The Antecedes of Service Quality and Patients' Satisfaction Equally Drive Patients' Loyalty in Private Healthcare Delivery: *Thinking the future*

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Abstract

The healthcare industry in developing nations has recorded high progress rate in recent years, leading an initiative varied studies into the examination of patients' comparative and varied views with regards to private healthcare providers service delivery. This study objectively focused on the hospital's service quality, and patients' satisfaction as a predictor and collective impact or on patient's loyalty; it attempted to draw a distinctive border amongst quality of service and satisfaction of the patient, one with more effect size and predictive relevance to drive greater loyalty amongst the patients in a private healthcare delivery setting. A total of 562 patients recruited, participated in a cross-sectional survey with a questionnaire as the main and only data collection tool from four major private hospitals in Ghana. A path and linear regression analysis of the data was performed through SPSS 23 and Smart PLS version 3 in order to compute path coefficients, direct and indirect impacts of the factors; service quality and patient's satisfaction on patient's loyalty to the hospital. The study suggested that both clientele perceived service quality and patient satisfaction

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significantly influence patient loyalty. However, patient satisfaction with service delivery had a better predictive relevance and effect size than the quality of the service on patient loyalty in this study.

Keywords: Service Quality, Patients' satisfaction, Patients' loyalty, Private Hospitals, PLS-SEM.

Introduction

The services-based sector has become if not ultimately the primary key, but also, a support system for organizations in various service fields, least; Healthcare, banking, hospitality, telecommunication, transport etc., amongst an array of others (Asnawi, Awang, Afthanorhan, Mohamad, & Karim, 2019). The delivery of high-quality service thus is key to the success in service industries and in the present era of intense competition, monitoring and improving service quality is highly essential for developing efficiency and business volume. This, propelled by globalization has brought up a competitive urge in almost every area of the services sector with healthcare not been an exception (Aftab & Razzaq, 2016). The driving force to gaining and making an impact in the presence of such perfect and fierce competitions has been determined by somewhat the probability and effective feedback towards every prerequisite variation of the customers' behavior (Chotivanich & Sciences, 2014). Healthcare organizations are hence, obliged to be more creative and innovative in engaging customers, by endorsing products and services that best address necessity and command patronage (Asnawi et al., 2019). According to (Gill & White, 2009), the service quality offered to the customer indicates the level of knowledge, ability and willingness of the service provider to better understand the consumer and hence to serve them better. The effectiveness of service quality in literature has long been associated with customers' satisfaction in response to desire and expectancy of the service and is an affirmation that correspondence with rapid development and current trends in the field (Aliman, Mohamad, & Sciences, 2016). In confronting the competition propelled by service quality, hospitals direct interest in identifying the most critical factors in hospitals service delivery that if managed well, will ensure the survival and success in the future (Amin & Zahora Nasharuddin, 2013). For this to happen, strategic factors need to be identified and served as a priority by the healthcare provider, thus stringing effective service excellence and one, which is able to identify and satisfy patient's expectations (Kassim, Abdullah, & logistics, 2010; Mosadeghrad & management, 2014). Its, therefore, without any ambiguity that hospitals have to strive with measures to constantly evaluate the patient's needs and anticipations towards service delivery (Asnawi et al., 2019) and ensure the patients' satisfaction towards the hospital and its services as a whole (Naidu, 2009) which predominantly draws favourable clientele behavioral intention or general attitude (Wu, 2011). The healthcare industry in developing nations like Ghana has recorded a generally high development rate with a tall request for it services from both remote and local patients; in spite of imperatives such as the insufficient sum of clinic beds and shortage of profoundly qualified specialists, and its collective development may well be sustained all through a

few years that lie ahead (Aduo-Adjei, 2015; Asnawi et al., 2019). Delivery of high-quality service and building patient loyalty are considered to be critical anchors of the competitive survival of most hospitals (Anhang Price et al., 2014). The specific dimensions of quality service that contributes considerably to the patient's fulfilment ought to be identified and prioritized, so as to enable hospital administrations better focus on ways to enhance such particular components, even in spite of the overwhelming reliance of patients, rather than alluding them (clients) to other hospitals (Boadi, Wenxin, Bentum-Micah, Jerry, & Technology, 2019).

There's no well-designed study examining whether perceived service quality and patient's satisfaction equally impact patient's loyalty using variance-based structural equation model (PLS-SEM) in a developing country like Ghana and particularly in a private hospital setting. The researchers hence seek to determine the predictive relevance and effect size of the relationship between service quality and patient satisfaction on clientele loyalty in healthcare delivery with private hospitals. The research team are of the view that the research is highly essential in defining clearly the dichotomy between service quality and patient satisfaction, one, with the greater influence on the clientele loyalty in private healthcare service delivery. Above and beyond, service quality and patient satisfaction variables have been the main antecedents of consumer loyalty in most management and marketing literature. Therefore, this paper will fill the gap by assessing if these two variables equally affect customer loyalty in the private healthcare context of Ghana. The below framework was developed using path analysis with Structural Equation Modelling (SEM). SEM is a methodology for representing, estimating and testing a theoretical network of (mostly) linear relations between variables (Hair, Hollingsworth, Randolph, Chong, & Systems, 2017).
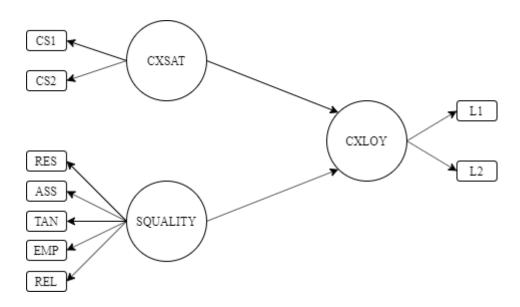

Figure 1: Conceptual Framework

Literature Review and Hypothesis Development

Patients' loyalty

Service providers have considered clientele loyalty as an important objective because of its significant role in developing and maintaining their long-term competitive edge (Amin & Zahora Nasharuddin, 2013). Therefore, a large proportion of research on patient loyalty has concentrated on the definition and measurement of patient loyalty (Asnawi et al., 2019; Fatima, Malik, Shabbir, & Management, 2018; Ramli & Review, 2019). While defining loyalty, early scholars such as Jacoby and Chestnut as cited by (Iqbal, Shah, & Studies, 2016; Moisescu, 2014) considered it as a behavioral phenomenon arguing that repurchasing shows the level of loyalty. However, using exclusive behavioral scales to assess customer loyalty was criticized by some scholars such as Dick and Basu as cited by (Alhaddad & Reviews, 2015; Bisschoff & Clapton, 2014) arguing that it disregards decision-making processes of the customers and results in inappropriate multiplication of behavioral and attitudinal attributes (Ryu & Han, 2009). Consequently, recent scholars proposed another approach to assess customer loyalty by using attitudinal scales with an emphasis on emotional attachment or trust (Baloglu & Quarterly, 2002). Following the attitudinal approach, (Min, Kim, Forlizzi, & Kiesler, 2015) posited clientele loyalty as "the feeling of attachment to or affection for a company's people, products or services". Comparison of the two approaches shows that the attitudinal approach discusses psychological or evaluative commitment towards the service providers, whereas the behavioral approach discusses the behaviours of consumers (Min et al., 2015; Ryu & Han, 2009). (Katona & Komáromi, 2015) stated that both the approaches (i.e., behavioural and attitudinal) are significant to assess clientele loyalty and have led to various perspectives beneficial to measure each aspect. Consequently, scholars have suggested employing and investigating both the attitudinal and behavioural measures while assessing customer loyalty (Asnawi et al., 2019; Danaher, 1997; Kandampully, Suhartanto, & Marketing, 2000). Based on these arguments, (ElManstrly, 2010; Setiawan, Sayuti, & Management, 2017) demarcated loyalty as "a deeply held commitment to re-buy or re-patronize a preferred product or service consistently in the future, despite situational influences and marketing efforts having the potential to cause switching behavior". This approach of integrating both the attitudinal and behavioral dimensions to assess customer loyalty is suitable with the hospitality and tourism industry; where revisiting frequency only does not indicate loyalty of customers, rather their attitudinal and emotional commitment towards the service provider depicts their loyalty (Bowen, Shoemaker, & Quarterly, 2003; Ryu & Han, 2009).

Generally, loyal patient's or consumer means a person who regularly uses a service provider or vendor, repeats purchase of service or product from the same company and does not consider other service providers or vendors (Amin & Zahora Nasharuddin, 2013). Patient loyalty, which is very important for healthcare providers, can be described as "the situation where the patient continues the relation with the hospital and recommend the services of the hospital to the potential patients" (Kitapci, Akdogan, Dortyol, & Sciences, 2014). The satisfaction of the patient with the service taken is important in terms of loyalty and positive perception of the hospital (Anbori, Ghani, Yadav, Daher, & Su, 2010). Hardly will an unsatisfied customer become a loyal customer while a satisfied

customer is always a loyal customer (AL-Mhasnah, Salleh, Afthanorhan, & Ghazali, 2018).

Service Quality

Service Quality as suggested by (Dabholkar, 2015; Parasuraman, Zeithaml, & Berry, 1985; Yarimoglu, 2014) is "a function of the difference between service expected and customer's perceptions of the actual service delivered" and it has received intense research attention in services marketing. Delivering high service quality is considered an essential strategy for success and survival in this competitive environment (Aliman et al., 2016; Wang, Shieh, Hsiao, & Sciences, 2005). In the case of healthcare services, perception is defined as the process by which the consumer receives, selects, organizes and interprets the stimuli to which it is exposed in a manner consistent with its own frame of reference; attitudes, values, motivations and previous experiences (Asnawi et al., 2019; Urden, 2002). The perception of quality healthcare service is based on three dimensions which are the physical environment (which includes the state of the environment, the social factor and the tangible elements), qualitative interaction (including attitudes and behaviour, diagnosis and quality of the medical process), and quality of the results (including waiting times, patient satisfaction and loyalty (Afthanorhan, Awang, Salleh, Ghazali, & Rashid, 2018).

Based on the above literature the researchers posit that:

Hypothesis 1: *Service quality has a significant impact on Patient loyalty in private healthcare delivery.*

Patients' Satisfaction

Patient satisfaction according to (Erickson, Rockwern, Koltov, & McLean, 2017) is "the result of judgment made by the healthcare consumers after analyzing the medical outcome of the process in order to see if their expectations have been accomplished or not" and satisfaction as "the consumers` feelings based on the experiences gained after consumption" (Ginter, Duncan, & Swayne, 2018; Mustak, Jaakkola, Halinen, & Kaartemo, 2016). A study by (Anabila, 2019) about patient satisfaction with health services in Ghana found that measuring Service Quality and satisfaction is very important.

A better understanding of the determinants of client satisfaction should help policy and decision-makers implement programs tailored to patients' needs as perceived by patients and service providers. Besides, (Al-Borie & Sheikh Damanhouri, 2013) studied the biases associated with assessing quality care based on patients' perception. In their study, patients were seen to have become more involved in hospital choice, while many patients do not choose a hospital directly; findings suggest that they often do this indirectly through the choice of a personal physician. Patients' satisfaction with hospital treatment positively influences the image of the medical facility (AL-Mhasnah et al., 2018). In their studies, many factors are involved when assessing the quality of the medical service associated with the rapid solution of the reported problem by the patient; staff empathy and attitude as well as the understanding and precise information communication. Above and beyond, they suggested the need to satisfy the health needs

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of patients by the medical facilities but also strive to meet these expectations that lead to increased satisfaction considering the quality of medical services.

Again, concurring to the above literature the researchers posit:

Hypothesis 2: *Patient satisfaction has a significant impact on patient loyalty in private healthcare delivery.*

Research methodology

Research instrument

A survey instrument from (Parasuraman et al., 1985) SERVQUAL scale was adopted for data collection from patients of the selected hospitals. Final questionnaire comprised of a total of 18 items, out of which three items belonged to each service quality dimension, one item on satisfaction and the other two on loyalty. A five-point Likert-type scale was used to enhance the redundancy and sanctity of this study, as advised by (Hair et al., 2017). Likewise, to validate the questionnaire, a pilot study was conducted, which involved 50 respondents who had visited the selected hospitals. Although some minor changes were made in the sentence structure of the final questionnaire, the overall findings of the pilot study established the reliability and validity of the questionnaire used for data collection.

Sample design and data collection

This study aimed to investigate the role of service quality and patient satisfaction in determining patient loyalty of private hospitals. In order to achieve this objective, the target population for this study was identified as all outpatients who have used services of the selected hospitals between March and June of 2019. Determining the right sample size is very crucial for ensuring the quality of any study. For this purpose, (Hair et al., 2017) have suggested the use of 10 times rule, for determining minimum sample size in a PLS-SEM analysis. This rule states that minimum sample should be "10 times the largest number of structural paths directed at a particular construct in a structural model", and since the structural model of this study involves three constructs (i.e. two independent and a dependent variable) and according to this rule criterion, our minimum sample size should be 20 respondents. However, out of the 700 questionnaires distributed to patients who had used the hospitals' services, 562 (80%) were returned valid and used for the analyses.

Analytical methods

Data was analyzed using IBM SPSS 23.0 and SmartPLS 3 (Ringle, Wende, & Becker, 2015), and variance-based PLS-SEM approach was adopted. This is because PLS-SEM can estimate both the causal and predictive relevance of all latent constructs simultaneously while dealing with measurement errors in the structural model (Hair et al., 2017; Ringle et al., 2015). Furthermore, our study is explanatory in nature; therefore, PLS-SEM is the best for this study. Considering the guidelines suggested by (Hair et al.,

2017), the measurement models were evaluated separately before the evaluation of the structural model.

Data analysis

Pre-analysis of data

The data was tested for any possible statistical errors of normality, outliers, missing values and missing demographic characteristics but none was detected. The analysis began with a brief description of demographic attributes of respondents in terms of their age, gender, education and employment status. Out of a total of 562 respondents, 295 (52.5%) were females, while 267 (47.5%) were male. 204 (36.3%) of the respondents were between the ages 18 and 29years, as 243 (43.2%) accounted for respondents between the ages 30 and 44 years. In count, 88 (15.2%) of the respondents were between 45 and 59 years whilst 27 (4.8%) were 60 years and above. Only, 25 (4.4%) had a master's degree or above, with the remaining respondents of 537 (95.6%) cut across a bachelor degree or equivalent, high school certificate and below secondary education. The self and wage employed accounted for high respondents in the employment category 429 (76.4%), with students and the unemployed following in, at that respective order 133 (23.7%).

Table 1: Description of demography

Items	Characteristics	Frequency (N=562)	Valid Percentage (%)
Gender	Male	267	(47.5)
	Female	295	(52.5)
Age	18-29	204	(36.3)
	30-44	243	(43.2)
	45-59	88	(15.2)
	60 above	27	(4.8)
Education	Secondary	238	(42.3)
	Tertiary	99	(17.6)
	Postgraduate	25	(4.4)
	Others	200	(32.6)
Employment	Student	82	(14.6)
	Self employed	187	(33.3)
	Wage employed	242	(43.1)
	Unemployed	51	(9.1)

(N)=Population Size

Analysis of Measurement Models

To analyze the reflective measurement models, we first established the internal consistency reliability as well as the convergent and discriminant validity. As posited by (J. J. I. M. Henseler & Systems, 2016), the Composite reliability (CR) is proposed as more appropriate as it considers the indicators' differential weights, whilst the Cronbach's alpha weights the indicators equally. The composite reliability (CR) and average variance

extracted (AVE) gotten after running the measurement model via PLS-SEM are assumed in Table 2. Grounded on the results, the Composite reliability (CR) of all constructs was above 0.7 and average variance extracted AVE above 0.5 (Hair et al., 2017). By principle, the acceptable convergence is an average variance extracted (AVE)> 0.50, and signifying that more than half of the indicator variance is encompassed in the construct score (Hair et al., 2017). Establishing discriminant validity means that each construct captures a unique phenomenon not embodied by any other construct in the model (Hair et al., 2017), and so for the measure of discriminant validity, we adopted the Fornell-Larcker Criterion (FLC) given in Table 2 as proposed by (J. Henseler, Ringle, & Sarstedt, 2015). Inclusive, the measurement model findings suggest compliance with the requirements for convergent and discriminant validities (Hair et al., 2017).

Table 2: Validity and Reliability of constructs

Construct	SQUAL	CXSAT	CXLOY	Composite Reliability	Average Variance Extracted (AVE)
SQUAL	**0.792**			0.894	0.628
CXSAT	0.760	**0.842**		0.828	0.708
CXLOY	0.701	0.710	**0.876**	0.868	0.767

Evaluation of structural model

Significance of relationships was assessed based on path coefficients. The significant results are: (i) the hypothesis (H1) that links service quality and Loyalty is supported (β=0.381, p-value=0.000); (ii) and hypothesis (H2) that establish the relationship between satisfaction and loyalty is supported too (β=0.421, p- value=0.000). For clarity, the outcome is presented in table 3. We further examined the R^2 value of the endogenous latent variables on the dependent variable, capturing the explaining power of the model. Our results suggested the proposed model has an R^2= 0.566 (56.6%) of the explanatory power of which changes in patient satisfaction and quality of service affect the patient's loyalty, which is considered a moderate effect (Hayes, 2009). The assessment of the effect size of relationships, f^2, between constructs is given in Table 3. Per the assertions of (Cohen, 2013), effect size of construct between 0.02 and 0.15 is measured to be small, between 0.15 and 0.30 is well-thought-out to be medium, and above 0.30 is considered to be high. The results presented suggest both the predictor variables have a significant effect size on the dependent variable however the variable satisfaction has a relative medium effect than service quality on the dependent variable; Loyalty. If a Q^2 value; the predictive relevance of a model is larger than zero, it suggests that the latent exogenous constructs involved in the structural model possess predictive relevance for latent endogenous constructs. The Q^2 value of our model is 0.398; which supports the underlying assumption of this study that, the endogenous construct (i.e. Customer loyalty) involved in this study has a strong predictive relevance. Comparable to the f^2 effect size approach for assessing R^2 value, the relative impact of a model's predictive relevance can be compared through the measure of the q^2 effect size. The assessment of the effect size of the predictive relevance of the relationships, q^2, amid constructs are specified in Table 3. Owing to (J. J. I. M. Henseler & Systems, 2016; J. J. Q. Henseler & Quantity, 2018), effect size between 0.02 and 0.15 is considered small, between 0.15 and 0.30 is considered

medium, and above 0.30 is considered high. This per our results, indicates both predictor variables have an effect per predictive relevance on the Loyalty of the patients however their level of satisfaction, comparably drives greater loyalty than the quality of services received in this study.

Table 3: Path coefficient results of relation between variables.

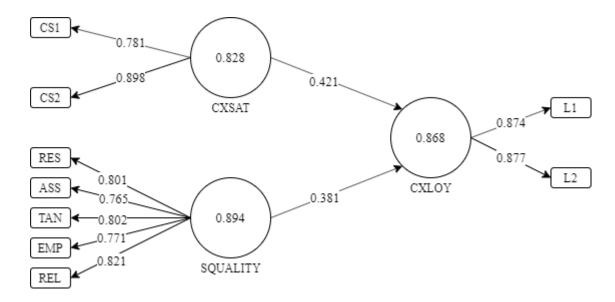| Path	Original Sample (O)	Sample Mean (M)	STD	T	f^2	q^2	P Value	VIF
CXSAT -> CXLOY	0.421	0.421	0.047	8.045	0.173	0.040	0.000	2.364
SQUAL -> CXLOY	0.381	0.381	0.053	7.937	0.141	0.027	0.000	2.364

Figure 2: Path model coefficients depicting construct relationships, composite reliability and factor loadings.

The tested structural relations of the hypothesized model is presented with its valid hypothesis statement, supported conclusions and significant error margin levels.

Table 4: Structural Relationship of Test Results.

Hypothesis	Hypothesis Statement	Sig.	Conclusion
H1	The better, the service quality, higher the loyalty of patients.	0.000	Data supports the hypothesis
H2	The more satisfied a patient, the more likely their level of loyalty.	0.000	Data supports the hypothesis

Discussion and Practical Implications

The current study examined the research questions; the independent effects of service quality and patient's satisfaction on patient's loyalty intents in the Ghanaian private

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healthcare delivery as well as their effect size and predictive relevance; further looking at whether they equally drive loyalty amongst patients. The association between private healthcare service quality and patient loyalty is related with each other as demonstrated by the results and it suggests that hospitals will construct loyalty goals of a patient if the healthcare service is provided in an appropriate manner pleasing to the patient. Patient satisfaction and patient loyalty are also positively related to each other which means that satisfaction helps to build loyalty among patients thus patient satisfaction and loyalty have a direct relationship. Per their effect and predictive relevance in the study and model, the satisfaction of the patients proved to have a greater effect size and predictive relevance on the loyalty of patients than the quality of services rendered. This further posits that even though the results are supportive of the significant effects of quality of service and satisfaction on loyalty, the patient's satisfaction per expectations and perceptions in private healthcare delivery as this study suggests drives more loyalty comparatively as opposed to the quality of the service rendered by the healthcare providers. The outcomes are stable with the earlier studies that service quality is significantly related with patient loyalty (Amin & Zahora Nasharuddin, 2013; Jamaluddin, Ruswanti, & Management, 2017; Lei & Jolibert, 2012), and Patient satisfaction is also positively related with patient loyalty (Ahmed, Tarique, & Arif, 2017; Jamaluddin et al., 2017; Lei & Jolibert, 2012; Meesala, Paul, & Services, 2018; Shabbir, Malik, Malik, & Management, 2016). Furthermore, the result shows that in private hospitals and healthcare service delivery sector; connecting the relationship of these critical factors of service quality and elements that drive satisfaction on consumers behavior intents, and recognizing evidence of critical service quality and satisfaction determinants especially to the consumer and its benefits, serves as an enhancement to perceived service quality and thereby shape a more favorable clientele behavioral intents; loyalty in the Ghanaian private healthcare delivery setting.

In order to achieve this would require the private hospital in its healthcare delivery to be client-favoured, make conceivable two-sided communications without scripting routine actions, keep clients very much informed, recognize and listen to their concerns in a perceptive and convincing manner. Specialists endeavour to comprehend the patient's concerns of ailment and be patient ready to clearly explain issues pertaining their ailment as communication is an indicator of a patient's satisfaction and commands loyalty as well (Fatima et al., 2018). Privacy and safety have also been found as strong predictors on both patient's satisfaction and hence loyalty (Fatima et al., 2018). It draws inferences that in the private division of healthcare delivery such as the case of Ghana, hospitals endeavour to make conscious effort to bridge the gap between expectations and perception's so to satisfy patients, maintain existing clientele base and to even woe in new clients even in the face of competitions and competitors; this without doubts builds loyalty amongst the patients (Al-Neyadi, Abdallah, & Malik, 2018), and since hospitals know its sustainability and profitability depend on the number of people they serve, ensuring current customers remain loyal and recommend others through their positive word-of-mouth from their favourable experiences is a notch the hospitals can't afford to make a blunder (Fatima et al., 2018).

As hypothesized, this study has contributed as an explanatory model for healthcare association that measures the impression of patients with respect to healthcare service quality, the level of satisfaction and loyalty intentions. Consequently, this study is valuable to healthcare providers and practitioner's as the study adds to the existing

literature by providing understanding and learning about healthcare services delivery and the factors, which can influence service quality, drive satisfaction and hence Loyalty development and measurement. Private Hospitals in Ghana ought to concentrate on the huge measurement of service quality and satisfaction of their patients by giving attention to their constructive response with respect to their loyalty.

Conclusion, Limitation and Future Research

The study provides amongst others a clear understanding about healthcare service quality conditions in private sector hospitals of Ghana and how private hospitals are trying to provide better quality services and contributing an affirmative role with specific end goals to attract and sustain their customers. Studies justifying the findings of our current study; (Al-Neyadi et al., 2018; Fatima et al., 2018; Jamaluddin et al., 2017) proposed the private hospitals are conveying healthcare services in a better way with improved quality of services. Correspondingly, the patient admires more prominently the healthcare services towards private hospitals (Andaleeb, Siddiqui, Khandakar, & planning, 2007; Fatima et al., 2018). The outcome of these studies demonstrates that private hospitals tend to provide better services concentrating on their patient's requests and creating for themselves specific end goals to provide the highest healthcare services and facilities to the patients. Findings in literature recommend that a very satisfied patient with a view of a better quality of healthcare services help in building loyalty intentions than just a satisfied client (Fatima et al., 2018; Meesala et al., 2018). In light of the fact that a reliable client will always make positive word-of-mouth, the hospital managers ought to focus on patient-oriented strategies as patients are the honest resource of an organization to build a clear picture of profitability and authority (Meesala et al., 2018).

There are limitations associated with this research. The study could be outlined to test characteristics of service quality, by utilizing other strategies for data gathering, i.e. interviews and experimental research to see which of them will be more viable. Also, a future study could be projected to test similar factors in other service sectors. Furthermore, applying the model to different hospitals in different cities may give distinctive or additional helpful results. The researchers used a survey study approach while in the future a quantitative approach may give more in-depth knowledge. The present study just centered on private hospitals; however, future studies can be done that will gauge the perception and additionally desires of both public and private hospitals' patients with the same or other healthcare service quality dimensions addressed in this study. The present study incorporated the role of patient satisfaction and quality of service in predicting loyalty, while future studies could focus on hospital image and price factor with respect to the patient's loyalty. While the current study addresses the effect of health care service quality and satisfaction on patient loyalty in the private healthcare delivery, future studies could focus on other outcome variables and also incorporate other healthcare service quality dimensions; doctors and nurses' professionalism, price and patient-provider relationships.

Acknowledgement

References

Aduo-Adjei, K. (2015). *Patients Satisfaction with Quality Healthcare in Ghana: A Comparative Study between University of Ghana and University of Cape Coast Hospitals.* University of Ghana.

Aftab, J., & Razzaq, M. (2016). Service quality in public and private hospitals in Pakistan: An analysis using SERVQUAL model.

Afthanorhan, A., Awang, Z., Salleh, F., Ghazali, P., & Rashid, N. J. M. S. L. (2018). The effect of product quality, medical price and staff skills on patient loyalty via cultural impact in medical tourism. *8*(12), 1421-1424.

Ahmed, S., Tarique, K. M., & Arif, I. J. I. j. o. h. c. q. a. (2017). Service quality, patient satisfaction and loyalty in the Bangladesh healthcare sector.

Al-Borie, H. M., & Sheikh Damanhouri, A. M. J. I. j. o. h. c. q. a. (2013). Patients' satisfaction of service quality in Saudi hospitals: a SERVQUAL analysis. *26*(1), 20-30.

AL-Mhasnah, A., Salleh, F., Afthanorhan, A., & Ghazali, P. J. M. S. L. (2018). The relationship between services quality and customer satisfaction among Jordanian healthcare sector. *8*(12), 1413-1420.

Al-Neyadi, H. S., Abdallah, S., & Malik, M. J. I. J. o. H. M. (2018). Measuring patient's satisfaction of healthcare services in the UAE hospitals: Using SERVQUAL. *11*(2), 96-105.

Alhaddad, A. J. I. J. o. M. R., & Reviews. (2015). A structural model of the relationships between brand image, brand trust and brand loyalty. *5*(3), 137.

Aliman, N. K., Mohamad, W. N. J. P.-S., & Sciences, B. (2016). Linking service quality, patients' satisfaction and behavioral intentions: an investigation on private healthcare in Malaysia. *224*, 141-148.

Amin, M., & Zahora Nasharuddin, S. J. C. G. A. I. J. (2013). Hospital service quality and its effects on patient satisfaction and behavioural intention. *18*(3), 238-254.

Anabila, P. J. H. m. q. (2019). Service quality: A subliminal pathway to service differentiation and competitive advantage in private healthcare marketing in Ghana. *36*(2), 136-151.

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Anbori, A., Ghani, S. N., Yadav, H., Daher, A. M., & Su, T. T. J. I. J. f. Q. i. H. C. (2010). Patient satisfaction and loyalty to the private hospitals in Sana'a, Yemen. *22*(4), 310-315.

Andaleeb, S. S., Siddiqui, N., Khandakar, S. J. H. p., & planning. (2007). Patient satisfaction with health services in Bangladesh. *22*(4), 263-273.

Anhang Price, R., Elliott, M. N., Zaslavsky, A. M., Hays, R. D., Lehrman, W. G., Rybowski, L., . . . Cleary, P. D. (2014). Examining the role of patient experience surveys in measuring health care quality. *Medical Care Research and Review, 71*(5), 522-554.

Asnawi, A., Awang, Z., Afthanorhan, A., Mohamad, M., & Karim, F. J. M. S. L. (2019). The influence of hospital image and service quality on patients' satisfaction and loyalty. *9*(6), 911-920.

Baloglu, S. J. C. H., & Quarterly, R. A. (2002). Dimensions of customer loyalty: Separating friends from well-wishers. *43*(1), 47-59.

Bisschoff, C., & Clapton, H. (2014). Measuring customer service in a private hospital.

Boadi, E. B., Wenxin, W., Bentum-Micah, G., Jerry, I. K. J. C. J. o. A. S., & Technology. (2019). Impact of Service Quality on Customer Satisfaction in Ghana hospitals: A PLS-SEM Approach. *7*(3), 503-511.

Bowen, J. T., Shoemaker, S. J. C. H., & Quarterly, R. A. (2003). Loyalty: A strategic commitment. *44*(5-6), 31-46.

Chotivanich, P. J. I. J. o. A., & Sciences. (2014). Service Quality, Satifaction, and Customer Loyalty in a Full-Service Domestic Airline in Thailand. *7*(3), 161.

Cohen, J. (2013). *Statistical power analysis for the behavioral sciences*: Routledge.

Dabholkar, P. A. (2015). *How to improve perceived service quality by increasing customer participation.* Paper presented at the Proceedings of the 1990 academy of marketing science (AMS) annual conference.

Danaher, P. J. (1997). Using conjoint analysis to determine the relative importance of service attributes measured in customer satisfaction surveys. *73*(2), 235-260.

ElManstrly. (2010). *Examining the interrelationships between the four stages of customer loyalty: a mixed method approach.* University of Glasgow.

Erickson, S. M., Rockwern, B., Koltov, M., & McLean, R. M. J. A. o. i. m. (2017). Putting patients first by reducing administrative tasks in health care: a position paper of the American College of Physicians. *166*(9), 659-661.

Fatima, T., Malik, S. A., Shabbir, A. J. I. J. o. Q., & Management, R. (2018). Hospital healthcare service quality, patient satisfaction and loyalty: An investigation in context of private healthcare systems. *35*(6), 1195-1214.

Gill, L., & White, L. (2009). A critical review of patient satisfaction. *Leadership in Health Services, 22*(1), 8-19.

Ginter, P. M., Duncan, W. J., & Swayne, L. E. (2018). *The strategic management of health care organizations*: John Wiley & Sons.

Hair, J., Hollingsworth, C. L., Randolph, A. B., Chong, A. Y. L. J. I. M., & Systems, D. (2017). An updated and expanded assessment of PLS-SEM in information systems research. *117*(3), 442-458.

Hayes, A. F. J. C. m. (2009). Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. *76*(4), 408-420.

Henseler, J., Ringle, C. M., & Sarstedt, M. J. J. o. t. a. o. m. s. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *43*(1), 115-135.

Henseler, J. J. I. M., & Systems, D. (2016). New developments in partial least squares parh modeling. *116*(9), 1842-1848.

Henseler, J. J. Q., & Quantity. (2018). Partial least squares path modeling: Quo vadis? *, 52*(1), 1-8.

Iqbal, M., Shah, A. B. A. J. J. o. B. M., & Studies, E. (2016). The impact of customer satisfaction on customer loyalty: Mediating role of customer trust. *1*(1), 1-15.

Jamaluddin, J., Ruswanti, E. J. J. o. B., & Management. (2017). Impact of service quality and customer satisfaction on customer loyalty: a case study in a private hospital in Indonesia. *19*(5), 23-33.

Kandampully, J. A., Suhartanto, D. J. J. o. H., & Marketing, L. (2000). Customer loyalty in the hotel industry: The role of customer satisfaction and image. *12*(6), 3-25.

Kassim, N., Abdullah, N. A. J. A. p. j. o. m., & logistics. (2010). The effect of perceived service quality dimensions on customer satisfaction, trust, and loyalty in e-commerce settings.

Katona, M. R., & Komáromi, N. (2015). Quality-satisfaction-loyalty: consumer behaviour in catering.

Kitapci, O., Akdogan, C., Dortyol, I. T. J. P.-S., & Sciences, B. (2014). The impact of service quality dimensions on patient satisfaction, repurchase intentions and word-of-mouth communication in the public healthcare industry. *148*, 161-169.

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Lei, P., & Jolibert, A. J. B. H. S. R. (2012). A three-model comparison of the relationship between quality, satisfaction and loyalty: an empirical study of the Chinese healthcare system. *12*(1), 436.

Meesala, A., Paul, J. J. J. o. R., & Services, C. (2018). Service quality, consumer satisfaction and loyalty in hospitals: Thinking for the future. *40*, 261-269.

Min, K. L., Kim, J., Forlizzi, J., & Kiesler, S. (2015). *Personalization Revisited: A Reflective Approach Helps People Better Personalize Health Services and Motivates Them to Increase Physical Activity.* Paper presented at the The 2015 ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp 2015).

Moisescu, O.-I. (2014). Assessing customer loyalty: A literature review.

Mosadeghrad, A. M. J. I. j. o. h. p., & management. (2014). Factors influencing healthcare service quality. *3*(2), 77.

Mustak, M., Jaakkola, E., Halinen, A., & Kaartemo, V. J. J. o. S. M. (2016). Customer participation management: developing a comprehensive framework and a research agenda. *27*(3), 250-275.

Naidu, A. J. I. j. o. h. c. q. a. (2009). Factors affecting patient satisfaction and healthcare quality. *22*(4), 366-381.

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *Journal of marketing, 49*(4), 41-50.

Ramli, A. H. J. B., & Review, E. (2019). Patient Satisfaction, Hospital Image and Patient Loyalty in West Sulawesi Province. *17*(1), 1-14.

Ringle, C. M., Wende, S., & Becker, J.-M. J. B. S. G. (2015). Smart PLS 3.

Ryu, G., & Han, J. K. J. J. o. C. P. (2009). Word-of-mouth transmission in settings with multiple opinions: The impact of other opinions on WOM likelihood and valence. *19*(3), 403-415.

Setiawan, H., Sayuti, A. J. J. I. J. o. B., & Management. (2017). Effects of service quality, customer trust and corporate image on customer satisfaction and loyalty: an assessment of travel agencies customer in South Sumatra Indonesia. *19*(5), 31-40.

Shabbir, A., Malik, S. A., Malik, S. A. J. I. J. o. Q., & Management, R. (2016). Measuring patients' healthcare service quality perceptions, satisfaction, and loyalty in public and private sector hospitals in Pakistan. *33*(5), 538-557.

Urden, L. D. (2002). Patient satisfaction measurement: current issues and implications. *Professional case management, 7*(5), 194-200.

Wang, I.-M., Shieh, C.-J., Hsiao, J. J. J. o. I., & Sciences, O. (2005). The relationship between service quality, customer satisfaction and customer loyalty: A study on the management consulting industry. *26*(2), 371-384.

Wu, C.-C. J. A. J. o. B. M. (2011). The impact of hospital brand image on service quality, patient satisfaction and loyalty. *5*(12), 4873.

Yarimoglu, E. K. J. J. o. M. M. (2014). A review on dimensions of service quality models. *2*(2), 79-93.