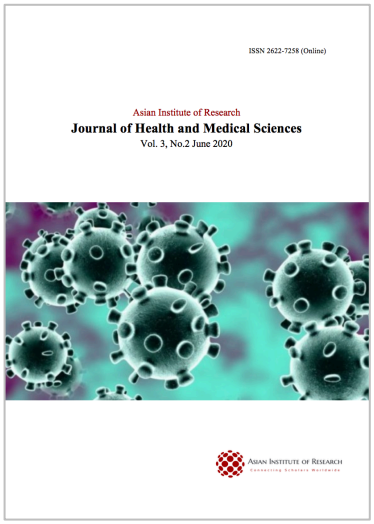

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Perceived Service Quality, a Key to Improved Patient Satisfaction and Loyalty in Healthcare Delivery: The Servqual Dimension Approach

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Abstract
Hospital's perceived service quality is a degree of discrepancy between patients' perceptions and their expectations about hospitals services. The quality of services which is provided by healthcare providers emphasizes the actual hospital service process. In the hospital, patients' satisfaction and hence loyalty could be widely used to determine hospital service quality. The study adopted a regression and path analysis utilizing SmartPLS V3.2.8; a second-generation multivariate data analysis method (PLS-SEM) approach to analyze the influence of perceived quality of services of hospitals on patient's satisfaction and loyalty based on the SERVQUAL dimensions. The study used data from (562) out-patients who had received services from (4) four major private hospitals in Ghana using purposive census sampling technique. Based on the analysis results, all five dimensions of the health services quality predictor of patients' level of satisfaction and loyalty to the hospital's services, explained that patients' satisfaction and loyalty was affected by all dimensions of health service quality (RATER) simultaneously. Nonetheless, different impacts will be obtained if all dimensions were measured separately. The study incited that patients' satisfaction and loyalty are influenced by the quality of medical/hospital services through its five components: reliability, assurance, tangibility, empathy and responsiveness.

Keywords: Private Health/Clinic, Service Quality, Patient Loyalty, Satisfaction, PLS-SEM

Introduction

Competition within the provision of well-being services triggers enhancements in effectiveness, productivity and quality of care (Ferrand et al., 2016). Increasing competition among health administrations drives patients to select a hospital/clinic with a trusted track record as clinics compete for patients by making strides in its quality of services which is a vital element to realize patients' fulfillment and loyalty towards the hospital/clinic (Brown et al., 2016; Erickson, Rockwern, Koltov, & McLean, 2017). Clinic/hospital service quality is a degree of

disparity between patients' discernment's and their desires of hospitals/clinic services(Fatima, Malik, & Shabbir, 2018). Service quality which is given by medical staff of hospitals emphasizes the actual hospital/clinic service process (Namana & Al-Dori, 2018). Within the hospital, patients' fulfillment might be broadly utilized to decide hospital/clinic service quality (Budiwan, 2016) as past studies investigated that patient loyalty and service quality were influenced by understanding satisfaction creation (Setyawan, Supriyanto, Tunjungsari, Hanifaty, & Lestari, 2019). Quality of healthcare services has been a contention centered around three components: quality of structure (tangibles), quality of process (services given by therapeutic staff) and results (impacts of care arrangement on patients' contentment) (Ferreira & Marques, 2019), as these strike as critical factors which can be useful for distinguishing and improving organization's performance in the era of intense competition (Farooq et al., 2018; Jamaluddin & Ruswanti, 2017). In principle, making improvements as an extension of more better access to healthcare provision from organizational boundaries is additionally imperative to realize the foremost hoisted benchmarks for quality care (Setyawan et al., 2019). Per work in literature healthcare providers can by leeway achieve high quality of healthcare administrations if they can tune into their patients' needs and count such inside the well-being services provision as healthcare organizations are subsequently, obliged to be more inventive and innovative in engaging clients, by endorsing products, services and administrations that best addresses needs and command patronage by its clients (Asnawi, Awang, Afthanorhan, Mohamad, & Karim, 2019; Kalaja, Myshketa, & Scalera, 2016).

Patients are the determinants of the healthcare framework, and this often than not quest healthcare service providers a vital notch to supply the most noteworthy service needed for a better, effective and viable quality of care (Rosha & Kaur, 2018) this comes off as rapid advancements in competitive business environment, customer expectations and demands keep increasing on the daily, leading to a situation where most companies find it difficult to retain their customers (Bentum-Micah et al., 2019; Farooq et al., 2018; Fatima et al., 2018). Progressing health services into a friendly clinic and understanding both therapeutic staff and patient's fulfillment strengthen and reinforce the management of well-being care institutions and guarantee the patients' satisfaction towards the hospital and its services as a whole, which transcendently draws positive consumer behavioral intent or general demeanor (Janicijevic, Seke, Djokovic, & Filipovic, 2013; Mankar, Velankar, Joshi, & Nalgundwar, 2013).

Underling our understanding of quality of service may well be the foremost broadly utilized instrument of SERVQUAL, which was developed by Parasuraman of the *Marketing Science Institute* (Alex & Ondiek, 2014; Parasuraman, Zeithaml, & Berry, 1988) with five measurements of service quality. SERVQUAL/RATER instrument comprises of: Reliability, Assurance, Tangibles, Empathy, Responsiveness, which is used as a measure of consumers expectations (before) and perception (post usage) of a service (Ahrholdt, Gudergan, & Ringle, 2017). Per evidence in literature, service quality determinants can be divided into two primary categories: the tangible and intangible components of a service. Tangible measurements allude to physical facilities, restorative staff, communication and any others of the service components that can be seen and readily felt. Intangible dimensions comprise of four sub-sectors which then is categorized into reliability, responsiveness, assurance and empathy. Earlier studies have illustrated that all the service dimensions had to a certain degree a positive connection with patients' satisfaction, with tangibility, reliability and assurance been the foremost indicators of patient's satisfaction and loyalty of the patients to the service (Setyawan et al., 2019). SERVQUAL measurements give a positive understanding to the health teach where they ought to center to provide better service to the patients (Aliman & Mohamad, 2016).

Although measurement of service quality has gotten an extraordinary bargain of attention in driving satisfaction and loyalty amongst patrons and providers of the healthcare service, quality of service of the clinic industry in developing nations like Ghana still remains one with an exhaustive examination still required (Boadi, Wenxin, Bentum-Micah, & Jerry, 2019; Paul & Sahadev, 2018; Tenkorang, 2016). With globalization fueling fierce competition in the service sector of the global economy, the hospital's principal goal in building patient satisfaction and driving loyalty is perhaps one embedded in understanding the link between specific dimensions of quality healthcare service delivery, patient satisfaction, and patient loyalty. Linking the conceptual and empirical measurement of the relationship between these dimensions of quality of service, satisfaction of the patients and hence their loyalty to the hospital is key into turning concepts into a core marketing instrument (Farooq et al., 2018). With the over-reliance of densely populated patients on the services of public hospitals

with few healthcare specialist in developing countries like Ghana, due to the governments subsides on healthcare costs of patients in public hospitals and a few approved private hospitals in a quest to reducing financial burden for the general populace and ensuring access to primary healthcare for all with little or no financial shocks, there only leads to a healthcare trap with patients experiencing low to no forms of customer service satisfaction at all in such conditional settings. Nonetheless, with their daily unmet needs, these patients have little to no option than to return to the same hospitals and it services that leave them dissatisfied on the regular (Anabila, 2019; Bucher, Jäger, & Prado, 2016).

Irrespective of the many undocumented report of outcries of patients by the media, most of these investigates into the service delivery by healthcare providers have only to a larger extent been led in public clinics. There isn't much extant work in literature to fully address this connection in the context of private hospitals in developing countries as Ghana as described in the foregoing lines of assertions, meaning work in this sector is still understudied. This study, therefore, seeks to fill this gap in literature. Again, there is no well-designed study examining the exact effects of each of the SERVQUAL dimensions on patient's satisfaction and loyalty to private healthcare delivery in a developing country like Ghana. Essentially, the use of variance based structural equation model (PLS- SEM), has been under-utilized in this setting. And so, our investigation will also determine the most vital quality dimensions and their predictive estimation and significance on the patient's satisfaction and loyalty creation in the delivery of private healthcare.

Given the past empirical findings, it would be only reasonable to hypothesize the positive impacts of the service quality on the patients' satisfaction and loyalty via enhancing the SERVQUAL dimensions. Thus, this study aimed at examining the hypothesized effects of the impact of the quality of service on patients' satisfaction and loyalty through the SERVQUAL dimensions in the private healthcare delivery sector of Ghana. The study finding will inform health care system-level changes for enhancing the patient's attitudes and perceptions e.g., patient's perceptions about service quality and loyalty in the context of private healthcare delivery.

Rooted on these queries we formulate the following hypothesis:

Hypothesis 1: All the SERVQUAL dimensions impact the patient's satisfaction in private health delivery.
Hypothesis 2: All the SERVQUAL dimensions impact patient's loyalty in private health delivery.

Figure: 1

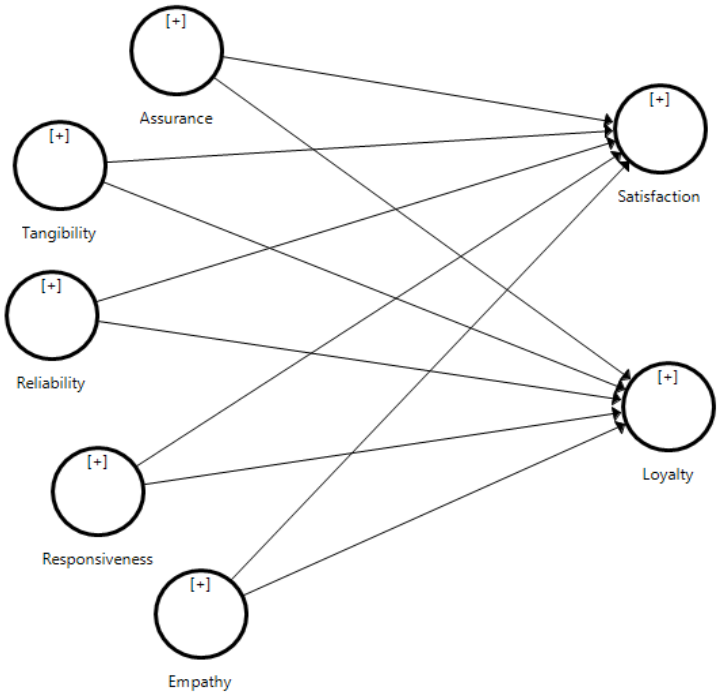

Figure 1: Conceptual Framework of The Study.

Research Method

Data Source and Collection

This study used a survey design with a cross-sectional approach. There were (562) respondents taken from outpatients' hospital admission from four major private hospitals in Ghana using purposive census sampling technique. 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. To minimize the perplexing factors, the researchers restricted respondents into several inclusion criteria: [1] have received treatment from the hospital, [2] mentally healthy, [3] willing to be a respondent [4] Between the ages 18-60 years and [5] Proficient in English language, with identifiable personal information not recorded to maintain confidentiality of the respondents.

Study Variables

Quality of service was examined using a previously tested perceived service quality index; SERVQUAL dimensions. (Parasuraman et al., 1988), SERVQUAL is composed of 22 items with 5 Likert-type response categories: strongly agree, agree, neutral, disagree, and strongly disagree, used as a reflective post-usage measure of a product or service. However, this study's final questionnaire included a total of 17 items of the 5 quality service dimensions modified for this study, out of which three items belonged to each of the dimensions. based on the RATER (Reliability, Assurance, Tangible, Empathy and Responsiveness), with sub-variables as clarified as follows:

- Reliability: Is the ability of the service staff to provide services promptly, accurately, reliably and satisfactorily.
- Assurance: Is a guarantee of service of knowledge, politeness, the ability of the service staff to build patient's trust in the medical services provided.
- Tangibles: This dimension measures the physical environment of the hospital in relation to the out-patient department. The nature of the equipment used at the hospital. (Physical facilities, equipment, and appearance of personnel).
- Empathy: This dimension deals with the caring nature of the staff, meaning how helpful the staff are (caring and personalized attention provided to customers).
- Responsiveness: Is the ability of the service staff to provide prompt and appropriate services to patients by responding to patient complaints and resolving complaints of patients and their families and conveying clear information to patient complaints.

The constructs internal validity and reliability (measured using the composite reliability (CR) as proposed as more appropriate as it considers the indicators' differential weights, whilst the Cronbach's alpha weights the indicators equally) of the SERVQUAL dimensions among the study population was Reliability: 0.907, Assurance: 0.896, Tangibility: 0.854, Empathy: 0.883, Responsiveness: 0.894.

Patients' level of satisfaction of the service based on patient's satisfaction indicators, which is a measure of the difference in expectations and perceptions of the service received built on the service quality dimensions, were measured utilizing a two single item measure with 5 Likert-type reaction categories: (exceptionally satisfied, satisfied, neutral, unsatisfied, or exceptionally unsatisfied). Which was modified according to particular services in the hospital. Patients were inquired about their satisfaction with the service:(exceptionally satisfied, satisfied, neutral, unsatisfied, or exceptionally unsatisfied), and likewise about the degree of trust they have in the clinic that they gotten healthcare at (very trustworthy, somewhat trustworthy, neither, somewhat untrustworthy, or very untrustworthy). The constructs validity and reliability (measured using the composite reliability (CR) as proposed as more appropriate as it considers the indicators' differential weights, whilst the Cronbach's alpha weights the indicators equally) of the patients' level of satisfaction amongst the study population was 0.831.

Loyalty of the patient to the hospital services as a measure of patients' interpersonal trust in the hospital/clinic and it services, and reflects three overlapping concepts: repurchase, recommendation and positive word-of-mouth, was measured via a two single-item with 5 Likert-type response categories: strongly agree, agree,

neutral, disagree, and strongly disagree, with higher scores indicating greater loyalty to the hospital. The constructs validity and reliability (measured using the composite reliability (CR) as proposed as more appropriate as it considers the indicators' differential weights, whilst the Cronbach's alpha weights the indicators equally) of the patients' loyalty amongst the study population was 0.868.

Results and Analysis

Demography

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 female, 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 of 133 (23.7%).

Table 1: Demographic Characteristics

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)

Source: *Fieldwork, 2019* (N) = Population Size
Note: Percentage breakdowns may not add precisely to 100%

Analysis of Measurement Models

By means of establishing the internal consistency and reliability as well as the discriminant validity of the variables, (J. J. I. M. Henseler, 2016), proposed the composite reliability (CR) approach as more appropriate, as it considers the indicators' differential weights, whilst the traditional Cronbach's alpha, weights the indicators equally. The composite reliability (CR) and average variance extracted (AVE) after running the measurement model via (PLS-SEM) is assumed in Table 2. The composite reliability (CR) of all constructs was above 0.7 and average variance extracted AVE above 0.5. Which by principle, is acceptable, as an average variance extracted (AVE)> 0.50, signify that more than half of the indicator variance is encompassed in the construct score (Hair, Hollingsworth, Randolph, & Chong, 2017). Again, establishing discriminant validity means that each construct captures a unique phenomenon not embodied by any other construct in the model. For the measure of

discriminant validity, we adopted the Fornell-Larcker Criterion (FLC) given in Table 2 as proposed by (J. Henseler, 2018) as it proved better for this study.

Table 2: Validity and Reliability of Constructs

Latent Variables		Loadings	Composite Reliability	Average Variance Extracted (AVE)	Discriminant Validity
		>0.70	0.60~0.90	>0.50	
Assurance	**Ass1**	0.834	0.896	0.742	Yes
	Ass2	0.896			
	Ass3	0.852			
Empathy	**Emp1**	0.854	0.883	0.716	Yes
	Emp2	0.847			
	Emp3	0.837			
Reliability	**Rel1**	0.892	0.907	0.766	Yes
	Rel2	0.871			
	Rel3	0.861			
Responsiveness	**Res1**	0.833	0.894	0.739	Yes
	Res2	0.901			
	Res3	0.843			
Tangibles	**Tan1**	0.832	0.854	0.661	Yes
	Tan2	0.766			
	Tan3	0.839			
Satisfaction	**Sat1**	0.813	0.831	0.712	Yes
	Sat2	0.874			
Loyalty	**Loy1**	0.868	0.868	0.767	Yes
	Loy2	0.884			

Source: Authors contribution; Discriminant Validity (Fornell-Larcker Criterion (FLC)), Note: Yes (square root of AVE > the correlation of the construct).

Evaluation of Structural Model

Table (3) shows the path coefficients of the direct and total effects of: Reliability, Assurance, Tangibility, Empathy, Responsiveness (RATER), and on patient satisfaction and loyalty to the hospital/clinic services with their significance levels. Assurance ($\beta = 0.018$; t-value = 0.509; p= 0.611) was the only construct amongst the (5) Servqual dimensions that evidenced to have no direct effect on the satisfaction of the patient, with Reliability ($\beta = 0.050$; t-value = 0.954; p= 0.340) and Tangibility ($\beta = 0.076$; t-value = 1.238; p= 0.216) also suggesting to have no direct effect on the patients loyalty to the hospital/clinic per this study and it findings. yet confirms the findings of the works of(Meesala, Paul, & Services, 2018).

This study suggested, by affirming previous literature and insight that if the main goal of a research of such kind is to identify the factors that highlight patient satisfaction and patient loyalty, then the SERVQUAL dimensions still proves relevant, since barely two of the five dimensions of SERVQUAL appeared irrelevant in this study setting and context, bearing the reaffirming repetition of the dimension even in this current dispersion and trend. However, caution is incited within the utilization of SERVQUAL in the event that the context is characterized by patients depending intensely on alluding physicians' counsel for choice of service suppliers.

Table 3: Path coefficients of the structural model; direct and total effects of constructs

Dimensions	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Assurance -> Loyalty	0.101	0.099	0.045	2.249	**0.025**
Assurance -> Satisfaction	0.018	0.019	0.036	0.509	**0.611**
Empathy_ -> Loyalty	0.729	0.730	0.062	11.720	**0.000**
Empathy_ -> Satisfaction	0.396	0.398	0.051	7.771	**0.000**
Reliability -> Loyalty	0.050	0.049	0.052	0.954	**0.340**
Reliability -> Satisfaction	0.078	0.078	0.039	1.995	**0.046**
Responsiveness_ -> Loyalty	0.283	0.284	0.055	5.161	**0.000**
Responsiveness_ -> Satisfaction	0.301	0.300	0.061	4.954	**0.000**
Tangibility -> Loyalty	0.076	0.078	0.061	1.238	**0.216**
Tangibility -> Satisfaction	0.166	0.165	0.063	2.643	**0.008**

Source: Authors contribution using Smart-PLS 3.2.8; Regression weights: (ungrouped)

The path diagram (**Figure 2**) shows the graphical regression weights with their significance levels of the servqual dimensions on patient satisfaction and patient loyalty, to the hospital/clinic's services.

Figure: 2

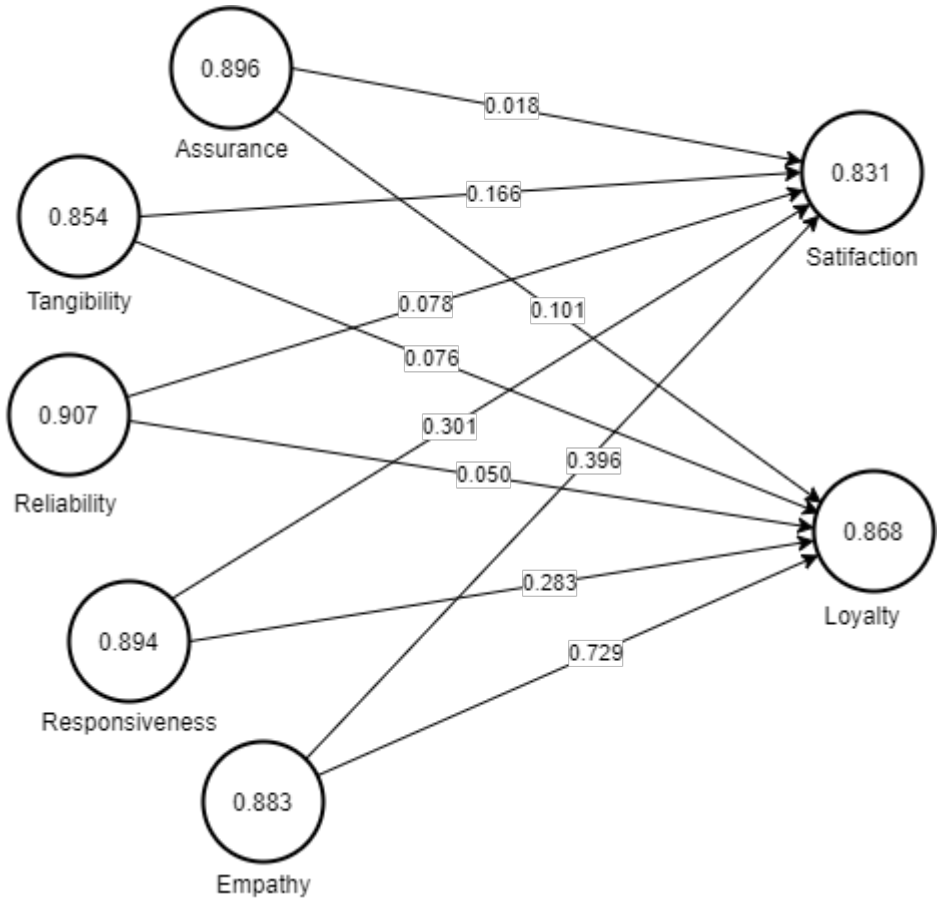

Figure 2: Tested graphical path model depicting the direct effects of the patients' experience with the SERVQUAL dimensions on patient level of satisfaction and patients' loyalty to the hospitals/clinic's services.

All the constructs (SERVQUAL dimensions) to this study had a role to play in driving patient satisfaction and loyalty in the expression of quality healthcare service delivery. However, the most critical factors to consider to drive these effects are when the patients feel satisfied in the light of (1): Timely delivery of services, (2): Caring

employees, (3): The hospital's staff giving patients personal attention. (4): The hospital having patients' best interests at heart, (5): Convenient consultation hours with and the medical services have fulfilled patient's expectation, (6): The hospital has up to date equipment, (7): Hospital's physical facilities are visually appealing and (8): Hospital's staff been well dressed these doesn't just drive satisfaction but has the patient coming back to use the service of the hospital even in the light of intense competitions and other healthcare suppliers promising better service delivery. In essence, these are areas in (Hospital/Clinic) service delivery the hospitals can't afford to fail as they drive higher and critical hospital success. The results of the study showed that overall (RATER) service quality dimension was relatively good in driving satisfaction and loyalty. Assurance, tangible, empathy and responsiveness dimensions were marked very satisfying as it generates the best feeling of patients during their visits to the hospital.

For ease of visual checking, the hypotheses and their status after research are set out in the Table 4 below:

Table 4: Statuses of Hypothesis based on the findings of the study

Hypothesis Number	Hypothesis	Status After Research
Hypothesis 1	All the SERVQUAL dimensions impact the patient satisfaction in private health delivery.	Reliability, Responsiveness, Empathy and Tangibility contribute significantly to patient satisfaction but Assurance does not.
Hypothesis 2	All the SERVQUAL dimensions impact patient loyalty in private health delivery.	Responsiveness, Empathy and Assurance impact patient loyalty but Tangibility and Reliability, does not.

Source: Authors contribution using SmartPLS-SEM.

Discussion

The Servqual dimensions for assessing the quality of services rendered patients in the case of healthcare delivery as posited by (Lee, 2017) is envisioned to reduce or eliminate differences in expectations and perceptions of services that birth either satisfaction or dissatisfaction, and this study suggests the positive impacts of these dimensions on patients' satisfaction creation and loyalty to hospital's/clinics via the level of subjective satisfaction judgement of the patient. Quality of hospital service is determined by patients' satisfaction, loyalty and hospital's productivity and profitability (Kitapci, Akdogan, & Dortyol, 2014). In addition, patients' satisfaction also is a discrepancy about likes and dislikes of the hospital's services (Untachai, 2013). Previous study argued that the primary focus to measure service quality of health care is by analyzing service performance. Yet, current studies suggest that researchers should also explore the gap between patients' expectations and perceptions (Mendes et al., 2018). Hospital competition creates positive effect on better provision of healthcare services (Li et al., 2015). High-quality services could be improved by meeting patients' needs and expectations, through the key factors of improving quality of care by having high quality medical staff to advance the service quality dimensions through education and providing timeless rewards for outstanding medical staff as patients' perceptions of health services could affect the image of the hospital as well as patients' satisfaction and loyalty (Shafiq, Naeem, Munawar, & Fatima, 2017).

As hypothesized, the most imperative facets the hospital managers need to focus on, based on our findings, are (1): Timely delivery of services, (2): Caring employees, (3): The hospital's staff give patients personal attention. (4): The hospital has patients' best interests at heart, (5): Convenient consultation hours with and the medical

services have fulfilled patient's expectation, (6): The hospital has up to date equipment, (7): Hospital's physical facilities are visually appealing and (8): Hospital's staff been well dressed. In its core, these are areas in (Hospital/Clinic) service delivery the hospitals cannot afford to fail as they drive higher and critical hospital success. Assurance and reliability per our study are important but matter little to the patient presumably due to the patient's over-dependence on the treating physician's recommendation characterized in most developing nations like Ghana and many others. Empathy, Tangibility, Reliability and Responsiveness (but not assurance) impact patients' satisfaction and Responsiveness, Empathy and Assurance impact patient loyalty (but not Tangibility and Reliability). In other words, employees' attitude towards patients, their proper communication with patients, and accurate delivery of services are highly critical to the hospital's success. The Attitude, Communication, Delivery (ACD Model) and Tangibles are the key to making patients satisfied and hence return to the same hospital per our findings. This is to also say, that any efforts beyond the basic provision of assurance and reliability to the patient, be directed elsewhere. These conclusions are aligned with the quality dimensions of WHO framework (2006) which recommends that the healthcare systems should be patient-centered and take into account local cultures and preferences of users.

Conclusions

The success of any country depends objectively on its people and their health, and its through a healthy nation that its citizenry can do better for their country by actively participating in their daily activities. Utilizing (PLS-SEM) for healthcare consumer research, which is an emergent path modeling approach, this study in consensus with previous studies on the efforts in bridging the gap between patient's expectations and perceptions about quality of service delivery and patient's satisfaction and loyalty on access to healthcare arrangements, suggests that the quality of service rendered a patient has a potential to enhance the patients' loyalty to the visiting hospital/clinic and increase their level of satisfaction of the service delivery via the evidence of vital quality service dimensions. While this study provides a favorable evidence for the positive role the quality of service plays in creating patient satisfaction and driving loyalty amongst patients in private healthcare delivery through the evidence of the servqual dimensions, this study also is limited from the cross-sectional study design, and further studies are recommended for evaluating its impacts overtime. Further, the dimensions employed in this study did not make use of other dimensional factors e.g. safety matters, culture, technology acceptance, religion, gender etc., which could equally drive satisfaction and loyalty in the conceptual model of this study, hence future research can be directed towards the exploration of these dimensions using latest hospital industry and comparative approaches with other healthcare industries rather than just the private industry.

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Ethics Statement
The authors affirm that this work is unique and has not been distributed somewhere else, nor is it as of now under consideration for publication elsewhere. All authors participated and contributed to the improvement of this paper. All methods performed in this study were in agreement with the moral guidelines of the morals committee of the School of Management in Jiangsu University and with the (1964) Helsinki declaration and its later amendments or comparable ethical standards.

Conflicts of Interest
The authors affirm that they have no contending conflicts of interests.

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