

A MODEL FOR THE RELATIONSHIP BETWEEN USER
SATISFACTION OF HEALTHCARE FACILITIES MANAGEMENT AND CORE
HEALTHCARE BUSINESS

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A thesis submitted in fulfilment of the
requirements for the award of the degree of
Doctor of Philosophy

Faculty of Built Environment and Surveying
Universiti Teknologi Malaysia

SEPTEMBER 2019

DEDICATION

To God be the glory

ACKNOWLEDGEMENT

My foremost gratitude goes to the almighty God for His immeasurable grace for granting me the strength that sustained me till the completion this research work

Special thanks go to my supervisors Associate Prof. Dr. Choong Weng Wai and Prof Dr. Abdul Hakim Mohammed for their marvellous guidance; advice and support towards making this research a reality.

To my lovely wife Lydia Martin, words are not enough to show my appreciation for your understanding, tolerance and prayers. Your love, prayer and support has brought me this far. I am thankful. I give special thanks to my beloved mother Akua Amponsah, my brothers, especially Prof. Richard Kwasi Amankwah and my children Otiwaa, Akwasi Agyemang and Kofi Duah.

I am also grateful to the management of my institution, Kumasi Technical University for their support in granting me the study leave and partial sponsorship to pursue this PhD and to my colleagues at the office for holding the fort. To my colleagues and brothers from UTM especially Andrews Gadzekpo, Iddrisu Kasim, Dr Adjei-Twum, Eugene Okyere-Kwakye, Joseph Owusu and my Nigerian brother Edo Oga Ojoko for the help and support towards the completion of this study.

Finally, to my late father Kwaku Duah, my brother Obeng Darko and twin sister Otiwaa who did not live to see this milestone, May your gentle souls rest in perfect peace.

ABSTRACT

Public hospitals in Ghana, as in many other developing countries, are faced with facilities management (FM) challenges due partly to the problem of poor services and user dissatisfaction with FM service delivery. Studies to understand the relationship between user satisfaction of healthcare FM and core healthcare business have not addressed the issue from the perspective of this study. To fill this gap, the study examined the relationship between healthcare FM services based on the FM basic framework (people - patients, place – healthcare healing environment, processes –FM service quality and technology – quality of healthcare infrastructure and equipment) and core healthcare business (healthcare personnel, healthcare delivery, adequacy of healthcare resources and healthcare administrative process). The underlying theoretical frameworks for the study included the FM basic framework, SERVQUAL theory, Core Healthcare Business dimensions and A Staff and Patient Calibration Toolkit (ASPECT) which is based on a theory of supportive designs for healthcare facilities. Questionnaire was used to gather data from 622 patients of the three surveyed hospitals (Komfo Anokye, Cape-Coast and Tamale teaching hospitals) in Ghana. The data were statistically tested and analysed by structural equation modelling (SEM) technique. Twelve of the 19 hypotheses were supported. The findings showed that although the patients are satisfied with the quality of healthcare healing environment and the quality of healthcare infrastructure and equipment, they were dissatisfied with the FM service quality. Secondly, the results indicated that healthcare FM service quality and quality of healthcare infrastructure and equipment did not have a positive significant influence on the quality of healthcare administrative process. Also, the quality of healthcare healing environment did not show a positive significant influence on healthcare delivery. The quality of healthcare infrastructure and equipment also did not have a positive significant influence on healthcare personnel. Lastly, out of the four dimensions used to evaluate the quality of core healthcare business, patients were dissatisfied with the adequacy of healthcare resources and healthcare administrative process. Generally, the study model offered a good understanding of the factors that influenced the relationship between users (patients) satisfaction of healthcare FM and core healthcare business. The findings indicated that healthcare institutions must realize that quality healthcare FM service is a means for the healthcare organisations to stay relevant in the eyes of the patients. Thus, the study recommends that the surveyed teaching hospitals in Ghana should aim to achieve patient centered healthcare service deliver by effectively improving the quality of both their FM and core healthcare services, since patient satisfaction leads to patient loyalty.

ABSTRAK

Hospital awam di Ghana seperti di negara-negara membangun yang lain menghadapi cabaran-cabaran pengurusan fasiliti (FM) disebabkan oleh masalah perkhidmatan dan ketidakpuasan pengguna dengan penyampaian perkhidmatan FM. Kajian untuk memahami hubungan antara kepuasan pengguna FM kesihatan dan perniagaan penjagaan kesihatan teras tidak menangani isu ini dari perspektif kajian ini. Untuk mengisi jurang ini, kajian ini mengkaji hubungan antara FM perkhidmatan kesihatan berasaskan rangka kerja asas FM (orang - pesakit, tempat - persekitaran kawasan penjagaan kesihatan, proses - kualiti perkhidmatan dan teknologi - kualiti infrastruktur dan peralatan penjagaan kesihatan) dan teras perniagaan penjagaan kesihatan (kakitangan penjagaan kesihatan, penyampaian penjagaan kesihatan, kecukupan sumber penjagaan kesihatan dan proses pentadbiran penjagaan kesihatan). Rangka kerja teoritical asas untuk kajian ini merangkumi rangka kerja asas FM, teori SERVQUAL, dimensi teras perniagaan penjagaan kesihatan teras dan *A Staff and Patient Calibration Toolkit* (ASPECT) yang berdasarkan teori reka bentuk sokongan bagi kemudahan penjagaan kesihatan. Soal selidik digunakan untuk mengumpul data dari 622 pesakit dari tiga hospital yang dikaji (Komfo Anokye, Cape-Coast dan Tamale hospital penyelidikan) di Ghana. Data tersebut diuji secara statistik dan dianalisis dengan menggunakan teknik permodelan persamaan struktur (SEM). 12 dari 19 hipotesis disokong. Hasil kajian menunjukkan bahawa walaupun pesakit berpuas hati dengan kualiti persekitaran kawasan penjagaan kesihatan dan kualiti infrastruktur dan peralatan penjagaan kesihatan, mereka tidak berpuas hati dengan kualiti perkhidmatan FM. Kedua, keputusan kajian menunjukkan bahawa kualiti perkhidmatan FM dan kualiti perkhidmatan infrastruktur dan peralatan penjagaan kesihatan tidak mempunyai pengaruh yang positif terhadap kualiti proses pentadbiran penjagaan kesihatan. Juga, kualiti persekitaran kawasan penjagaan kesihatan tidak menunjukkan pengaruh yang positif terhadap penyampaian penjagaan kesihatan. Kualiti infrastruktur dan peralatan penjagaan kesihatan juga tidak memberi kesan positif terhadap kakitangan penjagaan kesihatan. Akhir sekali, daripada empat dimensi yang digunakan untuk menilai kualiti teras perniagaan penjagaan kesihatan teras, pesakit tidak berpuas hati dengan kecukupan sumber penjagaan kesihatan dan proses pentadbiran penjagaan kesihatan. Secara umumnya, model kajian menawarkan pemahaman yang baik tentang faktor-faktor yang mempengaruhi hubungan antara kepuasan pengguna (pesakit) terhadap FM penjagaan kesihatan dan teras perniagaan penjagaan kesihatan. Penemuan kajian menunjukkan bahawa institusi penjagaan kesihatan harus sedar bahawa perkhidmatan FM penjagaan kesihatan yang berkualiti adalah salah satu cara untuk organisasi penjagaan kesihatan tetap relevan di mata pesakit. Oleh itu, kajian ini mengesyorkan bahawa hospital penyelidikan yang dikaji di Ghana harus bermatlamat untuk mencapai perkhidmatan penjagaan kesihatan berpandukan pesakit yang disampaikan dengan berkesan juga meningkatkan kualiti perkhidmatan FM dan teras penjagaan kesihatan mereka, memandangkan kepuasan pesakit membawa kepada kesetiaan pesakit

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LIST OF ABBREVIATIONS

FM	-	Facilities Management
ASPECT	-	A Staff and Patient Environment Calibration Toolkit
PCD	-	Privacy, Company and Dignity
VNO	-	Views, Nature and Outdoors
CAC	-	Comfort and Control
LOP	-	Legibility of Place
IAP	-	Interior Appearance
TAN	-	Tangibles
EMP	-	Empathy
REL	-	Reliability
RES	-	Responsiveness
ASS	-	Assurance
FAC	-	Facilities
MFA	-	Maintenance Factors
QHD	-	Quality of Healthcare Delivery
QHP	-	Quality of Healthcare Personnel
AHR	-	Adequacy of Healthcare Resources
QAP	-	Quality of Administration Process
PS	-	Patients Satisfaction
CHD	-	Core Healthcare Delivery
GSA	-	General Satisfaction
OPD	-	Out-Patient-Department
SEM	-	Structural Equation Modelling
PLS	-	Partial Least Square

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CHAPTER 1

INTRODUCTION

1.1 Introduction

The delivery of healthcare is challenged by a wide range of problems. The fact still remains that patients go through challenges on a daily basis worldwide in the course of receiving healthcare (WHO, 2007; Shohet, 2006; Slawomirski, et al., 2017; Mannion and Braithwaite, 2017; WHO, 2017; WHO and UNICEF, 2018). This disturbing truth must be acknowledged and necessary actions taken to correct the problems that are contributing to unsafe healthcare (WHO, 2007; Protzman et al, 2011; Hansson et al., 2015; Montag, 2017). Hospitals must therefore continually bring up to the right standard, all their facilities and equipment (Lennerts et al., 2005; Brandenburg et al., 2015; Ogembo-Kachieng'a and Ogara, 2004). This will help address healthcare challenges and that is specifically what healthcare facilities management (FM) seeks to ensure.

Healthcare facilities management (FM) is challenging. Therefore, complex buildings like hospitals with several properties that function mostly on a daily basis should always be innovative in order to extend the facilities and equipment life cycle (Rani et al., 2015; Kendall, 2018; Lavy and Shohet, 2010; Pakrudin et al., 2017). The solution is to promote an environment and support systems that aid modern healthcare and increase patients' healthcare experience (WHO 2007; Weller et al., 2014; Epstein et al., 2010; Chew et al., 2007; Bajpai, 2014). There is therefore the need to strategically transform the traditional practices to achieve better performance of healthcare facilities (Rani et al., 2015; Zawawi et al., 2011; Atkins and Brooks, 2015; Baaki et al., 2016).). This is what this study seeks to achieve, to attain best value in service quality for both healthcare FM and core healthcare business which will have a positive impact on patient satisfaction.

Achieving best value in service quality and improving customer satisfaction are strategic to FM (Atkin & Brooks, 2009; Atkin & Brooks, 2015; Pheng and Zhu, 2016; Dibb et al., 2005). Thus, there is the need to give special consideration to service quality of healthcare facilities as it will lead to an increase in patients' satisfaction (Bajpai, 2014; Mosadeghrad, 2014; Bloom et al., 2015; Chepkonga & Nyaga, 2019). Patients' satisfaction with healthcare facilities management is determined by a patient's complete assessment of experience with hospital services (Farooq et al., 2016; Dansereau et al., 2015; Berkowitz, 2016). Thus, there have been some studies concentrating on healthcare facilities management services, healthcare service quality and patient satisfaction (Adhikary et al., 2018). However, most researches have centered on the assessment of healthcare basic services and medical care (Elleuch, 2008; Lim & Tang, 2000b; Junewicz and Youngner, 2015; Farooq et al., 2016). However, even though it is necessary to deliver excellent core services, patient healthcare experience satisfaction goes beyond only that (Padma et al., 2010). Therefore, in a healthcare environment that normally operates on a 24/7 basis, FM efficiency is paramount as there is the need to improve efficiency to impact positively on the comfort, health and safety of the healthcare users (Herman, 2011; Brandenburg et al., 2015).

In summary, patient satisfaction is very vital to FM as patients are currently more conscious and better informed on the importance of service quality (Pheng and Zhu, 2016; Andaleeb, 1998). According to Pheng and Zhu (2016) patients' assessment of hospital service is now centred on personal experience, making user-oriented approach to both healthcare FM and core healthcare business vital to increase complete patient satisfaction. FM professionals claim that in a healthcare environment, the adoption and institutionalisation of FM will impact positively on core healthcare business and enhance patient satisfaction. Evidences of such claim are important as it will enhance the rationale of adoption and institutionalisation of FM services in Ghanaian hospitals. In Ghana, FM is in very infantile stages; therefore, the management of healthcare institutions require solid reasons to convince themselves that the institutionalisation of FM is very necessary. Hence, it is critical and necessary to conduct a study to investigate the relationship between user satisfaction of healthcare FM and core healthcare business in Ghanaian teaching hospitals.

1.2 Research Background

In Ghana, the health sector is operated in a decentralized manner with proven tools to manage policy formulation, resource mobilization, policy execution and monitoring and evaluation of healthcare activities. The Ministry of Health is in charge of decision making in health matters and the sector is divided into policy-making and service delivery arms (Ghana Health Service, 2015; de-Graft Aikins and Koram, 2017; de-Graft Aikins, 2018). Healthcare delivery in government owned facilities are done by the Ghana Health Service. Civil Society Organizations (CSOs) also have a stake in health delivery at the community levels; with the faith-based institutions and private sector accounting for the remaining 40% of healthcare delivery. Health service delivery in Ghana is at the national, regional and district with tertiary, regional and district hospitals. In addition, the district level is further distributed into various sub-districts which combine community-level health delivery system (Ghana Health Service, 2007; Ghana Health Service, 2015; de-Graft Aikins, 2018; de-Graft Aikins and Koram, 2017).

The Ghanaian healthcare system is confronted with the challenge of improving the health needs and well-being of Ghanaians (Ghana Health Service, 2007; Addae-Korankye, 2013; Ghana Health Service, 2015; Atinga et al., 2015; Adua et al., 2017; de-Graft Aikins and Koram, 2017). The health sector has gone through various modifications in the past decades. Initially, its services were focused on curative care rather than preventive care depending to a large extent on programmes that were donor driven (de-Graft Aikins and Koram, 2017). There are roughly 2,262 public and private hospitals in Ghana, the government owned ones are about 1,108. These include ten regional hospitals, 75 district hospitals and 622 health centres (Ghana Health Service, 2007; de-Graft Aikins and Koram, 2017).

Although the public hospitals form about 50% of the total number of hospitals, they employ about 75 percent of all health personnel. The public hospitals therefore need to develop their service quality so as to favourably compete with their private counterparts (Atinga et al 2011; Ghana Health Service, 2015; de-Graft Aikins and Koram, 2017). Although the utilization of healthcare service has improved drastically over the years, there has not been any substantial upgrading in healthcare

equipment and personnel as well as service quality (de-Graft Aikins and Koram, 2017). Thus, most public hospitals centred research overwhelmingly show that healthcare users are not satisfied with the quality of service (Atinga et al., 2015; Adua et al., 2017). According to the Ghana Health Service (2007) and de-Graft Aikins (2018) quality assurance as well as quality-associated activities from healthcare providers and facilities are undependable and not well structured at both national and regional levels. This, the study believe should not be the case as with prudent management of both the quality of core healthcare business and healthcare FM service can be remedied.

Figure 1.1 is a map of Ghana showing the location of the three surveyed teaching hospitals that formed the basis of this particular study.

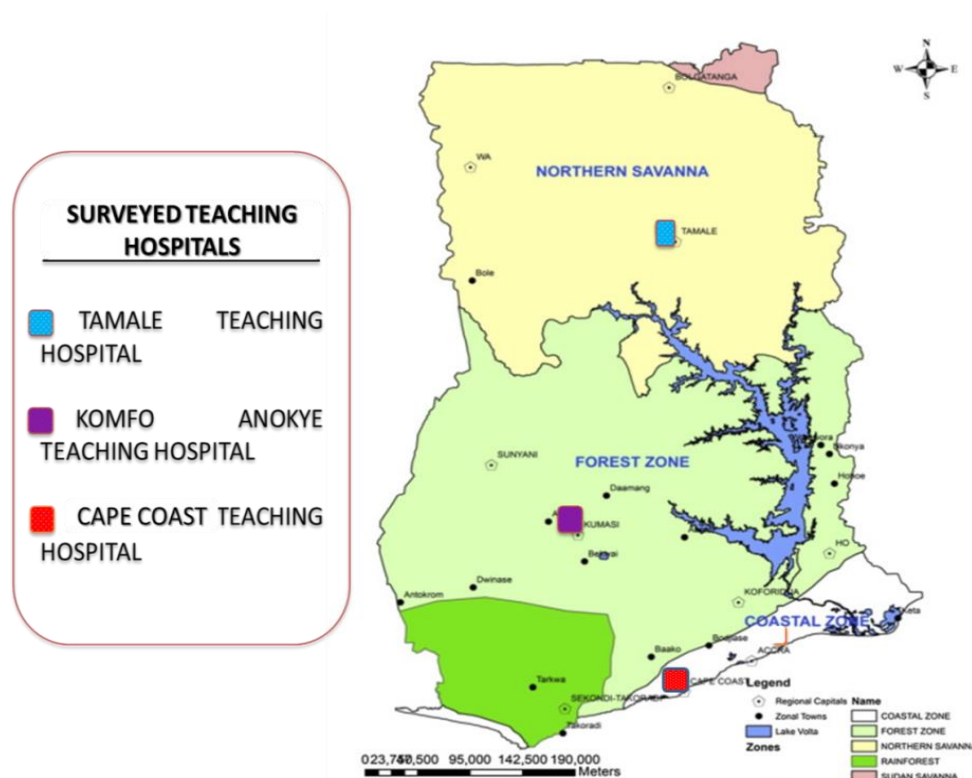


Figure 1.1: Map of Ghana

Service quality assessment has been applied in hospital evaluation of patient satisfaction with healthcare services (Abuosi and Atinga, 2013; Atinga et al., 2015). Healthcare customers (patients) from developing countries are gradually developing

a consciousness of their right to quality healthcare (Abuosi and Atinga, 2013; Nketiah-Amponsah and Hiemenz, 2009). Therefore, the need to provide quality services in healthcare delivery is increasing. According to Smith et al. (2006) and Abuosi and Atinga (2013) the various stakeholders in the healthcare industry; including government, institutions and healthcare clients are now increasing their call for higher service quality as all healthcare consumers prefer quality services that ensures value for money (Lee et al., 2000). Research by Andaleeb (1998) in Egypt, Yip et al. (1998) in China, Mostafa (2005) in Bangladesh, Rani et al (2015) in Malaysia all point to the fact that patients' perceptions of their overall healthcare service quality experience has a strong influence on service satisfaction.

1.3 Problem Statement

The ultimate aim of every healthcare institution is to provide a healthcare experience that will be to patients' satisfaction; however, this has so far been unattainable for most hospitals as an assessment of patients' satisfaction show most patients are dissatisfied with their overall healthcare experience (Atinga et al. 2011; Abuosi and Atinga 2013; Pheng and Zhu, 2016; Atinga et al. 2015). This assertion seems quite surprising, considering efforts stakeholders make to improve patients' satisfaction, by allocating a lot of funds in support of quality health care delivery.

Studies show that customer satisfaction depends on the service quality provided because service quality is a determinant of customer satisfaction (Lee et al., 2000; Wen-Yi et al., 2009; Wilson et al., 2008). According to Zeithaml *et al.* (1990) and Pheng and Zhu (2016) it is very challenging to assess service quality than product quality since services are intangible, diverse and inseparable. In establishing the association between customer satisfaction and service quality, researchers such as Ahmed et al. (2010) in the telecom sector of Pakistan, Peng and Moghavvemi (2015) in the banking sector of Malaysia, Etemad-Sajadi and Rizzuto (2013) in the fast-food industry in China and Switzerland and Kitapcia et al. (2014) in the healthcare industry in Turkey all concluded that service quality improvement is key to customer satisfaction and competitive success as there is a significant connection between

customer satisfaction, service quality, word of mouth and repurchase intentions. Thus, for customers to be continually satisfied and for service and product providers to stay relevant in the eyes of customers they need to maintain a high level of product and service quality. Hence, delivering high-quality healthcare services is very important as patients' satisfaction is dependent on an assessment of their overall experience with hospital services (Johnson & Fornell, 1991; Wang et al, 2016; Lv et al, 2016).

In the healthcare sector, it cannot be denied that patients' satisfaction with their healthcare experience is influenced by the service quality of both core healthcare business and healthcare FM. One area where FM is very critical is that of hospitals and healthcare facilities as they are one of the most difficult, expensive and thought-provoking buildings to manage (Pheng and Zhu, 2016). Studies show that there are challenges of poor services and user dissatisfaction with service quality among healthcare facilities in both developed and developing countries (Andaleeb, 2007; Malik et al., 2018; Musoke et al., 2014; Nasim et al., 2014; Thu et al., 2015; Pheng and Zhu, 2016).

Assessing user service-quality perceptions, expectations and satisfaction is important as it has substantial impact on patient well-being and treatment result (Abuosi and Atinga, 2013; Clemes et al., 2008; Wang et al, 2016; Lv et al, 2016). Lennerts *et al.* (2005) opined that patients are at times direct customers of FM services whereas other times they are indirect customers. A review of past research on the relationship between user satisfaction of healthcare FM and core healthcare business, revealed that very few research have been conducted on the relationship between healthcare FM and core healthcare business by testing the relationship between FM basic framework (*people, place, process, technology*) and core healthcare business dimensions (*quality of the healthcare environment, service quality, adequacy of healthcare resources and healthcare infrastructure and equipment*). Consequently, it is essential to research specifically on these core dimensions to evaluate the complete healthcare service quality level in order to identify areas that need improvement.

FM is very important for hospitals because there are claims that FM will impact positively on core business and improve customer satisfaction (Atkin and Brooks, 2009; IFMA, 2004; Atkins and Brooks, 2009; Cotts *et al.*, 2010; Pitt and Tucker, 2008; Chotipanich, 2004; Amaratunga & Baldry, 2003; Wauters, 2005). Evidences of such claim are important as it will enhance the rationale for institutionalisation of FM services in Ghanaian teaching hospitals. A review on patients satisfaction with their overall healthcare experience showed evidences from studies mainly conducted in Asia, (see Choi *et al.*, 2004; Sutharjana *et al.*, 2013; Patawayati *et al.*, 2013; Hu *et al.*, 2011; Kim *et al.*, 2012; Lei and Jolibert, 2012; Wu, 2011; Amin and Nasharuddin, 2013; Zarei *et al.*, 2014), Europe (see Moreira and Silva, 2015; Lonial *et al.*, 2010), and America (see Woodside and Frey, 1989) but little evidence of the relationship between user satisfaction with healthcare FM and core healthcare business in Africa. To fill this gap, the current study seeks to examine the relationship between patients' satisfaction with healthcare FM and core healthcare business in Ghana which typifies Africa.

Patients' satisfaction is multi-faceted and is particularly important to the healthcare industry. This is because delivering excellent service is necessary to help hospitals maintain user (patient) satisfaction and loyalty (Hussain *et al.*, 2019). Quality FM service as perceived by the user has an effect on the perceived value of the healthcare service rendered. Therefore, most health facilities can make use of FM service as an effective competitive tool (Shohet, 2006). To accomplish a superior customer satisfaction with FM of hospitals, studies on the relationship between healthcare FM and healthcare core business is deemed appropriate to enable excellent service quality to be delivered by the healthcare provider, as service quality is considered as the source of customer satisfaction (Hussain *et al.*, 2015). Customer satisfaction and service quality have been confirmed from previous researches as being positively associated (Budianto, 2019; Jiang *et al.*, 2019). However, few studies had assessed the service quality of healthcare FM and core healthcare business dimensions directly to see the influence the different dimensions have on each other. Hence, it is essential to assess the direct association between each of the healthcare FM and core healthcare business dimensions and patients satisfaction. In relation to the factors that were used to examine healthcare FM and core healthcare business in the previous studies, the review shows that these factors did not

specifically take into consideration the FM basic framework. This gap is addressed by this current research by assessing healthcare FM based on the FM basic framework (Place: *Healthcare Healing Environment*, Process: *Healthcare FM service Quality*, Technology: *Healthcare Infrastructure and Equipment* and People: *Patients*). This is because there are gaps and unanswered questions in the area of quality of healthcare healing environment, healthcare FM service quality and the influence of the quality of healthcare infrastructure and equipment on core healthcare performance and its effect on patients satisfaction with their overall healthcare experience.

Although researchers like Turkson (2009), Ghana Health Service (2007), Abousi and Atinga (2013), Addae-Korankye (2013), Ghana Health Service (2015), Adua et al. (2017), and de-Graft Aikins and Koram (2017) have studied healthcare service quality and patient satisfaction in Ghana, there is a gap as many questions remained unanswered in the area of Healthcare FM (quality of healthcare healing environment, FM service quality, and the quality of healthcare infrastructure and equipment) and its influence on core healthcare business performance and user satisfaction. In short, there are only a few proven empirical data regarding patients' satisfaction with healthcare FM using Structural Equation Model (SEM) that combines proven quality assessment tools such as A Staff and Patient Environmental Calibration Toolkit (ASPECT), SERVQUAL and core healthcare dimensions as a measuring tool. The question therefore is “what is the significant relationship between user satisfaction of the healthcare FM of public teaching hospitals using the FM basic framework, that is, the place, the process, the people and the technology” and core healthcare dimensions.

In summary, this study aims to fill four basic gaps. Firstly, there are minimal studies of this nature. This is a comprehensive and holistic study to investigate the relationship between user satisfaction of healthcare FM and core healthcare business dimensions. Secondly, there are claims by Amaratunga & Baldry (2003), Wauters (2005), IFMA (2004), Atkin & Brooks (2009) and Atkin & Brooks, (2015) that facilities management can enhance the core business value, not very much research has been done on it thus, the need for more research to buttress these claims. This study therefore seeks to test this in a healthcare setting. Thirdly, there are very little

of such study in a multi-tribal / multi-cultural environment. This study examines user satisfaction with healthcare FM and its influence on core healthcare business in a multi-tribal / multi-cultural environment in Ghana. Lastly, to the best of the researcher's knowledge, this study is one of the pioneer works with the intention to provide empirical evidence that FM can enhance the value of core healthcare business, conducted through Structural Equation Model (SEM) in Africa in general and Ghana in particular.

1.4 Research Questions

The following research questions have been set to guide the research on the relationship between user satisfaction of healthcare FM and core healthcare business:

1. To what extent are patients satisfied with the quality of healthcare facilities management?
 - a. Does healthcare FM (healthcare healing environment, FM service quality and healthcare infrastructure and equipment) of the surveyed teaching hospitals have a significant influence on patients' satisfaction?
2. What is the influence of facilities management's core elements (people, place, process, and technology) in contributing to core healthcare business?
 - a. Does healthcare healing environment have an influence on core healthcare business (healthcare delivery, healthcare personnel, adequacy of healthcare resources and healthcare administrative process)?
 - b. Does FM service quality have an influence on core healthcare business (healthcare delivery, healthcare personnel, adequacy of healthcare resources and healthcare administrative process)?
 - c. Does healthcare infrastructure and equipment have an influence on core healthcare business (healthcare delivery, healthcare personnel, adequacy of healthcare resources and healthcare administrative process)?

3. What are the perceived views of patients on the influence of core healthcare business in contributing to patients' satisfaction of the quality of health facilities and services?

Does core healthcare business (healthcare delivery, healthcare personnel, adequacy of healthcare resources and healthcare administrative process) of the surveyed teaching hospitals have a positive significant influence on patients' satisfaction?

1.5 Research Objectives

The whole aim of this study is to determine the relationship between user satisfaction of healthcare FM and core healthcare business of teaching hospitals in Ghana. Based on the research questions, the research objectives of this study are stated as follows:

1. To examine patient satisfaction with the quality of healthcare facilities management.
2. To determine the influence of facilities management's core elements in contributing to core healthcare business.
3. To explore the influence core healthcare business has in contributing to patients' satisfaction of the quality of healthcare facilities and services.

1.6 Research Scope

The study quantitatively examines the relationship between user satisfaction of healthcare FM service based on the FM basic framework (*people* - patients, *place* – healthcare healing environment, *processes* – FM service quality and *technology* –

quality of healthcare infrastructure and equipment) and core healthcare business (*healthcare personnel, healthcare delivery, adequacy of healthcare resources and healthcare administrative process*) of public teaching hospitals in Ghana with specific reference to Komfo Anokye Teaching Hospital in Kumasi, Cape Coast Teaching hospital in Cape Coast and Tamale Teaching hospital in Tamale. According to Yin (2009) profound understanding of a phenomenon depends on choosing the best possible case. Therefore, these health facilities were strategically chosen because they are the hospitals in Ghana where research shows the role of FM is more defined and it is important to find out after many years of operation, the FM and core healthcare business challenges they are facing based on patients assessment, in order to improve patients' overall healthcare experiences. The study was limited to the patients of these teaching hospitals because they are the users who are directly impacted by both the quality of healthcare FM and core healthcare business of these healthcare facilities.

1.7 Outline of Research Methodology

This research adopted the quantitative method approach. According to Yin (2009), this approach helps to address more complicated research questions and attain high reliability and validity of the research. Data gathering was limited to the patients of the surveyed health institutions as they are more directly affected by the impact of the FM practices on core healthcare business. Figure 1.2 presents a brief overview of the process for this research. Details are provided in chapter 4.

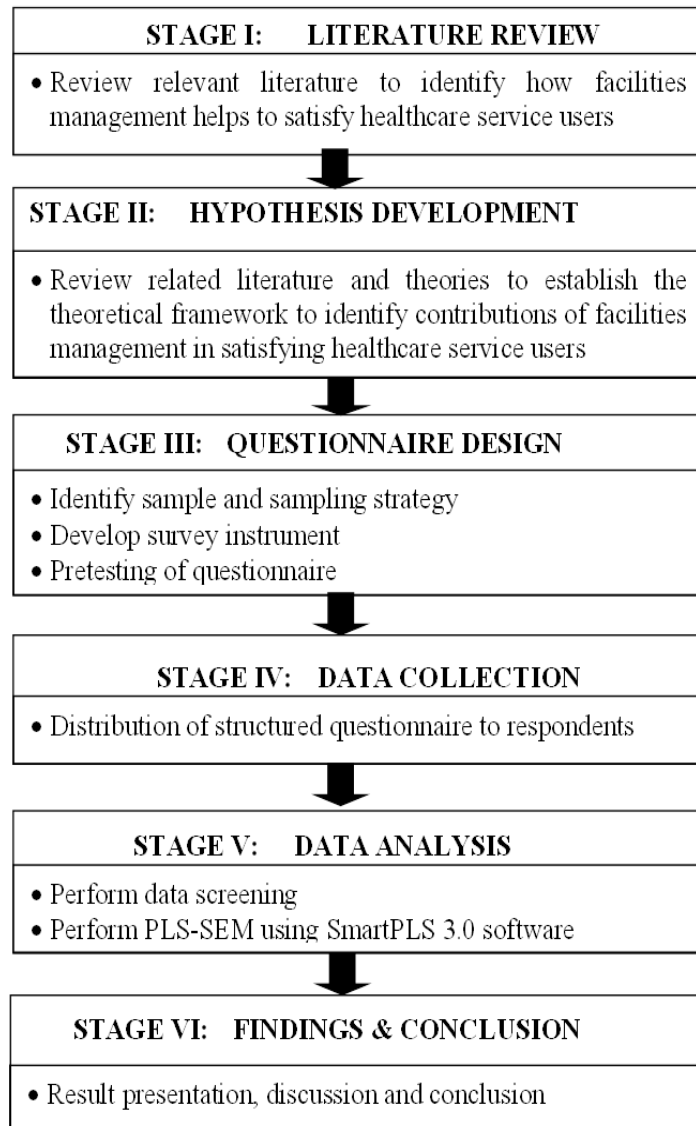


Figure 1.2: Research flow chart

1.8 Significance of the Research

Other studies have been conducted to evaluate user satisfaction per the quality of healthcare FM service, the quality of healing environment in healthcare facilities as well as user satisfaction with healthcare services at the individual level. However, to the best of the knowledge of the researcher, there has been no significant research or at best very minimal research that seeks to assess user satisfaction of healthcare FM delivery and its influence on core healthcare business, that incorporates the totality of the FM concept, that is, incorporating the “*Place, People Process and Technology*” and core healthcare dimensions; “*healthcare*

delivery, healthcare personnel, adequacy of healthcare resources and healthcare process” into a single study; especially in a developing country, in Africa, where the practice of FM is in the infantile stage. Therefore, this study has contributed to knowledge and academia by adding to the literature on healthcare FM in general and that of a developing country in Africa in particular. The findings and discussions on patients’ satisfaction assessment on the effect of FM service delivery on the core healthcare business would enhance knowledge.

1.9 Organisation of the Thesis

The thesis was organised into seven chapters which are outlined below:

- Chapter 1: This chapter provided an overview of the complete research covering the background, problem statement, research questions, and objectives, scope of study and brief overview of methodology.
- Chapter 2: The chapter reviewed and summarised relevant literature relating to FM and healthcare facilities. It also covered topics such as the customer concept, service quality and customer satisfaction.
- Chapter 3: The chapter reviewed the Total Quality Management theory, the quality of the healthcare healing environment, FM service quality and the quality of healthcare infrastructure and equipment and core healthcare delivery dimensions based on which the research framework and hypotheses were developed.
- Chapter 4: The chapter outlined and explained the methodology employed in the study. It explains various parts of the study including philosophy, research approach, design, data collection and data analysis procedures. The chapter also reviewed the research instrument
- Chapter 5: This chapter presented the analysis and discussions to determine the relationship between user satisfaction of the

quality of healthcare FM practices and core healthcare business in Ghanaian teaching hospitals.

Chapter 6: This chapter presented the key study findings and implications of the results.

Chapter 7: This final chapter concluded the study by summarising the key study findings, contributions and limitations of the study and suggestions for further study.

1.10 Summary

The aim of this research is to provide a comprehensive insight into patients' assessment of their overall healthcare experience (both healthcare FM and core healthcare business) in Ghanaian Teaching hospitals. This chapter introduced the background, importance and motivation of the research. The aims of the study and the research questions and objectives were then presented followed by an overview of the methodology, then the significance of this research. Finally, the structure of this thesis was outlined with a brief description of each chapter. The following chapter (Chapter 2) reviews the existing literature in order to develop a clear understanding of facilities management, healthcare facilities management, customer service, service quality and patients' satisfaction.

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