Square, Relative Chi-square, CFI, IFI, NFI, TLI and RMSEA). The construct reliability (CR >0.7) and average variance extracted (AVE>0.5)

Construct	Chi-Square	Relative Chi-sq	CFI	IFI	NFI	TLI	RMSEA	CR	AVE
Financial aspect	8.726	1.745	0.992	0.992	0.982	0.985	0.053	0.832	0.505
Medical staff caring	5.565	0.618	1.00	1.004	0.993	1.007	0.001	0.875	0.551
Procedural quality	34.679	3.853	0.974	0.974	0.966	0.957	0.103	0.907	0.621
Tangibility	23.364	2.596	0.984	0.984	0.974	0.973	0.077	0.903	0.607
Hospital image	24.409	4.882	0.974	0.975	0.968	0.949	0.102	0.885	0.61
patient satisfaction	3.453	1.727	0.995	0.995	0.989	0.986	0.052	0.82	0.528

Table 3 The result of SEM on effect of financial aspect and service quality on hospital image and patient satisfaction.

	Patient satisfaction				Hospital image			
Construct	B	SE	Beta	*p*	B	SE	Beta	*p*
Financial aspect	0.352	0.105	0.259	***	0.501	0.09	0.472	***
Service quality	0.557	0.097	0.431	***	0.311	0.07	0.307	***

In this study, we analysed whether hospital image has a mediating effect between financial factor and patient's satisfaction. **Table 4** shows the bootstrap results of mediation effect of hospital image on relationship between financial aspect, service quality and patient satisfaction. From the direct model, it is clear that financial aspect has a significant direct effect on patient satisfaction (β=0.358, *P*= 0.000), while from the mediation model, the financial aspect has a direct significant effect on patient satisfaction (β=0.259, *P*= 0.000) and a significant indirect effect (β=0.105, *P*= 0.006). Therefore, the statistical results indicated that the hospital image has a partial mediation effect on the relationship between financial factor and Syrian patient satisfaction. Therefore, hypothesis H6 was supported.

In addition, we investigated the mediating role of hospital image on the relationship between service quality and patient satisfaction. From the direct model, it is clear that service quality has a significant direct effect on patient satisfaction (β=0.50, *P*= 0.000), while from the mediation model, the service quality has a direct significant effect on patient satisfaction (β=0.431, *P*= 0.000) and significant indirect effect (β=0.068, *P*= 0.005). According to Barich and Kotler (1991), a corporate image is the general impression of a corporation in the minds of their customers. Our statistical results revealed that the hospital image partially mediates the relationship between service quality and patient satisfaction. Hence, the hypothesis H7 was supported.

Table 4 Bootstrap results of mediation effect of hospital image on relationship between financial aspect, service quality and patient satisfaction

Hypothesized paths	Beta	*p*
Direct Model		
Financial aspect ⇨ Patient satisfaction	0.358	***
Mediation Model		
Financial aspect ⇨ Patient satisfaction	0.259	***
Standardized Indirect Effect (SIE)	0.105	0.006
Direct Model		
Service quality ⇨ Patient satisfaction	0.50	***
Mediation Model		
Service quality ⇨ Patient satisfaction	0.431	***
Standardized Indirect Effect (SIE)	0.068	0.005

Table 5 Result of hypotheses: Financial aspect (FA), service quality (SQ), hospital image (HI), patient satisfaction (PS).

Hypothesis No.	Relationship	Result
H1(direct effect)	FA ⇨ PS	Supported
H2 (direct effect)	SQ ⇨ PS	Supported
H3 (direct effect)	FA ⇨ HI	Supported
H4 (direct effect)	SQ ⇨ HI	Supported
H5 (direct effect)	HI ⇨ PS	Supported
H6 (mediation effect)	FA ⇨ HI ⇨ PS	Supported
H7 (mediation effect)	SQ ⇨ HI ⇨ PS	Supported

The results of this investigation contribute substantially to the present literature. This study's major contribution is to provide empirical evidence of the partial mediating impact of hospital image on the relationship between service quality, financial aspects and patient satisfaction. Besides, our study explains why and how hospital image affects patient satisfaction. Furthermore, our suggested model sheds light on the patient satisfaction literature in healthcare marketing research from the perspective of developing countries, such as Syria, which has never been studied before.

The new enlargement of the global competitive healthcare service has been influenced by other businesses, including the financial, tourism, and economic sectors. Healthcare providers have begun to emphasize how to provide a superior healthcare service quality, as day by day, increased competition among hospitals induces customers to make the best choice in selecting any hospital. There is a growing interest in the health care market of developing nations in discovering the underlying factors for patient satisfaction, but in comparison to developed countries, Arab countries still have a paucity of knowledge in understanding the impact of service quality on health outcomes. This study is a step towards filling the gap in healthcare research and offers important practical and managerial implications to develop healthcare sector in Arab countries especially in Syria.

We compiled the latest results of research on healthcare service quality and presented our conceptual model that assists hospital management through creating a holistic perspective of various elements that affect patient satisfaction and the image of hospitals. Our model may be used by hospital administrators to assess, analyse, and improve their operational performance, as well as to compare their activities to those of their rivals in the healthcare market. Our suggested instrument would allow healthcare practitioners to assess patient satisfaction and hospital image, as well as offer Syrian patients the chance to provide critical feedback on service quality.

Our results highlighted the significant role of medical staff in improving service quality. Therefore, hospital administrators should encourage their medical professionals to abandon classical, traditional and unsympathetic relationships with patients in order to improve the quality of care as well as create a trustful atmosphere with patients. Also, a good hospital image is a vital instrument to increasing patient satisfaction. Our study illustrated the significance of reducing care costs, increasing consultation time, and minimizing waiting time, in order to increase patient satisfaction and improve healthcare organization image. In the healthcare market, the mechanism of funding for healthcare services is intrinsically interconnected with other systems, such as education, the job market, and security. Annual evaluations of healthcare providers' performance will help policymakers and governments to efficiently utilize the available resources and will also assist countries in articulating a better response to the complex and dynamic health needs of their people (Murray et al., 1999). Our study calls on hospital managers in the healthcare sector not to sacrifice the quality of care at the expense of care costs. Moreover, patients will switch to other healthcare providers if their care fees become higher and patients are less likely to recommend them to friends and relatives (Rundle-Thiele & Russell-Bennett, 2010). Importantly, our study also disclosed that policymakers should give equal weight to the cost-effectiveness and efficiency of clinical care. The evaluation of quality must be linked to cost-effectiveness in order to improve the quality of service in the healthcare setting (Campbell et al., 2000). In Syrian hospitals, decision makers and hospital administrators need to recognize the dynamic distinctions in the healthcare system and to ascertain key factors to improve it. In addition, they should emphasize measuring the quality-of-care services, pay more attention to cost-effectiveness analysis and take extra care in using the available care resources. Our research study will also help policymakers in the healthcare sector to review, update, and develop instruments that figure out hospital pricing for particular services, such as the cost of surgical procedures, medical laboratory tests, medications, and post-surgical costs. In addition, our study emphasizes that the healthcare service provider should bring a greater degree of care to Syrian patients by providing hospitals with advanced medical equipment, recruiting skilled experts, and providing training courses for personnel in all disciplines and levels.

The performance of hospitals, especially the emergency department performance, can be negatively impacted by delays in discharging and admitting patients. Discharging and admitting patients is a complicated procedure that requires collaboration from a variety of groups, including doctors, nurses, hospital administration, patients and their attendants, as well as the financial department. Effective quality management in the healthcare system is hampered by centralization, bureaucracy, and a complicated hierarchical structure. Hence, maintaining and correctly implementing policies reduces the likelihood of accidents, improves productivity, and contributes to the retention of a safe environment for Syrian patients. Although there are several advantages to liberating a healthcare system from bureaucratic restraints, especially in developing countries, the challenges are significant. Bureaucracy is, of course, typically strongly embedded in a healthcare institution's culture and procedures.

Conclusion, Suggestions and Limitations

The rapidly expanding healthcare industry faces a complicated set of rules, continuously changing legislation, financial challenges, and a lack of positive patient outcomes. Today, healthcare organizations should understand how to adopt cost-effective strategies to meet patients' needs as well as to survive in a highly competitive market. The cost of care services provided by healthcare organizations, service quality, hospital image, and patient satisfaction have become fundamental indicators in the healthcare market that affect government performance. Our findings highlighted that although service quality has a more direct positive impact on patient satisfaction than care cost, care cost still plays a remarkable role in influencing hospital image and patient satisfaction. Therefore, healthcare providers in Syrian hospitals should pay more attention to the financial aspect of their patients. Our findings are consistent with the results of Mazzei et al. (2009), who found that the most significant elements for improving patient satisfaction were the cost of care, the doctor-patient relationship, and the clarity of treatment information. However, Rose et al. (2004) indicated that care cost dimension is insignificant factor in determining service quality in Malaysian private hospital. Furthermore, according to our study, a positive business image can assist in attracting clients and keeping them satisfied. This study provides a new insight into how hospital image influences the relationship between service quality and patient satisfaction. Our results are consistent with the findings by Andreassen and Lindestad (1998) that service providers should maximize the customer's satisfaction by creating a durable corporate image and securing high quality of services. Our investigation highlighted that in Syrian hospitals, healthcare managers should guarantee that any negatives that may harm their image are removed, and they should make a concerted effort to cultivate a positive image during patient treatment.

We investigated the determinants that influence patient satisfaction and analysed the relationships between service quality, patient satisfaction, and hospital image from a patient's perspective in the healthcare sector in the Syrian capital-Damascus. Although the validity and reliability of the proposed model has been confirmed, there are still some limitations and future research work: Firstly, the findings of the study are based on patients' perceptions of care services but ignore medical staff's perceptions (doctors and nurses) that should be investigated. Secondly, perceived service quality and customer satisfaction constructs are placed at the same level in affecting customer loyalty intentions (Hennig-Thurau & Klee, 1997; Iacobucci et al., 1995). Hence, future studies should be extended to include patient loyalty in the framework. Moreover, our study did not include a comparison of insured and uninsured Syrian patients; therefore, future research should consider this issue.

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