Universidade do Minho

Escola de Economia e Gestão

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Customer Experience in a Healthcare Co-creation Setting: Insights from Providers and Patients in Ghana

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Ph.D. Thesis

Ph.D. Thesis in Marketing and Strategy

Research conducted under the supervision of

Professor Clàudia Maria Neves Simões

October 2023

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Dedication

With heartfelt appreciation, I dedicate this thesis to two remarkable pillars of my life: my cherished wife, Naaki Akornor, and my beloved son, Kwaku Temeng Agyapong. Their unwavering support and boundless patience have been the steadfast foundations that carried me through every step of this academic journey.

Statement of Integrity

I hereby declare having conducted this academic work with integrity. I confirm that I have not used plagiarism or any form of undue use of information or falsification of results along the process leading to its elaboration. I further declare that I have fully acknowledged the Code of Ethical Conduct of the University of Minho.

Customer Experience in a Healthcare Co-creation Setting: Insights from Providers and Patients in Ghana

Abstract

In the context of healthcare, the current thesis seeks to enrich the understanding of the value co-creation process in the patients' experience encounters with healthcare providers in the malaria treatment process. Three qualitative studies were conducted. Data collection involves face-to-face interviews with 36 key informants at a university clinic in Ghana. The first study concentrated on patients' perspectives of value in use emerging from communication and interaction value, information sharing and access to information value, treatment value, and well-being. The second study reports on patients' experiences of the contextual elements for value co-creation. The third study investigates patients' smooth journey encounters in co-creation.

The contribution of this thesis to co-creation literature is threefold. First, the thesis contributes to patients' value in use in healthcare encounters in the malaria treatment process from communication and interaction, information sharing, and access to information, treatment, and well-being perspectives. Additionally, the thesis contributes to how continuous improvement in healthcare services facilitates the value co-creation process. Second, the thesis contributes to the contextual dimensions during patients' encounters with healthcare providers indicating how the contextual elements facilitate co-creation in healthcare encounters. This concentrates on dimensions such as physical space, digital communication, and location and access to the facility, which facilitate patients' experiences in the encounter process. Third, the thesis contributes to how a smooth journey facilitates value co-creation. Co-creation features that emerge in the smooth journey encounters in the context of a healthcare setting include openness, relationship, comfortability of service encounters, satisfaction, and accessibility of healthcare providers, to improve healthcare delivery.

Finally, based on the findings, several managerial implications are suggested for healthcare managers. Furthermore, research limitations that offer directions and avenues for future research are presented.

Keywords: *Value co-creation, patient experience, healthcare, malaria treatment, Ghana*.

Resumo

No contexto dos cuidados de saúde, esta tese procura enriquecer a compreensão do processo de cocriação de valor em encontros entre pacientes e prestadores de cuidados de saúde no processo de tratamento da malária. Foram realizados três estudos qualitativos. A recolha de dados envolveu entrevistas presenciais com 36 pacientes e prestadores de serviços realizadas numa clínica universitária no Gana. O primeiro estudo concentrou-se nas perspectivas dos pacientes sobre o o *value-in-use* no âmbitoda experiência da cocriação. O segundo estudo relata experiências de pacientes sobre elementos contextuais para cocriação de valor. O terceiro estudo investiga smooth journeys no âmbito da jornada dos pacientes na cocriação.

A contribuição desta tese para a literatura é tripla. Em primeiro lugar, a tese contribui para o papel do paciente na criação de valor nos cuidados de saúde no processo de tratamento da malária a partir das perspectivas de comunicação e interação, partilha de informação e acesso à informação, tratamento e bem-estar. A tese contribui, ainda, para a formas como a melhoria contínua nos serviços de saúde facilita o processo de cocriação de valor. Em segundo lugar, a tese contribui para dimensões contextuais durante os encontros dos pacientes com os prestadores de cuidados de saúde, indicando como os elementos contextuais facilitam a cocriação nos encontros de cuidados de saúde. Tal concentra-se em dimensões como espaço físico, comunicação digital e localização e acesso às instalações, que facilitam as experiências dos pacientes no encontro do serviço. Terceiro, a tese contribui para a forma como uma *smooth journey* facilita a cocriação de valor. Os recursos de cocriação que emergem nos encontros deste tipo no contexto de um ambiente de saúde incluem abertura, relacionamento, conforto nos encontros de serviço, satisfação e acessibilidade dos prestadores de cuidados de saúde.

Por fim, com base nos resultados, são sugeridas diversas implicações para os gestores de saúde e são apresentadas limitações do estudo e e caminhos de investigação futuros.

Palavras-chave: *Cocriação de valor, experiência do paciente, cuidados de saúde, tratamento da malária, Gana.*

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List of Abbreviations

TSR: Transformative Service Research

GT: Grounded Theory

WHO: World Health Organization (WHO)

DART: Dialogue, Access, Risk Assessment, and Transparency

V-in-U: Value-in-Use

V-in-E: Value-in-Exchange

P: Patient

HP: Healthcare Provider

GDL: Goods-Dominant Logic

SDL: Service-Dominant Logic

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Chapter One

INTRODUCTION

1. Introduction

The World Health Organization (WHO) reports that malaria continues to be a major global health issue, with approximately 229 million cases and about 409,000 deaths recorded worldwide in 2019 (WHO, 2020). While malaria diagnoses have been increasing in certain Western countries like the USA, Africa disproportionately bears the impact (Mace et al., 2021), with Sub-Saharan Africa, Southeast Asia, and the Western Pacific being the most severely affected regions (WHO, 2020). To address the urgent global concern of malaria, healthcare has demonstrated the potential to alleviate the disease burden, expedite recovery, and enhance patient satisfaction (Bitner, 1992; Geimer-Flanders, 2009; Berry & Bendapudi, 2007; Fottler et al., 2000). Considering this context, it becomes crucial to establish strong healthcare systems and improve healthcare treatments, particularly for conditions like malaria. The provision of accessible healthcare services should be a foundation of societies and prompt the development of innovative healthcare delivery models (Anderson et al., 2018; Osei-Frimpong, 2016).

Healthcare service is an essential service sector because it reports to a universally used service that significantly affects every aspect of patient life (Alkire & Hammedi, 2021; Berry & Bendapudi, 2007). Healthcare encompasses a continuum of services that spans from preventive measures and diagnostics to treatments and emergency care. Though healthcare services need to be understood holistically, it is dominated by doctor-patient interaction (Osei-Frimpong; 2017; Osei-Frimpong et al., 2015). Therefore, for a more holistic patient experience, there is a need to transform the conversations beyond the doctor-patient interactions to include multiple actors in the value co-creation process (McColl-Kennedy et al., 2012; Osei-Frimpong et al.,

2016). The concept of co-creation logic offers valuable insights into the mechanisms governing value co-creation within the domain of service provision. Consequently, this study presents a dynamic perspective on the logic of value co-creation within the literature of service marketing.

1.1 Main Theoretical Notions Adopted in the Research

academic discourse surrounding co-creation in the field of service marketing. This paradigm provides dynamic insights into the conceptualization of co-creation Edvardsson et al., 2011; Grönroos & Voima, 2013; Prahalad & Ramaswamy, 2004; Vargo et al., 2008). As posited by Vargo and Lusch (2008), conventional marketing theory, exemplified by Goods-Dominant Logic (GDL), often referred to as "manufacturing logic" or "firm-centric logic," predominantly defines the notion of value as "value-in-exchange." Nevertheless, Vargo et al. (2008) contend that both "value-in-exchange" and "value-in-use" constitute indispensable elements for comprehending the process of value creation in transactions. GDL assumes prominence when firms engage in the exchange of goods for monetary consideration within the marketplace, a perspective supported by scholars such as Grönroos and Voima (2013) and Vargo et al. (2008).

Service-Dominant Logic (SDL) represents a departure from the traditional Goods-Dominant Logic (GDL), a paradigm that has been deeply ingrained in the disciplines of marketing and management for well over a century, originating from the field of economics (Vargo & Lusch, 2008, 2016). SDL introduces the notion that customers not only derive benefits from services but actively engage in the co-creation of value with other stakeholders, through the integration of resources (Auh et al., 2007; Chan et al., 2010; Vargo & Lusch, 2016). Vargo and Lusch (2006) further underscore that Service-Dominant Logic (SDL) is fundamentally centered on the concept of 'value-in-use,' which emerges through customers' interactions with the service firm, drawing upon both publicly accessible and privately held resources (McColl-Kennedy et al., 2012). Within the framework of SDL, firms present value propositions, while customers actively participate in the value creation process

(Prahalad & Ramaswamy, 2004). Consequently, the roles of service providers and customers become interwoven as they collaboratively and reciprocally co-create value through the integration of resource applications (Vargo, Morgan, Akaka, & He, 2009). This paradigm shift redirects the focus from the offerings of the service firm to the dynamic process of customer value creation, wherein value is experienced by the customer. Consequently, Service-Dominant Logic (SDL) highlights the pivotal role of customer participation in shaping the service experience and driving value creation (Prahalad & Ramaswamy, 2004b).

This acknowledges the service system as a critical entity that engages with diverse components, facilitating customers' active involvement in the co-creation of value (Vargo et al., 2008). Moreover, service logic assumes a central role in the process of customer value creation, with Vargo et al. (2008) affirming that the customer occupies a pivotal position within this value creation dynamic, engaging in direct interactions with the service provider (Vargo et al., 2008).

The core premise underpinning this research centers on co-creation. Co-creation is the ‘benefit that emerges from the integration of resources through activities and interactions with collaborators within the customer's service network (McColl-Kennedy et al., 2012). Within this perspective, the value can be construed through various conceptual lenses (Vargo & Lusch, 2008).

A portion of the literature is embedded in the "value-in-use," where the process of value creation involves mutual and interactive engagement between service providers and beneficiaries, leading to the integration of resources (Vargo et al., 2008). This concept constitutes the main pivot of the service-dominant logic because it posits that the customer consistently assumes the role of a co-creator of value (Vargo & Lusch, 2004). Hence, customers engage in the integration and utilization of their available resources, encompassing knowledge, skills, and motivations, to actively contribute to the value co-creation process (Lusch et al., 2010). These resources are to be considered from both the company's perspective, comprising operand resources such as physical products, websites, machines, and various touchpoints, and the customer's perspective, encompassing operant

resources such as the customer's knowledge and skills. Consequently, "value-in-use" emerges throughout the collaborative co-creation process.

1.2 Research Objectives and Scope of the Study

The primary aim of our study was to explore the process of service co-creation in healthcare interactions. To achieve this goal, we formulated the following specific objectives:

(1) To investigate the patients' value in a journey of co-creation in healthcare delivery.
(2) To describe the contextual elements in the patient encounter process for co-creation in healthcare.
(3) To identify the roles in the patient's journey in a co-creation context in healthcare.

The thesis is designed to address three distinct research questions, each corresponding to a distinct essay, with the objective of contributing to our comprehension of the co-creation phenomenon within the context of healthcare.

RQ1: How does value emerge in the co-creation experience in healthcare from the perspectives of patients?

RQ2: How do contextual elements emerge in the patient encounter process for co-creation in healthcare?

RQ3: How is co-creation embedded in the patients' smooth journey experience in healthcare?

We developed 3 studies to explore co-creation in a healthcare setting during the course of malaria treatment in a clinic in Ghana. We employ qualitative research design methodology to address these study research questions. The methodological approach chosen to explore participants' perceptions is the interpretivism approach and we presented rich information and dynamic descriptions of how people think, react, and feel under certain contextual specific circumstances. Table 1 summarizes the scope of each study.

Table 1: Scope of the Thesis

Study	Research Question	Research Gap	Research Contribution
Study 1: Patients' perspectives of value in use in healthcare encounters: A case from Ghana	**RQ1**: How does value emerge in the co-creation experience in healthcare from the perspectives of patients?	Healthcare services are often organized around multiple healthcare professionals (Danaher & Gallan, 2016), and dominated by doctor-patient interaction (Osei-Frimpong; 2017; 2016; Osei-Frimpong et al., 2015). Studies indicate the need for a more holistic view of the patient value experience, beyond the doctor-patient encounter (McColl-Kennedy et al., 2012; Osei-Frimpong, 2016, 2017;). There is a call to transform the conversation in healthcare from asymmetric and physician-dominated encounters to multiple healthcare service providers (McColl-Kennedy, Hogan, et al., 2017; McColl-Kennedy et al., 2012).	The study delineates the patient's role and perception of value-in-use in a co-creation process during the interaction with service providers (healthcare professionals). A better understanding of the healthcare delivery process contributes to the delivery of patient-centered care and, ultimately, better healthcare outcomes.
Study 2: Patients' experience of the contextual elements for value co-creation in a healthcare setting: A case from Ghana	**RQ2**: How do contextual elements emerge in the patient encounter process for co-creation in healthcare?	Studies show that in healthcare, the atmosphere of care minimizes disease burden, speeds up recovery time, and improves patient life satisfaction (Bitner, 1992; Geimer-Flanders, 2009; Berry & Bendapudi, 2007; Fottler et al., 2000). For patients to co-construct their own personalized service experiences, healthcare	The study contributes to the understanding that the focus on traditional medical treatment for patients' malaria (i.e., request for medical tests, the prescription of

Study	Research Question	Research Gap	Research Contribution
		atmospheric elements need to be improved (McColl-Kennedy, Danaher, et al., 2017; Albinsson et al., 2016; Prahalad & Ramaswamy, 2004). Research indicates that inadequate atmospheric qualities do not inspire the physical and psychosocial settings, to build solid confidence in the healthcare design system (Garip, 2011; Kvæl & Bergland, 2021; Pati et al., 2019; Suess & Mody, 2017; Tsai et al., 2007; Verleye, 2015).	malaria drugs by healthcare providers, etc.) happens in natural tendency situations but patients use process factors and tangible indications (e.g., physical structure, internal and external decorations, etc.) in the healthcare providers' work atmosphere to evaluate their experiences during encounters. We contribute to the literature by offering an understanding of how healthcare services can use "contextual elements" for patients to co-create value.
Study 3: Interactive Smooth Journey in a Healthcare Co-creation: A Case from Ghana	**RQ3**: How is co-creation embedded in the patients' smooth journey experience in healthcare?	Research has underscored the importance of examining patient journeys, especially in a healthcare setting as a means of service delivery to understand the service experiences (Følstad &	We extend the knowledge in the smooth journey domain and broaden the concept of value co-

Study	Research Question	Research Gap	Research Contribution
		Kvale, 2018; Lemon & Verhoef, 2016; Ponsignon et al., 2018). To examine patient journeys, there is a need to understand their past, present, and future healthcare encounters (Zaltman & Zaltman, 2008).	creation in healthcare. The study contributes to how value co-creation emerges in the smooth journey in the context of a healthcare setting. The study brings the concept of the smooth journey from the marketing literature and aligns it as a specialized type of value co-creation process.

Study 1 concentrates on how patient value in use in the co-creation process emerges. The study involves the interaction between patients and healthcare professionals. Our study relied on two models to address co-creation. The DART model which consists of Dialogue, Access, Risk Assessment, and Transparency emerged as the basis for interaction between the consumer and the firm (Prahalad & Ramaswamy 2004). The second model used is based on two core dimensions of value co-creation: value co-production and value-in-use principles. The value co-production consists of Knowledge sharing, equity, and interaction (Ranjan & Read, 2016). The value-in-use concept consists of experience, personalization, and relationship (Ranjan & Read, 2016) and plays a fundamental role in patient value co-creation (McColl-Kennedy et al., 2012). This study addresses the multi-dimensionality of value in the healthcare delivery process in the malaria treatment journey. The study starts with an introduction and presents the background. It is

followed by the theoretical background, the method employed, findings, and discussions. Finally, the theoretical contribution, managerial implications, limitations of the study, and future research avenues are presented.

Study 2 purports to provide novel insights into the perception of the patient's experience in healthcare contextual elements for value co-creation. We argue that the dimensions of the contextual elements facilitate patients' memorable and core experiences and establish solid confidence in healthcare design decision-making for value co-creation experience. The study encompasses an introduction, a theoretical background, a study method, findings and discussion, practical implications, limitations, and future research directions.

Study 3 complements existing studies (Siebert et al., 2020) from other settings, and focuses on the role of a smooth journey in healthcare encounters. The study also pertains to healthcare service providers' contribution towards features of a smooth journey in patients' and healthcare providers' encounters. Our study relied on Transformative Service Research (TSR) which hinges on the interaction among service providers and consumer entities on the aspects of individual, collective, and societal well-being which is emphasized in healthcare delivery. We discuss the findings of the study, theoretical contributions, and managerial implications. Finally, we outlined the limitations and offered directions for future research avenues.

The contribution of the thesis is threefold: Study one contributes to patients' value in use in healthcare encounters. We approach patient value in the malaria treatment process from communication and interaction, information sharing, and access to information, treatment, and well-being perspectives. Additionally, the study contributes to how continuous improvement in healthcare services facilitates the value co-creation process. Study two articulates the contextual dimensions during patients' encounters with healthcare providers. This indicates how the contextual elements facilitate co-creation in healthcare encounters and concentrate on dimensions such as physical space, digital communication, and location and access to the facility, which facilitate patients' experiences in the encounter process. Study three articulates how a smooth journey facilitates value co-creation. We are

considering co-creation features that emerge in the smooth journey encounters in the context of a healthcare setting, such as openness, relationship, comfortability of service encounters, satisfaction, and accessibility of healthcare providers, to improve healthcare delivery. Therefore, the study contributes to a broad spectrum of patient journeys and touchpoints in the co-creation process from an African setting.

1.3 Thesis Structure

This thesis contains six chapters. Chapter one concentrates on the introduction and consists of the notion of value co-creation, service system, study justification, research contribution, and research questions described in detail. Chapter two presents research philosophies that underpin the study, research methodological approach, research methods (design and strategy), and data collection and analysis.

Chapter three presents the first study on the topic: "Patients' perspectives of value in use in healthcare encounters: A case of Ghana".

Chapter four embeds the second study on the topic: "Patients' experience of the contextual elements for value co-creation in a healthcare setting: A case of Ghana".

Chapter five which is the third study describes the smooth journey in healthcare co-creation in the context of Africa and concentrates on the topic: "Smooth Journey in a Healthcare Co-creation: A Case from Ghana.

In Chapter Six, all the findings of the three studies are presented. Also, we present the overall theoretical contributions and managerial and practical implications. In the final stage, we discuss and present the study limitations and directions for future research. We provide a vivid highlight of the thesis structure in Table 2.

Table 2: Thesis outline

Chapter	Content
	Chapter One
Introduction	Introduction
	Main Theoretical Notions Adopted in the Research
	Research Objectives and Scope of the Study
	Thesis structure
	Chapter Two
Methodology	Research Philosophy
	Research Design
	Research Approach
	Research Strategy: Case Study
	Chapter Three
Study One	Patients' perspectives of value in use in healthcare encounters: A case of Ghana
	Chapter Four
Study Two	Patients' experience of the contextual elements for value co-creation in a healthcare setting: A case of Ghana
	Chapter Five
Study Three	Interactive Smooth Journey in a Healthcare Co-creation: A Case of Ghana
	Chapter Six
	Introduction
Conclusion of the Study	Main conclusions
	Theoretical contributions
	Managerial and Practical Implications
	Limitations and Future Research Avenues

Chapter Two

METHODOLOGY

2. Introduction

In this section, we explain our research methodology approach. Our methodology starts with a comprehensive discussion of the research philosophies that serve as the foundational framework for this study. Subsequently, we expound upon the chosen research approach and delineate the specific methods employed. Our general objective was to explore the service co-creation process in healthcare encounters. The specific objectives of this study were to investigate the patients' value in a journey of co-creation in healthcare delivery, to describe the contextual elements in the patient encounter process for co-creation in healthcare, and to identify the roles in the patient's journey in a co-creation context in healthcare.

Co-creation constitutes practice situated at the nexus of patient and healthcare-provider interactions. Our research endeavors were primarily directed toward the comprehensive investigation of practices and interactions inherent in healthcare settings, particularly interactions between patients and healthcare providers. Consequently, it is not possible to discuss the patient's experience in co-creation without understanding the underpinnings of the process of the patient's journey with multiple stakeholders (healthcare providers) throughout the co-creation process.

In the study, we used a methodology that best investigates co-creation and we sought to observe patients' experience in a healthcare co-creation setting, in an encounter with healthcare providers. Our investigation encompassed an examination of both the patient's engagement in the co-creation process with the practices of the healthcare firm and the subsequent how the firm's practices are altered by the patients in the co-creation journey. To realize the research goals, we adopted a qualitative research approach, thus enabling us to delve deeply into the perspectives of patients and key stakeholders involved in service delivery. Our

study was specifically situated within a university-based clinic in Ghana, which served as a pertinent case study for our research.

To demonstrate how this research builds and expands, our study was guided by the following three research questions that allowed us to investigate patients' experience in co-creation in a healthcare setting: How does value emerge in the co-creation experience in healthcare from the perspectives of patients?, How do contextual elements emerge in the patient encounter process for co-creation in healthcare?, and How is co-creation embedded in the patients' smooth journey experience in healthcare?

To capture and give in-depth answers to these questions, we employed qualitative, and interview-based methods to investigate the practices of co-creation in a service firm, and observed patient experience in the co-creation process from patients, and stakeholders within a university setting.

2.1 Research Philosophy

The notion of research philosophy pertains to the fundamental considerations surrounding the development of knowledge and the nature of that knowledge in research (Saunders et al. 2012). In this section of the study, we explained two philosophical assumptions and placed particular emphasis on the ontological and epistemological paradigms. These two foundational philosophical underpinnings play a role in shaping a scientific inquiry (Saunders et al., 2009). It is essential to acknowledge that the formulation and interpretation of knowledge are fundamentally dependent upon specific assumptions rooted in one's worldview. These assumptions significantly influenced our selection of the research topic, a concept that finds support in scholarly works (Holden & Lynch, 2006; Saunders et al., 2009).

2.1.1. Ontological Philosophy

Ontology, in our conceptualization, pertains to the examination of the existence and fundamental structure of truth or reality. Truth is delineated by the boundaries of what can be apprehended regarding the fundamental nature of the world. This perspective aligns with the insights of Crotty (1998) and the work of Snape and Spencer (2003), who similarly contend that ontology is fundamentally concerned with the assumptions surrounding the existence of entities and the nature of that reality. Additionally, Keth (2003) highlights that ontology encompasses assumptions regarding the very existence of entities and the underlying characteristics of that reality. In essence, ontology may be articulated as a field of inquiry that deals with the question of "whether a universal truth exists independently of human perceptions and interpretations" (Ormston, Spencer, Barnard, & Snape 2014: 4). The question at the center of ontology revolves around the existence of a shared, universal social truth as opposed to the presence of numerous context-specific truths.

Within the domain of ontology, two primary and contrasting perspectives emerge. The first viewpoint posits that social entities possess an objective and external existence, independent of the actions and perceptions of social actors. Conversely, the second perspective contends that these social entities are constructed and shaped by the perceptions, actions, and interactions of the individuals involved (Bryman, 2012). Ontology is linked to the fundamental nature of reality and is characterized by two key dimensions: objectivism and subjectivism. Objectivism posits that meaning and facts fundamentally exist within objects, awaiting discovery, and existing independently of any individual's consciousness (Crotty, 1998). Objectivist perspectives further assert that the existence of reality is external to and autonomous from the actions of social actors (Saunders et al., 2009). Therefore, the concept of objectivism is grounded in the conviction that reality possesses an inherent 'realness' that can be uncovered, even though this apprehension may be imperfect and probabilistic in nature (Sobh & Perry, 2006).

In contrast to the objectivist perspective, Wahyuni (2012) conceives ontology through the lens of constructivism, where reality is perceived as contingent upon social actors, and the assumption prevails that individuals actively contribute to the formation of social phenomena. It is important to acknowledge that contemporary research endeavors often tend towards pure positivism; however, it remains essential to recognize the presence of subjective decisions and influences in the research process (Johnson & Onwuegbuzie, 2004).

2.1.2 Epistemology Philosophy

Epistemology centers on the beliefs and principles guiding the creation, comprehension, and utilization of knowledge deemed reasonable and true (Wahyuni, 2012). The epistemological stance pertains to the interplay between the researcher and the perceived reality (Guba & Lincoln, 1994). Building upon the perspective put forth by Snape and Spencer (2003: 13), epistemology can be conceptualized as the pursuit of understanding "how it is possible to acquire knowledge about the world". Consequently, epistemology hinges on the assumptions one formulates regarding the fundamental underpinnings of knowledge, including its existence, structure, the mechanisms through which it can be acquired, and the means by which it can be effectively conveyed to others (Cohen, Manion, & Morrison, 2007). Within this perspective, the nature of knowledge held by a researcher has significant implications for their role and methodology. When knowledge is regarded as objective, the researcher assumes the role of an observer and employs methods akin to those used in the natural sciences, such as testing and measurement. Conversely, when knowledge is perceived as personal, subjective, and unique, the researcher engages with their participants or subjects and refrains from adopting the methods of natural sciences (Cohen et al., 2007).

Epistemologically, two primary paradigms exist, each with contrasting perspectives regarding the essence of knowledge: Positivist and interpretivist. Positivists operate under the assumption that distinct researchers examining the same empirical problem, when employing statistical tests and similar testing methodologies on a wide-ranging sample, would yield comparable results (Wahyuni, 2012). Positivist researchers endeavor to attain law-like generalizations through the conduct of value-free research aimed at quantifying social phenomena (Neuman, 2014 & Wahyuni, 2012). Conversely, interpretivists hold the belief that reality is constructed through the agency of social actors and is heavily influenced by individual perceptions and experiences. Given the subjective nature of these human perceptions and experiences, social reality is deemed as mutable and open to multiple viewpoints (Hennink, Hutter, & Bailey, 2011 & Wahyuni, 2012).

Guba's reflection in 1990 regarding ontology pertains to the contemplation of the nature of reality, emphasizing its potential knowability. In addition, his perspective on epistemology delves into the nature of the relationship between the knower, often represented by the inquirer or researcher, and the known, signifying the knowable aspects of reality. Furthermore, Guba's conceptualization highlights that methodology is fundamentally concerned with the processes and approaches employed by the inquirers in their pursuit of acquiring knowledge. Our methodology explains and justifies the methods used, representing the rationale for this study (Clough & Nutbrown, 2007). Table 3 illustrates the methodology concerns and the fundamental belief that underpins research philosophies, which is well documented in the literature (Hallebone & Priest, 2009; Guba & Lincoln, 2005; Saunders et al.,2009).

Table 3: Fundamental Beliefs of Research Paradigms

	Research Paradigms			
Fundamental Beliefs	**Positivism (Naïve realism)**	**Post-positivism (Critical Realism)**	**Interpretivism (Constructivism)**	**Pragmatism**
Ontology: the position on the nature of reality	External, objective, and independent of social actors	Objective. Exist independently of human thoughts and beliefs or knowledge of their existence, but is interpreted through social conditioning (critical realist)	Socially constructed, subjective, may change, multiple	External, multiple, views chosen to best achieve an answer to the research question

Research Paradigms				
Fundamental Beliefs	**Positivism (Naïve realism)**	**Post-positivism (Critical Realism)**	**Interpretivism (Constructivism)**	**Pragmatism**
Epistemology: the view on what constitutes acceptable knowledge	Only observable phenomena can provide credible data and facts. Focus on causality and law-like generalizations, reducing phenomena to simplest elements	Only observable phenomena can provide credible data and facts. Focus on explaining within a context or contexts	Subjective meanings and social phenomena. Focus upon the details of the situation, the reality behind these details, subjective meanings and motivating actions	Either or both observable phenomena and subjective meanings can provide acceptable knowledge dependent upon the research question. Focus on practical applied research, integrating different perspectives to help interpret the data
Axiology: the role of values in research and the researcher's stance	Value-free and etic Research is undertaken in a value-free way, the researcher is independent of the data and maintains an objective stance	Value-laden and etic Research is value-laden; the researcher is biased by world views, cultural experiences, and upbringing	Value-bond and emic Research is a value bond, the researcher is part of what is being researched, cannot be separated and so will be subjective	Value-bond and etic-emic Values play a large role in interpreting the results, the researcher adopts both objective and subjective points of view

Research Paradigms				
Fundamental Beliefs	**Positivism (Naïve realism)**	**Post-positivism (Critical Realism)**	**Interpretivism (Constructivism)**	**Pragmatism**
Research Methodology: the model behind the research process	Quantitative	Quantitative or qualitative	Qualitative	Quantitative and qualitative (mixed or multimethod design)

Adapted from Saunders et al. 2009; Guba and Lincoln 2005; Hallebone and Priest, 2009

Our research philosophy is grounded in the belief that a comprehensive understanding of the social world can be achieved through the investigation and analysis of the attitudes, expectations, and opinions held by People. This study delves into the exploration of the patient's experience and the process of value co-creation within the domain of healthcare provision. The methodological approach chosen to explore participant's perceptions is interpretivism and we presented rich information and dynamic description of how people think, react, and feel under certain contextual specific circumstances. Consequently, the social world can be understood from the perspective of the individuals who are part of the ongoing action investigated by observations and interpretations of their perception in a natural setting (Cavana, Delahaye, & Sekaran, 2001; Cohen, Manion, & Morrison, 2007; Edmondson & Mcmanus, 2007; Gentles et al., 2015; Sobh & Perry, 2006). Consequently, we conducted a comprehensive study involving individuals who served a dual role as patients seeking healthcare and as critical stakeholders responsible for delivering key services at the Clinic located in Kumasi, situated within the Ashanti Region of Ghana.

2.2. Research Design

Research design is comprehensively evaluated through both quantitative and qualitative lenses, each representing distinct research paradigms (Dabbs, 1982). It is crucial to recognize that research methodologies for quantitative and qualitative research diverge significantly in terms of the underlying philosophical foundations guiding their respective modes of inquiry, the models they employ, the procedures they follow, and the methods they utilize (Malhotra, 2007).

Quantitative research embraces a deductive approach characterized by the systematic testing of hypotheses, often closely aligned with a positivist philosophical stance (Atkinson & Hammersley, 1994 & Malhotra, 2007). In contrast, the inductive approach primarily pertains to qualitative research, typically involving methods like interviews and grounded theory, and is fundamentally rooted in an interpretive framework (Creswell, 2003). Quantitative data are typically characterized by the use of numerical values for description and analysis (Malhotra, 2007). In contrast, qualitative research is distinguished by its reliance on non-numeric data (Saunders et al., 2009). Qualitative analysis revolves around the collection and interpretation of textual or narrative information, often stemming from observations and people's perceptions of various events (Gentles et al., 2015). This approach provides a detailed and contextualized snapshot of individuals' perspectives within their natural settings (Cavana et al., 2001; Edmondson & McManus, 2007). Thus, qualitative research represents an inquiry process that is fundamentally concerned with comprehending the unique methodological traditions employed to investigate social or human issues (Creswell, 1998). In alignment with this perspective, our study embraces qualitative research design (Patton, 2005). This choice is informed by the suitability of the qualitative design for our research objective, which aims to attain an understanding of the intricate process and human interactions characterizing the patient's experience in a healthcare co-creation setting, as perceived by both patients and service providers (Gephart, 2004).

Our research endeavor is driven by the pursuit of answers to questions pertaining to the patient's experience and co-creation process within healthcare. To achieve this objective, we examined various social settings in healthcare and the individuals who inhabit the settings (Berg, 2001). We focused on exploring in as much detail as possible to achieve the 'depth' rather than 'breath' of a study (Blaxter et al., 2001). Further, we offered more detailed information about the patient's experience in co-creation, based on the patient's experience which is perceived as "facts", to create a deeper understanding by gathering relevant data that is difficult to represent in numbers (Malhotra, 2010). We engaged in the process of data interpretation to extract and elucidate the underlying meanings inherent in the data collected (Creswell, 2003). This interpretative approach facilitated a richer and more profound comprehension of the research findings. The focus of the study was to explore patient's experiences in co-creation to build a theory rather than setting out to test hypotheses (Atkinson & Hammersley, 1994). With this, we found out how participants make sense of the world and how they experience events in a natural setting (Willig, 2001), interacting with participants to collaboratively construct a meaningful reality (Rowlands, 2005), and finding meaning in context (Willig, 2001).

2.2.1 Classification of Qualitative Research

Qualitative research encompasses a broad array of approaches to inquiry, each offering distinct perspectives and methodologies. These approaches include grounded theory, ethnography, narratives, action research, and case study (Creswell, 2003). Collectively, these diverse approaches form the foundational framework of qualitative research, each contributing unique tools and perspectives for exploring and understanding the complexities of the social world.

Grounded Theory (GT) stands as one of the prominent qualitative research approaches. As articulated by Strauss and Corbin (1994), GT is characterized as an approach that systematically collects and analyzes data to develop a theory grounded in that data. In the words of Creswell (2007:63), GT is a qualitative research design where the researcher generates a general explanation or theory concerning a process, action, or interaction, shaped by the perspectives and insights

of a substantial number of participants. This approach is particularly valuable for explaining the underlying patterns and dynamics within a given phenomenon based on empirical data. In GT, the theory is systematically constructed from the empirical data gathered in the field (Neuman, 1997). Thus, the use of GT methodology, particularly through interviews with informants, provides a unique opportunity for the researcher to gain a deeper understanding of the culture and dynamics of the group under study (Strauss & Corbin, 1994). The researcher engages with participants who are actively involved in the same processes, actions, or interactions. Through this engagement, the researcher transcends mere description and progresses toward the discovery and development of a comprehensive theory (Creswell, 2007). This approach allows for the exploration of underlying patterns and relationships within the data, ultimately contributing to a more profound understanding of the phenomenon under investigation.

Ethnography, as a qualitative research approach, is often characterized in the literature as an exploration of culture and an endeavor to comprehend how individuals perceive and experience life from the perspective of the native inhabitants (Neuman, 1997). Fetterman (1998:1) provides a definition of ethnography as "the art and science of describing a group or culture." This description can pertain to various contexts, ranging from a small tribal community in a remote and exotic location to a classroom situated within a middle-class suburban setting. Ethnography, in essence, is the systematic study and portrayal of the culture, behaviors, and interactions of a particular group or community, offering valuable insights into their lived experiences and worldviews. As a culture-inclined method, Creswell (2007) interprets ethnography as a qualitative design with shared, learned, and patterns of values, behaviors, beliefs, and language of a culture-sharing group. Therefore, studying these cultural groups in a natural setting is based on primary data collection (Creswell, 2003). The main key question that emanates from the ethnography qualitative research is based on the cultural patterns and perspectives of the cultural group in its natural setting (Savage, 2000 & Patton, 1990). This specter indicates that ethnography is based on a natural setting including face-to-face interaction between the informants and the researcher using the concept of culture as the basis for an interpretation of result findings (LeCompte

& Schensul, 1999). In their commentary on ethnography as a qualitative research approach, Atkinson and Hammersley (1994: 248) delineate ethnography as a form of social research characterized by the following attributes:

- a strong emphasis on exploring the nature of particular social phenomena, rather than setting out to test hypotheses about them.
- a tendency to work primarily with 'unstructured' data, that is, data that have not been coded at the point of data collection in terms of a closed set of analytic categories.
- investigation of a small number of cases, perhaps just one case, in detail
- analysis of data that involves explicit interpretation of the meanings and functions of human actions, the product of which mainly takes the form of verbal descriptions and explanations, with quantification and statistical analysis playing a subordinate role at most".
-

Ethnography, as described, is indeed a qualitative approach primarily employed to investigate cultural group processes, encompassing aspects such as beliefs, language, behaviors, power dynamics, resistance, and dominance (Creswell, 2007). However, it is essential to clarify that the primary focus of our study is to explore the patient's experiences within the context of healthcare co-creation, rather than delving into co-creation from a cultural dimension. Given this specific research focus, the concept of ethnography may not be the most suitable approach for our study, as its primary domain lies in the comprehensive examination of cultural phenomena.

The narrative approach is another valuable qualitative research methodology, often defined as a means of comprehending and investigating human experiences through a collaborative process between the researcher and participants, unfolding over time, within specific places, and embedded in social interactions within various settings (Clandinin & Connelly, 2000). In essence, narrative research involves the study of individuals' lives to craft narratives that capture and convey their personal life experiences (Creswell, 2003). This approach is particularly well-suited for exploring and conveying the rich stories and experiences of individuals within the

research context. In the context of narrative research, the narrative itself is considered the raw data (Bleakley, 2005). This approach involves an inquiry into human experiences or an inquiry that generates data in the form of narratives (Reissman,2008). Consequently, narratives serve as a means of capturing the personal and human dimensions of experiences that unfold over time. They function as a conduit to establish a connection between individual experiences within a cultural setting, fostering a deeper understanding of the complex interplay between personal stories and the broader cultural context (Clandinin & Connelly, 2000).

The narratives recounted by individuals not only serve as valuable sources of insight but also provide the researcher with the opportunity to pose follow-up questions, thereby uncovering additional individual experiences. These narratives are typically collected through various qualitative methods, including interviews, observations, and other forms of qualitative data collection (Fetterman, 1998). Consequently, the researcher engages in a comprehensive process of gathering, analyzing, and representing people's stories as narrated by the participants themselves. This approach allows the researcher to adopt a particular perspective on experience as a central phenomenon within the research study (Connelly & Clandinin, 2006). By capturing and interpreting these narratives, the researcher gains access to rich information and understanding of the experiences and perspectives of the individuals under study.

Action research is another valuable qualitative research approach, characterized as "a form of collective self-reflective inquiry undertaken by participants in social situations to improve the rationality and justice of their own social or educational practices, as well as their understanding of those practices and the situations in which the practices are carried out" (Kemmis & McTaggart, 1988: 5). This approach emphasizes active engagement by participants themselves in the research process, with the overarching goal of enhancing the quality and fairness of their own practices, while also deepening their comprehension of those practices and the contexts in which they occur.

Thus, action research is a collaborative approach that actively involves participants in the research process, aiming to develop and implement improvements that emerge from the research itself, thereby contributing to advancements in the realm of social science and promoting social change. This process involves a critical examination of individual and group participants (Kemmis & McTaggart, 1988). The primary purpose of action research is to exert a positive influence on practice while simultaneously gathering data that can be shared with a broader community of participants in the research process. This sharing of insights and data contributes to the enhancement of practices across various interprofessional boundaries and within diverse healthcare settings, ultimately offering solutions for improving practice (Meyer, 2000). Action research, therefore, serves as a dynamic and participatory approach to generating positive changes and fostering better practices in a collaborative manner.

A case study is another established approach within qualitative research methodology. As posited by Yin (2003, 2016), case studies are particularly suitable when there is a requirement for an exploratory investigation to determine the empirical validity of a theory. This approach allows researchers to delve deeply into specific cases or instances, providing valuable insights and understanding of the phenomenon under investigation. Case studies are particularly well-suited for unraveling complex, context-specific issues and facilitating an in-depth exploration of the interplay between theory and real-world practice. Creswell (2014) characterized case study research as exploring in-depth, a program, an event, an activity, a process, or one or more individuals. Additionally, a case study represents an in-depth exploration conducted from multiple perspectives, shedding light on the details and distinctive attributes of a specific project, policy, institution, program, or system within the context of a real-life situation (Simons, 2009).

The essence of case study research is that the social unit or phenomenon under investigation essentially defines the parameters and boundaries of the case (Maylor & Blackmon, 2005). This approach allows researchers to meticulously examine and understand complex and unique phenomena within their authentic contexts. Neuman (2014) highlights that a qualitative researcher often employs a case study

approach to thoroughly collect a substantial volume of detailed information pertaining to the specific case under investigation. Consequently, our study is categorized as a qualitative case study, with the primary aim of providing a comprehensive description of the patient's experience in the context of healthcare co-creation. This approach enables us to generate a rich and detailed depiction of the phenomenon being explored (Stark & Torrance, 2005).

2.3. Research Approach

In this study, we employed a qualitative research approach as our chosen empirical research method. Our rationale for selecting this approach lies in our pursuit of acquiring a comprehensive understanding of the patient's experience within the sphere of co-creation in healthcare. To achieve this objective and address our research questions, we developed a qualitative research approach, specifically adopting a case study methodology. This approach aligns with our aim of enhancing our knowledge of a multifaceted social phenomenon (Yin, 2009).

Our primary objective was to gather data from two distinct sources: patients and stakeholders, who serve as key service delivery employees at the university clinic (Leonard-Barton, 1990; Nieto & Peréz, 2000). This method was undertaken to gain an understanding of the phenomenon concerning patients' experiences in healthcare co-creation within their natural settings (Dubois & Gadde, 2002; Ghauri, 2004; Yin,1994). This enabled us to conduct an in-depth exploration of patients' experiences in the context of co-creation. Our primary aim was to offer a comprehensive understanding of the patient's experience and co-creation, drawing from the perspectives of both service providers and patients within the healthcare setting in Ghana. To best align with this objective, we adopted the case study research strategy (Yin, 2016).

2.3.1 Setting and Participants

The study was conducted within the confines of the university situated at Kumasi in Ghana, and the participants included individuals who sought healthcare services at the university clinic. The participants/key informants were staff of the University. This choice was made because the staff members themselves represent a significant and typical part of the patients of the clinic who regularly seek services at the clinic. The key informants, in accordance with Yin's approach (2009), offered valuable insights supported by evidence regarding their interactions with healthcare providers. This diverse range of informants provided comprehensive viewpoints concerning the patients' experiences in co-creation within the university healthcare system. Our data collection included interviews with patients to gain insights into their co-creation practices. Additionally, we conducted interviews with healthcare providers to obtain their perspectives on co-creation practices and their experiences when interacting with patients. This multifaceted approach allowed us to develop a holistic understanding of the patient's experience in the context of co-creation in healthcare.

This approach was deemed essential as it provided us with valuable insights into the practices of both participants, namely patients and healthcare providers, and illuminated their distinct roles within the dynamic context of their interactions (Bryman, 2004 & Reissman, 2004). Consequently, our unit of analysis encompassed patients and healthcare providers, with a specific focus on explaining the essence of the case itself (Berg, 2001; Willig, 2001 & Yin, 2014). It is important to note that the social unit under study fundamentally defines the parameters of the case study (Maylor & Blackmon, 2005). Therefore, our unit of analysis encompassed the individual patient, the interactions occurring between patients and healthcare providers, as well as the entire patient journey, all of which collectively defined the scope of our study.

2.4. Research Strategy: Case Study

To comprehend the patient's experience within the context of healthcare co-creation in their real-life situations, a case study approach is particularly appropriate (Gephart, 2004 & Yin, 2016), as the study's primary objective is to explore and provide a detailed description of this phenomenon, a goal that is well-suited to the inherent characteristics of a case study design (Yin, 2003). Case studies capture complex phenomena within their natural settings, making them an ideal choice for achieving a comprehensive understanding of the patient's experience in healthcare co-creation.

Different types of case study designs have been described as exploratory, explanatory, and descriptive case studies (Yin, 1994). An exploratory case study, fieldwork, and data collection may be undertaken before defining a research question and prelude to a large social scientific study (Berg, 2001). Case study designs encompass various types, including exploratory, explanatory, and descriptive case studies (Yin, 1994). An exploratory case study typically involves preliminary fieldwork and data collection, often preceding the formulation of a specific research question. This initial phase can serve as a prelude to a more extensive social scientific study (Berg, 2001). Exploratory case studies are particularly valuable for delving into a research area, gathering insights, and identifying potential avenues for further investigation. They help researchers refine their research questions and hypotheses based on the initial findings and observations.

Explanatory case studies play a crucial role in research, particularly when causal relationships between two distinct situations need to be elucidated. These types of case studies are employed when there is a desire to explain cause-and-effect relationships comprehensively. In explanatory case studies, researchers typically seek to provide not only a detailed narrative but also employ statistical evidence to establish the connections and causal links between the situations under investigation. This approach is particularly valuable when there is a need to offer a robust explanation for the observed cause-and-effect relationships (Berg, 2001).

Thus, explanatory case studies place their primary focus on providing a comprehensive explanation of why and how a particular situation unfolded, rather than merely describing the events or phenomena themselves. In these studies, researchers aim to delve deeper into the underlying causes and mechanisms that drive the observed outcomes or relationships. This emphasis on explanation allows for a more profound understanding of the details and dynamics at play within the research context, contributing to a richer and more comprehensive analysis of the case under investigation.

Descriptive case studies are characterized by the presentation of a descriptive theory, serving as an overarching framework that guides the researcher throughout the study. Before embarking on the research, the investigator must determine precisely what the unit of analysis for the study will be. This approach entails a systematic exploration of the chosen unit of analysis, with the objective of providing a comprehensive and detailed description of the case under investigation. To address our research question, our study utilized a descriptive case study which is valuable for capturing a thorough account of the phenomenon or subject of interest, facilitating a comprehensive understanding of the case's attributes and dynamics (Berg, 2001).

Accordingly, Yin (1994) provides a structured framework for the case study approach by outlining five key components of design: study questions, study propositions or theoretical framework, identification of the unit(s) of analysis, logical linking of the data to the propositions (or theory), and the criteria for interpreting the findings of the study. These components collectively provide a structured and methodical approach to designing and conducting a case study, enabling researchers to effectively address their research objectives and generate meaningful insights from the case under investigation. Our study used a descriptive case study design that aligns with the objective of exploring and providing a detailed description of patients' experiences in healthcare co-creation from both patients' and healthcare providers' perspectives. This approach allows for a comprehensive examination of the phenomenon under investigation, capturing the details of the co-creation process. As noted by Neuman (2014), descriptive and exploratory research

often overlap in practice. In the context of our study, this overlap may occur as we delve into the details of patients' and healthcare providers' experiences while simultaneously exploring and gaining insights into the co-creation process itself. This blurring of descriptive and exploratory aspects can be valuable in generating a holistic understanding of the research topic.

The case study has its advantages which are well documented in the literature (Yin, 2003). The case study is drawn from people's experiences and practices and is seen to be strong in reality (Cohen et al., 2000). Other studies have also proved that case studies are useful for going beyond the local boundaries of the case being studied leading to identifying new layers of reality, and developing new ideas that are testable and empirically given valid theoretical and practical insights (Eisenhardt, 1989; Eisenhardt & Graebner, 2007; Ghauri, 2004; Glaser & Strauss, 1967; Stuart, McCutcheon, Handfield, McLachlin, & Samson, 2002; Tsoukas, 1989; Voss, Tsikriktsis, & Frohlich, 2002).

The case study further allows the researcher to show the complexity of social life. We build on this to explore alternative meanings and interpretations (Cohen et al., 2000). Thus, the case study provided a data source from which further analysis can be made for further research work (Cohen et al., 2000). Case study again builds on actual practices and experiences and helped the researcher to get insights into the contributions of patient experience in co-creation and the changing practice of healthcare professionals and this unearths how and why things have happened in a certain way (Yin, 1994) in the healthcare delivery system.

Subsequently, the data contained in case studies are close to people's experiences, they can be more persuasive and more accessible to researchers. The case study has also been described as more convincing to support the solidness of the study (Yin, 2014, 2016). It is found to be based on people's experiences, which allows us to show the complicity of real-life circumstances (Blaxter et al., 2001). Hence, to examine in detail the importance and significance of a specific project, policy, organization, programme, or framework from multiple perspectives in a real-life situation, a case study is recommended (Simons, 2009; Yin, 2014). Blaxter et al.,

(2006) believe that a case study is suited to the needs and resources of the small-scale researcher and focuses on just one example, or perhaps two or three, and might be the researcher's place of work.

Though case studies are useful, it has often been criticized as more time-consuming and labor-intensive as compared to survey type of research (see, Daniels & Cannice, 2004; Leonard-Barton, 1990; Nieto & Peréz, 2000; Stuart et al., 2002) because, with the case study, interviews may be interrupted by unplanned meetings with interviewees which affect interview time and distract the interviewer and interviewee discussion (Welch, 2000). In some cases, the case study by nature is often difficult to generalize (see Jensen & Rodgers, 2001; Patton & Applebaum, 2003). Additionally, Lee (1989), Nieto and Peréz (2000), and Yin (1994) maintained that since the results of the case study involve more variables data points, it cannot be controlled by using a statistical tool.

2.5. Data Collection Method

To investigate patient experience in co-creation, interviews were used to collect data from patients and healthcare providers and their role in co-creation practices at a clinic in Ghana. The qualitative research was conducted systematically and subjectively that highlighted and explained daily life experiences (Burns & Grove, 2017; Gephart, 2004). This enabled us to understand the complex social phenomenon which involves characteristics of the real-life situation (Yin, 2016). We engaged and collaborated with our research participants to shape the themes of the study in the research process (Creswell, 2009) in the natural setting in the fieldwork with close interaction with participants and the researcher was the key instrument in the data collection process (Creswell, 2007).

Our data collection approach consisted of two phases. The first phase was limited to patients (informants) with rich information sharing (Denscombe, 2007; Yin, 2014, 2016). For us to unearth and get a better understanding of patient experience in a healthcare co-creation, the second set of data collection considered the views of stakeholders (Doctor, Nurse, etc.,) on how their roles interplayed in the co-creation

through the integration of resources (Vargo et al., 2009). This was conducted to ascertain how stakeholders and patients integrate their resources in co-creation to yield reciprocity (Patterson et al., 2006). Table 4 shows the profile of participants involved in the study.

Table 4: Participants/Patients/Users of the Health Care Facility

Interviewees	Job Position	Number of Years Worked	Gender	Age Range	Education
Patient 1	*Academic staff/ Head of Department*	*10*	*Male*	*45-49*	*Ph.D.*
Patient 2	*Academic staff/ Faculty Exams Officer*	*8*	*Male*	*35-39*	*Masters*
Patient 3	*Academic staff/ Exams Officer*	*9*	*Female*	*35-39*	*Masters*
Patient 4	*Academic staff/ Coordinator*	*10*	*Female*	*40-44*	*Masters*
Patient 5	*Academic staff/ Senior Lecturer*	*25*	*Male*	*60-64*	*Masters*
Patient 6	*Academic staff/ Head of Department*	*22*	*Male*	*55-59*	*Masters*
Patient 7	*Academic staff/ Lecturer*	*5*	*Female*	*30-34*	*Masters*
Patient 8	*Academic staff/ Lecturer*	*9*	*Male*	*40-44*	*Masters*
Patient 9	*Academic staff/ Senior Lecturer*	*14*	*Male*	*55-59*	*Masters*
Patient 10	*Academic staff/ Dean of Faculty*	*32*	*Male*	*55-59*	*PhD*

Interviewees	Job Position	Number of Years Worked	Gender	Age Range	Education
Patient 11	*Academic staff Senior Lecturer*	*8*	*Male*	*35-39*	*Masters*
Patient 12	*Academic staff/ Coordinator*	*5*	*Male*	*40-44*	*Masters*
Patient 13	*Academic staff/ Lecturer*	*4*	*Male*	*40-44*	*Masters*
Patient 14	*Academic staff/ Dean of Faculty*	*4*	*Male*	*45-49*	*Professor (Ph.D.)*
Patient 15	*Academic staff/ Coordinator*	*30*	*Male*	*50-54*	*Masters*
Patient 16	*Academic staff/ Senior Lecturer*	*7*	*Female*	*35-39*	*Masters*
Patient 17	*Academic staff/ Dean of Faculty*	*14*	*Male*	*45-49*	*Professor (Ph.D.)*
Patient 18	*Academic staff/ Coordinator*	*9*	*male*	*45-49*	*Masters*
Patient 19	*Academic staff/ Senior Lecturer*	*26*	*Male*	*60-64*	*Masters*
Patient 20	*Academic staff/ Exams Officer*	*10*	*Male*	*35-39*	*Masters*
Patient 21	*Academic Unit/ Head*	*13*	*Male*	*55-59*	*PhD*
Patient 22	*Estate Unit/* Senior Hall Assistant	*4*	*Male*	*35-39*	*Degree*
Patient 23	*Human Resource Unit/ Assistant Registrar*	*18*	*Female*	*45-49*	*Masters*
Patient 24	*Security Unit/* Senior Security Officer	*5*	*Male*	*30-34*	*Degree*

Interviewees	Job Position	Number of Years Worked	Gender	Age Range	Education
Patient 25	*Liaison Unit / Assistant Registrar*	21	*Male*	*45-49*	*Masters*
Patient 26	*Internal Audit Unit/* Ag. Head	19	*Male*	*40-44*	*Masters*
Patient 27	*Human Resource Unit/ Assistant Registrar*	17	*Male*	*45-49*	*Masters*
Patient 28	*Internal Audit Unit/*Junior Assistant Internal Auditor	8	*female*	*35-39*	*Masters*
Patient 29	*Finance Unit/ Ag, Head*	*29*	*Male*	*55-59*	*Masters*
Patient 30	*Academic Unit/* Coordinator, Exams Relations	*19*	*Male*	*50-54*	*Masters*
Patient 31	*Library/* Principal Assistant	*20*	*Male*	*35-39*	*Degree*
Patient 32	*Procurement Unit/Ag. Head*	*8*	*Male*	*35-39*	*Masters*
Patient 33	*University Relations/ Head*	*27*	*Male*	*50-54*	*Masters*
Patient 34	*Human Resource Unit/* Head	19	*Male*	*45-49*	*Masters*
Patient 35	*Budget Unit/* Head	*17*	*Male*	*40-44*	*Masters*
Patient 36	*Academic Un it/ Head, Admissions*	18	*Male*	*50-54*	*Masters*
Healthcare Provider 37	*Medical Officer*	*5*	*Male*	*35-39*	*Masters*

Interviewees	Job Position	Number of Years Worked	Gender	Age Range	Education
Healthcare Provider 38	*Principal Nursing Officer*	*10*	*Male*	*35-39*	*Diploma*
Healthcare Provider 39	*Senior Nursing Officer*	*9*	*Female*	*35-39*	*Masters*
Healthcare Provider 40	*Pharmacist*	*8*	*Female*	*35-39*	*Degree*
Healthcare Provider 41	Medical *Laboratory Technologist*	*9*	*Male*	*35-39*	*Masters*

2.5.1 Interview Guide Development

The interviews were comprehensive and focused on patient experience in a healthcare co-creation. This enabled us to collect relevant and useful data and the interviews were face-to-face (Blaxter et al., 2001). To conduct qualitative empirical research, we developed an interview guide to collect data from both patients and stakeholders (healthcare providers). The interview guide was prepared to cover the patient's experience in healthcare co-creation and the themes for the study. The interview guide was pre-tested with five experts in the service marketing field who provided advice on some ambiguous questions which led to the re-wording of some of the questions for participant's easy understanding. We used the interview guide to collect information on the topic and the interviews were semi-structured and divided into the main themes for the study. We engaged our participants with a semi-structured interview based on the interview guide (Malhotra, 2010). Our interview guide contained open-ended questions that covered the themes of the study, and it was conversational, semi-structured and participation was voluntary (Daniels, & Cannice, 2004; Malhotra, 2006; Rubin, & Rubin, 2005). We included in our interview guide questions that addressed the patients' experience in their encounter with service providers (Doctors, Nurses, Pharmacists, etc.,) during their healthcare delivery journey. The interview guide also addressed the stakeholders'

roles played and their activities in the patient journey. Stakeholders described their role towards the patient journey in healthcare delivery.

2.5.2 Topics/Questions for the Interviews

The patient journey depicted in this study elucidates the sequential phases that patients navigate while engaging with service providers. This journey encompasses the initial interaction between the patient and the service providers and extends through the entirety of the service consumption experience (Lemon & Verhoef, 2016). Table 5 and 6 provide a comprehensive explication of the thematic elements and inquiries that constitute the interview structure. They play a pivotal role in delineating the patient's journey and encounter with healthcare providers and the associated accumulation of experiences resulting from these encounters along this journey.

Table 5: Topics/Questions for the Interviews (Patient)

Theme	Questions	Objectives	Source
	Patient		
Patient journey			
	Reasons for visitation Last time you experienced malaria Patients' first-time treatment at the clinic Time spent on treatment	To access the patients' knowledge and experience in the malaria treatment process	Lemon & Verhoef', 2016
	Reasons for interaction with healthcare professionals Description of experience with healthcare providers	To access the patients' interaction experience in the malaria treatment process	Prahalad & Ramaswamy, 2004; Lemon & Verhoef', 2016; Albinsson et al., 2016

Theme	Questions	Objectives	Source
	Patient		
	Feelings and emotions about the treatment process Perception of whether patients will revisit the facility after treatment	To understand patients' knowledge and experience of feelings and emotions in the malaria treatment process	Prahalad & Ramaswamy, 2004; Lemon & Verhoef, 2016
	Relationship with the healthcare providers in the malaria treatment	To access patients' knowledge and experience on the relationship with healthcare providers in the malaria treatment process.	Ranjan & Read; 2016
Patient touchpoint			
	Means of communication/contact before arriving for treatment	To access the patients' knowledge and experience on contact means in the malaria treatment process	Lemon & Verhoef, 2016; Stauss & Weinlich, 1997;
	Type of information given to patients on the treatment process Patients check information about service (e.g., website, brochure, etc.) Type of information patients get from the website on the treatment of malaria	To access the patients' knowledge and experience on the type of information on the healthcare providers' website on the malaria treatment process.	Prahalad & Ramaswamy, 2004; Lemon & Verhoef' 2016; Stauss & Weinlich, 1997;
	healthcare surroundings/facilities at the-Clinic	To access the patients' knowledge and experience of	Lemon & Verhoef' 2016; Fottler et al.,

Theme	Questions	Objectives	Source
		Patient	
		the facility's surroundings during the malaria treatment	2000; Colley et al., 2020 Vik et al., 2007
	Additional services enhancing patients' experience	To understand patients' knowledge and experience of future value required in the malaria treatment process	-

Table 6: Topics/Questions for the Interviews (Service Provider)

Theme	Questions	Objectives	Source
		Provider	
Healthcare encounter (The journey)			
	Categories of patients' healthcare providers attend at the Clinic	To access the healthcare providers' knowledge and experience of the type of patients treated for malaria	-
	The whole treatment process since the patient first arrives at the Clinic Healthcare providers' actions and emotions throughout the diagnosis and treatment process	To access the healthcare providers' knowledge and experience of the whole malaria treatment diagnosis process	Lemon & Verhoef', 2016

Theme	Questions	Objectives	Source
	Provider		
	The time period for the malaria treatment process		
	Describing the interaction with patients in the treatment process	To understand the healthcare providers' interaction experience in the patients' malaria treatment process	Ranjan & Read, 2016; Lemon & Verhoef', 2016
	Patient satisfaction during and after the malaria treatment process	To access the healthcare providers' knowledge and experience on patients' satisfaction in the malaria treatment process	Ranjan & Read, 2016; Tsai et al., 2015
	Information healthcare providers want from patients in the treatment process	To access the healthcare providers' knowledge and experience on the type of information they want from patients during malaria treatment	Prahalad & Ramaswamy, 2004; Lemon & Verhoef', 2016; Albinsson et al., 2016
	Benefits patients want from healthcare providers during the encounter.	To understand the healthcare providers' knowledge and experience on benefits patients want during malaria treatment interactions	
Healthcare encounter (The touchpoint)			
	Means of patients' contact with the facility when they	To access the healthcare providers'	Lemon & Verhoef', 2016; Surprenant & Solomon, 1987;

Theme	Questions	Objectives	Source
		Provider	
	want malaria treatment Type of information patients can get from the website, brochure, etc.	knowledge and experience on patients contact means for the malaria treatment process at the facility.	Stauss & Weinlich, 1997
	Information provided to the patient on treatment Information healthcare providers want from patients in the treatment process Type of information given to the patient on malaria treatment	To access the healthcare providers' knowledge and experience on the type of information provided to patients' malaria treatment.	Prahalad & Ramaswamy, 2004; Lemon & Verhoef', 2016; Albinsson et al., 2016
	Perceptions on whether patients will revisit the facility after the treatment.	To understand healthcare providers' knowledge and experience of whether patients will revisit the facility after the malaria treatment process at the facility.	-
	Services to enhance the healthcare delivery experience	To access healthcare providers' knowledge and experience on future services required for patients' value co-creation in the	-

Theme	Questions	Objectives	Source
		Provider	
		malaria treatment process	

Each interview session, conducted within the offices of the participants, extended for an approximate duration of 1 hour and 15 minutes. In certain instances, the interview structure was adapted in response to emerging themes, and follow-up discussions were employed to seek clarifications and adjustments, rendering the data collection process flexible (Denscombe, 2017; Robson, 2011). This methodological flexibility was instrumental in facilitating an in-depth exploration of patients' experiential journeys and delineating the roles of various stakeholders within the co-creation processes. The interview phase spanned a five-month period, with meticulous care taken to ensure the accuracy and completeness of data collection through the use of voice recording and secure storage of interview materials (Blaxter et al., 2001). In total, a substantial number of interviews were conducted with both patients and healthcare providers, constituting a comprehensive study within the healthcare facility.

2.6 Data Analysis Method

The data analysis entailed the inductive nature of the qualitative research to discover meanings and insights into the case (Levitt et al,, 2017; Strauss, & Corbin, 2008). The respondents' views on their experiences on healthcare co-creation were recorded alongside detailed write-up field notes (Miles & Huberman, 1994). The themes for the interview guide emerged from the comprehensive literature review. The interview guides were based on the three parts reporting: (1) patient journey (2) patient touchpoints and (3) patients and service providers role interplay (see tables 5 and 6). The interviews were listened to and fully transcribed and captured all the content provided by the informants and transformed the raw data into a more manageable form (Berg, 2001; Blaxter et al., 2001; Miles & Huberman, 1994; Patton, 2002).

The data coding and analysis process began and based on the raw data captured from the informants and the detailed field notes (Miles & Huberman, 1994). Next, the data cleaning process began and captured the novel and relevant parts hidden within the overall data collected (Eisenhardt, 1989). The data display was presented in an organized and compressed information that enabled us to draw an analytical conclusion (Berg, 2001; Yin, 2014) and compared existing theories to extant literature (Eisenhardt, 1989; Yin, 2016). Data display took the form of vivid quotations from informants (Berg, 2001; Miles, & Huberman, 1994; Yin, 2014).

2.6.1 Data Triangulation

This suggests that to better understand the patients' experience in co-creation in healthcare, it is important to triangulate the data (Yin, 2010). We used data triangulation to address construct validity (Yin, 2009). In this case, we evaluated the patient's experience in co-creation in the healthcare delivery journey and stakeholders' role towards the patient's journey. This enabled us to understand the different views regarding the patient's experience in co-creation, and the role expected from stakeholders in healthcare delivery. Patients have different journeys and experiences, and this makes the service firm and patients' role in service delivery an essential encounter in service delivery (Broderick, 1999), and this enabled the researchers to obtain mutual complementary evidence (Yin, 2010).

To ensure the validation of data collected, all the interviews were transcribed. The transcribed scripts were sent to interviewees 12, 18, 21, 30, 33 and 35 to crosscheck whether during the interview, what the transcribed captured was the content of their respective interviews and where they think the right information was not captured or it was wrongly captured, they effect the change in the script and highlight the portion. Generally, the transcripts captured the context and content of the interview.

We further adhere to ethical principles and considerations in our research. Though Bryman (2012) and Kalof et al., (2008) explain that reliability and validity per se cannot be practically used as criteria to assess qualitative research. However,

Corbin and Strauss (1990) stressed that in qualitative research, one can produce trustworthy and believable findings by building a trust relationship with the subjects and staying in that setting for a long period by making sure that informants are very clear on the nature of the research (why the researcher is there, what he is studying, how he will collect data and what he will do with it) and confirming findings and analysis with the informants. Based on Corbin and Strauss's (1990) episode, we adhered to the principle of voluntary participation and sought the approval of the participants. We further adhere to the basic ethical considerations that apply to participants in the qualitative research case study as outlined by Elmes et al. (1995):

i) Informed Consent: Participants were fully informed about the research objectives and the procedures involved before data collection began. We hand the full consent of the participant, and we stayed in the process until the data collection was completed. Again, during the period of the interview, we explained the steps of the interview and how the data was to be collected.

ii) No deception: To avoid deception, we used a semi-structured interview guide, and this enabled the participants to answer the research questions to avoid any risk of not being given the chance to answer the questions.

iii) Right to withdraw: The participants who were not willing to partake in the study had their full right to withdraw without any fear of intimidation or penalized.

iv) Confidentiality: We maintained complete confidentiality regarding information provided by the participants in the interviewed process to guard their psychological well-being and protect their dignity (Willig, 2001).

All the participants were made aware of the purpose and objectives of the study, their privacy, anonymity, and confidentiality were adhered to, protected, and guaranteed in the information given concerning the patient's experience in co-creation and their encounter with the stakeholders. The research work was

carried out in compliance with the principles of research and ethics, and all the informants gave their informed consent for inclusion.

2.7 Summary

The research design was presented in this section. The chapter highlighted qualitative features of the study including the development of the interview guide as the main tool for data collection. The profile of the informants was presented. The data analysis methods, including data coding and cleaning processes, were also considered. This section also emphasizes the data triangulation approach and ethical principles applied in the study. Comment that this approach to patients' experiences in a healthcare co-creation setting from the views of patients and providers explore themes and provide valuable insight within an African context.

Chapter Three

ESSAY ONE

Patients' perspectives of value in use in healthcare encounters: A case from Ghana

Abstract

Purpose: This study aims to identify the patients' perception of value generated in a co-creation process during the interaction with healthcare service providers.

Design/methodology/approach: The data collection entailed 36 personal in-depth interviews exploring in detail patients' views in encounters with healthcare professionals over a malaria treatment process in healthcare delivery in a clinic in Ghana.

Findings: Three themes emerged from the literature and the data: (i) "patient value in use in co-creation" (ii) "continuous improvement: services enhancing patients' co-creation experiences" and (iii) "challenges in patients' value co-creation"

Originality: This study contributes to the patients' perception of value in use in a co-creation process during interaction with service providers in the malaria treatment journey.

Keywords: Value co-creation, patient value, healthcare, malaria treatment, Ghana, value-in-use

3. Introduction

In accordance with the World Health Organization (WHO), malaria remains a significant global health concern, accounting for an estimated 229 million cases and approximately 409,000 deaths worldwide in 2019 (WHO 2020). While malaria diagnoses have been on the rise in certain Western countries such as USA, the disease maintains its endemic status in Africa (Mace et al., 2021). The prevalence of malaria cases (94%) and related fatalities (96%) is particularly concentrated in Africa, with Sub-Saharan Africa, Southeast Asia, and the Western Pacific being the most severely affected regions (WHO 2020). Given this context, the imperative to establish effective healthcare systems and enhance acute illness treatments, such as malaria treatment, becomes paramount. The availability of accessible healthcare should be a pillar within societies (Anderson et al., 2018), necessitating the creation of innovative healthcare delivery models in Africa (Alkire & Hammedi, 2021; Osei-Frimpong, 2016).

There is a wide spectrum of healthcare services, ranging from preventative measures and diagnostics to treatments and emergency care. Central to the success of healthcare contacts is the interaction between healthcare professionals and patients, with the overarching goal of yielding favourable outcomes (McColl-Kennedy et al., 2012; Sweeney et al., 2015) that ultimately improve individuals' health. The ramifications of inadequate healthcare delivery are far-reaching and adverse (Tsai et al., 2015), impacting individuals, communities, and societies. Limited access to essential healthcare services can lead to heightened rates of illness, disability, premature mortality (Grut et al., 2012), patients' non-adherence or avoidance of prescribed treatments, and a subsequent decline in overall quality of life. Consequently, the healthcare domain calls for significant contributions to the field's advancement (Berry & Bendapudi, 2007). There is the need to transform the conversation, moving away from predominantly asymmetric and physician-centric encounters to multiple healthcare service providers (McColl-Kennedy, Snyder, et al., 2017; McColl-Kennedy et al., 2012) and touchpoints. A pressing need for innovative healthcare management strategies emerges, involving new engagements and

efficient processes, which foster the co-creation of value (Vargo & Lusch, 2008) among the different players.

The notion of co-creation has gained prominence in service settings, demonstrating its potential to trigger favorable consumer positive attitudes (Navarro et al., 2014), enhance satisfaction and loyalty (Grissemann & Stokburger-Sauer, 2012), and encourage customer engagement within the co-creation process (Balaji & Roy, 2017). To gain a deeper understanding of co-creation, it becomes essential to acknowledge consumers as active co-creators (Grönroos & Ravald, 2011) and involve them in shaping product and service experiences (Nambisan & Watt, 2011; Klaus & Maklan, 2012). The notion of co-creation can be extended to the healthcare sector, emphasizing the inclusion of patients as co-creators within the healthcare journey. The essence of co-creation in the healthcare context pertains to "…the integration of resources through activities and interactions with collaborators to realize the benefit of patients in the healthcare service delivery network" (McColl-Kennedy et al., 2012: 375). While healthcare services often revolve around multiple healthcare professionals (Danaher & Gallan, 2016) and tend to be centered on doctor-patient interactions (Osei-Frimpong, 2017; 2016; Osei-Frimpong et al., 2015), emerging studies advocate for a more comprehensive perspective on the patient value experience, extending beyond the confines of the doctor-patient encounter (McColl-Kennedy et al., 2012; Osei-Frimpong, 2016, 2017). The creation of value in use transpires during customer interactions with service firms, facilitated by the integration of patients' and service providers' resources (McColl-Kennedy et al., 2012). However, the existing literature remains silent on the process underpinning the patient's role and perception in the co-creation process, in particular in what concerns the perception of value in use. A knowledge gap persists regarding the emergence of patient-derived value in use throughout the co-creation process.

This study delineates the patients' role and perception of value-in-use within a co-creation process during their interactions with service providers, specifically healthcare professionals. The research centers on capturing the patient's viewpoint during engagements/encounters with diverse healthcare professionals. Towards

this aim, we conducted a singular case study within a Ghanaian clinic, with a particular emphasis on the treatment of malaria. This study serves as a platform for deriving theoretical insights into the concept of perceived value in use within co-creation processes involving patients in healthcare settings. The research offers an account of these processes within the context of an African context. Enhanced comprehension of such processes contributes to the provision of patient-centric care, ultimately leading to improved healthcare outcomes (Hardyman et al., 2015; Best et al., 2019).

3.1 Literature Background

3.1.1 Evolving towards the notion of value co-creation.

The notion of value has been simplified as a trade-off between quality and price. Such perspective falls short in capturing the comprehensive scope of value, which cannot be fully delineated solely by these two factors (Schechter, 1984; Bolton & Drew, 1991). A pioneering interpretation of customer value expands this notion, by describing value as "the overall assessment of the utility of a product based on the customer's perception of what is received and what is given" (Zeithaml, 1988: 14). Another angle on value encompasses emotional and cognitive dimensions (Grönroos, 1997). Overall, the term may be found in four common applications concerning value: (i) price, (ii) trade-off between perceived product quality and price, (iii) as a trade-off between costs and benefits, and (iv) as a comprehensive evaluation of subjective worth considering evaluative criteria (Babin et al., 1994). Consequently, value emerges as a multidimensional construct, encapsulating various dimensions (Gallarza et al., 2017). Value is perceived from different standpoints, encompassing objectivity, subjectivity, and individual or collective/group perspectives (Brakus et al., 2009).

From a co-creation standpoint, value is conceived as an interactive process that generates value through experience, wherein the experience itself defines what holds value to the customer, beyond the mere transactional purchase (Holbrook, 1996). Co-creation underlines the active involvement of consumers in shaping their

own experiences (Prahalad & Ramaswamy, 2004). As such, it integrates the customer's available resources such as knowledge, skills, and motivations, with the resources of the company including physical products and personnel (Vargo et al., 2008). Value co-creation involves a collective collaborative endeavour (Grönroos, 2012), requiring customers to integrate and apply their resources together with those of the service provider (Vargo et al., 2009). This phenomenon is rooted in the concept of value-in-use, where companies offer value propositions for value co-creation (Peñaloza & Venkatesh, 2006; Edvardsson et al., 2011; Grönroos, 2008; Shamim et al., 2017; Vargo et al., 2008). There are inconsistencies in the literature in elucidating how consumers co-create experiences with organizations (Fisher & Smith, 2011), thereby rendering value a complex term to define, measure, and comprehend (Geraerdts, 2012)

Various models have been developed to capture the domain and dimensions of value co-creation. Among these models, the DART model emerged as a framework for delineating the interaction between consumers and firms. It encompasses the essential "key building blocks" of co-creation, shedding light on the process through which value co-creation occurs. These key building blocks, as outlined in the DART model, encompass Dialogue, Access, Risk Assessment, and Transparency (Albinsson et al., 2016).

At its core, the *dialogue* block embodies an immersive and interactive engagement, underscored by the willingness and capacity to act, emphasizing parity between two equal partners (Prahalad & Ramaswamy, 2004). Within the healthcare context, a well-coordinated dialogue between patients and service providers hinges upon the acquisition and sharing of information (Dehling & Edvardsson, 2022). Thus, dialogue bases the communication and knowledge sharing between patients and healthcare professionals, signifying a joint responsibility of both actors to co-create the value experience (Prahalad & Ramaswamy, 2004). When customers are provided with *access* to information regarding services, productive conversations arise. In this context, the block access pertains to the avenues available to patients for obtaining both experiential insights and information. This includes the act of posing inquiries and collaborating to solve problems, thus fostering value creation

(Prahalad & Ramaswamy, 2004; Albinsson et al., 2016). Co-creative engagement within an enriching dialogue is rooted in collaborative encounters and the creation of value (Ramaswamy & Ozcan, 2014). Notably, this process holds the potential to transform value for the customer (Prahalad & Ramaswamy, 2004), ultimately enabling each customer the ability to craft their unique and personalized experience (Ramaswamy & Ozcan, 2014, p. 56).

Within the co-creation process, the block concerning *transparency* embodies the degree of openness in the exchange of information between the parties in a conversation (Albinsson et al., 2016). For example, in the context of healthcare, transparency resonates in the act of making information accessible to patients by healthcare professionals, who stand as pivotal figures in the landscape of healthcare delivery, including doctors, nurses, pharmacists, and others. This transparency facilitates dialogue, a core aspect of co-creation (Albinsson et al., 2016). The block *risk sharing* stands as another integral facet of co-creation, encompassing the dissemination of information concerning the potential benefits and associated risks within the service delivery encounters. For example, in the context of healthcare, risk sharing may encompass unveiling private details in the interaction between patients and healthcare professionals, particularly within the context of processes like malaria treatment. By shedding light on previously concealed aspects, new avenues of value creation can be unlocked (Prahalad & Ramaswamy, 2004). Transparency and risk sharing coalesce to form a foundation for the establishment of trust between collaborators. These dynamics of transparency and risk are not only instrumental in fostering a sense of trust but are also vital for generating meaningful co-creation endeavors. Their role extends to enhancing the efficacy of information dissemination, ultimately contributing to the overarching improvement of service processes (McColl-Kennedy et al., 2012).

Another prominent model pertaining to value co-creation introduces two core dimensions: value co-production and value-in-use (Ranjan & Read, 2016). Co-production entails the contribution of consumers' inputs to the process of service delivery that extends beyond the actions of service providers, encompassing elements such as time, effort, and knowledge (Mende & van Doorn, 2015; Xie et al.,

2008). As outlined by Ranjan & Read (2016), co-production unfolds through three distinct dimensions: knowledge-sharing, equity, and interaction. Knowledge-sharing stands as a pivotal operant resource (e.g., knowledge, skills, and competencies) that enables customers to actively contribute to the experience. Equity delves into consumers' access to information, enabling them to play a role in the co-creation process. Interaction materializes through participation, dialogue, and engagement, manifesting the collaborative and interactive nature of the co-creation process (Grönroos & Ravald, 2011; Payne et al., 2008; Zhang & Chen, 2008). In the context of healthcare, the concept of value co-production translates to patient interaction, encompassing both physical and mental processes, aimed at fostering a collaborative/mutual exchange with healthcare professionals.

The notion of value-in-use comprises the dimensions of experience, personalization, and relationship (Ranjan & Read 2016). Value-in-use serves as the foundational underpinning in value co-creation (McColl-Kennedy et al., 2012). Personalization and experience are expressed through patient engagement (Haahti 2003), driving a unique treatment process (Macdonald et al. 2011) in interaction with service providers (Grönroos & Voima, 2013). In the realm of healthcare, the creation of experiential solutions hinges on forging robust relationships and collaboration between patients and healthcare professionals (Bonsu & Darmody 2008), resulting in effective healthcare encounters (Osei-Frimpong et al., 2015). Value co-creation in this context is intrinsically tied to the patient's personalized experience. Therefore, the interactions between patients and service providers culminate in the generation of individually tailored value-in-use experiences.

3.1.2 Value-in-use (V-in-U) and the patient

The foundation of the concept of value-in-use can be traced back to classical economic philosophy and the utility concept (Wooliscroft, 2008). In the literature, the distinction between value-in-use (V-in-U) and value-in-exchange (V-in-E) has been established, with V-in-U pertaining to a person's consumption process, while V-in-E is generated in the production process (Payne & Holt, 2001; Vargo & Lusch, 2004, 2008). Flint et al. (1997: 170) defined value-in-use as "the use of the product

or service in a situation to achieve a certain goal or set of goals." It is described as a functional outcome, representing the purpose or objective that is directly fulfilled through product consumption (Payne & Holt, 2001: 162). Importantly, V-in-U is determined solely by the user during the consumption process. From the Service-Dominant Logic (S-D) perspective, value for the customer is created during the consumption of a product or service as V-in-U and is subjectively determined by the individual customer (Vargo & Lusch, 2008; Vargo et al., 2009). V-in-U is "idiosyncratic, experiential, contextual, and meaning-laden" and "always uniquely and phenomenologically determined by the beneficiary" (Vargo & Lusch 2008: 7). The use of the expression "phenomenologically determined by the beneficiary" suggests that the V-in-U emerges from encounter experiences as perceived by the user. The focus is on the customer's experience of the service as the source of V-in-U (Flint, 2006; Plé & Cáceres, 2010).

In the context of healthcare, particularly in the co-creation of value, the experience of value-in-use revolves around the interaction, evaluation, interpretation, and response between healthcare provider and patient (Vargo & Lusch, 2004, 2008), facilitated by the integration of resources (McColl-Kennedy et al., 2012). This view highlights that value is generated through the interaction between two parties, shaped by personal and contextual factors, and rooted in the consumer's consumption encounter (Echeverri & Skålen, 2011). When value is perceived as V-in-U from the customer's perspective, the experience becomes deeply personal, encompassing cognitive, emotional, affective, social, and physical responses to co-create value (Verhoef et al., 2009). At this level, the customer's understanding of V-in-U becomes an interactive relativistic preference experience (Holbrook, 2006). This view highlights that the customer experience of V-in-U is a subjective response to direct and indirect encounters with the firm, spanning communication, service, and consumption (Lemke et al., 2011: 848).

The customer experience of co-creation represents how the customer wishes to engage with the experience environment facilitated by the service firm (Prahalad & Ramaswamy, 2004). Experience encompasses the consumer's cognitive, emotional, affective, social, and physical reactions to the firm (Verhoef et al., 2009), ultimately

leading to the creation of V-in-U (Edvardsson et al., 2005). Consequently, in healthcare, the experience generates value because of the patient's active participation in the healthcare delivery process (Gallan et al., 2013; Jaakkola & Halinen, 2006). Similarly, interpersonal service quality, atmospherics, and timeliness contribute to generating value (Dagger et al., 2007) through the experience of service quality (Dagger et al., 2007; Sheth et al., 1991; Sweeney & Soutar, 2001). Patient experiences encompass various aspects such as treatment, patient well-being, assurance, and positive doctor-patient interaction in the consultation room, all contributing to the patient's perception of value (Osei-Frimpong et al., 2015). For value to be created through the patient's experience, the relationship between the patient and the subject/object in the environment is prominent.

The creation of value involves the interaction between the firm and the customer throughout the consumption process (Grönroos 2006; Vargo & Lusch 2004). This implies that value creation is a result of resource integration from both the service provider and the customer. However, within the notion of value-in-use (V-in-U), the perspective shifts to focus on the patient's role in creating value during the consumption of the service (Edvardsson et al. 2011; Ramaswamy 2011). Consequently, in the context of delivering health services, the patient's physical presence is often necessary at the location where the service is being provided (Berry & Bendapudi, 2007). This is essential to facilitate value co-creation in real service contexts (Vargo & Lusch, 2016) and ensure the occurrence of the patient's experience (Walter et al., 2010).

The concept of value, as framed within the idea of "interactive relativistic preference experience" (Holbrook, 2006, p.715), emphasizes that experiences arise from interactions with another 'object', such as service encounters. These experiences are inherently personal and are subjectively determined by the patient's experiences within the service delivery process (McGlynn et al. 2003; Wennberg & Fisher, 2006). As such, value is co-created through unique and personalized patient experiences (Prahalad & Ramaswamy, 2004). This notion aligns with the understanding that value is not something that is pre-determined or predefined by the service provider;

instead, it emerges through the patient's interaction with the service encounter and is shaped by their individual perceptions, needs, and preferences. In essence, the creation of value-in-use in the healthcare context hinges on the patient's active involvement and participation in their healthcare journey, as well as their interpretation and assessment of the experience. This underscores the importance of tailoring healthcare interactions to meet the individual needs of patients, thereby contributing to the creation of unique and meaningful value through their personal experiences.

Value is formed by an overall subjective (Zeithaml, 1988), and individualistic (Oh, 2000) assessment of the healthcare consumption process. This idea highlights the variability in what constitutes value for different patients. While the healthcare sector's value creation is a process, it is the patient who partakes in the experience and plays an integral role in shaping how value is realized (Vargo & Lusch, 2004). Consequently, the genesis of value is intricately intertwined with the dynamics of the service encounter process (Mathwick et al., 2001). Within the scope of this study, the term "value in use" denotes the value salient attributes and requisites discerned from the patient's perspective throughout the treatment process. Value, is delineated as the patient creation of real 'value in use' is crystallized during the course of service encounters and consumption (Vargo & Lusch, 2004).

3.1.3 Spheres of Value Co-creation in the Encounter of an Acute Illness Treatment

The foundation of a relationship is rooted in collaboration (Sawhney et al., 2006). Within this relational framework, joint, reciprocal, and iterative processes serve as the base, given that value co-creation is a collective collaborative endeavor (Grönroos, 2012). Relationships, especially within the realm of healthcare professionals (Balmer et al., 2011), evolve to generate solutions and foster value through the integration of resources (McColl-Kennedy et al., 2012; Vargo et al., 2009). Consequently, the co-creation of value unfolds as an intrinsic component of the consumption process (Etgar, 2008; Vargo & Lusch, 2008), characterized by a mutual collaboration that engenders value for either or both parties in a direct

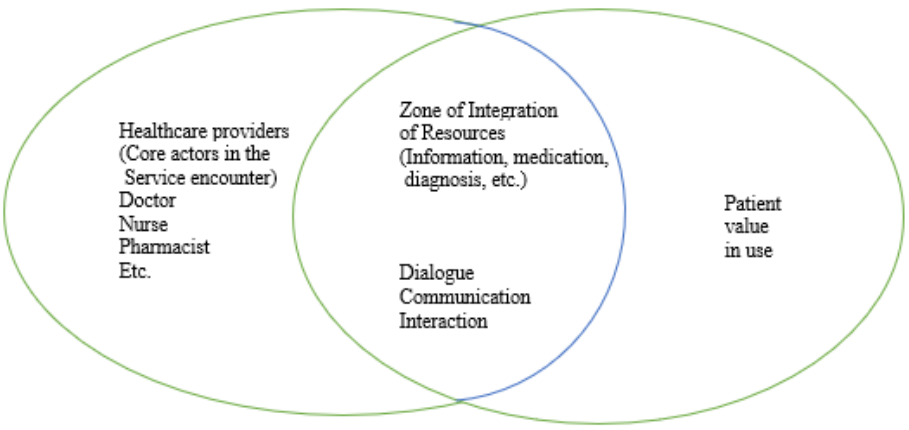
interaction (Grönroos, 2012; Joiner & Lusch, 2016). As a result, the relationship and collaboration between service providers and patients culminate in the cultivation of enduring patient relationships, underpinning the co-creation of value over the long term (Payne et al., 2008). *Embracing the conception of value-in-use, we adopt the stance that value fundamentally emanates from the patient's experience and relationship with healthcare professionals during the service consumption process* (Ranjan & Read, 2016).

The concept of value co-creation encompasses three distinct value spheres: the provider sphere, the customer sphere, and the joint sphere. In the provider sphere, the provider assumes the role of a value facilitator; in the customer sphere, the customer operates as an independent value creator and finally, the joint sphere embodies the value produced during the direct interactions between the service provider and the customer (Grönroos & Voima, 2013). In alignment with the underlying premise of this study, value creation is based on the contributions spanning from the perspectives of both healthcare professionals and patients, within the context of the treatment process. During the treatment encounter period, patients and healthcare professionals integrate their resources at the zone of resource integration, preventing resource asymmetry (Dehling & Edvardsson, 2022) as patients lack the technical expertise pertaining to the service provision process. The patient constructs and experiences value within the resource integration zone, rooted in their unique context. This underlines the pivotal role of the resource integration zone in shaping patient perceptions of value, further emphasizing that value's genesis is contingent upon patients assimilating the service firm's resources into their own domain (Vargo et al., 2009).

Based on this rationale, we developed a framework (Figure 1), capturing the process of patient co-creation of value-in-use within a healthcare context, such as the malaria treatment process. The framework encapsulates the interplay of patients' experiences, healthcare professionals, and value co-creation, enriching our understanding of the multifaceted dynamics inherent to the healthcare domain. The essence of probing into the value-in-use within the co-creation process is rooted in the fundamental perspective of value as a utility (Zeithaml, 1988), wherein its

emergence for the patient materializes during the process of consuming the healthcare service, such as the malaria treatment process (McColl-Kennedy, Cheung, & Ferrier, 2015). The patient is pivotal in value co-creation, actively contributing to the generation of value. Centrally, within the conceptual framework, lies the Zone of Integration – a critical juncture wherein both patients and healthcare providers collaborate to ensure the creation of value and, ultimately, the favorable outcome of the service experience. Within this Zone of Integration, patients engage in direct and interactive exchanges with healthcare professionals, which serve as the basis for the co-creation of value, encapsulated as "value in use" (Shamim et al., 2017). The service firm in this co-creation process primarily assumes the role of offering value propositions (see Peñaloza & Venkatesh, 2006; Edvardsson et al., 2011; Grönroos, 2008; Shamim et al., 2017; Vargo et al., 2008). The value that patients perceive emanates from the experience through their interactions and communication with healthcare professionals. Consequently, this value is created and experienced by the patient, who simultaneously determines the essence of the value being generated (Vargo & Lusch, 2004). The patient value in use is personally and subjectively determined by the patient's experiences during the service encounter (McGlynn et al., 2003; Wennberg & Fisher, 2006). It is important to acknowledge the inherent personalization in healthcare delivery and the nuanced variations that exist across different healthcare activities (McGlynn et al., 2003; Wennberg & Fisher, 2006).

Figure 1: Spheres of value co-creation in a healthcare setting



To comprehend the notion of patient value in use from a co-creation perspective, the study explores communication and interaction dynamics occurring during encounters with healthcare professionals. Communication emerges as a vital catalyst in enhancing interactions between healthcare professionals and patients (Asnani, 2009; Huang et al., 2014). The conversation between patients and healthcare professionals must be interactive and involve a deep engagement. The dialogue between patients and healthcare professionals implies interactive engagement characterized by depth and mutual participation (Prahalad & Ramaswamy, 2004). Dialogue between patients and healthcare professionals facilitates co-creation, inviting both parties to actively collaborate in the value co-creation process (Asnani, 2009).

Consequently, the participation in this co-creative dialogue grounds in the patient's collaborative experiences and the search of value (Ramaswamy & Ozcan, 2014). The dynamic nature of value implies that dialogue can either create or destroy value (Keeling et al., 2021), thereby underlying the significance of proper dialogue to avoid adverse outcomes in value co-creation (Vargo et al., 2017). Value co-creation manifests through interaction (Grönroos and Ravald 2011; Nambisan & Baron 2007; Ranjan & Read; 2016 & Vallaster & von Wallpach, 2012). In the context of this study, the term "dialogue" encompasses interaction and communication. This dialogue connotation aligns with the role of communication dynamics and interaction patterns, collectively contributing to value co-creation within the healthcare domain.

Patients' engagement in productive conversations and information sharing bases on the accessibility of information offered by service providers (Prahalad & Ramaswamy, 2004) and produce exchange of information, collaboration, and cooperation (Nardi et al., 2019). The interface for co-creation lies in the realm of conversation. This study adopts the conceptions of knowledge sharing by Ranjan and Read (2016) and access to information as delineated by Prahalad and Ramaswamy (2004), likening them to the essence of conversations in patient-healthcare professional encounters. In a co-creation context, the conversational exchange revolves around the sharing of information (Ranjan & Read, 2016)

between healthcare professionals and patients concerning health matters and forthcoming health needs in the value co-creation context (Fisher & Smith 2011). Information sharing is seen as a source of perceived value (Buonincontri et al., 2017), and it is considered beneficial for patients during service encounters (Gill et al., 2011; McColl-Kennedy et al., 2012). This context leads to the transformation of value's significance for patients (Prahlad & Ramaswamy, 2004), enabling them to create their own experiences (Ramaswamy & Ozcan, 2014, p. 56).

Personalization constitutes a co-creation experience that promotes individualized interactions. These distinctive personalized experiences enhance the value patients seek from providers in their service encounters (Prahalad & Ramaswamy, 2004; Seybold, 2001). Personalization maintains a connection with risk assessment. Risk and transparency represent a personalized understanding, encompassing the personal and social risks inherent to the service encounter. This ultimately leads to value generation (as exemplified by confidentiality) (Prahalad & Ramaswamy, 2004), particularly within the conditions of the service process encounter (Ranjan & Read, 2016). This study, focusing on accounts of the malaria treatment process, delves into personalization and the treatment-associated risks (Prahalad & Ramaswamy, 2004; Ranjan & Read, 2016).

In recent times, the healthcare sector reach and focus has undergone a notable shift, placing significant emphasis on the overall well-being of patients (Andrade & Devlin, 2015; Berry & Bendapudi, 2007). Consequently, there has been a growing focus on assessing the impact of healthcare delivery on the well-being of patients (Mende et al., 2017), with the aim of cultivating favorable patients living conditions (Delhey et al., 2002; Leo, 2013). As a result, the collaborative efforts between patients and healthcare providers to enhance patient well-being (Diener et al., 2003; Ostrom et al., 2015) foster a mutually beneficial collaboration that culminates in a quality experience (encompassing elements such as happiness and recovery/cure) (McColl-Kennedy et al., 2017) within the context of the co-creation process.

3.2 Methodology

3.2.1 Research context and background

The fieldwork was carried out at a University Clinic (herein referred to as Clinic A), which is affiliated with a state university located in the Ashanti Region of Ghana. This on-campus healthcare facility caters to the health needs of academic staff, non-academic staff, and students. Despite being situated amidst other clinics in the municipality, the university has effectively managed Clinic A to ensure permanent healthcare services for its community. The primary objective of this clinic is to address the health needs of employees by providing superior healthcare services. This includes specialized malaria treatment, as Malaria ranks among the most frequently reported illnesses in Ghana.

The selection of malaria treatment as the focus of this project stems from its specific healthcare process facilitating the integration of resources and collaborative practices performed by actors engaged in healthcare delivery (Chandler & Lusch, 2015; Vargo & Lusch, 2008). The treatment of malaria entails a dynamic encounter between patients and service providers (Mathwick et al., 2001). The malaria treatment process encompasses the involvement of both patients and healthcare professionals, initiating with the patient and extending to the active participation of healthcare professionals in the treatment procedure. Within this context, the service encounter captures the timeframe in which a consumer interacts directly with a service provider (Bitner et al.,1990). Table 7 describes the encounter process between patients and healthcare professionals during malaria treatment.

Table 7: Overview of the of the Malaria Treatment Process

Stages	Process description
Patients present symptoms: (Initial symptoms: fever, chills, headache, nausea, vomiting, bitter mouth, sometimes running stomach, and body weakness)	Suspected of having malaria report to the clinic with clinical signs and symptoms
Arrival at the clinic	Upon arrival at the clinic, the patient's first point of call is the outpatient department for the activation of the patient's national health insurance details in the clinic's database system.
The nursing station	The patients' second point of call is the nursing station for the patients' vital information such as temperature, blood pressure, weight, height, and the symptoms of their health conditions to be recorded
Medical consultation	The patient third point of call is the consulting room to have interaction and discussion with the medical professional based on the symptoms that the patient reported at the nursing station.
Malaria tests	At the fourth point of call, if the medical doctor suspects that the symptoms reported are signs of malaria, a laboratory test is requested and a patient blood sample is taken for the microscopy malaria parasites test.
Patient test results and medication	Upon positive test results for malaria parasites from the laboratory, the doctor prescribes some anti-malaria drugs, and the patient goes to the pharmacy for the medication.
Dispensing of medication	At the point of dispensing the medication, the pharmacist explains to the patient the treatment to receive whether it is an injection, and/or oral medication. In situations where the patient needs to be held for injections, the pharmacist directs the nurses to perform that service.
Patient malaria treatment	When the pharmacist dispenses the drugs to the patients, the treatment usually takes between three to seven days maximum depending on the condition of the patient to recover fully from the malaria symptoms.
After treatment/medication	The patient's last point of call is a scheduled review by the healthcare professionals to assess the level or the extent of the progress of the treatment. The patient may be referred to the laboratory for another

Stages	Process description
	test to ascertain if the patient is fully recovered from the illness after malaria treatment.

3.2.2 Fieldwork

To gain in-depth insights into the perceived value experienced by patients resulting from a co-creation process within the context of malaria treatment, we adopted a qualitative research design using a single case study approach (Flyvbjerg, 2004; Eisenhardt, 1989). This research design was chosen to allow for an understanding of the specific context in which the study was conducted (Yin, 2014). The study focused on examining the encounters between patients and healthcare professionals (Doctors, Nurses, Pharmacists, etc.) concerning the co-creation of value in the healthcare domain, specifically within the context of the malaria treatment process. The primary objective of this study was to explore the patient's perspective regarding the perceived value in use that arises during encounters within the in-house healthcare delivery.

The data collection process involved conducting in-depth interviews with participants from Clinic A. The interview guide (Blaxter et al., 2001) was designed to explore the participants' perceptions regarding the emerging value resulting from co-creation practices with healthcare professionals (such as Doctors, Nurses, Pharmacists, etc.) during malaria treatment. This approach was chosen to gain insights into patients' experiences and perceptions on value co-creation through their encounters with healthcare professionals. The interviews further gathered contextual information from patients (McColl-Kennedy et al., 2012).

The interview guide comprised several sections. The first section focused on participants' profiles, including years of work experience, gender, age range, and education. The second section explored patients' interactions with healthcare professionals during the malaria treatment process. The subsequent section addressed services aimed at enhancing and improving value co-creation experiences. The final part centered on the challenges faced during the treatment process in relation to value co-creation experiences. The interview questions

allowed for flexibility, enabling the interviewer to gain insights into participants' subjective perceptions of reality (Bryman, 2012) within the malaria treatment process. This was crucial for understanding the patients' experiences within the value co-creation process. Before implementation, the interview guide underwent refinement through discussions with five academic experts, resulting in modifications to better align with the study objectives. Six pilot interviews with patients were conducted to test the guide's effectiveness. Based on feedback from these interviews, the guide was further refined.

In total, 36 interviews were conducted; data saturation was reached by interview number 33 (Seale et al., 2004). The interviews were conducted at the participants' workplace and lasted between 30 to 50 minutes. All interviews were recorded with participants' consent and subsequently transcribed (Blaxter et al., 2001; Miles & Huberman, 1994; Patton, 2002). The interviews were conversational and participation was voluntary (Daniels & Cannice, 2004; Malhotra, 2007; Rubin & Rubin, 2005). Of the 36 participants, six were women, and 30 were men, reflecting the male predominance within the University community. Participants' work experience at the university ranged from a minimum of 4 years to a maximum of 32 years. All participants were full-time staff members who had worked in various University departments and had a solid understanding of Clinic A (Table 8). The diversity among the informants provided a comprehensive understanding of patients' perceived value in use within the value co-creation process of malaria treatment in a healthcare setting.

Table 8: Key Informant Profile

Interviewees	*Job Position*	*Number of Years Worked*	*Gender*	*Age Range*	*Education*
Patient 1	*Academic staff/ Head of Department*	*10*	*Male*	*45-49*	*Ph.D.*
Patient 2	*Academic Staff/ Faculty Exams Officer*	*8*	*Male*	*35-39*	*Masters*
Patient 3	*Academic staff/ Exams Officer*	*9*	*Female*	*35-39*	*Masters*
Patient 4	*Academic staff/ Coordinator*	*10*	*Female*	*40-44*	*Masters*
Patient 5	*Academic staff/ Senior Lecturer*	*25*	*Male*	*60-64*	*Masters*
Patient 6	*Academic staff/ Head of Department*	*22*	*Male*	*55-59*	*Masters*
Patient 7	*Academic staff/ Lecturer*	*5*	*Female*	*30-34*	*Masters*
Patient 8	*Academic staff/ Lecturer*	*9*	*Male*	*40-44*	*Masters*
Patient 9	*Academic staff/ Senior Lecturer*	*14*	*Male*	*55-59*	*Masters*
Patient 10	*Academic staff/ Dean of Faculty*	*32*	*Male*	*55-59*	*PhD*
Patient 11	*Academic staff Senior Lecturer*	*8*	*Male*	*35-39*	*Masters*
Patient 12	*Academic staff/ Coordinator*	*5*	*Male*	*40-44*	*Masters*
Patient 13	*Academic staff/ Lecturer*	*4*	*Male*	*40-44*	*Masters*
Patient 14	*Academic staff/ Dean of Faculty*	*4*	*Male*	*45-49*	*Professor (Ph.D.)*
Patient 15	*Academic staff/ Coordinator*	*30*	*Male*	*50-54*	*Masters*
Patient 16	*Academic staff/ Senior Lecturer*	*7*	*Female*	*35-39*	*Masters*
Patient 17	*Academic staff/ Dean of Faculty*	*14*	*Male*	*45-49*	*Professor (Ph.D.)*
Patient 18	*Academic staff/ Coordinator*	*9*	*male*	*45-49*	*Masters*
Patient 19	*Academic staff/ Senior Lecturer*	*26*	*Male*	*60-64*	*Masters*
Patient 20	*Academic staff/ Exams Officer*	*10*	*Male*	*35-39*	*Masters*

Interviewees	*Job Position*	*Number of Years Worked*	*Gender*	*Age Range*	*Education*
Patient 21	*Academic Unit/ Head*	*13*	*Male*	*55-59*	*PhD*
Patient 22	*Estate Unit/* Senior Hall Assistant	*4*	*Male*	*35.39*	*Degree*
Patient 23	*Human Resource Unit/ Assistant Registrar*	*18*	*Female*	*45-49*	*Masters*
Patient 24	*Security Unit/* Senior Security Officer	*5*	*Male*	*30-34*	*Degree*
Patient 25	*Liaison Unit / Assistant Registrar*	21	*Male*	*45-49*	*Masters*
Patient 26	*Internal Audit Unit/* Ag. Head	19	*Male*	*40-44*	*Masters*
Patient 27	*Human Resource Unit/ Assistant Registrar*	17	*Male*	*45-49*	*Masters*
Patient 28	*Internal Audit Unit/*Junior Assistant Internal Auditor	8	*female*	*35-39*	*Masters*
Patient 29	*Finance Unit/ Ag, Head*	*29*	*Male*	*55-59*	*Masters*
Patient 30	*Academic Unit/* Coordinator, Exams Relations	*19*	*Male*	*50-54*	*Masters*
Patient 31	*Library/* Principal Assistant	*20*	*Male*	*35-39*	*Degree*
Patient 32	*Procurement Unit/Ag. Head*	*8*	*Male*	*35-39*	*Masters*
Patient 33	*University Relations/ Head*	*27*	*Male*	*50-54*	*Masters*
Patient 34	*Human Resource Unit/* Head	19	*Male*	*45-49*	*Masters*
Patient 35	*Budget Unit/* Head	*17*	*Male*	*40-44*	*Masters*
Patient 36	*Academic Unit/ Head, Admissions*	18	*Male*	*50-54*	*Masters*

The data analysis employed an inductive approach, aimed at uncovering underlying meanings and insights (Levitt et al., 2017; Strauss & Corbin, 2008). The analysis proceeded through four distinct stages: (i) data collection, (ii) data reduction, (iii) data display, and (iv) conclusion drawing (Miles and Huberman, 1994; Eisenhardt, 1989). Given the personalized nature of healthcare delivery and the variations within it (McGlynn et al., 2003; Wennberg & Fisher, 2006), we cultivated a rapport of trust with the participants/patients (Corbin & Strauss, 1990). This facilitated comprehensive discussions, capturing essential facets of patients' encounters (Burns & Grove, 2017) with healthcare professionals within the context of malaria treatment on their experiences of co-creation encounters in their daily lives. Transcribing the interviews enhanced descriptive validity (Felix, 2014). To ensure the data's reliability and trustworthiness, transcripts were reviewed multiple times to capture the nuances of respondents' narratives (Alam, 2005). Instances of ambiguity were addressed by seeking clarifications from interviewees to gain a deeper understanding of their viewpoints. Additionally, the corresponding transcribed texts were shared with six participants to validate accuracy. Participants were invited to suggest corrections or modifications where they felt the representation deviated from their original statements. Overall, the transcripts effectively conveyed the essence and content of the interviews. For the purpose of thematic analysis, we identified recurring themes within the data (Felix, 2014). The presentation of findings included vivid quotations from the participants/patients, providing a direct representation of their perspectives (Miles & Huberman, 1994). During the theory-building and conclusion phase of our research, we engaged in a comparison between emergent concepts and theories and the existing literature (Eisenhardt, 1989).

3.2.3 Ethical informed consent

We followed ethical and situational ethics protocols in qualitative research (Guillemin & Gillam, 2004). Prior to data collection, an institutional letter detailing the research objectives was forwarded to the University's Registrar, explaining the study's intentions and objectives. The Registrar informed potential participants about the possibility of their involvement in the interview process. Since the participants did not belong to a vulnerable group (Busher, 2019), the risk of causing inadvertent harm during the interviews was minimal (Guillemin & Gillam, 2004).

In the course of face-to-face interviews, each participant was provided with a copy of the interview guide, and an explanation of the study's objectives, empowering them to make informed decisions about their involvement in the study (Kitchener & Kitchener, 2009). This operationalized the principle of voluntary participation (Kılınç, 2017). Establishing interpersonal rapport with participants was a core consideration (Hewitt, 2007), enabling a co-creative relationship structure with the interviewers (Dennis, 2018). To further confirm their confidence, participants were assured anonymity and that their contributions would remain confidential (Busher, 2019; Webster et al., 2014). Explicit permission for audio recording was sought and granted by each participant.

3.3. Results and Discussion

Healthcare processes are characterized by high contact between patients and healthcare professionals. The extent of patient involvement within the healthcare delivery process plays a pivotal role in shaping the value in use that emerges from patient encounters with healthcare providers. Patients may associate the value to both the experiences and the process of the healthcare encounter. In the context of this study, our focus centers on comprehending the concept of value and its perceptions as seen from the patient's perspective, in the context of malaria treatment. Our investigation endures a holistic understanding of the value derived from the co-creation process elucidating the nuances of patients' experiences and their perceptions regarding the perceived value in use during encounters with

healthcare professionals throughout the malaria treatment process. Three pivotal themes emerged encapsulating the perceived value in use process within the realm of value co-creation. The first theme, coined as "patient value in use in co-creation," highlights elements such as communication, interaction, information exchange, access to information, treatment, and overall well-being that unfold during the interactions with healthcare professionals. The second theme, referred to as "continuous improvement: services enhancing patients' co-creation experiences," reveals insights into healthcare improvements geared towards enriching patient experiences. The third, "challenges in patients' value co-creation," unearths issues pertaining to the inadequacy of follow-up services delivery.

3.3.1 Patients' value in use in co-creation

Findings reveal the multidimensional and dynamic nature of value that is created through a series of diverse service encounters with healthcare professionals, resulting in distinct patient-centric perceived value. The concept of patients' value in use encompasses the communication, interaction, treatment, and overall well-being during their interactions with healthcare providers. Our data uncovers that value holds significance for patients during their engagements with healthcare professionals, particularly when they integrate various resources (such as information about the illness, treatment protocols, and medications) within the context of value co-creation during the malaria treatment process. These perceptions of value co-creation, as gleaned from patients' experiences, materialize through their interactions with a multifaceted array of healthcare professionals at different junctures within the malaria treatment trajectory. This view is exemplified by the direct quotations drawn from the patients (Table 9). These perceptions of value co-creation exert an impact on patients' health status and overall well-being. Diverse facets of value surface throughout the value in use process. We delve into a more comprehensive exploration of these distinct thematic dimensions.

3.3.1.1 Communication and Interaction - Dialogue

During the malaria treatment period, the interactions that unfold between healthcare professionals and patients entail a co-creative participatory dialogue, thereby fostering collaborative experiences and generating value (Ramaswamy & Ozcan, 2014). The integration of resources by both patients and service providers influences the evaluations and subsequent actions within these dialogue exchanges (Dehling & Edvardsson, 2022). As one patient expressed:

> *"I felt calm when I interacted with the healthcare professionals…… I was feeling pain and I thought there was something wrong with my body, I interacted with the nurse, and allowed me to explain the situation to her…. I calmed down and I subsequently met the medical doctor, he explained everything to me" [Patient 2].*

Effective communication plays a pivotal role in fostering collaboration between patients and healthcare professionals within healthcare delivery (Asnani, 2009). The role of communication extends to enhancing interactions between these two parties, thereby creating conducive conditions for value generation (Asnani, 2009; Huang et al., 2014). This sentiment finds resonance in a patient's perspective: " *The communication with the pharmacists was very good in terms of how they explained the medication to me and its side effects* " [Patient 4].

In expounding upon the concept of value in use, it becomes evident that the direct interaction between patients and service providers, namely healthcare professionals, significantly contributes to the value that emerges through their collaborative endeavors (Grönroos 2012; Joiner & Lusch, 2016). Interaction constitutes the juncture where co-creation takes shape, capturing the fundamental underpinning logic of dialogue. This very interaction embodies value in itself (Nambisan & Baron 2007; Ranjan & Read, 2016; Vallaster & von Wallpach, 2012). Such perspective finds articulation in statements like: "*I must say that the healthcare professionals are friendly and my interaction with them was good and cordial" [Patient 15].*

These affirmations underscore how patients' contact and interaction with healthcare professionals heightens the perceived value within the health delivery encounters (Seybold, 2001). In essence, the interaction, evaluation, interpretation, and response between providers and patients pivot around the experiential aspect of the encounter itself (Vargo & Lusch, 2004, 2008).

3.3.1.2 Information sharing and access to information.

Patients are most likely to engage in productive and meaningful conversations when they have access to health information (Prahalad & Ramaswamy, 2004). Such dialogues stem from the sharing of knowledge and the provision of relevant information between healthcare professionals and patients, thereby facilitating the co-creation of value (Grönroos & Ravald, 2011). This idea in a patient's remark: " *It's a lovely place to be because healthcare professionals give you access to every information concerning your health* " [Patient 14].

The act of sharing information is intricately linked to addressing health-related concerns and future health requirements as part of the value co-creation process (Fisher & Smith, 2011). Findings underscore the significance of information sharing as a critical facet of perceived value in co-creation, an idea aimed at delivering patient-centric care (Hardyman et al., 2015). This perspective is exemplified by a patient's testimonial: "*The medical officer is professional because he responds to every question and provided me with every information I asked* " [Patient 18]. It is evident that information sharing during service encounters yields palpable benefits for patients (Gill et al., 2011; McColl-Kennedy et al., 2012). This viewpoint is reinforced by expressions like: "*Oh, the healthcare professionals are friendly……. they explain what was wrong with me and if I didn't understand anything they can explain to me" [Patient, 20].*

These perspectives originate from the seamless integration of resources and access to information during various stages of the healthcare consumption process within the context of malaria treatment. The integration of resources encompasses contributions from both patients (e.g., effort, knowledge, and skills) and healthcare

professionals (e.g., including personnel, expertise, medication, information, interaction, and diagnosis).

3.3.1.3 Treatment - Risk and personalization

The findings bring to light the significance of treatment as a pivotal aspect of value perceived by patients in their interactions with healthcare professionals/doctors (Osei-Frimpong et al., 2015). The malaria treatment process is notably characterized by a personalized and distinctive approach (Macdonald et al., 2011). A patient referred: " *There was confidentiality and the services rendered to me were perfect" [Patient 14]*.

The malaria treatment process carries inherent risks, thereby contributing to the creation of value where confidentiality emerges as a pertinent factor. Our findings highlight the elements of personalization and risk central to malaria treatment. As a patient articulated: "*In terms of treatment, the health professionals give us the necessary care and individualized diagnosis" [Patient 12].*

In essence, the malaria treatment process is akin to engagement between the involved parties during the treatment phase (Burns & Grove, 2017; Haahti, 2003; Mathwick et al., 2001). The process is dynamic placing the patient at the epicenter of value determination, with the value's personal and contextual nature manifesting within the malaria treatment consumption encounter process.

3.3.1.4 Wellbeing/Welfare

Well-being significantly contributes to enhancing patients' health status within the context of malaria treatment. The interactions and communications between patients and healthcare professionals play a pivotal role in ensuring effective treatment and creating a positive experience, thus fostering patient well-being, (e.g., recovery and contentment) (McColl-Kennedy et al., 2017). Evidently, patients seek a remedy for their illness, and an improvement in their overall well-being through encounters with healthcare professionals. Our research findings align with the prevalent recognition of the paramount importance of welfare perception in healthcare (Berry & Bendapudi, 2007). This is underscored by a patient's statement: "*What I was looking for was a cure of the illness because I was in pain" [Patient 15]*. Given that healthcare services have a profound impact on individuals' quality of life compared to other services (Berry & Bendapudi, 2007), the provision of high-quality healthcare emerges as a fundamental prerequisite for patient-centered care, ultimately nurturing patient well-being (Diener et al., 2003; Ostrom et al., 2015).

Table 9: Interview excerpts: **Patients' value in use in co-creation**

Themes	***Illustrative quotes from participants***	***Value in use***
Communication and interaction - Dialogue	*: "I felt calm when I interacted with the healthcare professionals…… I was feeling pain and I thought there was something wrong with my body, I interacted with the nurse, and allowed me to explain the situation to her…..I was calmed down and I subsequently met the medical doctor, he explained everything to me" [Patient 2]*	*Dialogue*
	"The interaction was cordial" [Patient 23]	*Interaction and cordiality*
	"They are quite good and the interaction was cordial" [Patient 36]	*Interaction and cordiality*
	"The communication with the pharmacists was very good in terms of how they explained the medication to me and its side effects" [Patient 4]	*communication*
	"They all have professional qualifications and exhibit it in terms of their interaction with you" [Patient35]	*Interaction*

Themes	*Illustrative quotes from participants*	*Value in use*
	"The way they talked to you and their relationship was cordial" [Patient29]	*Relationship and cordiality*
	"I must say that the healthcare professionals are friendly and my interaction with them was good" [Patient 15].	*Interaction*
	"The interaction was very good and cordial" [Patient 25]	*Interaction and cordiality*
	" The interaction is very friendly….. They are willing to attend to you" [Patient 13]	*Interaction*
	Interaction is good especially, how the pharmacist explained the medication to me" [Patient 9]	*Interaction*
	"Good communication and I had it"(Patient 35)	
	Good communication at the outpatient unit and cordial relationship I keep enjoying" [Patient 3]	*Communication*
	"The interaction was ok, unlike what you would have gotten in public hospitals" [Patient 30]	*Interaction*
	"I think the interaction has been friendly" [Patient 14].	*Interaction*
Information sharing and access to information	*"They give you access to every information concerning your health" [Patient14]*	*Access to information*
	The healthcare professionals are good because they respond to every question and provided me with every information I asked" [Patient18]	*Information sharing*
	"Oh, the healthcare professionals are friendly……. they explain what was wrong with me and if I didn't understand anything they can explain to me" [Patient 20].	*Access to information*
	" It's a lovely place to be because you have access to every information concerning your health" [Patient 14].	*Access to information*
Treatment - risk and personalizatio n	*"There was confidentiality and the services rendered to me was perfect" [Patient14]*	*Risk*
	"They carried out the treatment in a very professional way" [Patient 33]	*Treatment*
	"There is confidentiality in the treatment process" [Patient 9]	*Risk*
	"I think their health treatment is good because of confidentiality and effective diagnosis process" [Patient 18]	*Risk*
	"All I needed to get was good treatment" [Patient 35]	*Treatment*

Themes	***Illustrative quotes from participants***	***Value in use***
	"In terms of treatment, the health professionals give you the necessary care and individualized diagnosis" [Patient 12]	*Personalization*
	"The treatment is good and the way they receive people" [Patient 31]	*Treatment*
	"I received very good care and the best treatment from the healthcare professionals" [Patient 10]	*Personalization*
Well-being/welfare	*"I want quality of life after treatment when my illness is gone"[Patient 2]*	*Cure*
	"The benefit I received from the healthcare professionals was to be cured of whatever disease or problem that I had" [Patient14]	*Cure*
	"Well, in the malaria treatment, I want physical wellbeing" [Patient 29]	*Wellbeing*
	"What I was looking for was cure of the illness because I was in pain" [Patient 15]	*Cure*
	"The medication is on point, and it cures me whenever I am sick"[Patient 10]	*Cure*

3.3.2 Continuous improvement: Services enhancing patients' experience in value co-creation

Expectations of future service enhancements play a pivotal role in shaping the patient value in the malaria treatment process. The aspiration for service improvement holds importance in the realm of patient value co-creation, concerning future arrangements. This category encapsulates the envisioned improvements in healthcare services that patients aspire to witness in their forthcoming encounters with healthcare professionals during the malaria treatment process. Table 10 illustrative quotes.

In this dynamic, patients exert their agency by determining the extent and mode of involvement in the co-creation process (Prahalad & Ramaswamy, 2004). Service firms' value co-creation hinges into the physical product/service, environment, or personnel aspects upon the integration of the patient's available resources, including knowledge, skills, and motivations (Vargo et al., 2008). The service interactions between patients and healthcare professionals are contingent upon the prevailing encounter conditions.

Efforts within healthcare services must concentrate on optimizing the patient's experience during the malaria treatment process. This endeavor, however, becomes hindered when the healthcare professional's role in the health delivery system is flawed with adverse perceptions, thus challenging patients' value co-creation efforts in their interactions with healthcare professionals. Within reporting desired enhancements to their experience, patients underscored health improvement as a pivotal domain necessitating attention within the value co-creation process. Prevention emerged as a form of value. Patients maintained that healthcare professionals should organize seminars and education on healthcare issues emphasizing primary healthcare as a strong measure of health prevention. The idea of proactive wellness took shape. The following quotes from patients capture these issues:

> *''Healthcare professionals can engage in disease prevention programmes (…) We don't have to fall sick before we report to the clinic'' [Patient 1].*
> *What the clinic has not added to their line of services is the primary healthcare (..) they need to prevent people from falling sick (…) they want us to fall sick and go to the clinic" [Patient 2].*

Education emerged as a significant aspect within the patients' value co-creation process, extending beyond the confines of specific healthcare issues. The acquisition of knowledge pertaining to fundamental lifestyle practices garnered considerable importance among the participants. In this context, as a patient articulated: *"I think we need education on how to live basic lifestyle such as sitting posture, and what we can do to distress ourselves" [Patient 4].*

The desire for educational initiatives that go beyond the treatment of illness highlights a broader engagement with patients' well-being and proactive healthcare approaches. This perspective aligns with the notion that patient value co-creation encompasses not only curative measures but also proactive steps toward health maintenance and enhancement.

Findings further revealed the relevance, with a feeling of delight, of round-the-clock healthcare service delivery in enhancing patient satisfaction during service encounters. The provision of 24/7 healthcare services, ensures increased accessibility to care and contributes to an improved patient experience by minimizing waiting times within the treatment process. A patient conveyed this sentiment: *"We have staff who are living on campus and the clinic must have additional healthcare professionals to operate 24/7" [Patient 7]*.

The emphasis on continuous improvement within healthcare delivery is fundamental to shaping patients' experience within the malaria treatment process and aligns with the aspiration for future value in use (Prahalad & Ramaswamy, 2004; Vargo & Lusch, 2004). Findings correspondingly emphasize patients' expectations regarding services that could heighten their overall experiences. As a patient noted: "*I wish healthcare professionals could extend their working hours so that they can provide 24/7 working hours"* [Patient 34].

Table 10: Interviews excerpts: Services that enhance patients' experience in value co-creation

Themes	*Illustratiive quotes from participants*	*Future value in use*
Health promotion	*"I want the healthcare professionals to organize seminars and workshops on health issues for us and also provide primary healthcare"[Patient 18]*	*Seminars, workshops on primary healthcare*
	"I wish they could extend their working hours throughout the night" [Patient 22]	*24-hour services*
	"I think they should engage in disease prevention programmes" [Patient 7]	*Disease prevention programme*
	"I believe organizing seminars for both teaching and non-teaching staff on how we distress ourselves will be good" [Patient 6]	*Seminars on stress control*
	''Healthcare professionals can engage in disease prevention programmes….. We don't have to fall sick before we report to the clinic''[Patient 1]	*Disease prevention programme*
	"We need education from the healthcare professionals on health issues" [Patient 8]	*Health education*
	''I think we need education on how to live basic lifestyle such as sitting posture, and what we can do to distress ourselves" [Patient 4]	*Education on basic lifestyle*
	"What the clinic has not added to their line of services is the primary healthcare…. they need to prevent people from falling sick…. they want us to fall sick and go to the clinic" [Patient 2]	*Primary healthcare*
	"I think they should educate us so that we don't even develop the condition to enable us to go to the clinic" [Patient 18]	*Health education*
	''We no malaria illness is Intermittent; we need the health professionals to educate us on health issues. Issues relating to how we sit every day at the office ……. looking at the nature of our work, primary healthcare, and health education should be at the top of the healthcare professional's job" [Patient 13]	*Health education*
	"They should extend their working hours probably 24/7 and also work on weekends" [Patient 26]	*24-hour services*

Themes	*Illustratiive quotes from participants*	*Future value in use*
	"In terms of health education, we've not had much" [Patient 36]	Health education
	"They need to create an environment for primary healthcare…..showing us how to do exercise and that can help to prevent sickness" [Patient 7]	Primary education
	"I wish healthcare professionals could extend their working hours so that they can provide 24/7 working hours" [Patient 34]	*24-hour services*
	We have staff who are living on campus and the clinic must have additional healthcare professionals to operate 24/7" [Patient 7]	*24-hour services*

3.3.3 Challenges in the patients' value co-creation

The challenges associated with the co-creation of value in the malaria treatment process surface in the form of waiting times and issues pertaining to service follow-up. Patient engagements with healthcare professionals are intrinsically intertwined with time considerations and the subsequent follow-ups designed to ensure patients' full recuperation from malaria. The process of follow-up stages interactive experiences between healthcare providers and patients. This shift towards experiential engagement signifies an evolution where value co-creation transcends the conventional role of healthcare providers as service deliverers, transforming into a framework centered around experience involving all stakeholders (Albinsson et al., 2016; Prahalad & Ramaswamy, 2004). In this study, the occurrence of delays stemming from waiting periods and the deficiency in post-treatment follow-up is categorized as a deterioration of value within the service engagement or where co-destruction was shown by denial of patient satisfaction, and weakened treatment outcomes in the patient-providers encounters. The encapsulation of these challenges is illustrated through the excerpts presented in Table 11, where participants express perspectives on these matters.

The intrinsic importance of time in expeditiously procuring healthcare services is well-documented in the literature (Institute of Medicine, 2001; Aday & Anderson, 1975; Dagger et al., 2007). Time is fundamental in ensuring the satisfaction of healthcare encounters and the concurrent co-creation of value (Vargo & Lusch, 2004). Temporal efficiency within the realm of healthcare delivery is perceived as a valuable asset, both within the precincts of healthcare facilities and beyond. As underscored by a Patient's testimonial: " *At times, you may be asked to source the drugs from outside because they don't have it at the pharmacy, and is time-wasting" [Patient 1]*.

Furthermore, the findings revealed the role of resource scarcity in prolonging waiting durations. We identified instances where the medical officer, who serves in a dual capacity as the facility's administrative head, could occasionally be unavailable to attend to patients due to concurrent administrative obligations. One patient referred to this situation, as follows: " *Time is wasted …….the medical doctor may be having a meeting because he is also the administrator of the healthcare facility" [Patient 12]*.

Effective temporal management by healthcare professionals assumes core importance in facilitating streamlined access to healthcare services (Aday & Anderson, 1975; Dagger et al., 2007), thereby ensuring the prompt delivery of essential medical care (Institute of Medicine, 2001). In light of the foregoing, the delays associated with waiting times and the dearth of adequate post-treatment follow-up mechanisms can impede the seamless process of value co-creation for patients within the malaria treatment process. A patient perspective expressed this concern: *"We used to form queues at the clinic and spent longtime" [Patient 1]*.

An additional challenge within healthcare delivery pertains to the inability of healthcare professionals to ensure the continuity of patient encounters through follow-up processes, especially concerning patients who have been scheduled for subsequent reviews.

The healthcare service follow-up is essential within the provision of healthcare services, intricately intertwined with the degree of social interaction that patients share with healthcare professionals. This interconnectedness captures that value creation is inherently entwined with interactive dynamics involving various actors (Grönroos & Voima, 2013). The efficacy of follow-up practices hinges upon the collaborative endeavors of service providers and patients, thereby nurturing the very experiences that underpin the value creation process. Critical considerations encompassing follow-up practices impact on patients' assessment of value. As a patient explained: *There should be a follow-up mechanism after you leave the facility…..there should be a way for the healthcare professionals to be able to communicate with you to monitor how you are doing after you have been to the clinic for malaria treatment'' [Patient 2].*

Follow-up endeavors substantiate a mechanism for active engagement in the value creation process. In the context of healthcare delivery, the intrinsic significance of experiences intertwines with active participation, culminating in the coalescence of value during the unfolding process. In instances marked by collaborative interaction between healthcare providers and patients, value created and experienced by the patient, who simultaneously wields agency in delineating the contours of the value, manifests in their interactions with these service stakeholders. A dearth of follow-up initiatives constrains the realization of optimal healthcare outcomes (Best et al., 2019). As a patient reports: *"They don't call but normally tell you to come back if you are not recovered after the medication" [Patient 20].*

The articulation of patients' expectations vis-à-vis follow-ups elucidates how proactive measures can contribute to enhancing healthcare efficacy and, consequently, strengthening the value co-creation process in the broader context of healthcare encounters.

Table 11: Challenges and illustrative quotes from respondents

Themes	***Illustration quotes from respondents***	***Challenges of value-in-use***
Lack of follow-up on patients	*"There should be a follow-up mechanism after you leave the facility…..there should be a way for the healthcare professionals to be able to communicate with you to monitor how you are doing after you have been to the clinic for malaria treatment''[Faculty Exams Officer 2]*	*Lack of follow-up*
	"They should set up a front desk that does follow-ups on patients' recovery" [Patient 27]	*Lack of follow-up*
	"The healthcare professionals should call patients when it is the review period because the patient may forget the date" [Patient 9]	*Lack of follow-up*
	"No, nobody called me but I see the doctor every day, and he knows I am well"[Patient 19]	*Lack of follow-up*
	"Well! as for follow-ups, it is not done" [Patient 31]	*Lack of follow-up*
	"Not really, but went there the next day for an injection" [Patient 6]	*Lack of follow-up*
	''I think the stressful nature of the teaching makes us forget the period for treatment review and a reminder from healthcare professionals will be perfect" [Patient 16]	*Lack of follow-up*
	''I think we forget the date and time given for clinical review'' [Patient 13]	*Lack of follow-up*
	"They did not call to check on you" [Patient 18]	*Lack of follow-up*
	''They don't call but normally tell you to come back if you are not recovered after the medication" [Patient 20]	*Lack of follow-up*
	"They don't call. But for me, after the medication, I was fine" [Patient 10]	*Lack of follow-up*
	"No! no! they don't call to check up on you" [Patient 30]	*Lack of follow-up*
Waiting time	*Time is wasted because the medical doctor may be having a meeting because he is also the administrator of the healthcare facility" [Patient 12]*	*Time-delayed*
	"At times, you may be asked to source the drugs from outside because they don't have it at the pharmacy and is time-wasting" [patient 1]	*Time-delayed*
	.''The Challenge I have when I usually visit the clinic is the long period spent before seeing the medical officer" [Patient 2]	*Time-delayed*

Themes	*Illustration quotes from respondents*	*Challenges of value-in-use*
	"We used to form queues at the clinic and spent longtime " Head of Department [Patient 1]	*Time-delayed*
	"Sometimes, you will be in a queue with the students… because of this, it delays you at the clinic to see the medical officer" [Patient 9]	*Time-delayed*
	"You need to wait for some time before you can see the medical doctor"[Patient 8]	*Time-delayed*
	"I think we waste time so long to see the medical officer" [Patient 11]	*Time-delayed*
	"I sometimes need to join a queue at the pharmacy" [Patient 2]	*Time-delayed*

3.4 Conclusion

Amidst the global transformation towards an experience-driven economy (Pine & Gilmore, 1998), patients are evolving into proactive architects of their own healthcare narratives, actively participating in the co-creation of value. This research contributes to the understanding of value co-creation by dissecting the contributions of patients within healthcare encounters, particularly in the unique context of malaria treatment. The paper examined the evolving landscape of healthcare services and the shifting roles of patients within the healthcare context. The study explored the multifaceted phenomenon of value co-creation within the domain of healthcare. With a specific focus on the patient's role and perception concerning their experiences of the malaria treatment process, the study captured the dynamic transformation within healthcare services and the consequential redefinition of patient roles, leading implications for service providers and patients. This pivotal aspect of our study underscores the importance of an iterative approach to healthcare delivery, one that seamlessly incorporates patient input to tailor services and optimizes the value derived from patient-provider interactions.

The nature of healthcare delivery emerges from the aspects in a zone of integration of resources, such as medication, communication, interaction, dialogue, and diagnosis. The investigation highlights the multifaceted nature of patient-healthcare provider encounters in the co-creation process, underpinning the essentiality of

integrating patients' available resources such as knowledge, skills, and motivations. The study's findings underscore the diverse manifestations of patient value in use, ranging from personalized treatment to the imperative of health promotion. Simultaneously, the study accentuates the potential consequences of unaddressed aspects of patient value, which can breed discontent and dissatisfaction. Furthermore, the temporal dimension's prominence in co-creation, particularly in the realm of waiting times and follow-up, accentuates the urgency of service enhancements to enrich patient experiences.

Through the lens of patient value, the study identifies three pivotal dimensions that collectively shape the realm of co-creation. Firstly, the articulation of "patient value in use" encompasses a spectrum of components including communication and interactions (dialogue), information sharing, and access to information, treatment (risk and personalization), and well-being. These dimensions collectively contribute to the nuanced experiences patients encounter throughout the healthcare process. Our study expands the horizons of the notion of value in use by highlighting the synergetic relationship between personalized treatment and the holistic well-being of patients.

Consequently, the co-creation experience, characterized by tailored and individualized interactions, surfaces as a catalyst that promotes and enhances patients' health situation, as reported by their overall well-being, within the ambit of the malaria treatment process. This research elucidates how the notion of value in use assumes a broader dimension, exerting a discernible influence on patient experiences and their concomitant perceptions of value. This co-creation experience, marked by its intimate engagement with individual patient requirements, denotes a transformative impact on the broader malaria treatment process. By accommodating and addressing the unique needs of each patient, our research contributes to refining the contours of value co-creation, rendering it an instrument for tailored healthcare experiences that prioritize both personalized treatment and the enhancement of patient well-being.

Secondly, attention has been directed toward services that enhance patients' experiences in the co-creation endeavor. The challenges posed by waiting times and the absence of adequate follow-up mechanisms underline the temporal dimension of value co-creation, thus accentuating the pivotal role of time in shaping the contours of patient experiences and their corresponding perceptions of value. Our study sheds light on the transient nature of certain aspects of value co-creation and elucidates the temporal underpinnings that influence patient encounters and value perceptions. Furthermore, the research highlights the significance of continuously refining healthcare services. This involves the integration of patient feedback and preferences, thus cultivating a continuous improvement ethos that is conducive to heightening the overall patient experience and fostering an enriched value co-creation process. Such a comprehensive manner transcends the immediate context to present a broader perspective on the evolving dynamics of future value co-creation processes between patients and healthcare providers.

Lastly, the research extends beyond the prevalent Western-centric perspective and delves into the unique context of African healthcare, where the fragility of healthcare systems poses distinctive challenges (Makoni, 2020). By illuminating the patient's pivotal role in value co-creation, this study contributes to patient-centered care, emphasizing the necessity of assessing value from a patient's viewpoint. By elucidating the nuances of patient value in use and latent needs and challenges, this study advocates for a comprehensive overhaul of healthcare delivery, with patients positioned at the nucleus of the experience. Ultimately, we advance the discourse on value co-creation within healthcare, advocating for more integrated and patient-centric approaches to service provision aligned with the evolving healthcare landscape.

3.5 Managerial and Practical Implications

This study carries managerial and practical implications for healthcare service providers who aspire to elevate patient experiences and value co-creation. Firstly, healthcare managers may enhance patient experiences and co-creating value by prioritizing effective communication, personalized treatment, information sharing, and a continuous improvement mindset. By embracing a patient-centered approach, positive outcomes and heightened perceived value within the treatment process can be realized. Secondly, delays and a lack of follow-up by healthcare professionals can influence patients' perception of value in use. When not satisfying, these issues may potentially drive patients to seek healthcare services beyond the in-house health facility, particularly when time and follow-up are of utmost importance. In addressing these challenges, healthcare managers can explore various avenues. These may encompass optimizing appointment scheduling, streamlining administrative processes, and implementing a front desk system to minimize patient waiting times. Additionally, introducing robust follow-up mechanisms possibly via digital communication platforms can improve patient satisfaction and facilitate ongoing care management throughout the malaria treatment process.

Thirdly, the emphasis on personalized treatment and well-being highlights the role of individualized care plans. Healthcare managers should consider tailoring treatment strategies to align with individual patients' distinct needs. This approach fosters a sense of personalization and compassionate care. Simultaneously, managers must diligently safeguard patient confidentiality, manage risks, and ensure that the enhancement of well-being contributes to the positive patient experience and an elevated perceived value.

Fourthly, continuous service improvement is relevant in elevating patients' experiences during value co-creation within healthcare delivery. Patients' experiences do not hinge only on one element but emanate from a holistic co-creation process. Managers should focus on cultivating an experiential context that empowers patients to forge their unique, personalized encounters. Recognizing that service delivery is closely intertwined with the healthcare environment, such an

approach serves as a means to enhance the value that patients seek from their interactions with healthcare providers. Moreover, the study emphasizes that patients' well-being occupies a central position within healthcare delivery. Healthcare managers must proactively address issues such as extended wait times for service provision. By fostering effective communication and nurturing positive interactions, a conducive environment can be cultivated that enhances patients' well-being, thereby contributing to their overall happiness and the efficacy of the healing process.

Lastly, effective communication and interaction emerge as critical factors. Healthcare professionals must actively prioritize patient engagement, active listening, and the transparent sharing of information. Managers should orchestrate initiatives that empower patients with comprehensive health insights, thereby enabling them to make informed decisions regarding their well-being. The design and implementation of targeted training programs and workshops aimed at refining healthcare professionals' communication competencies are relevant. Such efforts ensure that patients feel not only heard and understood but also valued, ultimately empowering them and fostering a heightened sense of perceived value in their healthcare interactions.

3.6 Limitations and Further Research

This research is not without its limitations. The study's utilization of a single case presents a constraint. To corroborate and substantiate the study's outcomes, it would be advisable to incorporate multiple case studies. Furthermore, as the research exclusively focused on senior members encompassing both teaching and non-teaching staff in the context of the malaria treatment process within a university, it could be advantageous to extend future studies to encompass junior members, particularly non-teaching staff who also avail the facility/clinic services. We believe that the research remains relevant and suitable for expansion in similar settings within universities possessing in-house healthcare facilities in Africa. Moreover, it would be important to extend the view to more vulnerable patient groups. This extension would likely provide a more comprehensive outlook of the

perceived value in use by patients. In addition, it is worth noting that the data collected in this study appears to be skewed toward male patients. To ensure a more inclusive understanding, it is recommended that the viewpoints of female patients be incorporated, thereby offering a broader spectrum of insights.

Lastly, given the significant role of contextual elements in shaping patients' value co-creation experiences, conducting further research to explore the multifaceted interplay between patients' encounters and the contextual factors within healthcare co-creation frameworks is recommended. Considering the diversity of patient profiles, including those in rural areas and with limited access to education and healthcare, would enrich the understanding of value co-creation challenges and opportunities in varying contexts. Such investigations would undoubtedly contribute to a more nuanced understanding of the complex dynamics influencing patient experiences and perceived value within healthcare co-creation environments.

Chapter Four

ESSAY TWO

Patients' experience of the contextual elements for value co-creation in a healthcare setting: A Case from Ghana

Abstract

Purpose – Patient experience has drawn significant attention within the healthcare sector. It is important to acknowledge that the extent to which healthcare contextual elements facilitate the process of healthcare delivery varies in the context of value co-creation. The purpose of this research is to gain a comprehensive understanding of the contextual elements that facilitate patients' experiences throughout the value co-creation process, particularly in the context of the malaria treatment process.

Design/methodology/approach – The study employed a qualitative approach for data collection. The fieldwork took place at a university-based clinic in Ghana. The data collection involved 36 face-to-face interviews with patients of the university clinic. This diverse array of informants was instrumental in facilitating a comprehensive exploration of the patients' viewpoints concerning the healthcare contextual factors underpinning the process of value co-creation.

Findings – The findings of the study revealed that the degree of contextual elements present within the healthcare encounter plays a significant role in enhancing patients' experiences, contributing to the process of value co-creation. Through an in-depth analysis of the data, three distinct dimensions of engagement were identified and surfaced as pivotal constituents: (i) *"physical space"* (ii) *"digital communication"* and (iii) *location and access to the facility.*

Research limitations/implications – The study's scope is centered around the contextual elements within a university clinic, necessitating further research spanning various healthcare settings to unravel patients' experiences in

contextually varied scenarios. WhatsApp has been identified as a valuable communication tool; its personalized usage highlights the need for a more robust digital healthcare infrastructure to prioritize investments in electronic healthcare delivery platforms that offer a wider array of services to the patient in the value co-creation process.

Originality/value – The study contributes to value co-creation by examining the 'contextual' elements in the healthcare setting in an African context.

Keywords: *Keywords: Contextual elements, value co-creation, healthcare, malaria, Ghana*

Paper type: Research paper

4. Introduction

Malaria stands as a global health challenge, with the year 2018 witnessing 228 million reported instances of infection and nearly half a million deaths (World Health Organization, 2019). Sub-Saharan Africa, in particular, bears the disproportionate burden of this disease, which remains a significant contributor to mortality rates and, consequently, constitutes a pressing public health issue (Mace et al., 2021). Addressing malaria illness challenges demands innovative approaches (Anderson et al., 2018; Burt et al., 2018). In the realm of healthcare, the ambiance of care plays a pivotal role in mitigating disease impact, expediting recovery, and enhancing overall patient satisfaction (Bitner, 1992; Geimer-Flanders, 2009; Berry & Bendapudi, 2007; Fottler et al., 2000). For instance, individuals afflicted with malaria illness navigate through a multifaceted healthcare landscape encompassing diagnosis, treatment, and eventual recovery (Berry et al., 2015).

While traditional medical interventions for malaria treatment are pivotal, patients draw upon process factors and tangible cues within the healthcare setting, such as physical structures and decorations, to assess part of their encounter experiences in the treatment process (Lovelock et al., 2006). Thus, the quality of the healthcare setting significantly influences treatment outcomes and the journey toward patient health improvement (Colley & Zeeman, 2020; Danaher & Gallan, 2016; Fottler et al.,

2000; Geimer-Flanders, 2009). Enabling patients to actively co-create their personalized healthcare, experience demands enhancement in healthcare atmospheric attributes (Albinsson et al., 2016; McColl-Kennedy, Danaher, et al., 2017; Prahalad & Ramaswamy, 2004). However, inadequacies in the use of atmospheric elements fail to inspire confidence in the healthcare design system, both in terms of its physical and psychosocial dimensions (Garip, 2011; Kvæl & Bergland, 2021; Pati et al., 2019; Suess & Mody, 2017; Tsai et al., 2007; Verleye, 2015).

The dynamic nature of the healthcare encounter process indicates that co-creation experiences encompass multifaceted dimensions (Schallehn et al., 2019), and the design characteristics of contextualized elements play a pivotal role in shaping patients' experiences (Hou et al., 2013; Ponsignon et al., 2017; Zomerdijk & Voss, 2010). This study undertakes a novel effort to redefine the notion of 'contextual elements' within the healthcare consumption process, contributing to the existing literature on value co-creation. Addressing a knowledge gap, our research aims to provide a comprehensive understanding of how healthcare services can effectively utilize 'contextual elements' to facilitate collaborative value creation with patients.

In this context, the paper explores patients' perspectives on the role of contextual elements in the value co-creation process, specifically within the African context, with a focus on the malaria treatment process at a clinic in Ghana. The structure of the paper is as follows: Section two encompasses the literature background that informs our research. Section three elaborates on the research methodology. The next part elucidates the findings and discussion of the study. The final section highlights theoretical, managerial, and practical implications for the healthcare sector, and acknowledges the study's limitations.

4.1 Literature Background

4.1.1 Shaping Experiences in the Patient Co-creation Process

In the sphere of healthcare interactions, patients encounter a multifaceted interplay of contextual factors that span interpersonal, organizational, and community levels, occurring within both social and physical settings (McLeroy et al., 1998). These contextual elements serve as triggers for patient engagement and foster distinctive experiences. Patient decisions pertaining to health and behavior are intricately interwoven with their healthcare surroundings (Stokols, 1992), rendering contextual elements as mechanisms where interactions shape patient experiences throughout the co-creation process. Accordingly, the contextual elements manifest in interactions between patients and their immediate surrounding conditions, acting as channels for brand engagement and serving as sources of inspiration for patients' overall experiences (Brownson et al., 2006; Musthafa et al., 2015). Consequently, these contextual elements are best comprehended when viewed through the lens of the patient's perspective, as they represent pivotal signals that drive value co-creation within a patient-centric framework of engagement.

The process of value co-creation within the healthcare domain is broad and not confined to a single element of the marketing mix (Carpenter & Moore, 2006). Value co-creation in health is “the benefit realized from integration of resources through activities and interactions with collaborators in the customer service network” (McColl-Kennedy et al., 2012, p. 375). This approach necessitates active participation from both patients and service providers to jointly integrate resources to create value (Fusco et al., 2023; Grönroos & Voima, 2013; Virlée et al., 2020).

The patient journey entails the process of generating the co-created experience and comprises three main stages: the first stage is the pre-consumption phase (initial arrival and check-in), the second stage is the consumption phase (interaction and treatment), and the final stage is the post-consumption phase (where the patient checks out of the premises after treatment) (Lemon & Verhoef, 2016). The formation of experiential stages is based on the patients' perspectives including the

individuals involved, procedural aspects, interactive dynamics, and both digital and tangible components (Kranzbühler et al., 2018; Grönroos & Voima, 2013; Rawson et al., 2013). Importantly, to engage patients effectively, healthcare providers need a thorough understanding of patients' viewpoints, requirements, and preferences within the service delivery process (Vargo & Lusch, 2008; Payne et al., 2009). This involves incorporating patients' contextual elements into healthcare delivery strategies and aligning them with patients' preferences during service interactions within the co-creation process (Klaus, 2014; Schiavone et al., 2020; Lusch et al., 2010; Virlée et al., 2020).

For the scope of this study, we define contextual elements as encompassing a wide range of facets, including but not limited to physical surroundings, digital interactions, social dynamics, and cultural considerations. In a healthcare context, for instance, these contextual elements may encompass factors such as the layout of the clinic's physical facilities, the ease of access to digital health records, and the overall ambiance of the healthcare facility.

However, it is important to distinguish contextual elements from touchpoints. We designate touchpoints as specific instances or moments of direct interaction between the patient and the service provider or brand. In contrast contextual elements are the situational factors that shape patient experiences. These elements provide the framework within which an interaction or experience occurs, impacting the patient’s perception of healthcare delivery. Examples of contextual elements include factors such as the healthcare location, website, ambiance, and ease of access to digital health information. Through this, the patient’s experience and perception facilitate value co-creation.

4.1.2 Contextual Elements' Role in Healthcare Service Experience

The physical space within healthcare services plays a pivotal role, acting as the signal for the overall service experience. It serves as a critical component through which patients assess the value of their experiential encounters, significantly contributing to their overall experience (Ponsignon et al., 2017; Schiavone et al., 2020). Design considerations applied to this physical space have the capacity to either enhance or hinder the process of value co-creation within these surroundings (Mathis et al., 2016; Vik et al., 2007; Hestevik et al., 2019). This design also influences patients' cognitive, emotional, and physiological responses (Hutton & Richardson, 1995; McDermott et al., 2017) during the service co-creation process (Im & Qu, 2017). In line with this, elements such as atmospheric and visual aesthetics, which include factors like color, brightness, size, and shape, collectively form the physical space (Kotler, 1973).

These components contribute to emotionally shaping memorable service experiences (Hou et al., 2013; Akinci et al., 2004; Rahman et al., 2021). The physical elements both within and around healthcare facilities, encompassing factors such as cleanliness, greenery in the surroundings, seating arrangements, availability of health reading materials, background music, architectural design, and the attire of staff (Andrus & Buchheister, 1985; Chakraborty & Gaeth, 1993; Douglas & Douglas, 2005; Hede et al., 2014), contribute to enhancing patients' perceived experiential value in the healthcare atmospherics (Akinci et al., 2004; Turley & Milliman, 2000) by evoking sensory responses in patients (Adongo et al., 2015; Kivela & Crotts, 2006). Thus, engaging the sensory dimensions of sight, smell, touch, and hearing, as articulated by Kotler (1973), acts as stimuli motivating patients to actively participate in the value co-creation process (Elg et al., 2012; Hungenberg et al., 2019). This engagement occurs on multiple levels, encompassing sensory, cognitive, and emotional dimensions (Holbrook & Hirschman, 1982; Taheri et al., 2019). This highlights the fact that patients actively seek a distinctive, positive, and fulfilling experience tailored to their specific needs (Barnes et al., 2014; Oh & Teo, 2010). Consequently, patients acquire valuable insights and develop perceptions through reflective, emotional, and imaginative experiences, whether within the healthcare

setting or beyond. These experiences encourage collaborative endeavors in the pursuit of value co-creation (Halkes, 2014; Kokkos, 2010; Sweeney et al., 2015).

In addition, there are other dimensions that enhance the co-creation process in healthcare. For instance, the transition from conventional to digital services has assumed a central role in the era of digital transformation, with the healthcare sector taking a pioneering role in this paradigm shift (World Economic Forum, 2017). The utilization of digital communication tools for accessing health-related information serves as a noteworthy indication of the evolving landscape of healthcare, progressively assuming the characteristics of a digital technology-driven enterprise (Tan & Goonawardene, 2017). This shift towards digitalization has exerted a transformative influence on the patient's experience, fundamentally altering the dynamics of value co-creation (Hoyer et al., 2010). This introduces an innovative mode of interaction between patients and healthcare providers (Oh & Lee, 2012; Powell et al., 2003; Tan & Goonawardene, 2017; Van der Eijk et al., 2013). Vargo and Lusch (2016) underscore the fundamental role of digital technology within the service-dominant logic framework, wherein it serves as a channel for establishing networks, fostering relationships, and facilitating collaborative interactions between patients and healthcare providers (Grönroos & Voima, 2013).

The extant literature consistently emphasizes the pivotal role of digital technology platforms in facilitating access to healthcare-related information (Horrocks & Johnson, 2014; Petrakaki et al., 2018). This underscores the critical significance of digital transformation within the healthcare sector, positing it as the essential pathway towards enhancing healthcare encounters (Ferreira et al., 2020; Kapoor et al., 2020). Consequently, digital technologies including, but not limited to, social media, multimedia, and mobile phones, are leveraged to establish connections between patients and service providers (Vial, 2021; Wang et al., 2018). As an illustrative example, technology-enabled communication tools such as WhatsApp messaging offer patients an efficient, cost-effective, and portable means of engaging with healthcare providers in the context of service delivery on a global scale (Hoyer et al., 2010).

In developing nations, the use of WhatsApp and similar digital communication tools has become a means of sharing information between patients and healthcare providers (Mars & Scott, 2016; Nikolic et al., 2018). The adoption of WhatsApp, among other digital platforms, has yielded tangible improvements in the lives of both patients and healthcare practitioners, rendering their interactions more convenient, secure, enduring, and efficient (Angst et al., 2010). WhatsApp, in particular, demonstrates the potential to facilitate highly personalized, interactive, and information-rich exchanges between patients and healthcare providers (Lee et al., 2016; Lee, 2017; Hong & Lee, 2018; Parise et al., 2016), unfettered by the constraints of time, place, or space (Carrubbo et al., 2015).

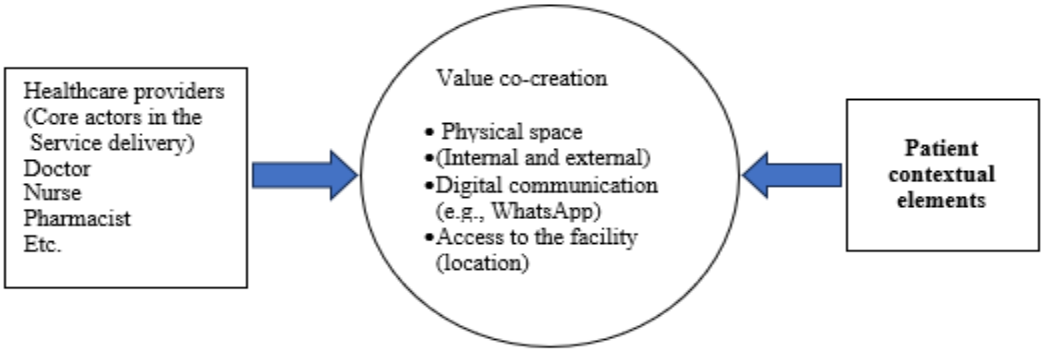
Yet, while the adoption of digital platforms like WhatsApp has contributed to the enhancement of patient's health and the facilitation of value co-creation (Smart & Banduchi, 2015), the pace of digital transformation within the healthcare sector has been relatively sluggish (Safavi & Ratlif, 2015). Deloitte's assessment in 2018 characterizes the utilization of digital and electronic health technologies as relatively minimal in the context of healthcare delivery. Nevertheless, patients' expectations regarding access to technology to enhance healthcare encounters and engender spatial experiences conducive to co-creation remain high (Ferreira et al., 2020; Marques & Ferreira, 2020; Sreejesh et al., 2022), patients' involvement in a co-creation experience are influenced by the extent and sophistication of technology integration within the healthcare context (Verleye, 2015).

Furthermore, the convenience of a physical healthcare facility is intricately linked to its location and accessibility, forming the cornerstone of value co-creation in healthcare. This dimension becomes feasible when a healthcare facility is strategically situated to fulfill its societal role and provide convenient access to medical services for patients. The aspect of location and its associated accessibility are integral components of architectural design considerations (Kvæl & Bergland, 2021). This bears substantial relevance for ensuring convenient and accessible healthcare service delivery, thereby profoundly impacting patient engagement and the overall quality of service encounters (Lee et al., 2016; Lee, 2017; Hong & Lee, 2018; Hestevik et al., 2019). Therefore, the geographical placement of a healthcare

facility and its overall design shape patients' experiences within the service delivery context (Woodside et al., 1998), adding meaning to their healthcare experience (Kvæl & Bergland, 2021). Consequently, the thorough transposition of healthcare personnel, processes, physical infrastructure, artifacts, and architectural design within the physical space plays a pivotal role in fostering patient engagement, triggering the patient experience, and supporting the collaborative process of value co-creation (Macdonald et al., 2011; Ramaswamy & Ozcan, 2014).

Following the contextual elements' role in shaping patients' experiences in healthcare encounters, (Grundey, 2008; Luigi et al., 2012), Figure 2 provides a visual representation of these contextual elements situated within the healthcare service provider's setting. This underscores the elements' role in shaping the patient value co-creation process, particularly in the context of malaria treatment. Throughout the engagement process of treatment, patients are exposed to and interact with various contextual elements that serve as triggers for the patient experience (Ramaswamy & Ozcan, 2014; Pham et al, 2021) and facilitate the collaborative process of value co-creation (Macdonald et al., 2011).

Figure 2: Contextual Elements' Role in Healthcare Service Experience



The physical space within the patient's context is regarded as a pivotal factor that can either serve as an enabler or an obstacle in the co-creation process. This encompassing physical space includes elements such as ambiance and interior decor, which possess the potential to significantly influence the emotional and memorable aspects of the service experiences. On the other hand, digital communication, as facilitated through various digital platforms, serves as a medium for accessing information within the healthcare delivery encounter. This digital medium plays a pivotal role in enhancing the overall patient experience and encompasses various facets of the service encounter system situated within the patients' context. One illustrative example of this phenomenon is the utilization of the WhatsApp platform for sharing healthcare-related information, which exemplifies how digital communication is transforming the way patients engage with healthcare services.

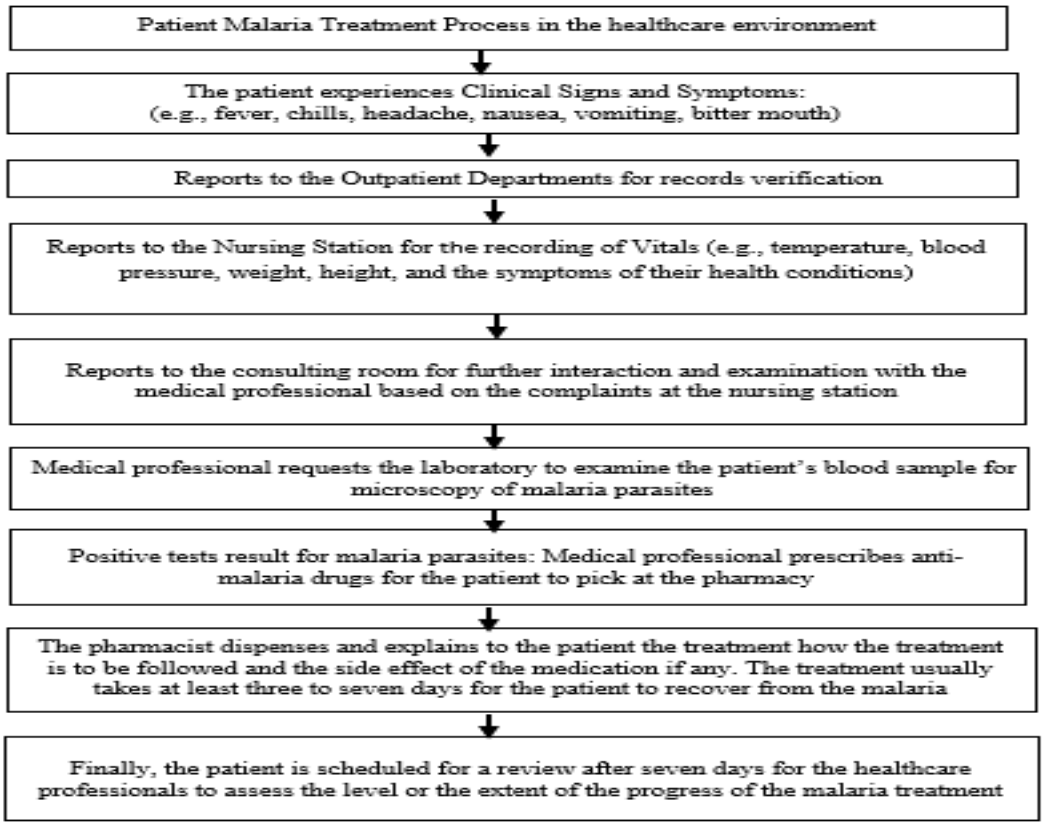
The interpretation of location and access holds significance in terms of its convenience in facilitating engagement encounters for the value co-creation process. Patients form their perceptions and interpretations of location and accessibility in the context of convenience, particularly with regard to their engagement encounters within the value co-creation process at physical healthcare facilities. Hence, the contextual elements inherent in the malaria treatment process play a critical role in either facilitating or obstructing patients' efforts in co-creating value. This emphasizes the multifaceted nature of the value co-creation process (Schallehn et al., 2019). Consequently, the integration of resources for malaria treatment transcends mere components such as laboratory tests, drug prescriptions, and interactions between patients and healthcare providers. It extends to encompass a broader spectrum of tangible and digital elements inherent in the encounter process, collectively contributing to the creation of value.

4.2 Methods

4.2.1 Overview of Malaria Treatment Journey

In Ghana, the treatment of malaria patients follows a healthcare service process that involves multiple encounters with various service providers, namely healthcare providers. These encounter experiences empower the patient to apply their knowledge within the context of the encounter, thereby contributing to the process of value co-creation (Lee, 2017; Vargo & Lusch, 2008). Similar to the treatment of other diseases, the malaria treatment process commences with the patient and concludes with the patient, traversing through a series of encounters with the healthcare providers. Figure 3 provides an overview of this process.

Figure 3: ***Overview of Malaria Treatment Journey***



4.2.2 Research Design

This study adopted a qualitative research design, employing a constructivist approach (Elliott et al., 2000) to investigate the perspectives of patients regarding their experiences with healthcare contextual elements (Justesen & Mik-Meyer, 2012). A constructivist approach is rooted in an epistemological stance that posits individuals as active constructors of their own knowledge and reality, influenced by their experiences (Elliott et al., 2000). Accordingly, qualitative interviews were utilized as the primary method to delve into patients' perceptions of their experiences during interactions with healthcare providers within the context of malaria treatment at a clinic in Ghana. To ensure diversity and breadth in our data collection process, we specifically targeted patients formed by the core patient base of the university clinic (Verleye, 2015).

The interviews were conducted in the English language within the Ghanaian context. The interview guide underwent a thorough review process involving four research academics to eliminate any potential ambiguity in the interview questions. The interview guide delves into the role of contextual elements in patient engagement with healthcare providers. We focused on capturing the patients' perspectives concerning their experiences in their daily interactions with healthcare providers during the malaria treatment process and elucidating the significance of these contextual elements in the value co-creation process.

The interviews, lasting between 45 minutes to 1 hour, were recorded with the permission of the patients or participants and took place in their workplace settings. They were characterized by a conversational and loosely structured approach (Rubin & Rubin 2005). Regarding the saturation point, Guest et al. (2006) and Guest et al. (2020) recommended that a sample size ranging from six to twelve interviews is typically sufficient to attain data saturation, where new interviews cease to yield additional themes. However, as noted by Ando et al. (2014), saturation may occur between twenty and twenty-five interviews, at which point further interviews may not introduce new themes or insights. In our study, we observed data saturation at the thirty-fourth interview. This indicated that we had reached a point of

comprehensiveness in capturing the relevant perspectives and themes concerning the role of contextual elements in value co-creation within patient interactions with healthcare providers.

4.2.3 Participant Overview

Table 12 provides a comprehensive overview of the study's participants, comprising a total of 36 patients. Within this participant pool, there were 6 female participants and 30 male participants, indicating a notable predominance of males within the patient community at the university. It is noteworthy that all of the participants had been employed at the university for varying durations, ranging from 4 to 36 years. Of particular relevance, is the fact that each participant had personally experienced malaria symptoms, received a diagnosis of the malaria parasite, and undergone the subsequent treatment process. Many of these participants possessed extensive firsthand experience with the malaria treatment process, rendering their insights and perspectives valuable to the study.

The majority of the study's participants fell within the age bracket of 35 to 54 years old, indicating that the clinic predominantly serves a younger patient demographic for malaria treatment. In terms of their educational background, 5 participants held Ph.D. degrees, 29 possessed master's degrees, and 2 had bachelor's degrees, highlighting a relatively high level of educational attainment among the participants. The participants represented a diverse spectrum of roles and positions within the university, encompassing Deans of Faculty, Heads of Department, Coordinators, Library staff, Halls of Residence staff, Security personnel, Lecturers, Exam Officers, and Registrars. This diversity within the participant pool ensured a comprehensive range of perspectives and experiences related to the malaria treatment process at the university clinic. During the interview process, deliberate efforts were undertaken to maintain clarity and promote understanding. Participants were actively encouraged to provide additional explanations or clarifications whenever questions or doubts arose regarding their perspectives on specific aspects of the study. This approach aimed to ensure the richness and depth of the data collected.

Table 12: Key Informant Profiles

Interviewees	*Job Position*	*Number of Years Worked*	*Gender*	*Age Range*	*Education*
Patient 1	*Academic staff/ Head of Department*	*10*	*Male*	*45-49*	*Ph.D.*
Patient 2	*Academic staff/ Faculty Exams Officer*	*8*	*Male*	*35-39*	*Masters*
Patient 3	*Academic staff/ Exams Officer*	*9*	*Female*	*35-39*	*Masters*
Patient 4	*Academic staff/ Coordinator*	*10*	*Female*	*40-44*	*Masters*
Patient 5	*Academic staff/ Senior Lecturer*	*25*	*Male*	*60-64*	*Masters*
Patient 6	*Academic staff/ Head of Department*	*22*	*Male*	*55-59*	*Masters*
Patient 7	*Academic staff/ Lecturer*	*5*	*Female*	*30-34*	*Masters*
Patient 8	*Academic staff/ Lecturer*	*9*	*Male*	*40-44*	*Masters*
Patient 9	*Academic staff/ Senior Lecturer*	*14*	*Male*	*55-59*	*Masters*
Patient 10	*Academic staff/ Dean of Faculty*	*32*	*Male*	*55-59*	*PhD*
Patient 11	*Academic staff Senior Lecturer*	*8*	*Male*	*35-39*	*Masters*
Patient 12	*Academic staff/ Coordinator*	*5*	*Male*	*40-44*	*Masters*
Patient 13	*Academic staff/ Lecturer*	*4*	*Male*	*40-44*	*Masters*
Patient 14	*Academic staff/ Dean of Faculty*	*4*	*Male*	*45-49*	*Professor (Ph.D.)*
Patient 15	*Academic staff/ Coordinator*	*30*	*Male*	*50-54*	*Masters*
Patient 16	*Academic staff/ Senior Lecturer*	*7*	*Female*	*35-39*	*Masters*
Patient 17	*Academic staff/ Dean of Faculty*	*14*	*Male*	*45-49*	*Professor (Ph.D.)*
Patient 18	*Academic staff/ Coordinator*	*9*	*male*	*45-49*	*Masters*
Patient 19	*Academic staff/ Senior Lecturer*	*26*	*Male*	*60-64*	*Masters*
Patient 20	*Academic staff/ Exams Officer*	*10*	*Male*	*35-39*	*Masters*
Patient 21	*Academic Unit/ Head*	*13*	*Male*	*55-59*	*PhD*
Patient 22	*Estate Unit/* Senior Hall Assistant	*4*	*Male*	*35.39*	*Degree*

Interviewees	*Job Position*	*Number of Years Worked*	*Gender*	*Age Range*	*Education*
Patient 23	*Human Resource Unit/ Assistant Registrar*	*18*	*Female*	*45-49*	*Masters*
Patient 24	*Security Unit/* Senior Security Officer	*5*	*Male*	*30-34*	*Degree*
Patient 25	*Liaison Unit / Assistant Registrar*	21	*Male*	*45-49*	*Masters*
Patient 26	*Internal Audit Unit/* Ag. Head	19	*Male*	*40-44*	*Masters*
Patient 27	*Human Resource Unit/ Assistant Registrar*	17	*Male*	*45-49*	*Masters*
Patient 28	*Internal Audit Unit/*Junior Assistant Internal Auditor	8	*female*	*35-39*	*Masters*
Patient 29	*Finance Unit/ Ag, Head*	*29*	*Male*	*55-59*	*Masters*
Patient 30	*Academic Unit/* Coordinator, Exams Relations	*19*	*Male*	*50-54*	*Masters*
Patient 31	*Library/* Principal Assistant	*20*	*Male*	*35-39*	*Degree*
Patient 32	*Procurement Unit/Ag. Head*	*8*	*Male*	*35-39*	*Masters*
Patient 33	*University Relations/ Head*	*27*	*Male*	*50-54*	*Masters*
Patient 34	*Human Resource Unit/* Head	19	*Male*	*45-49*	*Masters*
Patient 35	*Budget Unit/* Head	*17*	*Male*	*40-44*	*Masters*
Patient 36	*Academic Unit/ Head, Admissions*	18	*Male*	*50-54*	*Masters*

4.2.4 Data Analysis

Data analysis commenced with the transcription of participants' responses in verbatim format, followed by thematic coding to uncover and scrutinize the underlying patterns within the data. This approach aligns with the qualitative data analysis framework proposed by Braun & Clarke (2006: 35), which is detailed in Table 13.

Table 13: Phases of Thematic Analysis

Phase	*Description of the process*
Familiarizing yourself with the data	*Transcribing data (if necessary), reading and re-reading the data, and noting initial ideas.*
Generating initial codes	*Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.*
Searching for themes	*Collating codes into potential themes, gathering all data relevant to each potential theme.*
Reviewing themes	*Checking whether the themes work in relation to the coded extracts and the entire data set, generating a thematic "map" of the analysis.*
Defining and naming themes	*Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells; generating clear definitions and names for each theme.*
Producing the report	*The final opportunity for analysis. Selection of vivid, compelling extract examples, the final analysis of selected extracts, connecting the results of the analysis to the research question and literature, and producing a scholarly report of the analysis.*

Source: Thematic analyses based on Braun & Clarke, 2006: 35

We engaged in a systematic analysis by closely examining the transcripts while simultaneously taking notes during the interviews. Our approach involved entering the data into a framework, categorizing and coding it to identify recurring patterns. Specifically, we focused on extracting codes from quotes that revolved around patient interactions within healthcare encounters.

As the analysis progressed, these codes were grouped and organized into coherent clusters, eventually forming themes. We methodically reassembled the insights shared by patients concerning contextual elements, drawing from their experiences in their interactions with healthcare providers and the relevant contextual elements. Through this process, we pinpointed patients' perspectives on various types of contextual elements. Prominent patterns surfaced within the data, centering around physical elements, digital components, the role of location, and accessibility to facilities. This paper thus presents a comprehensive analysis of patients' experiences with contextual elements and their influence on value co-creation within a healthcare context. To enhance the richness of our findings, we integrated vivid quotes from our informant interviews (Braun & Clarke, 2006; Miles & Huberman, 1994). During the theory-building phase, we cross-referenced emerging concepts and theories with existing literature, culminating in an intellectually robust analysis (Braun & Clarke, 2006; Eisenhardt, 1989).

4.3 Findings and Discussion

In the process of assessing healthcare, patients encounter various contextual factors within the healthcare domain. The extent of patient involvement within the healthcare delivery process plays a pivotal role in shaping the patient's perception of the elements that emerge from patient encounters with healthcare providers. In the context of this study, our focus centers on comprehending the concept of contextual elements and their perceptions as seen from the patient's perspective, in the context of the malaria treatment process. These contextual elements serve as key drivers that steer the creation of value in patient-centered interactions.

Three main dimensions emerged summing up the perceived patient contextual element within the domain of value co-creation. The first dimension, referred to as " Physical space" highlights elements such as interior and exterior decor display within the healthcare setting. The second dimension, described as " Digital communication," uncovers the use of technology such as WhatsApp platforms for messaging and online booking of appointments. The third dimension, "location, and access to the facility", reveals issues relating to universal access to the clinic and the design characteristics of the facility.

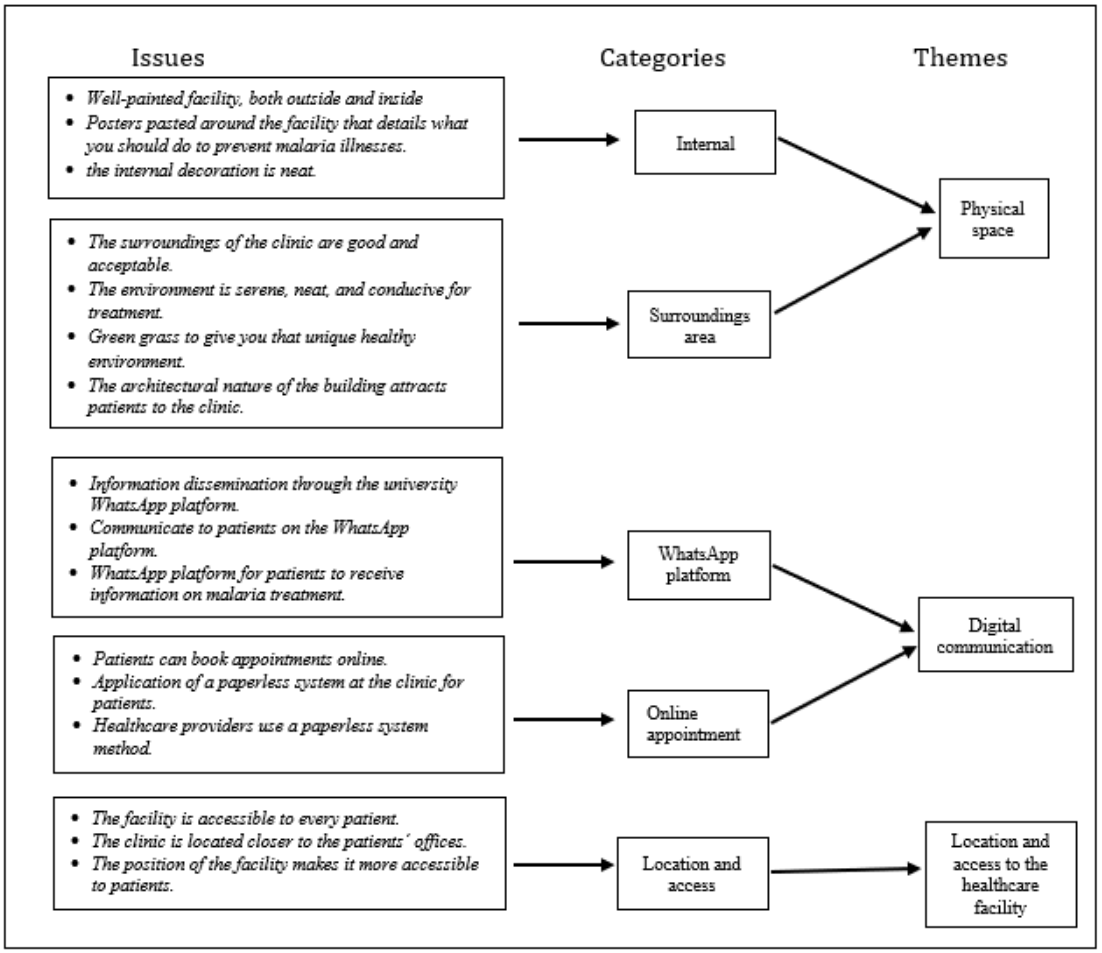
4.3.1 Patient Contextual Elements for Co-creation

The study identifies three main aspects that shape a patient's experience in the healthcare setting: physical space, digital communication, and access to the facility. Patients shared their thoughts about each aspect within the context of malaria treatment. In general, patients expressed their perceptions about each aspect of the contextual elements within the healthcare context. The different levels show how patients experience their interactions, as viewed from their standpoint, specifically in the context of undergoing malaria treatment.

Our study seeks to fully comprehend the elements that patients consider important from a co-creation process perspective. This helps us uncover the details of how patients perceive these elements during their interactions with healthcare

providers throughout their malaria treatment journey. Our investigation shows that these aspects are important to patients as they engage with healthcare providers. This perspective is illustrated through direct quotes sourced from the patients themselves. These aspects play a role in how patients collaborate with healthcare providers, which is shown in Figure 4 with issues emerging from the conversations with participants. We delve into these themes more deeply for a better understanding.

Figure 4: Issues Emerging from the Data



4.3.1.1 Physical Space: internal and surrounding area

Patients further emphasized the significance of a clean and serene healthcare setting as a valuable resource that profoundly impacts their overall experiences and triggers their sense of fulfillment in co-creation efforts. The physical space, in this context, emphasizes qualities such as cleanliness, brightness, and decor, all of which play a pivotal role in shaping how patients perceive their healthcare interactions (Bitner, 1992; Fottler et al., 2000). When contextual elements are introduced into the conversation, participants draw our attention to the specific attributes they prefer in the physical healthcare setting. This underscores the importance of tailoring the physical space to align with patients' preferences and expectations, as it can significantly influence their comfort, satisfaction, and willingness to actively engage in value co-creation within the healthcare setting.

This matter reflects a shift towards the recognition of physical cues that evoke sensory sensations in patients, prompting them to actively seek out a memorable and positive experience that aligns with their requirements for value co-creation (Adongo et al., 2015; Kivela & Crotts, 2006). Patients place significant emphasis on the physical elements within their learning process of co-creation. This perspective is further reinforced by statements from patients, accentuating the tangible impact of the physical space on patients' overall healthcare experience and active engagement in the value co-creation process. The following quotes from the interviews illustrate this idea: *"The physical elements have been described as a good edifice and well-painted facility, both* outside and inside, and patients feel at home when they are sick and arrive at the clinic for malaria treatment" (Patient 1).

> *"The healthcare providers have pasted posters around the facility that detail what you should do to prevent those illnesses and malaria is one of them" (Patient 10)*
>
> *"There is a lot of information posted on the clinic walls to give direction and also educate you on malaria and other common diseases" (Patient 11)*
>
> *"When you arrive at the clinic, you will see stickers with information posted at vantage points to educate ourselves on malaria and other illnesses" (Patient 28)*

"Healthcare providers have pasted educational materials on diseases on the clinic walls including symptoms of malaria for patients to read" (Patient 6).

"Oh, I will say the clinic is a place that anybody will go there when the person is not feeling well" (Patient 23).

Patients further emphasized the significance of a clean and serene healthcare setting as a valuable resource that profoundly impacts their overall experiences and triggers their sense of fulfillment in co-creation efforts. The physical space, in this context, emphasizes qualities such as cleanliness, brightness, and decor, all of which play a pivotal role in shaping how patients perceive their healthcare interactions (Bitner, 1992; Fottler et al., 2000). When contextual elements are introduced into the conversation, participants draw our attention to the specific attributes they prefer in the physical healthcare setting. This underscores the importance of tailoring the physical space to align with patients' preferences and expectations, as it can significantly influence their comfort, satisfaction, and willingness to actively engage in value co-creation within the healthcare setting.

"I must say that the physical environment is very serene for healthcare delivery. The premises is well painted, and the internal decoration is neat" (Patient 16)

"I think everyone wishes to have medical assistance in this environment because the place is neat" (Patient 12)

"The environment is serene and tidy" (Patient 14)

"The clinic is a quiet place and green glass is everywhere to give you that unique healthy environment" (Patient 11)

"The surroundings of the clinic are good and acceptable" (Patient 17)

"I don't think the clinic has a problem with sanitation at all and as soon as you enter the clinic *for treatment, you feel very comfortable, and probably half of your problem might have been gone" (Patient 25)*

"The environment shows that it is a healthcare facility because everywhere is green grass" (Patient 13)

"The greening environment is conducive for healthcare delivery" (Patient 3)

"The pleasant environment, surrounded by green grass and the architectural nature of the building facilitates healing process" (Patient 9)

Patients further shared their perspectives architecture design, in particular the waiting space within healthcare facilities (Kapoor et al., 2020), shedding light on how these spaces sometimes impose restrictions on patients' comfort and freedom of movement (Minkiewicz et al., 2016). This insight highlights the crucial role of physical space in shaping patients' overall healthcare experience. The way waiting areas are designed and managed can significantly influence patients' perceptions, emotions, and the effectiveness of their interactions with healthcare providers. It serves as a reminder that optimizing the waiting space design and experience is an essential aspect of providing patient-centered care (Tsai et al., 2007). As Patients noted:

> *"Though the clinic premises is not very big but manageable…..But from my perspective, the waiting space is small, and something needs to be done about it, looking, at the population of staff" (Patient 1)*
> *"The clinic environment is ok, except that the premises is a bit congested, and they need more space over there" (Patient 36)*
> *"The clinic has a small waiting space which I think something must be done about that" (Patient 11)*

The study's findings underscore the pivotal role of the physical space in generating favourable or unfavourable emotions and enhancing the overall value of the healthcare experience, with factors such as ambiance, interior design, and service quality contributing significantly. Within this context, patients receive messages and cues through the physical space during their healthcare encounters. They actively engage in the process of interpreting and comprehending these communications, which can drive changes in patient behavior and ultimately lead to improved patient lifestyles (Berry & Bendapudi, 2007). The physical elements within healthcare settings serve as mechanisms that either encourage or discourage patients to actively participate in value co-creation process during their healthcare interactions.

4.3.1.2 Digital communication: WhatsApp platform and online appointment

Digital communication serves as a virtual channel for direct interaction within the healthcare context, a focus that spans diverse contexts and discussions (Horrocks & Johnson, 2014; Petrakaki et al., 2018). This advancement is widely recognized as a favourable force in enhancing the overall healthcare experience, particularly in terms of improving access to healthcare services. Through conversations with patients, it became evident that mobile technology, including platforms like WhatsApp, plays a pivotal role in shaping patient experiences within healthcare delivery (Cavusoglu & Demirbag-Kaplan, 2017; Grönroos & Voima, 2013; Vargo & Lusch, 2008), ultimately contributing to the creation of value (Elg et al., 2012; Hungenberg et al., 2019).

Patient feedback highlights the importance of WhatsApp as a platform over traditional websites, particularly in minimizing unnecessary delays in receiving messages from healthcare providers regarding the malaria illness. As patients expressed, this shift to using WhatsApp has streamlined the healthcare experience, resulting in smoother interactions and reduced waiting times. This underscores the tangible benefits of digital communication in healthcare, where instant, accessible, and efficient communication channels significantly enhance the patient's overall experience. Considering the viewpoints shared by patients:

> *"Unfortunately, the clinic does not have a website, so it is difficult to access certain healthcare information……But they communicate with us on WhatsApp which is more reliable and instant" (Patient 20)*
>
> *"Though I have not seen permanent websites for the clinic, they send messages at times on health issues on the university group WhatsApp platform" (Patient 3).*
>
> *"There is a common platform where healthcare providers share information and thus, through our WhatsApp group…… All staff receive information relating to healthcare services from the healthcare providers via WhatsApp" (Patient 25)*
>
> *"The university has a common WhatsApp platform and the healthcare providers do send information regularly on healthcare services" (Patient 13)*
>
> *"The healthcare providers share health-related information on our WhatsApp platforms" (Patient 26)*

Furthermore, there is a notable emphasis on incorporating additional technological aspects, particularly the adoption of paperless systems and the facilitation of online appointment booking by patients. This evolving trend reflects the changing landscape of healthcare engagement, aligning with patients' growing preferences for digital convenience. As articulated by patients themselves:

> "*You know the clinic uses online technology and is fast... It has helped to reduce unnecessary delays because you know when to go the clinic based on your online booking of appointment" (Patient 1)*
>
> *"You can book appointments online…It is now a paperless system at the clinic" (Patient 13)*
>
> *"Healthcare providers use a paperless system…. No folder, you just go to the clinic and all your information is stored on a database" (Patient 12)*
>
> *"The clinic has adopted the paperless system, and it speeds up the process of healthcare delivery" (Patient 20).*

The findings from this study stress the transformative impact of digital communication within the healthcare sector, with a demonstrable improvement in healthcare delivery (Ferreira et al., 2020; Kapoor et al., 2020). This enhanced healthcare experience contributes to patients' expressed intention to return to the clinic for future healthcare services (Sreejesh et al., 2022). In this context, leveraging digital technologies, patients can directly access valuable information about malaria and related healthcare services from healthcare providers. WhatsApp, as a social media tool, plays a pivotal role in providing information and nurturing supportive relationships between patients and healthcare providers, ultimately facilitating the attainment of healthcare-related objectives (Cavusoglu & Demirbag-Kaplan, 2017; Grönroos & Voima, 2013; Vargo & Lusch, 2016) and serves as a bridge connecting patients with healthcare service providers (Vial, 2021; Wang et al., 2018). This transformative role of WhatsApp is instrumental in reshaping the healthcare sector (Ferreira et al., 2020). It underscores how digital technologies are progressively redefining patient-provider interactions and the delivery of healthcare services to meet the evolving needs of patients and healthcare providers alike.

4.3.1.3. Location and access to the healthcare Facility

The significance of location and access to a healthcare facility is rooted in the placement of the architectural design of the building, which directly affects patients' interactions with healthcare providers (Kvæl & Bergland, 2021).The position of the building holds the key to determining the location and accessibility of healthcare conveniences (Hutton & Richardson, 1995), impacting patients' engagement with the healthcare delivery process in accessing medical services. The influence of location and physical access becomes particularly pronounced when considering a patient's overall experience in the healthcare delivery process. Patients emphasize that the accessibility of a healthcare facility to the public significantly enhances their experiences and serves as a means for meaningful interactions (Hestevik et al., 2019). Therefore, the physical location of a healthcare facility can motivate and inspire patients within the context of service delivery (Woodside et al., 1998). For instance, patients distinctly appreciated the convenience of accessing the healthcare facility during their malaria treatment process:

> *"As you know, where the facility is located and the lorry roads around are perfect……It is very accessible to every patient" (Patient, 13)*
>
> *"It is easy to have access to the clinic because it is located closer to a major road, and our offices" (Patient, 16)*
>
> *"The location of the building is good because of the area it is positioned in the metropolis… You know it is surrounded by other communities like 'Tanoso' and other patients can use the facility" (Patient 9).*
>
> *"The clinic is at a good location because it is closer to a major road. The inside of the clinic is also well organized. The seating arrangement is good. The staff are polite and neatly dressed (Patient 1).*

In order to achieve multifaceted objectives in healthcare delivery, the core focus of healthcare encounters must revolve around the patient. The study's findings demonstrate that when healthcare facilities are easily accessible for public convenience, it substantially improves patient experiences (Lee et al., 2016; Lee, 2017; Hong & Lee, 2018). The patient's experience during these encounters holds a central role in the co-creation of value. As a result, patients heavily rely on factors like location and the quality of healthcare facilities when participating in healthcare

interactions. This approach is a consistent practice of value co-creation, which in turn improves patients' overall quality of life (Berry & Bendapudi, 2007). Consequently, when healthcare providers comprehend the location and access to the facility concept, aid in new ideologies in redesigning existing services infrastructure, ground landscape design, and space planning (Douglas & Douglas, 2005). This promotes increased efforts to actively involve patients in healthcare management, fostering an environment of mutual exchange that ultimately results in improved healthcare delivery (Blocker & Barrios, 2015).

4.4 Conclusion

Healthcare experience plays a pivotal role in shaping the effectiveness of healthcare delivery in the global economy. Co-creation is crucial in healthcare, bringing together the resources from doctors and patients. When diverse perspectives are included in healthcare delivery, it helps make healthcare solutions complete and tailored to the specific needs of patients. This research advances our comprehension of value co-creation by analyzing patient involvement in healthcare interactions, particularly within the malaria treatment context. The study investigates patient roles in generating value and assesses the contextual factors in the healthcare co-creation process. The findings hold significance for healthcare providers and patients. The research explores the intricate concept of value co-creation in healthcare, with specific attention to patient perceptions and experiences during malaria treatment. This examination sheds light on evolving healthcare dynamics that redefine patient roles, carrying substantial implications for providers and patients.

The landscape of healthcare encounters involves aspects such as physical space, digital communication, and facility location and access. By exploring how patients perceive and interact with these elements, the study contributes to further understanding of contextual elements and the patients' preferences interactions with those elements when co-creating value. By considering the role of contextual elements on patient behavior change and lifestyle improvement, the research expands the scope of the theoretical understanding of value co-creation in

healthcare. Furthermore, the integration of physical spaces, digital resources, and strategic facility placement creates an immersive atmosphere that fosters interactive exchanges and robust information/resources sharing between patients and healthcare providers. This integration/sharing is instrumental in enhancing patients' health comfort and contributing to the process of value co-creation.

Notably, the study's findings enrich the understanding of physical settings. In healthcare, the physical setting greatly influences patients' happiness and engagement. Creating aesthetically pleasing interiors, incorporating natural elements, and ensuring cleanliness can positively impact patients' emotional state and their willingness to participate actively in their care. By exploring how patients perceive and interact with their physical surroundings, the study contributes to the development of better patient experience, increased trust in healthcare providers, and a stronger sense of collaboration in the treatment process.

Moreover, the study has identified WhatsApp's significant role as a digital communication channel for patients and healthcare providers, underscoring the progressive influence on patient experiences in information sharing and nurturing support for patient-provider relationships, contributing to value co-creation efforts. The recognized advantages stem from acknowledging and leveraging WhatsApp's potential to enhance healthcare goals and foster active patient participation. The study highlights further the importance of location and buinding arquitecture as critical elements for patient experience. For example, welcoming and comfortable waiting spaces minimize patient stress and anxiety. By providing educational materials, clear signage, and comfortable seating, healthcare facilities can foster a sense of security and calmness among patients. This positive atmosphere supports patient engagement, communication, and active participation in their care discussions.

Finally, this study significantly enhances our comprehension of the value co-creation process within healthcare, particularly in relation to patient-centered improvement. It highlights the shift from viewing patients as passive recipients of healthcare to recognizing their active role in managing their health needs. Patient

perspectives, input, and experiences are pivotal in driving improvements in their health conditions during healthcare interactions. As a result, the study expands our insights into the collaborative efforts between patients and healthcare providers for better health outcomes.

4.5 Managerial and Practical Implications

Healthcare managers can derive managerial and practical insights from the study's findings to enhance service delivery and patient experiences. The emphasis on the physical settings, including elements such as neatness, brightness, and decoration, suggests that healthcare facilities should prioritize creating a welcoming and comfortable atmosphere. Healthcare managers should consider investing in interior design, cleanliness, and aesthetic appeal can contribute to favourable emotional responses and memorable service experiences for patients, ultimately fostering value co-creation.

While WhatsApp serves as a valuable communication tool, its personalized usage highlights the need for a more robust digital healthcare infrastructure. Healthcare managers should prioritize investments in electronic healthcare delivery platforms that offer a wider array of services. This could include creating online communities or forums for patients with similar conditions to foster peer-to-peer support and information exchange and patient portals that offer a central hub for health information. By building a comprehensive digital platform, healthcare managers can offer patients a versatile healthcare experience, fostering greater patient engagement for co-creation. This approach widens the range of available avenues for accessing healthcare resources, overcoming limitations associated with restricted technological options in healthcare service delivery.

Waiting areas are part of the crucial elements in healthcare settings. Healthcare managers can optimize these spaces by providing comfortable seating, clear signage, and educational materials to inform patients about their conditions and treatments. Well-organized and informative waiting areas contribute to patient

satisfaction, reduce stress, and create a positive atmosphere for meaningful patient-provider interaction.

Implementing patient-centric strategies involves understanding patient preferences and involving them in the decision-making process. Healthcare managers can collaborate with patients to give them services that prioritize their comfort and needs. By adopting a patient-centric approach, healthcare managers demonstrate empathy and commitment in fostering the patient co-creation engagement process, leading to improved health outcomes.

Lastly, the healthcare delivery landscape involves various professionals working together to provide comprehensive care. Healthcare managers must foster collaboration between medical, administrative, and support staff. This multidisciplinary approach ensures that patient-centered enhancements are implemented cohesively, resulting in a holistic and consistent patient experience across the whole co-creation context.

4.6 Limitations and Future Research

While the study significantly underscores the pivotal role of exceptional patient experiences in driving co-creation within service firms, it also serves as a valuable contribution in deepening our understanding of how patients perceive contextual elements. However, it is equally imperative to gain further insights from decision-makers to better craft and assess co-creation experiences. It is worth acknowledging the limitations inherent in our research. Given the study's interpretive nature, the results carry a certain degree of preliminary insight and are not universally applicable. The study's scope is centered around the contextual elements within a university clinic, necessitating further research spanning various healthcare settings to unravel patients' experiences in contextually varied scenarios, such as employee dress, that may drive value co-creation.

Furthermore, there exists a compelling avenue for exploring how further digital platforms, such as e-healthcare platforms and websites, can facilitate and enhance patients' engagement in the value co-creation process within healthcare delivery, particularly in developing economies. A potential research direction is investigating the intricate healthcare design process for co-creating a smooth patient journey and perceptions in healthcare settings across Sub-Saharan Africa. In addition, the study's focal point revolves around patients and the main core healthcare providers. To cultivate a more comprehensive perspective of the co-creation process within healthcare, it is recommended to expand the research to encompass administrative and support staff. This inclusive approach ensures a broader and more holistic understanding of the dynamics involved in value co-creation across the entire healthcare spectrum and the different roles they entail.

Chapter Five

ESSAY Three

Interactive Smooth Journeys in a Healthcare Co-creation: The Case of Malaria Treatment in Ghana

Abstract

Purpose – The purpose of the study is to gain a comprehensive understanding of the mechanisms underlying the emergence of value co-creation within the interactive smooth healthcare journey context.

Methodology – Using an interpretive approach, the study draws on 41 in-depth interviews with healthcare providers, and patients in Ghana. Data analysis was based on thematic analysis.

Findings – The findings indicate that the patient's journey through malaria treatment is characterized by an intermittent smooth pattern. The research identified five key features that play a pivotal role in facilitating intermittent smooth journey within the context of healthcare value co-creation: openness, relationship, comfortability of service encounters, satisfaction, and accessibility of healthcare providers.

Research limitations/implications – The study's focus is limited to interactions between patients and healthcare providers in a university clinic. However, to achieve a smooth journey, healthcare managers can integrate user-friendly digital platforms and tools such as patient portals that give individuals secure access to their medical records, test results, and medication reminders for patients to stay informed and enhance convenience, accessibility, and communication throughout the patient's journey, to contribute to a more satisfying experience.

Originality/value – The study contributes to the value co-creation literature by theorizing about the intermittent smooth journey and its features in a healthcare setting in the African context.

Keywords: Healthcare, Smooth Journey, Patient, Co-creation, Ghana.

Paper type: Research paper

5. Introduction

Patients embark on healthcare journeys in pursuit of treatment for a diverse spectrum of diseases within the healthcare sector. These journeys encompass multifaceted experiences that revolve around the actual utilization of healthcare services. Some of those experiences emphasise "…consistency, effortlessness, and predictability…" (Siebert et al 2020: 45), especially when they are applied to recurrent illnesses as exemplified in the context of the malaria treatment. Malaria diagnoses occur to a higher degree in Africa (Mace et al., 2021), with Sub-Saharan Africa, being among the most severely affected regions (WHO, 2020). It is, thus, relevant to address the urgent global concern of malaria, in particular in the most affected regions by developing a consistent treatment for the illness and thus, raise its effectiveness. In a general perspective, it is essential to respond to the growing demand for improvements within the healthcare sector, a domain that significantly impacts global economies and the overall quality of patient health (Berry & Bendapudi, 2007).

Recent research underscores the paramount importance of delving into patient journeys, particularly within healthcare settings, as a means to enhance comprehension of service delivery and gain deeper insights into encounters associated with healthcare services (Følstad & Kvale, 2018; Lemon & Verhoef, 2016; Ponsignon et al., 2018). In an endeavor to expand knowledge in this domain, this study extends the scope of value co-creation within healthcare by introducing the concept of a "smooth journey" (Siebert, Gopaldas, Lindridge & Simões, 2020) and showing its nuances within the intermittent context of treatment in healthcare by specifically focusing on the malaria treatment process in the African context. There are numerous intricate touchpoints within the malaria treatment trajectory, wherein patients engage with various healthcare providers and facilities. These touchpoints encompass a range of activities including, but not limited to, appointment scheduling, outpatient unit visits, interactions with nursing staff, consultations with medical professionals, undergoing laboratory assessments, and procuring prescribed medications from the pharmacy. The cumulative effect of these interactions is pivotal in ensuring the provision of high-quality care

throughout the malaria treatment process (Barwitz & Maas, 2018; Berry et al., 2015; Chheda et al., 2019; Leeflang et al., 2014), involving consistency and learning throughout the journey.

The concept of a "smooth journey," as delineated, aims to explain the intricate dynamics between the roles assumed by healthcare providers and patients, ultimately culminating in the co-creation of healthcare engagement. As academic research overlooked the mechanisms that underpin the smooth progression of co-creation activities within the healthcare sector, a research gap persists in the existing scholarly discourse concerning our comprehension of how the facilitation of a smooth journey is achieved, encompassing the experiences of both patients and healthcare providers throughout the co-creation process. Consequently, this study seeks to address this gap by offering a comprehensive explanation of the roles played by healthcare providers and patients in the context of facilitating a smooth journey within the realm of healthcare delivery.

Hence, the study serves as a foundational platform for an in-depth exploration of the concept of a (intermittent) smooth journey within co-creation processes involving patients and healthcare providers, with a particular focus on the African context. Enhancing our understanding of these processes contributes significantly to the advancement of smooth journey nuances, ultimately resulting in improved outcomes (Siebert et al., 2020). In the study, we rely on the theoretical framework of Transformative Service Research (TSR) to elucidate and elaborate on the process of value co-creation from the perspective of a "smooth journey." This perspective is shared by both healthcare providers and patients throughout their interactions within the healthcare context. Ultimately our research contributes to various domains, including healthcare marketing, service research, and provides managerial and practical applications.

5.1 Literature Review

5.1.1 The Evolving Service Exploration: Value Co-Creation through Transformational Service Research

Within the framework of Service-Dominant (S-D) logic, the dynamic interplay between firms and customers in the process of value creation assumes paramount significance (Prahalad & Ramaswamy, 2004). This perspective lies in the collaborative and mutually reciprocal co-creation of value, which is realized through the integration of shared resources (Vargo et al., 2009). Such shift redirects attention from the provision of services by firms to the active involvement of customers in the value co-creation process (Prahalad & Ramaswamy, 2004). Hence, customers are no longer passive recipients but are recognized as active contributors to the value-creation process (Grönroos, 2012; Grönroos & Voima, 2013; Prahalad & Ramaswamy, 2002; Vargo & Lusch, 2004; Vargo et al., 2008).

This intricate process of value creation unfolds through a reciprocal interaction between service providers and customers, where resources are collaboratively integrated (Vargo et al., 2008). Accordingly, the establishment of effective collaboration between patients and healthcare providers within the service framework emerges as a critical imperative, facilitating the creation of experiential value through the integration of resources (Banyte & Dovaliene, 2014; Vargo & Lusch, 2008). These resources extend across service providers (.e.g, healthcare service), encompassing touchpoints, treatment processes, and personnel, as well as customers (patients in the case of this study), including their knowledge, skills, and motivations (Vargo et al., 2008). This synergy culminates in the cultivation of personalized experiences and the collaborative creation of value throughout the entirety of the treatment journey (Neghina et al., 2015; Prahalad & Ramaswamy, 2004).

In parallel, Transformative Service Research (TSR) is also relevant to understand the healthcare delivery dynamics. TSR assumes a pivotal role in facilitating positive outcomes by promoting interactions between service providers and consumers,

with a particular emphasis on enhancing individual, collective, and societal well-being (Anderson et al., 2013). TSR's applications span across multiple sectors, including healthcare services, recognizing the pivotal impact of interactions between patients and healthcare providers on patient well-being (Berry & Bendapudi, 2007; Danaher & Gallan, 2016). Rooted in the social exchange theory (Anderson et al., 2011), TSR revolves around the dynamic interplay between service entities, such as healthcare professionals like doctors, nurses, and pharmacists, and customer entities, encompassing individuals or patients as well as broader collectives, social networks, or communities. The aim of TSR is to target well-being outcomes, including but not limited to healthcare delivery outcomes (Anderson et al., 2013, p. 1208). TSR's significance is particularly noticeable, given the intricate interplay between well-being outcomes (healthcare delivery) and the patient journey, which involves a multitude of actors (Danaher & Gallan, 2016; Sweeney et al., 2015). Within this context, the patient experience and learning models are constructed based on insights derived from interactions between patients and service providers, a pivotal component of the co-creation process (Dube & Helkkula, 2014; Elg et al., 2012). This approach contributes to the collaborative process of co-creation (Elg et al., 2012; McColl-Kennedy et al., 2012).

In the contemporary service landscape, the concept of value co-creation stands as an indispensable dimension within service research (Vargo & Lusch, 2008). Co-creation is a concept characterized by collective and collaborative efforts involving multiple stakeholders through interactions, with the ultimate objective of generating value for one or more of the involved parties (Grönroos, 2012). This collaborative process creates mutually beneficial outcomes for both service firms and their customers (Grewal et al., 2009). Indeed, at the core of TSR's effectiveness lies the concept of co-creating services, a process that is instrumental in enhancing actor well-being, encompassing dimensions such as quality of life, health, happiness, and other metrics that hold significance for the individual actor (McColl-Kennedy et al., 2012). It is essential to underscore that the evaluation of these dimensions is inherently rooted in each actor's unique experiences (Falter & Hadwich, 2020). The levels at which service entities operate exert varying influences on the diverse patients and service providers within healthcare settings (Anderson et al., 2018).

5.1.2 Navigating Throughout the Stages of Patient Journey and Touchpoints Experience

Lemon and Verhoef (2016) delineate customer journeys as extending from the initial interaction with the service organization to the period subsequent to service consumption. In the context of healthcare, comprehending patient journeys transcends the patient's viewpoint, including a deeper exploration of their lived experiences (Følstad & Kvale, 2018). Patient journeys encompass the entirety of a patient's engagement with the treatment process, commencing before the initial arrival at the healthcare facility and concluding with their discharge, all under the overarching goal of delivering value-based care.

The journey unfolds across three distinct phases: the pre-purchase, purchase, and post-purchase phases (Lemon & Verhoef, 2016; Ponsignon et al., 2017; Rawson et al., 2013). Transposing this phase to the healthcare context, the initial phase encompasses all interactions, experiences, and environmental aspects that precede the actual healthcare encounter. The second phase centers on the patient's interactions with healthcare professionals and the care environment during the service delivery itself. The ultimate phase extends to interactions occurring after the completion of healthcare service consumption.

The delineated journey phases underscore the interactive nature of patient engagement, involving multiple actors in the collaborative process of value co-creation (Vargo & Lusch, 2008). Central to the patient journey are touchpoints, which refer to the contact moments of patient interaction with the healthcare service organization. The design attributes of the patient journey, in conjunction with these touchpoints, collectively constitute the fundamental elements of patient experiences (Ponsignon et al., 2017). These touchpoints encapsulate both the operational style of the healthcare service organization and the patient's encounter throughout the service delivery process (Helkkula, 2011; Ponsignon, Klaus, & Maull, 2015). In the literature, various terms have been used to describe touchpoints, including service encounters, contact points, moments of contact, and

communication channels (Surprenant & Solomon, 1987; Stauss & Weinlich, 1997; Zomerdijk & Voss, 2011; Clatworthy, 2011).

5.1.3 The Intermittent Smooth Journey

In healthcare delivery, interaction between patients and healthcare providers assumes a pivotal role in the creation of experiential value through co-creation (Ranjan & Read, 2016). The collaborative exchanges that transpire within any service encounter contribute to value generation for all involved parties (Vargo & Lusch, 2017), thereby facilitating the integration of resources and promoting interactive value formation for co-creation (Caridà et al., 2019; Echeverri & Skålén, 2021). Specifically, face-to-face dialogues between patients and healthcare providers provide significant means in ensuring a smooth journey within the malaria treatment process. This is imperative to ensure equitable access to service delivery, provide impartial treatment during service interactions, and facilitate patient satisfaction following healthcare provider engagements with patients (Fisk et al., 2018).

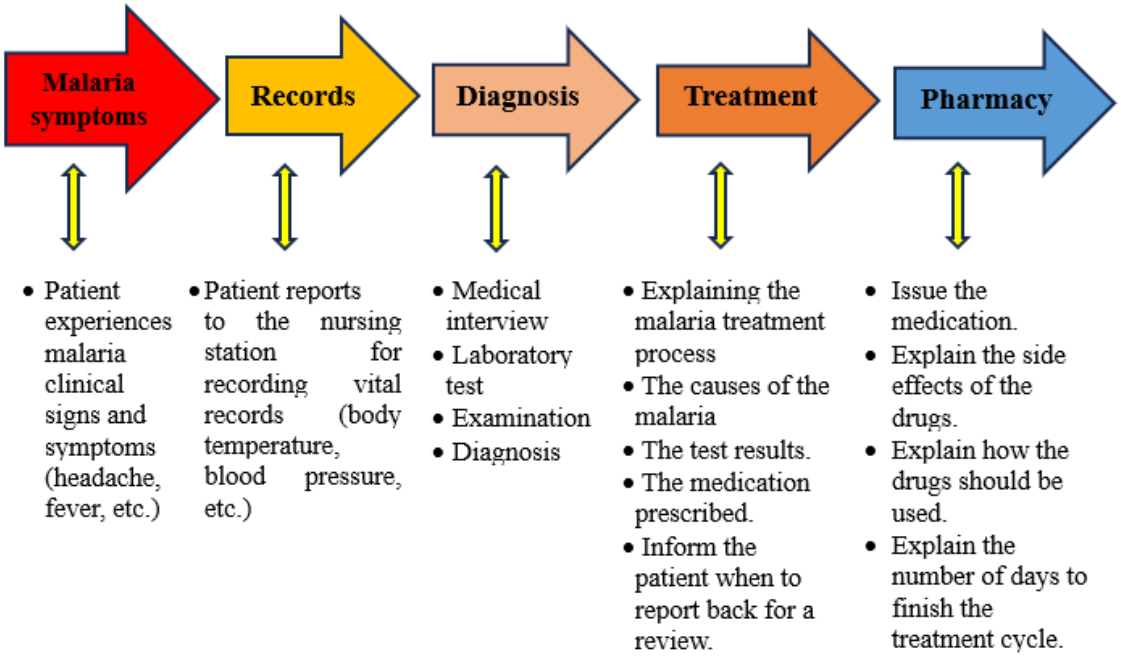
The Smooth Journey Model involves an initial service cycle of customer experience that constitutes a "… highly deliberate, multiphase, customer decision-making process, motivated by internal and external triggers…" (Siebert et al 2020: 47). Within this cycle organizations essentially provide advice and customer support to assist decision-making. Subsequent cycles focus on streamlining the customer journey by "... (1) eliminating unnecessary steps (or simplification), (2) anticipating customer preferences (or personalization), and (3) providing just-in-time support (or contextualization)…" (Siebert et al, 2020: 47). In the context of healthcare, a smooth journey involves tailoring services to meet patient preferences, ensuring timely service encounters, and creating an atmosphere conducive to nurturing satisfaction and happiness (Edelman & Singer, 2015; Fleming, 2016; Kuehnl et al., 2019). Thus, a smooth journey entails the elimination of unnecessary steps in service delivery, ensuring a predictable, convenient, easy, and fulfilling patient experience throughout healthcare interactions. This revolves around enhancing

both human health status and the overall patient experience (Alkire et al., 2019; Fisk et al., 2020).

The loyalty loop model expressed in the smooth journey (Siebert et al., 2020), emphasizes how service encounters meet patients' expectations, particularly in healthcare delivery, and simplify patients' lives. This view is rooted in the notion that interactions between service providers and patients have an influence on patients' lives and yield consistent experiences that result in patient satisfaction and improvements in the treatment process (Siebert et al 2020; Osei-Frimpong, 2016). The notion of the smooth journey empowers patients to actively participate in co-creating value through intense interactions with healthcare providers, particularly in scenarios characterized by service being highly interactive, tailored to individual needs, and dependent on trust (Bitner et al., 2008; Khullar, 2019). For example, in the context of chronic conditions such as diabetes, patients routinely attend healthcare facilities for ongoing treatment, hence the journey is continuous. This treatment entails the permanent and lifelong management of medication to effectively control the disease.

In this study we expand the idea of smooth journey to encompass the notion of intermittent smooth journey. The term "intermittent," as defined by the Cambridge Dictionary, denotes a situation that does not occur regularly or continuously; rather, it involves the cessation and reinitiation of events with intervals in between". The "intermittent smooth journey" encompasses a transition toward a seamless flow driven by a gradual truncation of the underlying evolving process (Sparks et al., 2019). For instance, in the "intermittent smooth journey" pattern, patients visit the clinic whenever they exhibit clinical signs and symptoms that may suggest malaria illness. During treatment, patients are prescribed a single medication tailored to match the clinical signs and symptoms confirmed through laboratory tests. Following a three-day medication, the treatment concludes, leading to the resolution of malaria-related signs and symptoms. As depicted in Figure 5, the malaria treatment process involves a dynamic interaction between patients and healthcare providers aimed at diagnosing, managing, and treating malaria infections.

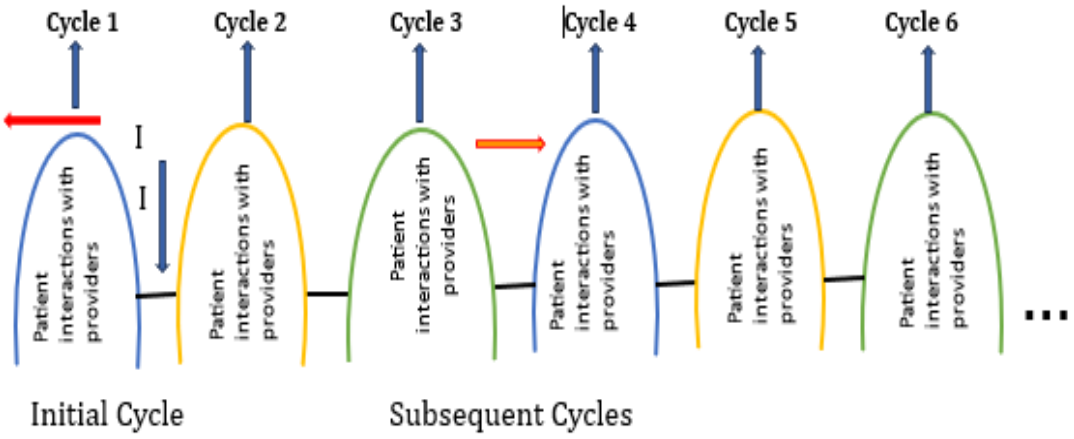
Figure 5: Overview of Key Stages and Interactions in the Malaria Treatment Process



The patients' progression through various touchpoints, including appointment scheduling, outpatient visits, interactions at nursing stations, consultations with doctors, diagnostic laboratory visits, and pharmacy interactions for medication retrieval for a three-day treatment of the symptoms and signs of malaria, collectively constitutes a cycle. Once the cycle finishes and the patient is healed he/she will only come back to the service if presenting malaria symptoms again. Each touchpoint represents a distinct interaction, and the presence of the patient is dependent on the recurrence of symptoms or the need for further medical attention related to the condition. Hence, the notion of intermittent smooth journey holds true in the context of malaria treatment, where the expertise of service providers, encompassing treatment protocols, medication prescriptions, and malaria laboratory tests, as well as patients' active involvement in adhering to recommended treatment procedures, collectively contribute to the smooth journey throughout the malaria treatment process and future repetitions.

Notably, there is a significant incidence of malaria recurrence after the initial treatment (Mahittikorn et al., 2021). For example, the Ghana Demographic and Health Survey highlights a significant range in the prevalence of malaria, varying between 11.2% to 40.0% (Kweku et al., 2017). Within the framework of malaria treatment, healthcare providers engage in a multifaceted spectrum of activities. These activities include the analysis of malaria laboratory test results, prescription of medication, patient counseling, and various other contributions throughout the intermittent and ongoing patient journey. This comprehensive involvement is essential in supporting patients consistently during their malaria treatment. (Neghina et al., 2015). This sequence constitutes an intermittent smooth journey involving repetitions of patients coming to the health facility as and when experiencing the symptoms (Figure 6).

Figure 6: The Cycle of Intermittent Smooth Journey



The effectiveness of this support hinges upon the integration of resources, a process facilitated by diverse activities and interactions involving healthcare providers (doctors, nurses, etc.) within the patient's healthcare network. This integration, in turn, shapes the benefits realized by both healthcare providers and patients, constituting the collaborative generation of value. The journey starts with an initial cycle corresponding to the first use of the service (the first time the patient experiences Malaria treatment with the healthcare provider). Our focus lies on the subsequent cycles (i.e., cycles two, three, and so forth), where patients have

previously encountered and received treatment for malaria signs and symptoms from the specific healthcare provider. The emphasis is on streamlining by eliminating unnecessary steps (or simplification), anticipating customer preferences (or personalization), and providing just-in-time support (or contextualization) in the treatment process (Siebert et al, 2020), which are pivotal in enhancing the efficacy of subsequent treatment cycles.

During the second cycle, the recurrence of malaria symptoms prompts the patient to revisit the healthcare facility seeking treatment. Repetition of this process occurs when patients manifest recurring symptoms and signs of malaria, initiating a subsequent cycle of treatment. Consequently, the interaction and engagement with healthcare providers becomes an intermittent smooth journey yet familiar journey for the patient, characterized by its recurrent nature. In the context of the intermittent smooth journey and recurrent treatment for malaria, both patients and healthcare providers operate as resource integrators. They combine operant resources, such as knowledge and skills, with operand resources, including medicines, facilities, touchpoints, and various interactions. This collaborative integration aims to mutually benefit both parties and facilitate co-creation (McColl-Kennedy et al., 2012; Vargo & Lusch, 2004; Vargo et al., 2009; Vargo & Lusch, 2008).

5.2 Method

5.2.1 Research context: Ghana

This study employs Ghana as an illustrative example to explore the emergence of value co-creation within the context of the smooth journey associated with the malaria treatment process. On a global scale, the classification within malaria elimination programs underscores that malaria remains a significant health challenge in most regions of Sub-Saharan Africa (Mace et al., 2021). Ghana, specifically, falls within the group of West African countries currently categorized as being in the disease control phase, characterized by high outpatient attendance and public health issues (Ameme et al., 2014; Ghana Health Service, 2017).

The government of Ghana has endorsed Sub-Regional and Global Initiatives centered around the Test, Treat, and Track Malaria approach. This initiative is aimed at ensuring that every individual suspected of having malaria is subjected to testing, and every individual who tests positive receives timely and accurate treatment, with the goal of providing essential data for guiding policy and operational decisions within the treatment process (World Malaria Report, 2021).

This study seeks to comprehend the experiences of research participants with the aim of guiding our investigation based on their perceptions, aligning with the principles of qualitative research (Creswell, 2013). Given the limited exploration of this area, a qualitative research approach was employed to gain a profound understanding of each patient's experience within the context of the smooth journey associated with the malaria treatment process (Yin, 2009; Bryman & Bell, 2007).

5.2.2 Research Design

During the fieldwork conducted in the study setting, we employed a qualitative research approach (Dean & Indrianti, 2020; Reynoso et al., 2015). To gain insights into the malaria treatment process, we selected healthcare professionals and patients who had previous experience with malaria (Miles & Huberman, 1994). These distinct roles held by healthcare providers and patients allowed us to explore and analyze the smooth interactions between them within the specific context of Clinic "B" in Ghana. Data for the study was collected through interviews conducted with a total of 36 participants. In line with established research practices, guidelines and strategies were employed to ensure data reliability and validity (Flick, 2014). This approach aimed to enhance the credibility and trustworthiness of the research findings.

To ensure the clarity and consistency of the interview guide, we conducted a pre-test with individuals who had experienced malaria but were not patients at Clinic "B." This pre-test allowed us to identify any potential ambiguities or inconsistencies in the interview questions, enabling us to make necessary corrections before the actual data collection commenced. The study encompassed two distinct participant groups. The first group consisted of healthcare professionals who played key roles in delivering care at Clinic "B" during the malaria treatment process. This group comprised five individuals with diverse roles, including one medical officer, two senior nursing officers, one lab technician, and one pharmacist. The second participant group comprised twenty-six individuals who were patients of Clinic "B" and had previously undergone the malaria treatment process at the same clinic. These patients offered valuable insights into their experiences and interactions within the malaria treatment journey at Clinic "B".

Prior to conducting the interviews, every participant received a semi-structured interview guide customized to explore their perceptions of the entire journey within the malaria treatment process and the role of this journey in contributing to value co-creation within the healthcare context. These interview guides were designed to facilitate in-depth discussions and insights. The interviews were carried out in a

face-to-face manner, providing an opportunity for participants to express their thoughts and experiences in detail. The duration of these interviews varied, spanning from 35 to 60 minutes, allowing for a comprehensive exploration of the topics of interest. To ensure accuracy and to aid in later analysis, audio recordings of the interviews were made for reference purposes.

The interview structure was centered on the concept of a smooth journey within a healthcare setting, with a primary focus on patients' day-to-day interactions with healthcare providers during the malaria treatment process. The interviews encompassed various aspects of this journey, including exploring how patients initiated the process of seeking healthcare when they suspected they had contracted malaria, understanding the factors and motivations that led patients to consistently visit the clinic for malaria treatment, gathering insights from patients on their overall journey, including interactions with various touchpoints within the healthcare encounter structure, such as doctors, nurses, and other healthcare professionals. In addition to patient perspectives, the study also sought the insights of healthcare professionals. This included understanding their experiences in facilitating the healthcare delivery journey for patients undergoing the malaria treatment process. These insights from both patients and healthcare professionals provided a comprehensive view of the dynamics of the intermittent smooth journey in the context of malaria treatment within the healthcare system.

In the data analysis phase, we adopted an inductive and interpretive approach to derive meaning from the collected data. The data from the interviews were transcribed verbatim, ensuring that the textual content accurately reflected the participants' responses (Miles & Huberman, 1994). We further engaged ourselves in the transcribed data, reading it thoroughly for comprehension and becoming acquainted with the content (Braun & Clarke, 2014). We identified common patterns, recurring ideas, and significant insights that emerged from the data. These patterns formed the basis for subsequent analysis. Again, codes were generated from the interviews, with similar pieces of text grouped under relevant themes (Miles & Huberman, 1994). This process allowed for the organization and categorization of data. By clustering text excerpts under themes, we achieved a

holistic understanding of the data, capturing the essence of participants' perspectives and experiences.

Data saturation was reached when no new themes or insights emerged from additional data, indicating that a comprehensive exploration of the topic had been achieved (Ando et al., 2014). The study findings were systematically compared with existing literature, enabling the development of new knowledge while grounding the findings in the current context-specific understanding (Wagner et al., 2014). We present the key informants in Table 14, which provides an overview of the individuals who participated in the study and contributed valuable insights to the research.

Table 14: Key Informants Profile

Interviewees	Job Position	Number of Years Worked	Gender	Age Range	Education
Patient 1	*Academic staff/ Head of Department*	*10*	*Male*	*45-49*	*Ph.D.*
Patient 2	*Academic staff/ Faculty Exams Officer*	*8*	*Male*	*35-39*	*Masters*
Patient 3	*Academic staff/ Exams Officer*	*9*	*Female*	*35-39*	*Masters*
Patient 4	*Academic staff/ Coordinator*	*10*	*Female*	*40-44*	*Masters*
Patient 5	*Academic staff/ Senior Lecturer*	*25*	*Male*	*60-64*	*Masters*
Patient 6	*Academic staff/ Head of Department*	*22*	*Male*	*55-59*	*Masters*
Patient 7	*Academic staff/ Lecturer*	*5*	*Female*	*30-34*	*Masters*
Patient 8	*Academic staff/ Lecturer*	*9*	*Male*	*40-44*	*Masters*
Patient 9	*Academic staff/ Senior Lecturer*	*14*	*Male*	*55-59*	*Masters*
Patient 10	*Academic staff/ Dean of Faculty*	*32*	*Male*	*55-59*	*PhD*
Patient 11	*Academic staff Senior Lecturer*	*8*	*Male*	*35-39*	*Masters*
Patient 12	*Academic staff/ Coordinator*	*5*	*Male*	*40-44*	*Masters*
Patient 13	*Academic staff/ Lecturer*	*4*	*Male*	*40-44*	*Masters*

Interviewees	Job Position	Number of Years Worked	Gender	Age Range	Education
Patient 14	*Academic staff/ Dean of Faculty*	*4*	*Male*	*45-49*	*Professor (Ph.D.)*
Patient 15	*Academic staff/ Coordinator*	*30*	*Male*	*50-54*	*Masters*
Patient 16	*Academic staff/ Senior Lecturer*	*7*	*Female*	*35-39*	*Masters*
Patient 17	*Academic staff/ Dean of Faculty*	*14*	*Male*	*45-49*	*Professor (Ph.D.)*
Patient 18	*Academic staff/ Coordinator*	*9*	*male*	*45-49*	*Masters*
Patient 19	*Academic staff/ Senior Lecturer*	*26*	*Male*	*60-64*	*Masters*
Patient 20	*Academic staff/ Exams Officer*	*10*	*Male*	*35-39*	*Masters*
Patient 21	*Academic Unit/ Head*	*13*	*Male*	*55-59*	*PhD*
Patient 22	*Estate Unit/* Senior Hall Assistant	*4*	*Male*	*35-39*	*Degree*
Patient 23	*Human Resource Unit/ Assistant Registrar*	*18*	*Female*	*45-49*	*Masters*
Patient 24	*Security Unit/* Senior Security Officer	*5*	*Male*	*30-34*	*Degree*
Patient 25	*Liaison Unit / Assistant Registrar*	21	*Male*	*45-49*	*Masters*
Patient 26	*Internal Audit Unit/* Ag. Head	19	*Male*	*40-44*	*Masters*
Patient 27	*Human Resource Unit/ Assistant Registrar*	17	*Male*	*45-49*	*Masters*
Patient 28	*Internal Audit Unit/*Junior Assistant Internal Auditor	8	*female*	*35-39*	*Masters*
Patient 29	*Finance Unit/ Ag, Head*	*29*	*Male*	*55-59*	*Masters*
Patient 30	*Academic Unit/* Coordinator, Exams Relations	*19*	*Male*	*50-54*	*Masters*
Patient 31	*Library/* Principal Assistant	*20*	*Male*	*35-39*	*Degree*
Patient 32	*Procurement Unit/Ag. Head*	*8*	*Male*	*35-39*	*Masters*
Patient 33	*University Relations/ Head*	*27*	*Male*	*50-54*	*Masters*
Patient 34	*Human Resource Unit/* Head	19	*Male*	*45-49*	*Masters*
Patient 35	*Budget Unit/* Head	*17*	*Male*	*40-44*	*Masters*

Interviewees	Job Position	Number of Years Worked	Gender	Age Range	Education
Patient 36	*Academic Unit/ Head, Admissions*	18	*Male*	*50-54*	*Masters*
Healthcare Provider 37	*Medical Officer*	*5*	*Male*	*35-39*	*Masters*
Healthcare Provider 38	*Principal Nursing Officer*	*10*	*Male*	*35-39*	*Diploma*
Healthcare Provider 39	*Senior Nursing Officer*	*9*	*Female*	*35-39*	*Masters*
Healthcare Provider 40	*Pharmacist*	*8*	*Female*	*35-39*	*Degree*
Healthcare Provider 41	Medical *Laboratory Technologist*	*9*	*Male*	*35-39*	*Masters*

5.3 Findings and Discussion

Throughout the trajectory of malaria treatment, healthcare processes demonstrate a recurring pattern of intermittent yet smooth journey for patients. The degree of patient engagement within the healthcare delivery process plays a pivotal role in shaping how patients perceive the unique attributes associated with this journey in co-creation. Both patients and healthcare providers ascribe the co-creation experiences to the dynamics of healthcare encounters. Within the scope of this study, our primary objective is to gain a comprehensive understanding of the concept of a perceived smooth journey, examining it from the perspectives of both patients and healthcare providers during the malaria treatment process. Our investigation aims to provide a holistic insight into the concept of a smooth journey within the context of value co-creation.

5.3.1 Interactive Smooth Journeys

The study delves into the multifaceted features of the smooth journey as perceived by both patients and healthcare providers during the malaria treatment process, encompassing various service encounters. These features include openness, relationships, comfortability of service encounters, satisfaction, and the accessibility of healthcare providers. Our data highlights the significance of these smooth journey features for both patients and healthcare providers in the context of value co-creation during the malaria treatment process. These perceptions of value co-creation experiences manifest themselves through interactions at different points within the malaria treatment journey.

This perspective is illustrated by direct quotations extracted from both patients and healthcare providers, demonstrating their impact on the healthcare delivery process. We present below selected excerpts carefully chosen from participants, serving as illustrative examples of their perceptions regarding a smooth journey in co-creation. We proceed to conduct an in-depth exploration of these distinct interactive smooth journeys to provide a an understanding of their dynamics and implications. The following issues emerged from the interactions:

Openness

Openness in the context of healthcare constitutes the friendliness and willingness to communicate openly between patients and healthcare providers. It reflects a shared common goal, where both parties understand that openness is instrumental in driving a smooth patient journey in co-creation. While patients and healthcare providers may perceive the patient journey differently in terms of service encounters, the presence of openness fosters a smooth journey characterized by friendly and collaborative interactions for the purpose of value co-creation (McColl-Kennedy et al., 2012; Vargo & Lusch, 2004). For instance, patients have revealed their experiences of openness in interactions with healthcare providers during the malaria treatment process. As exemplified by the statements made by patients:

> *"Healthcare providers are very open because they tell the patient the state of their illness"* ***[P 19]***
> *"Healthcare providers make sure patients understand what is going on in the malaria treatment process and open to us one-on-one" [**P 24]***
>
> *"The healthcare providers don't hide anything from the patients……they tell you what to do always to be fit and avoid malaria"* ***[P 2]***

A healthcare provider reiterated:

> *"Upon the patient's arrival at the facility, we tend to listen to the patient first, and then based on the form of complaints that the patient presents to the facility, we would then respond, or give the patient feedback to address those concerns that they brought. For example, if the patient is worried about whether he or she may be having malaria, we, first of all, have to take the patient through a means to assess his or her knowledge of what malaria means to him or her, and thereafter we fill in the gaps and let the patient know what we are going to do for him or her and the expected outcomes depending on the lab results…..Generally, we have very good and friendly encounters with the patients and we try to be as open as possible during the treatment process" [**HP 1]***

The quotations provided highlight openness as a friendly and positive interaction between patients and healthcare providers. In the context of healthcare delivery, this openness is oriented toward the overarching goal of patient well-being and healing (Berry & Bendapudi, 2007; Danaher & Gallan, 2016). This commitment to

patient well-being is particularly evident when healthcare providers welcome patients at the facility and guide them through the entirety of the malaria treatment process, encompassing the stages before, during, and after treatment (Zaltman & Zaltman, 2008). By doing so, healthcare providers enable patients to personalize their healthcare experiences and actively engage in value co-creation process (Neghina, et al., 2015; Prahalad & Ramaswamy, 2004). This approach underscores the importance of openness in fostering positive patient journeys and value co-creation in healthcare.

Relationship

The relationship between patients and healthcare providers during the malaria treatment process is characterized by a comprehensive understanding of patients' needs and the effective management of feedback. This involves the collection and profiling of patients' data, encompassing factors such as their place of residence, lifestyle, habits, and preferences, all of which are stored in a patient database. Healthcare providers' efforts to comprehend the unique characteristics of patients' lives form the foundation for building better relationships, and these relationships are pivotal for value co-creation (Agrawal & Rahman, 2015). In the context of healthcare services, the relationship between patients and healthcare providers plays a crucial role in supporting the creation of experiential value for patients (Ranjan & Read, 2016). As one patient expressed:

> *"Healthcare providers have every detail of information about patients and treatment is good* ***[P 20]***

As mentioned by a healthcare provider:

> *"Oh! A patient will come with clinical signs and symptoms of malaria, but he has other complaints which are more psychological, and we always have to rely on patients' data to give advice and treatment"* ***[HP 2]***
>
> *"As healthcare providers, we listen attentively to patients….We empathize with whatever problems patients presented to the clinic and listen attentively to them" [****HP 1]***

The perspectives shared in the above quotes underscore the critical importance of relationships for both patients and healthcare providers in the context of value co-creation within a healthcare setting. This understanding of the patient-provider relationship extends to the concept of smooth journey interaction, which represents a collective agreement between healthcare providers and patients regarding the malaria treatment process. This collaborative relationship serves as a motivation for and facilitator of collaborative engagement in the service experience, particularly in terms of understanding patients' lifestyles, habits, and preferences.

These insights highlight the profound impact of relationships on the quality of patient life, health condition, happiness, and other factors deemed valuable by the actors involved, which are key indicators of value co-creation (McColl-Kennedy et al., 2012). The concept of relationships aligns with the social exchange theory (Anderson et al., 2011), where service entities (e.g., doctors, nurses, pharmacists) and customer entities (e.g., individuals/patients, collectives, social networks, or communities) focus on well-being outcomes, including healthcare delivery outcomes (Anderson et al., 2013). This perspective supports the idea of reciprocal service provision, where value is co-created through the integration of resources by the actors involved (Vargo & Lusch, 2004).

Comfortability of service encounters

Comfortable service encounters within the healthcare context encompass the creation of a supportive atmosphere during healthcare interactions, which fosters patient well-being. Positive word-of-mouth communication during the malaria treatment process is integral, ensuring that patients can easily and comfortably access and utilize the resources provided by healthcare providers, thus facilitating a smooth journey. This underscores the idea that a patient's experience is not solely determined by the professionalism of healthcare providers but is also influenced by the comfort and ease of the encounter within the smooth journey process. Effective word-of-mouth communication plays a pivotal role in establishing these comfortable service encounters and, in turn, contributes to the value co-creation process during the malaria treatment journey (Falter & Hadwich, 2020). It is

essential to recognize that each patient and healthcare provider's assessment of these encounters is shaped by their unique experiences, highlighting the personalized nature of these interactions, as articulated by patients:

> *"Healthcare providers treat patients as Kings when interacting with them. This makes you feel safe and comfortable, and you know that they are going to be of help in the malaria treatment process"* [**P 21]**

> *"You feel very comfortable because healthcare providers smile when you interact with them in the malaria treatment journey "**[P 25]***

As expressed by a healthcare provider:

> *"Ok! Every patient wants good health care service, and an environment where they will be accepted and respected, get professionals who talk nicely to them, encourage them, and advise them to feel at home" **[HP 4]***

This finding underscores the significance of a smooth journey in enhancing patients' lives through improved encounters with healthcare providers, resulting in predictability and building loyalty over time (Siebert et al., 2020). Furthermore, the findings suggest that healthcare encounters offer patients a range of choices, create opportunities, alleviate suffering, and contribute to patient happiness (Osei-Frimpong, 2016; Fisk et al., 2018). This highlights the high level of involvement in healthcare delivery, driven by the characteristics of healthcare services being high-contact, customized, and high in credence (Bitner, Ostrom, & Morgan, 2008). This finding underscores the significance of a smooth journey in enhancing patients' lives through improved encounters with healthcare providers, resulting in predictability and building loyalty over time (Siebert et al., 2020).

Satisfaction

The satisfaction of both patients and healthcare providers can be attributed to the high level of professionalism exhibited throughout the malaria treatment process. This professionalism is evident in healthcare education related to medication use and the diagnosis process. Consequently, healthcare providers derive a sense of satisfaction from patients who promptly seek medical attention at the facility when they contract malaria, leading to smooth journey encounters in the co-creation participation process (McColl-Kennedy et al., 2012). Actors' well-being increases when they benefit from co-creating services (Grönroos & Voima, 2013).

As reported by patients:

> *"The healthcare providers ask the right question, and I am satisfied with the level of professionalism in the service encounter"* ***[P 21]***
> *"I like healthcare providers' timely intervention and welcoming attitude and professionalism…… it is unique, and you are always satisfied at the end of the treatment"* ***[P 10]***

A healthcare provider expressed:

> *"In case patients have any medical situation, even if it's not malaria, they always wish to come to the clinic because of the quality service rendered by the healthcare providers"* ***[HP 4]***

> *"Because of how healthcare providers handle patients' health issues, they always recommend to their friends to come to our facility……. This is an indication that patients get satisfaction from the encounter in their malaria treatment"* ***[HP 5]***

In alignment with Vargo and Lusch's (2017) study, the collaborative interactions that occur during any service encounter serve as a source of value for the various actors involved in the interaction process. This value is manifested in patients' satisfaction, which is influenced by treatment knowledge and outcomes (Caridà et al., 2019; Echeverri & Skålén, 2021). Therefore, maintaining a high level of professionalism is key to ensuring a smooth journey and providing evidence that encounters between service providers and patients can improve patients' lives by

offering predictable experiences that foster patient loyalty over time (Siebert et al., 2020). It is important to note that the satisfaction experience extends from the initial patient journey interaction with the service organization to the period after service consumption (Lemon & Verhoef, 2016). This finding highlights the importance of delivering smooth journey practices within an environment that upholds human dignity and happiness (Ranjan & Read, 2016), ultimately leading to the formation of interactive value for co-creation (Caridà et al., 2019; Echeverri & Skålén, 2021).

Access to healthcare providers

Access to healthcare providers plays a significant role in facilitating a smooth journey within the healthcare system. This involves ensuring that patients have easy access to healthcare providers to meet their health needs, ultimately leading to value co-creation (Verleye, 2015; Vargo & Lusch, 2004). As reported by patients at the university clinic:

> *"I must confess that it is very easy to have access to healthcare providers when you walk to the clinic for treatment"* ***[P 17]***

> *"It is easy to get access to healthcare providers whenever you walk into the facility as a staff of the university"* ***[P 16]***

Another perspective on this matter was provided by a healthcare provider, as follows:

> *"We assure the patient that we are always available to attend to their health needs and then their complaints should they have any and that our doors are always open to them. They are at liberty to walk in and report, should the condition, not improve or should things turn to get worse"* ***[HP 1]***

The findings emphasize that patients derive significant value from their encounters with healthcare providers when they have easy access to them throughout the healthcare delivery process. This is particularly crucial given the dynamic and complex nature of healthcare treatments (Berry & Bendapudi, 2007). McColl-

Kennedy et al. (2012) highlight the growing interest in patient participation in healthcare delivery for value co-creation within healthcare service literature. This evidence underscores the role of value co-creation in facilitating the integration of resources in dynamic interactions that contribute to people's well-being within the service environment (Beirão et al., 2017; Grönroos & Voima, 2013), ultimately leading to the establishment of smooth journey processes for value co-creation (Dube & Helkkula, 2014; Elg et al., 2012). Based on the findings, it is imperative for the healthcare providers to ensure that patients have fair access to services, receive equitable treatment during service encounters, and are provided with a fair opportunity to exit the service after interacting with healthcare providers (Fisk et al., 2018). This ensures a smooth healthcare journey for patients as they engage with healthcare providers before, during, and after the malaria treatment process, ultimately enhancing value co-creation experiences. Table 15 summarizes the features of intermittent smooth journeys in a healthcare setting.

Table 15: Features of Intermittent Smooth Journeys in a Healthcare Setting

Features	Quotes from Key Informants
Openness	*Healthcare providers are very open because they tell the patient the state of their illness* ***[P 19]***
	The healthcare providers don't hide anything from the patients……they tell you what to do always to be fit and avoid malaria ***[P 2]***
	*Healthcare providers make sure patients understand what is going on in the malaria treatment process and open to us one-on-one [****P 24]***
	Healthcare providers are easy to approach ***[P 25]***
	Healthcare providers give you access to all information concerning our health status ***[P 14]***
	Oh! The treatment was friendly even though I wasn't feeling well, and the reception was good ***[P 8]***
	As patients, we appreciate how healthcare providers receive us because when one is sick, the person goes through challenges, and they don't make the frustration more unbearable for the patients ***[P 9]***
	*Yeah! usually, we have very good and friendly interactions right from the point of care at the outpatient department throughout the treatment process [****P 1]***

Features	Quotes from Key Informants
	*Upon the patient's arrival at the facility, we tend to listen to the patient first, and then based on the form of complaints that the patient presents to the facility, we would then respond, or give the patient feedback to address those concerns that they brought. For example, if the patient is worried about whether he or she may be having malaria, we, first of all, have to take the patient through a means to assess his or her knowledge of what malaria means to him or her, and thereafter we fill in the gaps and let the patient know what we are going to do for him or her and the expected outcomes depending on the lab results…..Generally, we have very good and friendly encounters with the patients and we try to be as open as possible during the treatment process [**HP 1]* *We educate them about how malaria comes about, and we advise them to ensure a healthy environment [**HP 2]*** *For a professional to feel good then you must know that whatever discussion you are having with the patient, the patient is giving you a listening ear and the patient should appreciate your service. Because there is collaboration, we always feel good interacting with the patient [**P 4]*** *Patients are cooperating because of the friendship we have with them….. At the end of the day, we all want to achieve the goal of the patients being in sound health condition **[UHP 3]***
Relationship	*Healthcare providers have every detail of information about patients and treatment is good **[P 20]*** *Oh! It is always fruitful, and supportive encounters with the healthcare provider…. We get feedback responses when we report back to the facility on any medical complications **[P 5]*** *Oh! A patient will come with clinical signs and symptoms of malaria, but he has other complaints which are more psychological, and we always have to rely on patients' data to give advice and treatment [**HP 2]*** *There is a reciprocal type of relationship between us and the patients through feedback [**HP 5]*** *As healthcare providers, we listen attentively to patients….We empathize with whatever problems patients presented to the clinic and listen attentively to them [**HP 1]***
Comfortability of service encounters	*Healthcare providers treat patients as Kings when interacting with them. This makes you feel safe and comfortable, and you know that they are going to be of help in the malaria treatment process* [**P 21]** *You feel very comfortable because healthcare providers smile when you interact with them in the malaria treatment journey **[P 25]*** *You feel comfortable going to the premises for malaria treatment because healthcare providers are ever ready to receive you **[P 3]*** *I feel comfortable going to the clinic because the providers are supportive of the treatment of malaria illness [**P 4]***

Features	Quotes from Key Informants
	They infuse me with a sense of humor which is good for a patient suffering from malaria, and I feel comfortable in the engagement process ***[P 22]***
	I feel relaxed because healthcare providers treat patients with respect to malaria treatment ***[P 16]***
	*Yeah! patients want us to be enduring and communicate well by giving any information and opinion concerning the health challenges they are going through. When patients ask questions, we the healthcare providers explain to them the reason why they are in that health situation [****HP 3]***
	Ok! Every patient wants good health care service, and an environment where they will be accepted and respected, get professionals who talk nicely to them, encourage them, and advise them to feel at home ***[HP 4]***
	Most of our interactions with the patient are face-to-face and per the culture we find ourselves……. most patients find it very convenient to use that mode of approach…. they feel confident that their concerns will be well addressed when they present themselves physically and interact directly with the healthcare workers ***[HP 1]***
Satisfaction	
	The healthcare providers ask the right questions, and I am satisfied with the level of professionalism in the service encounter ***[P 21]***
	So far, the healthcare providers as compared to other healthcare providers have shown excellent skills in their service delivery ***[P 11]***
	The healthcare providers are very effective in their job, and I am satisfied with the service delivery. ***[P 18]***
	I like their timely intervention and welcoming attitude and professionalism…… it is unique, and you are always satisfied at the end of the treatment ***[P 10]***
	Ok! I will say they have a high sense of professionalism in the discharge of their duties, and this makes me satisfied with their treatment process ***[P 22]***
	In case patients have any medical situation, even if it's not malaria, they always wish to come to the clinic because of the quality service rendered by the healthcare providers ***[HP 4]***
	We have good encounters with patients because we the healthcare workers are polite and ever ready to respond to the patients' needs fulfillment ***[HP 1]***
	We feel happy when we get feedback from patients that they are satisfied with our service delivery ***[HP 2]***
	Because of how healthcare providers handle patients' health issues, they always recommend to their friends to come to our facility……. This is an indication that patients get satisfaction from the encounter in their malaria treatment ***[HP 5]***

Features	Quotes from Key Informants
Access to healthcare providers	*I must confess that it is very easy to have access to healthcare providers when you walk to the clinic for treatment* ***[P 17]***
	It is easy to get access to healthcare providers whenever you walk into the facility as a staff of the university ***[P 16]***
	The process to get to the clinic to get access to healthcare providers is easy because you can walk in ***[P 12]***
	It is easy to get access to healthcare providers whenever you walk into the facility as a staff with your healthcare card ***[P 6]***
	You can walk in, and you will have access to the healthcare providers for your malaria treatment ***[P 13]***
	You can walk to the clinic from your office and get access to the service providers ***[P 18]***
	We assure the patient that we are always available to attend to their health needs and then their complaints should they have any and that our doors are always open to them. They are at liberty to walk in and report, should the condition, not improve or should things turn to get worse ***[HP 1]***
	For instance, any patient can walk-in, to access healthcare delivery at any time during our service provision hours ***[HP 3]***
	Members of staff can walk into the emergency and get treated ***[HP 2]***

Note: [P]-Patient, [HP]-Healthcare Provider

5.3.2 Visual Representation of the Cycle of Intermittent Smooth Journey

Figure 7 provides a visual representation delineating the essential aspects of an intermittent smooth journey within the healthcare domain. These features capture pivotal elements that actively contribute to the collaborative process of value co-creation between patients and healthcare providers. This visual depiction highlights the significance of openness as a mechanism for nurturing collaborative and friendly interactions. It further underscores the critical role of establishing robust relationships that encompass an empathetic understanding of patients' diverse needs and lifestyles. Additionally, it highlights the function of comfortable service encounters, which are facilitated through effective word-of-mouth communication. Furthermore, the diagram portrays the substantial impact of patient satisfaction and the accessibility of healthcare providers on shaping the holistic patient experience. This visual representation serves as a reminder of the multifaceted nature of value co-creation dynamics inherent to the healthcare setting.

Figure 7: Visual Cycle of Intermittent Smooth Journey

5.4 Conclusion

The dynamic and complex nature of healthcare treatments highlights the pivotal role of the patient journey in facilitating value co-creation. Patient experience and learning models are enriched through interactions between patients and healthcare providers, which are essential components of the value co-creation process. This collaborative effort results in personalized experiences and the collective creation of value. Recognizing the significance of the patient journey and promoting collaboration between patients and healthcare providers can lead to improved healthcare outcomes and patient satisfaction.

This study contributes to our understanding of value co-creation by exploring the perspectives of both patients and healthcare providers in the context of healthcare's intermittent smooth journey encounters, particularly in the context of malaria treatment. The research delves into the multifaceted aspects of a smooth journey in co-creation within the healthcare domain, specifically focusing on how patients and healthcare providers perceive their experiences during the malaria treatment process. Furthermore, the study highlights the dynamic changes occurring within healthcare services and how these changes are transforming the roles of patients and healthcare providers, carrying implications for both service providers and patients.

The study's design allowed for an exploration of the concept of an intermittent smooth journey within the healthcare context, particularly as a functional service that facilitates co-creation. It focused on understanding the dynamics of an intermittent smooth journey which is an often-overlooked area in the scope of healthcare value co-creation. The study revealed that, due to the nature of the malaria treatment process, there is a pattern of intermittent smooth journeys, where patients visit the clinic whenever they experience clinical signs and symptoms. This treatment process reoccurs intermittently in a cyclical nature when the patient experiences malaria symptoms after the initial treatment and reports to the healthcare facility. , patients receive a one-time medication that aligns with the clinical signs and symptoms confirmed by laboratory tests. This finding supports

the theoretical argument that the healthcare journey is sometimes characterized by intermittencies in healthcare delivery.

The study contributes to features that enhances patient healthcare experiences. These features include openness, relationship-building, comfort in service encounters, satisfaction, and the accessibility of healthcare providers. Openness is a fundamental mechanism that establishes meaningful relationships between patients and healthcare providers. It forms the foundation for effective communication and cooperation, contributing significantly to patient satisfaction. Building strong relationships between patients and healthcare providers is essential for co-creating value in healthcare. Understanding patients' needs, preferences, and lifestyles helps foster these relationships, leading to improved patient experiences. Comfortable service encounters result from effective communication and understanding between patients and healthcare providers. These encounters ease the process of accessing healthcare services and contribute to a smoother healthcare journey. High levels of professionalism, including healthcare education and diagnosis processes, lead to patient satisfaction. This satisfaction is crucial for building trust and loyalty between patients and healthcare providers. Easy access to healthcare providers is a major factor in creating a smooth healthcare journey. Providing patients with fair access to services, fair treatment during encounters, and the opportunity to exit services when needed are essential for a positive healthcare experience. Finally, features collectively contribute to a smooth healthcare journey and enhance value co-creation in the healthcare context. Effective communication, strong relationships, and patient satisfaction are central to achieving this goal.

The study highlights the collaborative nature of healthcare services, emphasizing that it is not a unilateral act but a shared responsibility between patients and healthcare providers. Both parties actively contribute to achieving a smooth healthcare journey and co-creating value. This co-actor approach underscores the importance of shared efforts in delivering successful and meaningful healthcare experiences.

Furthermore, the study's unique perspective delves into how patients draw inspiration from their life experiences to improve their healthcare journey and transition toward a new way of living. This aspect adds valuable insights to the existing body of research and underscores the importance of considering the holistic experiences and backgrounds of patients in healthcare delivery.

The study further underscores the influential role that healthcare providers and firms play in shaping the patient/client journey. This influence is particularly evident in the context of malaria treatment, where the integration of resources between patients and healthcare providers is key. This integration involves patients bringing their operational resources, such as knowledge and skills, together with the operational resources of healthcare providers, including medications, facilities, touchpoints, and interactions. Through this collaborative process, both parties create mutual benefits, leading to a learning curve and the co-creation of value throughout the entire healthcare journey. This highlights the importance of healthcare providers in facilitating and enriching the patient's experience.

The study's significance lies in the exploration of the intricate interactions within the broader context of the healthcare delivery journey, moving beyond the traditional focus on doctor-patient interactions. By including various stakeholders such as doctors, nurses, pharmacists, and lab technologists, the research provides a more comprehensive understanding of the complexity of healthcare systems. This expansion of the value co-creation framework to include the perspectives of both patients and healthcare providers offers valuable insights into the multifaceted interactions that shape the dynamic between patients and healthcare providers. It underscores the collaborative nature of healthcare delivery and the importance of considering the roles and experiences of all participants involved.

Finally, the study's contribution to the field of service marketing and healthcare service delivery is noteworthy. By exploring the concept of intermittent smooth journey in healthcare, the research provides insights that can guide healthcare service providers in improving their strategies for co-creating value within patients' journeys. Understanding the nuances of a smooth journey allows for the

enhancement of healthcare service experiences, ultimately benefiting the patients who are the primary recipients of these services. This study serves as a valuable resource for healthcare professionals and researchers seeking to optimize the delivery of healthcare services and improve patient outcomes.

5.5 Managerial and Practical Implications

This study bears significant managerial and practical implications, offering invaluable insights that healthcare managers can strategically utilize to elevate service delivery standards and enhance patient experiences through co-creation.

The findings underscore the pivotal role of effective collaboration between patients and healthcare providers in shaping a smooth journey and fostering value co-creation. To consistently improve patient outcomes, healthcare managers can initiate health education initiatives that actively involve both patients and healthcare providers. Such collaborative endeavors may encompass participatory activities like laboratory tests, blood pressure examinations, and medication dispensing, ultimately strengthening patient-provider relationships and enhancing the overall healthcare delivery process.

Additionally, healthcare managers should place a premium on personalized service, recognizing that patients seek to feel valued and understood, particularly during times of illness. This necessitates a comprehensive monitoring of the entire patient journey, encompassing interactions between patients and healthcare providers, with an acute focus on patient feedback mechanisms, staff training in empathy and understanding, customized treatment plans, and involving patients in decisions related to their care.

The concept of a smooth journey is crucial for efficient service delivery, especially in healthcare. Healthcare managers can recognize the significance of the key features contributing to a smooth journey, such as openness, relationship-building, comfort in service encounters, satisfaction, and accessibility of healthcare providers. By fostering openness, healthcare providers can create a transparent and

friendly environment, promoting long-term relationships with patients. These relationships can lead to enhanced patient experiences, increased patient satisfaction, and stronger connections between patients and healthcare providers. Overall, these principles can help improve the quality, growth, and sustainability of healthcare interactions, benefiting both patients and providers.

Again, a critical factor for healthcare managers striving to enhance patient experiences is individualized service. Patients seek to feel valued by their healthcare providers, particularly when facing illness, as this vulnerability often triggers a desire for empathy and a sense of belonging. In this light, healthcare managers must diligently monitor the entire patient journey throughout all stages of malaria treatment interactions between patients and healthcare providers and gain a comprehensive understanding of patient's needs and desires such as feedback mechanisms, training healthcare staff to approach patients with empathy and understanding, customized treatment plans and involving patients in decisions about their treatment and care. These efforts can contribute to improved patient experiences and overall satisfaction with healthcare services.

Finally, leveraging technology effectively is indeed a crucial step for achieving a smooth journey in healthcare. Healthcare managers can integrate user-friendly digital platforms and tools that streamline various aspects of the patient's journey, from appointment scheduling to accessing medical information. Patient portals, for example, can empower individuals to stay informed about their health by providing secure access to their medical records, test results, and medication reminders. This not only enhances convenience but also facilitates better communication between patients and healthcare providers, ultimately contributing to a smoother and more satisfying healthcare experience.

5.6 Limitations and Future Research

The limitations of your research have been noted, and it's indeed essential to acknowledge them in any study. The focus on a single university clinic and the examination of patient-healthcare provider interactions within that specific context is a valid starting point for understanding the concept of a smooth journey in healthcare. However, expanding the scope to include a broader spectrum of participants, such as family members, university students, and the general public, would provide a more comprehensive and nuanced perspective on the smooth journey concept in healthcare. This could lead to more robust and generalizable findings and further contribute to the understanding of value co-creation in healthcare settings.

Moreover, while our study delved into the malaria treatment context, which primarily involves acute illnesses and limited long-term interactions, it would be valuable to investigate smooth journey factors within the context of chronic diseases such as diabetes. Chronic diseases often entail prolonged and ongoing engagements between patients and healthcare providers, which may result in distinct dynamics and implications for value co-creation. Therefore, future research endeavors should consider exploring these factors in the context of chronic diseases, allowing for a more comprehensive understanding of the dynamics at play within the concept of a smooth journey in healthcare delivery.

Additionally, we acknowledge the potential contextual variations in the dynamics of smooth journeys and their influence on value co-creation is an important consideration. The factors we have identified as integral components of the smooth journey may have different implications and significance in various contexts and healthcare settings. Future research could contribute to the development of more tailored and effective strategies for enhancing the patient experience and co-creating value in healthcare, considering the specific needs and dynamics of each context.

Exploring the factors contributing to a smooth journey, such as openness, relationship-building, and satisfaction, in the context of chronic diseases like diabetes would provide valuable insights. Future research could help identify specific challenges and opportunities related to long-term patient-provider interactions and how these factors influence value co-creation over an extended period. This research could inform the development of tailored strategies for improving the management of chronic conditions and enhancing the overall patient experience in these contexts.

Again, expanding the scope of research to encompass diverse healthcare settings in Ghana, such as private clinics and hospitals, is an excellent idea. Different healthcare settings may have unique dynamics, resources, and patient populations, which can influence the smooth journey interactions between patients and healthcare providers. Comparative research across various healthcare contexts can provide valuable insights into the factors that contribute to a smooth journey and value co-creation, helping healthcare managers tailor their strategies accordingly. Further, Exploring the application of smooth journeys in the context of fast-moving consumer goods (FMCG) is also a promising avenue. While much of the literature on smooth journeys has focused on services, the concept can be relevant to product contexts as well. FMCG companies could benefit from understanding how to create smooth journeys for consumers when purchasing and using their products. This research could shed light on the role of product design, packaging, branding, and customer support in enhancing the overall consumer experience.

Lastly, incorporating a quantitative approach in future research endeavors can offer a complementary perspective to the qualitative insights gained in this study. By involving a broader range of stakeholders, including families, friends, students, and others, researchers can collect quantitative data that allow for statistical analysis and quantification of various factors related to the smooth journey concept. This approach can help validate and quantify the impact of openness, relationship-building, comfort in service encounters, satisfaction, and healthcare provider accessibility on value co-creation and overall experiences.

Chapter Six

Conclusion and Research Contributions

6. Introduction

Healthcare activities in co-creation, such as role and interaction, suggest the engaging moment for patient value co-creation operationalization in healthcare service research (Dube & Helkkula, 2014; McColl-Kennedy, Snyder, et al., 2017). Our study differs from previous studies in healthcare co-creation in that we captured patients' views in encounters with healthcare providers beyond doctor-patient encounters. In this thesis, we focused on healthcare as one of the processes in service organizations that involve high-contact encounters between patients and healthcare providers (Berry et al., 2002; Lim et al., 2019; Wilder et al., 2014). Based on that, we explored the patients' experience encounters with multiple healthcare providers in the value co-creation process.

Following a qualitative research design approach, we conducted three empirical studies based on the three research questions for this thesis. An interview guide as a research tool was used to carry out face-to-face interviews in all three studies.

In our first study, we investigated patients' perspectives of value in use in healthcare encounters in Ghana. In the second study, we explore patients' experiences of the contextual elements for value co-creation in healthcare. Our third study describes the smooth journey in healthcare co-creation. The results of our qualitative studies revealed some critical and significant aspects of value co-creation in a healthcare setting from an African perspective.

The chapter summarizes the conclusions drawn from the main three studies, covering all three research questions. In addition, this chapter discusses and provides some theoretical, managerial, and practical implications, limitations, and suggestions for future research.

6.1. Main Conclusions

The study addressed customer experience in a healthcare co-creation setting: Insights from providers and patients in Ghana. In Chapter 1, we proposed three different research questions for three distinct studies. Conclusions were drawn from the studies.

6.1.1. Research Question #1: How does value emerge in the co-creation experience in healthcare from the perspectives of patients*?*

The focus of this study is on patients' perspectives of value in use in healthcare encounters. We, therefore, addressed value and perceptions of value from the patient's perspective in the malaria treatment process and a better understanding of such a process contributes to the delivery of patient-centered healthcare. We found that the level of patient involvement in the healthcare delivery process determines the value in use from the patient encounters with healthcare providers. The findings of the study revealed three themes that emerged from the literature and the data: Theme 1 developed as "patient value in use in co-creation", theme 2 emerged as "services that enhance patients'' experience in value co-creation" and theme 3 reports on "challenges in the co-creation". Moreover, our data analysis revealed that value is important to patients in their encounters with healthcare professionals when they integrate resources in the value co-creation during the malaria treatment process. Therefore, the multidimensionality and dynamic nature of value created emerged from patients' experiences in dealing with multifaceted healthcare providers at different points in the malaria treatment process.

6.1.2. Research Question #2: How do contextual elements emerge in the patient encounter process for co-creation in healthcare?

The purpose of this study is to identify patients' perceptions of the healthcare contextual elements in the co-creation process during the malaria treatment process. It is a well-established fact that patients use process elements and physical indications to evaluate their experiences (Lovelock et al., 2006) in the healthcare environment (Kim, 2019). Therefore, the second study develops and broadens the elements that facilitate patients' experience for value co-creation in healthcare surroundings. Moreover, this contextual element contributes to the patient's value co-creation process. Our study identified the following dimensions: (i) "physical space" (ii) "digital communication" and (iii) location and access to the facility as the contextual element that facilitates patients' value cocreation process. Our result shows that physical space and digital communication (i.e., WhatsApp) facilitate patients' experience for value co-creation. We found that the healthcare contextual elements influence and build relationships and value perceptions between patients and healthcare professionals (McDermott et al., 2017; Sreejesh et al., 2022). We also found that judging from the healthcare contextual elements signals, the patients may attribute conducive healthcare surroundings to good healthcare treatment, and poor healthcare surroundings as distracts of patient experience for value co-creation (Fottler et al., 2000; Colley et al., 2020). Consequently, healthcare professionals internal and external contextual dimensions such as neatness, brightness, and decoration to shape patient experience and improve their lives during the malaria treatment process (Berry & Bendapudi, 2007) for patients' self-efficacy in the value co-creation process (Im & Qu, 2017).

6.1.3. Research question #3: How is co-creation embedded in the patients' smooth journey experience in healthcare?

The purpose of the study is to understand how value co-creation emerges in the smooth journey in the context of a healthcare setting. Patients undertake many journeys coupled with consumption experiences. The journey involves a complex and different touchpoint in which interaction becomes the pivot between patients and healthcare providers (Barwitz & Maas, 2018; Chheda et al., 2019; Leeflang et al., 2014). Thus, patients' journey in making an appointment, going to the medical officer, taking laboratory examinations, etc., helps the patients to understand past, present, and future healthcare encounters (Zaltman & Zaltman, 2008). Finally, the third study uncovers how a smooth journey co-creates value within the context of Africa. The findings revealed that the patient's malaria treatment process is associated with a smooth intermittent journey. Again, the study identified five features that facilitate a smooth journey in healthcare value co-creation: openness, relationship, comfortability of service encounters, satisfaction, and accessibility of healthcare providers.

6.2 Theoretical, Managerial, and Practical Implications

At the conclusion stage of each empirical study, we shed light on the theoretical, Managerial, and Practical contributions provided by the three studies.

6.2.1 Theoretical implications

This study makes a contribution to the scholarly comprehension of value co-creation by undertaking a comprehensive analysis of the pivotal roles played by patients in healthcare encounters, with a specific focus on the distinctive context of malaria treatment. The research delves into the dynamic development of healthcare services and the transformations in the responsibilities and engagement of patients within the healthcare domain. Furthermore, this investigation offers an intricate exploration of the multifarious dimensions inherent in the phenomenon of value co-creation within the scope of healthcare. With a particular emphasis on the patient's active engagement and perspectives concerning their experiences throughout the malaria treatment process, this study aptly captured the patients' experience within healthcare services. This has significant implications for both healthcare service providers and the patients themselves. This crucial aspect of our study underscores the paramount significance of adopting an iterative approach to healthcare delivery, characterized by the integration of patient input. Such an approach enables the customization of healthcare services and facilitates the value derived from interactions between patients and healthcare providers.

The essence of healthcare delivery manifests through the various spheres within a zone of resource integration, encompassing facets such as medication, communication, interaction, dialogue, and diagnostic processes. The inquiry conducted brings to light the multifaceted characteristics of patient-healthcare provider encounters within the co-creation context. This highlights the fundamental importance of incorporating patients' resources, including their knowledge, skills, and motivations, into the healthcare delivery pattern. The findings of this study underscore the manifold expressions of patient value in use, from personalized treatment to health promotion initiatives. However, the study emphasizes the potential outcomes of unattended facets of patient value, which cause

dissatisfaction among patients. Furthermore, the study underscores the significance of the temporal dimension within the context of co-creation, notably in areas such as waiting times and follow-up procedures. This calls for implementing service improvements to enhance and enrich the overall patient experience.

One, through the perspective of patient value, the first study highlights three dimensions that facilitate the domain of co-creation. First, the description of "patient value in use" encompasses an array of constituents, comprising communication and interactions (dialogue), information sharing, and access to information, treatment (risk and personalization), and the promotion of well-being. These dimensions collectively play a pivotal role in shaping the patient's experience throughout the healthcare delivery process. Our study, in this context, extends the boundaries of the concept of value in use by enlightening the synergistic interplay between personalized treatment and the comprehensive well-being of patients. Hence, the co-creation experience, distinguished by its customized and individualized interactions, emerges as a potent trigger that fosters and enhances patients' health outcomes, as discerned through their overall well-being, within the scope of the malaria treatment process. Consequently, in the distinctive requirements of each patient, our research makes a significant contribution to refining the parameters of value co-creation, thus transforming it into a mechanism for fostering customized healthcare experiences that prioritize both individualized treatment and the extension of patient well-being.

Two, the second study makes contributions within the context of three pivotal elements, namely, the physical space, encompassing both interior and exterior aesthetics; digital communication channels, serving as the conduit for message reception and appointment booking; and the physical facility, encompassing considerations of universal accessibility, location, and facility design attributes. These elements collectively function as mechanisms that facilitate healthcare delivery, forging emotional connections and active engagement with patients, thereby fostering the co-creation of value. Additionally, the study contributes to and facilitates an understanding of how the combination of these elements can bring satisfaction to the patient. Emphasizing the synergistic integration of all three

elements amplifies the patient's experience, surpassing their expectations. This engenders a remarkable experience rooted in the discernment of patients' needs, desires, and emotional states, all of which hold paramount importance in influencing patients' overall health outcomes.

Three, the third study's contribution focuses on the notion of a smooth healthcare journey and discerns various pivotal features that collaboratively contribute to the enrichment of the holistic healthcare experience. These features include openness, relationship-building, comfort in service encounters, satisfaction, and the accessibility of healthcare providers. Openness serves as a foundational mechanism for fostering meaningful relationships between patients and healthcare providers. The establishment of robust relationships between patients and healthcare providers stands as an essential prerequisite for the co-creation of value in healthcare. Comfortable service encounters emerge from effective communication and mutual understanding between patients and healthcare providers. Superior levels of professionalism, encompassing healthcare education and diagnostic processes, are instrumental in fostering patient satisfaction. Therefore, satisfaction concerns cultivating trust and fostering loyalty between patients and healthcare providers. This can be accomplished by ensuring healthcare providers are easily accessible, thereby facilitating a smooth healthcare journey.

Ensuring patients have equitable access to services, fair treatment during encounters, and the ability to discontinue services when necessary are all essential features for fostering a favourable healthcare experience. These features collectively contribute to a streamlined healthcare journey and enhance the co-creation of value within the healthcare context.

Four, this study makes a notable contribution to understanding the notion of a smooth journey within the healthcare encounter process, particularly in scenarios characterized by smooth phases. For instance, in the case of malaria treatment, patients initially present at the clinic with symptoms suggestive of malaria, undergo testing for the malaria parasite, and upon confirmation, are provided with a three-day medication regimen. This observation lends support to the theoretical

argument that the healthcare journey can exhibit phases within healthcare delivery, accentuating its relevance to the value co-creation process.

Five, the study makes a contribution by extending the scope of value co-creation to encompass the concept of a smooth journey in the experiences of both patients and healthcare providers. While prior research has established a connection between the 'doctor-patient interaction' in value co-creation, this study delves deeper into the patient-doctor interaction within the broader context of healthcare delivery. Recognizing that numerous stakeholders are involved in the healthcare delivery process, each with their own interests and concerns, the study acknowledges the dynamic and complex nature of the healthcare system. It underscores the importance of comprehending this complexity beyond the confines of doctor-patient encounters and engaging with multiple actors such as patients and various healthcare providers, including doctors, nurses, pharmacists, and lab technologists, among others.

Six, the study significantly augments our knowledge and comprehension of the value co-creation process within the healthcare context, particularly on an aspect of patient-centered improvement. It underscores the shift away from perceiving patients as passive recipients of healthcare services to recognizing them as active participants responsible for their health situation. The study emphasizes that the input, views, and experiences of patients play a pivotal role in the enhancement of their health conditions during the healthcare encounter process.

Seven, the study provides a valuable contribution by delving into the patient's healthcare encounter experiences across multiple touchpoints. The frequency and diversity of these touchpoints with a healthcare service provider have a profound influence on the timing of receiving, diagnosing, and treating patients, and the accumulation of patient experience throughout the healthcare journey. As such, distinct touchpoints, including the treatment process, interactions with personnel, the facility itself, the outpatient unit, the nursing station, consultations with doctors, laboratory tests, and visits to the pharmacy for medication, among others, substantially shape the design characteristics of the patient's overall journey and

form the core of their healthcare experiences. Additionally, the study's contribution accentuates the critical role of waiting areas as pivotal touchpoints in shaping the overall patient experience. The creation of welcoming and comfortable waiting spaces serves to mitigate patient stress and anxiety significantly. By offering educational materials, employing clear signage, and providing comfortable seating, healthcare facilities can cultivate an environment that promotes a sense of security and tranquility among patients. This conducive atmosphere boosts patient engagement, facilitates communication, and encourages active participation in discussions concerning their care decision.

Eight, the study underscores the significant role between healthcare providers and patients in shaping the journey of co-creation and the resultant healthcare experiences. This becomes particularly pronounced in the context of malaria treatment, where the harmonization of resources between patients and healthcare providers assumes paramount importance. This integration encompasses patients contributing their operational resources, such as knowledge and skills, in conjunction with the operational resources provided by healthcare entities, which encompass medications, facilities, touchpoints, and interpersonal interactions. Through this collaborative and synergistic process, both parties derive mutual benefits, fostering a learning curve and facilitating the co-creation of value throughout the entirety of the healthcare journey. This underscores the vital role of healthcare providers in facilitating and enriching the overall patient experience.

Nine, the study contributes to the role of WhatsApp as a pivotal digital communication channel for both patients and healthcare providers. This underscores its progressive impact on patient experiences, particularly in terms of facilitating information sharing and nurturing the support necessary for patient-provider relationships. This contribution is instrumental in advancing efforts related to value co-creation in healthcare. The acknowledged advantages arise from the recognition of WhatsApp's potential and the strategic leveraging of its capabilities to enhance healthcare delivery, ultimately fostering heightened patient engagement and active participation.

Finally, most studies focusing on co-creation in healthcare have predominantly been conducted in Western and developed countries. The contributions of this particular study emanate from the African context, where the dynamics of the healthcare system differ from those in developed nations. In the African health context, the healthcare system is often characterized as fragile, a perspective rooted in the healthcare delivery process (Kirigia & Wambebe, 2006; Makoni, 2020). This study sheds significant light on the concept of value co-creation in healthcare, with a specific focus on patient value. It seeks to bolster the healthcare system, particularly in the treatment process, with the ultimate aim of enhancing patient satisfaction.

6.2.2 Managerial and Practical Implications

Based on our research outcomes, this study elucidates actionable strategies that managers can employ to enhance the healthcare system's capacity to collaboratively co-create value for patients within the context of service encounters.

One, the study's findings revealed distinctive characteristics within healthcare delivery, notably the perception of challenges arising from delayed responses and inadequate follow-up by healthcare providers. These challenges exert a discernible influence on patients' assessments of the value derived from healthcare services, potentially prompting patients to seek medical assistance from external healthcare providers, where promptness and effective follow-up mechanisms are deemed crucial. Healthcare managers are encouraged to consider the establishment of dedicated front desk offices or the implementation of alternative communication channels, such as email, designed specifically to address patients' follow-up needs, particularly in the context of malaria treatment.

Two, the research findings highlight the significance of continuous service improvement as an incentive for enhancing patients' experiences in the co-creation of value within the domain of healthcare delivery. The patients' experiences are not created by only one element but by total experiences through a co-creation process. Managers need to deliver an experiential environment for patients to create their own unique personalized experiences because service delivery is tied to the

healthcare environment. for instance, healthcare managers can create patient personalized experiences by creating a patient healthcare portal where patients can access their health information. This prevents long delays in receiving a service and encourages good communication and interaction that generate a good experience to enhance patients' well-being such as happiness and facilitate the cure process. This is a remedy for increasing the value patients want from the service providers' encounters.

Three, the findings additionally emphasize the significance of addressing patients' value in use during healthcare encounters, particularly within the domains of primary healthcare and health education. To effectively attend to these evolving value needs, healthcare managers are urged to consider the implementation of regular training workshops and seminars, designed to equip patients with essential skills and knowledge in areas such as stress management, disease prevention, and related aspects. Neglecting to incorporate these elements into the co-creation process can encroach upon patients' value assessments, potentially culminating in dissatisfaction. Therefore, it is imperative for healthcare managers to proactively engage in such initiatives to ensure a more comprehensive and patient-centric approach to healthcare delivery.

Four, healthcare managers are confronted with the imperative of delivering tailored experiences to individual patients within the appropriate digital channels. The utilization of digital space should transcend the confines of platforms like WhatsApp, primarily utilized for disseminating health-related information. Instead, healthcare managers should contemplate the incorporation of diverse communication devices and mediums, thus affording patients more patient-centered digital experiences. For instance, this could encompass the provision of treatment process information via web-based platforms. This strategic expansion serves to diversify the avenues through which patients can access healthcare resources, mitigating the constraints associated with limited technological means in the scope of healthcare delivery (Deloitte, 2018).

Five, for healthcare providers to adopt a patient-focused approach, it is imperative that their disease treatment processes establish direct and meaningful connections with patients. This entails ensuring that patients are placed at the forefront of every healthcare decision-making endeavor. Consequently, gaining an in-depth understanding of the contextual elements that shape each patient's unique healthcare journey becomes paramount. Such an approach is geared towards delivering value-based healthcare to patients, with a strategic emphasis on enhancing both their health outcomes and overall satisfaction. By adhering to this patient-centered strategy, healthcare managers transcend the conventional focus on disease treatment alone. Instead, they are committed to fostering holistic improvements in patient health and enriching the overall healthcare experience. This approach can contribute to enhancement, growth, and long-term sustainability, and thus collectively advancing the healthcare journey for all stakeholders involved.

Six, in evaluating the healthcare contextual elements, it becomes evident that patients may ascribe the quality of healthcare treatment to the overall ambiance and environment within the healthcare domain. Conducive healthcare surroundings are likely to be perceived favourable by patients, enhancing their experience, and facilitating value co-creation. Conversely, suboptimal healthcare elements may act as significant detractors of the patient's experience, potentially compromising the collaborative value creation process. Considering this, healthcare managers should bolster both internal and external contextual dimensions. This includes aspects such as maintaining cleanliness, optimizing brightness, and enhancing the overall aesthetic appeal through decoration. Such efforts are instrumental in shaping the patient's experience, particularly during the malaria treatment process. By proactively addressing these contextual elements, healthcare managers can create a conducive healthcare environment that not only promotes favourable patient experiences but also fosters effective value co-creation in healthcare delivery.

Seven, smooth journey is regarded as a crucial factor that enhances the efficiency of service delivery. This fosters healthcare improvement, growth, and survival in patients' encounters with healthcare providers. Healthcare managers can rely on smooth journey features such as openness, relationship, comfortability

of service encounters, satisfaction, and accessibility of healthcare providers to improve healthcare delivery. The openness of service encompasses transparency and accessibility of healthcare providers and providing friendly interaction with patients within outside the clinic to build a long-term relationship for patient continuous satisfaction in the service encounter chain. This is achievable through consistent and quality care and engaging patients in open and empathetic communication. This is key for patients to enjoy service comfortability in the healthcare environment and deepen their experiences encounters with healthcare providers.

Finally, in the pursuit of delivering exceptional patient experiences, healthcare managers must prioritize a personalized encounter process. Patients seek to establish a profound sense of significance within the healthcare encounter, particularly during times of illness when vulnerability is heightened. Healthcare managers should monitor the entire patient journey throughout all stages of the malaria treatment process, fostering a comprehensive understanding of patients' needs and desires. Consequently, by actively engaging in the tracking and analysis of patient interactions with healthcare providers, healthcare managers can gain valuable insights into what patients seek and empathy and a sense of belonging become paramount for individuals facing health challenges. This in-depth comprehension forms the foundation upon which tailored experiences can be crafted, thereby facilitating value co-creation. In essence, the personalized encounter process not only caters to patients' emotional and psychological needs but also empowers healthcare providers to align their services more closely with patient expectations, leading to enhanced patient experiences and value co-creation within the healthcare domain.

6.3 Limitation and Future Research

As a qualitative research design, this thesis is not without its limitations, which presents opportunities for future research endeavors. Notably, the three studies conducted within this thesis did not encompass patients from less educated backgrounds. Exploring the experiences of patients from less educated backgrounds within the framework of co-creation practices holds the potential to reveal novel insights and perspectives. Addressing this research gap could shed light on how socio-economic factors, including education levels, influence the co-creation journey and patient experiences. Consequently, future studies that incorporate this dimension would enrich our understanding of the dynamics at play in healthcare co-creation and contribute to a more inclusive comprehension of patient experiences in diverse contexts.

Future research endeavors could expand their scope to encompass a more diverse range of patients, both highly educated and less educated, across various healthcare settings and hospitals. This broader sampling strategy would facilitate a more comprehensive examination of the perceived patient value within the co-creation process, offering a more representative view of the general population's experiences. Moreover, while the current study employed a single case study approach and collected data from participants within a university setting, future investigations might benefit from a multi-case approach. Conducting research in a variety of healthcare institutions, including hospitals, clinics, and other healthcare facilities, could provide valuable insights into how context and organizational factors influence patient experiences and value co-creation. Hence, it may be argued that a sample from different sectors or organizations could produce different results.

While our study focused on the malaria treatment process, it is essential for future research endeavors to explore other types of medical treatments, such as those for diabetes, yellow fever, and a range of other health conditions. By examining a diverse array of treatment contexts, researchers can uncover how these specific factors influence the co-creation of value and patient experiences. Future studies

are required not only to enrich our knowledge but also enable healthcare providers to tailor their approaches to meet the distinct requirements of different patients effectively within the value co-creation process in healthcare.

Again, our study focuses on the interaction between patients and healthcare providers within a single university clinic, co-creation involves a network of actors that extends beyond this limited scope. Expanding future studies to include a more comprehensive array of stakeholders, such as family members of patients, students within the university, and the wider public, would offer a more holistic perspective on the dynamics of value co-creation in healthcare. Thus, the involvement of family members, for instance, is critical as they often play a substantial role in a patient's healthcare journey, especially when it comes to decision-making and emotional support. This can provide valuable insights into the broader societal context and the influence of public perceptions and expectations on healthcare delivery.

Furthermore, employing a quantitative cross-sectional study in future research endeavors within the domain of co-creation in healthcare settings can be highly beneficial. This approach would provide a broader and more generalized perspective by gathering data from a larger and more diverse sample of participants. Additionally, addressing the gender imbalance observed in our data is a crucial step in ensuring a comprehensive and inclusive understanding of patient experiences in value co-creation. Examining the views and experiences of female patients would contribute to a more balanced and representative study, as gender can influence healthcare experiences and expectations. By considering the perspectives of both male and female patients, future research can offer a more complete view of the co-creation process in healthcare, accommodating the unique needs and preferences of diverse patient populations.

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