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PERCEPTIONS AND EXPECTATIONS OF SERVICE QUALITY IN GRADUATE MEDICAL EDUCATION: A CASE STUDY OF AGA KHAN UNIVERSITY

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VT OMNES VNVM SINT

A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR MASTER OF BUSINESS ADMINISTRATION (MBA) DEGREE OF STRATHMORE UNIVERSITY

MARCH, 2023

DECLARATION

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other University. To the best of my knowledge and belief, the dissertation contains no material previously published or written by another person except where due reference is made in the dissertation itself.

Dorothy Kamya Student No: 134953

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ABSTRACT

Good Service Quality (SQ) builds a foundation for consumer loyalty and competitiveness. It is recognized that a differentiation strategy focused on great service quality can give a strong competitive advantage. The need to measure the quality of service in medical education is increasingly important as, globally, the number of institutions offering medical education grows. This growth is reflected in the Kenyan context, posing a strong competitive threat for existing institutions of higher medical education such as the Aga Khan University, Nairobi. There is a lack of knowledge about how graduate medical students and academic staff feel about service quality in medical education and competitiveness. The study objectives were to explore medical students and academic staff's expectations and experiences of service quality of the medical education at AKU, N. and to discover their opinions about the importance of service quality for competitiveness in graduate medical education. Employing a qualitative research design and using a modified SERVQUAL tool, in-depth interviews with AKU, N. students and academic staff were conducted. Inductive thematic analysis of the data yielded key themes. The findings show that although SQ at AKU, N. is high in tangibility and assurance, there are gaps – both in the students' perceptions and expectations of SQ and in faculty and managers' understanding of what students value. Although tangibility was rated highly by both, it was seen as the least important of all dimensions of SQ. There were differing opinions between students and managers about the relative importance of the five dimensions of SQ and both these stakeholders related different aspects of SQ to competitiveness in GME. The study concludes that although service quality is well rated in tangibility and assurance at AKU, N., there are gaps which are amenable to managerial input and improvement. Recommendations are that there should be initiatives to measure and mitigate service quality gaps where possible, as part of ongoing quality assurance and improvement at AKU, N. More broadly, this first-of-its-kind study offers a basis for further investigation, and perhaps strategic changes in direction to focus on SQ as a competitive force in education.

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Key words: *Graduate medical education, service quality, competitive advantage.*

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ABBREVIATIONS AND ACRONYMS

AKU, N	Aga Khan University, Nairobi
CUE	Commission for Universities' Education
GME	Graduate Medical Education
ICT	Information and Communications Technology
JCI	Joint Commission International
PGME	Postgraduate Medical Education
SQ	Service Quality
SERVQUAL	Service Quality tool for measurement

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DEFINITIONS OF KEY TERMS

Commission for Universities Education (CUE)	The national accreditation authority for higher education, including graduate medical education in Kenya.
Graduate Medical Education, (GME	The process by which generalist medical doctors train to become medical specialists.
Higher Education (HE)	Post-secondary education undertaken in universities, colleges and professional schools, leading to the qualification of a degree, diploma or certificate of higher studies.
Medical Education:	The process of training and education in undergraduate and postgraduate medicine.
Medical Specialist:	Doctor that has undergone further postgraduate training to become a certified expert in that field, such as ophthalmology, paediatrics, anaesthesia or pathology.
Medical Student	A student that is studying for their first qualification in medicine. They are not a specialist.
Postgraduate Medical Education (PGME)	Another term that describes the process by which generalist medical doctors train to become medical specialists.
Service Quality	A measure of how an organization delivers its services compared to the expectations of its customers.

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CHAPTER ONE

INTRODUCTION TO THE STUDY

1.0 Introduction

This chapter gives the background of the study, describing the setting for the study, the rationale and the key concepts of service quality, graduate medical education and competitiveness. The research objectives and the questions are shown. Finally, the scope and the implications of the research are described.

1.1 Background Information

Since the beginning of the 21st century, higher education has been driven towards commercial and financial competitiveness as a result of the economic forces wrought by an expansion of global education markets and a reduction in governmental funding. Beyond considerations of academic standards, accreditation and education, research and the quality of graduates, educational managers are forced to consider the competitiveness of their institutions, in comparison to others in the sector, because this impacts their rankings and status, thereby their capacity to attract students, funding and prestige (Hanaysha, 2011; Mahdi & Almsafir, 2014; Wijetunge, 2016).

Funding for higher education comes from governments through national research and educational bodies, non-governmental agencies, private sponsors, donors, and self-sponsorship at an individual student level (Adams et al., 2016; Camilleri, 2021; Talib, Narayan, & Harrod, 2019). The educational reputation, and thus attractiveness for funding derives from product quality and service quality (Aizenberg & Logio, 2020; Pringle & Huisman, 2011; Yeo & Li, 2014). In the current climate, changing economic conditions mean that there is increased competition for funding, resources and students between educational institutions; students are more discriminating, state funding mechanism are leaner and non-governmental sources of funding are more selective – leading to a greater focus on quality (Hefer & Cant, 2014). Thus, educators are increasingly accountable for the quality of the education provided by their institutions – with an emphasis on performance indicators that include measures of how students rate the quality of their educational experience (Aizenberg & Logio, 2020; Mahat, 2019; Pringle & Huisman, 2011).

Service quality in education is regarded as a key to organizational progress and competitive survival (Aizenberg & Logio, 2020; Yeo & Li, 2014). There are multiple definitions of service quality and diverse instruments for its measurement (Calvo-Porral, Lévy-Mangin, & Novo-

Corti, 2013; Camilleri, 2021; Hill, 1995; Sultan & Wong, 2013). Parasuraman and colleagues' definition encapsulates the most widely accepted definition of SQ: a measure of how an organization delivers its services compared to the expectations of its customers (Zeithaml & Parasuraman, 2004).

Graduate Medical Education (GME) is a form of higher education by which generalist medical doctors train to become specialists, such as surgeons, anaesthetists, pathologists, obstetricians and paediatricians. Graduate medical students are the specialists and doctors of the future – expected to deal competently with a myriad of physical and psychological ailments in their patients. Thus, the quality of the education and training that they undergo impacts directly on the quality of their work (Da Dalt et al., 2010; Torralba & Katz, 2020). The quality of medical care is affected by the quality of the medical training that students receive. GME presents an interesting and distinctive setting in which to evaluate service quality. This is because, although general quality and specific accreditation frameworks exist that define and assess the quality of graduate medical education (GME), the dimension of service quality can often be cursory or missing in these frameworks (Torralba & Katz, 2020).

The need to measure the quality of service in medical education is increasingly important as, globally, the number of institutions offering medical education grows and competition for funding stiffens (Mahat, 2019; Hefer & Cant, 2014). The total number of medical schools in the world in 2020 was 3323, up from 1900 schools in 2007 (Bedoll, van Zanten, & McKinley, 2021). Kenya has seen a commensurate increase from four to thirteen medical schools (Ministry of Health, 2015). In an increasingly competitive environment, higher education institutions need to become more efficient and participate in a competitive global market where client expectations are continually rising (Sharabi, 2013). This growth is reflected in the Kenyan context: there is an increasing number of higher educational institutions offering similar programs in the east and central African region, Kenyatta University, Jomo Kenyatta university of Agriculture and Technology in Kenya and the University of Global Health Equity in Rwanda (Health, 2017; Talib, 2019). This development poses a significant threat to existing educational institutions such as Aga Khan University, Nairobi (AKU, N).

At AKU, N, it falls to educational leaders to focus on the competitiveness of the 'product' they offer. By interrogating service quality, they can remain competitive and relevant in an increasingly competitive market. Good service quality builds a foundation for consumer loyalty (Camilleri, 2021; Hefer & Cant, 2014). Without measuring service quality, educational

managers cannot identify the gaps and address them to improve overall quality. With the entry of more competitors into the medical education market, students have more choices. Students rate 'word of mouth' recommendations highly in making the choice of educational institution to apply to (Da Dalt et al., 2010). AKU, N has an active presence on social media platforms that are accessible to the public and other stakeholders including potential students. In the age of social media, Kenyan institutions' presence on social media is a way of marketing and providing information concerning their services (Wamuyu, 2020). Healthcare organizations' social media forums can also be used by consumers to publicly air their dissatisfaction with or complaints about the quality of services (Greaves et al., 2014; Nyongesa, Munguti, Omondi, & Mokua, 2014).

Competition for students comes from established graduate medical education institutions locally, within the region and further abroad – research indicates that many individuals in east and central Africa leave their home country for undergraduate and postgraduate medical education (Miseda, Were, Murianki, Mutuku, & Mutwiwa, 2017; Talib et al., 2019). Moreover, many of those who migrate for educational reasons do not return to their countries of origin, contributing to a significant 'brain' and 'economic drain' which exacerbates the inequity of healthcare in these countries (Talib et al., 2019).

1.1.1 Service Quality

The concept of service quality is well described and applied to many fields – including healthcare, retail, banking, hotels and catering, manufacturing and education. Service quality can be described as an attitude of the consumer on the global evaluation of a service received; it is the difference between the consumer's expectation of and their perception of the service as received and experienced (Parasuraman, Zeithaml, & Berry, 1988). There are numerous analytic approaches and descriptive models of service quality that have attempted to define and measure service quality (Alijanzadeh, 2018; Akhlagi, 2012). Among them, the Gaps Model, developed together with the SERVQUAL scale by Parasuraman, Zeithaml and Berry (1985), is still the most used (Abukhalifeh & Som, 2015; Bahadori 2015; Camilleri, 2020).

This definition is rooted several prevailing philosophies and definitions that attempted, in the 1970s and 1980s, to describe service quality. Acknowledging the intangibility of the concept of service quality, compared to more tangible definitions of quality of products, processes and outputs – by style, feel, price and fit for example – in 1982, Gronroos developed the conceptual definition of service quality as the difference between a consumer's expectation of service and

their actual experience of the service as received (Kang & James, 2004). Subsequently, the Gaps Model was developed, together with the SERVQUAL scale for measuring service quality (Anantharanthan Parasuraman et al., 1985).

There are five key dimensions of service quality – assurance, empathy, reliability, responsiveness and tangibles – which are encapsulated in Parasuraman's Gaps framework for service quality mentioned in (Abukhalifeh & Som, 2015). Thus: assurance defines the knowledge and courtesy of employees and their ability to convey trust and confidence. Empathy is the provision of caring, individualized attention to customers. Reliability is the ability to perform the promised service dependably and accurately. Responsiveness is the willingness to help customers and to provide prompt service and finally, Tangibility is the appearance of the physical facilities, equipment, personnel and communication materials (Abukhalifeh & Som, 2015, Parasumaran, 1985).

In the Gaps - SERVQUAL model, service quality is a function of perceptions and expectations. Perceptions are the actual experience of service quality by the customer or consumer after the service is received. (Mauri, Minazzi, & Muccio, 2013, Parasuraman, 1985). Expectations are a consumer or manager's expected level of service quality before it is rendered. Consumers' expectations are informed by their personal needs, past experiences, and word of mouth impressions. Thus, these can change according to context, timing, individual customer circumstances (Parasuraman, 1985; Mauri, 2013).

The Gaps -SERVQUAL model broadly defines gaps that exist in both managers' and consumers' perceptions of service quality. Accordingly, there exist four gaps in managers' perceptions of service quality and the tasks associated with service delivery, which can interfere with the delivery of high service quality. Briefly, these are a 'knowledge gap' – between what customers expect and what managers think their customers expect; a 'policy gap' – between managers' understanding of customer needs and the service delivery policies put in place; a delivery gap between service delivery policy specifications and the actual service delivery; a communication gap between what is communicated to customers and actual service delivery.

In addition, one gap exists for consumers – the gap between their expectations of the service and their experience of the actual service delivered (Abukhalifeh & Som, 2015; Mauri, Minazzi, & Muccio, 2013). For this study, the definition above will prevail: SQ is a measure of how an organization delivers its services compared to the expectations of its customers (Anantharanthan Parasuraman et al., 1985). Excellent service quality within this framework is defined as service

that exceeds the consumer's expectations (Abukhalifeh & Som, 2015). As the original SERVQUAL measures SQ quantitatively, a modified version of his SERVQUAL questionnaire will be used to assess qualitatively the service quality in GME at AKU, N.

The importance of service quality in medical education relates to the close relationship between the quality of their education and the quality of the healthcare delivered by medical graduates. Hasan argues that the best way to evaluate the quality of medical education is in terms of the quality of care offered to patient by medical graduates and patient outcomes (Da Dalt et al., 2010; Hasan, 2010; Torralba & Katz, 2020). According to Quinn (2009) and others, the key to knowing whether any quality improvement measures are successful is through performance management of key performance and financial metrics/ indicators (Hasan, 2010). This supposition creates distinct problems when applied to GME. It necessitates a definition (and acceptance) of the concept to be improved – in this case, service quality in graduate medical education.

The definition of education as a service – and the student as a consumer – is still a novel concept in GME. Three decades after the evolution of the SERVQUAL framework of service quality, its application to GME is in the literature is scant – mostly single institution studies in undergraduate medical settings and very few literature reviews or meta-studies (Alijanzadeh et al., 2018; Bolaa & Koyuncu, 2020; Borishade, Ogunnaike, Salau, Motilewa, & Dirisu, 2021; Gilavand & Maraghi, 2019; Mukhopadhyay, 2016).

Furthermore, indicators that clearly relate to the SQ concept in GME must be described and a measuring tool that has validity and reliability in this context should be developed. A consensus on definition of service quality in education and how, once defined, to measure it has been, and remains, obscure (Schijns, 2021; Teeroovengadum, Kamalanabhan, & Seebaluck, 2016). The major challenge is to develop an adequate model for measuring service quality in higher education (Chong & Ahmed, 2012). This difficulty arises from the multidimensional nature of education – the aspects that can be evaluated in making judgements about quality of education vary from campus facilities and responsiveness of staff to curriculum content, teaching practices and empathy (Hefer & Cant, 2014; Schijns, 2021). Adding to the complexity is the existence of multiple measuring instruments.

To date, like in many other institutions of higher medical education, quality indicators for the GME programs at Aga Khan University have focused on input, process and output indicators without explicitly measuring the quality of the medical education as a service that is consumable

(Calvo Porral, 2013; Dos Santos, 2017; Frank 2020). Ideally, educational managers should be aware of the relevance of good service quality with regular assessments of the educational service quality in their institutions (Sharabi, 2013; Yeo & Li, 2014). Thus, identifying and describing students' and managers' perceptions and expectations of SQ can help to frame education as a service, and allow educational leaders to identify gaps that can be addressed as part of the routine institutional quality improvement frameworks.

Empirical studies in this area are commendable and mostly well conducted. Yarmohammadian and colleagues use the Academic Quality Improvement Program (AQIP) framework as a model to evaluate educational quality in 4 Iranian universities, identifying community needs and expectations of the students and faculty (Yarmohammadian et al., 2011). Their model, though comprehensive, does not address *service quality in education* specifically. Likewise, Taber and her colleagues attempt to define a framework for accreditation of GME programs and they propose a useful 'fit-for-purpose' framework that provides guidance to administrators, policy-makers, and educators about different approaches to medical education accreditation and quality assurance (Taber, Akdemir, Gorman, van Zanten, & Frank, 2020). Within this framework is encapsulated a quality assurance aspect but it does not address *service quality* specifically. Thus, these earlier studies do not recognize education as a service, per se.

Mukhopadhyay's cross-sectional study which measured educational quality using the SERVQUAL instrument undergraduate medical students is an improvement, because it focuses on *service* quality in medical education (Mukhopadhyay, 2016). Similarly, Agamholei, Bolac and Bahadori's studies used SERVQUAL to quantitatively evaluate medical students' experience and expectations of SQ in their medical schools (Bolac, 2020; Bahadori,2011). Interestingly, all four studies found negative perceptions of service quality, with unmet expectations for the students – demonstrating low SQ in these institutions. All these studies employed a quantitative approach.

From the few studies conducted about SQ in medical education, it is possible to infer that service quality in medical education is an under investigated issue. From the available studies, it seems that SQ in medical education is poor – it fails to meet medical students' expectations. More studies could help to shed light on the phenomenon.

1.1.2 The Aga Khan University, Nairobi (AKU, N.)

The Aga Khan University, Nairobi (AKU, N.) is a small, private, academic medical centre – a tertiary care health centre that is integrated organizationally and administratively with a medical school (Talib et al., 2019). There are nine postgraduate medical training programs and five programs of basic and advanced nursing and midwifery, with plans to launch an undergraduate medical training program in 2023. There are approximately 130 medical specialists in training at any time, and 25 – 30 graduate from the medical programs every year; an equal number join the program each year. Students spend four years in training and pay tuition fees. To facilitate and support the educational programs at AKU, there are approximately 200 teaching faculty, educational administrators and other support staff. Educational facilities include clinical and didactic teaching spaces, a well-stocked library, computer workstations and wireless ICT, doctors' on-call accommodation and lounge facilities.

The current quality frameworks focus on hospital services, products and processes through the JCI accreditation system. The Joint Commission International (JCI) accreditation provides international health care accreditation services to hospitals around the world (Accreditation, 2005). AKU, N is an academic health centre and as such, JCI standards are focused on organizational functions that are key to the provision of safe, high quality patient care. Although JCI contains a mechanism for assessment of quality of the educational aspect, this is not currently in use at AKU, N – leaving a gap in the assessment of the service quality of educational services.

The recent global expansion of medical schools reflected in the Kenyan context: there is an increasing number of higher educational institutions offering similar programs in the east and central African region (Health, 2017). This development poses a significant threat to existing educational institutions such as Aga Khan University, Nairobi (AKU, N). AKU, N competes collectively alongside the public institutions for students, staff, research funding, fees and status. With the entry of more competitors or substitutes into the medical education market, students have more choices. By investigating the drivers of competitiveness for medical education, existing entities can strategize to maintain or maximise their competitive advantage in a crowded market. Competition in the GME context, includes competition for students, for funding from governmental and non-governmental funders, for research grants, for highly qualified academic staff and for academic reputation (Mahat, 2019). The more students each institution can attract, the more funding, fees and prestige they have. Unlike undergraduate medical schools, GME training institutions can determine how many students they can admit; subject to regulatory bodies' oversight.

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1.2 Problem statement

The need to measure the quality of service in medical education is increasingly important as the number of institutions offering medical education grows and competition for funding, students and academic reputation increases. SQ as a concept in GME is poorly defined and accepted (Da Dalt et al., 2010; Frank et al., 2020). Moreover, existing quality frameworks for GME are mainly process and outcomes orientated and do not adequately capture SQ (Bedoll et al., 2021; Hasan, 2010). For example, accreditation systems for graduate medical education such as the ACGME-i and COSECSA, contain standards for quality assurance in graduate medical education (Frank et al., 2020; Dos Santos et al., 2017). For accreditation, universities provide information about educational processes, curriculum delivery, hospital and classroom based teaching and assessment but the accreditation mechanism focuses little on service quality of the education (Hasan, 2010). Three main approaches to SQ in education are evident in the literature: some studies use or adapt the SERVQUAL model to measure students' expectations and perceptions of SQ (Alijanzadeh et al., 2018; Bahadori et al., 2013), while others modify or attempt to mitigate the shortcomings of the SERVQUAL model (Abdullah, 2006; Teeroovengandum, 2016). Still others aim to define what SQ in higher education (Taber et al., 2020; Frank et al, 2021). Few of these are medical education-focused, leaving a gap.

This enquiry into the service quality of medical education at AKU, N. and its relevance to competitiveness is significant and timely. In a region where there are few studies of its type, the study will address the relative lack of knowledge about how students – the consumers, and managers – the suppliers of educational service perceive and experience SQ and how they relate it to competitiveness.

The healthcare statistics for Kenya and the broader east African region give a stark background for this study. Kenya's doctor-to-patient ratio is approximately 1:16,000, much lower than the 1:1000 recommendation of the UN World Health Organization (Health, 2017). There is a huge overall gap in health specialists across the 46 counties of Kenya (Miseda et al., 2017). Compounding this deficiency is a lack of specialized doctors in remote areas of the country, which forces patients to pay to travel to the capital Nairobi or abroad for treatment. Those whose pockets cannot afford must seek alternative solutions for their healthcare. The lack of specialists in the Kenyan healthcare sector has longer-term implications for the achievement of health-related Millennium Development Goals (MDGs) and Universal Health Coverage (Miseda et al., 2017).

In a crowded marketplace, a differentiation competitive strategy focused on great service quality can and could give a university a competitive advantage (De Haan, 2015; Mahdi & Almsafir, 2014).Without insight into the service quality of the education offered at AKU, and without the capacity to identify and fill gaps detected, AKU, N can quickly be outpaced by nimbler entrants into the market and will become uncompetitive. A lack of focus on service quality by educational managers at AKU could signal a lack of understanding of the importance of the concept, its impact on students as consumers and its impact on competitiveness. Although the study was based at one institution, as a first of its kind in Kenya, it gives insights and open the field for exploration. The methodology can be replicated, and the findings can be a baseline in the field, allowing others in the country and region to conduct further research. The lack of studies that specifically explore the concept of SQ in GME as perceived by students and managers – buyers and suppliers in this market – makes this study and its findings timely and relevant.

1.3 Research Objectives

General purpose

The main purpose of this study was to explore AKU students' and managers' perceptions (experiences) and expectations of service quality of education and their views on the impact of SQ on competitiveness of GME at AKU, N.

1.3.1 Specific objectives

i. To explore students' perceptions and expectations of service quality of education at the Aga Khan University Hospital Nairobi.
ii. To explore managers' perceptions and expectations of service quality of education at the Aga Khan University Hospital Nairobi
iii. To explore students' views of the relevance of service quality for competitiveness of the graduate medical education at AKU, N.
iv. To explore faculty and managers' views of the relevance of service quality for competitiveness of graduate medical education at AKU, N.

1.4 Research questions

i. How do students describe their perceptions and expectations of service quality of education at the Aga Khan University Hospital Nairobi?

ii. How do managers describe their perceptions and expectations of service quality of education at the Aga Khan University Hospital Nairobi?
iii. How do students describe the relevance, if any, of service quality on the competitiveness of the medical education at AKU, N.?
iv. How do faculty and managers' describe the relevance, if any, of service quality on the competitiveness of the medical education at AKU, N?

1.5 Significance of the study

AKU, N policy makers: The study findings provide baseline data on the educational service quality at AKU, N. The findings could give a new strategic focus to education at AKU, N, to reinforce strengths, address weaknesses and take advantage of opportunities in the current system, in order to optimize education delivery and enhance the attractiveness of the GME product of AKU. With this, GME at AKU, N can be competitive, improve recruitment and retention and result in increased satisfaction for students.

Research and methodological: The study contributes to the small body of literature in this area, by adding to it. It forms a basis for future studies. The methodology can be replicated, and the findings are baseline data in the field.

Kenyan government: specifically, the Ministry of Health whose policies drive the provision of quality healthcare across the nation. The Kenya Medical and Dental Practitioners Council (KMDPC) and the Commission for Universities Education (CUE) are likely to be interested in the findings – they are key stakeholders in the GME ecosystem. Graduate medical schools and their affiliated training sites (hospitals and county level healthcare providers) and their accrediting entities.

Medical students and educational managers may benefit by recognizing what makes the GME product competitive, thus putting into place strategic initiatives to address any shortcomings on SQ. Patients and patient advocates benefit when the SQ in GME improves – as this improves the quality of the education received by the future medical practitioners and healthcare providers of the region. Identification of the gaps in service delivery and service quality of education at AKU, N could enable future planning and allocation of resources by educational managers to address gaps. Apprehending managers' understanding of the concept of service quality, as well as their understanding of the state of competitiveness in the Kenyan

GME market of the AKU product, allows exploration of any link between SQ and competitiveness of GME products in Kenya.

1.6 Scope of the Study

The study describes students' and managers' perceptions and expectations of the service quality of the education at AKU, N. and explores their views on the interrelationship of SQ and competitiveness in medical education. The respondents are the key stakeholders of graduate medical education – the providers and the consumers. The context is a single centre – a Kenyan academic medical centre with approximately 160 students and 200 faculty and managers. The study findings help to identify gaps in service quality and stakeholders' views on how SQ impacts competitiveness. The study setting is a single institution and provides baseline insight into the phenomenon of service quality as seen by two important stakeholders in the Kenyan GME context.

CHAPTER TWO
REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter explains two important theoretical models that are relevant to this study and describes their applicability to this study – the Gaps Service Quality model and Porter's Five Forces of Competitiveness. This is followed by an appraisal of the literature relating to studies done in service quality relating to GME and competitiveness. Finally, research gaps identified are described.

2.2 Theoretical foundation

This section describes the Gaps Model of Service Quality that is central to the study. This is described in the literature as the SERVQUAL–Gaps Model, the SERVQUAL model or the Gaps Model of Service Quality. For clarity, GAPS is the model and SERVQUAL is the questionnaire through which gaps in service quality are identified (Anantharanthan Parasuraman et al., 1985). Throughout this dissertation, the model will be referred to as the Gaps Model and SERVQUAL will denote the tool used to measure service quality. The application of the Gaps model to higher education, in the literature is described, with an emphasis on graduate medical education. Its applicability to the study is explored herein.

2.2.1 The Gaps Model of Service Quality

According to the Gaps model, service quality is a function of perceptions and expectations. The model broadly defines gaps that exist in both managers' and consumers' perceptions of service quality. There exist five gaps in service quality – four gaps in managers' perceptions of service quality and the tasks associated with service delivery, which can interfere with the delivery of high service quality (Abukhalifeh & Som, 2015; Mauri et al., 2013).

Thus: Gap 1: *Knowledge Gap* – managers and customers' differing perceptions about what customers want or expect; Gap 2: *Standards Gap* – the difference between managers' perceptions of customer expectations and the standards they set for service delivery; Gap 3: *Delivery Gap* – the difference between the set service standards and the actual service delivered; Gap 5: *External Communication Gap* – the difference between the publicized service quality level and the quality delivered; and Gap 5: *Expectation-Perception Gap* – the difference between the customer's expectation of service and their perception the service.

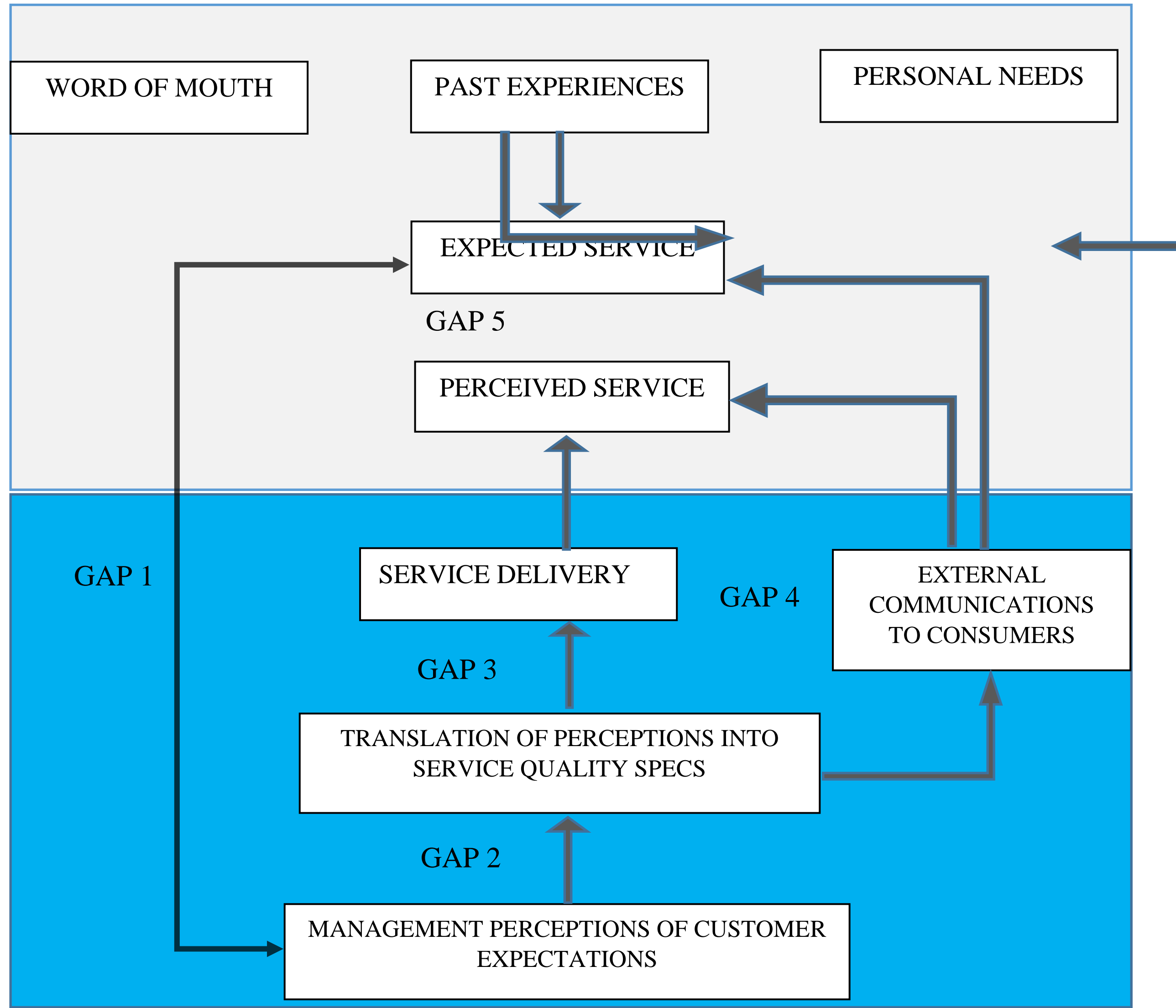

Figure 2. 1: The Gaps Model of Service Quality (Anantharanthan Parasuraman et al., 1985)

The Gaps Model was first proposed and published in 1985 and then further modified (Mauri et al., 2013; Anantharanthan Parasuraman et al., 1985). Based on the definition of good quality as the capability to satisfy consumer expectations, the Gaps Model aims to identify the possible causes for a gap between expected quality and perceived quality and to identify strategies to improve the most important concerns, hence closing these gaps and improving the quality of client service (Abili, Thani, & Afarinandehbin, 2012; Hill, 1995; Mauri et al., 2013). To measure possible SQ gaps, the authors developed a scale named SERVQUAL to assist businesses in diagnosing their service quality gaps (Parasuraman et al., 1988).

The key tenet of this model is that the size of the service quality gap depends on the size and direction of the gaps between the consumer's Expectation (E) and Perception (P) of the service

given. It is therefore possible to assess service quality, as judged by consumers (Bahadori, 2013; Sultan & Wong, 2011). In developing their framework, Parasuraman and his colleagues used insights into manager and consumer perceptions to develop the SERVQUAL tool for measuring service quality. In it, the original ten qualifiers for service quality are merged into 5 dimensions – tangibility, reliability, assurance, responsiveness and empathy.

These are defined thus – Tangibility is the appearance of the physical facilities, equipment, personnel and communication material. Responsiveness is the willingness to help customers and to provide prompt service. Reliability is the ability to perform the promised service dependably and accurately. Assurance is the knowledge and courtesy of employees and their ability to convey trust and confidence and finally, Empathy is the provision of caring, individualized attention to customers (Souca, 2011).

The Gaps model is widely used and applied to assess SQ across the various industries, including education (Bahadori et al., 2013; Bahadori et al., 2011; Gilavand & Maraghi, 2019; Gopalakrishnan, 2014; Lee & Kim, 2017; Quinn et al., 2009; Souca, 2011). Its broad application to education has shown its suitability to this field – providing useful consumer-focused data on service gaps for quality improvement (Gopalakrishnan, 2014; Sultan & Wong, 2011; Yeo & Li, 2014).

The Gaps-SERVQUAL model underpins this study. It explores the gaps in SQ identified in the Gaps model, using a qualitative modification of the SERVQUAL instrument. Most important for this study is the the gap between managers' understanding and perception of consumer expectations in this context is an important aspect of this study. Additionally important is the gap that exists for consumers – the gap between their expectations of the service and the actual service delivered (Abukhalifeh & Som, 2015; Mauri et al., 2013; A Parasuraman et al., 1988).

2.2.2 Porter's Five Forces of Competition

Good service quality has been demonstrated to offer a sustainable differentiation and competitive strategy in many sectors, including education (Abdul-Majeed 2021; Hanaysha, Abdullah & Warokka, 2011; Warraich, Warraich, & Asif, 2013; Wijetunge, 2016). According to Hanaysha and colleagues, student satisfaction is vital in determining the quality of an educational service. In order to be competitive, educational institutions should attract and keep students by offering high quality education – oriented towards both process and service quality (Hanaysha et al., 2011; Moslepour 2020).

A framework of Five Forces of Competition (Figure 2.2) was developed in 1979 by Porter as a way of evaluating the competitive strength and position of any business or organization in a market (Bruijl, 2018; Indiatsy, Mwangi, Mandere, Bichanga, & George, 2014). It is based on the conception that there are five forces that determine the competitive intensity and attractiveness of a market. Among these five forces, and relevant to this study are the power of buyers, the power of the suppliers and the state of competition – competitive rivalry – in the market (Bruijl, 2018; Indiatsy et al., 2014). Exploration of students' perceptions of the quality of the education they receive, as buyers within the broader marketplace, and managers' perceptions of the quality and competitiveness of their educational product, can be informative.

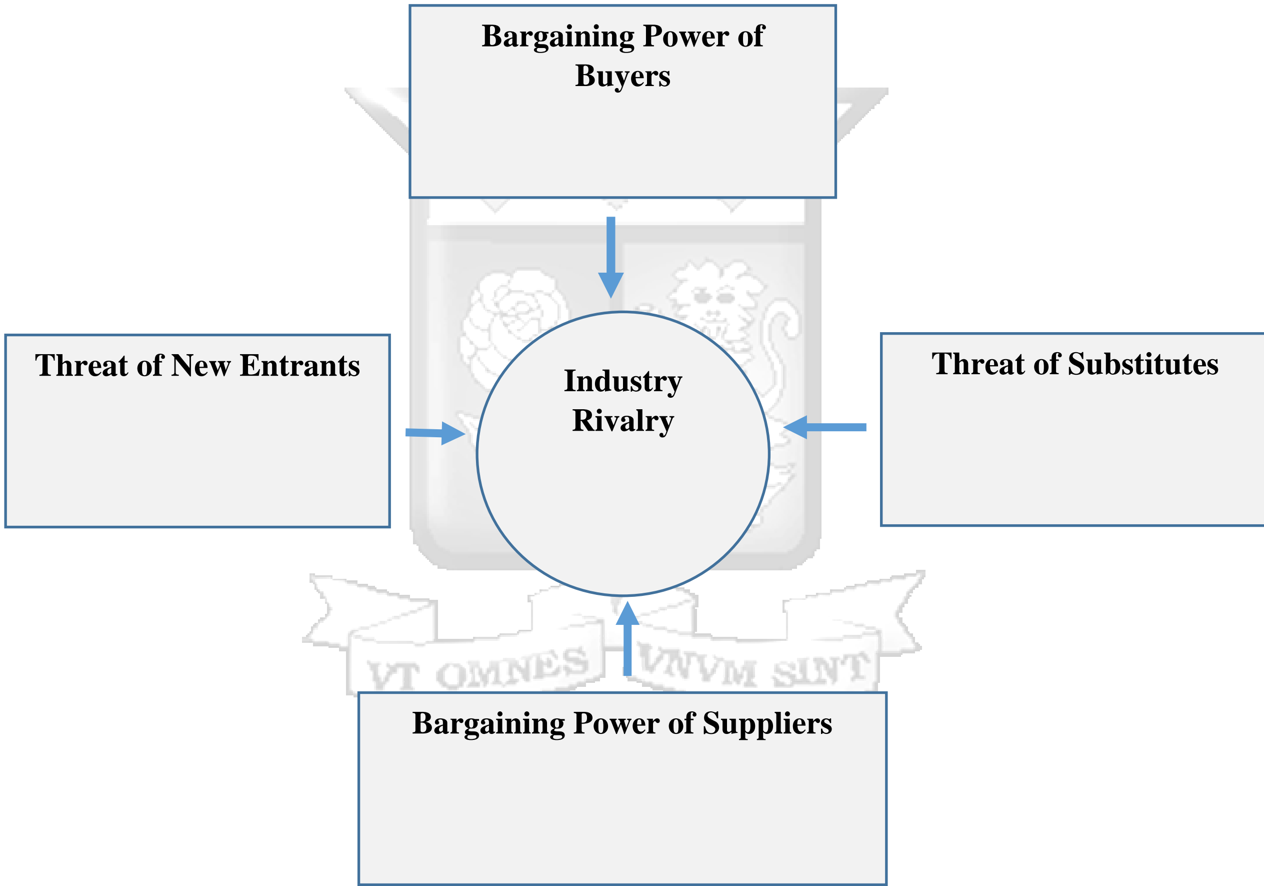

Figure 2. 2: Porter's Five Forces of Competitiveness

Threat of substitution comes from substitute products that can be used as alternatives by consumers. Porter's model stipulates that where close substitute products or services exist in a market, there is an increased likelihood of customers switching to alternatives in response to price increases. Thus, cheaper alternatives can be seen as more attractive by consumers replace costlier products, especially in times of economic strain (Porter, 2008; Zeleza, 2019). With reference to GME in Kenya, institutions offering lower priced alternatives may hold a

competitive advantage, especially if their GME product is seen as a viable alternative to pricier education. Threat of new entry is when markets are seen as profitable, they appeal to new entrants. This can erode the profitability of the market for competitors, by diluting the consumer share (Indiatsy et al., 2014; Mathooko & Ogutu, 2015). If the existing competitors have strong barriers to entry – conditions that reduce the likelihood of new entrants such as economy of scale, patented technologies or huge capital requirements – then profitability will decline to a competitive rate (Porter, 2008).

Students can be considered as the primary 'buyers' or 'consumers' in the GME market (Mahat, 2019). This is because they are the primary consumers of the GME product of medical schools. As they can choose between the competing medical schools, they wield considerable power in the marketplace. According to Pringle and colleagues, the more options the buyer has to choose from, the more power the buyer has. Too, the power of the student as buyer increases as the services offered become more homogenous (Pringle & Huisman, 2011). Within the GME arena, patients, society and regulators can be considered as buyers of the product as well. They wield a moderate amount of power in the market, by demanding quality healthcare from well-qualified graduates (Mahat, 2019). They can influence the GME market structure by their need for more specialized services, in more spaces at higher quality within the healthcare system – and medical schools must align their strategy to meet these needs as well as the needs of their students (Mahat, 2019).
Therefore, in a crowded marketplace, a differentiation strategy focused on great service quality could give a university a competitive advantage.

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Competitive rivalry hinges on the number and capabilities of the competitors in the market. When there are multiple competitors who offer similar, undifferentiated products and services then market attractiveness for consumers goes down. Conversely, when a market has fewer players, competitiveness can improve. In the Kenyan GME setting, the market is seeing a growing number of players, thanks to new entrants. Thus, suppliers of a differentiated product hold a competitive advantage (Zeleza, 2019).

2.3 Empirical review

For the past two decades, the issue of quality improvement in higher education has been increasingly under the spotlight (Akhlaghi, Amini, & Akhlaghi, 2012; Alijanzadeh et al., 2018; Bahadori et al., 2013; Bahadori et al., 2011; Bolaa & Koyuncu, 2020; Borishade et al., 2021; Calvo-Porral et al., 2013; Mukhopadhyay, 2016; Soares, Novaski, & Anholon, 2017). Perusal of

the literature reveals an evolution in since the 1990s to date. Industry standards for quality have been applied to education from the early 1990s – standards such as ISO 9001, Total Quality Management (TQM), Six Sigma and the Baldrige Excellence Framework. This was followed by an increasing focus on quality improvement through education-specific accreditation frameworks such as AQIP (Academic Quality Improvement Program, USA) (Da Dalt et al., 2010; Mukhopadhyay, 2016; Owlia & Aspinwall, 1996; Yarmohammadian, Mozaffary, & Esfahani, 2011).

Literature broadly describes three approaches to service quality evaluation in education. Many studies have used or adapted the SERVQUAL model, reflecting its popularity in the education field (Akhlaghi et al., 2012; Alijanzadeh et al., 2018; Bahadori et al., 2013; Bahadori et al., 2011; Bolaa & Koyuncu, 2020; Borishade et al., 2021; Calvo-Porral et al., 2013; Gilavand & Maraghi, 2019). Other studies attempt to mitigate the shortcomings of the SERVQUAL framework and develop alternative measures of SQ in higher education, giving rise to a multiplicity of other methods (Abdullah, 2006; Bayraktaroglu & Atrek, 2010; Brochado, 2009; Camilleri, 2021; Souca, 2011; Teeroovengadum et al., 2016). Still others aim to define what SQ in higher education is – exploring the dimensional nature of SQ in this field (Abdullah, 2006; Sultan & Wong, 2010, 2011; Taber et al., 2020).

Although educational institutions (graduate medical schools) are increasingly corporate-like entities, according to some authors their primary activity is teaching and learning – itself not a business activity (Griswold, 2021; Quinn et al., 2009). Thus, business derived quality frameworks do not work as well in GME, because teaching and learning are inseparable, occurring simultaneously (Quinn et al., 2009; Sultan & Wong, 2010). In addition, as academic institutions, many graduate medical schools embrace the concept of academic freedom: the freedom of teachers and students to teach, study, and pursue knowledge and research without unreasonable interference or restriction from law, institutional regulations, or public pressure.

Reflecting the global trend, the medical education environment is changing in East and Central Africa. Unlike undergraduate medical education, at postgraduate level, there are fewer training institutions and students can choose the educational establishment that they wish to pursue their studies in (Talib). GME training positions are sponsored at central government or county government level, according to needs, or non-governmental sponsoring agencies. Physicians may also be self-sponsored, especially after a period of time in the workforce (Farmer & Rhatigan, 2016; Talib et al., 2019). Most GME programs are affiliated with public universities

that confer a Master of Medicine degree. Some GME programs in Kenya are affiliated to regional bodies such as the College of East, Central, and Southern African Surgeons (COSECSA) (Ndetei et al., 2010; Talib et al., 2019). The Aga Khan University is currently in the unique position of being the only private university offering GME.

2.3.1 Students' perceptions and expectations of service quality in Graduate Medical Education

Studies specifically focused on service quality in GME are not as prevalent in the literature as those addressing SQ in general higher education. The concept of SQ in healthcare is well established and accepted – hospitals are rated by patients, relatives and other stakeholders for their quality of service, and indeed, the literature reflects this focus (Fatima, Humayun, Iqbal, & Shafiq, 2019; Lee & Kim, 2017). Nearly three decades after the evolution of the SERVQUAL framework of service quality, its application to GME is in the literature is scant – mostly single institution studies in undergraduate medical settings (Aghamolaei & Zare, 2008; Alijanzadeh et al., 2018; Bahadori et al., 2013; Bahadori et al., 2011; Bolaa & Koyuncu, 2020; Borishade et al., 2021; Gilavand & Maraghi, 2019; Mukhopadhyay, 2016).

Many authors' work focuses on Parasuraman's SERVQUAL framework applied in an educational setting (Abdullah, 2006; Bahadori et al., 2013; Bahadori et al., 2011; Borishade et al., 2021; De Oliveira & Ferreira, 2009; Gilavand & Maraghi, 2019; Gopalakrishnan, 2014; Soares et al., 2017; Sultan & Wong, 2011; Taber et al., 2020). These studies directly utilize the SERVQUAL framework to evaluate the gap between students' expectation and experience of five dimensions of educational service (tangibility, reliability, responsiveness, security and empathy). From this perspective, SQ is conceptualized as performance (P) minus expectation (E). Consequently, SQ is maximized when the positive difference between P and E is maximal; in other words, exceeding customer expectations (A Parasuraman et al., 1988; Souca, 2011).

Aghamolaei and Zare applied the SERVQUAL model to measure Iranian medical students' E – P scores in the five dimensions of SQ defined in the model, finding negative EP scores in all (Aghamolaei & Zare, 2008). Similar methodology was applied in Bahadori, Gilavand and Mykhopadhyay's work – with similar findings; in all these studies students indicated that improvement in all five dimensions of SQ was necessary at the institutions studied. A strength of these studies was the authors' evaluation of the Cronbach's alpha coefficients which indicated an adequate reliability for the entire SERVQUAL construct (Aghamolaei & Zare, 2008; Bahadori et al., 2011; Gilavand & Maraghi, 2019; Mukhopadhyay, 2016).

Some African studies of relevance are evident in the literature. Kazungu and colleagues' Tanzanian study is noteworthy. Set in a higher education institution, this mixed-methods study used a modified SERVQUAL tool to measure the SQ perceptions and expectations of 180 students. Like the studies above, students here indicated negative perceptions compared to their expectation in all five dimensions of SQ, with the largest negative gaps in reliability and responsiveness (Kazungu & Kiwia, 2015). Cheruiyot and Maru's exploratory survey of three public universities in East Africa related students' perceptions of SQ to each university's performance, revealing a significant effect of service quality on performance of universities (Cheruiyot & Saru, 2013). Wuhib and colleagues' Ethiopian study utilizes the same methodological approach to measure SQ as perceived by business students (Wuhib, 2016).

Though worthy examples of this approach, the validity of these studies is questionable because of problems related to measuring students' expectations (Teeroovengadum et al., 2016). Expectation-Perception (E-P) discrimination raises psychometric and variance issues. Thus, there are several valid criticisms of the model. Students may have unclear or no expectations of service quality, these expectations may vary over time or may change in relation to current or previous experiences. In a 30-year review of the utility of SERVQUAL, it is found that students' expectations can even be formed simultaneously with perception of the service (Souca, 2011). This is because students' expectations of higher education may be informed by their prior educational experiences at school and such expectations may be quite unrealistic. Zeimthal and colleagues (1994) accepted that this may have a negative influence on perceived service performance (Zeithaml & Parasuraman, 2004). This is termed the expectation-confirmation theory (Mauri et al., 2013). Secondly, negative E-P scores may be revealing of a low SQ; however, low or negative scores in E-P are not necessarily indicative especially when expectations are low. Thirdly, when expectations are low and perceptions are low, the difference between the E-P scores can be minimal – failing to reflect poor service quality (Abdullah, 2006; Arun Parasuraman, Berry, & Zeithaml, 1993; Schijns, 2021; Teeroovengadum et al., 2016).

Another weakness is that these studies are set in single educational settings, only four of which are in the area of medical education (Aghamolaei & Zare, 2008; Bahadori et al., 2013; Gilavand & Maraghi, 2019; Mukhopadhyay, 2016). For example, Mukhopadhyay's 2016 study is a well-conducted, small, cross sectional descriptive study that utilized a modified SERVQUAL instrument to assess service quality in a sample of medical students in India – finding negative E-P scores in all five dimensions (Mukhopadhyay, 2016). Nevertheless, some attempts to implement the SERVQUAL instrument to fields outside the traditional service sector have

resulted in problems, especially with respect of the management of the five dimensions, the number and the wording of questions and the Likert scale used. This necessitated the modification of the model, methodology or items within the original model. Researchers in the education sector have chosen to adapt dimensions and items – adding or removing some to suit the specific educational context where the SERVQUAL scale is applied (De Oliveira & Ferreira, 2009; Mauri et al., 2013). Qualitative modifications of the SERVQUAL model have been used successfully to explore, in more depth, consumers' perceptions and expectations of SQ (Abbas, 2020; Chang, 2009; Shankar, Datta, Jebarajakirthy, & Mukherjee, 2020; Yeo & Li, 2014). These authors explored the key dimensions of service quality in higher education, mobile banking and restaurant services, using qualitative methods for data collection. Sultan and Wong's work used a mixed methods approach to generate insights about antecedents and dimensions of service quality in a higher education context. They conclude that students' past experiences inform their perceptions of SQ in education (Sultan & Wong, 2011). Yeo and Li's study employed qualitative methodology to explore educational managers' thoughts about what makes education competitive, concluding that the managers should view students as customers or products appropriately and develop a customer-focused mind-set if they are to succeed against competitors (Yeo & Li, 2014). Bolac's cross sectional study used qualitative methodology to ascertain medical students opinions about the quality of their faculty and education (Bolaa & Koyuncu, 2020). Their study did not directly utilise the SERVQUAL model, the 'service factors' described in their study map well on the 5 SQ dimensions of SERVQUAL. Although none of these studies are GME related, the translation of the SERVQUAL tool into a qualitative tool is shown to be viable and will be performed in this study.

In summary, there are few GME focused studies in the service quality literature, most are quantitative, single setting studies which measure the SQ expectations-perceptions gap. There are no studies using qualitative methodology to interrogate SQ in GME.

2.3.2 Managers' perceptions of SQ in Graduate Medical Education

Academic managers – university leaders, faculty and senior administrative staff – are responsible for the provision of education services in GME (Talib et al., 2019). Their role involves direct interpersonal interaction with students. Thus, their understanding, capacity and readiness to deliver good service quality will determine the students' overall experience of the service quality of the education services offered by the higher education institutions (Camilleri, 2021). Interestingly, in developing the original Gaps Model, the authors used an exploratory study involving a systematic group interview with 11 senior managers of six US-based service

firms (Zeithaml & Parasuraman, 2004). From managers' views across different sectors, they formulated the five-dimension service quality model.

Like this early example, the literature contains examples of studies that examine managers' perceptions of the quality of the service their firms offer (Abu-El Samen, Akroush, & Abu-Lail, 2013; Shankar et al., 2020). El-Samen and colleagues' study compared the SERVQUAL dimensions from mobile telecommunications customers' and the managers' perspectives and examined their effect on customer satisfaction. They found that the SERVQUAL dimensions identified as important are different from the two stakeholders' perspectives - managers identify with three different dimensions of the five SERVQUAL model dimensions compared to their customers. Thus, managers may focus on delivering aspects of SQ which do not resonate as much with their customers. The study authors conclude that it is crucial that managers endeavour to change their service quality perspective to match how customers perceive quality. (Abu el Samen, 2013). Shankar's telecommunications-based study used qualitative methods to explore the key dimensions of mobile banking (m-banking) service quality. They demonstrated that privacy, customer support, security and interactivity, efficiency and content were the key dimensions of importance to customers in their sector (Shankar et al, 2020). Camilleri's literature review on service quality in higher education suggests that higher education institutions should use diverse performance indicators and measures to evaluate their service quality in terms of their resources, student-centered education, high-impact research and stakeholder engagement (Camilleri, 2021)

Hill's seminal paper outlines the importance that managers' perceptions and understanding of the role that student expectations play in their ultimate educational experience. She emphasizes the need to manage students' expectations from enrolment through to graduation, to align them as closely as possible with what can be delivered by way of service quality; for example, informing students of what is and what is not possible, and explaining why. For this to happen, managers' perceptions about SQ must be clear (Hill, 1995).

Studies that investigate the role and perceptions of managers of educational managers are few – and GME-related studies are fewer. Yeo's study modifies the SERVQUAL questionnaire to explore engineering educational managers' perceptions of service quality and their relevance to strategic objectives using in-depth interviews. Their findings revealed that the way students are perceived by managers directly influences the learning dynamics that occur both inside and outside the classroom (Yeo & Li, 2014). In other studies, students desire their lecturers to be

knowledgeable, enthusiastic, yet approachable and friendly – academic leaders should be aware that their employees' interactions with students have an effect on their satisfaction during their learning journey (Quinn et al., 2009).

Perhaps because of the conceptualization problems mentioned in the sections above, the literature contains no viable examples of studies enquiring into managers' viewpoints on SQ in GME. As a result, there is a lack of knowledge about educational managers' perceptions about the quality of service of the education that they deliver at AKU, N. and more broadly in the region.

2.3.3 Students' views on the impact of service quality on competitiveness of the Graduate Medical Education

The relationship between service quality and competitiveness is widely explored in contemporary research (Arachchige, Singh, & Weerasooriya, 2021; Wijetunge, 2016). In the service industries, in marketing, retail, telecommunications, hospitality and healthcare, the link between quality of service and competitive advantage has been explored (Abdul-Majeed; Warraich et al., 2013; Wijetunge, 2016). As far back as the 1990s, when the SERVQUAL framework was developed, it was recognized that companies seeking unique sources of sustainable competitive advantage could build positional advantages in their market by optimizing service quality (Arachchige et al., 2021; Ananthanarayanan Parasuraman, Zeithaml, & Berry, 1994; Rapert & Wren, 1998; Wijetunge, 2016). Indeed, many firms have made service quality a predominant strategy because from a strategic point of view, good service quality increases profitability, customer satisfaction, customer loyalty, customer retention and reputation (Abbas, 2020; Warraich et al., 2013; Wijetunge, 2016).

Students can be considered as the primary 'buyers' or 'consumers' in the GME market (Mahat, 2019; Porter, 2008). This is because they are the primary 'consumers' of the GME product of medical schools. As they can choose between the competing medical schools, they wield considerable power in the marketplace. According to Pringle and colleagues, the more options the buyer has to choose from, the more power the buyer has. Too, the power of the student as buyer increases as the services offered become more homogenous (Pringle & Huisman, 2011). They can more easily compare GME offerings and make informed choices. In the Kenyan market, the GME product is relatively homogenous – all programs are of approximately the same duration and accord the same qualification on completion: Master of Medicine. Differences in cost, infrastructure, quality of faculty, student affairs, governance and quality of

clinical clerkship experiences are the potential areas for differentiation of the GME product. Consequently, the opinions of students about the competitiveness of the educational product on offer are relevant – specifically, how SQ impacts or relates to competitiveness.

The existing literature on how SQ relates to competitiveness in higher education from students' perspectives is scant. Moreover, comparative studies in the African HE or GME setting are almost non-existent. Arachchige's study among library staff made a quantitative correlation of the two variables – SQ (all dimensions) and competitiveness. Their exploratory survey of 66 library workers revealed an overall small positive correlation (r = 0.286) between the SQ and competitiveness. However, the low value of the correlation (Pearson correlation coefficient r < 0.6) implies that the relationship is small. The authors drilled down to correlate individual elements of SQ to competitiveness, finding small positive correlations for in only two variables: service affect – reliability and responsiveness of the staff (r=0.249, p=0.022) and quality and accessibility of library resources (r=0.232, p=0.03). The authors concluded that service quality is determined by the human face of the service and the quality of the information resources of the library rather than other tangibles (Arachchige et al., 2021).

Šimić & Štimac, (2012) evaluated business school students' perceptions of service quality, relating this to their choice of business school. Their findings indicated that students rate the work done by academic and support staff as part of the overall quality of service, and that this impacts on their ideas of the competitiveness of the institution. Similarly, a study in a Singapore university relates competitive forces to students' impressions about service quality – concluding that students' impressions are based on staff attitudes and ways they think, feel, and act towards students (Yeo & Li, 2014). African studies are rare – Wuhib's Ethiopian study of business and engineering students' views and Borishade's study with Nigerian university students are examples (Borishade et al., 2021; Wuhib, 2016). The Ethiopian students rated all dimensions of SQ positively except reliability. Borisade utilized a structural equation model to reveal a significant association between service quality and student loyalty, a relationship that is mediated by student satisfaction. Thus, good SQ relates to student satisfaction and thus economically to competitiveness.

Studies linking the individual elements of service quality – tangibility, empathy, reliability, assurance and responsiveness – to competitiveness in GME are very few, for the reason discussed above: the novelty of the SQ concept in GME (Hill, 1995; Quinn et al., 2009; Schijns, 2021). Tangibility describes the appearance of physical facilities, equipment, signage, accessibility, spaciousness, functionality, personnel and communication materials of a business

(Calvo-Porral et al., 2013). There are few studies that compare tangibility in SQ and competitiveness in higher education. Hefer and Cant's 2014 study measured South African students' E-P scores in tangibility against their satisfaction scores, and found a very weak, but positive, correlation between the two variables (total tangibility and overall satisfaction), $r = 0.34$, $p \leq 0.0005$ (Hefer & Cant, 2014). Though competitiveness was not an outcome measure of the study, the authors relate this positive correlation to competitiveness, as they posit that educational institutions can use service quality as a competitive advantage to ensure that they stay the first choice in the minds of potential students (Hefer & Cant, 2014).

In other studies that measured tangibility as part of the SERVQUAL framework, students gave negative E-P scores for tangibility – indicating a gap that should be addressed in higher education institutions that seek competitiveness (Aghamolaei & Zare, 2008; Alijanzadeh et al., 2018; Gilavand & Maraghi, 2019).

Calvo-Porral's study examined the key dimensions in perceived quality in HE from the students' standpoint. They found that tangibility and reliability had the strongest influence on students' perceptions of quality in two HE institutions. They conclude that tangible elements of university centres are important determinants of student perceptions of quality and may attract new students and give competitive advantage over other university centres (Calvo-Porral et al., 2013).

Reliability defines the ability to provide the service on time; dependably and accurately. In the context of GME, it describes the delivery process of training – the academic content, academic support services, curriculum structure or schedules (Calvo-Porral et al., 2013). Stimac and Simic's study identified several elements of SQ that students in Eastern European business school students value, which they related directly to the competitiveness of three competing business study programs. These included credibility of teaching and non-teaching staff, the availability of resources and responsiveness of staff to students' expectations and their ability to enable personal development (Šimić & Štimac, 2012). Although not explicitly stated as reliability in the study, these dimensions map well on to the SERVQUAL measure of reliability. And, though useful, the business setting of the study does not allow direct comparison to GME. The other studies that measured reliability as part of the SERVQUAL framework found a negative E-P scores for this dimension – indicating a gap that should be addressed in higher education institutions that seek competitiveness (Alijanzadeh et al., 2018; Gilavand & Maraghi, 2019).

Assurance is the knowledge, professionalism and courtesy of employees and their ability to convey trust and confidence in the consumer (A. Parasuraman et al., 1988). In relation to education, it defines the competence of the staff; the teaching capacity and communication skills of faculty, their ability to convey trust and confidence in the students and their accomplishment an professional experience (Calvo-Porral et al., 2013).
The literature contains many studies in which assurance is measured alongside other dimensions of SQ (Akhlaghi et al., 2012; Alijanzadeh et al., 2018; Bahadori et al., 2011; Calvo-Porral et al., 2013; Soares et al., 2017, Kannan, 2021). Of these, one African study by Kannan revealed that university students rated overall SQ poorly, especially in educational qualifications of the faculty and staff (assurance). Although the authors did not relate assurance directly to competitiveness, their findings of negative scores in this dimension show the gap in SQ. Assurance is seen by consumers in the banking sector as more important than the other SQ dimensions. Kumar and colleagues concluded that assurance could reduce the SQ gap in their study setting (Kumar, Kee, & Manshor, 2009). Studies like these are not directly replicated in the GME literature but within the broader literature, it is clear that students value competence and professionalism in educational staff (Bolaa & Koyuncu, 2020).

Empathy is the capacity to understand students' broader social needs and to respond to them in a caring, individualized way (Cavo-Porral et al., 2013). Empathy is measured alongside other dimensions of SQ in multiple studies: the findings of negative scores in this dimension reveal a significant the gap in SQ in higher education (Akhlaghi et al., 2012; Alijanzadeh et al., 2018; Bahadori et al., 2011; Calvo-Porral et al., 2013; Soares et al., 2017). Yeo and Li's (2014) study, which uses SERVQUAL to explore the effects of service quality in higher education and how they contribute to the overall performance and competitiveness of an engineering school in Singapore (Yeo & Li, 2014). This qualitative study identified responsiveness, empathy and customer-orientation as elements of SQ that have a strong impact on students' overall perceptions of the school's performance and competitiveness. Engineering students recognized that the attitude of the people who provide the educational services drives the way they think, feel, and act towards them (Yeo & Li, 2014). They concluded that it is essential that all employees be student-centred rather than task-driven in order to improve SQ in higher education in Singapore. Rather than observing stringent rules and regulations, they should adopt customer orientation as a way of creating greater rapport with students (Yeo & Li, 2014). Thus, to beat the competition, employees in GME should be aware of these three elements of SQ – responsiveness, empathy and customer-orientation – and promote them. Yeo's findings reflect

students' desire for empathy from educational service providers. According to Porter's framework, buyers in the any market system can exert an influence on competitiveness of educational products (Porter, 2008).

Responsiveness describes the willingness of staff to help customers, to provide prompt service and to show skill in handling common processes and incidents (Calvo-Porral et al., 2013). The literature enquires into SQ and competitiveness in higher education, with some commendable, well conducted studies (Yarmohammadian, 2011; Taber et al, 2020; Abili et al., 2012 Alijanzadeh, 2018; Yeo & Li, 2014). As they do not specifically address competitiveness, the relationship between responsiveness and competitiveness must be inferred from the importance that respondents (students) put on this dimension.Abili and colleagues' work ranked the relative importance of the 5 dimensions of SQ among Iranian university students (Abili et al., 2012). They found that assurance and responsiveness were deemed most important, followed by reliability, tangibles and empathy. Yeo's study findings are in line with these results; students value speedy and quality responses to problems from staff (Yeo & Li, 2014). Wuhib's study based in an Ethiopian business school showed that although all other dimensions of SQ were rated well, the responsiveness of the Faculty of Business and Economics was low. Again, no direct link was made to competitiveness in that study, in the face of poor SQ, students can easily compare educational offerings and make informed choices (Pringle and Huisman, 2011).
This leaves a gap in the literature which this study can fill.

2.3.4 Managers' views on the impact of service quality on the competitiveness of Graduate Medical Education

There are relatively few studies investigating managers' views on SQ and competitiveness in higher education and GME specifically. Mahat and colleagues' conducted semi-structured interviews with academic and professional staff with substantive roles in the management of six Australian medical schools, exploring their views on the competitive forces within the medical education industry and these forces' effect on strategy formulation in medical schools (Mahat, 2019). The respondents viewed patients and wider society as consumers with moderate bargaining power in the system but failed to see medical students as powerful buyers of their educational products. This may be a result of the stringent regulatory environment in Australia, by which the federal government determines the numbers of students placed at each medical school. They recognized government and research funding agencies as key 'suppliers' for medical schools, who can restrict or permit competitiveness. With this view of the limited

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bargaining power of both buyers (students) and the strength of the suppliers, these managers did not focus on how SQ can influence the competitiveness of medical schools (Mahat, 2019).

Yeo's University-based study in Singapore explored managers' views of the factors that influence service quality in higher education and how they contribute to the overall performance of a higher learning institution. The findings showed that managers recognized the need for a customer-focused approach to students, whether they regarded them as consumers or products of the education system. Furthermore, they also acknowledged that the attitude of managers affects the level of SQ experienced by students in their institutions (Yeo & Li, 2014). Despite these findings, a link between competitiveness and SQ was hard to derive from the study.

Finally, how managers see students matters; whether their students are consumers or products of the education on offer affects how managers handle them (Hill, Mazur, Quinn) It follows that, like managers in retail, educational managers could respond to students' needs differently if they see them as the primary consumer of their product (Hill, 1995). Awareness informs managers' strategic decisions to develop a more competitive strategy – whether to change the way in which services are delivered, whether to increase capacity, to offer a different range of courses or even to enter a specific educational sector (Bruijl, 2018).

2.4 Research gaps

Perhaps because of the problems with conceptualisation of SQ in higher education, and GME in particular, there are few studies that interrogate SQ and none that relate SQ in GME, as conceptualized in the Gaps Model, to competitiveness. There are several knowledge gaps highlighted in the literature review which could be addressed through this study's findings.

Presented below is a summary of the knowledge gaps that this study addresses.

Firstly, there is a lack of knowledge about GME students' perceptions about the quality of service of the education that students receive at AKU, N. This is the first study of its type in sub-Saharan Africa, and it provides a baseline data on students' views about SQ in GME.

There is also a lack of knowledge about educational managers' perceptions about the quality of service of the education that they deliver at AKU, N. This is the first study of its type in sub-Saharan Africa and provides a baseline data on managers' views about SQ in GME in this region.

Although a strong link between SQ and competitiveness is evident in the broad literature, there are no studies that make this link in GME. Students' views on how SQ and competitiveness are linked are explored and this knowledge gap is reduced by the study findings.

Finally, GME managers' views about SQ and competitiveness in GME are unknown. This study investigates AKU, N managers' views about SQ and its relationship to competitiveness.

The study findings can help in formulating strategies to address the service quality gaps and improve competitiveness.

2.7 Chapter Summary

The broad review of the literature reveals multiple ways of assessing SQ in higher education. Most studies described in this literature review use the SERVQUAL model or a modified version of the same dimensions. Studies that focus on graduate medical education are few – mostly single centre studies whose findings are collectively informative but are not broadly applicable in other contexts. Although many authors in other sectors propose that SQ is vitally related to competitiveness, there are few studies that directly explore this link in the medical educational sector.

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CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

The purpose of this study was to evaluate students' and managers' perceptions and expectations of service quality and to examine their views about its importance for the competitiveness of postgraduate medical education at AKU, N. This chapter presents the research philosophy, design, sampling methods and data collection methods and procedures. The quality assurance measures that were carried out for reliability and validity are explained and an overview of the ethical considerations and the data analysis methods are described.

3.2 Research Philosophy

This research project embraced a socio-constructivism research philosophy (Alharahsheh & Pius, 2020; Ryan, 2018). The constructivist approach begins with open-ended inquiry through the research questions, then constructs conclusions from the findings. It aims to discover and explain the sense that people make of their world, accepting the subjective viewpoint, exploring multiple, diverse and personal interpretations (Bunniss & Kelly, 2010). So, in this study, in-depth accounts from participants were interpreted in order to build a detailed picture of how the phenomenon is understood by those who have personal experience of it – the students and managers (Alharahsheh & Pius, 2020; Bunniss & Kelly, 2010; Ryan, 2018).

3.3 Research Design

To address the research questions, the study used a qualitative descriptive design. The choice was justifiable because through the qualitative approach a detailed, more personal perspective could be explored. The qualitative methodology is sensitive to context and lived experiences of the respondents, allowing more depth and nuance in the data (Punch & Oancea, 2014). In addition, sample sizes tend to be smaller and data less generalizable (Alharahsheh & Pius, 2020; Bunniss & Kelly, 2010). This is widely used study design in educational social research (Bolac & Koyuncu, 2020; Yeo & Li, 2014). Moreover, this choice of research design is congruent with the socio-constructivist philosophy – in-depth interviews with participants helped to explore and explain their understanding of the concept of SQ, competitiveness in GME at AKU.

3.4 Population and Sampling

3.4.1 Target Population

The target population under study was all the postgraduate students – resident doctors in training at AKU, N and all the managers – faculty, heads of department, managers, administrative staff and university leaders who work in GME. At the time of the study, there were 139 resident graduate medical students on the student registry at AKU, N. Managers, faculty and educational managers numbered approximately 160. This target population thus excluded students or faculty and managers who are on maternity, illness, or other prolonged leave. The study population was purposively sampled from this broader group.

3.4.2 Sampling Design

A purposive sampling method enabled selection of respondents from within the sampling frame who could provide a wide range of views about service quality in medical education (Yeo & Li, 2014). This was a suitable sampling method because it allowed purposiveness in selecting interview participants – selecting for existing subgroups within the larger target population and facilitating comparisons between them (Punch & Oancea, 2014). Thus, rather than mere random or convenience sampling, the purposive approach deliberately identified students and managers from different medical specialties, different age and year groups and genders. All students (150) and managers (171) received an email detailing the study and seeking their participation. Those who were happy to do so were listed according to their year of training, specialty of training or faculty and gender. From this list, research assistants deliberately selected from each specialty, year group and gender before arranging the time and place for the interview. The sampling approach allowed broad representation of the whole population being studied – and the findings from this sample can be used to make inferences about the population.

3.4.3 Data Collection Methods

The data collection method was the semi-structured interview, using an interview schedule. An interview schedule is the list of semi-structured questions that serve as a guide for interviewers, researchers and investigators in collecting information or data about a specific topic (Punch & Oancea, 2014). The interview schedule contained open-ended questions, (see Appendix I, II) with prompts for more detail where appropriate. In a semi-structured format, questions were

categorized a priori by the researcher to cover the research objectives. However, the questions were phrased in an open-ended way to encourage expansiveness in the responses.

There are five key dimensions of service quality – assurance, empathy, reliability, responsiveness and tangibles – which are encapsulated in Parasuraman's SERVQUAL framework for service quality mentioned in (Abukhalifeh & Som, 2015). The interview schedule was a modification of the original quantitative SERVQUAL questionnaire – all five dimensions are interrogated, but each of the 22 items was now represented by interview questions. Such a modification is encountered in other works in the literature (Abbas, 2020; Bayraktaroglu & Atrek, 2010; De Oliveira & Ferreira, 2009). Appendix IV shows how each question in the data collection tool (interview schedule) mapped onto the SERVQUAL questionnaire.

The original SERVQUAL instrument is a two-part, 22 item questionnaire with 4 - 5 questions related to each of the five dimensions of SQ (Hefer & Cant, 2014; A Parasuraman et al., 1988). Quantitative analysis of respondents' Likert scores for expectations (E) and perceptions (P) of service quality yields E minus P scores for each dimension. Positive scores denote high SQ and negative E-P scores are indicative of a low SQ (A Parasuraman et al., 1988). SERVQUAL has also been modified for use in qualitative methodology, through adaption of the question items according to the specific context (Abbas, 2020; Mauri et al., 2013). These studies converted the questionnaire items into longer form questions to be used in interviews and focus group discussions (Mauri et al., 2013; Sultan & Wong, 2010; Yeo & Li, 2014). Such an approach has been shown to be viable, yielding detailed qualitative data on SQ.

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3.4.4 Sample size determination

As this was a qualitative study, interviews continued until data saturation is reached. Data saturation is reached when no new data, information or themes are observed in the data by carrying out additional interviews (Boddy, 2016). Thus, any further information from more interviews is effectively redundant. The concept of data saturation is useful when determining sample size in qualitative research. Sample sizes of between 15 and 40 are recommended for qualitative research, with an ideal range of 20-30 interviews for grounded research and 15-30 interviews for case studies (Marshall, Cardon, Poddar, & Fontenot, 2013). In one of the few studies investigating the point at which actual saturation is reached, the authors found data saturation starting to become evident at six in-depth interviews and definitely evident at 12 in-depth interviews (Boddy, 2016). Thus, the sample size for this study was not predetermined, but

met the expectation that data saturation would be achieved at approximately 12-30 interviews for each group (students and managers).

3.5 Data Collection Procedures

To reach the selected participants an email invitation to participate in the study was sent to their official email addresses. Permission to approach students for the study was sought from the Manager of Academic Services and through the ethical review body of the University. The invitation contained a full explanation of the purpose and context of the study, the guarantee of confidentiality was given along with an explanation of the interview as a tool for data collection (Punch and Oancea 2014). Potential participants were asked to express interest in participating by response to the email. Any positive responses to the invitations were followed up with another email communication with a more detailed explanation of the research, options to participate or to decline at this stage (or any other stage before completion of the study) and a consent form. Participants signed and returned the completed consent form to the research assistants.

The interviewers were experienced researchers who are skilled to probe for deeper meanings and bring to the surface those aspects that were not immediately obvious (Bunniss & Kelly, 2010; Punch & Oancea, 2014). Student interviews took place in meeting or seminar rooms at the Aga Khan University Centre and managers were interviewed in their offices. Each interview took about 25 to 35 minutes to complete. Interviews were sought with representatives from each subgroup, such as students in different specialties and years of training, male and female educational managers and administrators, faculty, program directors and heads of departments at AKU, N. with representation from each. The same interview schedule was used in each interview, to allow close comparison between different data transcripts and maintain data quality (Young et al. 2017) As fluent English speakers, whose medium of instruction is English, AKU, N. students and other participants did not encounter problems in understanding the interview questions.

The primary investigator (PI) was not involved in seeking students' consent or, indeed, in interviewing any of the participants (Gehlert & Mozersky, 2018). This is because the PI is known to the students as an administrator and faculty member of the University. Those who agreed to participate and had signed the consent forms were invited to in-depth face-to-face interviews, at a time and venue of their convenience. Interviews were recorded using an

electronic voice recording device and the researchers took contemporaneous notes during the interview. Consent to record the interviews was taken separately (see Appendix V). Participants who did not wish to be voice recorded were still interviewed, but the research assistants took notes instead. In the event, none of the participants refused to be audio-recorded.

A vulnerable population is a group of people that requires greater protection than normal against the potential risks of participating in research. This includes children, incarcerated individuals and people with debilitating mental health conditions (Gehlert & Mozersky, 2018). This study involved interviews with a defined vulnerable group – students who are subordinates of the PI. For this reason, the PI, who is the Associate Dean of postgraduate medical education, was not involved in consent taking, briefing or interviewing the participants of the study. This was carried out only by the research assistants. Participants were informed that the Associate Dean was the PI and were able to agree or not agree to participate in the study without prejudice.

3.6 Research Quality

3.6.1 Validity

Validity denotes the extent to which something is accurately measured in a study. In this instance it means that the study instrument – the interview schedule – should measure what is intended to measure (Taherdoost, 2016).

To ensure the validity of the interview schedule, a pilot study was done. Prior to use, it was tried out on a group of 3 students and 2 managers. The pilot study checked their understanding of questions items, their meaning and context, the idiom and clarity and the logical sequencing of the questions. It also enabled the researcher to accurately state the time allowed for all the questions to be comfortably answered by respondents. They gave feedback to the researcher, who clarified and corrected any questions that did not make contextual, linguistic or logical sense. Any potential sources of bias such as leading questions were discerned. The pilot interviews were transcribed to check that they produced enough relevant data to answer each of the research question; in the event, no changes to the schedule were needed. The pilot data was not included in the final analysis.

The value of the pilot here was to ensure that the questions test what they aim to test, and that the timing, logistics and other practical aspects of the interviewing method could be practiced and streamlined (McGrath, Palmgren, & Liljedahl, 2019; Punch & Oancea, 2014).

3.6.2 Reliability

Reliability of an instrument is capability of the instrument to precisely measure the construct under study. A scale or test is reliable if repeat measurements under constant conditions give the same result (Taherdoost, 2016). Several steps were taken to check reliability of the interview schedule. The research assistants were familiarised with the tool, and were trained interviewers who could ensure that they obtained accurate and complete data yet maintaining sufficient standardization to secure the validity and reliability (McGrath et al., 2019).

Inter-coder reliability measures the extent to which two or more coders make similar decisions on coding transcripts (Cheung & Tai, 2021). To check the reliability of the coding an independent experienced qualitative researcher was asked to generate their own initial and final codes from selected transcripts. These codes were compared to the see if they matched the codes generated by the research team. In this way, reliability of the coding was independently verified.

3.6.3 Pilot Study

The interview question schedule was pre-tested with 3 students and 2 managers, again to ensure that the questions make linguistic sense, were contextually and culturally appropriate and allowed respondents to give full and detailed responses. Also, the pilot study included a 'timing test', which showed that the average time required was 20 to 25 minutes. Feedback from the pilot group allowed modification of interview schedule as required.

The pilot study was carried out prior to the main study, to ensure that the questions made linguistic sense and were contextually and culturally appropriate. Most of the questions were understood and clear, though two of the longer question items were not as clear to the pilot group, who asked for them to be repeated. For example, question E4: *How does the knowledge, courtesy and trustworthiness of staff affect AKU, N's attractiveness to you as a place to study?* required repetition for 3 out of the 5 pilot interviewees. It was left unmodified in the study interviews, but the interviewers were primed to make sure that they repeated it or rephrased the question whenever it became necessary. The pilot study included a 'timing test', which demonstrated that the time required to complete the interviews was about 25 minutes, not the previously estimated 45 minutes.

3.7 Data Analysis

Analysis of the qualitative data was by inductive thematic analysis, in order to identify themes that emerged from the recordings of the interviews. The following step-wise process of analysis was done. Recorded interview data was transcribed verbatim and to generate written transcripts

for further analysis. A unique identifier was tagged to each transcript, to allow tracking of individual transcripts at data analysis stage. This identifier was an alpha-numeric code which did not contain any reference to the participants' name, age, specialty or gender, in order to protect their identity. Managers' and students' codes were assigned with different alphabetical letters.

The transcripts were corrected, which helped the research team to familiarise themselves with the data. Thereafter, a first level of coding using NVIVO software generated descriptive codes from the whole data set. Codes are descriptive or inferential labels that assign meaning to the information from the interview data (Benitez et al., 2018). Codes were assigned to individual words, phrases, sentences or whole paragraphs in each transcript, to help in the interpretation of meaning. Second-level coding by the researcher followed, at a higher level of inference and abstraction, focusing on patterns within the data. Finally, four broad themes of the data were evident.

3.8 Ethical Issues

The main ethical considerations in this study related to maintaining the autonomy of the participants, valid consent that is fully informed and non-maleficent to them. The researcher assistants obtained informed consent by giving detailed information about the study and then checking that participants understood the aims of the project and how their data would be used. The identity of informants was protected throughout the study and during reporting of the findings. Thus, the final dissertation contains no recognisable details of the participants –simply codified, anonymised excerpts of the interviews. The process was not coercive; researchers ensured that participants knew that they could refuse to participate at any point of the process, could withdraw their consent or refuse to have their interviews in the final report. Other ethical considerations included the level of personal intrusion, especially if they deemed the questions to be sensitive. The pilot study identified no such questions. Confidential interview data was stored within a password protected server that is secure; only approved members of the research team will have access to it. The data will be stored for up to seven years, according to the institutional research policies, after which time it will be destroyed.

Permissions to conduct the research were sought and obtained from NACOSTI and from the university Institutional Research and Ethics Committees of both Strathmore University and the Aga Khan University.

Chapter Summary

In this chapter, the research philosophy, design, population and sampling methods have been described. The data collection methods and procedures have been detailed. The quality assurance measures that were carried out for reliability and validity are explained and an overview the data analysis methods have been described. An overview of the ethical considerations was given.

CHAPTER FOUR
DATA ANALYSIS AND INTERPRETATION

4.0 Introduction

In this chapter, the key findings of the research are presented. The four main themes emerging from inductive analysis of the interview data are described, and subsequently, a more detailed description of the data, relating to each of the four objectives of the study is presented. A chapter summary will wrap up the section.

4.1 Response Rate

In keeping with the qualitative methodology of the study, the end point of sampling was reached when the data was saturated – when no new information was forthcoming from further interviews. This occurred after 12 faculty (managers) interviews and 15 residents (graduate medical students) interviews. To ensure that data saturation really had occurred, two more interviews in each category were carried out, confirming saturation. Thus, the final sample sizes were fourteen (14) managers and seventeen (17) residents, a total of 31 interviews.

Table 4.1: Summary of interviews conducted

Study phase	Managers / Faculty	Students / Residents	Total
Main study interviews	12	15	27
Saturation confirmation interviews	2	2	4
Total interviews	**14**	**17**	**31**

THEMATIC ANALYSIS

Four broad themes emerged from analysis of the data:

The concept of service quality in GME was misunderstood by managers and students at AKU, N; both groups of respondents conflated its meaning with the quality of the education and medical care offered at AKU, N.

Empathy, assurance and reliability were rated as the most important aspects of service quality and tangibility was rated least important by both students and managers.

Tangibility at AKU, N. was rated very highly by both managers and students but was not deemed to be as important as the other aspects of service quality – empathy, responsiveness, assurance and reliability.

There was a marked discrepancy between the views of managers and students about the impact of service quality on competitiveness of GME in Kenya. Managers highlighted technical things like a high-quality education, modern facilities and patient volume and mix as competitive factors. Students, on the other hand, emphasised the more people-oriented aspects of an institution such as student-centeredness, psychosocial support and mentorship as the sources of competitive advantage over AKU, N. There was a discrepancy between the managers' and students' perceptions of the service quality at AKU, especially in the dimensions of empathy and responsiveness.

4.2 Students' perceptions and expectations of service quality at AKU, N

Students' understanding of educational service quality

Students' understanding of the term service quality (SQ) was mixed. None of the students referred to SQ in terms of the five SERVQUAL dimensions. Almost all respondents described it in terms of the quality of education at AKU, and the standards that measure the educational quality:

> *"I think in terms of a student, the service the University is offering it is the education so the service quality is the quality of the education, yeah." (R1R)*
>
> *"I think it is standards put in place to ensure that we have quality education" (R6R)*

Asked to relate their understandings of the term service quality to their education at AKU, N., most continued to relate it to the quality of education, which they rated positively. Only one student respondent admitted a lack of understanding of the term service quality. Conversely, when asked whether they saw the education they undergo at AKU, N as a service, almost all respondents agreed that it is a service:

> *"I look at it like AKU has a mandate to give me an education so yes, it is giving me a service." (R5R)*

Students' perceptions and expectations of Tangibility at AKU, N

Regarding their perceptions of the tangibility aspect of SQ, all students had a positive view of AKU, N. Almost all respondents had a very positive view of the physical infrastructure at the University, with many emphasizing the 'world class' educational facilities and equipment.

Students also rated the appearance of staff as professional and smart. The only negative note concerned the on-call sleeping accommodation, which many respondents described as adequate but in need of some improvement.

"I am honestly very happy, the infrastructure is top notch, I am very happy to be here as a student" (R5R)

"Its… OK? Being on call is not the most comfortable place to be, but there are facilities like kitchen and fridge, it's OK. Perhaps I can say we could have a lounge where someone could take a nap" (R8R)

Students' high expectations of tangibility were met; most had applied with some knowledge of the institution from varying sources of information – the AKU, N website, the application materials, and word of mouth reputation. When asked whether their expectations of high-quality infrastructure had influenced their decisions to apply, most were affirmative. Others qualified this, stating that tangibility was important, but that other factors were also key to their decision to apply to AKU, N:

"It was one of the things that attracted me to apply…" (R6R)

"It is a mix of everything, the infrastructure, the level of training, the experience, the brand name and the quality that is associated with AKU, that is what is attractive." (R17R)

Students' perceptions and expectations of Reliability at AKU, N.

Students' perceptions about reliability were generally positive – questions about the University's capacity to deliver the education as promised elicited similar answers from students. Thus, students indicated that the education was delivered on time as scheduled, the grading of their coursework was seen as fair and consistent. Several students indicated that they trusted that there were policies and structures in place to ensure fairness.

"I think it is good, there are policies in place to ensure it is fair." (R12R)

Students' opinions about the staff helpfulness were mixed – some respondents found staff unfailingly helpful while others felt it depended on individual staff personalities – some are more helpful than others:

"It varies from person to person but academic support is there, yes, but it not blanket for all residents. It could be better, especially in social support and mentorship part of it could be improved." (R2R)

Their expectations of reliability were also mixed; some indicated that because of the reputation and advertising of AKU, N., they had high expectations before they applied. Word of mouth

reputation from alumni added to these high expectations – which were generally met. Others had no real expectations, as they did not know any alumni and applied to study because AKU, N. offered the course they were interested in.

Students' perceptions and expectations of Responsiveness at AKU, N.

Students felt that responsiveness of staff at AKU, N., was variable at best and poor at worst. Many of the respondents indicated that although a system for giving feedback to staff was in place, they were reluctant to give feedback and found other means to address their own problems. Their reluctance stemmed from uncertainty about how negative feedback would be received by staff, and others felt that no action would be taken anyway.

> *"We have a system of reporting from our immediate supervisors to higher offices… well, I don't know how it works. Most residents find a way to go around their problems it is really hard to make suggestions and get them affected." (R12R)*
>
> *"[It is] neither here neither there, it's not the best but compared with other institutions it is better than them – but still not the best" (R5R)*

However, when asked if staff were polite, supportive and student-focused, a majority agreed that they were – though, again, there was some reported variability in attitude.

> *"Are they polite? It generally varies from person to person but the environment is mostly friendly." (R2R, said laughingly)*
>
> *"Yes, most staff are polite (R1R)*

Their expectations of responsiveness at AKU, N. of were high – based on the institution's reputation and word of mouth reputation from alumni. Respondents indicated that the actual level of responsiveness at AKU, N. was acceptable, though disappointing, compared to their expectations. However, even if disappointing, some students still compared it favorably to their previous institutions of undergraduate study.

> *"When I compare where I was for undergraduate, there is a world of difference, the staff are much more willing to help so it makes me happy with my decision to come here as opposed to staying where I was." (R1R)*

Students' perceptions and expectations of Assurance at AKU, N

Students displayed great confidence in the knowledge and skills, competence and reputation of staff at AKU, N. They also expressed sureness that the education at AKU, N. was preparing them well for their future careers. This was in keeping with their expectations before joining the institution – again, based on a strong reputation and alumni contacts.

"I feel very confident; you could say over 100%. One of the particular reasons I joined AKU was because of the caliber of the staff. I feel very confident, even in my interaction with them…" R5R:

Students' perceptions and expectations of Empathy at AKU, N

Students varied in their perceptions of empathy at AKU, N. Some felt they were not treated fairly by staff and that there could be a biased attitude of staff towards them. A majority of students described it as a mixed bag; with some staff being very pro-students and some staff being indifferent or even hostile.

"Yes, and no (laughs). Depends on the faculty member. There are those who are very supportive and there are others who, by their actions, show that they're out to get you." (R11R)

Their expectations of empathy were varied too, summed up by one respondent:

"I don't know…. because from those who have left [the institution] we have heard very good stories and very tragic stories – It is hard to say." (R2R)

Students' views on the relative importance of the dimensions of service quality

Students were asked to describe how important each of the five dimensions of service quality was to them. About half of the of students rated **assurance** as the most important aspect of SQ. Reliability and empathy received top importance from 20% and 15% of all interviewees, respectively. At the other end of the scale, 80% of students described tangibility as the as least important of all.

"For me the knowledge and courtesy of staff is huge. It's the most important. The physical facilities is last for me, least important." (R5R)

"Why [is tangibility] last? – I think knowledge and courtesy is more important – have a good team on the ground first, that is key. The buildings can be worked on after…" (R3R)

4.3 Managers' perceptions and expectations of service quality at AKU, N

Managers' understanding of educational service quality

Like the students, managers misunderstood the concept of SQ; describing it as the quality of education at AKU, N. Thus, they indicated that SQ can be described in terms of the quality of education given to students and the quality of the product of that education. None of the respondents touched on the *service* aspect of SQ, and none were familiar with the five dimensions of SQ as defined by Parasuraman and colleagues.

> *"…means the quality of the education being offered here at AKU to the residents by the University." (R10F)*
>
> *"It means that, because we are a training institution there are is an assessment of the quality of it, the standard of it; it equips the person receiving the information, it is provided in an interactive way and there are measured outcomes in terms of skills acquisition and knowledge retention..." (R9F)*

Asked whether they perceived the education at AKU, N as a service to residents, they agreed that it was a service but many were unable to qualify that statement. For example:

> *"Yes, because the medical college leads the process and it can be seen as a service provided…. you can look at it in two ways – is it a service? Yes, is it a service provided by the medical college and the hospital, yes." (R14F)*
>
> *"Yes, it is a service because it is provided to the residents who need it." (R10F)*

Managers' perceptions and expectations of Tangibility at AKU, N

Like the student respondents, managers rated the tangibility – buildings, facilities and equipment – at AKU, N. highly, using words like excellent, world class and state-of-the-art. The only downside expressed was the constraints on space and lack of faculty offices in the new university centre.

> *"High quality, [there are] some significant space constraints but [the facilities are] of good quality." (R14F)*
>
> *"It is [an] excellent … environment for the residents, world class." (R10F)*
>
> *"The University is very good but can be improved especially when it comes to faculty offices. We should be conducting this interview in my own personal office..." (R8F).*

A majority of managers had no opinion about the on-call accommodation for students on call, not being required to take part in the on-site on-call rota. Likewise, few expressed any opinion about their own expectations of the tangibles before they joined AKU, N. However,

they expressed opinions about the students' expectations of tangibility, stating that students have a very positive expectation of the institution' tangible assets, and that they apply to AKU, N. because of this positive expectation:

"Of course. Everyone who comes here marvels at the facilities here and at the hospital compared to what pertains in the public universities, so, yeah." (R6F)

Managers' perceptions and expectations of Reliability at AKU, N

Managers rated reliability at AKU, N. highly – most seeing themselves as supportive of students' academic lives and rating the grading criteria as fair and consistent to students. Some expressed reservations about the class timetables, stating that patient care duties sometimes get in the way of the teaching.

"The staff and faculty are supportive to residents, they feel they like what they do, they do it willingly without being pushed." (R10F)

"Yes, definitely because majority of people who study here would like the teaching schedules to be delivered on time and in an attractive way, which we have tried to do for sure" (R15F)

Only two faculty respondents varied from this positive outlook – stating that reliability at AKU, N. was inconsistent in the delivery of scheduled teaching and in the supportiveness of staff.

Regarding timetabled teaching:

"For my department that would be a no, because of the nature of the clinical service... you have patient care and it won't happen" (R11F)

"The majority [of staff] are helpful and supportive, there are some challenges which [residents] cannot overcome because it is about certain personalities that are not helpful but on the whole the majority are helpful" (R15F)

However, all managers that were interviewed spoke positively about grading criteria and student expectations of the institution;

Regarding expectations of reliability –

"Applicants talk about the high quality of the educational service…" (R14F)

Regarding the grading criteria –

"It is consistent and it allow us to expound on why a resident got a certain grade so it is appropriate." (R1F).

Managers' perceptions and expectations of Responsiveness at AKU, N

Managers' views of the responsiveness of staff were ambivalent – most respondents gave qualified answers to questions about staff openness to and acceptance feedback from students as well as the quality of staff interactions with students. For example, almost all staff when asked about feedback, stated that though they themselves were open to feedback from students, they knew that this was not universal and that some problems exist:

"Hmm, I think we are open. We encourage feedback from residents about their experiences and take it in consideration when we are planning for the next year (R5F)

"Wah… again, this depends on the subculture of each department. Some have a very good inter-professional relationship between learners and teachers…. where they can speak very openly about their grievances. It is not the same across the board, that is not only for AKU but it is, some areas can be problematic, yeah" (R11F).

"The majority of residents are afraid to give frank feedback to staff especially if it is negative so the bulk if feedback is positive and falsely positive and is taken well. When negative feedback is given it is not taken very well" (R1F)

Others indicated that communication between students and staff could be better, and that a student-focused approach is yet to be attained at AKU, N.

"Erm…. (laughing) yes and no – the student based and staff based interest sometimes clash. It would be ideal but on the ground it may not happen – the conflict is bound to be there." (R7F)

"Hmm… no; I mean it is a very transactional relationship, we come and teach and we get the job done but in terms of figuring out what's the best for the particular resident, no." (R9F)

About their expectations about responsiveness, managers felt that there are robust feedback mechanisms at AKU, N., therefore their expectations for staff responsiveness to students' needs

were high. Only one respondent indicated that they felt that the feedback mechanisms were inadequate, and thus assurance did not meet expectations.

"We have a robust mechanism for residents to feedback…" (R14F)

"We have the departmental decision body or team that listens to residents and if issues cannot be resolved they can be escalated. I think, everyone has a good route to express their wishes and to be heard" (R8F)

"I don't think we have a consistently good way of getting feedback – we do have a faculty forum but when I look back how we have acted on the feedback the residents have given us I think ……. you don't see how these things are being resolved or acted upon." (R9F).

Managers' perceptions and expectations of Assurance at AKU, N

Managers expressed strong confidence in the assurance offered at AKU, N. They rated staff competence very highly and felt that faculty and managers have a good reputation amongst their peers, both locally and more broadly in the region and internationally. Most respondents linked this to a high level of expectation of assurance, based on their perceptions that AKU, N. invests greatly in the recruitment of high-quality staff and faculty and has policies that guide faculty teaching to which most must adhere.

"[I am] pretty confident, high caliber people in my department and are willing to impart [knowledge] to the residents (R14F)

"Mmm… quite confident with knowledge and skills, AKU employs the cream of the country, professor's clinical experts are here. We have quite knowledgeable people around here so the residents are in good hands (R10F).

Managers' perceptions and expectations of Empathy at AKU, N.

Asked whether staff have a positive attitude towards students, faculty and managers described themselves as student focused and positive. They also professed that students are treated very fairly, especially as there are policies to ensure fair treatment at AKU, N.

Regarding fair treatment of students:

"That's a yes, there are structures in place [to ensure fairness]" (R7F)

"That is why they are staff, yeah. We are positive towards residents – if we were negative, we would quit." (R8F)

On staff attitudes to students:

"Yes, the staff are very positive to residents because that is what we are here for, that is our business so we value them." (R10F).

Few managers expressed any opinion on expectations of empathy at AKU, N. These, like their expectations of reliability and assurance were couched in terms of the policies and procedures that exist to ensure them. Thus, managers felt that because these are in place, their expectations are high.

4.5 Managers' views on the relative importance of the dimensions of service quality

Faculty and managers described the five dimensions of SQ in order of importance to them. Most frequent in the top two were empathy and reliability; assurance and responsiveness were less important and tangibility was deemed to be the least important.
Nearly half (42%) of managers said that reliability was the most important dimension of SQ, and a third defined empathy as most important. Another third rated reliability as second most important, while a quarter ranked empathy in second place. Thus, 75% of managers in the study thought empathy and reliability are the two most important aspects of SQ, while two-thirds ranked either of the two in second place. At the other end of the spectrum, half of managers rated tangibility as the least important, while a third rated reliability as of penultimate importance.

Asked to qualify their opinions, the responses are exemplified below:

> *"[Empathy] because in health, how you treat people multiplies how they treat other people and how they engage with the information you are giving them. It is also very, very important that the service is provided dependably. The physical facilities are the cherry on the top, they are not the heart of what we do." (R9F)*
> *"Why? Trust is very important; you have to be at ease in the place of learning, for me that is a prerequisite of learning. Facilities are important but the personnel and their attitude is what really matters rather than the physical facilities." (R14F)*

4.6 Students' views on the impact of service quality on the competitiveness of AKU, N.

Although most students had mixed views on the service quality at AKU, N., and had some criticisms of the level of service quality they experience, most of them rated the overall educational service quality at AKU, N. highly when compared to medical education at other institutions in the region. Thus, despite the shortcomings, most respondents still felt that AKU, N. was a strong competitor in the medical education field.

"I think, in spite of the problems, we are the best in the country maybe even the region." (R1R)

Though many of the students stated that they ranked AKU, N. above its other competitors, a few of the respondents could identify other postgraduate medical programs in Kenya and East Africa that are comparable or better than the one on offer at AKU, N.

"The only other one I can think of is [names another local institution] they have been around a long time, they trained a lot of our faculty, the hospital has a wide range of clinical cases so their exposure is broad." (R10R)

Like the respondent above, other students recognized that the patient profile is limited at AKU, N, being a smaller, urban hospital, which caters to an insured, middle- and upper-class population.

"I think AKU is better but I have been to [names another local institution] and others and where they can beat AKU is the range of patients they see." (R17R)

Students were very forthcoming when asked how the program's competitors could successfully compete with AKU, N. Apart from a wider patient profile, students stated that competitors with a stronger focus on students' wellbeing – mental wellness, mentorship, student-centeredness and social support would offer stiff competition for AKU, N.

"If they gave better mentorship, better social support for the residents, better remuneration –then that would be a better place" (R3R)

"The other could beat AKU by prioritizing the resident and actively focus on the mental health and psychosocial support of residents – not just have it as a thing at the back of the hospital." (R12R)

"Generally, AKU still stands out though there is more that could be done to make it more friendly for the residents" (R2R).

4.7 Managers' views of the impact of service quality on the competitiveness of AKU, N

Faculty and managers, like students rated the educational service at AKU, N. highly but they were keenly aware of competitors in the medical education field, in Kenya and in the broader region.

"There are plenty of them, many medical schools in Kenya. There are 10 medical schools in Kenya, [lists five Kenyan medical training institutions] .... they are all potential competitors as we specialize in the same things (R7F)

"In the region? Definitely, in different aspects they can compete aggressively, [names two local institutions]– we are at par." (R1F)

Interestingly, when they listed the things that could give these competitors an edge over AKU, N., none of the managers interviewed mentioned the customer-centric aspects of SQ – empathy, responsiveness and reliability – as a source of competitive advantage. According to managers, the tangibles and assurance of AKU, N. conferred strong competitive advantage. In addition, they felt that the quality of education at AKU, N. brought a competitive advantage over other institutions in the region. Institutions with better patient volumes and a broader disease profile for students to learn about would have a competitive edge over AKU, N.

"Definitely, yes. If you have a reputable name, then you are likely to attract many students. Case in point, we had close to 500 applicants for just 40 positions for our programs recent recruitment. This tells you that the facilities, the reputation and the products of any institution have a significant impact on its reputation out there…" (RF6)

"In terms of education very good, in terms of patient profile not so good. Some of those diseases you can't see at AKU yet you see them in practice." (R7F)

"So the Achilles heel in AKU training is the volumes of patients for [students] to interact with and exposure to complex cases – there are higher volumes in the public sector." (R1F)

4.8 Chapter Summary

This chapter has presented the key findings of the study. Both students and managers at AKU, N. did not grasp well the meaning of the term service quality; indeed, both groups equate SQ in education with quality of education and the products of that education. None of the interviewees in both groups indicated any familiarity with the five dimensions of SQ. The physical infrastructure and facilities at AKU, N. were highly rated by students and managers, even when both groups put the least importance on them. Students ranked assurance as the most important aspect of SQ to them, while their managers and teachers rated empathy as most important. When considering how SQ impacts on competitiveness with other institutions of graduate medical education, students indicated that a focus on responsiveness and empathy – student welfare and psychological wellbeing – could confer competitive advantage to any institution

that wishes to compete with AKU, N. Managers recognised reliability, assurance, tangibles and as contributing to competitiveness – indeed, they deemed practical aspects such as patient volumes and disease profile as the things that could confer advantage over AKU, N.

CHAPTER FIVE
DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This study set out to explore and describe the experiences and expectations of graduate medical students and their teachers about the service quality (SQ) in the education at a medium sized private graduate medical school. In addition, to relate these experiences and expectations to their views on competitiveness in graduate medical education (GME) in Kenya and further afield.

5.2 Discussion of Research findings

There was a gap in the literature about graduate medical students' and their educational managers' experiences and expectations of service quality in education in Kenya and more broadly worldwide. This is the first study of its type in sub-Saharan Africa, and it provides a baseline of data on students' and faculty and managers' views about SQ in GME. Although a strong link between SQ and competitiveness in education is evident in the broad literature, (Abbas, 2020; Arachchige et al., 2021; Yeo & Li, 2014) (Rust et al., 2000) there have been, to date, no studies that make this link in GME. Students' and managers' views on how SQ and competitiveness link were explored and are described in the study findings.

A qualitative, descriptive approach was employed, using individual in-depth interviews with the two stakeholder groups. Interview data was transcribed and then thematically analysed, yielding four broad themes: both students and their managers (their faculty) misunderstand the concept of service quality and how it relates to education at AKU, N., the physical infrastructure and facilities at AKU, N. are rated very highly by both groups but ranked lowest in importance of the five dimensions of SQ. Students rank assurance and reliability as the most important aspects of SQ; their managers rank empathy and reliability most important. Yet, there is a marked discrepancy between the views of managers and students about the impact of service quality on competitiveness of GME in Kenya. Managers are more cognizant of the threat of other competitors in Kenya than are students, though students are more articulate about the dimensions of SQ that would confer a competitive edge to other educational institutions.

5.2.1 Students' and managers' perceptions and expectations of service quality at AKU, N

This study's findings on students' and their faculty and managers' perceptions and expectations of SQ at AKU, N are interesting and worth deeper analysis. They are discussed together below in order to facilitate comparisons and explore the gaps between them.

First, the concept of service quality in graduate medical education was misunderstood by managers and students at AKU, N; both groups of respondents conflated its meaning with the quality of the education and medical care offered at AKU, N. The lack of understanding of the term service quality demonstrated by students and their teachers in this study is an interesting finding. Both faculty and residents conflated educational service quality with the quality of education and healthcare rather than quality of *service per se*.

This type of misperception is uncommon – students in other settings understood educational service quality and were able to define its dimensions and its meaning in their contexts (Abbas, 2020; Angell, Heffernan, & Megicks, 2008). There are several possible sources of this lack of clarity. A clear definition of service quality in medical education is elusive, with many different constructions put on the concept (Da Dalt et al., 2010; Quinn et al., 2009). This is because, in medical education, there exist multiple stakeholders – students, faculty and patients; and a broad 'product-mix' – educational, healthcare, pastoral and academic (Sultan & Wong, 2010; Bendermacher et al., 2020). Thus, from the differing stakeholder points of view, educational service quality can look different. Students may see SQ as related to the educational, pastoral and administrative services of a university where their patients may have little or no interest or interaction with these aspects. Additionally, faculty and managers may also have a different focus when thinking about service quality – systems, processes and outputs rather than 'customer' related aspects (Abu-El Samen et al., 2013).

In contrast, the service quality concept is well defined in healthcare delivery – medical students and their faculty managers understand this as givers of service (Fatima et al., 2019). They are healthcare givers and therefore are subject to quality assurance frameworks that focus on service quality delivery in healthcare, (Endeshaw, 2021; Mosadeghrad, 2014; Sumaedi, Yarmen, & Bakti, 2016). Indeed, respondents in this study have been participants in the periodic accreditation processes which accredit healthcare institutions worldwide. Consequently, they are no strangers to the concept of SQ in healthcare. Therefore, the service quality concept in healthcare is primary in their minds and it may be understandable if they conflate service quality in healthcare and service quality in education. On this background, it is unsurprising that both

faculty and students in this setting cannot clearly define service quality in relation to their education.

A lack of understanding of the official definition of SQ, however, does not necessarily translate into a lack of appreciation of SQ – how it feels to the consumer to receive or be denied good SQ (Dougherty & Murthy, 2009; Stone, 2011). Faculty and students in this study were able to describe their perceptions, experiences and expectations of the five dimensions of SQ, even when they were not using the official terminology.

Both the students and managers at AKU, N, are most satisfied with the tangible aspects of SQ – the buildings, infrastructure and facilities. They also expressed satisfaction with assurance – articulating a confidence in the knowledge of staff and faculty, and their ability to convey trust and confidence. Both these dimensions met students' and managers' expectations. This finding is at variance with other studies done in higher education and in medical education specifically, in which students' expectations were not met in any of the five dimensions of SQ (Aghamolaei & Zare, 2008; Bahadori et al., 2013; Gilavand & Maraghi, 2019; Mukhopadhyay, 2016). Though the methodology was quantitative in those studies, the findings of unmet expectations are telling – AKU, N. does better in these two dimensions than other medical schools studied.

However, faculty and managers at AKU, N. cannot rest on their laurels. AKU, N. students describe unmet expectations in the dimensions of empathy, responsiveness and reliability. This, according to the Gaps Model, is the intrinsic gap experienced by the consumer – their expectations are not matched by the real-life experience (Parasumaran 1985, Nargunde 2016; Mauri, 2013). Students' expectations are rooted in their personal needs, past experiences and from the word-of-mouth reputation of an institution (Gilavand 2019; Sultan & Wong, 2011; Parasuraman 1988). The students indicated high expectations of AKU, N., informed by previous experiences of poor SQ at undergraduate level and through positive word of mouth recommendations of alumni. This gap is commonly described in the literature on medical education and SQ – medical students elsewhere frequently report poor SQ in their institutions of education (Aghamolaei & Zare, 2008; Bahadori et al., 2013; Gilavand & Maraghi, 2019; Mukhopadhyay, 2016)

Specifically, there are discrepancies between the managers' and students' perceptions of the service quality at AKU, especially in the dimensions of empathy and responsiveness. While managers on the whole expressed satisfaction with themselves as givers of responsive and

empathetic service to students, there is a palpable perception-expectations gap in these dimensions of SQ, expressed by students.

AKU, N. managers describe themselves as having a positive attitude towards students and being student-centred in their interactions with them – which should translate into better reports of responsiveness, reliability and empathy from students. It does not. Students' expectations of responsiveness and empathy at AKU, N. are not effectively met. Many felt that though processes are formally in place to ensure, for example, timely and effective feedback about their education, they did not trust these mechanisms. Furthermore, students at AKU, N. do not feel that all staff are student-centric and positive towards them. This is an important finding, in view of the importance that students in this setting put on the student-centred dimensions of SQ.

Such discrepancies in the perceptions of students and their faculty are indicative of a gap between managers' understanding of students' needs and expectations; Gap 1 in the model (Arun Parasuraman et al., 1993; A Parasuraman et al., 1988). Such a gap typically occurs when management or service providers fail to understand what the customers want or need, normally through inadequate market research, a lack of communication between employees and managers, lack of proper market segmentation or a lack of encouragement for employees to listen to the customers (Mauri et al., 2013). In this study, students indicated a reluctance to communicate and give feedback about their experiences, which stemmed from uncertainty about how negative feedback would be received by staff. Others felt that no action would be taken anyway in response to their feedback. Yet, although some faculty managers alluded to a lack of staff openness to and acceptance feedback from students, most faculty expressed their satisfaction with the mechanisms and processes in place to ensure feedback. Managers, therefore, trust that they receive useful feedback from students and can understand students' needs – though, according to the students, they cannot.

This gap between the managers and students' perceptions about the quality of their education are not unusual. Research shows that self-report data is often prone to a phenomenon known as self-presentation bias or social desirability bias. This is a tendency of individuals to present themselves and their practices in a favourable way – they want to look good, or want to avoid looking bad, to others (Kopcha & Sullivan, 2007). Thus, AKU, N. managers' self-evaluation of their positive attitudes and student centeredness may be unreliable, especially in the face of the students' perceptions of staff responsiveness and empathy. Moreover, when managers do not

perceive the any problems with SQ, they cannot adequately address them – in this case, without good quality feedback, managers cannot see a problem to be solved.

According to the Gaps Model, when educational managers fail to apprehend the concept of SQ they can fail to deliver good SQ (Borishade, 2021; Parasumaran 1985; Nargunde 2016). This is because they set the service quality specifications for the medical school – by translating their understanding, experiences and expectations into the deliverables of medical education. If managers at AKU, N. misconstrue SQ relative to education, the SQ specifications they set up may not match the needs of their consumers. According to Parasumaran these gaps can be major hurdles in attempting to deliver a service which consumers would perceive as being of high quality (Parasumaran, 1985). The finding of this gap requires academic managers at AKU, N. to understand what SQ is, in relation to the education they are responsible for.

From this study's findings, it is possible to postulate, too, that there may be ineffective mechanisms for communication at AKU, N. which might mask another gap in SQ; that staff and managers may understand students' needs but remain unwilling or unable to deliver to the required standards – Gap 3 between SQ specifications and its actual service delivery. Managers don't seem to see the gap that students experience in SQ – they on the whole expressed satisfaction with the processes and outcomes of the educational processes. This may not stem from a lack of knowledge of the required standards but may be the result of inability or unwillingness to deliver good SQ (Franceschini & Mastrogiacomo, 2018; Nargunde, 2016). Although this study did not extend to enquiry about managers' willingness or capacity to deliver to required standards, this is an area that could be the focus of a different future study.

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5.2.3 Strategies to address the service quality gaps at AKU, N.

There are important strategies that managers can use to manage or address the SQ Gaps revealed in this study. Educational managers determine strategy, goals and objectives and especially corporate culture - therefore they have a decisive influence on the quality of service (Sharabi, 2013). Thus, Gap 1, between managers and students' perceptions, is amenable to their active management. As people who have authority and responsibility for designing services, their full understanding of customer service expectations can prevent poor decision-making and inappropriate resource allocation (Nargunde, 2016). According to Sharabi, managers must regularly review service quality with the intention of actively participating in the continuous improvement of the educational business processes to meet the students' needs and expectations, and to discover the quality gaps (Sharabi, 2013). There is a need for consistent

interaction between managers the students. To get a better understanding of student expectations, the feedback mechanisms already in place at AKU, N. can be utilized more effectively to discern their needs. It is possible at AKU, N. to implement periodic questionnaires about satisfaction that include different measurements of service quality. Perhaps using focus groups, it is possible to interrogate different stakeholders' definitions of service quality in graduate medical education. Such periodic surveys would give the academic management a clear picture of their service quality from the students, faculty and other staff's point of view and to identify the gaps (Sharabi, 2013; Šimić & Štimac, 2012).

Increased direct interactions between managers and students would be helpful to improve understanding and to build the relationship between them over time, through official meetings and less formal social gatherings (Nargunde, 2016). Finally, through research, complaint analysis, student feedback panels and a more robust feedback system, students' needs can be better distinguished. Taking this approach, a step further, educational leaders can solicit feedback from students and faculty in the form of complaints. Students or customer complaints can be viewed as a means of improving service because close contact with them, paying attention to and responding to their complaints, criticism and suggestions can help an organization to implement improvements in its system. Such attention enables the management of an organization to fine-tune itself to students' expectations and needs, as well as anticipate their future demands (Hamoud, Hussien, Fadhil, & Ekal, 2020; Sharabi, 2013; Stone, 2011).

Alternatively, organizations could take steps to manage students' expectations at the outset. As students are increasingly viewed as the primary customers of education services, one approach to service quality management would be to temper students' expectations (Hill, 1995). For example, by informing students of what is and what is not possible (Berry et al., 1985; King, 1985; Zeithaml et al., 1990). Such an approach could be a short term, stop-gap way of managing SQ while a longer-term strategy of SQ improvement is engaged. To address the specifications and delivery gaps, it is necessary to design service and performance standards that accurately reflect what the students at AKU, N. want. Academic leaders face the challenge of communicating student expectations into service quality specifications that employees – staff and non-administrative faculty – can understand and implement when dealing with students face-to-face (Nargunde 2016, Hill 1995). To enable this, SQ standards must be supported appropriate resources; people should be trained, systems and technology must be invested in. Lastly, the performance of employees should be measured and compensated according to their performance according to standards set (Nargunde 2016).

5.2.4 Students' and managers' views on the impact of service quality on the competitiveness of graduate medical education at AKU, N.

Students' and managers' views on the impact of service quality on the competitiveness of the medical education offered at AKU, N are informed by their views on the relative importance of SQ dimensions, discussed below. The relative importance that students and their managers place on each dimension of SQ is important because it affects their perceptions of the competitiveness of their education compared to other products available in the market (Arachchige et al., 2021; Wijetunge, 2016).

AKU, N. students rated assurance as the most important of the five dimensions of SQ, and tangibility least important. So, as in other study settings, AKU, N. students value competence and professionalism in their teachers (Bolac & Koyuncu, 2020; Calvo-Porral et al., 2013). Remarkably, even though tangible elements have a positive impact on student impressions of the quality of an institution, (Bolac & Koyuncu, 2020; Calvo-Porral et al., 2013) AKU, N. students and managers both ranked tangibility as least important to them.

Multiple studies reveal that students value the more 'customer-centric' aspects of service quality over the more process-orientated aspects or tangibility. In Akhlaghi's 2012 study, students rated assurance, responsiveness and empathy as the more important of the dimensions of SQ, with reliability and tangibles of secondary importance (Akhlaghi et al., 2012). Abili's study found that assurance and responsiveness were the most important dimensions of service quality followed by reliability, tangibles and lastly, empathy (Abili et al., 2012). Duplicating this, Yeo and Li identified responsiveness, empathy and 'customer-orientation' as the important elements of SQ which have a strong impact on students' overall perceptions of the school's performance and competitiveness (Yeo & Li, 2014).

Managers and students at AKU, N. think differently about the impact of service quality on competitiveness of GME in Kenya. Managers highlighted technical things like the high quality of the education, modern facilities and patient volume and mix as competitive factors. Students, on the other hand, emphasized the more customer/ people-oriented aspects of an institution such as student-centeredness, psychosocial support and mentorship as the sources of competitive advantage. These findings can be compared to Yeo and colleagues' Singaporean study that correlates competitive forces to students' impressions about service quality in higher education – finding that students impressions of competitiveness are based on staff attitudes and ways they think, feel, and act towards students. Specifically, they identified responsiveness, empathy and

customer-orientation as important dimensions of SQ that have a strong impact on students' overall perceptions of the school's performance and competitiveness (Yeo & Li, 2014). Similarly, several other studies were able to demonstrate small positive correlations between consumers' perceptions of "service affect" – empathy, reliability and responsiveness – and customer satisfaction and competitiveness (Arachchige et al., 2021; Borishade et al., 2021; Šimić & Štimac, 2012).

Relating students' experiences to competitiveness, Hanaysha's neat study demonstrated a positive correlation between students' positive perceptions of all five dimensions of SQ and student satisfaction in Malaysian learning institutions, concluding that these institutions had effectively implemented institutional strategic improvement plans that focused on service quality. This, in turn, is important as it is one of the main measures of Malaysian Higher Education Ministry's strategic plan to attract as many international students as possible to study in Malaysian universities (RM Hanaysha et al., 2011).

In view of the relative importance that students at AKU, N. placed on reliability, empathy and responsiveness, the finding of an expectations-perceptions gap in these dimensions is important. Considering that students stated that competitors with a stronger focus on students' wellbeing – mental wellness, mentorship, student-centeredness and social support would offer stiff competition for AKU, N., then educational managers should employ strategies to close this gap between expectations and experiences. Educational leaders at AKU, N focus on tangibles, institutional reputation and the quality of staff – evidenced by the institution's multiple ground-breaking accreditations by international quality agencies (Wako, A., 2022). This accreditation is based on high end facilities that are rare elsewhere in Kenya. Although students are influenced by the outward appearance and facilities of an institution when making their choices (Abbas, 2020; Sharabi, 2013), in view of the low importance put on these by AKU, N students and managers, a strong focus on tangibles may not yield strong competitive advantage for AKU, N. According to Simic and colleagues, when there are choices higher education service providers available, students look for added value – perhaps better service and value for money.

Moreover, these days, students are equipped with modern internet-enabled communications technology and are more sophisticated than students of yesteryear. It is an oft-stated marketing truism that a satisfied customer (read, student) shares their satisfaction with only one or two other people, while a dissatisfied customer shares their experience with up to ten people (Šimić & Štimac, 2012). Thus, the effect of a student that is not satisfied will be greater because

students now have more access to different technological means of communication. Like students in other settings, AKU, N. students and prospective students are strongly influenced by the opinions of other students and alumni (Moslehpour, 2020). So, a minority of students who are dissatisfied can have the power to greatly damage the image of an academic institution.

5.3 Conclusions

Since the evolution of the Gaps model of service quality, service quality has emerged globally as a business tactic as well as a key strategic issue on the management agenda. As businesses continue to seek unique sources of sustainable competitive advantage, service quality has become an alternative to traditional skills and resources. Moreover, there is empirical evidence that superior service quality delivers sustainable competitive advantage (Abbas, 2020; Warraich et al., 2013; Wijetunge, 2016). When firms provide high quality service, and make this a top strategic priority, they gain short-term increases in net operating income and revenue growth, and also longer-term returns and a reputation for the superior service quality (Rapert & Wren, 1998). Balancing this, consumers are able to look for added value when there are choices of service providers available – and better service is one such value-add they seek (Šimić & Štimac, 2012).

In today's environment, higher education institutions such as AKU, N. must be more efficient and participate in a competitive market in order to survive and grow. Students' expectations are continually rising. The economic benefits of superior service quality are well established (Mahdi & Almsafir, 2014; Sharabi, 2013; Yeo & Li, 2014). Thus, many educational institutions can ignore them only at their own risk.

There is a risk for AKU, N. in this study's findings. As the top management determines the strategy, goals and objectives, and resource allocation of any institution, so it has a decisive influence on the quality of service (Rapert & Wren, 1998). If managers at AKU, N. equate high tangibles and assurance with good overall service quality and overlook the more student-orientated dimensions, there is a danger of a strategic orientation which will not provide a sustainable competitive advantage. The risk is that AKU, N. can spend money on things that do not improve service quality, especially in the dimensions deemed important for competitiveness by the students and managers themselves. Consequently, the institution can lose the positive benefits of good service quality – improved market share of GME students; better overall financial performance and growth in net revenues (Sharabi, 2013; Šimić & Štimac, 2012).

In conclusion, this is an important study exploring the views of students, their faculty and managers on service quality and competitiveness in graduate medical education in Kenya. Qualitative adaptation of the SERVQUAL tool has been useful in shedding light on the topic. Although SQ at AKU, N. is rated highly in two dimensions, there are gaps both in the students' perceptions and expectations of SQ and in faculty and in managers' understanding of what students' value; Gaps 1 and 5 in the model. There are differing opinions between students and managers about the relative importance of the five dimensions of SQ and both these stakeholders related different aspects of SQ as important to competitiveness in GME.

This is an important study because it sheds light on the SQ concept in graduate medical education and how its dimensions relate, in the minds of its providers and consumers, to competitiveness. For the educational leadership at AKU, N. the findings are a basis for further investigation, and perhaps strategic change in direction to focus on SQ, especially the more student-centric dimensions like responsiveness and empathy, as a competitive force in education.

5.4 Contributions of the Study

In an area of educational research where there is little empirical study, this study sheds light on service quality in in graduate medical education in Kenya for the first time. It is a first-of-its-kind study exploring the views of students, their faculty and managers on service quality and competitiveness in graduate medical education in Kenya, and the findings are an informative point of reference for future studies in this area.

For the stakeholders of the institution, the findings reveal that although the students and managers may misapprehend the concept of SQ in relation to education, they understand it as an expectation and as an experience. The two gaps in SQ that are revealed are significant; the educational leadership at AKU, N. must be alive to the risks to competitiveness that they pose. Thus, policymakers at AKU, N. may seek to investigate the phenomenon of SQ more deeply, identify and plan to mitigate and close any other gaps as part of the routine institutional quality improvement frameworks. Faculty and staff can re-frame their thinking about service quality, knowing that it matters and that it can bring competitive advantages in the field. A focus in the strategic thinking on service quality and its impact on competitiveness an increasingly competitive space.

The study contributes to the small body of literature in this area, by adding to it. It forms a basis for future studies. The methodology can be replicated, and the findings are baseline data in the

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field, allowing others in the country and region to conduct further research. In the area of medical education, the data generated is relevant. The lack of studies that specifically explore the concept of SQ in GME as perceived by students and managers – buyers and suppliers in this market – makes this study and its findings timely and relevant.

For the Government's ministries of health and education and regulatory bodies of GME in Kenya the findings can be utilized as baseline data on student views on the dimensions that matter to them when choosing an institution for higher medical education. Other stakeholders can benefit from this study's findings. Students now have some empirical information that allows them to make choices of educational institution, as service quality in education matters to them and informs their opinions on attractiveness and competitiveness.

Lastly, the study contributes to the drive towards a definition of service quality in education. From the findings, students, managers and faculty's opinions add to the body of available characterizations and help to clarify the concept. Furthermore, it is a starting point for the development of indicators that clearly relate to SQ in GME and a measuring tool that is reliable and valid.

5.5 Recommendations

Four recommendations on a practical, policy and research level arise from the study, which can impact both the institution and broader stakeholder groups.

At a practical level, for AKU, N., educational leadership can make educational SQ a top strategic priority in a competitive climate. They should seek to understand it and make it manifest for managers, staff and students, by defining its important dimensions, relevant to AKU. Beyond this, there should be initiatives to measure and mitigate service quality gaps where possible, as part of ongoing quality assurance and improvement at AKU, N.

Policy recommendations are for policy makers to investigate the phenomenon of SQ more deeply, identify and plan to mitigate and close any other gaps as part of the routine institutional quality improvement frameworks.

Researchers should build on this study's findings and conduct further investigations and generate empirical information of SQ in GME in Kenya.

Finally, for Strathmore Business School, the institution that sponsored the research, the recommendation is to enable dissemination of the findings, so that within the country, the region

and further afield, the findings are available to students, managers and other interested stakeholders who can build on and utilize the data.

5.6 Study Limitations

The study had some limitations. As a case study that is set at one moment in time, based at one institution – a private graduate medical school in urban Kenya – there are limits on the extrapolation of the results to other settings in Kenya and elsewhere. The setting of a relatively well-resourced medical school could make comparisons to larger, less resourced institutions less relevant. Also, the study's timeline is not longitudinal. Furthermore, the necessarily small sample size engendered by the qualitative methodology gave in-depth data, but from few voices. Lastly, more stakeholder types could be included in future studies, to give a broader representation. Despite the limitations of being a one-site qualitative case study, it is a foundational study for the exploration if this important area in Kenya and in the wider region. Other providers of GME in Kenya and in the region can gain insights about their own settings. The study methodology can be replicated, allowing others in the country and region to conduct further research.

5.7 Suggestions for Further Research

Future studies can emanate from this one, mitigating the limitations of this study. For example, a multicenter study would derive more generalizable results – through a broader sampling of the Kenyan GME population and using larger sample sizes to yield relevant data. Researchers could employ purely quantitative methodology to enable numerical quantification of service quality gaps in medical education. For a more focused approach to the topic, studies could assess factors that influence students' expectations of services rendered at GME institutions. Lastly, a broader group of the many stakeholders of GME could participate in studies that would reveal the interrelationship between stakeholder understanding, perceptions and expectations of service quality in this field.

REFERENCES

Abbas, J. (2020). Service quality in higher education institutions: qualitative evidence from the students' perspectives using Maslow hierarchy of needs. *International Journal of Quality and Service Sciences*.

Abdul-Majeed, I. Service Quality and Competitive Advantage in Ghana's Telecommunication Industry. Evidence of MTN Ghana.

Abdullah, F. (2006). Measuring service quality in higher education: three instruments compared. *International Journal of Research & Method in Education, 29*(1), 71-89.

Abili, K., Thani, F. N., & Afarinandehbin, M. (2012). Measuring university service quality by means of SERVQUAL method. *Asian Journal on Quality*.

Abu-El Samen, A. A., Akroush, M. N., & Abu-Lail, B. N. (2013). Mobile SERVQUAL: A comparative analysis of customers' and managers' perceptions. *International Journal of Quality & Reliability Management*.

Abukhalifeh, A. N., & Som, A. P. M. (2015). Servqual: A Multiple–Item Scale for Measuring Customer Perceptions of Restaurants' Service Quality. *Advances in Environmental Biology, 9*(3), 160-162.

Accreditation, W.-W. T. F. o. (2005). *Accreditation of medical education institutions*. Retrieved from

Adams, L. V., Wagner, C. M., Nutt, C. T., & Binagwaho, A. (2016). The future of global health education: training for equity in global health. *BMC Medical Education, 16*(1), 1-7.

Aghamolaei, T., & Zare, S. (2008). Quality gap of educational services in viewpoints of students in Hormozgan University of medical sciences. *BMC Med Educ, 8*, 34. doi:10.1186/1472-6920-8-34

Aizenberg, D. J., & Logio, L. S. (2020). The graduate medical education (GME) gold rush: GME slots and funding as a financial asset. *Academic Medicine, 95*(4), 503-505.

Akhlaghi, E., Amini, S., & Akhlaghi, H. (2012). Evaluating Educational Service Quality in Technical and Vocational Colleges using SERVQUAL Model. *Procedia - Social and Behavioral Sciences, 46*, 5285-5289. doi:10.1016/j.sbspro.2012.06.424

Alharahsheh, H. H., & Pius, A. (2020). A review of key paradigms: Positivism VS interpretivism. *Global Academic Journal of Humanities and Social Sciences, 2*(3), 39-43.

Alijanzadeh, M., Fattahi, H., Veisi, F., Alizadeh, B., Khedmatgozar, Z., & Gholami, S. (2018). Assessment of Educational Service Quality Gap: The Students' Perspectives. *Educational Research in Medical Sciences, 7*(1). doi:10.5812/erms.80246

Angell, R. J., Heffernan, T. W., & Megicks, P. (2008). Service quality in postgraduate education. *Quality assurance in education*.

Arachchige, J., Singh, D., & Weerasooriya, W. (2021). Examining the relationship between competitive capability and perceived service quality in university libraries. *Journal of the University Librarians Association of Sri Lanka, 24*(1), 1-38.

Bahadori, M., Mousavi, S. M., Sadeghifar, J., & Haghi, M. (2013). Reliability and performance of SEVQUAL survey in evaluating quality of medical education services. *International Journal of Hospital Research, 2*(1), 39-44.

Bahadori, M., Sadeghifar, J., Nejati, M., Hamouzadeh, P., & Hakimzadeh, M. (2011). Assessing quality of educational service by the SERVQUAL model: Viewpoints of paramedical students at Tehran university of medical science. *Technics Technologies Education Management, 6*(4), 1058-1065.

Bayraktaroglu, G., & Atrek, B. (2010). Testing the superiority and dimensionality of SERVQUAL vs. SERVPERF in higher education. The Quality Management Journal, 17 (1), 47–59. In.

Bedoll, D., van Zanten, M., & McKinley, D. (2021). Global trends in medical education accreditation. *Hum Resour Health, 19*(1), 70. doi:10.1186/s12960-021-00588-x

Bendermacher, G. W., De Grave, W. S., Wolfhagen, I. H., Dolmans, D. H., & oude Egbrink, M. G. (2020). Shaping a culture for continuous quality improvement in undergraduate medical education. *Academic Medicine*, *95*(12).

Benítez, F., Mukherjee, N., Young, J., Rose, D., Mumby, H., Derrick, C., ... & García, C. (2018). A methodological guide to using and reporting on interviews in conservation science research.

Boddy, C. R. (2016). Sample size for qualitative research. *Qualitative Market Research: An International Journal*.

Bolaa, F., & Koyuncu, B. Å. (2020). Evaluation of Medical Faculty Students' Quality Perceptions In The Context of The Service Factors. *International Journal of Early Childhood Special Education (INT-JECSE), 29*(5), 1622.

Borishade, T. T., Ogunnaike, O. O., Salau, O., Motilewa, B. D., & Dirisu, J. I. (2021). Assessing the relationship among service quality, student satisfaction and loyalty: the NIGERIAN higher education experience. *Heliyon*, e07590.

Boulet, J., Bede, C., Mckinley, D., & Norcini, J. (2007). An overview of the world's medical schools. *Medical Teacher, 29*(1), 20-26.

Brochado, A. (2009). Comparing alternative instruments to measure service quality in higher education. *Quality assurance in education*.

Bruijl, G. H. T. (2018). The relevance of Porter's five forces in today's innovative and changing business environment. *Available at SSRN 3192207*.

Bunniss, S., & Kelly, D. R. (2010). Research paradigms in medical education research. *Medical education, 44*(4), 358-366.

Calvo-Porral, C., Lévy-Mangin, J.-P., & Novo-Corti, I. (2013). Perceived quality in higher education: an empirical study. *Marketing Intelligence & Planning, 31*(6), 601-619. doi:10.1108/mip-11-2012-0136

Camilleri, M. A. (2021). Evaluating service quality and performance of higher education institutions: a systematic review and a post-COVID-19 outlook. *International Journal of Quality and Service Sciences*.

Chang, J.-C. (2009). Taiwanese tourists' perceptions of service quality on outbound guided package tours: A qualitative examination of the SERVQUAL dimensions. *Journal of vacation marketing, 15*(2), 165-178.

K. Cheruiyot, T., & C. Maru, L. (2013). Service quality and relative performance of public universities in East Africa. *The TQM Journal*, *25*(5), 533-546.

Cheung, K. K. C., & Tai, K. W. (2021). The use of intercoder reliability in qualitative interview data analysis in science education. *Research in Science & Technological Education*, 1-21.

Chong, Y. S., & Ahmed, P. K. (2012). An empirical investigation of students' motivational impact upon university service quality perception: a self-determination perspective. *Quality in Higher Education, 18*(1), 35-57.

Da Dalt, L., Callegaro, S., Mazzi, A., Scipioni, A., Lago, P., Chiozza, M. L., . . . Perilongo, G. (2010). A model of quality assurance and quality improvement for post-graduate medical education in Europe. *Med Teach, 32*(2), e57-64. doi:10.3109/01421590903199734

De Haan, H. H. (2015). Competitive advantage, what does it really mean in the context of public higher education institutions? *International Journal of Educational Management*.

De Oliveira, O. J., & Ferreira, E. C. (2009). *Adaptation and application of the SERVQUAL scale in higher education.* Paper presented at the Proceedings of POMS 20th Annual Conference Orlando, Florida USA.
Dougherty, D., & Murthy, A. (2009). What service customers really want. *Harvard business review, 87*(9), 22.
Elmore, J. M. (2010). Institutionalized attacks on academic freedom: The impact of mandates by state departments of education and national accreditation agencies on academic freedom. *AAUP Journal of Academic Freedom, 1*.
Endeshaw, B. (2021). Healthcare service quality-measurement models: a review. *Journal of Health Research, 35*(2), 106-117.
Farmer, P. E., & Rhatigan, J. J. (2016). Embracing medical education's global mission. *Academic Medicine, 91*(12), 1592-1594.
Fatima, I., Humayun, A., Iqbal, U., & Shafiq, M. (2019). Dimensions of service quality in healthcare: a systematic review of literature. *Int J Qual Health Care, 31*(1), 11-29. doi:10.1093/intqhc/mzy125
Franceschini, F., & Mastrogiacomo, L. (2018). Service gap deployment: a framework to link quality gaps to service activities. *International Journal of Services and Operations Management, 29*(1), 85-99.
Frank, J. R., Taber, S., van Zanten, M., Scheele, F., Blouin, D., & International Health Professions Accreditation Outcomes, C. (2020). The role of accreditation in 21st century health professions education: report of an International Consensus Group. *BMC Med Educ, 20*(Suppl 1), 305. doi:10.1186/s12909-020-02121-5
Gehlert, S., & Mozersky, J. (2018). Seeing beyond the margins: Challenges to informed inclusion of vulnerable populations in research. *Journal of Law, Medicine & Ethics, 46*(1), 30-43.
Gilavand, A., & Maraghi, E. (2019). Assessing the quality of educational services of Iranian universities of medical sciences based on the SERVQUAL evaluation model: a systematic review and Meta-Analysis. *Iranian Journal of Medical Sciences, 44*(4), 273.
Gopalakrishnan, P. (2014). Assessing Quality of Educational Service by the Servqual Model: Viewpoints of Hotel Management Undergraduate Students at Manipal University in India. *Nitte Management Review, 8*(2), 11-22.
Greaves, F., Laverty, A. A., Cano, D. R., Moilanen, K., Pulman, S., Darzi, A., & Millett, C. (2014). Tweets about hospital quality: a mixed methods study. *BMJ quality & safety, 23*(10), 838-846.
Griswold, S. (2021). Graduate Medical Education Should Not Be A Commodity. *Health Affairs, 40*(3), 536-539.
Hamoud, A. K., Hussien, H. N., Fadhil, A. A., & Ekal, Z. R. (2020). *Improving service quality using consumers' complaints data mart which effect on financial customer satisfaction.* Paper presented at the Journal of Physics: Conference Series.
Hasan, T. (2010). Doctors or technicians: assessing quality of medical education. *Adv Med Educ Pract, 1*, 25-29. doi:10.2147/AMEP.S13877
Health, K. M. o. (2017). *Kenya Health Workforce Report:*

The Status of Healthcare Professionals in Kenya, 2015. Retrieved from Nairobi:
Hefer, Y., & Cant, M. (2014). Measuring service quality: the student as primary consumer. *International Business & Economics Research Journal (IBER), 13*(6), 1251-1260.
Hill, F. M. (1995). Managing service quality in higher education: the role of the student as primary consumer. *Quality assurance in education*.
Indiatsy, C. M., Mwangi, M. S., Mandere, E. N., Bichanga, J. M., & George, G. E. (2014). The Application of Porter's Five Forces Model on Organization Performance: A Case of Cooperative Bank of Kenya Ltd.

Kannan, A. S. (2012). Entrepreneurial education in Ethiopian Universities, current trends and gaps: the case of Dilla University. *International Journal of Management (IJM)*, *3*(3), 121-130.

Kang, G. D., & James, J. (2004). Service quality dimensions: an examination of Grönroos's service quality model. *Managing Service Quality: An International Journal*.

Kazungu, I., & Kiwia, R. H. MEASURING SERVICE QUALITY GAP IN HIGHER EDUCATION USING SERVIQUAL MODEL AT MOSHI UNIVERSITY COLLEGE OF CO-OPERATIVE AND BUSINESS STUDIES (MUCCoBS): IMPLICATIONS FOR IMPROVEMENT.

Kirigia, J. M., Gbary, A. R., Muthuri, L. K., Nyoni, J., & Seddoh, A. (2006). The cost of health professionals' brain drain in Kenya. *BMC health services research, 6*(1), 1-10.

Kopcha, T. J., & Sullivan, H. (2007). Self-presentation bias in surveys of teachers' educational technology practices. *Educational technology research and development, 55*(6), 627-646.

Kumar, M., Kee, F. T., & Manshor, A. T. (2009). Determining the relative importance of critical factors in delivering service quality of banks: an application of dominance analysis in SERVQUAL model. *Managing Service Quality: An International Journal*.

Lee, D., & Kim, K. K. (2017). Assessing healthcare service quality: a comparative study of patient treatment types. *International Journal of Quality Innovation, 3*(1). doi:10.1186/s40887-016-0010-5

Mahat, M. (2019). The competitive forces that shape Australian medical education: An industry analysis using Porter's five forces framework. *International Journal of Educational Management*.

Mahdi, O. R., & Almsafir, M. K. (2014). The Role of Strategic Leadership in Building Sustainable Competitive Advantage in the Academic Environment. *Procedia - Social and Behavioral Sciences, 129*, 289-296. doi:https://doi.org/10.1016/j.sbspro.2014.03.679

Marshall, B., Cardon, P., Poddar, A., & Fontenot, R. (2013). Does sample size matter in qualitative research?: A review of qualitative interviews in IS research. *Journal of computer information systems, 54*(1), 11-22.

Mathooko, F. M., & Ogutu, M. (2015). Porter's five competitive forces framework and other factors that influence the choice of response strategies adopted by public universities in Kenya. *International Journal of Educational Management*.

Mauri, A. G., Minazzi, R., & Muccio, S. (2013). A review of literature on the gaps model on service quality: A 3-decades period: 1985-2013. *International Business Research, 6*(12), 134.

McGrath, C., Palmgren, P. J., & Liljedahl, M. (2019). Twelve tips for conducting qualitative research interviews. *Medical Teacher, 41*(9), 1002-1006.

Ministry of Health. (2015). Kenya health workforce report: the status of healthcare professionals in Kenya, 2015.

Miseda, M. H., Were, S. O., Murianki, C. A., Mutuku, M. P., & Mutwiwa, S. N. (2017). The implication of the shortage of health workforce specialist on universal health coverage in Kenya. *Human resources for health, 15*(1), 1-7.

Mosadeghrad, A. M. (2014). Factors influencing healthcare service quality. *International journal of health policy and management, 3*(2), 77.

Moslehpour, M., Chau, K. Y., Zheng, J., Hanjani, A. N., & Hoang, M. (2020). The mediating role of international student satisfaction in the influence of higher education service quality on institutional reputation in Taiwan. *International Journal of Engineering Business Management*, *12*, 1847979020971955.

Mukhopadhyay, D. K. (2016). Students' perception of quality of medical education in a medical college in west Bengal, India. *Indian journal of public health, 60*(1), 4.
Nargunde, A. S. (2016). Service gaps. *International Journal of Management, 7*(5).
Ndetei, D. M., Mathai, M., Khasakhala, L. I., Mutiso, V., & Mbwayo, A. W. (2010). University medical education in Kenya: The challenges. *Medical Teacher, 32*(10), 812-815.
Nyongesa, H., Munguti, C., Omondi, C., & Mokua, W. (2014). Harnessing the power of social media in optimizing health outcomes. *The Pan African Medical Journal, 18*.
Owlia, M. S., & Aspinwall, E. M. (1996). A framework for the dimensions of quality in higher education. *Quality assurance in education*.
Parasuraman, A., Berry, L. L., & Zeithaml, V. A. (1993). More on improving service quality measurement. *Journal of retailing, 69*(1), 140-147.
Parasuraman, A., Zeithaml, V. A., & Berry, L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality.
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.
Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1994). Reassessment of expectations as a comparison standard in measuring service quality: implications for further research. *Journal of marketing, 58*(1), 111-124.
Porter, M. E. (1989). How competitive forces shape strategy. In *Readings in strategic management* (pp. 133-143): Springer.
Porter, M. E. (2008). The five competitive forces that shape strategy. *Harvard business review, 86*(1), 78.
Pringle, J., & Huisman, J. (2011). Understanding Universities in Ontario, Canada: An Industry Analysis Using Porter's Five Forces Framework. *Canadian Journal of Higher Education, 41*(3), 36-58.
Punch, K. F., & Oancea, A. (2014). *Introduction to research methods in education*: Sage.
Quinn, A., Lemay, G., Larsen, P., & Johnson, D. M. (2009). Service quality in higher education. *Total Quality Management, 20*(2), 139-152.
Rapert, M. I., & Wren, B. M. (1998). Service quality as a competitive opportunity. *Journal of Services Marketing*.
RM Hanaysha, J., Hilman Abdullah, H., & Warokka, A. (2011). Service quality and students' satisfaction at higher learning institutions: The competing dimensions of Malaysian universities' competitiveness.
Rowley, J. (1997). Beyond service quality dimensions in higher education and towards a service contract. *Quality assurance in education*.
Rust, R. T., Danaher, P. J., & Varki, S. (2000). Using service quality data for competitive marketing decisions. *International Journal of Service Industry Management*.
Ryan, G. (2018). Introduction to positivism, interpretivism and critical theory. *Nurse researcher, 25*(4), 41-49.
Schijns, J. M. (2021). Measuring service quality at an online university: using PLS-SEM with archival data. *Tertiary Education and Management*, 1-25.
Shankar, A., Datta, B., Jebarajakirthy, C., & Mukherjee, S. (2020). Exploring mobile banking service quality: a qualitative approach. *Services Marketing Quarterly, 41*(2), 182-204.
Sharabi, M. (2013). Managing and improving service quality in higher education. *International Journal of Quality and Service Sciences*.
Šimić, L., & Štimac, H. (2012). Competitiveness in higher education: A need for marketing orientation and service quality. *Economics and sociology, 5*, 23-34.
Soares, M. C., Novaski, O., & Anholon, R. (2017). SERVQUAL model applied to higher education public administrative services. *Brazilian Journal of Operations & Production Management, 14*(3). doi:10.14488/BJOPM.2017.v14.n3.a7

Souca, M. L. (2011). SERVQUAL–Thirty years of research on service quality with implications for customer satisfaction. *Marketing from Information to Decision*(4), 420-429.

Stone, M. (2011). Literature review on complaints management. *Journal of Database Marketing & Customer Strategy Management, 18*(2), 108-122.

Sultan, P., & Wong, H. Y. (2010). Service quality in higher education–a review and research agenda. *International Journal of Quality and Service Sciences*.

Sultan, P., & Wong, H. Y. (2011). Service quality in a higher education context: antecedents and dimensions. *International Review of Business Research Papers, 7*(2), 11-20.

Sultan, P., & Wong, H. Y. (2013). Antecedents and consequences of service quality in a higher education context: a qualitative research approach. *Quality assurance in education*.

Sumaedi, S., Yarmen, M., & Bakti, I. (2016). Healthcare service quality model: A multi-level approach with empirical evidence from a developing country. *International Journal of Productivity and Performance Management, 65*(8), 1007-1024.

Taber, S., Akdemir, N., Gorman, L., van Zanten, M., & Frank, J. R. (2020). A "fit for purpose" framework for medical education accreditation system design. *BMC Med Educ, 20*(Suppl 1), 306. doi:10.1186/s12909-020-02122-4

Taherdoost, H. (2016). *Validity and Reliability of the Research Instrument; How to Test the Validation of a Questionnaire/Survey in a Research*. Retrieved from

Talib, Z., Narayan, L., & Harrod, T. (2019). Postgraduate medical education in sub-Saharan Africa: a scoping review spanning 26 years and lessons learned. *Journal of graduate medical education, 11*(4s), 34-46.

Teeroovengadum, V., Kamalanabhan, T., & Seebaluck, A. K. (2016). Measuring service quality in higher education: Development of a hierarchical model (HESQUAL). *Quality assurance in education*.

Torralba, K. M. D., & Katz, J. D. (2020). Quality of medical care begins with quality of medical education. *Clin Rheumatol, 39*(3), 617-618. doi:10.1007/s10067-019-04902-w

Wamuyu, P. (2020). The Kenyan Social Media Landscape: Trends and Emerging Narratives, 2020. In: SIMElab, Nairobi. https://www. usiu. ac. ke/assets/file ….

Wako, A. 2022, June 29 Aga Khan hospital recognised by global body for high-quality patient care *Nation Digital* URL: https://nation.africa/kenya/news/global-body-recognises-aga-khan-hospital-for-quality-care-3863874

Warraich, K. M., Warraich, I., & Asif, M. (2013). Achieving Sustainable Competitive Advantage through Service Quality: an Analysis of Pakistan's Telecom Sector. *Global Journal of Management and Business Research, 13*.

Wijetunge, W. (2016). Service quality, competitive advantage and business performance in service providing SMEs in Sri Lanka. *International Journal of Scientific and Research Publications, 6*(7), 720-728.

Wuhib, T. (2016). Service quality in education at Addis Ababa University: the case of the faculty of business and economics extension program. *Ethiopian Journal of Business and Economics (The), 6*(1), 48-71.

Yarmohammadian, M. H., Mozaffary, M., & Esfahani, S. S. (2011). Evaluation of quality of education in higher education based on Academic Quality Improvement Program (AQIP) Model. *Procedia-Social and Behavioral Sciences, 15*, 2917-2922.

Yeo, R. K., & Li, J. (2014). Beyond SERVQUAL: The competitive forces of higher education in Singapore. *Total Quality Management & Business Excellence, 25*(1-2), 95-123.

Young, J. C., Rose, D. C., Mumby, H. S., Benitez-Capistros, F., Derrick, C. J., Finch, T., . . . Morgans13, C. A methodological guide to using and reporting on interviews in conservation science research.

Zeithaml, V. A., & Parasuraman, A. (2004). Service quality. *Cambridge, MA*.

Zeleza, P. T. (2019). *Money Matters: The Financial Crises Facing Universities from the USA to Kenya*.

APPENDICES

APPENDIX I: INFORMED CONSENT FORM FOR MANAGERS

This informed consent form is for residents at the Medical College, Aga Khan University Nairobi, Kenya (AKU, N.) who are invited to participate in this research project titled:

"PERCEPTIONS AND EXPECTATIONS OF SERVICE QUALITY AND PERCEPTIONS OF ITS IMPACT ON COMPETITIVENESS IN GRADUATE MEDICAL EDUCATION AT AGA KHAN UNIVERSITY - A QUALITATIVE ANALYSIS USING A MODIFIED SERVQUAL APPROACH."

RESEARCH DETAILS

Name of Principle Investigator: Dr Dorothy Kamya, Associate Dean PGME, AKU, N.

Name of Organizations: Aga Khan University / Strathmore University Business School

Name of Sponsor: Aga Khan University

Name of Project and Version: Perceptions and Expectations of Service Quality and its Impact on Competitiveness in graduate medical education at Aga Khan University - a qualitative analysis using a modified SERVQUAL approach.

This Informed Consent Form has two parts; you will be given a copy of the full Informed Consent Form:

- Information Sheet (to share information about the study with you)
- Certificate of Consent (for signatures if you choose to participate)

PART I: INFORMATION SHEET

Introduction: This research project is about the extent of service quality at the Aga Khan University. I am going to give you information about it and invite you to be part of this research. You do not have to decide today whether or not you will participate in the research. Before you decide, you can talk to anyone you feel comfortable with about the research.

If at any point there is anything that you do not understand, please ask me to stop as we go through the information and I will explain. If you have questions later, you can ask them of me or of another researcher.

Purpose of the research: The main purpose of this study is to explore the extent to which service quality is practiced in postgraduate medical education at AKU, N. and how it affects competitiveness of GME in Kenya.

In simpler terms, I wish to hear from you how what you think about the quality of educational service you receive from AKU, N. I want to hear what you think makes a medical school competitive in this environment.

Type of Research Intervention: The research will be in the form on an interview with you and I.

Procedure: This research will involve your participation in an individual interview that will take about forty-five minutes to an hour of your time. I will ask you several questions about the subject of study. Feel free to share your opinions; I will clarify any questions if necessary. Any questions that you do not wish to answer, please let me know and we can skip them.

I would like to audio record the interview so that I am able to transcribe it later. This means I will translate the voice recording into a written script after the interview, using software that does this automatically. If you do not wish to have a voice recording of the interview, I can take notes and write down the answers instead.

Confidentiality: The information recorded is confidential, and no one else except me and (Dr Dorothy Kamya, the PI) will access to the information documented during your interview. Nothing that you tell us today will be shared with anybody outside the research team, and nothing will be attributed to you by name. The entire interview will be tape-recorded, but no-one will be identified by name on the tape. The digital recording will be kept on a cloud-based server which is password protected. Access to the data will be only by the PI. The information recorded is confidential, and no one else except the PI will have access to it. The digital data will be stored and will be destroyed after five years according to AKU research policy.

At the beginning of the interview, I will ask you to provide me with some basic demographic data (your age band, specialty of training and your gender) which will help the researchers in analysing your answers. The data will be anonymous and will be used to identify subgroups within the sample of interviewees. Your name and any other identifying data will not be stored or used in the analysis. Any information that you do not wish to be used can be omitted here.

Participant Selection: I have selected you to participate in this study because you are a student of the Medical College at AKU, N. and your experiences are relevant to the research question. Your opinions can contribute much to our understanding and knowledge of educational service quality in this setting.

Voluntary Participation: Your participation in this research is entirely voluntary. It is your choice whether to participate or not. If you choose not to participate all the services, you receive at AKU, N. will continue and nothing will change.

The choice to participate or not will have no bearing on your job or studies, or on any work-related evaluations or reports. You may change your mind later and stop participating even if you agreed earlier.

Benefits/ Reimbursement: There will be no direct benefit to you, but your participation is likely to help us find out more about the quality of the educational service at AKU. This may be useful for future AKU, N. students. You will not be provided any monetary incentive to take part in the research.

Further information: If you have any questions, you can ask them now or later. If you wish to ask questions later, you may contact me on:

[*Research assistant's name, address/telephone number/e-mail]*

This proposal has been reviewed and approved by the Aga Khan University Institutional Ethics and Research Committee (IERC), which is a committee whose task it is to make sure that research participants are protected from harm. If you wish to find about more about the IRB, contact Ms. (research manager)

PART II: CERTIFICATE OF CONSENT

I have read the foregoing information. I have had the opportunity to ask questions about it and any questions I have been asked have been answered to my satisfaction.

I consent voluntarily to be a participant in this study.

Print Name of Participant_____________________________________

Signature of Participant _________________________ Date ___________________________

Statement by the researcher/person taking consent:

I have shared the information sheet with the potential participant, and to the best of my ability made sure that the participant understands what will be done. I confirm that the participant was given an opportunity to ask questions about the study, and all the questions asked by the participant have been answered correctly and to the best of my ability. I confirm that the participant has not been coerced into giving consent, and that the consent has been given freely and voluntarily.

A copy of this informed consent form has been provided to the participant.

Print Name of Researcher/________________________

person taking the consent:

Signature of Researcher / _________________________

person taking the consent:

Date __________________________

APPENDIX II: INFORMED CONSENT FORM FOR STUDENTS

This informed consent form is for residents at the Medical College, Aga Khan University Nairobi, Kenya (AKU, N.) who are invited to participate in this research project titled:

"PERCEPTIONS AND EXPECTATIONS OF SERVICE QUALITY AND PERCEPTIONS OF ITS IMPACT ON COMPETITIVENESS IN GRADUATE MEDICAL EDUCATION AT AGA KHAN UNIVERSITY - A QUALITATIVE ANALYSIS USING A MODIFIED SERVQUAL APPROACH."

RESEARCH DETAILS

Name of Principle Investigator: Dr Dorothy Kamya, Associate Dean PGME, AKU, N.

Name of Organizations: Aga Khan University / Strathmore University Business School

Name of Sponsor: Aga Khan University

Name of Project and Version: Perceptions and Expectations of Service Quality and its Impact on Competitiveness in graduate medical education at Aga Khan University - a qualitative analysis using a modified SERVQUAL approach.

This Informed Consent Form has two parts; you will be given a copy of the full Informed Consent Form:

- Information Sheet (to share information about the study with you)
- Certificate of Consent (for signatures if you choose to participate)

PART I: INFORMATION SHEET

Introduction: This research project is about the extent of service quality at the Aga Khan University. I am going to give you information about it and invite you to be part of this research. You do not have to decide today whether or not you will participate in the research. Before you decide, you can talk to anyone you feel comfortable with about the research.

If at any point there is anything that you do not understand, please ask me to stop as we go through the information and I will explain. If you have questions later, you can ask them of me or of another researcher.

Purpose of the research: The main purpose of this study is to explore the extent to which service quality is practiced in postgraduate medical education at AKU, N. and how it affects competitiveness of GME in Kenya.

In simpler terms, I wish to hear from you how what you think about the quality of educational service you receive from AKU, N. I want to hear what you think makes a medical school competitive in this environment.

Type of Research Intervention: The research will be in the form on an interview with you and I.

Procedure: This research will involve your participation in an individual interview that will take about forty-five minutes to an hour of your time. I will ask you several questions about the subject of study. Feel free to share your opinions; I will clarify any questions if necessary. Any questions that you do not wish to answer, please let me know and we can skip them.

I would like to audio record the interview so that I am able to transcribe it later. This means I will translate the voice recording into a written script after the interview, using software that does this automatically. If you do not wish to have a voice recording of the interview, I can take notes and write down the answers instead.

Confidentiality: The information recorded is confidential, and no one else except me and (Dr Dorothy Kamya, the PI) will access to the information documented during your interview. Nothing that you tell us today will be shared with anybody outside the research team, and nothing will be attributed to you by name. The entire interview will be tape-recorded, but no-one will be identified by name on the tape. The digital recording will be kept on a cloud-based server which is password protected. Access to the data will be only by the PI. The information recorded is confidential, and no one else except the PI will have access to it. The digital data will be stored and will be destroyed after five years according to AKU research policy.

At the beginning of the interview I will ask you to provide me with some basic demographic data (your age band, specialty of training and your gender) which will help the researchers in analysing your answers. The data will be anonymous and will be used to identify subgroups within the sample of interviewees. Your name and any other identifying data will not be stored or used in the analysis. Any information that you do not wish to be used can be omitted here.

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Participant Selection: I have selected you to participate in this study because you are a student of the Medical College at AKU, N. and your experiences are relevant to the research question. Your opinions can contribute much to our understanding and knowledge of educational service quality in this setting.

Voluntary Participation: Your participation in this research is entirely voluntary. It is your choice whether to participate or not. If you choose not to participate all the services, you receive at AKU, N. will continue and nothing will change.

The choice to participate or not will have no bearing on your job or studies, or on any work-related evaluations or reports. You may change your mind later and stop participating even if you agreed earlier.

Benefits/ Reimbursement: There will be no direct benefit to you, but your participation is likely to help us find out more about the quality of the educational service at AKU. This may be useful for future AKU, N. students. You will not be provided any monetary incentive to take part in the research.

Further information: If you have any questions, you can ask them now or later. If you wish to ask questions later, you may contact me on:

[*Research assistant's name, address/telephone number/e-mail]*

This proposal has been reviewed and approved by the Aga Khan University Institutional Ethics and Research Committee (IERC), which is a committee whose task it is to make sure that research participants are protected from harm. If you wish to find about more about the IRB, contact Ms. (research manager)

PART II: CERTIFICATE OF CONSENT

I have read the foregoing information. I have had the opportunity to ask questions about it and any questions I have been asked have been answered to my satisfaction.

I consent voluntarily to be a participant in this study.

Print Name of Participant____________________________________

Signature of Participant ________________________ Date __________________________

Statement by the researcher/person taking consent:

I have shared the information sheet with the potential participant, and to the best of my ability made sure that the participant understands what will be done. I confirm that the participant was given an opportunity to ask questions about the study, and all the questions asked by the participant have been answered correctly and to the best of my ability. I confirm that the participant has not been coerced into giving consent, and that the consent has been given freely and voluntarily.

A copy of this informed consent form has been provided to the participant.

Print Name of Researcher/_______________________

person taking the consent:

Signature of Researcher / ________________________

person taking the consent:

Date _________________________

VT OMNES VNVM SINT

APPENDIX III: CONSENT TO BE AUDIO-RECORDED, FOR STORAGE AND ANALYSIS OF DATA

Study name

Perceptions and expectations of service quality and perceptions of its impact on competitiveness in graduate medical education at Aga Khan University - a qualitative analysis using a modified SERVQUAL approach.

RESEARCH DETAILS

Name of Principle Investigator: Dr Dorothy Kamya, Associate Dean PGME, AKU, N.

Name of Organizations: Aga Khan University / Strathmore University Business School

Name of Sponsor: Aga Khan University

This study involves the audio recording of your interview with the researcher. Neither your name nor any other identifying information will be associated with the audio or audio recording or the transcript. Only the research team will be able to listen to the recordings. The tapes will be transcribed by the researcher and erased once the transcriptions are checked for accuracy. Transcripts of your interview may be reproduced in whole or in part for use in presentations or written products that result from this study. Neither your name nor any other identifying information (such as your voice or picture) will be used in presentations or in written products resulting from the study.

By signing this form, I am allowing the researcher to audio or video tape me as part of this research. I also understand that this consent for recording is effective until the following date: _________________. On or before that date, the tapes will be destroyed.

I agree to be audiotaped for this research project. ☐

Name of participant ________________________________

Signature _______________________________

Date __________________________

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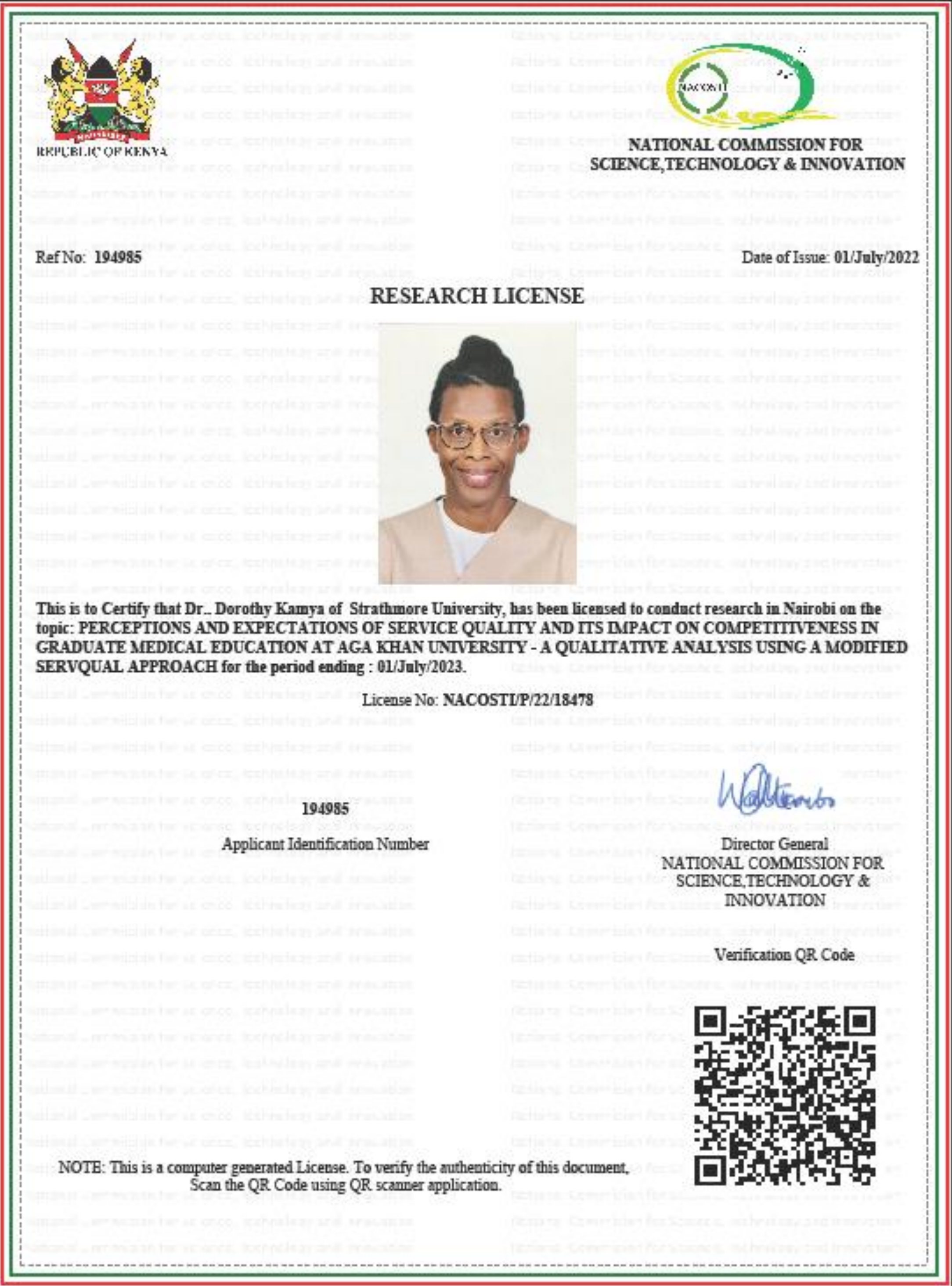
APPENDIX IV: NACOSTI PERMIT



REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Ref No: 194985

Date of Issue: 01/July/2022

RESEARCH LICENSE

This is to Certify that Dr.. Dorothy Kamya of Strathmore University, has been licensed to conduct research in Nairobi on the topic: PERCEPTIONS AND EXPECTATIONS OF SERVICE QUALITY AND ITS IMPACT ON COMPETITIVENESS IN GRADUATE MEDICAL EDUCATION AT AGA KHAN UNIVERSITY - A QUALITATIVE ANALYSIS USING A MODIFIED SERVQUAL APPROACH for the period ending : 01/July/2023.

License No: NACOSTI/P/22/18478

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Applicant Identification Number

Director General

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Verification QR Code

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Dimension		Questionnaire	Interview question (mapped)
Tangibility	1	XX has modern teaching and ICT equipment and facilities	B4: And the teaching materials and ICT – how do you rate them?

APPENDIX V: SERVQUAL items mapped to individual interview questions

	2	The XX premises are modern and pleasant	B1: What do you think about the physical characteristics of AKU, N, - that is the buildings, facilities and equipment?
	3	Staff at XX are well dressed and professional in appearance	B3: What about the professional appearance of the staff here?
	4	The teaching materials at XX are up-to-date and accessible	And the teaching materials and ICT – how do you rate them?
	5	Students' accommodation at AKU is comfortable, modern and clean	Tell me about the quality of the on-call accommodation – what is it like?
Reliability	6	Classes/ meetings are held on time as scheduled without delays	C2: Are the classes and other meetings for residents held on time and according to a published timetable
	7	The Academic Office opening hours are adequate for students' needs	
	8	Staff at XX are helpful and supportive to students	C1: What do you think about the helpfulness and supportiveness of AKU, N staff towards residents?
	9	Student records at XX are up to date	
	10	The grading criteria at XX are consistent and fair	C3: What do you think about the grading criteria for your course – are they consistent? Are they fair?
Responsiveness	11	XX gives timely responses and feedback to student enquiries	D1: Tell me about how staff respond to issues and feedback from residents at AKU, N?
	12	At XX, staff focus on students' best interests	D2: Would you say that at AKU, N staff focus on students' best interests?
	13	At XX, staff are willing provide assistance to students	C3: And do staff seem willing to provide support to residents?
	14	Staff at XX have good communication skills	C5: How do you rate the communication skills of staff?
	15	XX staff are polite to students	C4: Are the staff here polite to residents?
Assurance	16	I am confident in the knowledge and skills of academic staff at XX	E1: On the whole, how confident are you in the knowledge and skills of staff at AKU?
	17	XX staff are trustworthy	
	18	XX gives a good quality education	
	19	The faculty at XX have a good academic reputation	E2: Do the faculty here have a good reputation among their peers?
	20	An education at XX prepares one for future success	E3: Do you think that the education provided at AKU, H is preparing residents well for their future careers?
Empathy	21	At XX, staff understand students' needs	
	22	XX staff are student-orientated	
	23	XX staff have a positive attitude towards students	F2: Would you describe staff at AKU, N as positive towards residents?
	24	XX staff seek and value students' feedback	F1: Do staff here value feedback from residents?
	25	Students at XX are treated equally and fairly	F3: Are students treated fairly and equally at AKU, N?

APPENDIX VI: SEMI-STRUCTURED INTERVIEWS FOR ACADEMIC MANAGERS AND FACULTY

SERVQUAL questions mapped to Interview Questions

Instructions to respondents:

This interview will take approximately 30 minutes of your time. I will ask you several questions about the subject of study. Feel free to share your opinions; I will clarify any questions if necessary. Any questions that you do not wish to answer, please let me know and we can skip them.

Opening question

A. What does the term Educational Service Quality mean to you?

1. How do you relate this definition of service quality to the postgraduate education here at AKU, N? *Tell me more about that….*
2. Do you see the education at AKU, N as a service rendered by the Medical College? *Can you expand on that?*

B. Tangibles

1. What do you think about the physical characteristics of AKU, N, - that is the buildings, facilities and equipment?
2. And the teaching materials and ICT – how do you rate them?
3. What about the professional appearance of the staff here?
4. Tell me about the quality of the on-call accommodation – what is it like?
5. Do you think the physical facilities of AKU, N play any role its attractiveness for residents applying to study, when compared to other Universities? *How might that be?*

C. Reliability

6. What do you think about the helpfulness and supportiveness of AKU, N staff towards residents? *Can you share with me your reasons or examples for your answer?*
7. Are the classes and other meetings for residents held on time and according to a published timetable? *Give me more details about that please…*
8. What do you think about the grading criteria for your course – are they consistent? Are they fair? *Tell me more….*
9. Do you think that a University's ability to provide educational service as promised affects its attractiveness? *Can you expand on that?*

D. Responsiveness:

1. Tell me about how staff respond to issues and feedback from residents at AKU, N?
2. Would you say that at AKU, N staff focus on students' best interests*? Can you expand on that?*
3. And do staff seem willing to provide support to residents? *Give me an example…*
4. Are the staff here polite to residents? *Why do you say that?*
5. How do you rate the communication skills of staff?
6. In your opinion, how does staff the willingness to help residents and to provide a prompt service relate to a University's competitiveness? *Please tell me more….*

E. Assurance:

1. On the whole, how confident are you in the knowledge and skills of staff at AKU? *Can you expand on that?*
2. Do the faculty here have a good reputation among their peers? *Tell me why you think that…*
3. Do you think that the education provided at AKU, H is preparing residents well for their future careers? *Tell me more...*
4. How does the knowledge, courtesy and trustworthiness of staff affect AKU, N's attractiveness to you as a place to study?

F. Empathy:

1. Do staff here value feedback from residents? *Can you expand on that?*
2. Would you describe staff at AKU, N as positive towards residents? *Why do you say that…?*
3. Are students treated fairly and equally at AKU, N? *Tell me why you think that….*

Competitiveness questions:

G. Perceptions of competitors:

1. Do you know of other institutions or programs that can compete with AKU, N for medical education? *Please expand on that….*
2. How could alternative medical education programs beat the AKU, N product, in your opinion? *Tell me more…*
3. How do you rate the quality of the educational service at AKU, N. compared to other institutions out there? *Please help me to understand how that is…*
4. Are there some new M. Med programs that offer a comparable or better program than the AKU, N program? *Tell me more about that…*

H. Perception of students as consumers/ buyers

5. Can you rank these five aspects of service quality in order of importance to you as an educator? *Tell me why you have ranked them like this.*

The knowledge and courtesy of staff and their ability to convey trust and confidence (A)

The provision of caring, individualized attention to students (B)

The ability to perform the promised service dependably and accurately (C)

The willingness of staff to help students and to provide prompt service (D)

The appearance of the physical facilities, equipment, personnel and communication materials (E)

I. Wrap up question:

6. Thank you for giving us some of your time today and for participating in this interview. Is there anything else you'd like to add before we end?

APPENDIX VII: SEMI-STRUCTURED INTERVIEW SCHEDULE FOR GME STUDENTS

Instructions to respondents:

This interview will take approximately 30 minutes of your time. I will ask you several questions about the subject of study. Feel free to share your opinions; I will clarify any questions if necessary. Any questions that you do not wish to answer, please let me know and we can skip them.

To begin, please fill out the following demographic questions to help us understand more about you. The data will be anonymous and will be used to identify subgroups within the sample of interviewees. Any information that you do not wish to be used can be omitted here. Thank you for your participation.

Demographics basic

Age range	24 – 30 years	30 – 35 years	> 36 years
Gender	Female	Male	
PGME Specialty			
Which medical school did you attend?			
Are you fee paying or sponsored?	YES	NO	

Opening question

A. What does the term Educational Service Quality mean to you?

1. How do you relate this definition of service quality to the postgraduate education here at AKU, N? *Tell me more about that….*
2. Do you see the education at AKU, N as a service rendered by the Medical College? *Can you expand on that?*

B. Tangibles

1. What do you think about the physical characteristics of AKU, N, - that is the buildings, facilities and equipment?
2. And the teaching materials and ICT – how do you rate them?
3. What about the professional appearance of the staff here?
4. Tell me about the quality of the on-call accommodation – what is it like?
5. Do you think the physical facilities of AKU, N play any role its attractiveness for residents applying to study, when compared to other Universities? *How might that be?*

C. Reliability

1. What do you think about the helpfulness and supportiveness of AKU, N staff towards residents? Can you share with me your reasons or examples for your answer?
2. Are the classes and other meetings for residents held on time and according to a published timetable? Give me more details about that please…
3. What do you think about the grading criteria for your course – are they consistent? Are they fair? Tell me more….
4. Do you think that a University's ability to provide educational service as promised affects its attractiveness? Can you expand on that?

D. Responsiveness:

1. Tell me about how staff respond to issues and feedback from residents at AKU, N?
2. Would you say that at AKU, N staff focus on students' best interests*? Can you expand on that?*
3. And do staff seem willing to provide support to residents? *Give me an example…*
4. Are the staff here polite to residents? *Why do you say that?*
5. How do you rate the communication skills of staff?
6. In your opinion, how does staff the willingness to help residents and to provide a prompt service relate to a University's competitiveness? *Please tell me more….*

E. Assurance:

1. On the whole, how confident are you in the knowledge and skills of staff at AKU? *Can you expand on that?*
2. Do the faculty here have a good reputation among their peers? *Tell me why you think that…*
3. Do you think that the education provided at AKU, H is preparing residents well for their future careers? *Tell me more...*
4. How does the knowledge, courtesy and trustworthiness of staff affect AKU, N's attractiveness to you as a place to study?

F. Empathy:

1. Do staff here value feedback from residents? *Can you expand on that?*
2. Would you describe staff at AKU, N as positive towards residents? Why do you say that…?
3. Are students treated fairly and equally at AKU, N? *Tell me why you think that….*

Competitiveness questions:

G. Perceptions of competitors:

7. Do you know of other institutions or programs that can compete with AKU, N for medical education? *Please expand on that….*

8. How could alternative medical education programs beat the AKU, N product, in your opinion? *Tell me more…*

9. How do you rate the quality of the educational service at AKU, N. compared to other institutions out there? *Please help me to understand how that is…*

10. Are there some new M. Med programs that offer a comparable or better program than the AKU, N program? *Tell me more about that…*

H. Perception of students as consumers/ buyers

11. Can you rank these five aspects of service quality in order of importance to you as an educator? *Tell me why you have ranked them like this.*

The knowledge and courtesy of staff and their ability to convey trust and confidence (A)
The provision of caring, individualized attention to students (B)
The ability to perform the promised service dependably and accurately (C)
The willingness of staff to help students and to provide prompt service (D)
The appearance of the physical facilities, equipment, personnel and communication materials (E)

I. Wrap up question:

Thank you for giving us some of your time today and for participating in this interview. Is there anything else you'd like to add before we end?

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APPENDIX VIII: ISERC APPROVAL – AGA KHAN UNIVERSITY

THE AGA KHAN UNIVERSITY

Faculty of Health Sciences
Medical College

Ref: 2022/ISERC_36(v2)
July 1, 2022

Dorothy Kamya -Principal Investigator
Post-Graduate Medical Education
Medical College
Aga Khan University, Nairobi

Dear Dr. Dorothy Kamya and team

RE: EXPLORING THE EXTENT OF SERVICE QUALITY AT AGA KHAN UNIVERSITY: A FOCUS ON IMPROVING MEDICAL EDUCATION

The Aga Khan University, Nairobi Institutional Scientific and Ethics Review Committee (ISERC), is in receipt of your protocol resubmitted to the Research Office (RO) on 29th June, 2022. The ISERC has reviewed and approved this project *{as per attached official stamped protocol and attachments - version Ref: 2022/ISERC_36(v2)*. You are authorized to conduct this study from **July 1, 2022**. This approval is valid until **June 30, 2023** and is subject to compliance with the following requirements;

1. The conduct of the study shall be governed at all times by all applicable national and international laws, rules and regulations. ISERC guidelines and Aga Khan University Hospital policies shall also apply, and you should notify the committee of any changes that may affect your research project (amendments, deviations and violations)
2. Researchers desiring to initiate research activities during COVID-19 pandemic must comply with the COVID-19 SOPs for Research as well as submit to the Research Office a Request Form to Initiate, Reinstate or Continue Research During COVID-19 Pandemic.
3. **Prior** to human subjects enrolment you must obtain a research license from the National Commission for Science, Technology and Innovation (NACOSTI), *where applicable*, site approvals from the targeted external site(s) and file the copies with the RO.
4. *As applicable*, **prior** to export of biological specimens/data, ensure a Material Transfer Agreement (MTA)/Data Transfer Agreement (DTA), is in place as well as seek shipment authority/permit from the relevant government ministry. Copies of these approvals, should be submitted to the RO for records purpose.
5. All Serious Adverse Events and the interventions undertaken must be reported to the ISERC as soon as they occur but not later than 48 hours. The SAE shall also be reported through the AKUHN quality monitoring mechanism(s) at Client Relations Department of the Chief of Staff's Office.
6. All consent forms must be filed in the study binder and where applicable, patient hospital record.
7. Further, you must provide an interim Progress Report Form **60 days before expiration** of the validity of this approval and request extension if additional time is required for study completion; as well as submit the completed Self-Assessment Tool - Monitoring Ethical Compliance in Research. You must advise the ISERC when this study is complete or discontinued and a final report submitted to the Research Office for record purposes.
8. The Aga Khan University Hospital management should be notified of manuscripts emanating from this work.

If you have any questions, please contact Research Office at AKUKenya.ResearchOffice@aku.edu or 020-366 2148/1136.

With best wishes,

Dr. Christopher Opio,
Chair - Institutional Scientific and Ethics Review Committee (ISERC)
Aga Khan University, (Kenya)

Copy: Co-Investigators

APPENDIX IX: ISERC APPROVAL – STRATHMORE UNIVERSITY

Strathmore University Institutional Scientific and Ethical Review Committee (SU-ISERC)

Final Decision

This document certifies that the study:

\\\"Service Quality in Medical Education at Aga Khan University\\\"

Principal Investigator: Dr. Kamya, Dorothy
Reference number: SU-IERC1347/22

Was reviewed and received the following status:
\\\"done\\\"
Additional Comments: Final decision: **approved**
Comments sent:

Reviewer #1:
'1. Kindly address the comments given and queries raised
2. Revisit your references and check for completeness (harmony between in-text citations and those in your reference list), and consistency in how you cite (you use different styles in the text)
3. Recheck your abbreviations and acronyms list, and how you introduce and use them in the text e.g., PGME
4. Revisit the entire document for language. Some statements are poorly phrased, some are disjointed, and this distort the flow of the narrative. This is especially so in Chapter one of the submitted protocol.
'

04 July 2022 03:22:53