Department of Marketing

An examination of value co-creation at the micro level in a healthcare setting: a dyadic approach

by

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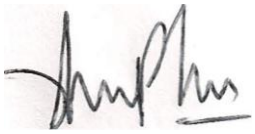
Signed: 

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Abstract

The literature on service-dominant logic has highlighted the central role value co-creation plays in enhancing service delivery. Thus, understanding value co-creation is imperative as it presents new opportunities for providers (firms) to create value with patients (customers). A number of studies have focused on the actor activities in the value co-creation process outside the service encounter. Thus, activities put forward by firms to engage customers, and activities observed by consumers to engage with the firm to co-create value. Using a mixed method research design, this thesis explores value co-creation at the micro level between the doctor and the patient in a healthcare setting to further the understanding of actors' differing perceptions of value and key factors that drive value co-creation. The study takes a patient centric view of value from the experiential perspective by examining the service encounter between the doctor and patient in the consulting room. The first study of the sequential design is exploratory and qualitative with results leading to the second study, quantitative research.

The qualitative study found three key factors influencing the value co-creation at the micro level that include the social context of the encounter, the beliefs and perceptions of the actors, and the partnership between the doctor and the patient. The findings also suggest the experiential view of value in the healthcare setting. The quantitative study affirmed the importance of these critical areas of the co-creation process and how they impact on the service outcomes that include improved service engagement, improved compliance to medical instructions and perceived value realised. The findings also highlight the effects of actor characteristics on value co-creation.

The thesis contributes to the value co-creation literature to further our understanding of the micro level factors influencing value co-creation from the dyadic perspective. The thesis also contributes to the healthcare value literature and contends that value in healthcare extends beyond the economic perspective to the experiential perspective. The study also contributes to the methodological discourse on the application of quantitative approaches to examine value co-creation, and propose a model that have both theoretical and managerial implications.

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Dedication

This thesis is dedicated to my family

CHAPTER ONE

INTRODUCTION

1.1 Research background

Consumer value creating activities and active involvement in service delivery has received considerable attention in the literature of which the healthcare sector is no exception. Recent advances in service research present an interactive framework of value creation in service delivery (Auh et al., 2007; Bitner et al., 1997; Day, 2006; Gronroos, 2008, 2011a; Payne et al., 2008; Prahalad and Ramaswamy, 2004a, b; Ng et al., 2009, 2012; Vargo and Lusch 2004, 2008b). Vargo and Lusch (2004) presented service-dominant logic (SDL) as a new paradigm of marketing, however, its implications extend beyond marketing and have since been applied widely. SDL addresses the inadequacies of goods-oriented or good-dominant logic whereby firms create value for customers (Vargo and Lusch, 2008b; Lusch and Vargo, 2014). Central to SDL is the concept of value co-creation that describes the collaborative processes through which firms (providers) and customers create value (Normann, 2001; Prahalad and Ramasmamy, 2000, 2004a). In this respect, firms create value with customers, in which case firms play the role of a facilitator whereas customers determine the creation of value (Gronroos, 2006, 2008; Gronroos and Ravald, 2011; Gronroos and Voima, 2013, Heinonen et al., 2010, 2013). Hence, value lies in the customer's sphere (Gronroos, 2006) created through the effective integration of actor resources (Edvardsson et al., 2011a; Vargo and Lusch, 2008b). However, the concept of value to date remains elusive, which is difficult to define, measure and understand (Geraerdts, 2012; Sanchez-Fernandez and Iniesta-Bonillo, 2007). Hence, the need to understand actors' value perceptions is essential in the value co-creation (La Rocca and Snehota, 2014).

Healthcare represents a high contact service (Bitner et al., 1997; Wilson et al., 2012) and, thus, serves as an important application area for empirical studies (Berry and Bendapudi, 2007; Gallan et al., 2013). Given that it is characterized by active collaboration between doctor and patient (Jaakkola and Alexander, 2014; McColl-Kennedy et al., 2012), it comes as little surprise that value co-creation has been directly linked to healthcare (e.g., Elg et al., 2012; Gill et al., 2011; Hardyman et al.,

2014; McColl-Kennedy et al., 2012). This concept propagates active participation behaviours from actors in a clinical encounter (Gallan et al., 2013; Gill et al., 2011). A concept that illuminates the transformations observed in the healthcare sector with regard to delivery of care, including the movement away from a paternalistic approach towards patients (i.e. one directed entirely by the doctor) to one that is more patient-centred (Laing et al., 2002; Taylor, 2009). This should have resulted in patients' values, needs and preferences being used to guide clinical decisions in service delivery (Godolphin, 2009; Institute of Medicine, 2001). However, the patient's role remains largely limited to the provision of information (e.g., reporting symptoms) (Elg et al., 2012; Wilson and Osei-Frimpong, 2013), despite the continuous promotion of this patient centred-care approach in healthcare delivery (Department of Health, 2010; Gill et al., 2011; Taylor, 2009). This is affirmed by research suggesting two-thirds of doctor-patient encounters are dominated by the professionals (Collins et al., 2007).

To co-create improved healthcare, patient's active participation is viewed as being important (Gallan et al., 2013; Hausman, 2004; Jaakkola and Halinen, 2006). Hence a change from passive patients to active partners or co-producers (Auh et al., 2007; Wikstrom, 1996) is expected to enhance medical management decisions and outcomes (Flynn et al., 2012; McColl-Kennedy et al., 2012). This also encourages the changing trends in the attitudes and behaviours on the part of the patient associated with consumerism in healthcare (Nettleton, 1995). Service engagement in healthcare between doctor and patient are not without challenges, especially with regard to knowledge asymmetry (Jaakkola and Halinen, 2006). Hardyman et al. (2014) note that lack of agreement regarding what participation means in care delivery affects the nature of engagement in the consulting room. To address such issues in a doctor-patient encounter, Mead and Bower (2000, p. 1087) identified five conceptual dimensions of patient-centeredness to include: "bio-psychosocial perspective; patient-as-person; sharing power and responsibility; therapeutic alliance; and doctor-as-person". These dimensions resonate with the complex nature of service provision and the need for a physician to understand the patient in order to deliver a tailored service to meet their needs and improve the service outcome.

Co-creating healthcare has been studied from different perspectives. For instance, Dellande et al. (2004) examined how patients could create value through compliance of medical directives which results in an improved health state of the individual; Nambisan and Nambisan (2009) developed a model of how online consumers could co-create value with healthcare organizations; McColl-Kennedy et al. (2012) empirically studied the value co-creating process or activities from the customer perspective; whereas Elg et al. (2012) developed a framework to address how consumers co-create value for others through customer learning. However, there is little on how consumers collaboratively create value with healthcare professionals from a dyadic perspective at the micro level.

Value co-creation can be fully understood when employing a dyadic perspective and recently authors have pointed out the need for it (e.g., Aarikka-Stenroos and Jaakkola, 2012; Saarijarvi et al., 2013). Hardyman et al. (2014) point out difficulties in assessing value co-creation in healthcare at the micro level as a result of limited empirical studies underpinning patient engagement. There is therefore a need for more research to gain a better understanding of the influencing factors of the encounter process that leads to value co-creation between the doctor-patient in healthcare setting at the micro level. In order to address this, the study takes a patient-centric view of value by examining the doctor-patient encounter process. The following sections of this chapter outline the aim of the thesis and research questions to address the knowledge gaps. The chapter will also present the research approach and concludes with an overview of the chapters of this thesis.

1.2 Research aim/purpose

The aim of this study is *to investigate and gain deeper insights into value co-creation by examining the influencing factors of the encounter process and how this impacts on the actors in co-creating value in healthcare service delivery at the micro level*. This study specifically examines what transpires in the consulting room, thus, the doctor-patient encounter layer in healthcare service delivery. Particularly, the manner in which the experiences emanating from the doctor-patient encounters in the consulting room

affects value creation (Gentile et al., 2007; Payne et al., 2008). This broad aim seeks to explore the concept of value co-creation in a healthcare setting from the dyadic perspective, an approach that lacks empirical research in the literature (Fisher and Smith, 2011; Hardyman et al., 2014). Schau et al. (2009, p. 31) note, "value is known to be co-created, but we do not know how, which makes replicating successful co-creation strategies difficult… and transferring from one product domain to another nearly impossible". Hence, there are aspects of value co-creation that are not well outlined and understood (Hoyer et al., 2010; Schau et al., 2009). Likewise Aarikka-Stenroos and Jaakkola (2012) note that, although 'interaction and collaboration' between the two actors is of paramount importance in value co-creation, this remains abstract, lacking empirical study, which seems to shield the details on the roles played or inputs created by the involved actors (Hardyman et al., 2014). There is, therefore, a need to conduct further studies addressing value co-creation from a dyadic perspective (Aarikka-Stenroos and Jaakkola, 2012) consisting of the doctor and the patient at the micro level, which has received limited attention in the literature. Thus, addressing this aim results in four research questions, which are briefly outlined in the next section.

1.2.1 Research questions

The following research questions (RQ) are set out to address the aim of the study and the knowledge gaps which need to be addressed to further our understanding of value co-creation in a healthcare setting at the micro level.

RQ 1: *What does value mean to the professional and the patient in the healthcare service delivery?*

Understanding what value means to the doctor and patient is essential to decipher how it is created jointly during the service encounter (La Rocca and Snehota, 2014). Hence, the qualitative study employed in this research will explore the perception of value from both actors (doctors and patients) to shape our understanding of value co-creation.

RQ 2: *What are the key factors that affect/drive value co-creation between the doctor and patient at the micro level during clinical encounters?*

This research question explores the key factors that affect value co-creation of the doctor and patient during the service encounter at the micro level. In effect, practices in the consulting room that affect actors' experiences will be explored employing a qualitative research approach.

RQ 3: *What impact do these factors have on the focal dyad at the micro level in relation to the expected service outcome(s) in a healthcare setting?*

This research question will examine the importance or benefits of the influencing factors of value co-creation on the focal dyad at the provider-patient encounter layer in relation to the service outcomes. This will be tested quantitatively employing a survey research design.

RQ 4: *Do personal characteristics of the actors' moderate value co-creation in relation to the expected outcome(s) of the encounter?*

Finally, this research question examines the role that actors' personal characteristics play in influencing value co-creation. This has not received prominence in the literature. This will be tested employing quantitative research approach.

1.3 Research approach

Considering the limited empirical research on value co-creation (Hardyman et al., 2014), this study was faced with methodological challenges. After exploring the literature on SDL and value co-creation, it became apparent that a mixed method research design needed to be employed to enable the researcher to answer the research questions. This also meant that development of the conceptual framework and measurement model had to rely largely on the findings of the qualitative research. Hence, the conceptual framework was partly developed from the literature, which is presented in chapter five (Fig. 5.1) of this thesis. The data collection for the qualitative research (phase 1) was first conducted in two health facilities in Accra, Ghana. The

interviews were transcribed and analysed using a content analytic technique. The findings helped develop a model of value co-creation from the dyadic perspective in a healthcare setting at the micro level as presented in Fig. 6.1.

Based on the qualitative research findings, the hypotheses tested in this thesis were formulated, which led to the second phase consisting of quantitative research. The quantitative research allowed the researcher to further test the proposed model to ascertain its robustness using a large sample involving doctors and patients from 20 health facilities in the Greater Accra Region of Ghana. However, lack of a validated scale for value co-creation (McColl-Kennedy et al., 2012; Ng et al., 2010) intimated the researcher to rely on several validated scales related to individual variables in the model as well as the qualitative research. The following section presents the structure of the thesis.

1.4 Structure of the thesis

Following the introduction chapter, the remainder of the thesis is structured as follows.

Chapter two reviews the literature associated with service-dominant logic of marketing. This is preceded by a discussion of the goods-dominant logic (GDL) to shape the understanding of SDL propagated by Vargo and Lusch (2004). SDL seeks to empower the customer and position them as a co-creator of value, blurring the distinct roles of the provider and customer as observed in the GDL paradigm. The four axioms underpinning SDL is discussed. The chapter also discusses the service logic (SL) propagated by Gronroos (2006) and highlights some theoretical differences and similarities between SDL and SL. These two logics position the customer as the central focus of the firm, without which value is not created. The chapter also highlights some of the criticisms and disagreements on SDL despite the fact that the concept is widely accepted in theory and practice.

Chapter three reviews the literature on consumer value co-creation. The chapter starts with a discussion on value and affirms that it is subjective (Helkkula et al., 2012) and remains difficult to define, measure and understand (Geraerdts, 2012). Value co-

creation is extensively discussed highlighting the respective roles of the actors. The role theoretical perspective in the value co-creation process is also discussed. The value co-creation process is affected by the actors' experiences during the service encounter; hence, the chapter also presents a brief review on consumer experience.

Chapter four presents the literature on co-creating healthcare. The chapter starts with an overview of healthcare goals. Healthcare is an essential service with the main goal to protect and improve the health and welfare of individuals and populations. The chapter also reviews the value perspective in healthcare, which suggests that value is mainly viewed as a health outcome achieved relative to cost (Porter, 2009). Consumerism in healthcare, consultation models, doctor-patient partnership and patient compliance are discussed to deepen our understanding of the co-creation process.

Chapter five introduces the research design of the study. The chapter begins with an overview of the conceptual framework, followed by a detailed discussion on research philosophy including the positivist, constructivist and pragmatist worldviews. This thesis adopts the pragmatist worldview, which offers a pluralistic view in research. The research questions outlined in this study suggest a mixed methods approach precisely the sequential exploratory design. This method is supported by the pragmatist worldview that presents a pluralistic approach to research allowing researchers to select the appropriate methods or techniques to answer a range of complex research questions of the study (Creswell and Plano Clark, 2011; Frels and Onwuegbuzie, 2013). The data collection procedures encompassing both qualitative and quantitative studies are discussed, as well as a brief overview of the study context.

Chapter six presents the results of the qualitative phase of the research. Reliability and validity concerns regarding the data are presented. The findings highlight three key influencing factors of value co-creation at the micro level between the doctor and the patient. These include the social context of the encounter, beliefs and perceptions of actors, and the partnership between doctor and patient. A model of a dyadic value co-creation in healthcare at the micro level is outlined to present the final conceptual framework and measurement model adopted in this study. The chapter ends with the

formulation of hypotheses that were tested in the quantitative study.

Chapter seven investigates the impact of the influencing factors on the focal dyad in relation to service outcomes. The chapter begins with the data preparation followed by an assessment of the underlying assumptions in using structural equation modelling (SEM). This is followed by the general SEM test model and alternative models used in the analysis. The path coefficients of the main hypotheses are presented together with the moderating factors including educational background of patients, age, frequency of visits to hospital; and the doctor's length of service and gender. As a dyadic study, the hypotheses were tested using the separate datasets of the doctors and patients, then the matched dataset representing the dyad dataset. This approach provides a better perspective of the data and informs good discussion and conclusions.

Chapter eight discusses the findings of both phases of the research in detail addressing all the research questions. The chapter highlights the convergent and divergent views of value to the doctor and the patient and assert that value in healthcare extends beyond the economic view to the experiential perspective. The effects of value co-creation on service outcomes are also discussed. The moderating effects of actor characteristics on the value co-creation process are discussed.

Chapter nine presents a summary of key findings of the study. The chapter also presents the main contributions of the thesis, which relate to: further understanding of the micro level factors influencing value co-creation from the dyadic perspective, understanding value in healthcare service delivery at the micro level, recognition of actor characteristics as moderating effects on value co-creation, methodological implications in value co-creation research. Finally, the managerial implications, limitations of this study and also directions for future research are discussed.

The following chapter presents a review of the literature on the service-dominant logic of marketing.

CHAPTER TWO

THE SERVICE-DOMINANT LOGIC OF MARKETING

2.1 Introduction

Marketing as a field of theory and practice has undergone several transitions over the past decades. The focus has now moved from goods-dominant logic (GDL) to service-dominant logic (SDL) with the consideration of the customer as a co-creator of value (Vargo and Lusch, 2008b) or creator of value (Gronroos, 2008; Heinonen et al., 2010). In this regard, marketing or business practice has moved from the usual demand and supply concept to place more emphasis on human experience (Ramaswamy, 2011). Lusch and Vargo (2006b) premise that, the SDL attributes find value creating processes of the consumer as a co-creator of value important to that of the supplier. On the other hand, the service logic considers the customer as a creator of value through usage (Gronroos, 2011a; Gronroos and Voima, 2013). However, central to the argument is an emphasis on the value-in-use concept while shifting away from the value-in-exchange paradigm.

SDL is a marketing evolution providing a paradigm shift from "goods-centred view" to "service-centred view" (Vargo and Lusch, 2004), thus blurring the roles of the firm and customer (Vargo et al., 2008; Zwick et al., 2008). However, Gronroos and Ravald (2011) assert the need to clarify the different roles of the producer and customer in the value creation process. Vargo and Lusch (2008b, p.9) framed SDL as: "a mindset, a lens through which to look at social and economic exchange phenomena so they can potentially be seen more clearly". This was framed by making inference of resource-based theory to explain the companies' *operant* and *operand* resources (Vargo and Lusch, 2004).

Bagozzi (1975, p. 32) noted that in practice, "marketing exchanges often are indirect, they may involve intangible and symbolic aspects, and more than two parties may participate". This implies that creation of value between the parties involved in provider-consumer relationships is important in every stage of the service delivery process, and this makes the central theme of SDL. In GDL of marketing, firms relied

mostly on operand resources, which are reflected in the value-chain concept proposed by Porter (1985). However, this is different in the SDL of marketing where firms rather focus on operant resources to gain competitive advantage in the business environment (Prahalad, 2004a). Service-dominant logic has therefore, ignited the concept of co-creation of value, which can be examined by taking into cognisance the activities that influence the process between actors. The extant literature suggests that value co-creation transcends beyond value-in-exchange process (Penaloza and Venkatesh, 2006), and place more emphasis on experiential value-in-use process among the consumers (Helkkula et al., 2012).

This chapter seeks to address the basic concepts and tenets of SDL to build the foundation of this study. Thus, the discussion of service, value creation, and theoretical foundations in this chapter is developed within the notion of the SDL framework put forward by Vargo and Lusch (2004). The antecedents of SDL, thus, the traditional GDL will be discussed in detail. The purpose of this is to ascertain the veracity of the paradigm shift, since the concept of SDL to date has been treated at the conceptual or abstract level (Baron and Warnaby, 2011; Hardyman et al., 2014) with practical difficulties in some service sectors, while the concept of value also remains divergent (Geraerdts, 2012; Gummerus, 2013; Ng and Smith, 2012).

2.2 Evolving to the new paradigm of marketing

Marketing has evolved over the years (Kotler, 1972) and as a dynamic function; it continues to change to meet the changing needs of the society. Marketing has since become a field of inquiry, and a practice approached differently depending on the context of the issue. Kotler (1972, p 46) outlined how marketing has evolved from the early twentieth century to the 1960's; "through a commodity focus (farm products, minerals, manufactured goods, services); an institutional focus (producers, wholesalers, retailers, agents); a functional focus (buying, selling, promoting, transporting, storing, pricing); a managerial focus (analysis, planning, organization, control); and a social focus (market efficiency, product quality, and social impact)". The formative years have mainly been the GDL era, however, service-marketing

research since the 1970s has changed the firm's approach to customers in contrast to the conventional roles in GDL (Gronroos and Gummerus, 2014). These changes are reflective in the models that have evolved in the last decades, for instance, customers as participants (Lovelock and Young, 1979), relationship marketing (Berry, 1995, 1983; Bitner et al., 1997; Gronroos, 1994, 1996; Gummesson, 2002, 1994; Sheth and Parvatiyar, 1995), service quality and interactive marketing (Berry and Parasuraman, 1991; Gronroos, 1978, 1984; Parasuraman et al., 1985; Zeithaml and Bitner, 1996), co-production (Auh et al., 2007; Lengnick-Hall et al., 2000), and more recently, customers as co-creators (Prahalad and Ramaswamy, 2000, 2004; Vargo and Lusch, 2004, 2008).

In the 1990's and early 2000's, the issue of value creation gained much interest to many management and marketing scholars. Value was once considered to evolve from the supplier's sphere in relation to the GDL, giving much prominence to the value-in-exchange process (Vargo and Lusch, 2004; Porter, 1985). This assertion has been contested by many scholars who are of the view that, value is determined in the customer's sphere through the value-in-use process (Gronroos, 2008, 2011a; Heinonen et al., 2010; Helkkula et al., 2012; Normann and Ramirez, 1993; Ravald and Gronroos, 1996; Vargo and Lusch, 2006). A number of service-based concepts and models have been developed which have provided a platform for the emergence of the service logic concept to impact the mainstream marketing practice (Gronroos, 2006).

Considering the dynamic nature of customers and the divergence of understanding value and how it is created, Vargo and Lusch (2004) proposed the SDL to serve as a panacea to the aforementioned problem. However, the definition of value remains suspicious as SDL failed to define it in absolute terms (Geraerdts, 2012; Gronroos and Voima, 2013; Gummerus, 2013). Vargo and Lusch (2004) in proposing SDL noted the paradigmatic changes over the past six decades although most of which had the central theme of satisfying the customer through the 4P's marketing mix framework. The focus of SDL to consider customers as co-creators of value (Vargo and Lusch, 2006) or value creators (Gronroos, 2011b, Gronroos and Voima, 2013; Heinonen et al., 2013) shifts the post from the old GDL concept where firms solely create value through value-in-exchange process with the pretence of involving the customer. In this regard,

value is not created until the product or service is consumed (Andreu et al., 2010; Gummesson, 1998; Holttinen, 2010).

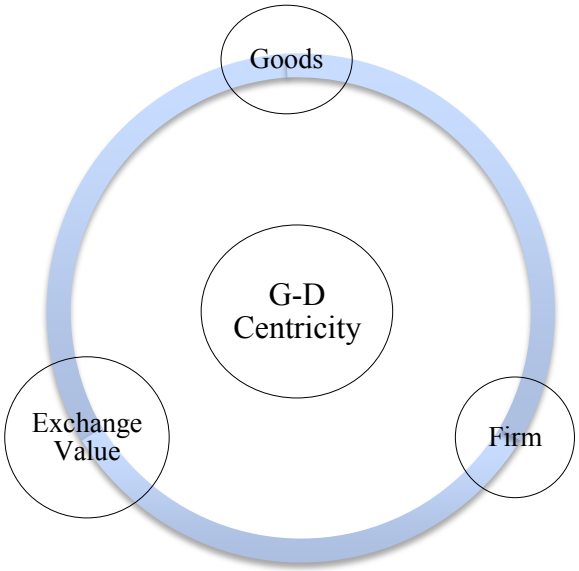
In their conclusion, Vargo and Lusch (2004) posit that marketing has moved from the GDL which views tangible products and discrete transactions as central, to an SDL in which products are seen as service (intangible) with exchange processes and relationship as central to the concept. Kim and Mauborgne (2005) crave the indulgence of marketing scholars to develop the conceptualization of the concept further by examining the value creation processes from the customer's perspective. Gummesson and Mele (2010) further affirmed the need to understand the dynamics of the value creation process in today's marketing paradigm as scholars and practitioners focus largely on value and service. In contrast to Gummesson and Mele's assertion, Lusch et al. (2006) contend that innovative firms present a different mind-set, which is tangential to the GDL practice where value resides in the product offering. To affirm this assertion, Vargo and Lusch (2006, 2008a) posit that the GDL of marketing is limited in the creation of value in which case the firm determines the value created and rather not the customer as opined by the SDL framework. The goods-dominant logic is further discussed in the subsequent section.

2.2.1 Goods-dominant logic of marketing

The traditional fundamental principles of marketing thought focused on the quality of goods and the effective distribution to the end user from the supplier. As a result, services were considered as intangible goods (Lusch and Vargo, 2006; Vargo and Lusch, 2004). More recently, Lusch and Vargo (2014) present three centricities of GDL consisting of goods, exchange value, and the firm as shown in Fig. 2.1. Lusch and Vargo (2014) note that, goods centricity is perhaps the major problem with GDL. Good centricity positions firms to focus on the qualities of goods in the production process and distribution system from the manufacturer's perspectives. Hence, the customer was always at the receiving end (Levitt, 1960). Lusch and Vargo (2014) note the existence of marketing myopia in today's business practices. In support of this, Ng

et al. (2012, p. 417) point out that GDL "pervades contemporary business thinking" that dates back to the era of production and exportation of goods to generate worth.

Fig. 2.1 GDL centricities



Source: Adopted from Lusch and Vargo (2014, p. 5)

Kotler (1972, p. 52) explained marketing as "descriptive science involving the study of how transactions are created, stimulated, facilitated, and valued". In view of this, the firm is seen as "the proactive actor" and play a central role as the "innovator, developer, producer, distributor, and promoter of goods (Lusch and Vargo, 2014, p. 6). This suggests that the GDL of marketing adopted a firm-centric view, which focused exclusively on the quality of products and services to be offered to the customer (Edvardsson et al., 2011b) with little or no involvement of the customer. Against this backdrop, firms assume a service delivery system designed for profit, although with the idea of providing value and experience to the customer (Goldstein et al., 2002; Lusch and Vargo, 2014). However, Lusch and Vargo (2014) point out that goods are not the central purpose of exchange, in the same vein; firms are not the central actors. The authors argue that, humans are the key actors in co-creating their well-being through collaborative integration of resources from a network of actors. As a result, human actors are not end-users *per se*, but contribute in a dynamic, actor-centric view

of the economy, which requires a shift in the role of the firm in relation to value creation (Lusch and Vargo, 2014). Edvardsson et al. (2000) affirmed this by asserting that, marketing seeks to identify and satisfy customer's needs, which is evident in the emergence of concepts such as customer relationship management (CRM) (Berry 1995, 1983; Gummesson, 2002), and know your customer (KYC) (Woodruff and Gardial, 1996), Gronroos (2000) and Gummesson (2002) argue that, these concepts are ploys to entice the customer.

In the GDL, the theory of marketing has mostly been considered to be a marketing mix management and its 4Ps (product, price, place and promotion) framework (Gronroos, 1994). After its inception (McCarthy, 1960, 1964), the 4Ps have appeared to be the core concept of marketing management. In traditional marketing theory, producers and consumers are separated, and participants are viewed as economic or business entities with divergent expectations (Baker, 1976; Bartels, 1968). As a result, exchange value centricity is amplified in the GDL (Lusch and Vargo, 2014), in which case, value is embedded in the unit of output (Ng et al., 2012). Thus companies build their marketing strategies on the 4Ps framework to gain competitive advantage in the business environment. However, as the general economic environment evolves, players in the business community (firms, stakeholders and customers) change. Value in GDL is briefly discussed in the next section to trow light on the exchange value centricity.

2.2.2 Value creation in the goods-dominant paradigm of marketing

Goods-dominant logic mainly focused on the firm-centred notion of value-in-exchange, in which case firms create value for customers (Vargo et al., 2008). In other words, firms were positioned to make value propositions for the passive customer to either accept or decline (Ng et al., 2012; Prahalad and Ramaswamy, 2004; Strandvik et al., 2012). In this regard, Ng et al. (2012, p.422) note that, "GDL requires systems in which resources have an assigned, inherent or transcendent value, which is not linked to their context". Bruhn and Georgi (2006) explain that, rather than determining what customers want, companies focus just on what they can make and how they can distribute or sell to the target customer with no concern or knowledge of the value

created through the value-in-use process. This practice places the tangible goods as the focus of exchange and services as residual of goods embedded in value (Vargo and Morgan, 2005). This view is not sustainable as it deviates from the actual role of services and the centre of exchange (Vargo and Lusch, 2004).

GDL is mainly driven by the transaction process providing the platform for value-in-exchange. Affirming this, Vargo and Morgan (2005) assert that value is rather defined by transactions with reference to the exchange of products or goods. Hence value-in-exchange is predominantly the concept of value creation by firms (Heinonen et al., 2013). The value-in-exchange process has well been discussed (Bitner et al., 1997; Gronroos, 1994; Gummesson, 1995; Zeithaml et al., 2009). The authors note that customers buy offerings from the firm, and clarify goods or services as mere service provision. This puts the firm in a position to focus more on the quality and quantity of the product put out on the market. Value in this context is considered to be the "sum of the discounted future income streams of the company" (Bruhn and Georgi, 2006, p.447). As a result, firms attribute their value creating activities through the value added concept (Porter, 1985), which is at variance with Gummesson's (2004) assertion that customers are better placed to judge their needs, hence positioning them as the best creators of value.

Value is considered an all-important concept in marketing (Holbrook, 2001). Value in GDL has mainly been attributed to the economic or monetary gains of the firm, through the production and distribution of goods (Norman and Ramirez, 1995). As a result, firms were compelled to focus more on the processes and factors of production in the quest for maximizing profit. Consistent with the GDL, Ng et al. (2012) found that, value-in-exchange (which is linked to GDL literature) is driven by the operand resources available to the firm. It is argued that value creation in GDL is embedded in the unit of output, which is determined by the firm (Vargo and Lusch, 2004). Vargo and Lusch (2004, p.5) outline a summary of what the goods-centred view of marketing postulates to include the following:

- The purpose of economic activity is to make and distribute things that can be sold.

- To be sold, these things must be embedded with utility and value during the production and distribution processes and must offer to the consumer superior value in relation to competitors' offerings.
- The firm should set all decision variables at a level that enables it to maximize the profit from the sale of output.
- For both maximum production control and efficiency, the good should be standardized and produced away from the market.
- The good can then be inventoried until it is demanded and then delivered to the consumer at a profit.

However, the complexity and increasing demands of customers (Gabriel and Lang, 2008) called for a need to better understand the service processes of the firm and the position or role of the customer in the value creation process. This has in turn led to call for a new dominant logic of marketing as presented in the next section.

2.3 The service-dominant logic (SDL) of marketing

The SDL considers the relationship between goods and services (Vargo et al., 2006) and how both could be grouped together as a service. Lusch and Vargo (2006, p. xvii) note that the crux of the SDL is that "service provision is the fundamental purpose of economic exchange and marketing – that is, service is exchanged for service". Propagated by Vargo and Lusch (2004), SDL gives prominence to the customer as the focal point in the value creation process (FiztPatrick et al., 2013) and as a co-creator of value (Vargo and Lusch, 2008b). However, the SDL can be viewed as a means of patching the loose ends from the fragmentation of the marketing field (Gummesson, 2008) as firms have largely adopted the goods-centric philosophy. As a result of this assertion, the SDL has received a number of criticisms in the literature (O'Shaughnessy and O'Shaughnessy, 2011). Lusch and Vargo (2014) note four core, fundamental concepts of the lexicon of SDL to consist of the actors, service, resources, and value, which can be used to on the axioms and fundational premises of SDL.

Service in the new paradigm may be defined as "the application of resources for the benefit of another actor or oneself" (Lusch and Vargo, 2014, p. 56). Gummesson

(1995) affirms this view by asserting that goods and services have no difference when viewed from the consumption and value creation perspective. As service is defined as the "application of competences" (Vargo and Lusch, 2004), there is a shift from thinking about value in terms of operand resources to operant resources (Lusch and Vargo, 2014; Ng et al., 2009; Williams, 2012). In this case, service is no longer viewed as units of output, but as a process of creating value for the actors involved in the exchange process (Vargo, 2007). For instance, "a farmer combines his or her farming knowledge and expertise as competencies with the competencies derived from the fishing knowledge and expertise of the fisher to create value (i.e. a more balanced diet and hence greater health) for both parties" (Williams, 2012, p. 473). In effect, the firm focuses on assisting the customers' value creating processes with a service offering, either directly or through goods (Lusch et al., 2010).

In GDL, services were clearly distinguished from goods through the tangibility and intangibility of the products in question (Wilson et al., 2012). The shift from GDL to SDL of marketing is summarized in Table 2.1:

Table 2.1. Differences between the GDL and SDL of marketing

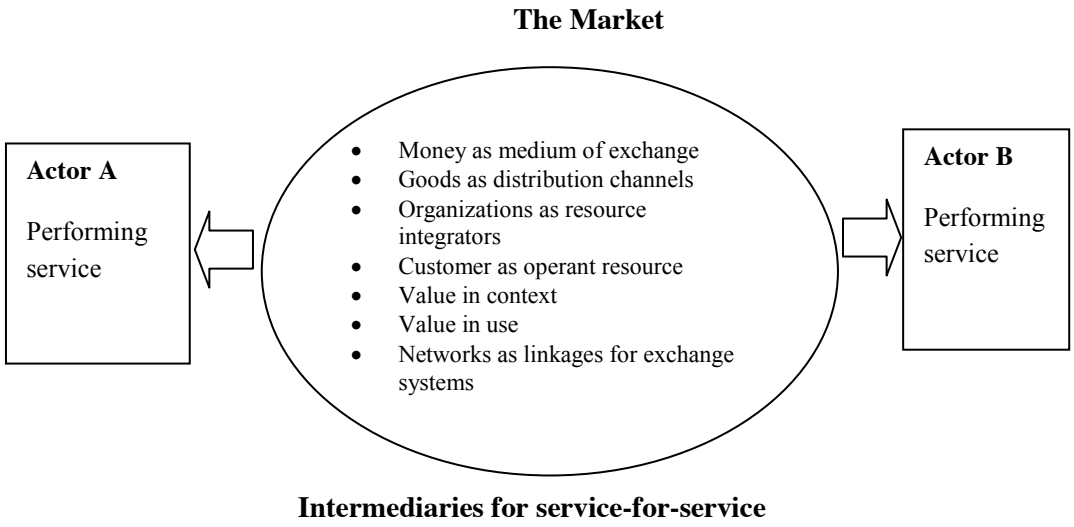
Goods – Dominant Logic	Service – Dominant Logic
Goods	Service
Tangible	Intangible
Operand resources	Operant resources
Asymmetric information	Symmetric information
Propaganda	Conversation
Value added	Value proposition
Transactional	Relational
Profit maximisation	Financial feedback

Source: Table adapted from Lusch et al. (2006, p. 268)

The SDL does not differentiate between goods and service(s), rather, it considers all processes involved in creating value for all actors as service (Lusch et al., 2010; Vargo, 2007). Service in the SDL is, therefore, defined to challenge or oppose the economic theory of marketing which places much emphasis on the goods-centric perspective (Vargo and Lusch, 2004, 2006; Vargo et al., 2006). Service is now considered the totality of marketing practice and not a sub-discipline in marketing. According to Vargo and Lusch's (2004) definition of service, all companies are service business

entities and therefore SDL is applicable to all firms (both service and manufacturing). They note, "perhaps the central implication of a service-centred dominant logic is the general change in perspective" (Vargo and Lusch, 2004, p. 12). On this basis, SDL view markets as networks of service systems linking all stakeholders within the organizational setup (Vargo et al., 2008) as shown in Fig. 2.2.

Figure 2.2 Service exchange for service



Adapted from Brodie et al. (2011, p. 78) with modifications

From Fig. 2.2, actors A and B (firm and customers) are viewed to be performing their activities through interaction during the service encounter process integrating their resources to create value. This is different from the good-dominant paradigm, where the customer is always at the receiving end with fewer interactions (if any) in the service provision. The activities that take place are the intermediaries presented in the oval. This level of integration and interaction has changed the nature of the relationship between the firm and the customer to see each other as partners to produce a synergistic effect through value creation (Brodie et al., 2011).

The knowledge acquired through the learning process position the firm to better serve the market and become competitive. In rethinking the orientation, everything is 'service' attending to a consumer need (Heinonen et al., 2010). Lusch et al. (2006) argue that shifting from the world of 'goods' and 'services', to the world of service,

requires understanding the tenets of what the service-centred view of marketing implies. Vargo and Lusch (2004) further argued that, marketing inherited the view that value was embedded in a product, and as a result of this notion, firms focused largely on financial accountability, customer loyalty and value management (Brookes, 2007). Manufacturers believe that increasing their profits results from selling more goods (Lusch et al., 2006), and this is considered as value creation in the GDL. This is rather different from the SDL perspective in the sense that, it provides an opportunity for the firm to sell a "flow of service" (Lusch et al., 2006).

SDL considers operant resources as important to orient the firm on specific needs of the customer and recognise the customer as a value co-creator through the value-in-use process (Abela and Murphy, 2008). The service-centred view allows firms and their customers to consider service flow rather than purchasing goods (Lusch et al., 2006). Edvardsson et al. (2005, p. 118) affirm this assertion by noting, "service is a perspective on value creation rather than a category of marketing offerings". This concept expands the market offerings from a goods-based offering to including firm-customer interaction, and this does not restrict the firm from making value propositions only (Gronroos, 2008). As noted by Vargo and Lusch (2004) and Vargo et al. (2008), goods are appliances to value creation through service provision. The customer contacts with the manufacturer or service provider have greatly increased compared to the traditional goods logic of marketing. Vargo and Lusch (2004, p.5) view the service-centred paradigm in a number of strategies that firms must adopt to include the following:

- Identify or develop core competences, the fundamental knowledge and skills of an economic entity that represent potential competitive advantage.
- Identify other entities (potential customers) that could benefit from these competences.
- Cultivate relationships that involve the customers in developing customized, competitively compelling value propositions to meet specific needs.
- Gauge marketplace feedback by analysing financial performance from exchange to learn how to improve the firm's offering to customers and improves firm performance.

Vargo and Lusch (2004) further argued that, the focus of marketing on core competences place marketing at the centre of the business functions. Ford (2011) asserts that SDL provides the platform for actors to interact in the exchange process and, therefore, what is transmitted to and received by an actor cannot be separated from the exchange processes. The service-centred view of marketing is customer centric (Sheth et al., 2000) and market-driven (Day, 1999); hence there is more learning and collaboration resulting from the integration of resources from the actors. The sharp contrast between GDL and SDL is how resources are defined and used to create competitive advantage as presented in Table 2.2.

Table 2.2 Distinguishing GDL and SDL using operand and operant resources

Focus	Traditional G-D Logic of Marketing	Emerging S-D Logic of Marketing
Primary unit of exchange	People exchange for goods. These goods serve primarily as operand resources.	People exchange to acquire the benefits of specialized competences (knowledge and skills), or services. Knowledge and skills are operant resources.
Role of goods	Goods are operand resources and end products. Marketers take matter and change its form, place, time, and possession.	Goods are transmitters of operant resources (embedded knowledge); they are intermediate "products" that are used by other operant resources (customers) as appliances in value creation processes.
Role of customer	The customer is the recipient of goods. Marketers do things to customers; they segment them, penetrate them, distribute to them, and promote to them. The customer is an operand resource.	The customer is a co-creator of service. Marketing is a process of doing things in interaction with the customer. The customer is primarily an operant resource, only functioning occasionally as an operand resource.
Determination and meaning of value	Value is determined by the producer. It is embedded in the operand resource (goods) and is defined in terms of "exchange-value."	Value is perceived and determined by the consumer on the basis of "value in use." Value results from the beneficial application of operant resources sometimes transmitted through operand resources. Firms can only make value propositions and facilitate value creation.
Firm – customer interaction	The customer is an operand resource. Customers are acted on to create transactions with resources in the value-in-exchange process	The customer is primarily an operant resource. Customers are active participants in relational exchanges and co-creation of value.
Source of economic growth	Wealth is obtained from surplus tangible resources and goods. Wealth consists of owning, controlling, and producing operand resources.	Wealth is obtained through the application and exchange of specialized knowledge and skills. It represents the right to the future use of operant resources.

Source: Table adapted from Vargo and Lusch (2004, p.7)

SDL drives the thinking orientation of marketing from a product-oriented philosophy to incorporating the customer in the process of specialization and value creation (Lusch and Vargo, 2014). An operant resource therefore, is seen to comprise of all the resources available to the firm's competence to include the customers, which enables the firm to cut down cost and obtain competitive advantage in the business environment (Vargo and Lusch, 2004, 2008a). SDL is proposed based on a number of fundamental premises, which is explained in detail in the following section.

2.3.1 Axioms and foundational premises of the service-dominant logic

In proposing the emerging SDL of marketing, Vargo and Lusch (2004) based their building blocks on eight foundational premises (FPs). They later added two FPs in their subsequent publications in 2006 and 2008. The ten FPs underpinning the proposition of SDL are summarized in Table 2.3. From Table 2.4, SDL is centred on service as the fundamental basis of exchange, and, therefore, the service system becomes the fundamental basis to understand value co-creation (Vargo and Lusch, 2008b). In SDL, customers are operant resources and co-create value on the premise that, service is made easier for them to understand and intuitively partake of it (Edvardsson et al., 2011b). Although some theoretical work has assumed that SDL has advantages over GDL when it comes to understanding value creation, but this has not been empirically proven (Edvardsson et al., 2011b), and therefore, the ten FPs are still considered to be abstract (Wright and Russell, 2012). More recently, Lusch and Vargo (2014) placed emphasis on four FPs that "capture the essence of SDL", considered as axioms. From Table 2.3, these four axioms include FPs 1, 6, 9, and 10, which are directly linked to the four core concepts that compose the lexicon of SDL (service, actors, resources, and value). These four axioms are briefly discussed below.

Axiom 1 (FP_1)

Axiom 1 (FP_1) states, "service is the fundamental basis of exchange" (Lusch and Vargo, 2014, p. 57). This axiom is based on the definition of service provided by Vargo and Lusch (2004) as the application of operant resources for the benefit of

Table 2.3 Service-dominant logic foundational premise modifications and additions

	Modified/new foundational premise	Original foundational premise	Comment/explanation
FP_1	Service is the fundamental basis of exchange	The application of specialized skills and knowledge is the fundamental unit of exchange	The application of operant resources (knowledge and skills), "service," as defined in SDL, is the basis for all exchange. Service is exchanged for service
FP_2	Indirect exchange masks the fundamental basis of exchange	Indirect exchange masks the fundamental unit of exchange	Because the service is provided through complex combinations of goods, money, and institutions, the service basis of exchange is not always apparent
FP_3	Goods are a distribution mechanism for service provision	Goods are distribution mechanisms for service provision	Goods (both durable and non-durable) derive their value through use – the service they provide
FP_4	Operant resources are the fundamental source of competitive advantage	Knowledge is the fundamental source of competitive advantage	The comparative ability to cause desired change drives competition
FP_5	All economies are service economies	All economies are services economies	Service (singular) is only now becoming more apparent with increased specialization and outsourcing
FP_6	The customer is always a co-creator of value	The customer is always a co-producer	Implies value creation is interactional
FP_7	The enterprise cannot deliver value, but only offer value propositions	The enterprise can only make value propositions	Enterprises can offer their applied resources for value creation and collaboratively (interactively) create value following acceptance of value propositions, but cannot create and/or deliver value independently
FP_8	A service-centred view is inherently customer oriented and relational	A service-centred view is customer oriented and relational	Because service is defined in terms of customer-determined benefit and co-created it is inherently customer oriented and relational
FP_9	All social and economic actors are resource integrators	Organizations exist to integrate and transform micro-specialised competences into complex services that are demanded in the marketplace	Implies the context of value creation is networks of networks (resource integrators)
FP_{10}	Value is always uniquely and phenomenologically determined by the beneficiary		Value is idiosyncratic, experiential, contextual, and meaning laden

Source: Table adopted from Vargo and Lusch (2008b, p. 7)
Note: *FP_{1-8} were introduced in Vargo and Lusch, (**2004**), FP_9 was added in Vargo and Lusch (**2006**), FP_{10} was added and others updated in Vargo & Lusch (**2008b**)*

another actor. Lusch and Vargo (2014) note that, actors have two basic operant resources consisting of physical and mental skills, which are applied with other actors to enhance their system viability. This is essential considering the fact that these skills are unequally distributed in a population (Vargo and Lusch, 2004). Essentially, Lusch and Vargo (2014) point out a need for all actors to recognise the nature of the offering in exchange with other actors. This implies that, the activities performed by the involved actors in a service encounter are to provide service (Gronroos, 2011b). Under axiom 1 (FP_1) are four derivative FPs including FP_2, FP_3, FP_4, and FP_5 (Lusch and Vargo, 2014) as presented in Table 2.3.

Axiom 2 (FP_6)

Axiom 2 (FP_6) states, "the customer is always a co-creator of value" (Lusch and Vargo, 2014, p. 68). This implies that value creation takes the involvement of two actors in the service encounter; however, this does not imply that one of the actors is the sole arbiter of value (Williams, 2012). In effect, value creation is always a collaborative and interactive process between the firm and the customer (Aarikka-Stenroos and Jaakkola, 2012) and both actors are considered as beneficiaries (Vargo and Lusch, 2008b). Lusch and Vargo (2014) note that the value co-creation process does not end with the sale and distribution of the product or service, but the beneficiary actor continues with the process of producing. Hence this axiom recognises value is always created through usage and integration of resources (Lusch and Vargo, 2014). Although, the assertion, "the customer is always a co-creator of value" has been challenged by Gronroos (2011b), who rather consider the customer as a creator of value, the use of co-creation in SDL is adopted in thesis to understand value co-creation in healthcare. Under axiom 2 (FP_6), are two derivative FPs including FP_7, FP_8 (Lusch and Vargo, 2014) as presented in Table 2.3.

Axiom 3 (FP_9)

Axiom 3 (FP_9) states, "All economic and social actors are resource integrators" (Lusch and Vargo, 2014, p. 74). Within the SDL, resource integration refers to how actors "integrate and transform micro-specialised competences into complex services that are demanded in the marketplace" (Vargo and Lusch, 2008b, p. 7). Resource integration is

a central concept in SDL that represents a continuous process defined as a "series of activities performed by an actor" (Payne et al., 2008, p. 86). This implies that, service cannot be separated from the resource integrating activities performed by the involved actors taking into consideration their operant resources (e.g. knowledge and skills) (Peters et al., 2014). In this vein, Williams (2012, p. 478) asserts axiom 3 as "an inescapable consequence of the definitions of service and resource integration". Therefore, firms are required to be supportive of their customers in the integration of resources and value creating activities. McColl-Kennedy et al. (2012) placed emphasis on the fact that access to resources not only influence healthcare outcomes, but rather how these resources are adopted in relation to the resource integration process. Furthermore, Lusch and Vargo (2014, p. 77) note that, "the effectual actor makes adjustments as the resource-integration and resource-creation process unfolds", which is essential in value co-creation. This also brings to the fore, the importance of understanding and managing these resources in service encounters between the involved actors. Hence, Jaakkola and Alexander (2014) affirm the critical importance firms need to attach on the resources that customers can contribute to provide greater avenues for value co-creation.

Resource integration in value co-creation is considered critical and is viewed as an opportunity for creating new potential resources through integration (Hardyman et al., 2014). This illustrates the dynamic nature of value co-creation, which is also evident in the different experiences and value (benefits) created for actors in a service exchange and determined by the beneficiary. The rationale being that each incidence of service exchange occurs "in a different context involving the availability, integration, and use of a different combination of resources" (Vargo and Lusch, 2012, p. 6). In other words, value co-creation occurs when two service systems have congruent expectations of the way in which the available resources should be used in the course of their interactions (Ple and Caceres, 2010). Ple and Caceres (2010) further note the implications of resources on value co-creation in cases where there are variances between the systems with regard to expectations of appropriate behaviour. Hence, Peters et al. (2014, p. 254) note that, a resource "becomes a resource only when it is deployed for a specific intended activity". This implies that, value co-

creation is dependent on how available resources are integrated in service encounters between the involved actors (Aarikka-Stenroos and Jaakkola, 2012; Peters et al., 2014). Hence ineffective integration of resources by actors could adversely affect value co-creation (Echeverri and Skalen, 2011).

Axiom 4 (FP_{10})

Axiom 4 (FP_{10}) states that; "value is always uniquely and phenomenologically determined by the beneficiary" (Lusch and Vargo, 2014, p. 78). This implies that value is assessed and evaluated differently depending on the individual, suggesting that the service exchange creates a varying experience that is unique to the involved actor (Lusch and Vargo, 2014). As a result, Williams (2012, p. 476) "value is not fixed, in the sence of being objective and immutable". The adoption of the term "phenomenological" clearly indicate the complexity of what determines value and how it is created, although the phenomenological approach is not explained (Gummerus, 2013). This also suggests that, the consideration of value by the involved actors in the service encounter could vary depending on their respective perspectives (Helkkula et al., 2012). This axiom is related to axiom 2 ("the customer is always a co-creator of value") in the sense that, as the beneficiary determines value, it takes the involvement of both parties for value to be realised (Williams, 2012).

2.3.2 Service logic (SL) approach

The service logic concept (Gronroos, 2006) throws more light on SDL with some similarities and differences. The author explains that service logic (SL) mainly stems from the Nordic school of thought on services based on their marketing context whereas the SDL view extensively analyse service from the classical economic theory. However, the fundamental purpose of these two Logics is the same considering the "interface between service providers and customers" in service provision (Gronroos and Gummerus, 2014, p. 210). Service logic makes a clear distinction between customer service logic and provider service logic by presenting the activities in each of the actors' sphere (Gronroos, 2008b, 2011a). Gronroos and Ravald (2011) point out

that firm-customer interactions underlying the SL to co-create value is rather influenced by a number of factors or activities. They further argue that the application of the traditional marketing activities such as advertising, promotional efforts, price offers etc. will continue to be employed together with the firms competences (skills, knowledge, technology etc.) to broaden the scope of marketing. It can be argued that, although the interactivity and processes leading to value co-creation are paramount (Gronroos and Voima, 2013), the marketing mix elements still play a key role in the value proposition process but in a more refined manner. Gronroos (2006, 2008) explains that, customers buy goods and services in order to create value for themselves.

Gronroos (2008, p.307) argues that, "the supplier's role in the value creation process is that of a value facilitator only", so in effect becomes a co-creator of value with the customer (Gronroos and Voima, 2013). This assertion is not far from what Vargo and Lusch (2004) put forward in **FP_7**, because 'value proposition' and 'value facilitator' to the customer denotes the same concept. However, they differ in positioning the customer as a creator of value with regard to the SL and co-creator of value in the case of SDL. Gronroos (2011b) however argues that, by creating interactions with the customer, this positions the firm with an extended role in value creation, therefore, the supplier co-creates value with the customer. As a result, customers incorporate the available resources provided by a firm with their resources in everyday practices in their value-creating processes (Gronroos and Gummerus, 2014; Saarijarvi et al., 2013). This suggests that the customer determines the value that is created through usage, which is in line with customer dominant concept (Gronroos, 2008, 2011a; Heinonen et al., 2010, 2013). Hence according to SL, the customers are rather creators of value and not co-creators as posited in the SDL.

The SL challenges firms to be innovative by creating touch points with the customer and be part of the consumption process. Against this backdrop, Gronroos (2008, p. 307) concludes that, "adopting SL makes it possible for firms to get involved with their customers' value-generating processes and, hence, also to actively take part in value fulfilment for customers". Firms now depend on their competences (such as knowledge and skills, integrating across technology, business, social and demand innovations) (Maglio et al., 2006) to create a competitive advantage in the business environment.

The service logic of marketing over-looks the value-in-exchange construct and focuses on the value-in-use concept, and in essence considers all firms as service firms (Gronroos and Gummerus, 2014). However, the fact that customers consume goods and services as a service does not mean they buy everything in the form of service (Gronroos, 2008). He further noted that though some customers may still consider goods as goods, the firm in such situations should develop value propositions and influence value fulfilment through the firm-customer interactions. According to Gronroos and Helle (2010), interactions between the actors are mutual which affects their value actualisation processes, suggesting that both firm and customer become active participants (Gronroos and Ravald, 2011), in the customer's value creation.

The SL and SDL share both similarities and differences in their perspectives as noted, the Table 2.4 presents comprehensive differences of the two logics.

Table 2.4: Differences between SL and SDL

Focus	Service Logic (SL)	Service-Dominant Logic (SDL)
Level of perspective	Managerial; defined concepts	Systemic; abstract; metaphorical
Goal of the service perspective	Value creation, where service functions as a facilitator; through service, the user's value creation gets facilitated, which enables the provider to capture value by providing service	Service is exchanged for service
Value	Defined as value-in-use	Value used with different meanings in different contexts
Value generation process	A process including all actions by all actors involved, which ultimately leads to value for a user (as exemplified by the customer)	Not explicitly discussed; implicitly, an all-encompassing value creation process including all actors (e.g. provider, customer, others) involved
Locus of value creation	Customer's creation of value-in-use	Not explicitly defined; implicitly, an all-encompassing process including actions by providers, customers, and other actors
The nature of value as value-in-use	Evolving as value-in-use in a cumulative process, with favourable and unfavourable phases throughout the customer's value creation	
Value in use: contextual influence	The qualifying dimension of a utility- based value concept evolving during use; when social, physical, mental, or other contextual factors are altered, the level of value-in-use changes	Sometimes replaced by the expression value-in-context, which disguises the qualifying aspect of value-in-use as being created during the many forms of use
Value spheres	Three, distinctly different value spheres: a provider sphere closed to the customer, a customer sphere closed to the provider, and a joint sphere where customers and providers directly interact and may co-create value	Not explicitly included; implicitly, one value sphere for an all-encompassing value creation process, in which all actors involved co-create value
Interaction	Explicitly defined with a clear, conceptual distinction between direct and indirect interactions; direct interactions with intelligent resources (people, intelligent systems) enable co-creation; indirect interaction with non-intelligent resources (most products and systems) do not	Not explicitly defined, only implicitly addressed through foundational premises
Co-creation	A joint directly interactive process in which the actors' (e.g. provider's and customer's) processes merge into one collaborative, dialogical process, such that a co-creation platform forms	Actions taken by all actors involved in the process (e.g. providers, customers), regardless of how they relate to each other
Value co-creation	Actions taken by the actors on a co- creation platform, where the actors may directly and actively influence each other's processes (e.g. supplier service process and customer consumption and value creation processes)	Actions contributing to value for customers during an all-encompassing value creation process by all actors involved (e.g. providers, customers, others), regardless of how they

		relate to one another or the process
Driver of co-creation	The customer drives value creation and is in charge of it	The provider drives value creation and is in charge of it
Division of roles in value co-creation	The provider may engage with the customer's value creation and co-create value with the customer	The customer may engage with the provider's process and co-create value with the provider
Value creation: customer's role	The customer both creates and determines value (as value-in-use)	The customer only determines value (as value-in-use)
Value creation: provider's role	The provider compiles resources embedded with potential value-in-use through which the customer's value creation is facilitated	The provider co-creates value
Value co-creation: customer ecosystem's role	During interactions with persons in the social ecosystem, the customer may socially co-create value with them	Abstract; not explicitly discussed
Marketing: making promises through value propositions	The provider can go beyond making promises by offering value propositions and undertake direct, interactive actions on a co-creation platform to actively and directly influence the customer's value creation and value fulfilment	The provider can only offer value propositions
Marketing: keeping promises	By co-creating value with its customers, the provider may extend the keeping of promises beyond product performance; from passive to active promise keeping	Not explicitly discussed
Reinventing marketing	Marketing extends beyond the a single- function, one-department process of making promises and creating brand awareness; it may become an organization-wide promise management process	Not explicitly discussed

Source: Table adopted from Gronroos and Gummerus (2014, pp. 213-214)

2.4 Toward understanding resources in the SDL of marketing

SDL as proposed by Vargo and Lusch (2004) focuses on the use and application of operant resources as the basis of the firms' competences to create competitive advantage (Ng et al., 2010). Hunt (2000, p. 138) defined resources as the "tangible and intangible entities available to the firm that enable it to produce efficiently and/or effectively a market offering that has value for some market segment(s)". This definition encompasses the resources employed in GDL as well as SDL. This could be interpreted that, the "tangible entities" refer to the operand resources (goods or products) whereas "intangible entities" denotes the operant resources (e.g. the skills and knowledge of individual employees and customers, organizational culture, technology etc.) of the firm. GDL considers operand resources or factor(s) of production as primary. Operand resources have been explained as resources on which an operation or act is performed to produce an effect (e.g. goods or products) (Lusch and Vargo, 2014; Vargo and Lusch, 2004). Vargo et al. (2008) posit that the difference between SDL and GDL lies on the basis of the exchange process, where GDL focuses mainly on the exchange of operand resources (e.g. tangible goods or products) (Lusch et al., 2006).

Considering the interactivity between the actors (Gronroos and Voima, 2013), it is important for firms to learn more about customers to understand their inherent behaviours and relate well on the interpersonal level (Payne et al., 2008). As this concept is changing the nature of relationships among individuals and firms, it is worth noting that customer's ability to be informed and empowered is generated through human experiences facilitated by the firm's resources (Ramaswamy, 2011). Vargo and Lusch (2004) defined the customer as an operant resource to the firm who contribute significantly to the co-creation of value. This is based on the assertion made by Prahalad and Ramaswamy (2000) that, the customer is full of competences through their knowledge and skills, their willingness to learn and experiment, and their ability to engage in an active dialogue. During the service encounter process, both actors (firms and customers) depend on each other as resources (Chandler and Vargo, 2011) and the continuous integration and exchange of these resources brings dynamism in the service process (Peters et al., 2014). These resources are characterised by their

intended purposes that also represent a carrier of capabilities that enable an intended activity or process only when used (Peters et al., 2014)

Madhavaram and Hunt (2008) posit that, firms should focus on these specialized skills and knowledge as the market shift from GDL to SDL, which is more dynamic in nature. Considering the nature of interactions (Ballantyne and Varey, 2006) and integration of the customer in the value co-creation process (Prahalad and Ramaswamy, 2004), firms are required to adapt the use of these operant resources to manage customers and understand the competition. With this concept, consumers are considered to be operant resources endogenous to the firm (Gronroos and Ravald, 2011). This requires providers to reorient to understand and cooperate with the changing dynamics of the consumer (Gabriel and Lang, 2008).

2.5 Criticisms of SDL

Both scholars and practitioners have embraced the concept of SDL in marketing though with some criticisms and disagreement. Despite the wide acceptability of the concept, it still remains at the conceptual stage of the development and as noted by Winklhofer et al. (2007), theory must relate to practice to make it more relevant. However, understanding and measuring SDL's concept of value creation in an organisation remains divergent. To this end, Brodie et al. (2011) consider the SDL as a general theory of marketing with the notion that goods and services co-exist in a broader and abstract manner. SDL has not been tested (Wright and Russell, 2012) to ascertain its applicability in practice as put forward by the contemporary marketing practice group. O'Shaughnessy and O'Shaughnessy (2011) conclude that, SDL remains theoretically limited and, therefore, its practical testing and applicability is likely to be unsuccessful and lacks clarity.

The definition of service, 'that everything is a service' is too broad to have more operational meaning (O'Shaughnessy and O'Shaughnessy, 2009). This presents a unitary perspective for marketing hence making it difficult to be accepted in practice as compared to when marketing is viewed as multiple perspectives (O'Shaughnessy and

O'Shaughnessy, 2009). Wright and Russell (2012) argue that, the single unitary perspective does not give room for other approaches as options in practice. The applicability of SDL in less developed economies where services drives less than 50% of the gross national product (GNP) is questionable as its impact on developing economies is not pronounced (O'Shaughnessy and O'Shaughnessy, 2009; Wright and Russell, 2012). These criticisms trigger the need to critically examine and investigate the concept and its acceptable applications in practice across different sectors.

2.6 Summary

Marketing thought has undergone several transitions since its inception in the early twentieth century. Marketing research has developed and adopted many marketing concepts (i.e. product differentiation, customer relationship management, supply chain management, customer orientation etc.) over the decades in order to effectively manage marketing programmes, and GDL offered a framework along with the 4P's. Firms have since relied on their operand resources where the customer was regarded as 'a passive customer' who does not have to play any role in the development stages but only remained at the receiving end. In effect, there was not much (if any) collaboration between the firm and the customer in the product-oriented era. Value was embedded in the product of output and was not created by the consumer.

However, the changing needs of the customer led to the call for a new paradigm of marketing by scholars and practitioners. Customers are fundamentally changing the dynamics of the marketplace and have become a new source of competence for the firm (Prahalad and Ramaswamy, 2000). This requires the effective integration of actor resources mainly explained as operant resources in SDL. SDL considers the customer as a co-creator of value with the provider. This approach tends to empower the customer to adopt active participatory behaviours in the service encounter. In another discourse, SL (Gronroos, 2006, 2008) consider the customer as a creator of value and the provider or firm as a facilitator who co-creates value with the customer. This concept provides the avenue for more collaborative activities between the firm and the customer (Heinonen et al., 2013), hence changing the approach to value creation. This

also allows the firm to create a competitive advantage by understanding the complex customer. In proposing SDL and SL, service is explained as the 'application of competences' (skills and knowledge) and this is based on the application of operant resources as opposed to the operand resources in the GDL. However, SDL has largely remained at the conceptual level with little empirical backing (Wright and Russell, 2012).

SDL views the customer assuming the role of a co-creator of value whose inputs are considered essential to the success of the firm. The firm then needs to communicate their value proposition effectively to the consumer through healthy interaction between the actors before, during and after the encounter process. This will lead to an understanding of certain behaviours and expectations of the customer as a result of the high level of involvement. To this end, organizational learning is imperative in order to create a competitive advantage among its competitors. This also suggests that, in co-creating value, the provider and the customer have respective roles to play to allow for the integration of resources through interactions. The following chapter reviews the literature on value and value co-creation to better understand the application of SDL.

CHAPTER THREE

VALUE CO-CREATION

3.1 Introduction

Value co-creation has received much credence in recent research agenda by scholars. The roles of the consumer have subsequently shifted as being passive to an active actor in the service provision process (Prahalad and Ramaswamy, 2000). The notion of service-dominant logic (SDL) is the evolution of the service concept that blurs the roles of the provider and the customer, in which case both actors are considered as resource integrators to jointly create value (Gronroos and Gummerus, 2014; Lusch and Vargo, 2014). In this regard, the provider and the customer collaborate through effective interaction in the service encounter process to co-create value through value-in-use (Payne et al., 2009). However, for value to be created, there is a need to understand what value means to the actors and how this value is perceived (La Roca and Snehota, 2014). The literature suggests the subjectivity of value (Helkkula et al., 2012) making it quite complex to comprehend.

SDL suggests the need for effective collaboration between the actors in the value co-creation process; however, this has mainly remained conceptual (Fisher and Smith, 2011; Winklhofer et al., 2007) with few empirical studies to test the effectiveness of the assertion in practice (Hardyman et al., 2014). Value co-creation thrives on the notion that, firms cannot create value wholly because consumers are the determinants of value (Etgar, 2006; Heinonen et al., 2013; Vargo and Lusch, 2004, 2008b). Gronroos (2011b, p. 280) concurs with the notion that 'the consumer is always a co-creator of value' but was quick to add that, "it is too simplistic to allow for theoretical development or practical decision making in any meaningful way". This calls for the need to examine the co-creation process to understand the rudiments of value creation between the actors in the service exchange.

Ple and Caceres (2010) affirm that, the use of available resources congruent to the service expectations leads to value co-creation through the interactions between the two actors. It is implicit to assert that value co-creation is likely to occur through the

effective direct interaction in provider-customer encounters (Gronroos 2011b). However, the encounter process of the co-creation is not solely about interactions, but other factors that come into play with regard to the experiences of the actors involved (Payne et al., 2008). In order to provide a theoretical foundation for this study, this chapter is aimed at explaining how actors co-create value. First the value concept will be explored to understand the value dimensions and the value perspective to adopt in this thesis. The value co-creation process will be reviewed to understand the various components. Role theory will be employed to understand actor respective roles in the co-creation of value in the healthcare service. The framework developed will contribute to the understanding the drivers of the focal dyad value co-creation process in a healthcare setting at the micro level. The initial conceptual framework developed in this chapter will form the basis for further development after the qualitative research.

3.2 The value concept

Value has been the prime concern of many in the marketing and service management literature (Gummesson et al., 2010; Lai et al., 2009; Ng and Smith, 2012; Voima et al., 2010). Although the value concept has received much credence from both practice and academia, it still remains difficult to define, measure and understand (Geraerdts, 2012; Sanchez-Fernandez and Iniesta-Bonillo, 2007). It is essential to understand value considering the "changing micro-level value constellations" (Ng and Smith, 2012). Value is conceptualised as the actors' "perceived trade-off between benefits and sacrifices within relationships" (Blocker, 2011, p. 534). Hence value is influenced by benefits perceived by the customer and the consumption situation (Hennig-Thurau et al., 2002). Ravald and Gronroos (1996, p. 22) explain perceived benefits as some "combination of physical attributes, service attributes and technical support available in relation to the particular use of the product, as well as the purchase price and other indicators of perceived quality". Firms traditionally create value by offering goods and services to meet the needs of the customer (Lovelock, 2001). Lovelock (2001, p. 19) defined value as "the worth of a specific action or object relative to an individual's (or

organisation's) needs at a particular point in time, less the cost involved in obtaining those benefits". Value has also been defined from the providers' perspective as "the economic worth of a customer… or the economic worth of a seller's product/service offerings to a customer" (Woodruff and Flint, 2006, p. 185).

These definitions follow the ideas of the economic theory (Ng and Smith, 2012), and resonate well with the value added concept (Porter, 1985), which also aligns with the value-in-exchange concept in the GDL era (Vargo and Lusch, 2004). Many scholars have addressed the concept of value in relation to the co-creation processes (see, Ballantyne and Varey 2006; Etgar, 2006; Gronroos and Voima, 2013; Helkkula et al., 2012; Holbrook, 2006 a, b; Jaworski and Kohli, 2006; Lusch and Vargo, 2006; Ng et al., 2009; Ng and Smith, 2012; Payne et al., 2008; Sanchez-Fernandez and Iniesta-Bonillo, 2007; Woodruff and Flint, 2006). They discussed the emergence of value and how it is (co) created from different dimensions but conventionally from the customers' perspective. Porter (1985) stressed the linearity of the value chain between the provider and the consumer, but this was criticised by Normann and Ramirez (1995), as it does not focus on the active role of the customer in creating value. This dimension has changed the notion of understanding value and the position of the customer in the value creating processes. Considering the processes involved in co-creating value, it may be more appropriate to review value from the experiential perspective.

3.2.1 Experiential perspective of value

An economic perspective has largely informed much of the discourse on value as addressed in the previous section. But the changing nature of the dynamic and complex customer (Gabriel and Lang, 2006) over time has called for the need to broaden our understanding of value from the economic-centric view (Monroe, 1990) to include the experiential view of value. Considering the desire of customers to derive value from the service exchange, the firm's understanding of the customer value perceptions could help create a competitive advantage (Sweeney and Soutar, 2001; Woodruff, 1997). Holbrook (2006b) explained that value could emerge through a variety of consumer

experiences, described as "interactive relativistic preference experience" (Holbrook, 2006a, p.212). Mathwick et al. (2001) opined that when the consumption experience of a service is rich in value, it impacts on the relativistic preferences possessed by the actors involved. This suggests that value offers both extrinsic and intrinsic benefits to the actors in the service encounter (Mano and Oliver, 1993). Mathwick et al. (2001) explain the extrinsic benefit as one derived from the service exchange that is utilitarian in nature. However, customer participation and involvement in the service provision can result in the formation of an emotional or relational bond between the two actors, which is intrinsic (Chan et al., 2010). In support of this, Vargo and Lusch (2004) conceptualized value as the customers' phenomenological experience perceived through interaction with the supplier and usage. To this end, Vargo and Lusch (2008b, p.7) explained value as "idiosyncratic, experiential, contextual, and meaning laden", which is "always uniquely and phenomenologically determined by the beneficiary".

This also reflects the multidimensionality (Sanchez-Fernandez and Iniesta-Bonillo, 2007), subjectivity (Cova et al., 2011; Helkkula et al., 2012), and context specificity (Chandler and Vargo, 2011) of value. The subjectivity of value in this case extends the difficulties and complexities in ascertaining whether or not value has been achieved. Hence, understanding what kind of value is created, and how it is generated is critical in value co-creation (Saarijarvi et al., 2013), which also differs depending on the context (Vargo and Lusch, 2008b). In value co-creation, value is argued to emerge from the customer's sphere (Heinonen et al., 2013; Gronroos, 2011a), which also explains Woodruff's (1997) assertion that customer value is inherent and considered as benefits derived from the use of a service or product (Spiteri and Dion, 2004). Holbrook (2006a, pp. 212-213) further explained the complexity of customer value by drawing on four interrelated terms:

- Customer value is *interactive* because it involves a relationship between some subjects (e.g. a consumer) or some object (e.g. a product). No value exists without an interaction between some subject (consumer) and some object (product).
- Customer value is *relativistic* in three senses:

- It is comparative because it is dependent on the relative merits of one object as opposed to the other.
- It is situational as it varies from one evaluative context to the other.
- It is personal because the beneficial experiences differ from one individual to another.

- Customer value is said to be a judgement of *preference*. The customer is the best expert to judge what satisfies his/her needs and subsequently creates value.
- Customer value resides in the consumption *experience*. That is to say, what the customer really desires are not products or services but satisfying experiences.

Considering these interrelated terms, Woodruff (1997) construed value as a judgment about relationship and further stressed the relevance of the customer value theory which brings to the fore the customer perceptions of value-in-use. This also expounds on the importance of the attribute qualities and performances in the service exchange that affect the customer's consumption experience (Woodruff, 1997; Woodruff and Gardial, 1996). In another discourse, Gummesson (1998) attributed so much power to the customer as the determinant of value. He argued that, "if the consumer is the focal point of marketing, value creation is only possible when a good or service is consumed. An unsold good has no value and a service provider without customers cannot produce anything" (p. 247). This is affirmed by Gronroos (2000, p. 24) who also argued that, "the focus is not on products but on the customers' value-creating processes where value emerges for customers and is perceived by them". In effect value is realised through value-in-use, resulting from the consumption experience (Holbrook, 2006b). Hence, this study adopts the experiential perspective of value, defined as "a consumer's perceptual and relative preference for services arising from the individual's interaction with a consumption setting that facilitates or blocks achievement of their goals or purposes" (Andrews et al., 2007, p. 642). The following section further engages the nature of value by examining the multi-dimensionality of the concept.

3.2.2 Dimensions of value

As alluded to, value has been conceptualised into multiple dimensions (Sanchez-Fernandez and Iniesta-Bonillo, 2007). For instance, the experiential view of value takes into perspective the symbolic, hedonic and aesthetic facets of the consumption process (Holbrook and Hirschman, 1982). Previous studies have also examined the utilitarian and hedonic components of value in the service exchange (Batra and Ahtola, 1990; Jones et al., 2006; Sweeney and Soutar, 2001). Sheth et al. (1991) suggested five dimensions of value to include social, emotional, functional, epistemic and conditional value. These dimensions relate to the consumers choice of utilizing a service. Lai et al. (2009) affirm the multiple dimensions explaining that the conception of value transcends beyond the functional aspect to include the more hedonic, social, emotional, and experiential components. Holbrook (2006b) also developed a typology of customer value to address the multiple dimensions and define the complexity of value into two broad themes, extrinsic (a means to an end) and intrinsic (an end in itself), and whether it is directed at oneself or another. Sweeney and Soutar (2001) note that it is essential to understand the different dimensions of value, since they influence the decision making of the consumer. As presented in Table 3.1, these two key distinctions are further defined into four basic dimensions to include economic value, social value, hedonic value and altruistic value. These are further explained.

Table 3.1. Holbrook's typology of customer value

	Extrinsic	**Intrinsic**
Self-oriented	Economic value	Hedonic value
Other-oriented	Social value	Altruistic value

Source: Adapted from Holbrook (2006b, p.715)

Economic (functional) value is explained as the experiential value of the self rather than others (Holbrook, 2006b). This type of value is extrinsically motivated and largely focuses on the functional performance (Mathwick et al., 2001; Sheth et al., 1991), hence this type of value significantly influence the decision choice of the consumer (Sweeney and Soutar, 2001). This may include the economic benefit in a commercial context (e.g. price of the product or service) (Zainuddin et al., 2011), thus the

recognition of an affordable quality and the utility derived from an engaging and effective exchange encounter (Mathwick et al., 2001).

Social value on the other hand depicts how one's experiential value affects others; hence this type of value is directed at others (Holbrook, 2006b). Russell-Bennett et al. (2009) assert that this extrinsically motivated value focuses on influencing others to gain self-recognition. It is noted that a positive image makes a consumption experience more satisfying, enabling customers to derive pleasurable social and emotional benefits (Lai et al., 2009). Social value is derived when social situational factors influence the value outcome (Sheth et al., 1991). Hence consumers conform to the norms and practices of others in a social setting that influence the consumption experience. In effect what one does to evoke a favourable impression results in creating social value (Holbrook, 2006b).

Hedonic (emotional) value evolves when a service is consumed for the emotional experience as an end in itself (Holbrook, 2006b). This type of intrinsic value aligns to the emotional situations of the subject, which could be for pleasure or anxiety (Sanchez-Fernandez and Iniesta-Bonillo, 2007). Jones et al. (2006) note that while shopping often contains a utilitarian component, it has the propensity to evoke a substantial emotional response, which is aroused by the consumption experience (Sweeney and Soutar, 2001). This type of intrinsic value is considered subjective, which mainly depends on the personal beliefs, perceptions and norms resulting from fun and playfulness (Babin et al., 1994; Holbrook and Hirschman 1982). Babin and Babin (2001) opine that the emotional experience derived from the encounter or service exchange creates an essential role to create this type of value. Hence, this depends on the personal evaluation of the social context for the sake of the experience itself (Babin et al., 1994).

The other intrinsic type of value, *altruistic value* is about how one's consumption experience affects others as an end in itself (Holbrook, 2006b). This type of value is directed towards others with the intention of creating self-fulfilment for the wellbeing of others (Zainuddin et al., 2011). For instance, a benevolent activity can result in creating value or ecstasy for others, in which virtue is its reward (Holbrook, 2006b).

Babin et al. (1994, p. 647) note that the altruistic practices can result in "value over and above any tangible consequences" to the benefit of others.

3.2.3 Service-dominant logic view of value

The concept of value has been discussed in the literature in various ways as presented in the previous sections. The traditional definition of value relating to the ownership of goods or "perceived trade-off between benefits and sacrifices within relationships" (Blocker, 2011, p. 534) assumes that, value is embodied in products and services. In this case, value is "linked to a sequence of uncovering the needs, devising solutions, producing solutions and transferring these solutions to customers in exchange for something else" (La Rocca and Snehota, 2014, p. 4). Holbrook (2006a, p. 212) explained value as an "interactive relativistic preference experience". This implies that the experience defines what is valuable to a customer and not the purchase. More recently, Vargo and Lusch (2008a) in their service-dominant logic, claimed that "value is always uniquely and phenomenologically determined by the beneficiary" and is co-created as actors interact to integrate resources (Lusch and Vargo, 2014). Both Holbrook's and Vargo and Lusch's conceptualization of value consider the importance of customers as value co-creators. This is also evident in the changing role of the customers in value co-creation from passive to proactive subjects (McColl-Kennedy et al., 2012).

Ng and Smith (2012) note that, value is determined by the customer and co-created with the firm at a given time and context, which suggests the firm, cannot provide value but offer value propositions. Given that value is not only achieved by the object but is always connected to the subject and its context presents relevant implications. This also suggests that value is dependent on the "subject's knowledge, understanding and perception of the consequences, and that decisions are based on expected value consequences" (La Rocca and Snehota, 2014, p. 4). From the SDL perspective, value is said to be uniquely and phenomenologically determined by the actor as beneficiary (Lusch and Vargo, 2014), although assessing value may involve economic/acquisition

cost (Oliver, 1997). Considering the relational perspective in service provision (Storbacka and Nenonen, 2009), it is observed that value originates from different facets of the provider-customer relationship rather than merely embodied in the product or service (La Rocca and Snehota, 2014). This suggests that, some value outcomes emerge during the service consumption, which is also evident when actors reflect on the activity or service provided and received (Gummerus, 2013). In this respect, Gummerus (2013) argues that, outcome determination is considered phenomenological and experiential, which relates to a beneficiary's feeling, thinking, wanting, sensing, imagining, and acting. Hence value could be assessed or determined based on the perceived service outcomes. In this vein, the service exchange is performed and agreed by the actors, and both contribute to the creation of value (Gronroos, 2011a). As a result, value for both subjects in the encounter reflects their cognitive elaboration and perceptions, which is context specific and socially constructed (Edvardsson et al., 2011a; Gronroos, 2011a). Hence, since value is "uniquely and phenomenologically determined" by the involved actors, value created and assessed by the customer might be different from that of the provider.

3.3 Value co-creation

The meaning of value co-creation in the context of marketing and management has remained contentious and complex to understand. Value creation is considered the focus of marketing (Gronroos, 2007) both in the traditional marketing models and the new paradigm of marketing logic. Co-creation is not considered a new concept (Ind and Coates, 2013) but the emergence of SDL (Vargo and Lusch, 2004) and SL (Gronroos, 2006) had shed more light on the concept as an appropriate mechanism of creating value (Holbrook, 2006a; Prahalad and Ramaswamy, 2000, 2004a, Vargo and Lusch, 2008b). According to the SDL, the knowledge and skills located within the organization (e.g. the competence of the employees, shared cultures, information systems, and market information), and in the larger environment (e.g. customer skills, national cultures, and institutional frameworks) drive value formation (Echeverri and Skalen, 2011). However these primary resources can also adversely affect the value

creation leading to a possible value co-destruction (Ple and Caceres, 2010) depending on how they are integrated in the service exchange (Echeverri and Skalen, 2011). Hence, Jaakkola and Alexander (2014) assert the critical importance firms need to attach on the resources that customers can contribute to provide greater avenues for value co-creation.

Co-creation refers to processes through which providers collaboratively engage customers to create value (Ind and Coates, 2013; Prahalad and Ramaswamy, 2004a), taking into consideration the foundational concepts of SDL (actors, service, resources, and value). Value in this context is not embedded in the product but in the usage hence the shift from value-in-exchange to value-in-use. In effect, the customer's experience during the usage of the service implies the value that has been created (Gronroos, 2011b; Gronroos and Voima, 2013). The consumer is no longer passive in the service delivery but active with emotional involvement in the consumption process (Heinonen et al., 2010). Prahalad and Ramaswamy (2004a) and Gronroos (2011a) placed much emphasis on the collaborative nature of value co-creation; however, the literature suggests scant information on how joint activities from the dyadic perspective constitute the process (Aarikka-Stenroos and Jaakkola, 2012).

Work by Prahalad and Ramaswamy (2000, 2004a) created a platform for value co-creation, which sought to shift value creation from, firm centric to the dyadic perspective of the customer and the provider. This approach also highlights the importance of the customer experience in the service exchange (Payne et al., 2008; Schmitt, 1999). This is critical considering the social context of the encounter (Edvardsson et al., 2011a) that drives the interactive nature of the exchange between the actors to co-create value (Gronroos and Voima, 2013; Vargo and Lusch, 2004). Value co-creation has been defined and conceptualised by many scholars (McColl-Kennedy et al., 2012) as summarized in Table 3.2.

Table 3.2 Definitions of Value Co-creation

Author(s)	Conceptualization	Conceptual Domain	Perspective
Normann and Ramirez (1995)	Actors come together to co-produce value	Coproduction: delivering value to the customer	Successful companies do not just add value, they reinvent it
Wikstrom (1996)	When the customer is conceived as a co-producer, the interaction between the parties should generate more value than a traditional transaction process	Coproduction: creating value with the customer	The consumer is positioned as a resource in the company's value-creating (profit generating) systems
Ramirez (1999)	Coproduction is a framework for understanding value creation processes that exist within interactions between producers and consumers	Coproduction: joint value creation through dyadic interaction	Value coproduced by two or more actors, with and for each other, with and yet for other actors
Gronroos (2000)	Value for the customer is created throughout the relationship by the customer, partly in interactions between the customer and the supplier or service provider	Customer value creation: value is created by the customer	Relationship marketing Value is created by the customer
Prahalad and Ramaswamy (2000)	Co-create personalized experiences with customers. Customers want to shape these experiences themselves, both individually or with experts or other customers	Value co-creation	Value co-created through experience with others outside the service provider dyad—other customers, other experts
Prahalad and Ramaswamy (2004a)	The co-creation experience, not the offering becomes the basis of unique value creation	Value co-creation	A firm cannot create anything of unique value without the engagement of individuals
Vargo and Lusch (2004)	Customers are active participants in relational exchanges and co-production	Customer co-production	The enterprise can only offer value propositions; the consumer must determine value and participate in creating it through the process of coproduction
Lusch and Vargo (2006b)	The SDL notion of value co-creation suggests that there is no value until an offering is used—experience and perception are essential to value determination	Co-creation of value	Value is only assessed when the value offering is used.
Vargo, Lusch, and Morgan (2006)	Value is always uniquely and phenomenologically determined by the beneficiary.	Co-creation of Value	Customers are the sole arbiters of value (value is determined by the beneficiary)
Gronroos	Adopting a service logic makes it possible for firms to get involved	Value co-creation	Customers are always the

(2008)	with their customers value-generating processes, and the market offering is expanded to including firm-customer interactions		value creators. The supplier can only be a co-creator of value with its customers
Payne, Storbacka, and Frow (2008)	The value co-creation process involves the supplier creating superior value propositions, with customers determining value when a good or service is consumed	Value co-creation	Providers offer superior value propositions and customers select from these based on judgments of value
Vargo, Maglio, and Akaka (2008)	Co-creation of value inherently requires participation of more than one service system, and it is through integration and application of resources made available through exchange that value is created	Co-creation of value	Value is created through resource integration in service systems, networks, and constellations through exchange
Tynan, McKechnie and Chhuon (2010)	Co-creation of value of luxury brands is conceptualized to involve dialogue and complex interactions between parties including the customer brand communities	Value co-creation	Inputs and influence of customer's co-create value in terms of exclusivity, recognition, access to privileged information and prestige.
Gronroos and Ravald (2011a)	Value co-creation requires supplier's process of making available resources for customer's use and the customer's process of turning a service into value	Value co-creation	Only the existence of supplier-customer interaction can lead to value co-creation.
Fuller, Hutter and Faullant (2011)	Consumer or participant contribution in the service process positively impacts on the co-creation experience	Co-creation of value	Customer creative outputs enhance the co-creation experience.
Zhang, Ye, Chena and Wang (2011)	Value co-creation becomes operational with customers through firm capability development	Value co-creation with customers	Corporate strategies are not determined by customers but their values and expectations influence such strategies
Eichentopf, Kleinaltenkamp and Stiphout (2011)	Value creation is influenced by the customer processes. Value co-creation is the integration of companies into formally autonomous customer processes.	Interactive value creation through customer script	Customer script have positive effect on interactive value co-creation
Edvardsson, Tronvoll, and Gruber (2011)	Value co-creation is shaped by social forces, is reproduced in social structures, and can be asymmetric for the actors involved	Value co-creation: as a social Phenomenon	Influence of social structures on value Co-creation

Source: Table adopted from McColl-Kennedy et al. (2012, pp. 3-5) with modifications

Drawing from Table 3.2 and for the purposes of this work, consumer value co-creation shall be defined as "*the experiential benefits gained by the customer through service usage from the integration of resources through interactive participation of the actors involved*". In other words, value is co-created through usage by the consumer (Gronroos, 2008; Gummesson, 1998) and the experience is co-created between the firm and the consumer (Spena et al., 2012). In this case, value co-creation takes into account the multi-dimensional processes to include the focal firm, and potentially other market-facing and public sources, private sources as well as customer activities (McColl-Kennedy et al., 2012; Tynan et al., 2010). The concept of value co-creation differs from the value chain concept, which sought to place the customer as exogenous to the firm's value creation process (Porter, 1985). However, this concept requires a collaborative effort from the actors and demands for a further understanding of value in a more integrated manner (Ng and Smith, 2012; Normann and Ramirez, 1993), as value is embedded in personalised experiences (Prahalad, 2004b). Prahalad (2004b, p. 172) asserts that value co-creation is "based on different set of internally consistent assumptions" as summarized in Table 3.3, and further explains that "experienced-based value creation requires greater sensitivity".

Table 3.3 The competing frames of value co-creation

Traditional Assumptions of Value Creation	New Assumptions of Experience-Based Value
➢ Value is exchanged between the firm and the customer. The firm creates value. ➢ Value is embedded in products and services (therefore innovation is about products and services). ➢ Value chain represents the value creation process. ➢ Innovation is about technologies, products, and process. ➢ Customers have a ''buy'' or ''not buy'' choice and managers are there to persuade them.	➢ Value is created at the point of exchange ➢ Value is co-created by the consumer and the firm ➢ Value is embedded in experiences: products and services are carriers ➢ Experience fulfilment webs are not a sequential and linear value chain ➢ Innovation is about experiences; technologies/products/processes are critical but not the goal ➢ Customers make the key decision and the associated trade-offs

Source: Table adapted from Prahalad (2004b, p. 173)

From the above, the conceptualisation of the customer in value co-creation differs from that of co-production. Co-production refers to "engaging customers as active participants in the organisation's work" (Lengnick-Hall et al., 2000, p. 359). In contrast, value co-creation takes into perspective, the customer's active involvement in the firm's offerings to obtain value in use (Ng and Smith, 2012). In this respect, Ng and Smith (2012) argue that, while customers are always considered as co-creators of value through value in use, they may not be always co-producers to the firm's offerings. They further argue that, the intention of the customer to "contribute to the firm's offering through co-production in a way co-create value in doing so, but based on a different proposition from the firm, that of engagement and community perhaps, and create a different value from realisation of that proposition" (Ng and Smith, 2012). Hence, value co-creation is intrinsic to the intersection of the actors and resources integration from both direct and indirect exchanges (Lusch and Vargo, 2014).

Drawing from the axioms (2 and 4) of SDL by Lusch and Vargo (2014), "value is always co-created" and "uniquely and phenomenologically determined" by the beneficiary. This is as a result of the changing roles of customers in the market environment. The customer has now become more active and sophisticated due to the availability of information leading to the acquision to knowledg. As a result, the value co-creation experience between individual customers is different and unique because of their different value expectations (Cova et al., 2011; Williams, 2012). Prahalad and Ramaswamy (2004a, p. 5) argue that, "the firm cannot create anything of value without the engagement of individuals".

In effect, the contribution of customers to co-create value is paramount and Lemke et al. (2011) argue that value creation is essentially affected by the consumer's usage of the goods or service. Hence, the individual roles of the consumer and the provider cannot be disregarded or misplaced (Gronroos, 2011a, b). The active involvement of customers in the value creation process enables them to mutually and simultaneously benefit from the supplier-customer collaboration (Maglio et al., 2009). Against this backdrop, value is *only* realised when the service is consumed through value-in-use (McColl-Kennedy et al., 2012; Payne et al., 2008; Vargo and Lusch, 2006). From the

conceptualisations of value co-creation, it is noted that, the perceived value realised is dependent on the usage and context of the service.

3.3.1 Value-in-use

The value-in-use view implies that, customers create value when resources or goods and services are used (Heinonen et al., 2010; Macdonald et al., 2011). Therefore, value emerges in the customers' sphere during usage of the service (Gronroos and Gummerus, 2014; Gronroos and Ravald, 2011; Gronroos and Voima, 2013; Normann and Ramirez, 1993). Value is therefore created by the customer through the effective integration of resources resulting in a positive consumption experience (Fuller et al., 2011; Lusch and Vargo, 2006b; Payne et al., 2008). Macdonald et al. (2011, p. 671) however, defined value-in-use as "a customer's outcome, purpose or objective that is achieved through service". This also rekindles the views of Gronroos (2006) asserting that in SL, the customer is the creator of value and the provider only acts as a facilitator who co-creates value with the customer. An instance is the doctor-patient encounter in the consulting room. In this case the doctor can provide the best of care and advice the patient accordingly; however, value will not be created if the patient does not comply with the directives of the doctor. This implies that value is created when the patient complies with the doctor's directives and gets well.

It is argued that, value-in-use can exist without value-in-exchange (Vargo and Lusch, 2006), but in contrast value-in-use is driven by value-in-exchange (Vargo et al., 2008). This suggests that, value-in-use cannot take place without the exchange process between the involved actors; therefore the value co-creation process requires a combination of exchange and use (Penaloza and Venkatesh (2006). This also implies that "value-in-use is not a static concept, nor is the idea of 'use' a simple one" (Ng et al., 2010, p. 34). Hence, Macdonald et al. (2011) conclude that value-in-use is multidimensional and requires the contribution and collaboration of the firm and customer in the value creation experience (Prahalad and Ramaswamy, 2004b). This is in line with Wikstrom's (1996, p. 362) assertion that the firm's offering is "a vital ingredient in the consumer's value creation". This also suggests the importance of the

interactive encounter with regard to creating favourable experiences to the customer since value resides in their sphere (Gronroos, 2006, 2008).

3.3.2 Value-in-context

The value co-creation concept requires the effective collaboration and integration of resources from the involved actors in the service exchange (Vargo, 2009), which is assessed on the basis of the context (Merz et al., 2009; Vargo, 2008). In this case there are no distinct roles of the actors (Prahalad and Ramaswamy, 2004a,b), hence the co-creation process is conceptualized on the bases of resources, service efforts and context variability (Chandler and Vargo, 2011; Edvardsson et al., 2011b; Ng et al., 2012; Vargo and Lusch, 2011). Chandler and Vargo (2011) have noted the importance of understanding the role that context plays in the value co-creation process since service exchange is framed based on the context. To this end, Vargo (2009, p. 39) assert that value-in-context is "uniquely derived at a given place and time and is phenomenologically determined based on existing resources". Vargo (2008) argues that value-in-use should be replaced with value-in-context, because value creation that emerges is dependent on a particular context. This is in contrast with Gronroos (2006) who asserts that, value creation is a dynamic process, which is reflected in the value concept used (Gronroos and Ravald, 2011). Gronroos (2006) further argues that value-in-use is more appropriate to use than value-in-context but bearing in mind the context and the changes that take place. Hence the emergence of value could have a bearing on the "social, physical, temporal and/or spatial" context by the customer (Gronroos and Voima, 2013, p. 138). This assertion recognises the importance of the value in exchange process in order to create value.

Lusch et al. (2008, p. 6) explained that "the contextual perspective suggests that what firms provide should not be understood in terms of outputs with value, but rather as resource inputs for a continuing value-creation process". Context is however considered multidimensional, which is level specific (Chandler and Vargo, 2011). They further explain that, "practices and transformations are temporal replications of rules, or institutions that facilitate exchange processes" (p. 45). This suggests the

importance of context in the service exchange, since the activities that transpire at the micro level might differ from the meso- and macro-level, impacting on consumer experiences in different ways. Relevant to this thesis, the micro level considers how the service exchange is framed for the individual actors or the dyad (Chandler and Vargo, 2011). In effect, the actors in the service exchange depend on each other's resources and competences in line with the views of SDL (Vargo, 2008) as presented in section 2.3.1. Edvardsson et al. (2011a, p. 329) affirm the importance of context in the service exchange and argue that value co-creation goes "beyond the individual and subjective setting" and further addresses the importance of understanding value as part of the social context. Therefore, how value is co-created in respective context settings may differ from one another.

3.4 The value co-creation process

Value in traditional goods logic of marketing has mainly assumed a non-interactive form of exchange (Alderson, 1957; Bagozzi, 1975; Hunt, 1976). In effect, value was embedded in the products or services delivered to a passive consumer. But the emergence of enlightened and active consumers not only allow firms to co-create value but be considered as part of the resources of the firm (Prahalad and Ramaswamy, 2000; Zwick et al., 2008). This has brought a change in the formal roles previously defined by the firm to the consumer to become more dynamic (Cova et al., 2011). The processes involved in creating value for both the provider and consumer simultaneously become more complex, especially as the role of the consumer is changing (Cova and Dalli, 2009; Saarijarvi et al., 2013). However, such dynamic, interactive processes in the service encounter require a better understanding of the roles of the actors (Epp and Price, 2011; Broderick, 1998). This could prevent the emergence of potential role conflicts that could pose a challenge hindering the customer value creating opportunities through collaboration (Moeller et al., 2013). Also, the actor characteristic could influence the co-creation process (Anderson et al., 2008), especially as Lusch and Vargo (2014) define the actors as resource integrators and as operant resources. This process blurs the distinct roles of the provider and the

consumer, which results in consumers experiencing both production and consumption simultaneously (Ng et al., 2010; Strandvik et al., 2012). In other words, firms become facilitators to co-create value with the customer (Gronroos and Voima, 2013).

Value co-creation requires the collaborative activities of the actors involved in the service exchange (Epp and Price, 2011; Frow and Payne, 2011; Payne et al., 2008; Storbacka and Nenonen, 2009). These activities are dependent on the capabilities and resources available to the actors (provider and consumer) (Peters et al., 2014). For instance, a firm's resources may include professional expertise, equipment, technology, defined processes, relational capabilities, etc. The firm's ability to utilize these resources to co-create value with the customer is critical in the value co-creation process (Storbacka and Nenonen, 2009; Wilson and Osei-Frimpong, 2013) as presented in seticon 2.3.1. Also, if value resides in the customers' sphere (Gronroos, 2011a), then their experiences and perceptions in determining the value that is created are essential (Payne et al., 2008). This also suggests the importance of examining and understanding the encounter processes and the influencing factors at the micro level during the service encounter, which has received limited attention in the literature (Hardyman et al., 2014).

It is also worth noting that relevant meanings are created by the experiences in the service encounter (Payne et al., 2008) that translates into the value determination. Hence, it is appropriate to understand the value perceptions or expectations of the actors, and what kind of value that is created (La Rocca and Snehota, 2014; Saarijarvi et al., 2013). Payne et al. (2008) conceptualised the value co-creation process to consist of three main components to include the customer value creating processes, supplier value creating processes, and the encounter process. Their framework presents the "interconnected set of processes" engaged by the actors and the "recursive nature of co-creation" (Payne et al., 2008, p. 86). Payne et al. (2008, p.85) explained processes to "include the procedures, tasks, mechanisms, activities and interactions which support the co-creation of value". This process view emphasises the need to understand the provider-customer relationship in a service encounter "as a longitudinal, dynamic, interactive set of experiences and activities performed by the provider and the

customer, within a context, using tools and practices that are partly overt and deliberate, and partly based on routine and unconscious behaviour" (Payne et al., 2008, p. 85). Following this, it is imperative to understand the influencing factors that drive these processes in provider-customer encounters at the micro level. Aarikka-Stenroos and Jaakkola (2012) outlined the value co-creation processes from a dyadic perspective in the knowledge intensive business sector by examining the actor resources, roles, and the collaborative activities between the parties. The authors suggest a need for further examination of the exchanges between the actors in the value co-creation process. These exchanges could be influenced by a number of factors at the micro level that drive the value co-creation process between the provider-customer dyad.

Storbacka and Nenonen (2009) examined the actor relationship influence on the co-creation process drawing from Payne et al.'s (2008) three main components of the process. They argued that, the dyad relational capabilities in collaborative activities exercised in the service exchange or the encounter process played a paramount role in the value co-creation process. However, despite thorough conceptualizations of value co-creation in previous research, empirical applications to operationalize value co-creation are needed to articulate this conceptual domain and identify its drivers at the micro level. Hence, understanding how customers engage in the co-creation of value requires further research (Hardyman et al., 2014). The following sections will discuss the actors' role in the co-creation process as well as how resources are integrated.

3.4.1 The role theoretical perspective in value co-creation

Biddle (1979) notes that the role played by respective actors in any social setting is affected by their individual behavioural characteristics. Biddle (1979, p. 4) defined role theory as "the study of behaviours that are characteristic of persons within contexts and with various processes that presumably produce, explain, or are affected by those behaviours". Solomon et al. (1985) explained the term 'role' as a set of behavioural patterns exhibited by actors in a social interaction to achieve their expected goals. Hence, a role depicts the socially defined expectations of actors' behaviour in a social position (Colton, 1987). In the value co-creation process, the customer's experience is

a combination of their emotions, cognition and behaviour (Payne et al., 2008), which agrees with Holbrook's (1996) definition of customer value as the relative totality of their experience of the service or products. In the firm-customer relationship, a role theoretical approach can enhance these perspectives on interactive marketing exchanges (Ivey and Robin, 1966), which is the focal point in the value co-creation process.

Role theory takes cognisance of the different role-related behaviours including expectations, performance and values (Markham et al., 2010). In situations of high contact service, Grove and Fisk (1983) assert the relevance of the role theoretical perspective to provide consistent service at an acceptable level. Role theory is based on a dramaturgical metaphor, which brings to the fore the different varying behaviours of the actors involved in the encounter (Solomon et al., 1985). Wickham and Parker (2007) note that role episodes during the service encounter or exchange of the actors are influenced by the actors' role expectations and behaviours. In effect, roles are created during social encounters between actors through cognitive processes based on norms, attitudes and behaviours with varying degrees of expectations (Guirguis and Chewning, 2005). Hence understanding the different roles and respective ensuing behaviours, which characterise the exchange process between actors (Goffman, 1959) is imperative in developing a theoretical framework for this research.

Human encounters create sociological problems as a result of the fact that individuals choose roles whether formal or informal by drawing from the other actor(s) (Guirguis and Chewning, 2005). Broderick (1998, p. 352) identified three properties in relation to the degree of interaction between the provider and the customer to include; (a) the degree of contact intensity, (b) the extent of reciprocity involved in exchange patterns and (c) the level of co-operative behaviour adopted. These provide the basis of understanding the actors involved in the nested activities as well as their behaviours in the exchange, which helps improve on the engagement process. The dyadic role of the supplier and the customer is very important in the value creation process, as role provides actors with a complex set of identities, which become the source of individual interpretations of social situations (Blumer 1969). To this end, Gronroos (2000) argues

that value is created in the customer's domain and through their practices and experiences in the value-in-use. Therefore, both the provider and customer assume the responsibility of playing their respective roles in a manner to create the expected value.

3.4.2 The role of the customer in the value creation process

It is worth noting that the consumer co-creation experience becomes the basis of value realised and, therefore, the firm cannot create value without the collaboration with customers (Prahalad and Ramaswamy, 2004a, b). Payne et al. (2008, p. 86) define the customer value creation process as "a series of activities performed by the customer to achieve a particular goal". They argued that, access to information, resources, individual knowledge and skills (competence), need assessment, cognitive behaviours are some of the attributes to assist the customer to create value. Woodruff (1997) in his customer value hierarchy model stressed the importance of understanding the customer perceptions of value-in-use. Customer participation or involvement in the co-creation process is considered essential as the level of the active contribution influence the final service outcome (Claycomb et al., 2001; Mustak et al., 2013).

Central to the SDL and value co-creation is the importance of knowledge in the service exchange and the sharing of information between the firm and the customer (Maglio and Spohrer, 2008; Mustak et al., 2013; Vargo and Lusch, 2004). Consumers now play an active role in creating and competing for value, and have the urge to learn and experiment to engage the supplier in an active dialogue (Prahalad and Ramaswamy, 2000), but little empirical research has addressed these roles in value co-creation and the effects on possible outcomes such as quality of life or wellbeing in the case of healthcare delivery (Hardyman et al., 2014). Payne et al. (2008, p. 86) note that, customer value creation should be considered as "dynamic, interactive, non-linear and unconscious processes". As customers become more active, their behaviour, cognition, emotion, and attitude changes and therefore, their role in value co-creation become complex to comprehend (Chan et al., 2010; Gallan et al., 2013). They assume an informal role in the process where their experiential perspective provides an opportunity to co-create value (Payne et al., 2009). They further argued that, the

consumer's ability to co-create value depends mainly on their experiences.

The customer competence (enhanced knowledge and skills) enables them to understand the right to information and the access to resources they need. However, SDL as put forth by Vargo and Lusch (2004, 2008b) did not specifically address the role of the customer in the co-creation process. Consumers rather expect the firm to assume a leading role that will provide an environment to co-create value. The role of the consumer in the co-creation of value is to engage in effective interactions with the provider and must always be prepared to collaborate (Eichentopf et al., 2011). As noted earlier, value is not created if there is no value-in-use (Gronroos and Ravald, 2011; Payne et al., 2008) which solely lies in the domain of the customer (Gronroos, 2006; Heinonen et al., 2013). Aarikka-Stenroos and Jaakkola (2012) found that customers' involvement in the designing, diagnosing, and producing the solution, as well as managing value conflicts between the actors in the encounter is critical in the collaborative activities. Hence, the role of the customer is central to the value co-creation process. In particular, there is high propensity of increased value-in-use to meet the needs of the actors when there is active collaboration in the service exchange (Auh, et al., 2007; Meuter, et al., 2005; Mustak et al., 2013).

3.4.3 The role of the firm in the value creation process

The literature suggests the value to be created is by the customer and the firm only delivers the value proposition (Vargo and Lusch, 2004). However, a strong relationship between the firm and the customer is critical (Jaworski and Kohli, 2006; Payne et al., 2009; Storbacka and Nenonen, 2009), which is achieved through high quality interactions and dialogue between the actors to enhance the nature of engagement (Auh, et al., 2007; Ballantyne and Varey, 2006; Gallan et al., 2013; Lin and Hsieh, 2011; Schau, et al., 2009; Yi and Gong, 2013). Without the involvement of the firm, the customer cannot create value. Therefore, value is co-created by both the customer and the firm. In this case, the firm assumes the role of a facilitator (Gronroos, 2008) to assist and influence the customer in co-creating value. In other words, the customer creates value independently, but with the support of the firm (Storbacka and Lehtinen,

2001). Normann and Ramirez (1988) note that, it is the responsibility of the firm to assist the customer to create value from the service perspective. Payne et al. (2008) emphasise the importance of knowledge as a fundamental source of competitive advantage to the firm. This also enables the firm to manage and provide the needed resources to assist the customer to create value (Gronroos and Ravald, 2011). Hence, it is the duty of the firm to create an enabling interactive environment for value creation to take place (Payne et al., 2008).

In analysing the supplier's role, Gronroos and Ravald (2011) note the difference between value facilitation and value creation. They further argue that, the processes that the firm goes through "including design, manufacturing and delivery as well as back office and front office activities" (p. 10) just facilitate the value creation processes of the customer. Delivering the value proposition and engaging the customer requires continuous organisational learning to understand the customer value creation processes (Payne et al., 2008). There are several resources and functions or departments involved in the value creation process from the firm's domain, but the customer only sees it as one integrated system during the interactive phase. In contrast to the value chain model (Porter, 1985), which places much emphasis on value creation to the firm (Stabell and Fjeldstad, 1998), the value co-creation process places emphasis on the customer as the unit of analysis (Vargo and Lusch, 2004). As a result, customer orientation is considered critical in the value co-creation process (Lin and Hsieh, 2011).

The success of the firm in facilitating and influencing value creation depends on the attitudes, commitment and performance of the employees (Gronroos, 2007). He further asserts that performing in a customer-oriented fashion is fundamental to understanding the customer who influences the interactive process, which subsequently leads to value creation. Bove and Johnson (2000) explained customer oriented practice as characterising the attitudes, values, norms and goals that depict the firm's commitment to delivering service to the interest of the customer. Individual customers behave in diverse ways during the service encounter and therefore, the firm will be in a better position to understand their different needs when they are more customer-oriented (Alam, 2013). This approach will also enable firms to use their competence to

effectively integrate the customers' resources with theirs to influence the customers' processes of creating value (Gronroos and Ravald, 2011) as shown in Fig. 3.1. As part of the collaborative processes between the actors, Payne et al. (2008) note the importance of creating positive customer experiences and organisational learning in the co-creation process. Payne et al. (2008, p. 88) further note these processes as including: "a review of co-creation opportunities; planning, testing and prototyping value co-creation opportunities with customers; implementing customer solutions and managing customer encounters; and developing metrics to assess whether the enterprise is making appropriate value propositions". These processes help build a healthy relationship between the actors (Storbacka and Nenonen, 2009), which also helps encourage and empower consumers to contribute actively to the co-creation process.

3.5 The encounter process

Co-creation involves encounters that provide the enabling environment and motivation for the actors to create value (Payne et al., 2009). These encounters provide the means for engagement between the actors, which could be initiated by the provider, consumer or both (Payne et al., 2008). Payne et al., (2008, p. 90) note, "encounter processes involve various functional departments and are cross-functional by nature". This process allows for the integration of resources and collaborative practices performed by the actors involved in the exchange process (Storbacka and Nenonen, 2009). Payne et al. (2008) suggest communication encounters, usage encounters and service encounters as the three broad forms of encounter that drive the value co-creation process. The types of encounters outlined by Payne et al. (2008) are briefly explained in Table 3.4. This process represents a series of two-way interactions between the actors in the exchange process, which is critical in the value co-creation process (Gronroos, 2011a; Gronroos and Voima, 2013).

Table 3.4 Encounters types of the value co-creation process

Encounter type	Brief explanation
Communication encounters	Activities that are primarily carried out in order to connect with customers, and promote and enact dialog (e.g., through advertisements, brochures, internet home-pages and manuals).
Usage encounters	These refer to customer practices in using a product or service and include the services that support such usage (e.g., using the internet banking service).
Service encounters	These comprise customer interactions with customer service personnel or service applications (e.g., via the contact centre).

Source: table adapted from Payne et al. (2008, p. 90)

Gummerus (2013) opines that, co-creation takes into perspective the processes within the network, which is demonstrated during the service encounter process. These processes and activities that ensue during the encounter could evolve customer experiences that could influence the value co-creation process (Gentile et al., 2007; Payne et al., 2008). These experiences could be at the cognitive and subconscious level leading to knowledge growth through interactive processes (Tsai, 2005). Hence creating a superior customer experience during the encounter process is considered key in the value co-creation process (Helkkula et al., 2012; Sandstrom et al., 2008; Spena et al., 2012). These experiences are influenced by the social context within which the encounter takes place (Edvardsson et al., 2011a), and the actors' beliefs and perceptions (Gentile et al., 2007). The following sections will discuss these factors, as they tend to influence the encounter process and the overall value co-creation process at the micro level.

3.5.1 The social context of the encounter process

SDL considers the integration of operant resources paramount in the value co-creation process (Vargo and Lusch, 2008a), however, these resources are valuable only within particular social contexts, as these resources are embedded in socially constructed systems (Edvardsson et al., 2011a). This suggests that, value creation is the actor's "physical, mental, or possessive activities, practices, and experiences in multiple individual and social contexts" (Gronroos and Voima, 2013, p. 138). Hence

Edvardsson et al. (2011a, p. 334) contend that, it is essential to consider the "actors' positions, roles and social interactions within social structures when designing resource constellations to realize value propositions". They further assert that, the actors' role in the service exchanges, the nature of interactions, their knowledge, competence and skills are important components of the social context of the encounter process to facilitate the realization of the expected value. These elements may be inter-related within the social context, which also attests to the fact that what values are communicated in the encounter are influenced by the social context (Anderson and McAuley, 1999).

The social context therefore, provides a platform for actors to exhibit their capabilities and competencies. Hoffman and Novak (1997) pointed out that these competencies help create a balance between their social skills and the challenges of their interactions. These competencies (driven by knowledge) are considered as key resources in the value co-creation process (Gummesson et al., 2010; Nambisan and Nambisan, 2009; Schau et al., 2009; Zwick et al., 2008). It is worth noting that the social context greatly impacts on the service exchange or encounter and the co-creation process (Edvardsson et al., 2011a). For instance, the actors' social skill elements afford them the opportunity to effectively communicate with each other and create an enabling environment for the encounter process (Lin and Hsieh, 2011). Likewise, this stimulates the quality of the interactions and allows actors to share knowledge, which also offer emotional support especially in managing a patient's condition (Nambisan and Nambisan, 2009). Nambisan and Nambisan (2009) note the criticality of knowledge creation in the co-creation process and assert that the social forum of actor communities drive new knowledge creation through social interactions, hence contextualising the knowledge created.

As part of the social context, interactions within the focal dyad drive the service exchange (Ballantyne and Varey, 2006), which is also considered as one of the focal points in the co-creation process (Flint, 2006; Gronroos, 2006; Lowe et al., 2012). McAlexander et al. (2002) point out that the interactions within the service exchange may be rich in the social context. However, there is little understanding of how this

dimension drives the value co-creation process. Interaction is referred to as a reciprocal action between two or more actors that require "mutual trust and collaborative relationships" (Alam, 2013, p. 58). In this case, the actors in question affect one another's action in the decision-making process. Holbrook (2006a) posits that value resides in actions and interactions leading to its creation. Value is considered a function of the interaction between subjects or actors with an emotional appeal, cognition, attitudes, and behaviour (Echeverri and Skalen, 2011). Value, therefore, is the totality of what an individual experience from a service, which places the interaction in the service encounter a very key construct to consider (Echeverri and Skalen, 2011; Vargo and Lusch, 2006).

Value can be co-created by firms and consumers through the interaction in which both actors have respective roles to play (Hammervoll, 2012). Gronroos (2011a) asserts that no value co-creation can take place without the interaction between the provider and the customer. Interaction is central and critical to the social context of the encounter process (Payne et al., 2008), because it provides the 'moment of truth' (Carlsson, 1987). In view of this, the consumers' expectations, past experiences, and previous information about the service are brought to bear and proven (Laing et al., 2002). The nature of interactions between the actors affect the service experience, (Fyrberg and Juriado, 2009), however, some initial action and response must be initiated (Ballantyne, 2004). This brings to bear the need for the social skill elements of the actors to shape the nature of interactions in the encounter (Lin and Hsieh, 2011).

Firms need to employ their skills and competences to understand consumer operant resources by gathering knowledge about their customers' behaviour, cognition, attitudes and emotions (Gronroos and Voima, 2013, Payne et al., 2008; Ramaswamy, 2008). This process increases the opportunities available to both parties for building knowledge and value (Gronroos, 2007; Jaworski and Kohli, 2006; Lusch and Vargo, 2014; Payne et al., 2008; Wikstrom, 1996). Jaworski and Kohli (2006) observed that firms must be prepared to relinquish control and leave behind the more linear and traditional approaches of customer management. They further posit a range of

attributes and conditions, which could positively impact on the co-creation process from the focal dyad as outlined in Table 3.5.

Table 3.5 Factors that lead to successful co-creation dialogue

Attributes	Explanation
Value placed on the other's insights	Dialogue is realised when one party builds on the ideas of the other in a process that leads to value co-creation. It is essential that each party value the other's insights and perspectives. This mainly depends on the perceived capability of the other party and past experience with the party.
Complementary skills and perspectives	The complementary set of skills, capabilities and knowledge drives provide means of effective and valuable dialogue between the actors. Hence a moderate amount of diversity in knowledge and perspectives appear to be most desirable.
Depth of knowledge and experience	The depth of knowledge is a critical factor for a productive dialogue. However, this needs inputs from other actors to trigger the good ideas that lie dormant in the folds of the others knowledge.
Adventure seeking	An open dialogue is like an expedition and parties should be encouraged to explore uncharted ideas and opportunities that are likely to arise in the course of a deep give-and-take conversation.
Setting of the conversation	The setting for a dialogue can influence the quality of the dialogue, and therefore should be free from any possible disruption. There are sets of on-going conversations that could guide vague and ambiguous statements to specific ideas.

Source: Table developed from Jaworski and Kohli (2006, pp. 114-115)

From Table 3.5, it is apparent actors in the service encounter have respective roles to play in the social context to co-create value. Lowe et al. (2012) noted that the role and behaviours of the actors in the encounter process are critical to affecting the service outcome.

3.5.2 Effects of the actors' beliefs and perception in the encounter process

The service encounter forms the basis for gaining personal integrative benefits of the service (Nambisan and Baron, 2007), which is paramount to building or establishing relationships (Storbacka and Nennonen, 2009). It is noted that the service experiences that evolve during the service encounter influenced by the social context of the focal dyad affect the actors' beliefs and perceptions of the service (Sandstrom et al., 2008). Studies have shown that when customers are involved in the service encounter and

their views are taken into consideration with regard to the decision making process, they are motivated and in which case their cognitive benefits reflect the understanding and knowledge of the service they receive and how they perceive it (Wasko and Faraj, 2000). Likewise, customers' integration in the service provision could be a source of highly pleasurable as well as mentally or emotionally stimulating experiences in the service (Holbrook, 1996; Muniz and O'Guinn, 2001). Such emotional feelings also have an effect on their overall perceptions of the service and to a larger extent improve on their preparedness to be involved in the co-creation experience (Payne et al., 2008; Saks, 2006; Spena et al., 2012).

The beliefs and perceptions of the actors drive their emotional appeal (Higgins et al., 1992; Sandstrom et al., 2008) as well as their level of trust and assurances that impact on the co-creation process (McKnight et al., 1998; Ranganathan et al., 2013). In the light of this, creating a customer experience in the service encounter depends more on the relationship between the actors and not about the product per se considering the multidimensionality of the service concept (Cook et al., 1999; Payne et al., 2008). The relationship experience of the service encounter, which influences the beliefs and perceptions of the actors involved also affects their level of trust and assurance (Hsieh et al., 2010; Mainous III et al., 2006; Pearson and Raeke, 2000; Rowe and Calnan, 2006). Trust is explained as the level of integrity and confidence a patient places in a doctor and vice versa (Dorsch et al., 1998; Ranganathan et al., 2013). For instance, a patient trusts that the care he/she receives is good and beneficial to his/her condition. Also the level of trust a patient places in the doctor is likely to influence the relationship experience as well as the service outcome, which usually anticipates future interactions between the actors (Johnson and Grayson, 2005). Jaworski and Kohli (2006) assert that for dialogue to be successful in the service encounter, it is imperative for both actors to trust the other. As such mutual trust furthers the interactions of the actors in the encounter process (Ballantyne, 2004; Pearson and Raeke, 2000), which is largely influenced by their beliefs and perceptions.

3.6 The experience construct: experiential outcome of the encounter process

Prahalad and Ramaswamy (2000) argued for co-opting customer competence in the co-creation process which also impacts on the customer experience. They further argued that the encounter process evolves a range of co-creation experiences leading to value creation. This suggests that, the customer's active participation behaviours in the value co-creation process are largely influenced by their past and present experiences (Gentile et al., 2007; Payne et al., 2009). Gentile et al. (2007, p. 397) state that: "the customer experience originates from a set of interactions between a customer and a product, a company, or part of its organization, which provoke a reaction". This suggests that the experience is personal, which could also vary depending on the level of involvement (e.g. rational, emotional, sensorial, physical and spiritual). Hence, co-creating experiences is dependent on the encounter process between the actors. The consumer experience is classified into two levels of awareness: the conscious and phenomenological level, and the cognitive and unconscious level (Joy and Sherry, 2003). These experiences lead to knowledge growth of the individual through interactive processes between people (Tsai, 2005). Payne et al. (2008) noted that the service experience transcends beyond the construct of service quality and therefore, taking cognisance of the customer experience before, during and after the encounter process is critical. Hence creating superior customer experience is considered key to the service organisation (Verhoef et al., 2009).

Experience is considered an integral part of defining customer value (Holbrook, 2006a). She argues, "value resides not in an object, a product, or a possession, but rather in the consumption experience" (p. 213). This supports the view of SDL that value emerges through consumption. Hirschman and Holbrook (1982) argue that the concept of 'consumption experience' is an experience paradigm whereby consumers focus on the emotional aspects of consumption in order to satisfy their hedonistic goals. Schmitt (1999) affirmed this assertion contending that actor experiences are clouded by their emotions, which are also driven by their beliefs and perceptions (Sandstrom et al., 2008). Schmitt (1999, p. 26) further noted that experiences "provide sensory, emotional, creative cognitive, behavioural and relational values that replace functional values". This is in support of Gentile et al.'s (2007) conceptualization of

customer experience as a multidimensional construct. Hence, Gupta and Vajic (2000, p. 34) defined service experience as "when a customer has any sensation or knowledge acquisition resulting from some level of interaction with different elements of a context created by the service provider". Meyer and Schwager (2007, p. 118) however conceptualised service experience as the "internal and subjective response customers have to any direct or indirect contact with the company". These conceptualizations of service experience take different dimensions from different perspectives (Klaus and Maklan, 2012). Klaus and Maklan (2012) posit that customer experience is perceived to be dependent on: product experience, outcome focus, moments-of-truth and peace-of-mind; and this evaluates the customer experience at all levels, which Gentile et al. (2007) consider as holistic.

Iacobucci and Ostrom (1993) in developing the consumer experience dimension in the service encounter considered the core and peripheral (relationship) attributes of service as the fundamental unit of assessment. The 'core' attributes represent the overall experience perceived by actors in the service encounter, whereas the peripheral attributes consider the social interactions of the actors. Sandstrom et al. (2008) note that service experience and its influence on customer value co-creation have received little attention in the extant literature. They further noted that, service experience is a criterion for evaluating and understanding service performance and the actor's perceived value. To this end, Verhoef et al. (2009, p.32) note "the customer experience originates from a set of interactions between a customer and a product, a company, or part of the organisation, which provoke a reaction". They further argued that, the customer's experience is strictly personal involving their "cognitive, affective, emotional, social and physical responses". Palmer (2010) affirms that understanding customer experience requires understanding individual emotional states before, during and after the service encounter. This also explains the importance of understanding customer goals in the encounter process to better manage the co-creation process (Lemke et al., 2011). They posit, "customer experience quality is perceptual and intimately related to the customer's goals" (p. 865). To this end, the customer's expectations during the service encounter process must be noted and understood by the service organisation to aid in the successful co-creation of value.

3.7 Summary

As the marketing environment becomes more dynamic, consumers also change and assume an active role in the service encounter process. Value creation is, therefore, not considered to be the prerogative of the supplier but a more collaborative process and active partnership of the actors. Value co-creation has since received much credence in the research domain by scholars. However, this concept remains at the highest level of abstraction (Fisher and Smith, 2011) with few or limited empirical researches (Hardyman et al., 2014). Quite a number of questions still remain unanswered in the literature regarding the understanding of the value co-creation process by both actors in the service encounter. The lack of empirical studies to ascertain the application of this concept in practice requires more work to be done in this area of research. For instance there is the need to understand how the differing value perceptions and the micro level activities or factors that influence the value co-creation from the dyadic perspective (Aarikka-Stenroos and Jaakkola, 2012; Saarijarvi et al., 2013). These remain gaps in the literature that require further research.

Value has been conceptualised as multi-dimensional (Sanchez-Fernandez and Iniesta-Bonillo, 2007), however, the complexity of value is defined into two broad themes; extrinsic (a means to an end) and intrinsic (an end in itself), which is further defined into; economic value, social value, hedonic value and altruistic value (Holbrook, 2006b). Porter's (1985) value chain concept sought to place the customer outside the value creation process as a passive object at the receiving end, whereas the SDL seeks to define the customer as the determinant of value. Value is, therefore, considered as unique and meaning laden and is dependent on the context or situation, which requires that value should be created in a more integrated manner. The dimensions of value will therefore be related to the healthcare setting in the following chapter.

It is noted that the encounter process between both actors is paramount in co-creating value. However, the encounter process is influenced by the social context, and the beliefs and perceptions of the actors. These factors influence the experiences of the actors that affect the value created. Value is considered a function of the interaction between actors (Echeverri and Skalen, 2011) with an emotional appeal, cognition,

attitudes, and behaviour (Payne et al., 2008). The encounter process of the dyad provides the avenue for collaborative activities leading to value-in-use, hence, understanding the influencing factors at the micro level is imperative.

Most studies have considered value co-creation from either the provider perspective or consumer perspective, but very few have examined this concept from the dyadic perspective at the micro level. Much have been mentioned about the collaborative nature of the value co-creation phenomenon (Gronroos, 2011a, 2008; Payne et al., 2008), however, joint activities constituting value co-creation remains a grey area for research, although it has been explored in the business-to-business (B2B) level (Aarikka-Stenroos and Jaakkola, 2012; Storbacka and Nenonen, 2009). There is a need to further explore how these exchanges and value creating processes from the dyadic perspective contribute to improved service output in the business-to-customer (B2C) segment at the micro level. The following chapter will review co-creating healthcare, which will also add value to the application of SDL in practice.

CHAPTER FOUR

VALUE CO-CREATION IN HEALTHCARE

4.1 Introduction

The healthcare service presents a very complex system bringing an array of different professionals all coming together to improve the welfare of the patient. Berry and Bendapudi (2007) consider it as one of the most personal and essential services consumers buy. As the quality of life is improved through healthcare delivery, the service also has a greater impact on the global economy (Berry and Bendapudi, 2007). For instance, the United States of America and United Kingdom spend 17.9% and 9.6% respectively of their annual gross domestic product (GDP) on healthcare representing £5,292 and £2,203 per capita income respectively (World Health Organisation, 2010). This presents the critical importance that nations attach to the life of their nationals in the hope of providing quality healthcare.

Encouraging consumer participation in the delivery of healthcare has been revealed to improve medical status, psychological wellbeing and doctor-patient satisfaction (Fallowfield et al., 1990). Hence, McColl-Kennedy et al. (2012) reaffirm the importance of understanding how value is co-created in the healthcare service delivery. Consumers accessing healthcare are required to participate fully in the information sharing and their preferences for treatment (Crawford et al., 2002; Elwyn et al., 1999). Research however, shows that there are variances in the level of patient participation in healthcare services (Cegala et al., 2007). This is considered a limitation or a challenge in co-creating health with patients. Co-creating activities in healthcare delivery remains critical in affecting the outcomes of the service (Badcott, 2005), especially when the patient remains the subject of interest with regard to experiencing the full course of a health problem (Elg et al., 2012; Osei-Frimpong and Wilson, 2014). Considering the high participatory nature of the service (Bitner et al., 1997; Wilson et al., 2012), ineffective co-creation of the service can lead to unproductive outcomes to the detriment of the patient's health. This also requires that patients must sacrifice time, energy and effort to gain value (Wilson and Osei-Frimpong, 2013). Hence, Berry and Bendapudi (2007) reiterated the need for healthcare professionals to encourage patient

active participation behaviours in consultations. This calls for the need to improve on the service engagement between the doctor and the patient by building good partnerships rather than what is observed in the paternalistic (doctor-led) approach.

In line with the aim of understanding the influencers of the value co-creation process in healthcare at the micro level, this chapter seeks to review value co-creation practices in the context of healthcare and the changing trends in service delivery. Value in healthcare, as well as consumerism will be discussed. The chapter will also seek to understand the various models of healthcare consultations in addition to some practices considered critical in the value co-creation process.

4.2 Goals of healthcare

Healthcare is considered an essential service that consumers buy (Berry and Bendapudi, 2007). The main goal of healthcare provision is to protect and improve the health and welfare of individuals and populations. The World Health Organisation (WHO) defined the health system as "all the activities whose primary purpose is to promote, restore or maintain health" (WHO, 2000, p. 5). However, in an attempt to improve and protect health, there are other intrinsic goals. Attainment of these goals provides the basis for measuring the performance of health systems. The intrinsic goals of health systems defined in the 2000 world health report include (WHO, 2000, p. viii):

- To improve the health of the population in terms of the average level of population health, as well as a reduction in health distribution inequalities.
- To improve the responsiveness of the health system to the legitimate expectations of the population, and
- To improve fairness in financial contributions.

To expand on the above goals, the Institute of Medicine (IoM) in their 2001 report, *Crossing the Quality Chasm: A New Health System for the 21st Century*, proposed that the goals for health services should include six critical elements to include (p. 3):

- **Patient safety**: The provision of healthcare should be focused on the safety of

the patient, hence avoiding injuries or errors to patients from the care that is intended to help them.

- **Effectiveness**: Providing services based on scientific knowledge to the benefit of the patient with the intent of improving on the desired health outcomes.
- **Patient-centred**: Providing care that is respectful of and responsive to the individual patient. This should result in patients' values, needs and preferences being used to guide clinical decisions in service delivery.
- **Timely**: Prolonged waiting times could be very frustrating and a possibility of worsening the health condition of the patient. Hence reducing waits and delays to provide care to patients in a timely manner is imperative.
- **Efficient**: Avoiding waste and inefficiency in the provision of healthcare is essential in order to optimise the available resources. Waste in healthcare could include waste of equipment, supplies, ideas, and energy.
- **Equitable**: Provision of healthcare should not vary in quality because of personal characteristics such as gender, ethnicity, geographic location, and socioeconomic status. Quality of care should benefit all people.

The IoM (2001) reported that the healthcare system that achieves major gains in the aforementioned critical elements is more likely to satisfy the needs of the patient. In this respect, patients would experience an integrated care that is safer, responsive to their needs, and accessible.

4.3 Introduction of value in healthcare

The wellbeing of individuals or the population is considered the key value of providing healthcare (WHO, 2000). However, the healthcare system is faced with challenges associated with the provision of high quality, affordable healthcare (Steinwachs and Hughes, 2008). Some of these challenges are alluded to the conflicting goals from both professional and patient perspectives (Porter, 2010). Considering these conflicting goals, the overarching goal of healthcare delivery must be achieving high value for patients (Patel et al., 2012; Porter, 2010; Porter and Teisberg, 2007), which is considered to be very critical (Volpp et al., 2012; Zainuddin et al., 2011).

Value in healthcare is defined as the health outcome achieved relative to cost (Porter, 2009, 2010), and the consumer conceptualizes value as the evaluation of the perceived benefits and sacrifices (Wilson et al., 2012). Porter's definition aligns with the economic dimension of value (Holbrook, 2006) as discussed in section 3.2, which takes into perspective, the relative importance of cost and outcomes in healthcare service delivery. Although healthcare differs from traditional business sectors (Young and McClean, 2008); yet it may be more appropriate for value to be examined from the experiential perspective (Zainuddin et al., 2011). This may be appropriate considering the complexity of the patient-professional relationship, the asymmetry of knowledge and patient vulnerability, etc. (Young and McClean, 2008). Furthermore, the complexity and subjectivity of value is not different in healthcare, in relation to how value is perceived differently by respective stakeholders (National Research Council, 2010). For instance, from a consumer perspective, value should focus on the quality of care, access, and communication, etc. while cost should be considered an ancillary benefit of improved healthcare, whereas provider-level value perspective is depended on culture and rewards focused on outcomes (National Research Council, 2010).

Providing clinical value to patients or consumers from service providers is considered one of the effective approaches to enhance care and potentially reduce cost (McMahon Jr and Chopra, 2012). But in an era where healthcare plans restrict providers in a number of ways, this rather becomes difficult to achieve. For instance, in Ghana, the National Health Insurance Scheme (NHIS) publish a list of medications with respective price brackets that doctors and other healthcare practitioners must adopt. It is noticed that, cost of listed medicines rather favours the cheaper generic brands on the market, which restrict patient or consumer choice. This practice does not improve health outcomes (Porter and Teisberg, 2007), yet remains a major concern in developing economies where the influx of sub-standard medications is common (Lybecker, 2007). Porter and Teisberg (2007) in assessing the future of healthcare enumerated three principles to improve on the value based system of health to include: (1) the goal is value for patients, (2) care delivery is organised around medical conditions and care cycles, and (3) results are measured (p. 1104). They contend that, "improving health and healthcare value for patients is the only real solution" for a better healthcare

delivery (Porter and Teisberg, 2007, p. 1103). Value for patients could be based on either how responsive the healthcare system is or from the perspectives of the clinical priorities (Young and McClean, 2008).

Considering the recent conceptualisations of value, which is argued to be determined by the consumer through value-in-use (Lusch and Vargo, 2014), greater attention is needed on collaborative value creation with the patient (Aarikka-Stenroos and Jaakkola, 2012) rather than creating value for patients (Porter and Teisberg, 2007). It is worth noting that, the individual's needs and preferences often change the dynamics and structure of the value co-creation process as outlined in other conceptualisations (Aarikka-Stenroos and Jaakkola, 2012; Payne et al., 2008; Storbacka and Nenonen, 2009). Hence, the need to understand how value is perceived in healthcare by patients and doctors is imperative to the co-creation process.

Porter (2010) contends that the complex nature of healthcare where stakeholders have conflicting goals has led to divergent views as to how to improve value delivery. However, he further posits that, value "should define the framework for performance improvement in healthcare" (p. 2477). Some healthcare professionals also consider value as a phenomenon of cost reduction, while others have a contrasting view as a fundamental goal for improving health outcomes for the patient (Lee, 2010). Lee (2010) argues that, improving value in healthcare leads to improved outcomes without any compromises. The Department of Health (DoH) (2010) in their programme intends to improve the value of patient care through the patient-centeredness approach. The approach supports the principle outlined by Porter and Teisberg (2007) that 'the goal is value for patients'. However, the complexities in the delivery of value in healthcare provision remain a major concern at present, which are partly attributed to consumer demands and their quest to control their health needs.

4.4 Professionalism versus consumerism

The performance of the healthcare system in providing high quality and cost effective care is enhanced to some extent by consumer and provider collaboration or partnership.

However, the proclivity of the patients to demand more services and take control of their condition has led to the increasing interest of consumerism in healthcare (Loeb, 2001; Robinson, 2005). While healthcare is not a commodity, patients' wish list cannot always prevail. Healthcare providers or professionals (Doctors, Pharmacists, Nurses, Biochemist/Laboratory Technologist and other health administrative staffs) are, therefore, challenged to reorient themselves to better understand the changing patient. Consumerism in healthcare has been the subject of interest in the UK and across Europe since the introduction of patient and public involvement in healthcare in the 1990s (Nettleton, 1995).

4.4.1 Professionalism in healthcare

Freidson (2001, p.19) explains professionalism as a set of institution of work with specialised knowledge that cannot be "standardized, rationalized or commodified". According to him, a profession is highly specialized and grounded in the body of knowledge and skills, and the appropriate regulatory institution certifies its members. Professionalism is given so much prominence in the healthcare service sector (Pawlson and O'Kane, 2002). This is possible because healthcare was considered a preserve only to the health professionals and patients were considered a novice with limited knowledge of their conditions. Professionalism is explained as "the mastery of a body of technical knowledge and the ability to apply that knowledge to a variety of situations by independent thoughts and analysis" (Pawlson and O'Kane, 2002, p. 200).

Freidson (1972, p. 137) noted that society surrender to the authority of professionals on three grounds:

- Professionals are judged to possess some level of expertise (technical knowledge and skill) that is not readily accessible to non-professionals and therefore, not equipped to evaluate or regulate it.
- The belief that professionals are responsible and trusted to work conscientiously in the best interest of the people they serve.

- The belief that the profession itself is trusted to undertake the required regulatory action to ensure professionals work competently and ethically.

However patient's beliefs have changed over the years as a result of the increasing access to information (Laing et al., 2002), the urgency to understand the condition and motivation to take total control of it. This has subjected professionalism in the healthcare sector to critical scrutiny (Health Professions Council, 2011) as a result of the changing trends in the behavioural roles of both professionals and patients. The American Board of Internal Medicine (ABIM) Foundation, American College of Physicians–American Society of Internal Medicine (ACP-ASIM) Foundation, and European Federation of Internal Medicine (EFIM) collaboratively, after several years of work produced the 'Charter on Medical Professionalism' in 2002. This project took into consideration the changing nature of the consumer and other public policies. The professionalism charter outlined three fundamental principles of professionalism (p. 244):

- The principle of primacy of patient welfare: This principle focuses on altruism, trust, and patient interest. Further, market forces, societal pressures, and administrative exigencies must not compromise this principle.
- The principle of patient autonomy. This principle emphasise the need for professionals to have respect for patients and show honesty in the care given. This also gives the right to the patient to make informed decisions about their treatment. In this case, if patient decisions align with ethical practices, and not demand inappropriate care, those decisions must be accorded the necessary importance by the doctor.
- The principle of social justice. This principle reaffirms the professionals' engagement to the society or community in the discharge of their duties.

These principles guiding the professionalism in healthcare give much credence to the patient. But Freidson (2001) argue that, professionalism is about applying the technical knowledge to deliver value to improve the quality of health of the patient and not to succumb to the patient's wishes. Relman (2007) contends that, despite the movement away from paternalism and elitism of medicine to a patient-directed healthcare, health

professionals should remain committed to their professional values. Although not absolute, professionalism is perceived to be situational with regard to how professionals respond in a case-to-case context, in effect, "constructed in the interaction of individual and context" (Health Professions Council, 2011, p. 40).

4.4.2 Consumerism in healthcare

The patient has needs to be satisfied and a right to demand service; therefore if accessing healthcare is a right for an individual, then it is a patient right. Nettleton (1995) argued that healthcare is not about the collective authority of the professionals and the participation of the patient, but the rights of the consumer. Lilley (2000) noted the emergence of individuals becoming more 'consumerist' with the right to make choices, perhaps as a result of the information available to them. The IoM defined patient-centeredness as care that is "respectful and responsive to individual patient preferences, needs and values in clinical decision-making" (IoM, 2001, p. 3). This in effect gives patients the right to take full control of their healthcare decisions. As noted by Nettleton (1995):

…Consumerism has come to mean the maximization of patient choice; the provision of adequate information; raising the standards of healthcare; ensuring the quality of services by taking into account the views of consumers; carrying out surveys to ensure consumer satisfaction; developing tools for the assessment of needs; reducing waiting times for treatment; and encouraging consumers to complain if they are not satisfied with the service they receive… (p. 249).

Consumerism offers a broad theoretical lens through which to consider how and why patients use healthcare and take control of their health issues (Laine and Davidoff, 1996; Williams and Calnan, 1996). This framework leads to an approach of delivering care that Thomson (2007) explains as "professional-as-agent" where patients' preferences and expectations are incorporated into the decision-making. Over the past decades, the emergence of patients assuming a more consumerist approach in healthcare (Hibbert et al., 2002) has raised a number of concerns within the circles of healthcare providers. However, research reveals that patients' active involvement of

their condition management including communication with the professional and participation in the decision making enhance decision outcomes positively (Flynn et al., 2012; Sepucha et al., 2004). Lupton (1997) contends that, the consumerist approach of the patient drives their instincts to a more active role in contrast to the traditionally passive and dependent role in the past. This gives them the edge to take control of their health by independently taking interest in researching diagnosis and treatment information (Cline, 2003), which enhance their communication with the consultant in a more authoritative manner. This could be attributed to the knowledge acquisition on the part of the patient, which is also considered a fundamental resource in service dominant logic (Vargo and Lusch, 2004). The Department of Health (DoH) (2010) in their white paper entitled; *Equity and excellence: Liberating the NHS* addressed ways of putting the patient first and giving the patient the opportunity to take control of their health condition and play an active role in shared decision-making. However, as noted in the statement below, there seems to be limitations in positioning healthcare as patient-led in practice:

…Healthcare outcomes are personal to each of us. The outcomes we experience reflect the quality of our interaction with the professionals that serve us. But compared to other sectors, healthcare systems are in their infancy in putting the experience of the user first, and have barely started to realise the potential of patients as joint providers of their own care and recovery. Progress has been limited in making the NHS truly patient-led. We intend to put that right… (DoH, 2010, p. 13)

The 21st century patient has a multiplicity of meanings, and Gabriel and Lang (2006) discuss the patient (consumer) in nine faces to include; the consumer as a chooser, communicator, explorer, identity-seeker, hedonist or artist, victim, rebel, activist and as a citizen (these faces are briefly explained in Table 4.1). They however noted the complex nature of the concept of consumerism, which is used and applied differently depending on the context. Research also reveals that the increasingly consumerist approach in healthcare is partly due to the proliferation of information (Hardey, 1999). As a result consumers have become more critical in the handling of their health issues. In effect, Robinson and Ginsburg (2009) contend that the consumer driven healthcare is highly necessary for reasons of efficiency and ethics.

Table 4.1. The nine faces of the consumer

Faces of consumer as:	Brief explanation in relation to health care
Chooser	The consumer is presented with a number of options to choose from regarding the choice of a GP, health facility as well as having the opportunity to make a choice from available treatment options. However, this is also dependent on access to objective information on which to base a rational choice of healthcare services.
Communicator	Consumers communicate and share information with others. In reference to healthcare, consumers' success in managing their condition through their active participation in a shared decision making process would be shared with others.
Explorer	Consumers explore to experience new opportunities, which also provide avenues to bargain. Consumers have the luxury to explore other alternative means to medicine and seek value for money.
Identity seeker	Identity and status of humans in a society are not ascribed but achieved. Consumers build trust in their relationship with healthcare professionals and keep themselves abreast with information.
Hedonist or artist	The emotional experiences of the consumer to the healthcare delivered can either make him satisfied or not.
Victim	The flipside of the consumer being sovereign is becoming a victim. A number of errors or negligence on the part of health care professionals has resulted in injuring, deforming, causing pain and sometimes death of the consumer.
Rebel	Rebellious consumers could take different forms and the outcome has been bizarre. In healthcare delivery, the rebellious consumer may be attributed to the non-compliant patient.
Activist	The era of promoting consumerism in healthcare; where patients or consumers are encouraged to be informed, play an active role in the decision making process and taking control of their condition. Consumer activism is also driven by pressure groups and social movements to champion the consumer cause.
Citizen	The consumer as a citizen has the right of choice and the right to freedom and others. Access to healthcare is a right to the citizen and a right to the consumer as well.

Source: Table developed from Gabriel and Lang (2006)

Consumerism, though without any theoretical justification (McClimans et al., 2011) remains an issue of concern in healthcare provision (Berwick, 2009; Laing et al., 2002) perhaps as a result of the informed and enlightened patient driven by knowledge. Patients in the process of seeking their interest of choice have conceptually been considered as rational and sovereign (du Gay and Salaman, 1992), and the critical issue is that the 21st century consumer will manage healthcare provision in the same manner as applied to other service sectors (Laing et al., 2002). However, the dominance of consumerism is somehow limited by the level of the professional-consumer relationship, which has a bearing on how value is co-created from both perspectives in the context of healthcare. Consumerist approach to healthcare depicts the patient's

autonomy in clinical encounters (Taylor, 2009), however, in a survey conducted in Sydney, Lupton et al. (1991) concluded that the patients preferred to trust their doctor and not behaving as a consumer to question the quality of service offered. Their conclusion is attributed to the fact that, the patients surveyed tended not to think of themselves as consumers who should be wary of the quality of service offered by doctors.

The consumerism approach to healthcare is not without criticism. Wiles and Higgins (1996) contend that, the growing trend of healthcare consumerism is quite problematic considering the fact that, consumers are not specialist and have to depend on the practitioner for treatment. If healthcare is modelled as a 'supermarket' where consumers prepare their 'wish list' and decide what to buy or not, then to some extent, consumerism will negatively affect the quality of healthcare delivered (Nettleton, 1995). Against this backdrop, Lupton (1997) note that, critics of healthcare consumerism view the 'patient' as a layperson without any technical-know-how, which is considered a major barrier.

4.5 Co-creating healthcare

Patient participation and involvement in healthcare services has received critical importance over the past years. Their active involvement in the management of their clinical conditions has shifted the patient from being passive to an active partner and co-producer of their health to enhance medical management decisions and outcomes (Auh et al., 2007; McColl-Kennedy et al., 2012). Hence, to co-create healthcare, patient's active participation is viewed as being important (Gallan et al., 2013; Hausman, 2004; Jaakkola and Halinen, 2006). The Health Foundation (2011) has invested over £5 million in a large-scale demonstration programme called co-creating health with the goal of empowering patients and healthcare professionals to work in partnership to achieve better outcomes. Reijonsaari et al. (2011) note that, health systems provide reactive care, although several resources affect an individual's health outcomes over time. In view of this, SDL and value co-creation have gained

prominence in healthcare service delivery (Elg et al., 2012; McColl-Kennedy et al., 2012), but lack empirical research (Hardyman et al., 2014; Reijonsaari et al., 2011), although Berry and Bendapudi (2007) contend that healthcare provide a significant area for empirical research. The Health Foundation (2011) in their programme, *co-creating health* has noted the importance of patient involvement in managing their conditions especially in the case of people with chronic conditions. *The Co-creating Health programme focuses on developing the skills and attitudes of both people with long term conditions and their clinicians, while also ensuring systems and services are designed to support and facilitate self-management* (The Health Foundation, 2011).

Accordingly, value is said to be co-created through the interaction of service systems (Spohrer and Maglio, 2010). Patient value co-creation is a relatively nascent construct in healthcare delivery, but it is more likely to impact positively on the outcome of the service (Nambisan and Nambisan, 2009). However, the application of value co-creation in the context of healthcare raises a number of questions that have not yet been answered in the literature. The literature suggests a limited understanding of the value co-creation and lack of techniques or methods of analysing and measuring this concept in healthcare and other service sectors. In an attempt to answer similar questions, Nambisan and Nambisan (2009) in their conceptual paper offered different models of online consumer value co-creation in healthcare taking into account health provider variables such as innovation, cost, time, service quality and consumer perceptions of the provider. McColl-Kennedy et al. (2012) empirically studied the value co-creating process or activities from the customer perspective, whereas Elg et al. (2012) developed a framework to address how patients co-create value for others through patient learning. Their models provide good insights of contributing to the concept of value co-creation in the healthcare setting but investigating from the dyadic perspective at the micro level requires further research.

Healthcare consultations are mostly face-to-face encounters, and therefore an actor's actions could affect the experiences of the other (Hardyman et al., 2014). However, Hardyman et al. (2014) note that lack of agreement regarding what participation means in care delivery affects the nature of engagement. This suggests that what transpires in

the consulting room during the encounter process is critical in the value co-creation process. This multi-layered complexity emphasises the importance of understanding the micro level factors of the actors to create positive experiences for all parties. As discussed, co-creation requires the active participation of both actors in the encounter (Gill et al., 2011), which includes the decision-making process (Godolphin, 2009). However, healthcare delivery assumes a social setting that requires a set of guidelines, skills and knowledge to engage the patient (Freidson, 2001). Chia (2004, p. 32) accentuates that the interactions between the provider and the patient could be enhanced or limited depending on the "background coping skill" of the actors. These set of skills are relevant in the service encounter, which are also related to the individuals understanding of social context or systems (Edvardsson et al., 2011a; Giddens, 2001). Against this backdrop, it could be asserted that value co-creating activities within the social system require individuals to learn, adapt and make choices based on their preferences (Giddens, 2001). Giddens (2001, p. 3) note that human activities are reflexive of the knowledge of "human agents that are most deeply involved in the recursive ordering of social practices". Hence, individuals must develop shared understandings and demonstrate competencies to engage in practices to enhance their performance (Duguid, 2005). There is therefore, the need to understand the patients' inherent and social motivations to co-create value with the provider (Saarijarvi et al., 2013), which also requires the need for building good partnerships between the actors (McColl-Kennedy et al., 2012; Taylor, 2009). The following sections discuss some key models that highlight some value co-creating activities and processes in the healthcare setting.

4.5.1 Healthcare consultation models

The consultation is traditionally considered as the focal point in healthcare delivery, which mainly comprises of processes such as history taking, examination, investigation and diagnosis (Taylor, 2009). However, past decades have seen transformations in consultations between the doctor and the patient (Jaakkola and Halinen, 2006; Laing et al., 2002). This is also partly attributed to the patient's increasing choice, consumerism

and availability of information (Edwards et al., 2009; Taylor, 2009). As a result, patients' expectation of their role in decision-making in consultations demands active participation to the extent of suggesting treatment options (Edwards et al., 2009). Medical practitioners have over the past decades depended on their expertise to dominate the doctor-patient encounter, often regarded as the paternalistic approach to consultations (Cegala et al., 2007; Thompson, 2007). This model of consultation was mainly directive and doctor-centred, whereby the patient is limited to providing information on symptoms and required to adhere to the professional instructions (Elg et al., 2012; Taylor, 2009).

Considering the changes in the dynamics of the doctor-patient relationship (Eveleigh et al., 2012; Goodyear-Smith and Buetow, 2001; Jaakkola and Halinen, 2006; Ridd et al., 2009; Ruusuvuori, 2001), the introduction of shared decision-making (SDM) model (Elwyn et al., 1999, 2000) is considered a more acceptable consultation model of improving management decisions and outcomes (McColl-Kennedy et al., 2012). This reflects the orientation of healthcare professionals' behaviour toward patient-centred care – a movement away from the paternalistic approach (Edwards et al., 2009). Before the introduction of SDM, Pendleton et al. (1984) proposed a seven-task consultation model as presented in Table 4.2 to change the approach to care delivery. They argued that patients do self-assessment of the changes in their health, weigh other treatment options, taking into consideration their needs and expectations. This model is expected to improve on the patient's health and wellbeing as a result of the patient's active participation in the consultation (Pendleton et al., 1984).

Table 4.2. Pendleton's 7-task consultation model

1. To define the reason for the patient's attendance, including:
   - The nature and history of the problems
   - Their aetiology
   - The patient's ideas, concerns and expectations
   - The effects of the problems
2. To consider other problems
   - Continuing problems
   - At-risk factors
3. With the patient to choose an appropriate action for each problem
4. To achieve a shared understanding of the problems with the patient
5. To involve the patient in the management and encourage him to accept appropriate responsibility
6. To use time and resources appropriately:
   - In the consultation
   - In the long term
7. To establish or maintain a relationship with the patient which helps to achieve the other tasks

Source: adopted from Pendleton et al. (1984, p. 40)

Similarly, Stewart et al. (1995) stipulated six elements to consider in clinical encounters or consultations to include; (1) the need to explore disease and the illness experience; (2) understanding the patient as a person; (3) finding common ground; (4) integrating prevention and health promotion in consultations; (5) enhancing the doctor-patient relationship; and (6) being realistic. All these processes share a common ground of enhancing healthcare management decisions to meet the needs of the patient (Hall et al., 1995). Mead and Bower (2000, p.1087) identified five conceptual dimensions of patient-centeredness to shed more light on these consultation models to include: "bio-psychosocial perspective; patient-as-person; sharing power and responsibility; therapeutic alliance; and doctor-as-person". These dimensions resonate with the complex nature of service provision and the need for the doctor to understand the patient in order to deliver a tailored service to meet their needs and improve the service outcome.

SDM extends on these models to give prominence to patient autonomy and improved patient engagement (Elwyn et al., 2010). Elwyn et al. (2010, p. 971) explained SDM as "an approach where clinicians and patients share the best available evidence when faced with the task of making decisions, and where patients are supported to consider options, to achieve informed preferences". This model has achieved prominence in healthcare, however its achievement in practice has been erratic partly due to the

varying degree of involvement of the patient and partly due to the unwillingness of doctors to implement SDM (Edwards et al., 2009). SDM mainly depends on building a good partnership and relationship in the encounter process, share detailed information and allow patients to deliberate and intimate their preferences and opinions during the decision-making process (Elwyn et al., 2012; Godolphin, 2009; Mohr and Spekman, 1994). Elwyn et al. (2012) outlined two main processes involved in achieving SDM to include information exchange, and supporting the decision-making process (deliberation). Information sharing is critical in the encounter process as this helps doctors to arrive at the right diagnoses and prescribe the right drugs for the treatment, and to patients in order to help reduce uncertainty and alleviate concerns. Also supporting deliberation gives patients the opportunity to suggest treatment options, which also seeks to empower them to reduce the imbalance of power between the doctor and the patient (Edwards et al., 2009; Elwyn et al., 2012; Sandman and Munthe, 2010). Considering the processes involved in achieving or implementing this consultation model, SDM assumes the right model to support value co-creation process in healthcare at the micro level. However, it is worth noting that regardless of promoting patient empowerment in clinical encounters, the professional directs the consultation, which limits the extent to which the patient can exercise his autonomy (Gwyn and Elwyn, 1999; Sandman and Munthe, 2010), hence the difficulties in implementing the model.

4.5.2 Doctor-patient partnership

Partnership has gained prominence in healthcare practice especially during the introduction of a patient-centred care approach. Aveling and Martin (2013, p. 74) described partnership as “a polysemic term” that describes the “collaboration between different arrays of stakeholders in diverse contexts”. In healthcare, partnership between the doctor and the patient is considered critical in the service encounter process (Taylor, 2009). Partnership requires both actors to understand each other and provide greater clarification about their respective roles and responsibilities (Austin and Seitanidi, 2012; Brinkerhoff, 2007; Hennig-Thurau, 2004). Austin and Seitanidi (2012)

opined that the dynamics of the value creation process changes as the relationship between partners evolves. Seitanidi (2008) further explained that, partnership requires actors to adapt responsibilities that depart from their limiting predefined roles. This allows for active participation or involvement and orientation of the actors in the consultation process (Claramita et al., 2011; Makaoul and Clayman, 2006; Murray et al., 2007). This approach brings mutuality in control whereby the patient's competences and ideas are explored and integrated into the management plan (Aveling and Martin, 2013; Moeller et al., 2013; Mohr and Spekman, 1994; Taylor, 2009). However, Stewart (2001) asserts that this model is complex in practice but considered as a holistic approach to the consultation.

Research in co-creation mainly takes the value creation perspective and places more emphasis on the engagement processes between the provider and the patient as the locus of creating the expected value (Moeller et al., 2013). This suggests the need for effective collaborative partnership between the involved actors (Say et al., 2006), which supports the concept of patient-centred care that alludes to a 'humanistic biopsychosocial perspective' in practice (Taylor, 2009). This also provides a means of overcoming the 'inflexibility and directiveness' to deliver improved healthcare (Aveling and Martin, 2013). In one instance, Britten et al. (2000) found that misunderstandings in prescription decisions are attributed to the lack of patient participation in the decision-making process. Hence partnerships help enhance the efficacy of health systems and interventions through actor involvement, cooperation and empowerment (Gill et al., 2011; McColl-Kennedy et al., 2012). However, these are not without challenges as communication problems are more likely to occur especially in cases where patient's views or opinions are completely ignored without any better deliberations (Edwards et al., 2009; Mohr and Spekman, 1994; Taylor, 2009).

To overcome potential challenges in the partnership between the doctor and the patient require the need for a better provider-patient orientation to provide a better understanding of their respective views and goals (Claramita et al., 2011; Hennig-Thurau, 2004; Makaoul and Clayman, 2006). It is without doubt that the consequences of the power-shift (patient autonomy) may create tensions in the encounter (Taylor,

2009), however a better understanding of the actors' respective roles could alleviate this challenge (Laing et al., 2002). Increasingly, patients are no longer mere recipients of care, but well informed, enlightened and active with the trust of taking control of their condition which is well noted by Berwick (2009, p. 560) and the Department of Health (2010) as "*nothing about me without me*". Hence a better orientation between the actors helps build good partnerships (Austin and Seitanidi, 2012), which provides an enabling environment for patients and doctors to effectively work together to achieve a better outcome (Mechanic and Meyer, 2000; Perry et al., 1999; Tofan et al., 2012), irrespective of the differences in knowledge and power between them (Brody, 1992; Gwyn and Elwyn, 1999).

4.5.3 Involvement as a motivational factor in the encounter process

Involvement is considered a motivational variable (Celuch and Taylor, 1999; Gabbot and Hogg, 1999; Krugman, 1965; Mitchell, 1981; Zaichovsky, 1985) and has been defined by Rothschild (1984) as an "unobservable state of motivation, arousal, or interest". Involvement is the degree of engagement or participation of the patient in the encounter process (Broderick and Mueller, 1999; Palmer, 2008). Involvement of the patient during the interactive phase explains the cognitive and behavioural characteristics of the patient's decision making (Gabbot and Hogg, 1999; Kinley et al., 2010). The literature thus suggests that, patients benefit greatly when involved through the sharing of information in the service provision (Gill et al., 2011; Kinard and Capella, 2006), which is reflective in the service outcome. Hence, this suggests that patients must put in the necessary efforts, sacrifice time and energy to gain the anticipated value (Wilson and Osei-Frimpong, 2013).

SDL propagates the patient's active involvement in the value co-creation process (McColl-Kennedy et al., 2012). This does allow for not only the co-creation of value between actors, but also the co-creation of long-term relationships (Storbacka and Nenonen, 2009). In effect, provider-patient encounters that result in satisfactory experiences impact on building a long-term relationship (Crosby et al., 1990; Varki and Wong, 2003). In other words, a patient's anticipation of future interaction with the

provider depends on the level of satisfaction in their previous encounter (Johnson and Grayson, 2005; Ramsey and Sohi, 1997). However, the level of patient involvement in the service encounter of the value creation process remains debatable as a result of the varying degrees of involvement between actors reported in the literature (Berthon and John, 2006).

4.6 Patient compliance in healthcare

Improved healthcare outcomes have partly been attributed to the nature of partnership between the actors (Taylor, 2009) as well as the level of adherence/compliance of the patients to the recommendations given in relation to managing their condition (Cameron, 1996; Hausman, 2004; Jin et al., 2008; Sandman et al., 2012). The literature reveals a substantial amount of research into the rudiments of the patient adherence/compliance and as to how compliance/adherence could be improved in order to positively affect the overall treatment outcome (Schmidt and Woolaway-Bickel, 2000; Seiders et al., 2014). In recent studies, patient adherence to healthcare is preferred to the word 'compliance', because adherence gives the patient the opportunity to be actively involved in decision-making whereas compliance suggests that patients are passive recipients of instructions from healthcare professionals (Bailey and Kodack, 2011). Transition from compliance to adherence explains the critical importance of the patient to fully participate in the management of his/her health condition (Sandman et al., 2012). This also highlights the relevance of the concept of value co-creation from the dyadic perspective of both actors in the healthcare setting. However, these terms are used interchangeably in several discussions and writings to mean the same.

Patient adherence/compliance is explained as the "extent to which a patient's behaviour coincides with the medical or health advice" (Haynes et al., 1979, p. 2) or the extent to which patients follow service provider's instructions (Bowman et al., 2004; Hausman, 2004). This addresses the patients' medication-taking behaviour as well as following the advice given by a healthcare professional (Haynes et al., 2005; Sandman et al., 2012). The patient has the opportunity to fully participate in the consultation process

by sharing their opinions, beliefs and concerns with the professionals though in some cases, the patient remains passive and allows the professional to take total control of the encounter (Collins et al., 2007; Elwyn et al., 2012; Hashimoto and Fukuhara, 2004). Patient compliance is considered very critical in the co-creation of value in healthcare settings (Dellande et al., 2004; McColl-Kennedy et al., 2012). In effect, this is an essential role of the patient outside the encounter process, which is regarded as the value-in-use stage of the value co-creation process (Auh et al., 2007; Gronroos and Voima, 2013; Gummesson et al., 2010). It is, therefore, essential to understand the mechanisms of patient compliance and factors that affect this process as the success of the medical outcome rest partly on the patients cognition to abide by the given management regimen or advice.

Compliance as noted above has more to do with behaviour and cognition (Horne, 1993; Wade et al., 2003) and, therefore, this concept could be explained by the social cognitive theory (SCT) approach. SCT explains how human cognitive processes affect outcomes of interest (Bagozzi and Lee, 2002) and how people acquire and maintain certain behavioural patterns (Bandura, 1991). Bandura (1991) affirms that cognitive factors such as outcome expectations, self-efficacy, and intentions are critical determinants of behaviour. Compliance is considered as a self-regulatory mechanism, and as contended by the SCT, human behaviour is motivated by self-influence be it external or personal. Bandura (1991, p. 248) postulates three major self-regulative mechanisms to include; "self-monitoring of one's behaviour, its determinants, and its effects; judgment of one's behaviour in relation to personal standards and environmental circumstances; and affective self-reaction". Dellande et al. (2004) found that, social influences in the society or environment significantly affect the behaviour and emotions of an individual. Patient compliance in this case is largely influenced by a person's behaviour or cognitive attitudes (Bagozzi and Lee, 2002). Although SCT explains the social elements that affect the individual's behaviours and attitudes, the issue of non-compliance remains a complex concept to understand as several interventions have failed (van Dulmen et al., 2007).

The medical and psychology literature has conducted a number of studies to improve on patient compliance, yet this problem persists (Cameron, 1996; Haynes et al., 2005; van Dulmen et al., 2007; Vermeire et al., 2001), which is very critical in co-creating value in the healthcare delivery (Lin and Hsieh, 2011). Van Dulmen et al. (2007) found that there exists an effective compliance intervention but this lacked strong theoretical explanations, and previous research seems fragmented. A number of components of these theories have been studied to include; communication, behaviour, education, etc., but the relative weights and effectiveness are yet to be ascertained (van Dulmen et al., 2007).

4.6.1 Factors affecting consumer adherence/compliance

Patient compliance is greatly affected by a number of factors (Jin et al., 2008). These factors could be categorised broadly into three key areas to consist of; psychosocial factors, healthcare system factors and disease and therapy related factors (Bailey and Kodack, 2011; Jin et al., 2008; Chesney, 2000; Cameron, 1996). Therapeutic non-compliance has always remained a major clinical issue to healthcare professionals and this issue remains complex as to what effective intervention could help reduce this occurrence. This greatly affects treatment outcomes and other clinical consequences including disease complications (Sabate, 2003). The key factors affecting patient compliance are briefly discussed below.

Psychosocial factors

The patients' adherence to therapy and medical advice is largely influenced by their beliefs, attitudes and perceptions (Cameron, 1996; Counte and Christman, 1981; DiMatteo, 2004; Horne, 1993; Wade et al., 2003), and the nature of the clinical engagement (Tofan et al., 2012; Griffith, 1990). The nature of interactions during the service encounter has been proven to enhance patients' compliance to medical directives (Tofan et al., 2012; Vermeire et al., 2001). However, this effect is shaped by individual characteristics, beliefs and norms (Counte and Christman, 1981). The beliefs are mostly influenced by cultural norms, levels of knowledge and understanding

regarding their conditions and therapies (Cameron, 1996; Haskard-Zolnierek and DiMatteo, 2009). The social context of the encounter between healthcare professionals and patients has been found to be one of the effective interventions of improving compliance (Morris and Schulz, 1992).

Healthcare system factors

The factors in the healthcare system that influence adherence include the professional-patient partnership (Jin et al., 2008; Krugger and Gerber, 1998; Weinman, 1990). The nature of the partnership between doctors and patients based on trust and competence is found to be an effective intervention in improving compliance to medical management regimen (Bachinger et al., 2009; Dezil, 2000; Jin et al., 2008). The level of trust and communication between the two parties reinforce the patients' confidence in the professional. The behaviours and attitude of doctors (Chesney, 2000; Winnick et al., 2005) could also affect the patients' compliance. The literature reveals that, judgemental doctors and an unfriendly atmosphere within the healthcare setting adversely affects patient compliance (Chesney, 2000). Hence, doctors should allow patients to have their health needs addressed and understood as well as to discuss the treatment plan prescribed (Kessler, 1991; Koo et al., 2003).

Disease and medication regimen factors

It has been revealed that, factors associated with the disease condition and treatment options, including the duration, cost and complexity of the regimen significantly influence compliance (Bailey and Kodack, 2011; Buabeng et al., 2004; Dezil, 2000; Cameron, 1996). Medical factors including cognitive abilities and the overall health condition (such as chronic conditions) also pose a challenge to compliance (Jin et al., 2008; Veimeire et al., 2001). Horne (1993) noted that medication factors (e.g. dosing frequency, potential adverse effects, poor labelling etc.) could affect consumer compliance. Jin et al. (2008) affirmed this assertion and pointed out that a treatment regimen with the potential effect on day-to-day living might result in decreased compliance.

4.7 Summary

The healthcare system remains a complex service setting, which is considered an essential service that consumers buy. The main goal of healthcare provision is to protect and improve the health and welfare of individuals and populations. With the cost of healthcare provision increasing, the issue of value delivery is questioned. The literature remains fragmented on how to improve value in healthcare while controlling cost. Value has largely been viewed from an economic perspective (Porter, 2010), however considering the nature of the healthcare service; it may be more appropriate to be examined from the experiential perspective. The literature suggests the diversity of meanings or perceptions of value to the respective stakeholders involved in the provision of healthcare. Therefore, to understand value co-creation in healthcare delivery at the micro-level, it will be better served to firstly examine and understand the value perceptions and meanings ascribed by the doctor and the patient.

The growing interest of consumerism in healthcare has brought a number of changes in the service delivery. This has caused a movement away from the paternalist approach to a patient-centred care approach referred to as the shared decision-making model (Elwyn et al., 2012). This model encourages patients to play an active role in the decision-making process exercising some level of autonomy, however the consultation is mainly initiated or directed by a doctor. This has resulted in the need for doctors to reorient to meet the challenges posed by the patient (Collins et al., 2007; Osei-Frimpong and Wilson, 2014).

The importance of value co-creation in healthcare has gained interest from both academics and organisations. The increased awareness of the patient to disease conditions and active participation in healthcare consultations is expected to improve health outcomes. It has also been revealed that patient compliance to medication and other professional advice and directives play an important role in co-creating value in healthcare. However, patients often fail to optimize their role in the co-creation process, which reflects in their levels of non-compliance (Dellande et al., 2004).

This chapter has outlined some of the key influences and approaches to value co-creation in the healthcare setting building on the previous chapters of the literature

review. SDL and value co-creation have gained prominence in healthcare service delivery, but lack empirical research (Hardyman et al., 2014), although Berry and Bendapudi (2007) contend that healthcare provides a significant area for empirical research. It is revealed that investigating value co-creation at the micro level from the dyadic perspective is limited across sectors, and no more so than in the healthcare sector.

Considering the exploratory nature of the value co-creation concept in the healthcare setting at the micro-level, the conceptual framework as alluded to, will be developed further after the qualitative research. As a result, the qualitative research findings will build or expand on the initial framework developed in Fig. 3.1, and formulate the hypotheses tested in this thesis. The sections of the framework to be expanded upon will be highlighted in the following chapter, which also outlines the philosophical and methodological framework of this thesis.

CHAPTER FIVE

RESEARCH METHODOLOGY

5.1 Introduction

The concept of value co-creation remains a more conceptual and abstract discourse (Fisher and Smith, 2011) with less empirical research (Hardyman et al., 2014). Hence, employing an exploratory study as a first step in an empirical research of this nature to ascertain the impact and applicability in practice of the concept is imperative. This chapter describes the research methodology that was employed in the study. The methodology guides this investigation to answer the research questions and consequently address the aim of the study. The chapter starts with an overview of the conceptual framework and unit of analysis of the study. The research philosophy will then be discussed, and then the research approach and the methods that were employed in the study will be presented. In addition, a brief explanation of the context in which the data was collected is also outlined. The data collection and analytical procedures that were employed are also discussed.

5.2 Overview of the conceptual framework

This section presents the conceptual framework to examine the influencing factors of value co-creation from the focal doctor-patient dyadic perspective in a healthcare setting at the micro level. As discussed in chapter two, the service dominant logic (SDL) considers four core concepts pertinent to value co-creation consisting of the actors, service, resources, and value (Lusch and Vargo, 2014). This study focuses on the actors in the service encounter, and the factors that influence the co-creation of value between the parties. The concept of value has been discussed extensively in the literature, which is defined by Holbrook (2006, p. 212) as an “interactive relativistic preference experience”. This implies that value is dependent on the individual and the experience is valuable to the actor. In the context of SDL, Vargo and Lusch (2008b) assert that, value is always uniquely and phenomenologically determined by the beneficiary and is co-created as actors engage to integrate resources. This implies that,

the firms' propositions and service provision are perceived differently by each of the involved actors in the service encounter, and, thus, value is uniquely experienced and determined (Lusch and Vargo, 2014). In other words, the provider creates the enablers for the consumer to achieve value and the consumers contribution in the service encounter helps create value for the provider in turn. In this case customers are more active and considered endogenous to the firm. However, in chapter three of this thesis, Geraerdts (2012) emphasized the complexities surrounding the understanding of value, and the subjective nature of the concept relative to healthcare imply its dependence on the subject's knowledge, understanding and perception of the consequences (La Rocca and Shenota, 2014). This also suggests the importance of understanding the actors' value expectations prior and during the service encounter (Ng and Smith, 2012; La Rocca and Snehota, 2014), considering the different needs and aspirations of the actors involved in the doctor-patient encounter layer in healthcare service delivery as emphasized in chapter four. These expectations of value serve as a measure of the value that is created for the actors. As a result, understanding the respective value meanings to the focal doctor-patient dyad is essential in co-creating value in healthcare.

Healthcare represents a high contact service (Bitner et al., 1997) and, thus, serves as an important application area for empirical studies (Berry and Bendapudi, 2007; Gallan et al., 2013). Given that it is characterized by active collaboration between doctor and patient (McColl-Kennedy et al. 2012), it comes as little surprise that value co-creation has been directly linked to healthcare (Elg et al. 2012; McColl-Kennedy et al. 2012; Nambisan and Nambisan 2009). Healthcare consultations are mostly face-to-face encounters, and therefore an actor's actions could affect the experiences of the other (Hardyman et al., 2014). This suggests that what transpires in the consulting room during clinical encounters is critical in value co-creation. This multilayered complexity emphasizes the importance of understanding the influencing factors of the encounter process between the actors leading to value co-creation. Again co-creation requires the active participation of both actors in the encounter (McColl-Kennedy et al. 2012), which includes the decision-making process when choosing the best course of treatment (Taylor 2009). The past decades have seen transformations in consultations between

doctors and patients (Jaakkola and Halinen 2006; Laing et al. 2002). This is partly attributed to patients' increasing choice, consumerism and availability of information (Edwards, Davis, and Edwards 2009). Consequently, patients' expectation of their role in decision-making in consultations demands active participation to the extent of suggesting treatment options (Edwards, Davis, and Edwards 2009; Hausman 2004). Past approaches to consultations have been dominated by doctors, often regarded as the paternalistic approach (Cegala et al. 2007). This model of consultation was mainly directive and doctor-centered, which sought to limit patients' active participation behaviours to mere provision of information on symptoms and required to adhere/comply to the professional instructions (Elg et al. 2012; Taylor 2009). More recently, the introduction and practice of shared decision-making (SDM) consultation model in healthcare (Elwyn et al., 2010) presents active participatory perspective in care delivery. Considering the processes involved in achieving or implementing this consultation model, SDM model could influence value co-creation in healthcare at the micro level.

As discussed in chapter three of this thesis, value co-creation may require a number of mechanisms, roles, processes, and resources integrated by both actors in the encounter process (Payne et al., 2008; Storbacka and Nenonen, 2009). Hence, the doctor and the patient in a clinical encounter have specific roles to play leading to value creation. The service encounter involves a series of interactions (Payne et al., 2008; Storbacka and Nenonen, 2009), which also provides a platform for service engagement between the actors taking into consideration their resources and capabilities. Clearly, as value co-creation is explained as processes through which providers collaboratively engage patients to create value (Aarikka-Stenroos and Jaakkola, 2012; McColl-Kennedy et al., 2012), it is imperative to understand the nature of the encounter process between the focal doctor-patient dyad and the influencing factors in a healthcare setting. This remains a gap in the literature needing addressed. Hardyman et al. (2014) note that lack of agreement regarding what participation means in healthcare delivery affects the nature of engagement/encounter in the consulting room. At the micro level, the approach to care delivery is critical, which is affected by a number of influencing factors leading to value creation. But Hardyman et al. (2014) point out difficulties in

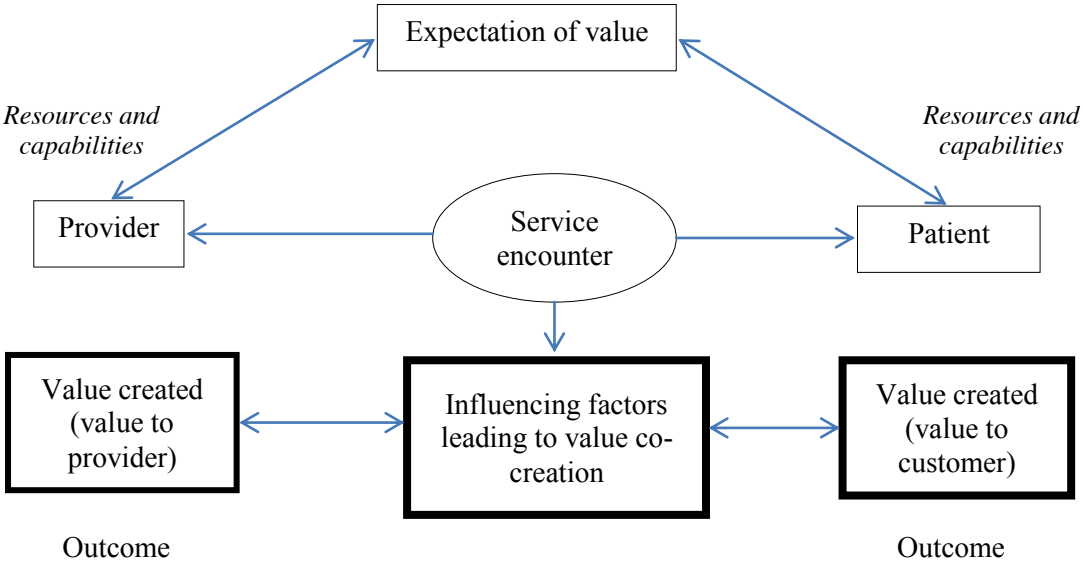
assessing value co-creation in healthcare at the micro level as a result of limited empirical studies underpinning patient engagement. This is also reflective in Payne et al.'s (2008) call for further research on how customers engage in the co-creation of value. In addition, value co-creation is affected by actors' experiences in the service encounter (Gentile et al., 2007; Payne et al., 2008) as well as the likelihood of actor personal characteristics (Anderson et al., 2008). This makes it essential to understand the influencing factors or drivers in value co-creation between the focal dyad involved in the clinical encounter at the micro level, which is not well understood. Also the understanding of the possible effects of actor charactersitics in value co-creation remains a grey area to explore in the literature, which requires further research (Anderson et al., 2008). Again despite the thorough conceptualisations of value co-creation, there is lack of empirical research (Fisher and Smith, 2012; Hardyman et al., 2014) to operationalize and understand the influencing factors that drives value co-creation at the micro level. Hence, this study seeks to understand the influencing factors that affect the dyad in co-creating value by examining what transpires in the consulting room between the doctor and the patient.

In the healthcare setting, models developed by Nambisan and Nambisan (2009), McColl-Kennedy et al. (2012), and Elg et al. (2012) provide useful insights of contributing to value co-creation as emphasised in chapter four of this thesis. Unfortunately, these lack the explicit understanding of the influencing factors that drive value co-creation and how these impact on the service outcomes taking into perspective the differing perceptions of the dyad at the micro level. This is essential considering the actors' different perspectives to what participation means in clinical engagements (Hardyman et al., 2014), especially in the upsurge of consumerism in healthcare, as well as promotion of patient-centred care approach in care delivery. This assumes that what actors perceive to be of value is jointly created by the integration of resources in a healthcare context. As a result, value co-creation can be fully understood when employing a dyadic perspective and recently authors have pointed out the need for it (e.g., Aarikka-Stenroos and Jaakkola, 2012; Saarijarvi et al. 2013). Aarikka-Stenroos and Jaakkola (2012) note that, although 'interaction and collaboration' between the two actors is of paramount importance in the value co-creation process yet

this remains abstract, lacking empirical studies, which seems to shield the details on the roles played or inputs by the involved actors.

Building on the above discussion, the dyadic value co-creation in healthcare at the provider-patient encounter layer is conceptualized on the basis of resources, service efforts, value perceptions or expectations, and context variability as shown in Fig. 5.1.

Fig. 5.1 A conceptual framework of the dyadic value co-creation (model development 1)



From Fig. 5.1, it is argued that the actors involved in the service exchange have their expectations of value before, during and after the encounter, which is represented by double-headed arrows. Their expectations of value serve as a measure towards the value that is created. As value co-creation requires collaborative efforts of the involved actors (Jaakkola and Alexander, 2014), a number of factors are likely to affect the encounter process as well as actor experiences, which have an effect on the value that is (co)-created. This also affirms that in co-creation, each of the actors involved have respective roles to play (Broderick, 1998), however, the value that is created is influenced by their experiences in the encounter (Payne et al., 2008). For instance, the approach or nature of engagement in the consulting room between the doctor and the patient could affect the experiences of the patient (either negative or positive), which

could also affect the value that is created (Osei-Frimpong and Wilson, 2014). There is therefore a need for more research to gain a better understanding of the influencing factors of the encounter process that leads to value co-creation between the doctor-patients in healthcare setting at the micro level. The final model to be adopted and tested in this thesis will be developed after exploring the concept based on this initial framework (Fig. 5.1) in the qualitative research. The following sections will discuss the research philosophy and the methods employed in this thesis.

5.3 Research philosophy

Philosophy is not considered a theory but an activity. "It is a method involving thinking skills that lifts us above the simple and uncreative activity of merely reproducing the ideas of others, so that we are able to search for and discover answers for ourselves" (Greetham, 2006, p. 7). This brings to the fore; the influence of philosophical ideas and ideologies on research that is largely identified in any research design (Creswell, 2009; Tronvoll et al., 2011). Easterby-Smith et al. (2008) note the importance of philosophical underpinnings of research by arguing that a lack of these philosophical issues could mar the quality of the research. Saunders et al. (2009) contend that the assumptions underpinning these philosophical ideas affect how the researcher views particular phenomena that invariably affect or shape the research strategy and methods employed. Easterby-Smith et al. (2008) identify three reasons for the usefulness of a philosophical stance in research: (1) it informs the researcher of the appropriate research designs and potential methods; (2) a researcher's understanding of philosophy enables him to identify successful research designs; (3) this may also present other possible designs and approaches that the researcher can explore. However, researchers' philosophical position have always generated debates to downplay the views of others, but as noted by Easterby-Smith et al. (2008, p. 56); "… it is important to understand both sides of an argument because research problems often require eclectic designs, which draw from more than one tradition".

Philosophy in the research domain is often referred to as a worldview (Creswell, 2009) or paradigm (Feilzer, 2010; Hunt, 1991a; Tronvoll et al., 2011). There are a number of

philosophical positions adopted by researchers, but the most dominant ones are the positivism (post-positivism) and constructivism (Easterby-Smith et al., 2008). Along the continuum are other paradigms (including critical realism, realism, pragmatism, etc.) with more relaxed assumptions and perceptions. These paradigms differ mostly on the ontological, epistemological and methodological assumptions underlying their positions (Creswell, 2009; Easterby-Smith et al., 2008). Saunders et al. (2009) explain ontology as how researchers view the nature of reality and epistemology as what is considered as the acceptable knowledge in the area of the research. These are explained in Table 5.1.

Table 5.1. Ontology, Epistemology and Methodology

Terminology	Explanation
Ontology	Philosophical assumptions about the nature of reality
Epistemology	General set of assumptions about the best ways of inquiring into the nature of the world
Methodology	Combination of techniques used to enquire into a specific situation

Source: Table adapted from Easterby-Smith et al. (2008, p. 60)

The choice of a researcher's philosophical position entails a detailed assessment of the differences between the various paradigms on the basis of their assumptions (Plano Clark and Creswell, 2008; Teddlie and Tashakkori, 2009). The subsequent sections will elaborate post-positivism/positivism, constructivism/interpretivism and pragmatism and justify why the pragmatic approach is adopted in this study. A comparison of the three paradigms is constructed in Table 5.3.

5.3.1 Positivism or post-positivism

Positivism has been considered as one of the most powerful philosophical approaches in the west during the second half of the 19th century (Carr and Kemmis, 1986). Positivists believe that the social world is organized by universal laws and truth (Phillimore and Goodson, 2004), therefore, only observable variables will lead to the generation of trusted data (Saunders et al., 2009). Hence, Ayikoru (2009) contends that

positivists assume behaviour can be predicted and controlled through cause and effect relationships. These are influenced by the work of August Comte (1798-1857), the French Historian and Philosopher, who argued that, the only real knowledge is the observable phenomenon (Easterby-Smith et al., 2008; Hunt, 1991a). In influencing the logic behind positivists' views, Comte explains that: "Any proposition which is not reducible to the simple enunciation of the fact – either particularly or in general – can have no real or intelligible meaning for us" (Comte, as cited in Hunt, 1991a, p. 252).

Ontologically, the positivists assume reality to be external and objective and epistemologically, knowledge is dependent on what is observed and measured in the external reality (Creswell, 2009; Easterby-Smith et al., 2008; Feilzer, 2010; Hunt, 1991a; Tronvoll et al., 2011). It is also argued by the positivist that, researchers must be independent and objective of what is observed or studied (Easterby-Smith et al., 2008). These assumptions have been contested by a number of scholars (Guba and Lincoln, 1994; Reichardt and Rallis, 1994) to address a number of assumptions underlying the positivists' view that has been discredited by the intellectual community leading to the position of the post-positivists. For instance, the positivists argue that research is conducted in a more 'value-free way' (Saunders et al., 2009), however, Reichardt and Rallis (1994) argue that research is largely influenced by values to discredit the 'value-freedom' position of the positivist. Positivists (post-positivist) adopt hypothetico-deductive research methodology (Easterby-Smith et al., 2008) in which theory is developed from literature and hypotheses are developed and tested to support or refute the theory (Blaikie, 1993; Creswell, 2009). Hence, Hunt (1991a, p. 213) contends that, "positivism is the proper foundation for theory development". The argument of the positivist assuming a singular reality and knowledge being significant in observable objects underlies the assumptions of quantitative research methods (Feilzer, 2010).

5.3.2 Social constructivism

Contrary to the views of the positivists, others hold that it is prudent to gain deeper insight into a complex phenomenon rather than narrowing it down into a discrete set of

ideas (Creswell, 2009; Saunders et al., 2009). The social constructivists (or in most cases, interpretivist) are of the view that, there is the need to understand different experiences instead of searching for cause and effect of a particular phenomenon or fundamental laws (Easterby-Smith et al., 2008). Hence, the constructivists seek a plurality of views compared to the reductionist approaches in (post) positivism. The basic assumption "stems from the view that, reality is not objective and exterior, but is socially constructed and given meaning by people" (Easterby-Smith et al., 2008, p. 58). Therefore, the interaction between the researcher and the participants is critical in knowledge creation (Creswell, 2009; Mertens, 2008). Susman and Evered (1978) purport that this philosophical position could help resolve the "epistemological crisis" arising in management research as a result of the application of the positivism philosophy in the social sciences.

Constructivists argue that the reality is within us; hence, investigating this reality is influenced by the subjective state of the researcher (Creswell, 2009). This implies that, research employing this philosophical approach is focused on the meaning of the observation and not a measurement. Research is conducted through inductive methods through which theories or patterns of meaning can be developed (Creswell, 2009). Teddlie and Tashakkori (2009, p.9) note that, the constructivist approach to research is generally "associated with the gathering, analysis, interpretation and presentation of narrative information" which are grouped into themes and analysed. The entire process of the research is largely influenced by the researchers' personal, cultural, and historical experiences (Creswell, 2009), and to a larger extent makes their findings subjective. The plurality of reality and the subjective nature of knowledge underlie the assumptions of qualitative research, which is considered as the acceptable methods of inquiry to the social constructivist (Feilzer, 2010; Tashakkori and Teddlie, 1998).

5.3.3 Pragmatism and the mixed method approach

As the paradigm war rages on as seen in the extreme philosophical stance of the positivist and the social constructivist, the pragmatist avoids the relentless debates on what is considered as truth and reality (Tashakkori and Teddlie, 1998). This stems

from the works of James (1907, p. 22) who argued that in "settling the metaphysical disputes" between the extreme philosophical ideologies, adopting pragmatic methods which seek to explain "each notion by tracing its respective practical consequences" will be more appropriate. Hence, to the pragmatist, a continuum exists between the objective and subjective viewpoints and therefore, understanding the epistemology and ontology depends on the research questions or problem (Morgan, 2007; Saunders et al., 2008; Tashakkori and Teddlie, 1998). Morgan (2007) developed a framework to compare the pragmatic approach to the two traditional methods (quantitative and qualitative), which typically represent the views of the positivist and the social constructivist. This is summarised in Table 5.2.

Table 5.2. A pragmatic alternative to the key issues in social science research methodology

	Quantitative approach	Qualitative approach	Pragmatic approach
Connection of theory and data	Deduction	Induction	Abduction
Relationship to the research process	Objectivity	Subjectivity	Inter-subjectivity
Inference from data	Generality	Context	Transferability

Source: Adapted from Morgan (2007, p. 71)

From the pragmatists' viewpoint, *abduction* falls between induction and deduction that bring useful points of connection between theory and data, which are assessed through action (Morgan, 2007, p. 71). Haig (2005, pp. 372-373) defines abductive logic as "reasoning from phenomena, understood as presumed effects, to their theoretical explanations in terms of underlying causal mechanisms". The relationship between the researcher and the research process has always been argued to be either objective or subjective considering the position of the positivist and the social constructivist (Easterby-Smith et al., 2008), however, being completely objective or subjective is considered impossible in practice (Morgan, 2007). The pragmatists obtain this duality by being *intra-subjective* with the assertion that, there could be a "single real world" yet socially constructed and given meaning by people (Morgan, 2007). Considering knowledge as either context dependent or generalised (Nonaka, 1994), the pragmatist argues that knowledge obtained from a specific setting should be considered on its

relevance or usefulness when transferred to other settings. As a result, Morgan (2007, p. 72) describes knowledge on the basis of its *transferability*, which is not "content-bound or generalizable".

It is noted that the pragmatist adopts multiple methods in research to offer the best way of finding answers to the research questions (Giacobbi et al., 2005; Morgan, 2007). The pragmatists therefore, do not confine themselves to the extreme philosophical stance (as in the case of the constructivist and the positivist) (Creswell, 2009) but rather sidesteps the issue of reality and knowledge to accept the fact that the researcher orients herself to find practical solutions in the real world (Feilzer, 2010). Hence, it is purported that, ontologically, the pragmatist views nature as 'existential reality' and knowledge as one that is useful and created through a line of action (Feilzer, 2010; Morgan, 2007). Cherryholmes (1992) contends that pragmatism presents an alternative approach to research philosophies that requires strict adherence to ontological and epistemological underpinnings. Morgan (2007) affirms this assertion and argues that 'what and how' to research is dependent on the researcher's consideration of the prevailing consequences. Hence, the underpinning assumption is that, knowledge is instrumental and contextual, and that, truth is what works at a particular time within a context (Cherryholmes, 1992).

Feilzer (2010, p. 8) notes that "the pragmatists' view of the measurable world is in reference to an experiential world with different elements or layers, some objective, some subjective, and some a mixture of the two". To this end, Johnson and Onwuegbuzie (2004, p. 17) argue that, the pragmatic position presents researchers with: "an immediate and useful middle position, philosophically and methodologically; it offers a practical and outcome-oriented method of inquiry that is based on action and leads, iteratively, to further action and the elimination of doubt; and it offers a method for selecting methodological mixes that can help researchers better answer many of their research questions". In this respect, Johnson and Onwuegbuzie (2004) suggest the adoption of the pragmatic philosophical approach will enhance communication among researchers from different worldviews to advance knowledge. In essence, research approaches are mixed to offer the best opportunities for answering important research

questions. Based on the arguments presented above, it can be argued that the pragmatist approach better suits this research considering the concept under investigation and the research questions. This study presents a combination of qualitative and quantitative research questions to achieve the aim of this thesis; hence, the pragmatist approach is adopted. Table 5.3 highlights the differences in the three paradigms discussed above on the basis of their ontological, epistemological, axiological and methodological positions.

Table 5.3: Comparison on the three philosophical positions based on their basic assumptions

	Positivism	Social Constructivism	Pragmatism
Ontology: the researcher's view of the nature of reality or being	External, objective and independent of social actors	Socially constructed, subjective and multiple	External, multiple, view chosen to best enable answering of research question
Epistemology: the researcher's view regarding what constitutes acceptable knowledge	Only observable phenomena can provide credible data, facts. Focus on causality and law like generalizations, reducing phenomena to simplest elements	Subjective meanings and social phenomena. Research relies on the participants views of the phenomenon studied.	Either or both observable phenomena and subjective meanings. Practically 'what works' to address the research questions
Axiology: the researcher's view of the role of values in research	Research is undertaken in a value-free way, the researcher is independent of the data and maintains an objective stance	Research is value bound, the researcher is part of what is being researched, cannot be separated and so will be subjective	Values play a large role in interpreting results, the researcher adopting both objective and subjective points of view
Methodology: what is the research process	Deductive: researchers test an a priori theory	Inductive: researchers start with participants' views and build up to patterns, theories and generalizations	Abductive: combining inductive and deductive approaches that bring useful points of connection between theory and data
Methods: data collection techniques most often used	Highly structured, large samples, measurement, mainly quantitative	Small samples, in-depth investigations, qualitative	Mixed or multiple method designs, quantitative and qualitative
Rhetoric: what is the language of research	Formal: researchers use agreed-on definitions of variables	Informal: researchers write in a literary, informal style	Formal or informal: researchers may employ both styles of writing.

Source: Table adapted from Creswell and Plano Clark (2011, p. 42) and Saunders et al. (2009, p. 119)

5.4 Research design

Although the positivist approach has dominated in service science research, Tronvoll et al. (2011) suggest the need for researchers to adopt other approaches or paradigms. However, this depends on what is being studied, for instance 'value' in the case of this research. Value is thus considered to be "individually intra-subjective and socially inter-subjective" (Helkkula et al., 2012, p. 61) which presents different meanings depending on the actor and the context. Research in the area of value co-creation has mostly assumed the constructivist and phenomenological approach (see; Aarikka-Stenroos and Jaakkola, 2012; Edvardsson et al., 2011; Elg et al., 2012; Gill et al., 2011; Helkkula et al., 2012; McColl-Kennedy et al., 2012; Payne et al., 2009; Schau et al., 2009; Witell et al., 2011), however, some researchers have adopted the positivist approach to test some developed hypotheses (see; Chan et al., 2010; Xie et al., 2008; Zhang and Chen, 2008). This research seeks to explore what value means to the focal dyad, how value is co-created by the doctor and the patient, then tests hypotheses mainly formulated from the qualitative research findings using quantitative survey research. The literature suggests divergent views or meanings to 'what value is', and how value is co-created by the focal dyad remains under-researched and conceptual. Following is a brief explanation of the aim and research questions of this study that warrant the choice of the philosophical position and the type of methods to adopt.

5.4.1 Aim and research questions

The aim of this study is *to investigate and gain deeper insights into the value co-creation by examining the influencing factors of the encounter process and how this impacts on the actors in co-creating value in healthcare service delivery at the micro level*. Schau et al. (2009, p. 31) note that, "value is known to be co-created, but we do not know how, which makes replicating successful co-creation strategies difficult… and transferring from one product domain to another nearly impossible". Likewise Aarikka-Stenroos and Jaakkola (2012) note that, although 'interaction and collaboration' between the two actors is of paramount importance in the value co-creation process, this remains abstract, lacking empirical studies, which seems to shield

the details of the roles played or inputs by the involving actors. This calls for the need for further research to address these gaps. Particularly, this study seeks to examine the actor experiences in the consulting room to understand value co-creation from the dyadic perspective at the micro level. Thus addressing this aim brings out the following research questions:

1. *What does value mean to the professional and the patient in the healthcare service delivery?*
2. *What are the key factors that affect/drive value co-creation between the doctor and patient at the micro level during the healthcare service encounter?*
3. *What impact do these factors have on the focal dyad at the micro level in relation to the service outcome in the healthcare setting?*
4. *Do personal characteristics of the actors' moderate value co-creation in relation to the outcomes of the service?*

From the research questions outlined above, it is noted that, the first two require a qualitative study to explore the understanding of the central phenomenon – "value" and how it is co-created by the focal dyad. The third and fourth research questions assume a quantitative approach to measuring the impact of the value co-creation process on the patient and the doctor in the service delivery and the outcome. Hence, this study seeks to address research questions that fall within both qualitative and quantitative research. This suggests the adoption of a mixed method approach, which seeks to combine multiple methods that best answer the respective research questions, hence falls within the assumptions of the pragmatist philosophical stance. This philosophical position as outlined above allows the researcher to adopt research methods that best answer the research questions, suggesting that knowledge is one that is useful and created through line of action (Feilzer, 2010; Morgan, 2007).

5.4.2 Mixed methods

Mixed methods research has received prominence across various fields of study (Ross and Onwuegbuzie, 2012) in the last 10-15 years though with some level of diverse

opinions (Teddlie and Tashakkori, 2012). This is evident in the different definitions used by various authors (e.g. Creswell, 2009; Creswell and Plano Clark, 2007; Greene et al., 1989; Johnson et al., 2007; Remenyi et al., 1998; Tashakkori and Teddlie, 1998). Johnson et al. (2007, p. 123) define mixed methods as "the type of research in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches (e.g. use of qualitative viewpoints and quantitative viewpoints, data collection, analysis inference techniques) for the broad purposes of breadth and depth of understanding and corroboration". This definition focuses on the research design and purpose of the study. However, Creswell and Plano Clark (2011, p.5) explained mixed methods by combining "the methods, a philosophy and a research design orientation" in what they refer to as; "definition of core characteristics of mixed methods research". Outlining the core characteristics of mixed methods, the researcher (Creswell and Plano Clark, 2011, p. 5):

- Collects and analyses persuasively and rigorously both qualitative and quantitative data (based on research questions);
- Mixes (or integrates or links) the two forms of data concurrently by combining them (or merging them), sequentially by having one build on the other, or embedding one within the other;
- Gives priority to one or both forms of data (in terms of what the research emphasises);
- Uses these procedures in a single study or multiple phases or a programme of study;
- Frames these procedures within philosophical worldviews and theoretical lenses; and
- Combines the procedures into specific research designs that direct the plan for conducting the study.

The integration of qualitative and quantitative research designs incorporated in mixed methods research rejects the "incompatibility thesis" (Hanson, 2008; Teddlie and Tashakkori, 2012), which allows the researcher to select the appropriate methods or techniques to answer a range of complex research questions of the study (Creswell and

Plano Clark, 2011; Frels and Onwuegbuzie, 2013; Green, 2008; Powell et al., 2008). For instance, Frels and Onwuegbuzie (2013) note that, quantitative research helps the researcher to answer questions of who, where, how many, how much, what is the relationship between variables of interest, but cannot adequately answer the why and how questions. Likewise, qualitative research answer the why and how questions and cannot adequately answer the questions addressed thoroughly by quantitative research. This deficiency on the part of the separate research methods is perfectly addressed by conducting a mixed method research approach (Frels and Onwuegbuzie, 2013; Tashakkori and Teddlie, 1998, 2003). Against this backdrop, Creswell and Plano Clark (2011) opine what research problems fit mixed methods:

… In which one data source may be insufficient, results need to be explained, exploratory findings need to be generalized, a second method is needed to enhance a primary method, a theoretical stance needs to be employed, and an overall research objective can be best addressed with multiple phases, or projects (p. 8).

Mixed methods research studies began in the 1960s (Ross and Onwuebguzie, 2012) while some authors date the emergence of this type of research to the late 1980s when several scholars start to conceptualise it into mainstream research (Creswell and Plano Clark, 2011) as the third to the two main research streams (quantitative and qualitative research). Campbell and Fiske (1959) provided the platform of mixing methods for validation purposes by developing the idea of 'multiple operationism', which was further extended by Webb et al. (1966) who introduced the term *triangulation* in the measurement processes. Other scholars have advocated the use and acceptability of mixed methods research (e.g. Cronbach, 1975; Denzin 1978; Jick, 1979; Morse, 1991; Rossman and Wilson, 1985). They shared the view that quantitative and qualitative methods can be complementary to each other and not opposing techniques. For instance, Jick (1979, p. 608) employed the mechanism of triangulating both quantitative and qualitative approaches to study 'the effect of a merger on employees' and explained "triangulation allowed for more confident interpretations, for both testing and developing hypotheses, and for more unpredicted and context-related findings".

The development of mixed methods has gone through a number of stages to register its relevance in the research domain as an alternative approach in complex studies (Creswell and Plano Clark, 2011); this is summarised in Table 5.4.

Table 5.4: Developmental stages of mixed methods research

Stage of Development	Period	Contribution
Formative period	1959 - 1979	The initiation and emergence of the idea of mixed methods application in research
Paradigm debate period	1985 – 1997	The paradigm incompatibilities were discussed to find a consensus of reconciling approaches
Procedural development period	1989 – 2000	The procedure of conducting mixed method research was discussed focussing on the methods of data collection, data analysis, research designs, and the purpose
Advocacy and expansion period	2003 – present	Mixed methods research is considered as an alternative research approach to the traditional mainstream research approaches
Reflective period	2003 – present	Highlights key issues, challenges and critique of this research approach and how these could be addressed

Source: Table adapted from Creswell and Plano Clark (2011, pp. 23-36)

However, there is an on-going debate on the consistency in the definition of common constructs (Johnson et al., 2007; Teddlie and Tashakkori, 2012). Teddlie and Tashakkori (2012, p. 783) contend that, "unless mixed methodologists develop a core identity of commonly understood characteristics and principles that cross disciplinary boundaries, it may simply be absorbed into this eclectic blend of research methodologies". The authors developed nine 'contemporary core characteristics of mixed methods and placed emphasis on four they consider quite controversial which need further discussions. The four 'controversial' core characteristics are briefly explained in Table 5.5. Although mixed methods research is considered as the approach "that will provide the most informative, complete, balanced, and useful research results" (Johnson et al., 2007, p. 129), the paradigm war in relation to the 'incompatibility thesis' remains debatable (Guba and Lincoln, 2011). In relation to paradigm pluralities, Guba and Lincoln (2011, p. 117) wrote:

Are paradigms commensurable? Is it possible to blend elements of one paradigm into another, so that one is engaging in research that represents the best of both

worldviews? The answer, from our perspective, has to be a cautious yes. This is so if the models (paradigms, integrated philosophical systems) share axiomatic elements that are similar, or that resonate strongly between them.

Table 5.5: Four 'controversial' core characteristics of mixed methods research

Core characteristic	Explanation
Methodological eclecticism	This stems from the rejection of the 'incompatibility thesis' which allow mixed methods researchers to select techniques appropriate to answer research questions.
Paradigm pluralism	Debates on philosophical assumptions underlying mixed methods research continues as researchers aligning to pragmatism, critical realism, dialectical and transformative paradigms adopt this research approach. However, difference between methods and methodology must be considered to curb the inherent tensions between researchers with axiological considerations as opposed to those with epistemological considerations.
Iterative, cyclical approach to research	Mixed methods research could start at any point in the cycle as this approach combines both deductive and inductive logic in one study.
Set of basic "signature" research designs and analytical processes	These include parallel mixed designs, conversion mixed designs, sequential mixed designs, data transformation.

Source: Table adapted from Teddlie and Tashakkori (2012, pp. 776-782)

Several conceptual frameworks and typologies have been developed to enhance the understanding and application of mixed methods research (Collins et al., 2006; Harrison and Reilly, 2011; Johnson and Onwuegbuzie, 2004; Leech and Onwuegbuzie, 2009; Morse, 1991; Tashakkori and Teddlie, 1998, 2003). Mixed methods research involves collecting, analysing and interpreting quantitative and qualitative data in a single study (Creswell, 2009; Leech and Onwuegbuzie, 2009; Tashakkori and Teddlie, 2003). Leech and Onwuegbuzie (2009) note four components, of which one or more could lead a researcher to adopt mixed methods research. The four components include (p. 267):

- The research objective (e.g. the researcher uses research objectives from both quantitative and qualitative research, such as the objective of both exploratory and prediction)
- Type of data and operations
- Type of analysis
- Type of inference

A number of research approaches or designs have been proposed in conducting mixed method research. Leech and Onwuegbuzie (2009, p. 268) conceptualized these designs into three broad dimensions, namely: "level of mixing (partially mixed versus fully mixed), time orientation (concurrent versus sequential), and emphasis of approaches (equal status versus dominant status)". These broad dimensions are further crossed out to produce eight types of mixed methods research design, as listed (p. 268):

- Partially mixed concurrent equal status design
- Partially mixed concurrent dominant status design
- Partially mixed sequential equal status design
- Partially mixed sequential dominant status design
- Fully mixed concurrent equal status design
- Fully mixed concurrent dominant status design
- Fully mixed sequential equal status design
- Fully mixed sequential dominant status design

The different approaches in designing mixed methods research may differ in their emphases but share certain commonalities (Creswell and Plano Clark, 2011) in relation to the four components listed. Explicitly, Creswell and Plano Clark (2011, pp. 69-72) outlines six major mixed methods research designs to include:

- **The convergent parallel design**: the research is carried out concurrently, where the quantitative and qualitative strands are equally prioritized. They are analysed separately and only converge during the overall interpretation of the results
- **The explanatory sequential design**: this design occurs in two distinct phases whereby the researcher conducts the quantitative research and analysed with the priority for addressing the research questions. This is followed by the qualitative phase, and the results used to explain the findings of the quantitative research.
- **The exploratory sequential design**: this design also occurs in two distinct phases, whereby the researcher conducts the qualitative research and analysis.

The researcher then conducts the quantitative research to build on the findings from the qualitative research to test or generalize the initial findings.

- **The embedded design**: this approach requires the researcher to collect and analyse both quantitative and qualitative data within a traditional quantitative or qualitative design. The researcher then adds a supplementary strand (either quantitative or qualitative design) depending on the kind of study in order to enhance the overall design.
- **The transformative design**: this design allows the researcher to concurrently or sequentially collect and analyse quantitative and qualitative data sets within a transformative theoretical framework.
- **The multiphase design**: this design combines both sequential and concurrent quantitative and qualitative strands over a period during which the study is conducted.

The choice of the type of a mixed methods research design (which follows in the next section) should be informed by four key decisions as noted by Creswell and Plano Clark (2011, p. 64):

1. The level of interaction between the quantitative and qualitative strands
2. The relative priority of the strands
3. The timing of the strands
4. The procedures for mixing the strand.

Every research method employed (whether 'traditional' quantitative or qualitative) by researchers has its advantages and disadvantages or challenges. This is no different from mixed methods research. Table 5.6 provides a number of advantages and challenges posed by adopting mixed methods research.

Table 5.6: Advantages and Challenges of mixed methods research

Advantages	Challenges/ weaknesses
➢ This research approach addresses the weaknesses of both quantitative and qualitative research. ➢ It provides more evidence for studying a research problem than either quantitative or qualitative research alone. ➢ It enables the researcher to answer research questions that cannot be answered by quantitative and qualitative approaches alone. ➢ It bridges the adversarial divide between quantitative and qualitative researchers. ➢ Encourages the use of multiple worldviews or paradigms and therefore rejects the incompatibility thesis. ➢ This approach allows the researcher to adopt all methods possible to address the research problem. ➢ Provides an opportunity for presenting a greater diversity of divergent views. ➢ Can provide better inferences than the traditional approaches used alone through convergence and corroboration of findings. ➢ Can add insights and understanding that might be missed when only a single method is used. ➢ Can be used to increase the generalizability of the results. ➢ Can produce more complete knowledge necessary to inform theory and practice.	➢ Can be difficult for a single researcher to carry out both qualitative and quantitative research, especially if two or more approaches are expected to be used concurrently; it may require a research team. ➢ Researcher has to learn about multiple methods and approaches and understand how to mix them appropriately. ➢ Methodological purists contend that one should always work within either a qualitative or a quantitative paradigm. ➢ More expensive. ➢ More time consuming. ➢ Some of the details of mixed research remain to be worked out fully by research methodologists (e.g., problems of paradigm mixing, how to qualitatively analyse quantitative data, how to interpret conflicting results). ➢ The approach is relatively new and therefore, may be difficult convincing and or understanding its value.

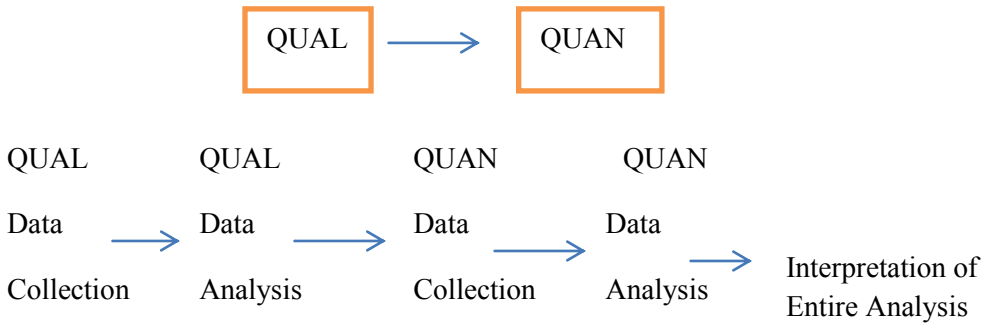
Source: Table adapted from Creswell and Plano Clark (2011, pp. 12-15), Johnson and Onwugbuzie (2004, p. 21) and Tashakkori and Teddlie (2003, pp. 14-15)

5.4.3 Mixed method research design

The research questions outlined for this study seek to explore the concept of value and value co-creation and further develop hypotheses for testing that suggest the adoption of qualitative research followed by a quantitative survey research. Thus, the research questions for this study combine both exploratory and confirmatory questions. Secondly, this is a relatively new concept that is under-researched (Hardyman et al., 2014) with fewer tested models. Therefore, it may be prudent to firstly explore the concept in any empirical study. In view of this, the chosen design to suit this research will be the sequential exploratory design (SED). This design allows the researcher to explore the concept and build on it with quantitative research for better generalization (Creswell and Plano Clark, 2011; Harrison and Reilly, 2011; Tashakkori and Teddlie,

2003). The rationale is aligned with the fact that qualitative data can be used to develop items for questionnaires, testable hypotheses, or theoretical frameworks, which can serve as a foundation to analyse quantitative data later collected (Wilkins and Woodgate, 2008). Morgan (1998) notes that, this design is suitable when testing elements in an emerging concept or theory, and therefore, best suited for exploring and generalizing a phenomenon (Creswell et al., 2003). The approach to this design is as shown in Fig. 5.2:

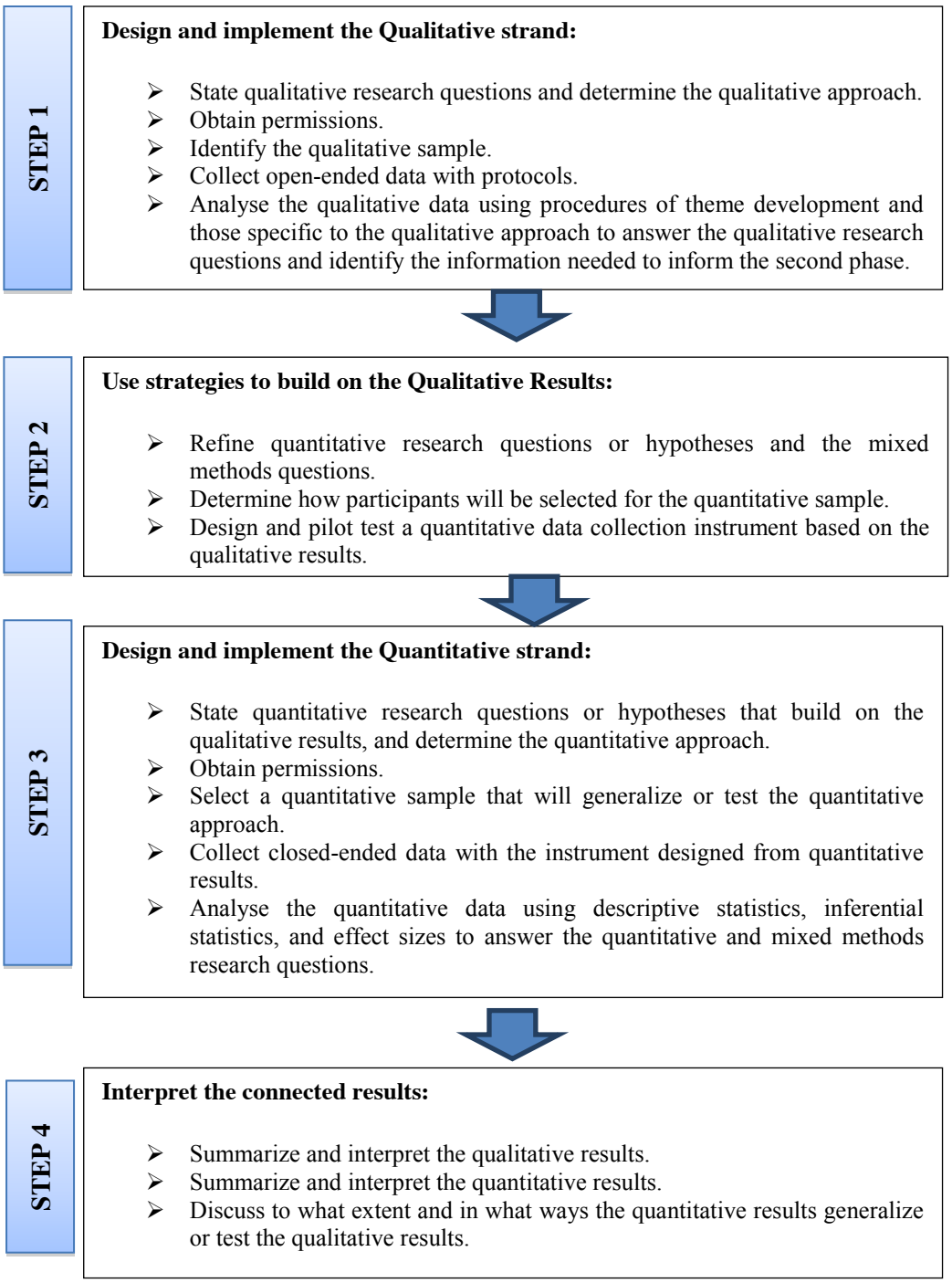
Figure 5.2: Sequential Exploratory Design



Source: Figure adopted from Creswell et al. (2003, p. 225)

From Fig. 5.2, the qualitative data is collected in the first phase of the research and analysed separately. The analysed qualitative data is further developed to generalize the findings using quantitative follow-up research in the second phase of the study. The quantitative data is then collected and analysed separately as in the case of the qualitative data. However, the interpretation of the results is based on the findings from the entire study to make informed inferences and conclusions. It is noted that building on the qualitative data for the quantitative follow-up can involve "identifying the types of questions that might be asked, determining the items/variables/scales for instrument design, and generating a typology or classification (Harrison and Reilly, 2011, p. 15). This design will however, give priority to the quantitative phase, and therefore, the qualitative phase will help identify or narrow the focus of the possible variables in developing the model (Creswell et al., 2003) and also help explain or clarify the findings. Creswell and Plano Clark (2011) outline four major steps to carry out this sequential exploratory design, which is summarized in Fig. 5.3; this expands on Fig. 5.2.

Fig. 5.3: Flowchart of the basic procedures in implementing a sequential exploratory design for this study



Source: Flowchart adopted from Creswell and Plano Clark (2011, p. 88)

In the flowchart (Fig. 5.3), the design begins with the collection and analysis of qualitative data, and step 2 shows the point of interface in mixing the research. In step

3, the quantitative strand is implemented to examine the salient variables using the developed instrument with a new sample of participants, and finally interpret how and to what extent the quantitative results generalize the qualitative findings (Creswell and Plano Clark, 2011). The prime objective of the SED is to "generalize qualitative findings based on a few individuals from the first phase to a larger sample gathered during the second phase" (Creswell and Plano Clark, 2011, p. 86). As noted by Denscombe (2008, p. 272), "methods are mixed to produce a more complete picture, to avoid the biases intrinsic in the use of mono-method designs, and as a way of building on, and developing, initial findings". Thus, Feilzer (2010) opines the flexibility of employing a second stage of research rendered by adopting a sequential design. In this case, the results of the qualitative methods help develop or inform the quantitative methods (Creswell, 2009).

Creswell and Plano Clark (2011, pp. 86-87) outline a number of relevant considerations that underpin the choice of the sequential exploratory design to include the following:

- The variables are unknown.
- There is no guiding framework or theory.
- The researcher and the research problem are more qualitatively oriented.
- The researcher does not know what constructs are important to study, and relevant quantitative instruments are not available.
- The researcher has the time to conduct the research in two phases.
- The researcher has limited resources and needs a design where only one type of data is being collected and analysed at a time.
- The researcher identifies new emergent research questions based on qualitative results that cannot be answered with qualitative data.

From the list, it is noted that, the research questions of this study informed by the literature in the previous chapters point towards these considerations if not all. The concept of value co-creation remains at the conceptual stage (Fisher and Smith, 2011; Hardyman et al., 2014), which lacks a developed and validated instrument (McColl-Kennedy et al., 2012; Ng et al., 2010). The research questions outlined in this study

also meet the criteria for employing SED and the fact that, the researcher has ample time and resources to conduct the research in two phases. The strengths and challenges of this design are summarised in Table 5.7, in particular the advantages are that the process is straightforward to implement, describe and report and useful for researchers wishing to explore a phenomenon but expand on initial qualitative findings (Creswell, 2009). In effect, the exploratory design place emphasis on theory and instrument development variants in relation to the importance attached to qualitative and quantitative elements respectively (Creswell and Plano Clark, 2011).

Table 5.7: Strengths and Challenges of the Sequential Exploratory Design

Strengths	Challenges
➢ Separate phases make the exploratory design straightforward to describe, implement, and report.	➢ The two-phase approach requires considerable time to implement, potentially including time to develop a new instrument. Researchers need to recognize this factor and build time into their study plan.
➢ Although designs typically emphasise the qualitative aspect, the inclusion of a quantitative component can make the approach more acceptable to quantitative-biased audiences.	➢ Sometime difficult to specify the procedures of the quantitative phase when applying initial approval for the study. ➢ Researchers should consider using a small purposeful sample in the first phase and a large sample of different participants in the second phase to avoid questions of bias in the quantitative strand.
➢ This design is useful when the need for a second, quantitative phase emerges based on what is learned from the initial qualitative phase.	➢ If an instrument is developed between phases, the researcher needs to decide which data from the qualitative phase to build the quantitative instrument and how to use these data to generate quantitative measures.
➢ The researcher can produce a new instrument as one of the potential products of the research process.	➢ Procedures should be undertaken to ensure that the scores developed on the instrument are valid and reliable.

Source: Table adapted from Creswell and Plano Clark (2011, p. 89)

The qualitative and quantitative approaches adopted in the mixed methods research do not differ from the single methods. The only difference is how one informs the other and how they are analysed (Tashakkori and Teddlie, 2003). As noted by Creswell and Plano Clark (2011, p. 172), conducting mixed methods research requires the researcher to adopt "persuasive qualitative data collection procedures and a quantitative strand that incorporates rigorous quantitative procedures". As outlined above, the study will unfold in two phases; the first phase will employ qualitative depth interviews using the

critical incident technique to explore the first two research questions whereas the second phase will employ a quantitative survey method to answer the third and fourth questions. The following sections briefly discuss context of the study, the data collection methods, the sampling process, and the data validation techniques.

5.5 The study context – Ghana Health Service

The provision of quality healthcare in Ghana has been the major concern of the Ministry of Health (MOH) and the Ghana Health Service (GHS). The GHS established in 1996 is the largest agency of the MOH responsible for implementing all national health policies (Agyepong, 1999; GHS, 2010). The government of Ghana has, since the 1990s, embarked on health sector reforms, to among other things; improve access to quality health (Avortri et al., 2011). The WHO (2014) estimates for 2012 that life expectancy at birth was 62 years; infant mortality rate was 72 per 1,000 live births, and maternal mortality rate of 380 per 100,000 live births, whereas about 0.93% of the population is classified as HIV positive. The country has about 3,217 public and private health facilities out of which the public sector controls about 50% (Ministry of Health, 2010). The socio-cultural and other demographic factors including population growth and better education have made consumers more aware of and demand good quality products and services.

Ghana is a developing Sub-Saharan country striving to achieve middle-income status. Ghana has ten regions, and each region is further divided into metropolitan, municipal and districts headed by administrative executives. It has a population of 24.6 million people with 51.2% females and 48.8% males, with 53% of the population living in urban areas of the country (Ghana Statistical Service, 2013). The economy is dominated by the services sector, which contributes about 50% of the Gross Domestic Product (GDP), followed by the agricultural sector (29.9%) and lastly the industrial sector, 18.6% (Ghana Statistical Service, 2013). Public expenditure on health services averages 1.6% of GDP with a per capita government expenditure on health at £52.73 in 2012 (WHO, 2014). The discovery and drilling of oil in commercial quantities by the

last quarter of 2010 has made the country an attractive destination for Foreign Direct Investments (FDI) in Sub-Saharan Africa, prompting the need to improve on the provision of healthcare in the country.

With the goal of improving service delivery in the public healthcare sector, the MOH together with the Institutional Care Division (ICD) of the GHS in 1997, outlined five-year strategic goals in its Medium-term Health Strategy for 1997-2001 and its operational document the 'Health Sector 5-year Programme of Work (5-Year POW)' to improve on service quality, access, efficient use of resources etc. This quality assurance strategic plan has been reviewed with the subsequent programmes in 2002-2006 and 2007-2011 (Ghana Health Service, 2010). As a result of achieving medium-term strategic goals, the GHS invested in capacity building of various professionals, strengthening management systems, as well as put in measures to launch an eHealth policy, which is yet to be rolled out. However, implementation challenges resulting from a limited budget and lack of a clear framework of the programme impeded its success, although with some improvements (Ministry of Health, 2013). As part of the eHealth project, the GHS in 2010 started putting in measures to develop the use of information technology to improve information management and service delivery as they liaised with the National Information and Telecommunication Authority (NITA) (Ghana Health Service, 2010).

As part of the healthcare reforms, the Government of Ghana in 2003 introduced the National Health Insurance Scheme (NHIS) to replace the *cash and carry system* as part of the Structural Adjustment Programme (SAP) (National Health Insurance Authority (NHIA), 2011). This intervention from the government brought a lot of relief to the populace who considered the *'cash and carry system'* as a barrier to accessing healthcare (Mills et al., 2012). The NHIS covers a range of outpatient and inpatient services at accredited public and private health facilities, which ensures that registered members receive free healthcare. The introduction of the NHIS has led to an increase in healthcare service utilization at all levels of care. For instance, service utilisation in public hospitals increased by 28.4% between 2006 and 2007 alone (Atinga et al., 2011). However, such an increase in utilisation has not seen any significant

improvements in equipment, personnel and quality of service provision (Atinga et al., 2011; Ghana Health Service, 2007). Among the achievements of the NHIS, the scheme covered 8.8 million people by the end of 2012 representing 35% of the population (NHIA, 2012), as well as recording 100% increase in the number of accredited health facilities between 2008 and 2011 (Gajate-Garrido and Owusua, 2013). Also, outpatient and inpatient utilization of the healthcare services have increased forty-fold (0.6 million to 25.5 million) and fifty-fold (28,906 to 1.45 million) respectively between 2005 and 2011, however, patient utilization decreased by 6.27% (outpatient) and 1.65% (inpatient) in 2012 (NHIA, 2012). A significant increase in the utilization of health services over the past years suggests an improvement in increased accessibility to healthcare for the populace.

Despite the increase in the patient utilization of healthcare services in recent years, the GHS continue to experience challenges relating to an improvement in equipment, personnel and quality of service delivery (Ghana Health Service, 2007). With a high doctor to patient ratio of 1: 10423 (Ghana Health Service, 2010), it is undoubtedly a fact that there is enormous pressure on the doctors delivering care to both out- and in-patients. Although there are some improvements in facilities, the health situation in Ghana is far from satisfactory as many people in the country continue to depend on self-medication (Salisu and Prinz, 2009).

Contrary to the NHS system in the UK where patients are required to make prior appointment before attending the health facility, patients visit health facilities to seek care without prior appointment in Ghana. In addition, patients are not registered to respective health facilities but have the luxury to attend any health facility of their choice. The implications of this system include incessant pressure on the facilities and the staff, as people travel far and near to attend specific health centres. In trying to resolve this problem, the GHS and the NHIA introduced the referral system as a result of which patients are required to attend community health facilities to receive primary care and only to be referred to the regional and teaching hospitals (NHIA, 2012) when such cases cannot be handled at the local level. Despite this initiative or directive, there is still a large number of patients attending various levels of health facilities leading to

prolonged waiting times for patients to see a doctor or physician assistant. As waiting times continue to be an issue of concern (Turkson, 2009), patients resort to self-medication making the community pharmacies the first point of call when sick (Salisu and Prinz, 2009). Also as a result of the high doctor-patient ratio, patients are sometimes rushed through the service leaving patients with mixed feelings. Turkson (2009) contends that patients are satisfied with the quality of healthcare they receive except that, they are not told of the diagnosis or given advice about their illness.

5.5.1 The greater Accra regional health directorate

The Greater Accra region where the study was conducted is one of the ten administrative regions in Ghana with Accra as the capital, which also doubles as the administrative seat of the government. The region lies in the South East of the country along the Gulf of Guinea and has coastal savannah, a little forest area inland, sharing boundaries with Eastern, Central and Volta region. The capital Accra is considered a cosmopolitan area, which is densely populated, serving as both administrative and industrial hub of the country. The Greater Accra Regional Health Directorate (GARHD) is divided into ten (10) sub-regions specifically comprising of 2 metropolises, 6 municipalities and 2 districts (GARHD, 2011) with varying population size as shown in appendix I. The region is served with 384 health facilities with 839 doctors and a doctor population ratio of 5,103 as of 2009 (Ministry of Health, 2010). The region also records 7.7% and 3.5% of females and males respectively without any formal education (Ministry of Health, 2010), which is the lowest compared to all the other regions, which presents perfect characteristics of the kind of respondents required in this study. Also the cosmopolitan status of the Accra and Tema is an indication of having settled residents from the other regions. It can be argued that the region represents the culture, beliefs and perceptions of the population in the country.

With a population size of 3.8 million, the Accra and Tema metropolises constitute 69% of the total population with Accra considered the most densely populated (51%) part of the region. There are six sub-metros in Accra and four sub-districts in Tema, which are

treated as health administrative districts. These areas are served with over 80% of the number of health facilities within the region out of which 42 (13.3%) are public health facilities and 7 (2.2%) quasi government facilities and the remaining 266 (84.4%) are private facilities (GARHD, 2011). The key health facilities in the region are Korle-Bu Teaching Hospital and the Ridge Hospital (Greater Accra Regional Hospital). These statistics clearly justify the inclusion of these metropolises in the study.

5.6 Ethical considerations

Research is governed by a set of principles constituting code of ethics designed by a number of professional research bodies. The code of ethics is about values and professionalism (Saunders et al., 2009), which is required to be maintained throughout the research process, hence considered essential in research (Creswell, 2009). Cooper and Schindler (2008, p. 34) define ethics as the "norms or standards of behaviour that guide moral choices about our behaviour and our relationships with others". It is essential for researchers to create a balance between the interest of the participants and value of increasing knowledge via research, giving both high moral priorities (Creswell, 2009). As part of this research, the author sought ethical clearance from the Department of Marketing, University of Strathclyde, Glasgow, and selected health facilities in Accra (in the case of the qualitative study or first phase of the research) and the Ghana Health Services (GHS) – Ethical Review Committee (ERC), Accra (in the case of the quantitative research or second phase of the study), which allowed access to the participating health facilities within the Greater Accra Region. A copy of the ethics approval letter from the GHS-ERC is attached to this thesis (appendix II). Negotiating for access is considered one of the most daunting and key challenges in research especially where you are considered as an external researcher (Saunders et al., 2009).

After obtaining approval from the GHS-ERC, an introductory letter was obtained from the Greater Accra Regional Health Directorate, which was used to request access to selected hospitals to participate in the study in line with the directives of the GHS. Once approval was obtained from the hospital administration, authorities of the

facilities were informed of the researchers' presence from start to completion of the study. At the end of the research, a letter was also sent to the GHS-ERC notifying them of the completion of the study. As this research does not involve any clinical trial or biological studies, but rather just interviews with respondents, there were no known associated risks (Olsen, 2012). The benefits of the research come in the form of its general contribution to improving the healthcare service delivery, as respondents were not offered any incentives for participating in the study.

This research did not involve any vulnerable individual, but it was still important to consider ethical issues to protect the identity and confidentiality of the respondents (Creswell, 2009) and especially in the case of health related research that involve patients. This process also avoids any issue of covert research, which violates participants' privacy (Easterby-Smith et al., 2008; Olsen, 2012). Respondents were given an information sheet (appendix III) to read and gain an understanding of what the study was about, objectives of the study and the possible implications. They were also offered the opportunity to ask questions for further clarification of the information provided with regard to the study and when they agreed to participate in the study, they were issued with the consent form (appendix IV) to sign before the interview began.

Confidentiality in research requires the anonymization of the respondents, hence withholding the identity of the patients and doctors interviewed (Saunders et al., 2009). Confidentiality is therefore, contravened when the researcher conveys private information about the research participant (doctors and patients) to another party unauthorized to receive the information, or make reference to the respondent in the study report (Miles and Huberman, 1994). Respondents remain anonymized, and their responses were treated with strict confidence, and under no circumstance was their identity disclosed throughout the research. Their names and affiliations are not disclosed to anybody and will not appear in the thesis.

Potential respondents participating in the study were not forced or coerced as they volunteered to participate. Informed consent of the respondent is when the respondent is briefed about the study and he/she is satisfied to voluntarily participate in the study (Saunders et al., 2009). Olsen (2012) notes that it is important to obtain a signed

informed consent from respondents before the interviews. This process was followed in this study. The researcher after explaining the participant information sheet to the respondent asked for their willingness to participate in the interviews. Upon agreeing to participate in the study, they were asked to sign a consent form prior to the interviews. However, signing the consent form did not bind the respondent to the study in any way as respondents had the right to withdraw from the interviews at any time that he/she deemed fit.

Saunders et al. (2009, pp. 185-186) enumerate a number of important ethical issues across the stages of the research to include the following:

- Privacy of possible and actual participants;
- The voluntary nature of participation and the right to withdraw partially or completely from the process;
- Consent and possible deception of participants;
- Maintenance of the confidentiality of data provided by individuals or identifiable participants and their anonymity;
- Reactions of participants to the way in which you seek to collect data, including embarrassment, stress, discomfort, pain and harm;
- Effects on participants of the way in which you use, analyse and report your data, in particular the avoidance of embarrassment, stress, discomfort, pain and harm;
- Behaviour and objectivity of you as a researcher.

These issues are important and were strictly followed in conducting this research. The data collected were handled and analysed by the researcher. This stage required the researcher to maintain fairness and objectivity to avoid misrepresenting the data collected (Saunders et al., 2009). Throughout the process, the anonymity and confidentiality of the respondents was maintained (Cooper and Schindler, 2008). The data will be kept for the duration of the PhD; Creswell (2009) notes that it is essential to keep data for a reasonable period, after which it can be destroyed. The research is academic property of the university and the researcher, the findings of which will

mainly be used for my PhD and other potential academic publications, hence all relevant information or data will be held by the researcher.

5.7 Qualitative data collection procedure

Qualitative data collection procedures take different forms depending on what the research seeks to find. Creswell (2009) notes the multiple forms of data that researchers collect and posits four basic types of data collection to include; observations, interviews, document, and audio-visual materials, however, the interview approach were employed in this research. Qualitative interviews take the form of face-to-face or telephone interviews with participants, or focus group interviews, which involves unstructured or semi-structured questions to gain deeper understanding of the phenomenon from the participants (Barbour, 2008; Creswell, 2009; Wilson, 2012). This study adopted the face-to-face interview with outpatients and doctors within selected health facilities in Accra, Ghana. This approach was employed for the following reasons:

- Participants cannot be observed directly to gather the required data
- Participants can provide historical information and explain in detail some of the activities that led to such experiences.
- The researcher has control over the line of questioning.

However, the approach also presents a number of challenges that could affect the accuracy of the data collected.

- Provides indirect information filtered through the views of interviewers
- Provides information in a designated place rather than the natural setting
- Researcher's presence may bias responses
- Not all people are equally articulate and perceptive

Considering the nature of the study and comparing it to the other types of qualitative data collection, the interview approach was deemed fit.

5.7.1 Semi-structured depth interviews using Critical Incident Technique (CIT)

In examining the encounter processes between actors and how the focal dyad jointly creates value in the healthcare setting, personal face-to-face interviews were conducted using the critical incident technique (CIT). The service encounter yields high experiential effects or factors for both actors especially for the patient. Hence, the identification of critical incidents is considered essential in enhancing service delivery (Bruhn and Georgi, 2006). The CIT, originally developed by Flanagan (1954) has been used extensively in service marketing research (Butterfield et al., 2005; Edvardsson and Roos, 2001; Gremler, 2004). This method is essentially useful when a thorough understanding of an activity or phenomena is required in exploratory research (Bitner et al., 1990; Grove and Fisk, 1997). Flanagan (1954, p. 327) defined the technique as "a set of procedures for collecting direct observations of human behaviour in such a way as to facilitate the potential usefulness in solving practical problems and developing broad psychological principles". This is aimed at gathering facts and reducing tendencies of personal opinions, judgements and generalizations (Coetzer et al., 2012; Keatinge, 2002; Kemppainen, 2000), which makes it suitable for such study. The method is particularly useful when a thorough understanding of an activity or phenomena is required in exploratory research (Grove and Fisk, 1997; Keatinge, 2002) aimed at identifying relevant issues that have not been addressed in previous research (Gremler, 2004). By employing this research method, the research aimed to examine the actor experiences in the consulting room to understand the value co-creation processes at the micro level, following the procedures outlined by Flanagan (1954). Also using retrospective self-reports (Butterfield et al., 2005) as employed in CIT is considerably an essential exploratory tool for increasing knowledge about a phenomenon that has received limited attention in the literature (Bitner et al., 1990; Coetzer et al., 2012) as in the case of this study.

Callan (1998) contends that CIT provides the background for researchers to compare and contrast discordant perspectives in an attempt to harmonize customers and service providers' perspectives. This rationale is congruent with the current study, in which case, value co-creating processes from the perspectives of the patients and

professionals are considered. In related studies, Backstrom and Johansson (2006) adopted CIT to explore the increasing retail experience-orientation from the retailer and the customers' perspective. CIT has also been used to explore why self-service technologies are used in the service encounter (Meuter et al., 2000), to examine context and mobile services value-in-use (Gummerus and Pihlstrom, 2011), to question the concept of co-creation of the multichannel customer representation in critical situations (Bonnemaizon et al., 2009). Helkkula and Pihlstrom (2010) also acknowledged the critical importance of the CIT in service development research. They contend that, CIT unravels real customer experiences and other activities whether positive or negative relevant to the service encounter. Studies involving CIT have also been reported in the healthcare literature including; satisfaction with general practitioner services (Gabbott and Hogg, 1996), critical analysis of the patient reactions to met and unmet psychological needs (Kent et al., 1996), to assess hospital service quality (Longo et al., 1993), and the application of CIT in quality nursing care research (Kemppainen, 2000).

CIT is an inductive approach "that contributes to or detracts from the general aim of the activity in a significant way" (Bitner et al., 1990, p. 73). This technique originated from the work of Flanagan (1954) who detailed how he and his colleagues first used this approach to identify critical incidents of pilots in World War II. Flanagan (1954, p. 327) explained an 'incident' "as any observable human activity that is sufficiently complete in itself to permit inferences and predictions to be made about the person performing the act. He further clarified 'critical' as an "incident that occurs where the intent of the act seems fairly clear to the observer and where its consequences are sufficiently definite to leave little doubt concerning its effects". Trip (2012, p. 8) also explains the 'critical incidents' as events that seem 'typical' to a practice or behaviour but become 'critical through analysis', hence notes that it is the "interpretation of the significance of an event". As noted in the definition, Chell (1998, p. 56) asserts that the objective of adopting the use of CIT is primarily to "gain an understanding of the incident from the perspective of the individual, taking into account the cognitive, affective, and behavioural elements".

The initial definition by Flanagan (1954) suggests a behaviourally grounded technique and focused on differentiating effective and ineffective behaviours in executing a task (Coetzer et al., 2012). This conception has changed in recent developments as researchers have utilized the CIT to study a wide array of psychological constructs and experiences among others (for example, Gummerus and Pihlstrom, 2011; Strandvik and Liljander, 1994; Sweeney and Lapp, 2004; Zulkefli and Uden, 2013). Strandvik and Liljander (1994) adopted CIT to study the positive and negative critical incidents in a customer-provider relationship. In relation to these changes, Beech and Norman (1995) identified CIT as a flexible but focused approach and also as a systematic, inductive, open-ended procedure for collecting direct incidents from respondents, hence a good method to find answers to practical problems (Kemppainen, 2000). These qualities of CIT as noted by Beech and Norman (1995) make it ideally suitable to studying the complex and relatively new phenomenon of the dyadic value co-creation.

5.7.2 Principles underlying critical incident technique

The CIT uses content data analysis of stories or events (incidents), which are then classified into categories (Bitner et al., 1990). Basically, respondents are asked to narrate or describe in detail any incidents experienced during the service encounter (Jones, 1999; Meuter et al., 2000; Ro and Wong, 2012). As service is usually experienced and recalled by actors in the encounter, narrated stories are focused on incidents rather than individual attributes (Callan, 1998), which are influenced by the flexibility of the technique (Kemppainen, 2000). Although a flexible approach or technique, Flanagan (1954) maintains that, there are sets of rules or procedures to be followed in conducting research using CIT. He however notes that, these are not stringent rules but can be 'modified and adapted' to meet the objectives of the study. Flanagan (1954) discussed the five (5) main steps or principles underlying the critical incident technique as:

a. *Defining the general aims of the activity*: Butterfield et al. (2005) note that, understanding the general aims of the activity to be studied is considered a

fundamental requirement since CIT serves as a means to establish a functional description of the activity. Flanagan (1954) explains that, the general aim of the activity should be brief and clearly stated to enable the participants to understand what affects the conduct of the observation or interviews. This is critical when the design is based on factual accounts of events experienced by the respondents or participants.

b. *Setting plans and specifications*: Interviews adopting the CIT should be focused on specific reasons for actions and behaviours (Sweeney and Lapp, 2004); therefore, precise and specific instructions should be laid out to participants to ensure objectivity of the observations or narratives reported (Flanagan, 1954). Prior to the collection of data stage, Flanagan outlined four specifications to be followed: (1) defining the types of situations to be observed (this specification must include information about the place, the persons, the conditions, and the activities); (2) establishing the situation's relevance to the general aim; (3) understanding the extent of the effect the incident has on the general aim (two important points to consider include: *(a)* a level of positive contributions to the general aim in specific terms, preferably including a concrete example, and *(b)* the corresponding level of negative effect on the general aim expressed in similar terms); and (4) selection and training of persons who will be making the observations (wherever possible, the observers should be selected on the basis of their familiarity with the activity. e.g. experts in the field, supervisors, consumers of the product or service or individuals performing the activity).

c. *Collecting the data*: Data can be collected in a number of ways, however, Flanagan advocates the importance of observers or interviewers to ensure precise data are collected, evaluated, classified and recorded. In addressing the problem of collecting data in the form of critical incidents, Flanagan (1954) outlined four procedures to include; personal face-to-face interviews, group interviews, use of questionnaires, and by means of record forms.

d. *Analysing the data*: Data is analysed to enhance its usage or usefulness in solving a particular problem in a meaningful way (Flanagan, 1954), however, researchers consider this stage as the most challenging step in the CIT process (Butterfield et al., 2005). Flanagan (1954, p. 344) notes that, "increasing the

usefulness of the data" necessitates three fundamental problems that needs to be considered to include: (a) the selection of the general frame of reference that will be most useful for describing the incidents; *(b)* the inductive development of a set of major area and sub-area headings (category formulation); and *(c)* the selection of one or more levels along the specificity-generality continuum to use in reporting the requirements (general behaviours). Regarding the specificity-generality continuum, Flanagan is of the view that, practical considerations exercised by researchers determine the level of specificity or generality to be used.

e. *Interpreting and reporting*: Flanagan (1954) advocates that, obtaining an ideal solution for each stated problem seem impossible in practice, therefore, errors or any limitations in the study must be appropriately recorded. This is critical in addressing the credibility and trustworthiness of the study (Butterfield et al., 2005).

5.7.3 Sampling

Sampling plays a very important role in the research process especially when the entire population cannot practically be involved or interviewed (Saunders et al., 2009). Thus, the selection of the sample to be interviewed is critical, and the representativeness of the sample is dependent on the research approach and the type of questions to be answered (Easterby-Smith et al., 2008). Barbour (2008, p. 53) notes that, qualitative sampling does not seek to develop a representative sample, but the purpose of which is to "reflect diversity and to provide as much potential for comparison as possible". Sampling method is categorized as probability and non-probability sampling (Bryman and Bell, 2007). Qualitative research employs the non-probability sampling methods where some units in the population are more likely to be selected than others. Wilson (2012, p. 187) explains non-probability sampling method as the "use of subjective procedure of selection resulting in the probability of selection for each member of the population of interest being unknown". There are four typical types of non-probability sampling including convenience, purposive, quota and snowball (Wilson, 2012).

Among these non-probability sampling types, purposive sampling was employed in selecting respondents to be interviewed. Sandelowski (2000) notes that purposive sampling is employed to gather rich data central to the purposes of the research, in which case the researcher selects respondents with peculiar characteristics appropriate to study the phenomenon or the emerging concept (Eisenhardt and Graebner, 2007; King and Horrocks, 2010; Wilkins and Woodgate, 2008). The sample to be interviewed was selected from both medical practitioners (doctors) and outpatients because the study seeks to investigate value co-creation from the dyadic perspective in the healthcare service delivery. The specific doctors were selected because they were dealing with outpatients rather than inpatients. This meant that the consultations tended to be on a one to one basis rather than the case of inpatients where a group of health professionals may be involved in the service encounter. In the case of this research, selection of outpatients to participate in the interviews considered their educational background and knowledge on the role of the patient with a tendency to be actively involved in the consultation process. Knowledge is considered as part of the competences of the customer as an operant resource (Nambisan and Nambisan, 2009; Vargo and Lusch, 2004) in the value co-creation process. Also in the advent of consumerism in healthcare, where the patient's needs and values are to be respected by the doctor (IoM, 2001; Nettleton, 1995), it is imperative for the patient to be quite knowledgeable and encouraged to take active participation in the consultation process and his/her condition management. Patients participating in the interviews were selected from the outpatient department from two hospitals in Accra and were mainly between the ages of 21 to 60 years.

Sample size in qualitative interviews remains debatable as to what is considered suitable (Mason, 2010), however, in CIT studies; the number of critical incidents collected and recorded is given priority to the sample size of the participants interviewed (Flanagan, 1954). But in a similar way with difficulties defining a suitable sample size, the number of incidents required in a CIT study remains debatable (Flanagan, 1954). In resolving this problem, Flanagan contends that, "for most purposes, it can be considered that adequate coverage has been achieved when the addition of 100 critical incidents to the sample adds only two or three critical

behaviours" (p. 343). This is considered as the point of theoretical saturation where further probing does not yield any new issues or incidents (e.g. Strauss and Cobin, 1990) relevant to the study. In view of this, Butterfield et al. (2005) note that, researchers must ensure that all relevant issues of the activity under study are fully captured and described. Hence, interviews were ended when respondents began repeating incidents already discussed as well covering all relevant issues to the study. Flanagan (1954) also notes that for simple studies, 50-100 critical incidents collected are considered satisfactory. Hence drawing from a sample frame of doctors and outpatients, a purposive sampling method was employed to select 8 doctors and 24 outpatients who were interviewed from two hospitals in Accra, Ghana.

5.7.4 The interview design and respondents

Following the principles underlying the conduct of CIT research, the general aim of this study was explained to the participants. The purpose of this research is to investigate and gain deeper insights into the value co-creating processes and its impacts on the focal dyad in the healthcare service delivery. In exploring the concept of value co-creation in a healthcare setting from the dyadic perspective, the researcher intended to understand the processes of the clinical encounter and how the actors' experiences drive the value co-creation process.

Considering the dyadic nature of the study, doctors were first recruited and interviewed, followed by interviewing three outpatients seen by each doctor. This approach was adopted to enable the researcher gain a better understanding of the encounter process from the dyadic perspective. Before each formal interview, interviewees were introduced briefly to the research explaining the general aim of the study and other relevant information as stated on the introduction sheet (see Appendix III). The purpose of this was to create a situation that would allow the interviewees to feel confident and comfortable to share their experience (Keats, 2000). Face-to-face interviews were conducted taking a flexible manner as noted in CIT research (Flanagan, 1954). Following the principles of CIT that allows the researcher to gather rich data (Chell, 2004), respondents were asked to recall and describe:

- Situations where the doctor-patient encounter affected their experience of the service;
- Elaborate on the reasons why that happened;
- How they handled or managed the incident;
- How the incident affected their experience, perception and value outcome of the service delivery.

Responses were probed where clarifications, explanations and further details were required in order to add depth to the interview data (Patton, 1990; Rubin and Rubin, 1995). The discussion guide (see appendix V) was pre-tested between 10th to 20th July 2013 to ensure flow and logic and enable the researcher to do any necessary corrections before the actual data collection started from 29th July to 6th September 2013. Pre-testing is critical in the research process, an exercise that is carried out before the major data collection begins (Keats, 2000). This process also provides early feedback for the researcher (Easterby-Smith et al., 2008) as well as potential issues in relation to reliability and validity of the data to be collected. A few corrections and additions were made in the discussion guide after the pre-testing and also enabled the researcher to improve on the probing in the course of the interviews.

Interviews were conducted from 29th July to 6th September 2013 in Accra after obtaining access from two selected hospitals. Participants were then recruited employing a purposive sampling technique. In this case doctors were first recruited to participate in the interviews after which three of the patients they had seen that day were also recruited. The interviews lasted between 35-60 minutes with an average interview length of 50 minutes. The interviews were audio recorded and transcribed later and analysed. As a prerequisite to being included in the interviews, doctors must have seen outpatients prior to the interview, and likewise patients must have also seen the doctor interviewed. People from different ethnic backgrounds in Ghana, different ages and varying professions were interviewed in the case of the patients, and doctors of different ranks were also interviewed. Of the 8 doctors interviewed, 5 (62.5%) were males and 3 (37.5%) females, whereas for the patients, 14 (58.3%) females and 10

(41.7%) males were interviewed. The breakdown of respondent characteristics is presented in Table 5.8.

Table 5.8: Characteristics of the respondents

Patient characteristics		Frequency (n)	Percentage (%)
Gender	Male	10	42
	Female	14	58
Age (in years)	21 – 30	6	25
	31 – 40	8	33
	41 – 50	8	33
	51 – 60	2	8
Educational background	Senior High School	2	8
	Higher National Diploma	5	21
	Undergraduate	3	13
	Bachelor's degree	12	50
	Post-Graduate	2	8
Doctor characteristics		**Frequency**	**Percentage**
Gender	Male	5	63
	Female	3	37
Professional rank	Houseman	1	12
	Medical officer	4	50
	Senior medical officer	3	38

Before each formal interview was started, respondents were introduced briefly to the research project and asked whether they wanted to participate in the study. This ensured that respondents willingly volunteered to participate in the interviews and confidently shared their experiences in relation to the service encounter. An incident was accepted as critical if the respondent was able to recall the incident when asked about their past experiences during the service encounter (Roos, 2002) and described in detail, which also had a direct impact on the value creating processes of both the patient and the doctor. Respondents were not limited to reporting only one incident, but a number of incidents they could remember either favourable or unfavourable or both that they could describe in detail. Interviews started with CIT, which was then followed by semi-structured depth interviews to cover all areas relevant to the research area.

Like all research methods, the technique employed in the data collection exercise presented some limitations aside from the strengths outlined above. As CIT takes a retrospective approach, it is flawed by recall bias, while others have also raised issues in relation to the reliability and validity of the data collected (Butterfield et al., 2005; Chell, 1998; Gremler, 2004). As versatility is considered as strength of CIT, the total dependence on the memories of the respondents to recollect specific incidents or events relevant to the concept of study could be considered as a drawback (Chandon et al., 1996; Keatinge, 2002). To this end, Gremler (2004) and Wong and Sohal (2003) point out the likelihood of low response rate resulting from the fact that respondents are required to take time and effort to describe incidents is detail.

5.7.5 Data analysis

The interview was audio-recorded, transcribed into a word document and analysed. Incidents were considered critical when they had clear consequences (Roos, 2002) on affecting the outcome of the service and also affecting the service experiences of the focal dyad involved in the encounter, which affects the value that is created. The data was read thoroughly, and initial incidents identified were coded following a classification scheme developed by the researcher. In all, 76 critical incidents were recorded from both interviews (doctors and patients). Flanagan (1954) asserts that for an exploratory study, a total of 50-100 critical incidents collected are considered appropriate.

The classification of categories as required in CIT studies (Bitner et al., 1990; Chell, 2004) was essentially done in a way to answer the research questions of the study. The abductive reasoning approach was followed in analysing the data (Dubois and Gadde, 2002; Kovacs and Spen, 2005) with the aim of understanding and interpreting the experiences that influence the value co-creation process within the healthcare service. Content analysis was used after ascribing meanings to the incidents and codifying these incidents into categories and sub-categories (e.g. Bitner et al., 1990; Gummerus and Pihlstrom, 2011). Hence, the incidents were ordered into favourable and unfavourable experiences with a reported frequency of occurrence. This is further

discussed in the next chapter of this thesis.

5.7.6 Credibility/ trustworthiness checks

Credibility of the data gathered through CIT is subject to the reliability and validity of the categories and as well as the classification process. Reliability is concerned with consistency; it is the degree to which repeated application of a technique or analysis procedures yield consistent findings (Gremler, 2004; Saunders et al., 2009). Gremler (2004) points out that the reliability of CIT studies employing content analysis focuses on judges consistently classifying critical incidents into specified categories. This study employed the use of independent judges to classify the incidents into categories (Kemppainen et al., 2001). In this approach, the critical incidents identified from the interviews, together with the coding rules, main and subcategories classified with definitions were sent to two independent judges who are research students with previous experience in CIT.

Different approaches have been used by several authors to check the reliability of their data in CIT studies. For instance, through Perreault and Leigh's index of reliability (Bitner et al., 1994; Sweeney and Lapp, 2004); percentage of inter-judge agreement (Ro and Wong, 2012; Wong and Sohal, 2003); a combination of inter-judge percentage of agreement and Perreault and Leigh's index of reliability (Meuter et al., 2000). This study employed a combination of both inter-judge percentage of agreement and Perreault and Leigh's (1989) index of reliability ($\mathbf{I_r}$). Perreault and Leigh (1989) contend that, the inter-judge percentage of agreement could be influenced by guess coding (by chance) from the judges, however, the index of reliability gives a holistic view of the estimate reliability as this takes into consideration the entire coding process. In this case the incidents identified together with the coding rules; classification scheme and definitions of categories were sent to the independent judges.

In relation to validity checks, Maxwell's (1992) validity measures were followed. Copies of transcripts with initial categories were sent to three respective respondents (one doctor and two patients), giving them the opportunity to cross check the

categories against their experiences reported in the interviews. Again, the measures outlined by Flanagan (1954) to enhance the validity of the data were strictly followed throughout the interview process and the classification of the categories. The results are presented in chapter six.

5.8 Quantitative study

Following the qualitative study, quantitative research employing a face-to-face survey design was incorporated to expand on the findings of the qualitative research. Consequently, the lack of validated instrument for the measurement of value co-creation (McColl-Kennedy et al., 2012; Ng et al., 2010) accounted for the relevance of the qualitative study as a first phase of the research. In this vein, potential scales were searched from the extant and diversified literature placing emphasis on concepts parallel to the categories identified and classified as the influencing factors of value co-creation between the focal dyad. A survey design was employed in the quantitative study as this approach enables the researcher to collect data from a large sample size and analysed the data using appropriate statistical instrument (Fink, 2003; Saunders et al., 2009).

5.8.1 Face-to-face survey research

The purpose of the survey is to answer research questions that cannot be answered qualitatively. Survey research is considered one of the essential fundamental methods, yet systematic and standardised tool for collecting information from individuals (de Vaus, 2002; Fink, 2003; Wright and Marsden, 2010). Data collected from a survey enables the researcher to suggest a relationship between variables and develop models of these relationships (Saunders et al., 2009). Survey research is also generally economical and results in a rapid turnaround in the data collection (Easterby-Smith et al., 2008; May, 1997), which suits this study. Wilson (2012) suggests that the survey questionnaire enables a large amount of data to be collected from a wide geographical area, involving a large number of people and ensuring anonymity. This approach was

employed to obtain measurable and objective data (Foza, 2002) from outpatients and doctors in the public health facilities in Accra and Tema, Ghana, following the qualitative study. The qualitative study and the literature allowed for the formulation of hypotheses for further testing to ascertain and generalise the initial findings.

Survey research has been used extensively in service research; for instance, Gallan et al. (2013) employed this approach to study customer positivity and participation in healthcare service delivery. Likewise, Chan et al. (2010) employed survey method to study customer participation in value creation. Wright and Marsden (2010, pp. 3,4) outline four basic developments that essentially form the nucleus of the survey design to include the following:

- Sampling: surveys draw a sampling frame from the population with peculiar traits relevant to the study to provide unbiased estimates
- Inference: population parameters are estimated and generalised employing statistical inference within calculable margins of error
- Measurement: the art of framing and designing questionnaires that enable researchers to collect valid and reliable data across a wide variety of disciplines
- Analysis: the application of multivariate data analysis techniques allows for the establishment of complex statistical relationships between variables.

In support of Wright and Marsden (2010), Lazarsfeld (1955) notes that survey research seeks to answer three basic questions including; the number of variables involved, the specific nature of the variables and how they are interrelated. Hence, survey research provides a platform for researchers to establish the cause and effect relationship between variables. Fundamentally, marketers and or researchers ask questions to "understand, explain, and perhaps predict marketplace behaviours" (Rindfleisch et al., 2008, p.261). This complex communication process allows researchers and respondents to establish meanings into constructs through interactions (Foddy, 1993). Hence, in survey research, the researcher needs to define the research questions and hypotheses to be tested which inform the kind of questions to include in the questionnaire.

Surveys could take the form of 'interviewer-administered questionnaires' or 'self-completion' (Wilson, 2012). He further explained that, interviewer-administered questionnaires could be through telephone or face-to-face contact with the respondent, whereas 'self-completion surveys' are the types that are delivered and collected from the respondent via online, fax, email etc. Considering the nature of the research and the respondents, face-to-face survey using paper-based questionnaire was employed. This method presents a number of advantages over telephone and self-completion methods in relation to the effect of the human factor; however, it is costly and time consuming. Some advantages and disadvantages of the face-to-face survey research are presented in Table 5.9.

Table 5.9: Advantages and disadvantages of face-to-face survey research method

Advantages	Disadvantages
➢ Direct face-to-face interviews allow the interviewer to motivate the respondent to participate and answer difficult questions ➢ It is easier to convince the respondent that the research and the interviewer are genuine ➢ Ability to ensure eligibility and selection of respondents ➢ Provide assistance to respondents with a more complex questionnaire ➢ Ability to judge the interest, impatience and the seriousness respondents attach to answering a questionnaire ➢ Improve understanding of the interviewer and the respondent through non-verbal communication ➢ Control the visual elements of the questionnaire if applicable	➢ It is generally costly and time consuming ➢ Interviews need to be clustered within specific geographical locations ➢ Training, briefing and supervision of interviewers is quite daunting in dispersed geographical areas ➢ Interviewer bias can be more pronounced throughout the interview

Source: Table developed from Wilson (2012, pp. 131-132)

5.8.2 Questionnaire design

The questionnaire is considered the crux of the survey (Krosnick and Presser, 2010), therefore, the questionnaire must be able to provide the required data which address the research objectives or questions (Lietz, 2010; Wilson, 2012). Webb (2000) considers three factors that must be considered when designing a questionnaire to include; the type of information required, the target respondents, and the means by which the questionnaire will be administered. Fink (2003) suggests that, the kind of questions asked should be purposeful and concrete. He explains that purposeful questions are

directly linked to the research objectives whereas concrete questions tend to be "precise and unambiguous".

In designing the questionnaire, items were drawn from the literature and insights from the qualitative research. According to Saunders et al. (2009) the validity and reliability of the data, as well as the response rate, is dependent on question type, how the questionnaire is structured and the effectiveness of the pilot testing. In support of this assertion, Wilson (2012) enumerates seven (7) processes to be considered when designing a questionnaire as presented in Table 5.10.

Table 5.10: The questionnaire-design process

Step	Process	Brief explanation
1	Develop question topics	Question topics should consider the research questions or objective of the study, insights from any qualitative study as well as the characteristics of the potential respondents. These provide pointers when formatting the questions for the study.
2	Select question and response format	This could be in the form of open-ended questions, closed questions, or scaling questions. The selection of a specific format or combination of them depends on the nature of responses expected.
3	Select wording	Wording questions is critical as this could easily affect the quality of responses from the respondents. Questions must be phrased simple and straightforward avoiding ambiguity, leading questions, implicit, and double-barrelled questions.
4	Determine sequence	Ideally questions of similar topics should be grouped together to enable respondents be on the same pedestal to harmonize the responses before moving to different topics.
5	Design layout and appearance	The layout and appearance of the question is important and likely to record high response rates if questionnaire looks attractive, uncluttered and easy to understand.
6	Pilot test	The pre-test is done prior to the actual survey which involves testing the questionnaire to a small number of the potential respondents in order to identify and correct flaws in the questionnaire.
7	Undertake survey	Once all corrections are made to the satisfaction of the researcher(s), then the actual survey can commence.

Source: Table developed from Wilson (2012, pp. 155-178)

Following Wilson's (2012) questionnaire design process, the key topics were drawn from the findings of the qualitative study, which also allowed for the hypotheses formulation. The key latent variables comprised of; the service social context, beliefs and perceptions of the focal dyad, the focal dyad partnership, and the dependent

variables mainly considered the impact of the value co-creation process on the service including; improved compliance to medical instructions, improved service engagement, and perceived value realised. The questions focused primarily on the service processes between the doctor and the outpatient. As a dyadic study, a dyad sampling frame was designed with the same question items but worded differently to reflect the member of the dyad (the doctor and the patient) completing the questionnaire (Chen and Quester, 2006). Regarding the latent variables, the constructs were further reduced to specific variables. For instance the service social context considered the level of interaction, learning, and social skills; beliefs and perceptions considered emotions, perception, trust and assurance; and the focal dyad partnership also included shared decision-making, involvement and provider-patient orientation.

All variables were measured using a five-point Likert-scale anchored with 1 (Strongly disagree), 3 (Uncertain), and 5 (Strongly agree). Scale items were mainly drawn from existing scales from related literature and the qualitative study. This is as a result of the fact that there is no developed and validated instrument for the measurement of value co-creation (McColl-Kennedy et al., 2012; Ng et al., 2010). Hence, following Ng et al.'s (2010) approach, potential scales were searched from the extant and diversified literature placing emphasis on concepts parallel to the categories identified and classified as the influencing factors of value co-creation between the focal dyad. No negative wording was used as the anticipated benefits are considered equivocal (Schriesheim and Hill, 1981) and could introduce "greater random error" in the responses (Lietz, 2010), hence the survey questionnaire adopted positive wording throughout. The key constructs were first addressed and the latter part of the questionnaire considered the demographic questions about the respondents including age, education, gender, profession and professional rank (in the case of the doctors). Lietz (2010, p. 257) suggests that demographic questions should come last in order to "avoid negative feelings about the provision of personal information impacting on the answering behaviour or participation".

As mentioned earlier, existing scales were adopted in the design of the questionnaire, however, some of the items were modified or added to with insights from the findings

of the qualitative study: Learning was measured using six items (Yi and Gong, 2013); interactions was measured using nine items (Chen and Quester, 2006); social skills was measured using ten items (Hausman, 2004; Lin and Hsieh, 2011); trust was measured using seven items (Anderson and Dedrick, 1990; Hall et al., 2002; Thom et al., 1999; Saha and Beach, 2011); emotions was measured using four items (Dolen et al., 2004; Wong, 2004); assurance was measured using five items (Vandamme and Leunis, 1993); perception was measured using eight items (Anderson, 1995; Hausman, 2004); involvement was measured using six items (Chan et al., 2010; Gallant et al., 2013); shared decision-making was measured using nine items (Hausman, 2004); provider-patient orientation was measured using twelve items (Daniel and Darby, 1997; Hinnig-Thurau, 2004); compliance was measured using five items (Dellande et al., 2004; Hausman, 2001); perceived value was measured using five items (Mathwick et al., 2001; Sweeney and Soutar, 2001); improved service engagement was measured using seven items (Salanova et al., 2005). Details of scales used are presented in Table 5.11 below, while the questionnaire designed for the study is presented in appendices VI. To moderate the co-creation process and the impact, frequency of visit (patient), length of service (doctor) and personal demographic factors of actors including age, gender and educational background were used.

Table 5.11 Scale items

Dependent variables	Anchors	Scale items
Compliance (Dellande et al., 2004; Hausman, 2001)	Disagree – Agree	I follow my doctor's orders I return to my doctor on the schedule he suggest I feel motivated to take my medications as prescribe by my doctor
Improved Service Engagement (Salanova et al., 2005)	Disagree – Agree	Understanding specific needs of patients The doctor is able to put himself in the patient's place Ability to "tune in" to each specific patient as unique Doctors do more than usual for patients Delivery of excellent service or care
Perceived Value (Mathwick et al., 2001; Sweeney and Soutar, 2001)	Disagree – Agree	The service I received is valuable My goal of coming is achieved I have good impressions about the doctor and would recommend him/her to others
Independent	**Anchor**	**Scale items**

variables		
Learning (Yi and Gong, 2013)	Disagree - Agree	I seek information from friends, family members on related health concerns I seek interest in searching for information relating to healthcare I have paid attention to how others behave to use this service well
Interactions (Chen and Quester, 2006)		Recognizing and greeting patients whenever visiting Letting a patient speak his/her mind without reticence Initiative in communication
Social skills (Hausman, 2004; Lin and Hsieh, 2011)		The doctor was friendly The doctor has extensive social skills The doctor likes to talk with patients The doctor and I seemed to find more things to talk about The doctor knows how to treat patients The doctor tried to establish a personal relationship with me
Trust (Anderson and Dedrick, 1990; Hall et al., 2002)	Disagree - Agree	My doctor is usually considerate of my needs and puts them first I trust my doctor so much I always try to follow his/her advice I would trust that doctor to tell me if a mistake was made about my treatment. I would worry that the doctor may not keep the information we discussed totally private. I trust my doctor's judgement If that doctor told me something is so, then I would believe it must be true
Emotions (van Dolen et al., 2004; Wong, 2004)		Pleased Content Happy
Assurance (Vandamme and Leunis, 1993)		The medical care is performed carefully The doctor is always honest and genuine The doctor respects my feelings
Perception (Anderson, 1995; Hausman, 2004)		The doctor appears sympathetic to my problems The doctor seems to care about me The doctor is very attentive with me The doctor is always willing to help the patient Patient feels safe interacting with doctor
Shared decision-making (Hausman, 2004)	Disagree - Agree	My doctor asks my advice and council regarding treatment options I helped the doctor in planning my treatment My doctor encourages suggestions about appropriate treatment of my illness Both the doctor and I participated extensively in planning treatment of my illness Together my doctor and I set goals and discuss treatment

	options
Involvement (Chan et al., 2010; Gallant et al., 2013)	I spent a lot of time sharing information about my needs and opinions with the staff during the service process. I put a lot of effort into expressing my personal needs to the staff during the service process. I have a high level of participation in the service process. I am very much involved in deciding how the services should be provided.
Provider-patient orientation (Daniel and Darby, 1997; Hennig-Thurau, 2004)	The service provider makes recommendations that match my needs The doctor is committed to understanding my needs The service provider offers tailor-made services for me The service provider makes me feel that I am unique I believe that the service provider offers services customized to my needs

5.8.3 Pre-test

The research instrument used in this study was pre-tested prior to undertaking the full-scale quantitative survey. Harrison (2010) asserts that pilot testing of the survey instrument is of grave importance as this exercise enables the researcher to identify potential problems with the survey questions, which can be corrected and streamlined before the actual survey. In all 20 outpatients and 10 doctors were interviewed from selected hospitals included in the main study. In a pilot study, a sample size of 10 to 40 is considered acceptable (Wilson, 2012). The procedure to be followed in the main survey was applied in the pre-test exercise. The data was analysed using SPSS 21.0. Pearson correlation coefficient was used to assess the reliability of the scales adopted in the study, which aided in selecting items for the final version of the questionnaire used in the main study. First the Cronbach's coefficient alpha (Cronbach, 1946) was measured to assess the internal consistency. All scales recorded Cronbach alpha of $\alpha > 0.7$ with correlation significance at the level of $p < 0.05$. Scale items that measured a corrected item-total correlation of < 0.3 were not included in the final version of the questionnaire. This process reduced the initial total scale items from 114 to 93, which were included in the final questionnaire.

5.8.4 Sampling

Sampling plays a very important role in the research process especially when the entire population cannot practically be involved or interviewed (Black, 1999; Saunders et al., 2009). Thus, the selection of the sample to be interviewed is critical and the representativeness of the sample is dependent on the research approach and the type of questions to be answered (Easterby-Smith et al., 2008). Hence, adequate representativeness of the sample is essential for appropriate statistical inference.

Selection of the sampling frame for this study was based on the context of the research. As the study is focused on healthcare delivery with special emphasis on doctors and outpatients, the sampling frame was drawn from a population of the doctors and patients within the Greater Accra Region of Ghana. As the interviews were conducted between the hours of 09:00 to 17:00, Doctors who were on duty within this time frame were included in the study; also patients were selected based on the doctor interviewed, in order to maintain the dyadic nature of the study. Therefore, a complete list of doctors could not be obtained as doctors on the night shift were practically excluded from the study. Likewise a complete list of outpatients was not possible to obtain from the selected hospitals due to the following reasons; (a) patients only attend the facility when they are sick without prior appointment, (b) patients who were seen by Physician Assistants were not included in the study, and (c) the outpatient department (OPD) nurses select folders of reported patients and distribute among the medical staff (Doctors and Physician Assistants) on duty, this process was repeated as and when patients report at the facility. However, a complete list of public health facilities within the Accra Metropolis and Tema Municipality was obtained from the Greater Accra Regional Health Directorate. Deleting all health centres without medical doctors further reduced the list. Accra and Tema were selected for the study mainly because; (a) combined, they are the most densely populated districts in the region, (b) they have over 80% of health facilities within the region (Ghana Health Service, 2010), and (c) considered as cosmopolitan areas with natives from all the regions/districts in Ghana, providing a well-balanced representation of the population in the country.

The number of public health facilities located within the two metropolises was

systematically defined based on the doctors at post. This was done because not all public health facilities have medical doctors. For each metropolis, random sampling was applied to select health facilities. A total of 20 public health facilities located within the two metropolises participated in the study. Considering the number of medical doctors at post within the selected health facilities, a purposive sampling technique was employed. Hence, all doctors attending to outpatients were recruited in the study. As a result, the number of respondents varied across participating facilities, because of the varying number of medical doctors in the facilities. Although a non-probability sampling procedure was employed, this technique provided an opportunity to select a sufficient sample with the desired characteristics appropriate for the study (Black, 1999). This procedure is criticized for its subjectivity, but Black (1999) argues that, a careful selection of the respondents could control this limitation to produce reliable results. Accordingly, a purposive sample apart from being representative is argued to be convenient, requires fewer resources (cost and time), and is as good as probability sampling (Green et al., 1988).

As a dyadic study, patients were recruited after a doctor was interviewed; specifically four (4) outpatients per doctor were interviewed. More patients were interviewed compared to the doctors taking into consideration the low doctor-patient ratio. As alluded to, it was not possible to obtain a complete list of the patients. However, the medical doctors interviewed provided an average number of patients they attend to on a daily basis. This figure was then used to systematically select patients in the study; hence systematic random sampling technique was employed in recruiting the patients. For instance, with regard to medical doctors who attend to an average of 30 patients per day, every 8^{th} patient seen was randomly selected. Wilson (2012) asserts that, this procedure is less cumbersome compared to random sampling, and in this case, there were “no obvious anomalies”.

5.8.5 Administration of questionnaires

Questionnaire administration is considered critical in survey research, which involves the structured questioning of respondents, which could also greatly affect the quality

and reliability of the responses (Saunders et al., 2009). Likewise, response rate is partly dependent on how the questionnaire is administered. The literature suggests a number of ways in which the questionnaire is administered as noted in section 5.8.1. All the methods have their advantages and disadvantages in relation to response rates, cost, time, etc.

This study mainly employed a face-to-face interview approach in administering the questionnaires. However, the questionnaires were self-completed by some of the respondents in the case of the doctors. The face-to-face approach motivates the respondent to take part in the study, allow the researcher to check and ensure respondents eligibility and also improves the understanding of the interviewer and the respondent through non-verbal communication, however, the major setback is the fact that it is time consuming and expensive, with the possibility of bias from the interviewer (Easterby-Smith et al., 2008; Wilson, 2012). However, this method was untenable considering the nature of the research, which involves both doctors and patients. Secondly doctors are busy in discharging their duties and, therefore, may not have time to administer the questionnaires to their patients. Moreover, a postal survey is not feasible as a result of a lack of a structured residential address system in Ghana. Also, Internet accessibility is not reliable and, therefore, these methods could result in high non-response rates.

Of the doctors interviewed, 84.5% (82 doctors) self-completed the questionnaires, which were later collected, whereas the researcher interviewed 15.5% (15 doctors) face-to-face. Out of the 82 doctors who self-completed the questionnaires, 30 returned their completed questionnaires late after a series of reminders. Hence, 120 outpatients were later interviewed upon receiving the completed questionnaires from the 30 doctors. Contrary to the doctors, 80% of the patients completed the questionnaires through face-to-face interviews by the interviewers, while 20% self-completed the questionnaires in the presence of the interviewer, and hence no patient was allowed to take the questionnaire home. In administering the questionnaires, three undergraduate students were recruited and trained to administer the questionnaires with the researcher. This approach was deemed important considering the time constraint faced

by the researcher, as they were involved in the administration of the questionnaires, collection and data entry.

As earlier noted, the data collection employed both self-completion and interviewer-led modes of questionnaire administration. This approach raises a number of concerns as the mode of questionnaire administration is argued to have potential effects on the quality of data collected (Bowling, 2005). However, Bowling (2005) notes that these arguments in the literature are inconsistent and inconclusive, which presents difficulties in ascertaining the exact effects. This limits our understanding of how the mode of questionnaire administration affects the process of answering questions (Tourangeau et al., 2000). In another study, McColl et al. (2001) found that self-completion and interviewer-led questionnaire administration provided no superior differences in relation to quantity or quality of the responses. They argued that, the mode of questionnaire administration should rather be informed by the availability of an appropriate sampling frame, anticipated response rates, the potential for bias from sources other than non-response, acceptability to the target respondents, time availability, etc. McColl et al. (2001) conclude that in as much as trade-offs between modes of questionnaire administration are likely in research, the principal objective should be to collect reliable, valid and unbiased data. Although self-completion and interviewer-led modes of questionnaire administration were employed in this study, there were no variances in the responses as presented in section 7.2.1 of this thesis. Hence, this was not problematic for the study.

The facility administrators were very helpful, as they introduced the interviewers to the medical doctors in their consulting rooms as well as the patients waiting at the OPD. This made it easier during the administration of the questionnaires to the respondents, which is evident in the high response rate especially from the patients as presented in section 5.8.6. Throughout the research, ethical procedures as outlined in section 5.6 were strictly adhered.

5.8.6 Response rate

Considering the importance of the representativeness of the population in research, recording a high response rate is essential, however, non-responses cannot be overruled entirely (Saunders et al., 2009). 140 questionnaires (doctors) were administered in 20 facilities between January and March 2014, out of which 97 were returned representing a response rate of 69.3%. Out of the 97 returned, 7 were incomplete and hence rejected from the analysis, resulting in a valid useable sample of 90. Patients were interviewed after receiving the completed questionnaire from the participating medical doctor; hence patients seen by doctors who did not complete the questionnaires were excluded from the study. In the case of the patients, the response rate was remarkable which could be attributed to the following reasons; (a) the researchers were introduced to them at the OPD by the Nurses in charge, (b) they were interested in the research area after the author had briefed them of the need for the study and how this would benefit patients in general.

388 questionnaires were administered to outpatients out of the 420 recruited through face-to-face interviews representing a response rate of 92.4%. All the questionnaires were fully completed by the 388 patients, which could be as a result of the face-to-face interviews. Further explanations where necessary, also assisted patients who opted for self-completion to answer all the questions on the questionnaire. Out of the 388 completed patient questionnaires, 28 were rejected because their matched doctor's uncompleted questionnaires were rejected as noted above. As noted in section 5.8.5, 30 doctors returned their completed questionnaires late, which resulted in interviewing 120 outpatients later in the data collection period. Overall 360 and 90 questionnaires were considered appropriate for further analysis from the patients and doctors respectively. This represents a valid response rate of 85.7% and 64.3% for outpatients and doctors respectively.

5.9 Data analysis procedures

The structural equation modelling (SEM) technique was employed in the analysis using the SPSS-AMOS 21.0 software. Before the model was tested, data screening procedures were followed. The Cronbach alpha coefficient was computed for the reliability of the data collected using SPSS. All measures were subjected to exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) to assess discriminant validity, reliability, and unidimensionality of the measures. The CFA helps to improve the psychometric properties by examining the validity and reliability of individual constructs (DeVellis, 2012; Reise et al., 2000; Gliem and Gliem, 2003). This was done for the individual datasets (doctor and patient), as well as the dyadic dataset, which was prepared using the individual datasets. As detailed in chapter seven, the measurement model was tested using SEM and all fit statistic indices reported.

Reporting on some of the demographics of the respondents as presented in Table 5.11, the doctors' respondents comprised of 62.2% males and 37.8% females. Majority of the doctors interviewed had practiced between 1 - 5 years (36.7%) and 53.3% were at the professional rank of Medical Officer (MO). Contrary to the gender distribution of the doctors, more female patients were interviewed than their male counterparts. 66.7% of females and 33.3% of males were interviewed; 82.8% of the patient respondents have had formal education ranging from the senior high school to the post-graduate level. The remaining 17.8% have mostly completed the Junior high school, vocational school and the middle school, hence coded as the lowest (or 1) among the options. Also, the basic characteristics of the respondent (both patients and doctors) included in the study are presented in Table 5.12.

Table 5.12: Characteristics of the respondents

Patient characteristics		Frequency (n)	Percentage (%)
Gender	Male	120	33.3
	Female	240	66.7
Age (in years)	21 – 30	141	39.2
	31 – 40	107	29.7
	41 – 50	41	11.4
	51 – 60	71	19.7
Educational background	Senior High School	142	39.4
	Diploma	24	6.7
	Higher National Diploma	45	12.5
	Undergraduate	30	8.3
	Bachelor's degree	40	11.1
	Post-Graduate	15	4.2
	Other	64	17.8
Doctor characteristics		**Frequency**	**Percentage**
Gender	Male	56	62.2
	Female	34	37.8
Professional rank	Medical officer	48	53.3
	Senior medical officer	25	27.8
	Specialist	11	12.2
	Consultant	6	6.7
Length of practice (in years)	1 – 5	33	36.7
	6 – 10	18	20.0
	11 – 15	12	13.3
	16 – 20	7	7.8
	21 – 25	17	15.6
	26 – 30	6	6.7
	Other	0	-

5.10 Summary

The chapter outlined the philosophical position and research design of the study. Specifically, pragmatism was adopted as a research paradigm employing a mixed method approach for the study. A pragmatic approach was adopted mainly due to what is being studied (value) and the fact that the research questions are both qualitative and quantitative. Using a mixed methods approach, the study adopted the sequential exploratory design, which requires data be collected in two phases at different times but interpreted together as one study. The first phase of the study was the qualitative study employing the critical incident technique to interview 8 doctors and 24 outpatients in two hospitals in Accra, Ghana. The second phase of the research was the

quantitative study involving 360 outpatients and 90 doctors from 20 health facilities in the Greater Accra Region (Accra and Tema).

The data analysis procedures and results (findings) of the qualitative and quantitative studies are presented in detail in chapters six and seven respectively.

CHAPTER SIX

QUALITATIVE RESEARCH FINDINGS

6.1 Introduction

The chapter reports on the findings from the qualitative interviews conducted. This presents the value co-creation process between the focal dyad in the service encounter. Processes that affect the experiences of the actors are outlined which also influence the value co-creation process. The chapter begins with the classification of these processes. The reliability and validity of the data are also addressed, which is then followed by the presentation of the findings. A conceptual framework is then developed from the findings building on the initial framework in figure 5.1. This chapter will also seek to transpose the conceptual framework into a measurement model as well as formulate the hypotheses tested in this thesis.

6.2 Classification of categories

Coding rules were developed to guide the classification of the incidents (Bitner et al., 1994) following a classification scheme. The data was inductively analysed (Woolsey, 1985) through categorization that resulted from coding incidents into themes and examining the similarities and differences in the quotes from the data which is in line with the abductive research process outlined by Kovac and Spen (2005). This is also consistent with Flanagan (1954, p. 344) who asserts that the formation of categories demands "insight, experience and judgement". The data was then ordered into categories and sub-categories. For the avoidance of ambiguities in the categories and sub-categories, the coding procedure was repeated a couple of times. The sorting of the incidents resulted in three (3) main categories which were labelled as: (a) social context, (b) beliefs and perceptions, and (c) partnership, to address the concept of value co-creation process in the healthcare service context as presented in Table 6.1.

Table 6.1: Main and subcategories of the influencing factors of value co-creating of the focal dyad

Main category *Subcategory*	**Favourable** No.	**Unfavourable** No.	**Row Total** No.
Social context (n=46) Actors' experiences of the interactions that ensue during the consultation process			
Doctor's social skills:	8	5	13
Nature of interaction:	6	7	13
Doctor's knowledge and competence:	1	3	4
Patient's knowledge and competences:	5	11	16
Beliefs and Perception (n=8) Actors' attitudes and behaviours that influence the service and how these significantly affect the outcome			
Level of trust & assurance to patients:	2	2	4
Emotional effects:	4	0	4
Partnership (n=22) Activities both focal dyad do to improve on the service outcome, which may impact on the optimal value-in use			
Compliance:	0	4	4
Involvement in the service encounter:	5	10	15
Provider patient orientation:	2	1	3

n – Number of critical incidents identified

6.3 Credibility/ trustworthiness checks

Following the method employed to assess the reliability of the data outlined in section 5.7.6, the index of reliability of the data was estimated. The equation defined by Perreault and Leigh (1989) was applied as shown below:

$$F_0 = N\{I_r^2(1 - {}^1/_k) + {}^1/_k\} \quad \text{----} \quad \text{equation (1)}$$

where;

F_0 – number of observed frequency of agreement between judges

N – total number of judgements made by each judge

k – number of sub-categories identified under each dimension or main categories by judges

I_r - index of reliability

Rearranging equation (1) to solve for I_r leads to equation (2) below:

$$I_r=\sqrt{\{[(F_0/N)-(1/k)]\,[k/(k-1)]\}} \quad \text{----} \quad \text{equation (2)}$$

Just like other reliability indices, the values of the index of reliability range from 0.0 to 1.0 (Perreault and Leigh, 1989); where 0.0 signifies no reliability and 1.0 signifies absolute reliability. The index of reliability was computed for the individual main categories as well as the entire data as presented in the Table 6.2.

Table 6.2: Reliability estimates for the coded categories

Main categories	Sub categories (**k**)	Number of critical incidents (**N**)		Number of observed frequency of agreement(**F_0**)		Percentage of agreement between judges (F_0/N)		Estimate of reliability (**I_r**)	
		fav	unfav	fav	unfav	fav	unfav	fav	unfav
Social context	4	20	26	17	20	.850	.769	.894	.832
Beliefs and perception	2	6	2	5	2	.833	1.00	.816	1.00
Partnership	3	7	15	5	11	.714	.733	.756	.775
All categories	**9**	**33**	**43**	**27**	**33**	**.818**	**.767**	**.892**	**.859**

fav – favourable incidents unfav – unfavourable incidents

Perreault and Leigh (1989) suggest that, in exploratory studies, **I_r** of ≥ **.700** is considered acceptable. From Table 6.2, it is noted that the index of reliability obtained for the entire classification were **.892** and **.859** for favourable and unfavourable incidents respectively. It is also noted from the table that, the number of incidents or size of data influences the degree of reliability. This confirms Perreault and Leigh's (1989) assertion that "the estimate of reliability becomes higher as the number of possible response categories increases" (p. 141). However, it is argued that establishing the reliability of the categories through quantitative means does not necessarily establish the validity of the categories (Butterfield et al., 2005).

In addition to the credibility already established with regard to the reliability measure, copies of transcripts with initial categories were sent to three respective respondents, giving them the opportunity to cross check the categories against their experiences

reported in the interviews (Maxwell, 1992). This process confirms the soundness of the categories mirroring the individual participant experiences (Butterfield et al., 2005; Whittemore et al., 2001). This was confirmed through the positive feedback from the selected participants. Again, the measures outlined by Flanagan (1954) to enhance the validity of the data were strictly followed through the interview process and the classification of the categories. Details of the incidents reported were taken into consideration noting the cause of the incident, describing in detail, and the net effect of the incident on their service experience. Also, descriptive validity of the study is significant as direct quotes from interviewees are provided for each category or sub-category identified as demonstrated in the findings section (Tuuli and Rowlinson, 2010).

The following sections analyse the results making reference to the categories and subcategories classified in Table 6.1. The value perspectives and outcomes are addressed. The value co-creation between the doctor and the outpatient during the service encounter, taking into consideration their favourable and unfavourable experiences are also outlined.

6.4 Value perspectives of the actors

Actors in the service encounter have a different set of goals that translate into the value that is determined at the end of the encounter. Individuals depending on their expectations mostly perceive value differently. One of the objectives of the study is to find out *what value means to the patient and the doctor in the healthcare setting*, and responses from the interviews conducted revealed a number of perceptions of how the parties in the dyad perceives value, which in some cases had common underlying features. It is worth noting that, value in this context is co-created, but evaluated differently and hence, determined uniquely by the beneficiary, in this case, the involved actors. Hence, for value to be co-created, there is a need to understand how the focal dyad perceives value in the healthcare setting. Respondents were asked about what they consider as value in receiving or delivering healthcare. From the research,

both actors expressed similar views about what they consider as value in the care that is delivered and received.

> *I expect to get the best of care from the doctor and ultimately get well as soon as possible. For me I think that is the value I receive from the service if I get well at the end of the day, then I'm okay then I know that my expectations have been met. [39-year-old patient]*

> *I think basically what I consider as value is seeing the patient getting well. [Doctor M_1]*

> *Coming to the hospital means you are not working that day considering the time you spend to see a doctor… so the value I get in all this stress and inconveniences is to get well that is primarily my expectation or goal of coming to the hospital… So once I get well at the end of the day, then I'm okay, and that also means I have achieved some value for the time spent in the hospital. [44-year old patient]*

However, some patients value the experiences that culminate from the consulting room. All patients interviewed considered getting well as the value achieved from the care delivered and received at the micro level. However, some argued that, 'getting well' was only part of the value that is expected. Some patients considered their involvement in consultations as being critical to what they consider as value, hence, they regard value as not being achieved when their participation is denied, even though they might get well after taking their medication.

> *For me, getting well is just part of the value I receive from coming to the hospital, in addition I expect to actively participate in the consultation, be part of the decision-making process, and therefore, when these are denied, I leave the consulting room not happy which sometimes even affect my compliance. So in effect I expect to receive the best of care, so when these are experienced, then I will say my goals are fulfilled. [40-year old patient]*

> *And one thing about me is that, I value the consultation very much because what happens there has some inherent effects on me as I mentioned of the emotional healing process which gives me some level of relief even before I get home and start taking my drugs, so I expect that the consultation goes well. [58-year old patient]*

On the other side of the dyad, in addition to seeing the patient getting well the doctors also considered other factors. They considered value of the care delivery at the micro level as pertaining to having all functional units in the hospital working and ultimately being able to understand the problems presented by the patients, get the right diagnosis, and prescribe the right drugs.

> *For me, I expect that all relevant units within the hospital are working, then the right diagnosis is made, right drugs prescribed, I expect the patient to comply, and when the patient gets well, then I will say I have achieved value for the time spent with the patient. [Doctor F_3]*

> *My objective is that the patient gets well or receives the best care. So if at the end of the day the patient gets well then I'm happy, and if the patient has received the best care they have to, then I'm happy including those who have to be referred, they need to get to the appropriate specialist, and when all this is done and the patient gets well, then I have achieved my goal and that is what I will consider as value. [Doctor M_4]*

Combining both perspectives, value in healthcare service delivery at the micro level between the focal doctor-patient dyad can be said to be attributed to; patient getting well, receiving the best of care, involvement in the decision-making process, positive experience in the consulting room, understanding the patient, making the correct diagnosis, prescribing the right drugs, the patient complying to directives, seeing patient happy and satisfied, and ensuring functional units are working. The focal dyad noted the importance of positive experiences in the consulting room in shaping the service outcome resulting from the value co-creation process. Knowledge of the value perceptions of the actors provides the basis of understanding value co-creation of the focal dyad at the micro level as addressed in the following sections.

6.5 Actors experiences and value co-creation

The literature suggests that the processes involved in the service encounter between the actors are likely to affect their respective experiences (Gentile et al., 2007; Payne et al., 2008), which also influence the value that is jointly created (Spena et al., 2012). The data revealed three key factors of the service encounter between the doctor and

the patient, which greatly influence value co-creation of the dyad at the micro level, which are labelled as: (a) social context, (b) beliefs and perception, and (c) partnership. These are presented below.

6.5.1 Social context

Both actors revealed the effects of the social context on their experience in the consulting room in relation to value co-creation. This refers mainly to the actors' experiences of the interactions during the consultation process. Hence, the social context provides the environment for the actors to interact during the service encounter, which affects the outcome of the service. Three main elements constituting the social context impacting on their experiences included the doctors' social skills, the level of interactions between the actors and their knowledge and competences.

In relation to the ***doctors' social skills,*** the findings revealed the importance of this attribute in value co-creation between the actors in the consulting room. The social skills afford them the opportunity to engage well with the patients and create an atmosphere for the patient to feel relaxed and encourage them to actively participate in the consultation. These skills included the actors' interpersonal skills, friendliness, empathy and respect for the patient.

> *The doctor was very friendly and nice and I think she has good interpersonal skills and she really used that to create a very conducive environment that encouraged me to freely and actively participate in the consultation and therefore, get the best out of it… [35-year-old patient]*

> *Establishing good rapport with the patient is critical… this helps break their silence and tells you everything, because some of them actually decide what to tell you based on your attitude… [Doctor F_1]*

Mutual Respect was also considered to be important between the actors in the service encounter.

> *Respecting the patient's views is very important as it encourages the patient to share more information with you, he/she is not scared or afraid to say anything because they believe their views are respected and welcomed. The patients I*

see accord me the needed respect, and it is important that I also respect them. [Doctor M_2]

I think the doctor was nice, friendly, he accorded me the respect I expected and really had time for me, trying to understand my condition better in order to give what is best for me. [40-year old patient]

I think if someone respects you and you also respect and trust the person, there is some mutuality between the two of you. And in my case that is how I see it and because of that, I freely share information with him, I tell him everything, whatever is on my mind I tell him, so we kind of understand each other, it makes the interaction easier, because it's not so formal as it happens sometimes. [47-year old patient]

As part of the value creation process, doctors are expected to relate to, respect, empathise, and build a conducive environment with their patients. Both actors pointed out situations where the lack of these characteristics negatively impacts on the service encounter. In such situations, the patients seemed to share more experiences as in most cases the consultation is initiated by a doctor.

…The doctor was disrespectful, and I noticed that the moment I entered the consulting room and I also observed that throughout the period of the consultation. When I entered the consulting room, I greeted him, and he pretended as if he did not hear my greetings, I stood for a while before he raised his head to offer me a chair. I felt insulted and disappointed. [26-year old patient]

Once I visited a doctor, and he was not nice, I didn't like the encounter, so I didn't share detailed information with him. For me I decide on what to share with the doctor depending on the circumstances, if the doctor is nice and friendly, I open up and share detailed information with him, but if he's not, I don't. [45-year old patient]

There are some patients who are not forthcoming with the information and I find it difficult why they do that, if I don't get the detailed information, it becomes quite difficult for me to diagnose, sometimes they are just shy to say what is on their mind, in such cases you need to encourage them before some will open up. It's quite challenging. [Doctor F_2]

From the above, it is clear that doctor's social attributes contribute a lot to the doctor-patient encounter, which also affects the mode of the consultation.

The respondents also emphasised the importance of the ***nature of interactions*** during the consultation process. This encompassed an emphasis on listening, explaining, non-assertive response and a demonstration of understanding.

> *I attended to some patients who appeared very nervous… such patients are usually afraid to say what is on their mind, and that makes the consultation quite difficult… They barely participate in the interaction… [Doctor M_2]*

> *I visited a doctor three months ago in this hospital…he was not engaging… little or no interaction, I reported what was wrong with me and he just listened and prescribed something for me…though it is not strange, but I don't like that and sometimes I feel I did not get value from the time spent… [31-year-old patient]*

> *…Also there are some patients who want to rush and go back to work… for such patients you try to explain issues to them and you sometimes realise their mind is not really there… it rather affects the level of interaction when it happens like that… [Doctor F_2]*

Both actors reported favourable and unfavourable experiences during the encounter with regard to the level of interaction between them. The results revealed both similar and contrasting findings from the actors. While some patients complained of the lack of engagement from doctors, some doctors also complained about similar behaviour from patients

It is argued that the interaction process affords the patient the opportunity to actively participate in the consultation. Likewise, it gives the doctor a greater opportunity to obtain as much information as possible to aid in diagnosing the problem presented. Both actors also agreed that there was a need for two-way communication during the service encounter rather than simply a question and answer session.

> *The consultation is mainly through interactions, it's a two-way communication, I need the patient to open up, share information with me by reporting what is wrong with them, I come in and ask questions to probe further, they are also given the opportunity to ask questions or say whatever is bothering them even to the extent that they are involved when a decision is taken. So during the consultation, I listen to what they say, and I expect them also to listen to what I say. [Doctor M_3]*

... Then the doctor said, 'I expect you to tell me everything I need to hear and feel free to ask questions and say whatever is on my mind'. So I told her everything regarding my condition and she asked me questions and I responded, then it became more like a conversation. She was more engaging, and it was great... [29-year-old patient]

In effect, a doctor's misconception about the patient's problem during the interaction process could result in a wrong diagnosis, which could be detrimental to the patient. Likewise, the patients misunderstanding of the doctor could result in a general assertion that, the doctor is not engaging and caring (Laing *et al*., 2002). It is imperative for doctors to improve their communication skills in order to get the best out from the patient.

The data also revealed the contrasting effects of use of **k*nowledge*** in value co-creation between the actors. The data revealed a high number of unfavourable experiences that resulted mainly from the patients' demonstration of knowledge during the consultation process as shown in table 6.1. This could also reflect the upsurge of consumerism in healthcare with patients having developed the habit of making requests as well as pre-empting the diagnosis in some cases. This approach brings out contrasting views from both patients and doctors, while some patients find this normal; some doctors believe this attitude should not be encouraged in healthcare delivery. Some doctors consider it a challenge for which they need to improve their communication skills.

...So I asked the doctor to prescribe a particular drug for me so I can get it from the pharmacy, and he got angry with me - why I should ask him to prescribe that particular drug for me? I was surprised because he was so nice before I made the request... [25-year-old patient]

There are some patients who come to the consulting room and tell you what they think the diagnosis is and even request specific drugs to be prescribed for them. That is something I think should stop... I don't like that attitude, and it sometimes puts me off... [Doctor M_5]

Doctors recognize the fact that there are a number of sources available to the patient, and are, therefore, not surprised at the changes in patients' attitudes in the consulting room.

I think some of them read, others talk to their friends or family members who are health professionals, others also discuss among their friends or family members who have once been on that particular drug to manage a condition with similar symptoms. They usually do these things before coming to the hospital. So sometimes they even diagnose themselves at home before coming to the hospital, though I haven't met a patient who diagnosed himself in front of me in the consulting room before, but I have encountered patients who come and request for certain drugs or labs. So they come to the hospital with all sorts of ideas, which they tend to explore to see if it will work... I don't see anything wrong with it, however, as a doctor, I have to listen to them and advise them accordingly which is considered critical in managing the patient's condition [Doctor F_1]

Mostly, what I do is go to the pharmacy seek the views of the pharmacist and if there is a need to come to the hospital I do. Once in a while I search for more information on the symptoms I'm presenting on the Internet, but I don't try to be an expert, I prefer to seek professional advice. There is a lot of information on the internet and sometimes I get a bit confused with some of the things I read, so what I do is to note certain things down and when I go to the pharmacy I ask the Pharmacist or when I come to the hospital I ask the doctor. So in most cases before I come to the hospital I have a fair idea of what is happening, which keeps me informed and also helps me to engage well with the doctor [41-year old patient]

Both actors acknowledged the changes in the consultation as a result of the patient's ability to convert their tacit experiential knowledge into explicit knowledge and explore available options. Despite this tension, both doctors and patients argued that the final decision rests on the professional judgement of a doctor.

However, it is apparent that patients are developing the habit of learning to know more about their conditions and show keen interest in health related issues. From the data, it is noted that the negative incidents in relation to knowledge was higher than what was recorded for the positive incidents. This raises concerns of what can be termed as 'knowledge conflict', which could affect value co-creation, considering knowledge as an essential resource in SDL (Lusch and Vargo, 2014). However, the ability of the doctors to incorporate the patient's views and expectations into their goals could improve the outcome of the service.

The social context within which the consultation takes place is critical in affecting the outcome of the service. There were a number of contrasting views from both perspectives (doctors and patients), which indicates that there is still the need to promote a person-centred care approach in healthcare, which seeks to empower patients and position them as the focal point in the service delivery. This practice delivers the needs and values of the patient and remains debatable as to its acceptability in practice from the doctors' perspective.

6.5.2 Beliefs and Perceptions

The behaviours and attitudes of patients and providers are mostly driven by their beliefs and perceptions, which also influence their experiences in the service encounter and value co-creation. This also stems from the experiences derived from the social context of the service encounter. The data revealed emotions, trust and assurance as elements of the actors' beliefs and perceptions that directly impacted on their experiences. However, patient's perception was also found to drive the encounter process and the service outcome as presented in section 6.4.

Both actors considered the importance of the service encounter and how it impacts on their **emotional** appeal especially in the case of the patients. From the data, it is worth noting that some patients' treatment processes were greatly influenced by the emotions created by the encounter.

> *Also, the doctor's approach in the consulting room made me feel very comfortable, which had a positive effect on my experience of the service. I'm emotionally and mentally satisfied when it happens like that, and I believe it helps me in the healing process...for me it's not all about the drugs I receive, but the emotional aspect of the consultation is very important… [58-year-old patient]*

> *Sometimes you meet patients who after the consultation tell you they are fine, and that how you handled their case had given them a reason to believe they are healed. So that also gives me as a doctor some positive feedback right there in the consulting room, which is a good experience for me. [Doctor M_3]*

The encouragement I received from the doctor was stimulating, and I feel psychologically I was healed... But when things don't go as expected, the treatment is prolonged even though I take the drugs prescribed… I have experienced this a couple of times. [41-year-old patient]

The focal dyad also noted that the emotional component of the service experience during the encounter could create an affective relationship between them. For instance, a patient had a bad encounter with a doctor, and as a result walked out from the consulting room and joined the queue again to see a different doctor in the same hospital, she said:

… So the doctor was really shocked to hear all that transpired between the other doctor and I, and he even said, it's okay, he's sorry for all that has happened, I was touched and felt emotionally satisfied because that was the first time I was meeting that doctor and he was so sensitive to my condition… [43-year old patient]

Both doctors and patients expressed the importance of positive experiences in the consulting room to the service delivery and its possible outcomes. For instance, patients were generally happy with doctors who were considerate, understanding and empathetic towards their condition, and negative experiences were reported in cases where opportunities to participate in the consultation were denied.

The data also revealed the importance of the ***level of trust and assurance*** in the consultation process, which also results from the level of the relationship between the two actors. It was evident from the interviews that trust affects the patient with regard to value co-creation.

…But I freely shared information with him simply because I trusted him which resulted from the service and care I received from a doctor. [47-year-old patient]

…They wanted to find out if I'm competent and a doctor they can trust. So if I had got any of their questions wrong, they would not have come to me again… I think it's natural that if you trust somebody, you are at peace with him/her, you can freely discuss issues and you have the belief that, that person will not let you down… I consider it valuable [Doctor M_2]

The focal dyad noted that trust is considered conditional and seemingly mandatory, which plays a critical role in the consultation. However, it is not something that is often expressed, but the level of importance in driving the consultation is unparalleled.

> *The doctor's actions and approach to consultations speak volumes when it comes to trusting him. It is not something that is explicitly expressed, but inwardly what the doctor does give me a cause to believe that I can trust his judgement. [55-year old patient]*

> *Trust in the consulting room seems mandatory and reciprocal. The patient must trust me as a doctor and likewise, I have to trust the patient of the information he/she is providing… It is very important because when the patient feels uncertain of your judgement as a doctor, it creates a problem in managing his/her condition. [Doctor M_2]*

The focal dyad noted that assurances from the doctor to the patient in relation to their health issues helped in managing their condition leading to value creation. This sometimes allays the fears of the patient depending on the condition that they have. Once the patient is assured of the effectiveness of the service this impacts on the outcome of the service. Likewise, the assurances received by the doctors from the patients in relation to managing their condition also give them a cause to believe there is value in the service delivered.

> *…Two months ago, I came here to see a doctor and the assurance he gave me allayed my fears and I began to feel better long before I left the consulting room… so it's not all about the drugs he prescribes for me but I find these assurances more valuable during the consultation… [44-year-old patient]*

> *… I complained to him about something I was feeling, and all he asked was have you been taking your medication, and I said yes, then he said okay, just continue with it, then he prescribed the drugs for me and I left the consulting room. He did not seem to be bothered about my other complaint, and he did not provide any assurance with regard to my complaints, whether it is something serious or not, that was bad. [49-year old patient]*

> *The assurance I receive from the doctor helps a lot in the healing process even before taking the drugs that are prescribed. So for me it is very important what happens in the consulting room. [32-year old patient]*

... I try to put myself in their shoes, I make them know that I understand their situation, I know the pains they are going through, and then give them the assurance they need, give them words of encouragement... Yes, once you give them the assurance, they become relieved and then begin to show some level of excitement and to me that is a positive sign of managing their condition. Also when it happens that way, the patient is also eager to share with you everything you need to know, I remember one patient came to my consulting room and I noticed she actually had something to say but strangely she didn't want to, so as we were interacting, then she asked me Doc can I trust you, I paused for a while and said why not, I'm here because of you and everything you say stays here, nobody will hear of it. So that assurance is what she needed to open up and tell me everything about her history that also helped me a lot to know what to prescribe for her. [Doctor F_3]

Once the patient is assured of the effectiveness of the service he/she is receiving could bring out the emotional appeal, which could impact on the outcome of the service. Likewise, the assurances received by the doctors from the patients in relation to managing their condition also give them a cause to believe that they will achieve their perceived value in the service delivered. The level of patient emotions, trust and assurance that results from the encounter with their doctors gives the patients some sense of ownership (Liang et al., 2002), which leads to the popular phrase "my doctor". Once this bond is established culminating from the effects of the social context, then the patient is likely to accept anything from the doctor.

6.5.3 Partnership

Partnership between the patient and the doctor result in ways that patients could be empowered in order to engage well in value co-creation. This requires active participation and understanding of the actors in the encounter, which is considered critical in the co-creation process (Aarikka-Stenroos and Jaakkola, 2012). The data revealed partnership between the dyad require actor involvement (including the decision-making process), provider-patient orientation, and patient compliance that impact on value co-creation.

In relation to actor ***involvement in the service encounter,*** the data revealed this is

widely initiated by a doctor. The patients maintain that most of them were not involved in the consultation, as they were mainly required to report symptoms. This approach departs from the concept of partnership between the actors in the service encounter. The focal dyad reported different approaches to the encounter in relation to actor involvement in the consultation process. The data revealed these styles to include the paternalistic approach, shared-decision making and professional-as-agent (Thompson, 2007).

The paternalistic approach is considered to be the traditional consultation model whereby patient involvement in consultations is limited to reporting symptoms and not being engaged throughout the consultation. Though considered outmoded, it is not uncommon to experience this kind of practice in the healthcare sector, in which case the doctor is seen to dominate the consultation. From the research, some doctors claim to believe and practice a patient-centred care approach, however, they do not demonstrate this in their actions.

> *No, I don't involve patients when prescribing. I prescribe after listening to them and asking them a series of questions relevant to their condition. So I prescribe and give the folder back to them to be taken to the pharmacy… Sometimes I do discuss the diagnosis with them, other times I don't. Some of the patients do not bother to know what the diagnosis is, and all they care is about what is given to them to take and get well. [Doctor F_2]*

> *The doctor just listened to my complaints and prescribed some drugs for me. But this is something like the norm, doctors don't discuss with patients about the decision in terms of telling the patient what the diagnosis is, and what is being prescribed so in most instances you leave the consulting room without having an idea of what the problem might be. In fact throughout my life I have never seen a doctor who prescribed a medicine and explained to me what he/she is prescribing. [42-year old patient]*

These doctors argue that, the patient does not bother much about their diagnosis, but are more concerned about what is prescribed, this is supported by some of the patients.

> *I was not involved in the decision-making, she did not discuss the diagnosis and the prescription with me, but I think she is the expert and therefore, whatever she gives me is the best for my condition. [39-year old patient]*

Both parties attribute their position to the fact that the doctor is an expert and has the right to exercise their specialised knowledge to make informed decisions regarding the management of the patient's condition. Some of the patients interviewed also considered this practice as the norm since they had never experienced a doctor who would involve them in the decision-making process.

Though patients may accept whatever the doctor prescribes, they also believe involving them in the decision-making process may be better. Contrary to the views of some doctors who limit the patient to just providing information, some doctors consider the patient involvement in the decision-making process as something worth doing.

> *…as a family physician one of the ways of managing the patient is to reach common ground, so reaching common ground is between you and the patient, I want to write this medicine for you… So I always involve the patient and discuss with them what I'm prescribing, and this is when some of the patients make their requests and demands. [Doctor F_1]*

> *I was actively involved in the consultation from start to finish; I was offered the opportunity to suggest options… this was my first experience, and it's something I really cherished…this also gives me some sense of responsibility in managing my condition… [50-year-old patient]*

This approach is considered very important by the focal dyad in the healthcare service delivery, which affects the patient positively. Specifically, the shared decision model empowers patients to exercise an informed choice and make suggestions to influence the decision in line with what is prescribed. This approach also instils some level of responsibility on the part of the patient in managing their condition, which is paramount in value co-creation. The extended form of the shared decision-making model of the consultation is the professional-as-agent where patients' preferences and expectations are incorporated into the decision-making.

> *Well as usual he informed me of the diagnosis and also what he was prescribing for me, so I also requested for a dewormer because it's been over five months since I took one and he said okay, that's not a problem but do I want a single dose or multiple dose so I said I wanted the single dose and he prescribed it for me. [28-year old patient]*

The focal dyad were of the view that valuing patient inputs in the decision-making process during the consultation must be encouraged in healthcare service delivery as this will encourage and empower more patients to share their views and engage in a healthy discussion in the decision-making process. However, this is mostly ignored by some doctors and attributes their inability to do that to the time factor and the fact that they have a high number of patients to attend to.

The research also revealed the need to improve on the ***provider-patient orientation,*** which is critical in the consultation process. From the research, both patients and doctors call for the need to understand and cooperate with each other to reduce the tendency of value conflict. Bove and Johnson (2000) assert that, provider's commitment to understanding patient's behaviours and interest is critical in delivering service tailored to their needs, and hence instilling positive patient's emotions and perceptions of the service. Considering the different aspirations of the dyad, a better orientation is expected from both actors, which could bring changes in the practice approach to impacting on the service outcome.

> *I think doctors must cooperate with me as a patient and appreciate my expectations and needs of the service I seek…it's not all about the prescription, but I desire to contribute to the consultation… [32-year old patient]*
>
> *Having a good orientation of the patient gives me a fair idea of what is happening, and how to approach different patients with different needs and expectations… for instance, I don't have any problem with patients who come with their own requests and demands, at the end of the day we have to agree on something and it is my duty as the professional to explain issues with the patient for them to understand clearly and as well accept the position taken… [Doctor M_4]*

In effect, the provider-patient orientation provides a learning phase for doctors to better comprehend and share the expectations of their patients. It is also eminent that some doctors have embraced the practice to be more committed to the patient needs while others are yet to practice that. This approach could also improve on the patients' participation in the consultation and especially in the case of patients who appear nervous and afraid to share information with the doctor, this practice could help alleviate that and collaboratively improve on the outcome of the service perceived by

both actors. Patients have been exposed to messages encouraging consumerist attitudes and behaviours in the healthcare service delivery, and therefore, there is the need for doctors to understand and empower them to easily share their expectations, which also edge them to be active in the consultation.

Another important element of the actor partnership revealed in the data is patient ***compliance*** to instructions. Patient compliance in healthcare has been a major concern to improving healthcare outcomes (e.g. improved well-being). Patient non-compliance is considered to be more attitudinal and behavioural than any other factor.

> *For me I think it's got to do with the individual's behaviour, for instance I receive all the care I expect to have received, yet I do forget sometimes for no apparent reason, so it's purely personal. I have the drugs, so what other excuses do I have… [26-year-old patient]*

> *I think it's mainly personal, because I have the drugs, I've been told the relevance of complying with medication, I've been reminded to take my drugs, I've been told how to take the drugs, the side effects I might experience, what again, if not personal behavioural issues. For instance sometimes I stop taking my medication after day three when I begin to feel better, which is not good especially when I'm treating an infection because you don't get fully treated. [38-year old patient]*

Considering value co-creation in healthcare, this is considered as value-in-use. From the data, both patients and doctors consider the important role compliance plays in service delivery in relation to the patient getting well, and also consider it as the role of the patient. However, as compliance remains a problem in healthcare, doctors are faced with this challenge every day.

> *There had been a number of times when I had to turn out some patients from my consulting room because they did not adhere to my directives. Some of these patients come back to me for review and you see their conditions deteriorating, and later find out that they did not take their medications as prescribed. It's a serious problem, and I'm always harsh on such patients. [Doctor F_3]*

> *I remember there was this patient who came here two months ago with typhoid and I prescribed some antibiotics for him and asked him to come for review in two weeks. The patient was rushed to the hospital after a week which was*

earlier than the initial two weeks I had recommended so I ran another lab test and it was the same condition which means the drugs I prescribed were not effective so I asked the patient if he took the drugs that were prescribed, and he confessed not taking as directed because he felt okay two days after taking the drugs. [Doctor F_2]

Both actors considered the relevance of complying with the medications prescribed and the fact that, patients need to comply in order to get well and achieve the purpose for which they attended the hospital. Once compliance is considered as behavioural, patient experiences in the consulting room during their encounter with the doctor, could positively affect the level of compliance. If a patient is happy and satisfied with the level of care or service received, then he/she is motivated to follow the instructions of the doctor. Doctors and patients have respective goals and expectations prior to the service encounter, with a common aim of seeing the patient getting well. It is imperative for both actors to understand each other's expectations or goals and integrate it into their respective goals, and in value co-creation, the ability of the provider to integrate the resources and aspirations of the patient is fundamental to the value that is determined.

6.6 Expected outcomes of the dyadic value co-creation

The research also revealed how value co-creation improves the service outcome. When asked about the net effects of their experiences in the consulting room on the value outcomes and how this could be improved, both expressed the need to enhance the level of engagement in the consulting room, which would lead to positive experiences. They explained positive outcomes to include; improved service engagement, commitment to compliance, and perceived value realised.

I think if the doctor better understands me and creates an enabling environment, then this will lead to better engagement and an understanding of each other in the consulting room…so we both have responsibilities to play to ensure a better outcome… this will more likely speed up the healing process…[30-year-old patient]

It's important for patients to understand their roles… also empowering the patient is a step in the right direction so they can better manage their condition leading to positive outcomes… hence reducing the tendency of repeat complications, but rather improved well-being…[Doctor M_1]

From the data analysis, three key expected outcomes of the focal doctor-patient dyad were highlighted to include:

- Improved service engagement
- Commitment to compliance to medical instructions
- Perceived value realised

6.6.1 Improved service engagement

In the context of this research, service engagement simply refers to how care is delivered and received between the doctor and the patient, taking into consideration the cognitive and relational factors that influence the patient's experience. In this case the approach that is employed between the focal dyad during the service encounter is considered important. Improving service engagement is also likely to positively influence the overall outcome of the service (Bitner et al., 1997; Bowden, 2009). It is apparent that service experiences derived from the encounter greatly affect the outcome to both parties involved in the co-creation process. From the data, both actors attest to the fact that understanding and cooperating with each other, encouraging and engaging both members of the focal dyad could improve on the care that is delivered and improve the service engagement.

I think if the right environment is provided and we understand each other, encourage patients to be actively involved in the consultation, build good partnerships, we can get the best of care delivered, so there is the need to cooperate with the patient for an improved clinical engagement. [Doctor M_2]

As a patient I want to receive the best of care possible and therefore, I need to share detailed information with the doctor, ensure I engage well with the doctor, therefore, how the doctor engages me in the consulting room is very important as this could also impact on the overall outcome. [28-year-old patient]

Stemming from value co-creation between the focal dyad, the actors believe that empowering patients to play an active role and to be engaged in their care is the key to improving health service delivery. Also, the patients reported they are encouraged to engage better when the doctor maintains eye contact with them and sometimes get distracted when the doctor tends to read something or divert his attention. Hence, the focal dyad notes that the level of engagement in the consulting room is influenced by social context, the degree of partnership and their beliefs and perceptions of illness and clinical management.

> *The friendly environment, the competences the doctor demonstrates and his orientation and understanding of my needs greatly drives the engagement. [38-year old patient]*
>
> *During the encounter, I expect the doctor to maintain eye contact with me and show interest in what I report or say…I get distracted when they turn to read or divert their attention from me…it means a lot to me when it comes to the engagement with the doctor. [47-year old patient]*
>
> *The patient's beliefs, trust in the doctor, their preparedness to collaborate and active participation greatly impacts on the level of engagement we have in the consultation…I try to provide the right environment, encourage and empower the patient to contribute to the consultation, and this is something that helps redefine the level of the clinical encounter. [Doctor F_1]*

6.6.2 Commitment to compliance to medical instructions

Compliance or adherence to medical instructions remains a challenge in the medical practice (Vermeire et al., 2001), which is also considered an essential role of the patient (Dellande et al., 2004) and impacts on the clinical outcomes (Gill et al., 2011). The research suggests compliance as an element of partnership (as presented in section 6.4.2) and as an outcome. The doctors maintain that compliance remains a challenge, which hinders clinical outcomes and hence improving on the patient's commitment to compliance could impact positively in achieving positive outcomes leading to the realisation of the perceived value.

Talking about compliance, I find it difficult to understand why some patients do not comply with their medications as instructed. Considering the effort you put in and the time spent in the hospital by the patient all in the hope of receiving care and getting well, yet they leave the hospital and get home only to forget or refuse to take the drugs prescribed for them. It baffles me, and it affects the overall outcome of the service. If patients could improve on their level of adherence to instructions or prescription, will greatly impact on the service outcome, and I, as a doctor will be satisfied with the service I provided. [Doctor M_3]

Both actors attest to the fact that service encounters influence the patient's commitment to compliance. The focal dyad attributes the effects of the partnership, social context, beliefs and perceptions as well as the quality of the service engagement on commitment to compliance; however, some doctors maintained that patients' commitment to compliance is mainly behavioural.

A positive approach to the engagement in the consulting room motivates me to comply with the doctor's instruction. [42-year old patient]

I expect improved commitment to compliance from my patients, which I think is mainly behavioural…my past experiences with some patients make me believe that, however hard you try to engage and encourage patients, they go home and forget to take their medications…[Doctor M_4]

6.6.3 Perceived value realised

Perceived value realised in the context of this research refers to the overall outcome of service delivery. This implies that, both parties in the dyad are delivering a service. Section 6.4 outlined the value perspectives of the actors, which presented both divergent and convergent views. The overall effect of value co-creation is the value that is determined at the end of the encounter (Saarijarvi et al., 2013). Both actors considered improvements in service engagement playing an important role in achieving their expected value. Some patients pointed out that improving compliance to medical instructions greatly influence the healing process, however their experiences in the encounter greatly influences the value achieved. Contrary to their views, doctors

believe improving compliance levels will help them achieve their expected goals or value of the service delivered.

> *I expect the patient to get well, which is also well managed if they comply with the directives or advice I give them including taking their medications religiously…when that happens then I'm at peace with myself. [Doctor F_3]*

> *I consider every aspect of the service especially the level of engagement with the doctor…it's not all about taking my medications but the holistic view of the service means a lot to me. So once I'm satisfied with holistic engagement and get well after taking my medication then I can say I've achieved value for the time spent in the hospital. [38-year old patient]*

However, there were contrasting views from the patients interviewed, while some admit that their prime concern is getting well irrespective of the experiences with the doctor, some presented a more complex nature of perceived value. In effect experiencing an improved service engagement in the clinical encounter is expected to greatly influence the value creation as shared by the doctors and some patients.

> *An improved engagement in the consulting room with the patient is critical in affecting the overall outcome of the service. I've got patients who come to me and express their level of satisfaction in my approach to engagement, and I'm delighted in doing it. [Doctor F_2]*

> *I like the approach of engagement with my doctor, it gives me a sense of belonging, and I feel delighted any time I meet her…at the end of the encounter I feel my expectations of value are achieved. [50-year old patient]*

The data suggests that value attributes to both actors varied. However, enhanced service engagement coupled with improved levels of compliance does influence the overall value created.

6.7 Effects of actor characteristics on the service encounter

Value co-creation suggests actors as resource integrators (Ng et al., 2012), and considers the importance of their capabilities (Storbacka and Nenonen, 2009). However, the encounter process is more likely to be influenced by the actors' personal

characteristics (Cooil et al., 2007; Homburg and Giering, 2001; Krupat et al., 2000). Respondents were asked to briefly share their views on the possible effects of actor characteristics on the encounter process. The focal dyad shared common and contrasting views with regard to some personal characteristics. The doctors remarked that older patients engage better than the younger ones. However, they did not assign any reason to their assertions. Contrary to their views, the patients argued that the engagement in the consulting room is mainly individualistic and does not matter whether the person is old or young.

> *I think older patients are able to engage better than the young ones…maybe it's because of our culture or better still I don't really know why… [Doctor M_4]*

> *I think I engage well with doctors and also believe that its mainly dependent on the person engaging with the doctor…I consider it as a platform to tell the doctor everything. [23-year old patient]*

> *I have always tried to engage well with doctors although sometimes you meet a doctor who is not friendly and engaging, but I do my best to interact well…for me it doesn't matter whether old or young, it is my responsibility to ensure I receive the best of care…[58-year old patient]*

The focal dyad also attests to the fact that education plays a critical role in the service encounter, but some doctors shared that, much also depends on the doctor, since all patients deserve the same level of care whether educated or not. However, educated patients are more enlightened and informed and that also improves the encounter to a level that results in quality interactions between the actors.

> *I do my best to read more on health related issues that keep me informed and to some extent I believe it really impacts on the level of engagement with the doctor in the consulting room… [30-year old patient]*

> *I think it's good to be educated and informed, but much also depends on the doctor's approach in the encounter, so I think it doesn't matter whether a patient is educated or not… [43-year old patient]*

> *As a doctor, I've encountered different patients and I think the educated ones are more engaging than the less educated ones; however, it is my duty to provide the needed environment to engage the patients and provide the best of care irrespective of their educational background. [Doctor F_2]*

In addition, both actors were of the view that, the patient's frequency of visit to a health facility does not influence the encounter in any way, because every encounter is different.

> *I see patients every day including those on repeat visits, but I treat every visit as different, and the ultimate goal is to see the patient getting well… [Doctor M_2]*

> *…I visit the hospital more often because of my condition, but I don't really think it influences the encounter, although I know the doctors which also helps build some level of friendship but I don't really see any difference in my visits. [55-year old patient]*

With regard to the effects of the doctor's gender, the focal dyad reported mixed opinions. The gender divide of the doctors interviewed attributed the approach to engagements in the consulting room as dependent on the doctor as an individual and not the gender. In effect they attest that gender does not play any significant role in the clinical encounter, an assertion that was shared by some patients.

> *I think the doctor's gender does not matter in the service encounter, it all depends on the style of the doctor whether male or female. [32-year old patient]*

> *I don't see any differences in the approach of the female doctor as compared to mine, but I think it's up to the patient to judge…but for me, it all depends on the individual delivering care to the patient. [Doctor M_1]*

While the focal dyad attributes the nature of engagement between the doctor and the patient as dependent on the style of the doctor, some patients thought otherwise.

> *I prefer female doctors because they are more caring and engaging than their male counterparts…my experience with female doctors is different from that of the male doctors…[41-year old patient]*

Similar to the views of the focal dyad with regard to the doctor's gender, the doctor's length of service did not seem to influence the encounter process.

> *I have been practising for over 20 years, and I think my approach to patient encounters has changed over time, however I don't think my current approach is different from what the young doctors do…I rather think I've got the experience to better understand patient behaviours in the consulting room. [Doctor F_1]*

Though I haven't been in the profession for long, but I think our approach is not so different, I see it as more individualistic…the doctors in this facility have regular meetings to discuss patient engagement issues, and it appears our beliefs in patient encounters are along similar directions. [Doctor F_3]

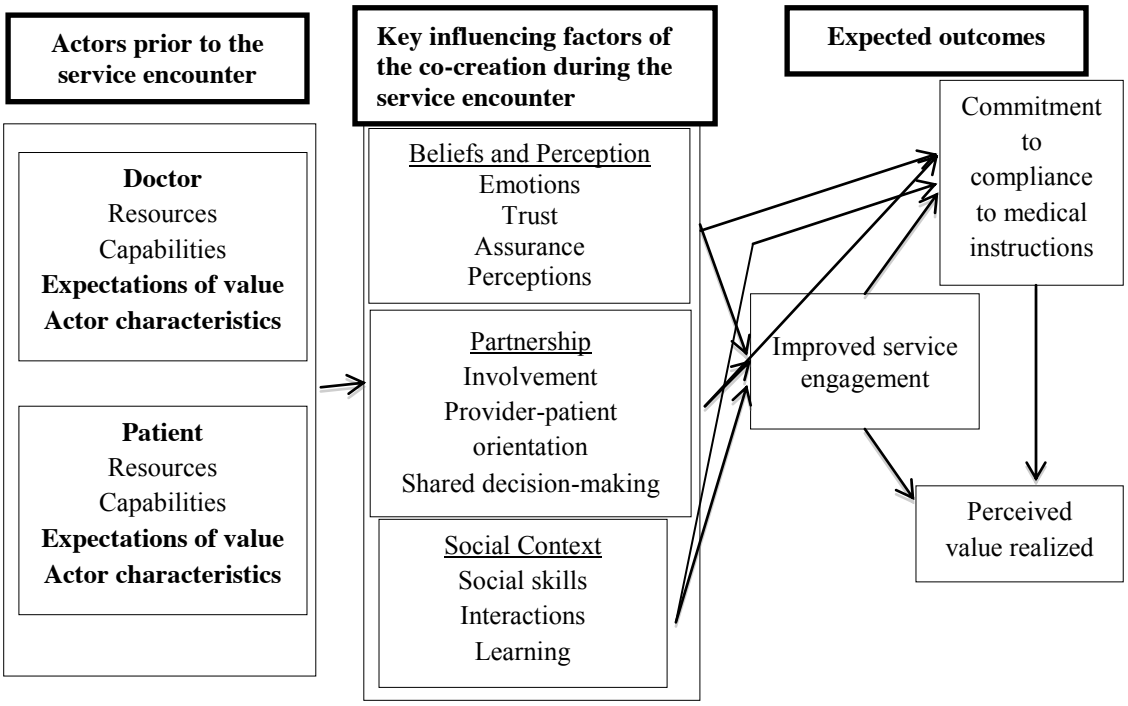
As a patient I sometimes prefer to see an experienced doctor, however, I think the approach from the doctors is not so different, although some doctors are friendlier than others…[45-year old patient]

From the data, it is apparent that the effect of actor characteristics on the co-creation process is largely subjective. However, these are likely to influence value co-creation especially in an era where greater roles are assigned to both actors in the encounter. Previous studies have examined the effects of actor characteristics on consultations and partnership in the consulting room (Kaplan et al., 1995; Roter and Hall, 2011; Thornton et al., 2011); however, how this affects the co-creation is not clear, which is also evident in the subjective assertions from the respondents. In effect, there is a need to further test the influences or effects of these actor characteristics on value co-creation.

6.8 Conceptualising the doctor-patient dyad in value co-creation

Following the findings of the study, a conceptual model is proposed which outlines the the three key influencing factors that affect value co-creation and their impact on the service outcomes from the focal dyad as shown in Fig 6.1. This extends the conceptual model presented in Fig. 5.1 (or 3.1) of the dyadic co-creation of value.

Fig. 6.1 A conceptual framework of the dyadic value co-creation (model development 2)



6.8.1 Formulation of hypotheses and measurement model

The hypotheses for this thesis are mainly developed from the qualitative research findings with reference to Fig. 6.1, and supported by the literature. Analysing the qualitative interviews identified three key factors that influence value co-creation between the focal dyad at the micro level. The study seeks to understand how the focal dyad co-creates value and how this impacts on the overall outcome of the service in the healthcare setting. The three key factors of value co-creation between the focal dyad at the micro level comprise of the social context, beliefs and perceptions, and partnership, taking into consideration the actors' resources and capabilities, their expectations of value, and actor characteristics as outlined in the findings in the previous sections. Based on the conceptual framework developed in Fig. 6.1, a measurement model is developed to show the paths of the relationship to highlight the hypotheses formulated.

Key influencing factors of the focal dyad in value co-creation

The service social context

Edvardsson et al. (2011) argue that the social context within which the service encounter takes place is critical influencing the service exchange and value co-creation. The data revealed the importance of the social context in enhancing the service engagement between the actors. The social context has also been classified as an antecedent to service engagement (Bovaird, 2007; Bowden, 2009). Considering the identified elements (nature of interactions, social skills, knowledge or learning), the social context provides a friendly and enabling environment to enhance the service engagement process. Lin and Hsieh (2011) found that the actors' social characteristics positively influence the service engagement. The findings also suggested the potential effects of the social context on the patient's compliance to medical instructions. This has been highlighted in the literature as a critical area to investigate of any potential effects of the social context on improving the level of compliance (Morris and Schulz, 1992; Vermeire et al., 2001). A good social context driven by the elements outlined is most likely to impact on the patient's behaviours in relation to compliance. Hence, the social context is likely to positively influence the level of patient compliance (Cegala et al., 2002; Lin and Hsieh, 2011).

Actors' Beliefs and Perceptions

Actor experiences are also influenced by their beliefs and perceptions (Gentile et al., 2007), which are essential in value co-creation (Payne et al., 2008; Vargo et al., 2008) as noted in the findings. The beliefs and perceptions of the actors drive their emotional appeal and perceptions (Higgins et al., 1992; Sandstrom et al., 2008) as well as their level of trust and assurances that impact on the co-creation process (McKnight et al., 1998; Ranganathan et al., 2013). The findings suggest that the experiences derived from the service that stems from the social context greatly influence the actors' beliefs and perceptions. The actors' beliefs and perceptions of the encounter also drive their preparedness to actively participate in the service engagement. Hence, the patient's integration in the service provision could be a source of highly pleasurable as well as

mentally or emotionally stimulating experiences in the service (Holbrook, 1996; Muniz and O'Guinn, 2001). This inherent motivation is likely to drive the actors' active participatory behaviours. Hence their beliefs and perceptions are expected to influence the service engagement (Saks, 2006). The literature also suggests that patient's desire to engage in consultations is more attitudinal taking into consideration the level of trust they place in the professional (Bijmolt et al., 2010).

The findings of the study also suggest that the beliefs and perceptions of the patient with special reference to their emotions, perceptions, trust and assurances, positively affects the patient's compliance to medical instructions. It is believed that if a patient trusts a doctor, he/she is more likely to accept whatever is prescribed (Anderson and Dedrick, 1990; Hsieh et al., 2010; Laing et al., 2002; Pearson and Raeke, 2000). Considering the behavioural nature of compliance, the provider's attitude could influence patients to comply with medical instructions (Dellande et al., 2004). The literature also suggests the likely positive influence of the beliefs and perceptions on patient compliance (Cameron, 1996).

The focal dyad partnership

The findings suggest the importance of partnership in value co-creation as this provides opportunities for the actors to better understand each other for active collaboration in the service encounter. Austin and Seitanidi (2012) opined that the dynamics of the value creation process changes as the relationship between partners evolves. Seitanidi (2008) further explained that, partnership requires actors to adapt responsibilities that depart from their limiting predefined roles. This process helps drive the service engagement because patients are encouraged and empowered to play an active role. As the findings suggest, partnership between the actors positively influences the service engagement, which is also supported in the literature (Austin and Seitanidi, 2012; Taylor, 2009).

It was also found that, partnership tends to empower patients to take up responsibilities in managing their conditions. Patient's active involvement in the engagement, as well as the decision-making process, motivates them to play their

respective roles including compliance to medical instructions. In one instance, Britten et al. (2000) found that misunderstandings in prescription decisions are attributed to the lack of patient participation in the decision-making process, which adversely affects the level of compliance. Active patient participation in the consultation also plays an active role in their behavioural intentions (Cermak et al., 1994; Hsieh et al., 2004; Lunde, 1993), which also craves a sense of responsibility on the part of the patient including their commitment to compliance (Dellande et al., 2004). Hence partnerships help enhance the efficacy of health systems and interventions including compliance through actor involvement, cooperation and empowerment (Gill et al., 2011; McColl-Kennedy et al., 2012).

The impact of influencing factors on the healthcare service delivery outcomes

The findings reveal the importance of patient empowerment and motivation in the clinical encounter that drives the service engagement between the actors. Patients believe that, if the professional respects their opinions and they are offered the opportunity to suggest treatment options this will motivate them to engage well in the consultation. Researchers have identified the notion of patients as active rather than passive recipient of service (Baron and Harris, 2008; Gallant et al., 2013), who are also considered as operant resources to the firm (Vargo and Lusch, 2008b). Understanding how individuals co-create value to manage their healthcare is important not only for the individual but healthcare service providers and government. Engaging the actors in value co-creation is likely to improve on the service delivery and the expected outcomes of the service encounter to the focal dyad. As outlined above, the process of value co-creation brings to the fore a client oriented service approach in which case both actors are clearly understood and play their respective roles (Gill et al., 2011).

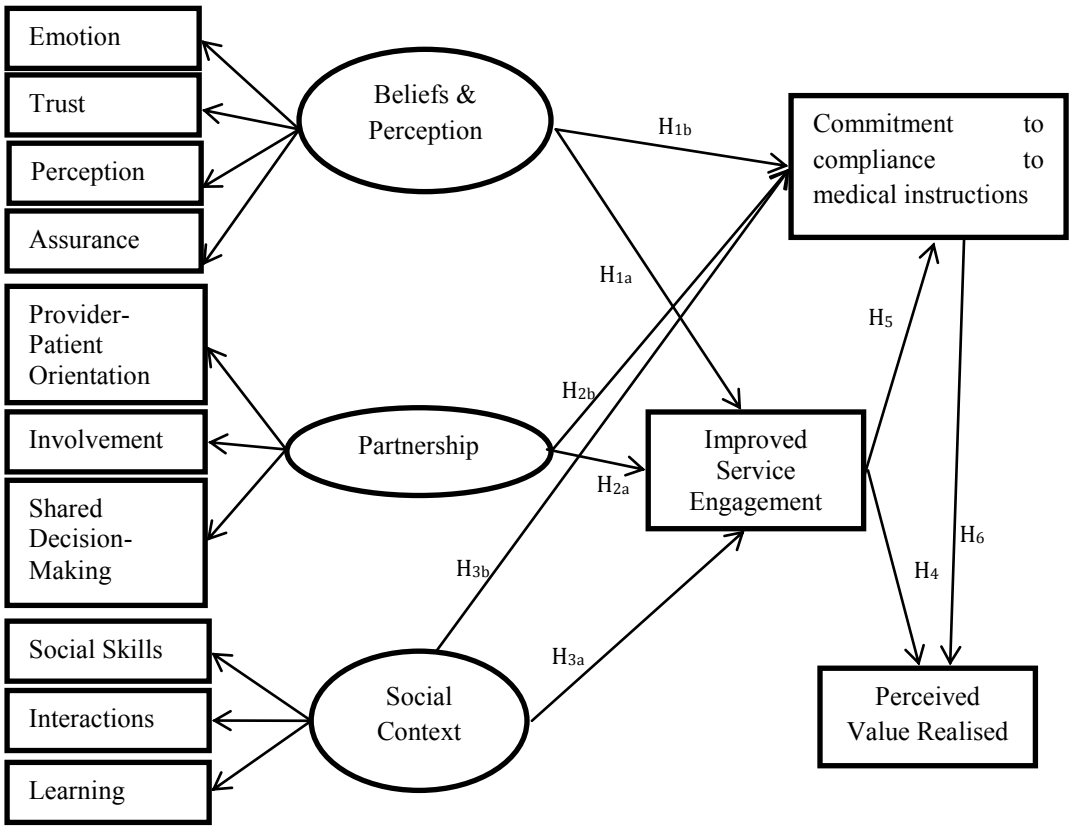
Patients anticipate their needs will be recognized in a way that makes them more than simply another transient patron (Patterson and Smith, 2001). If such patients feel a service provider is sincerely trying to meet their needs, positive emotions are more likely to develop toward the service provider (London et al., 2007). It is also noted that the nature of engagement of the focal dyad affects their attitudes and

perceptions toward the service, which impacts on the overall value realised (Russell-Bennett et al., 2009; Ruusuvuori, 2001). Gillespie et al. (2004) identify the attitude of the healthcare professional as a barrier to patient-centred care noting that attitudinal change is needed in order to redistribute the power between the professionals and the patients, which resonates well in an improved service engagement. As patients get actively involved in the engagement process, they are motivated to play their respective roles (Austin and Seitanidi, 2012; Gill et al., 2011), hence this is likely to influence their behavioural intentions towards compliance (Taylor, 2009).

Basic compliance including complying with the instructions of the healthcare service provider (Dellande et al., 2004), such as visiting the clinic as directed, and following instructions, has been shown to result in improved self-reports on individuals' health status, perceptions of goal attainment, and satisfaction with the health service (Fattal et al. 2005), which is translated into the value achieved. Hence, it can be argued that improving patients' compliance to medical instructions is more likely to influence the realisation of the actors perceived value.

Based on the above discussion, Fig. 6.1 is transposed into a measurement model as presented in Fig. 6.2, leading to the formulation of the following hypotheses:

Fig. 6.2 Key concepts and their relationships (final measurement model)



The focal dyad's beliefs and perceptions which are measured by the level of trust, assurance, perception, and emotional effects of the actors in value co-creation is likely to positively:

H_{1a}: affect the level of service engagement between the focal dyad within the health care setting

H_{1b}: influence the level of compliance of the patient

The degree of partnership between the focal dyad during the consultation process driven by the provider-patient orientation, involvement, and shared decision-making is considered critical to value co-creation, which is likely to positively:

H_{2a}: affect the level of service engagement between the focal dyad within the health care setting

H_{2b}: influence the level of compliance of the patient

The social context within which the service encounter takes place driven by the nature of interactions, actors' social skills, and learning or knowledge, is critical to value co-creation, which is likely to positively:

H_{3a}: affect the level of service engagement between the focal dyad within the healthcare setting

H_{3b}: influence the level of compliance of the patient

H_4: Improvement in the service engagement between the focal dyad during the consultation process is likely to positively influence the actors' perceived value created or realised.

H_5: Improvement in the service engagement between the focal dyad during the consultation process is likely to positively influence the patient's compliance to medical instructions.

H_6: Patients' compliance to medical instructions is most likely to influence the outcome of the service, which is translated in the perceived value that is created or captured.

Actor characteristics

The findings also suggest possible effects of the actor personal characteristics in value co-creation as highlighted in section 6.7. Following Anderson et al.'s (2008) assertion that value co-creation is likely to be influenced by the actors' personal characteristics, the following hypotheses were also formulated. The moderating effects of the personal characteristics focused on the encounter stage of the co-creation, hence, the following paths were moderated: Partnership→Improved service engagement; Beliefs perception→ Improved service engagement; and Social Context→ Improved Service Engagement.

H_7: The patient's age is likely to moderate value co-creation with varying effects among the different age groups on:

H_{7a}: the effect of partnership on the service engagement between the focal dyad

H_{7b}: the effect of beliefs and perception on the service engagement between the focal dyad

H_{7c}: the effect of the social context on the service engagement between the focal dyad

H_8: The patient's educational background is likely to moderate value co-creation with varying effects among the different educational levels on:

H_{8a}: the effect of partnership on the service engagement between the focal dyad

H_{8b}: the effect of beliefs and perception on the service engagement between the focal dyad

H_{8c}: the effect of the social context on the service engagement between the focal dyad

H_9: The patient's frequency of visit to a health facility is likely to moderate value co-creation with varying effects among the groups on:

H_{9a}: the effect of partnership on the service engagement between the focal dyad

H_{9b}: the effect of beliefs and perception on the service engagement between the focal dyad

H_{9c}: the effect of the social context on the service engagement between the focal dyad

H_{10}: The doctor's length of service is likely to moderate value co-creation with varying effects among the groups on:

H_{10a}: the effect of partnership on the service engagement between the focal dyad

H_{10b}: the effect of beliefs and perception on the service engagement between the focal dyad

H_{10c}: the effect of the social context on the service engagement between the focal dyad

H_{11}: The doctor's gender is likely to moderate value co-creation with varying effects among the groups on:

H_{11a}: the effect of partnership on the service engagement between the focal dyad

H_{11b}: the effect of beliefs and perception on the service engagement between the focal dyad

H_{11c}: the effect of the social context on the service engagement between the focal dyad

6.9 Summary

This chapter analysed the qualitative research findings and validated the credibility of the data. The findings suggest varied value perceptions to the focal dyad, and present both inter- and intra-subjective nature of value. An instance is the doctors' consideration of the operational or functional units, and achieving positive outcomes as value as compared to the patients' total experience of the service encounter in addition to 'getting well'. This also suggests that patients' value creation is largely influenced by the experiences in the consulting room. The chapter revealed three influencing factors of value co-creation at the micro level between the patient and the doctor, which impact greatly on the service outcomes. These comprise of the social context, beliefs and perception, and partnership between the focal dyad. The findings also suggest three key expected outcomes from the co-creation to include improved service engagement, improved compliance to medical instructions and overall perceived value realised. The study also found the potential effects of the actors' personal characteristics in value co-creation.

As an exploratory study, the findings helped to finalise the conceptual model of this thesis, which is also translated into a measurement model. The steps taken to arrive at the final conceptual model were highlighted in section 5.2 (Fig. 5.1). This also allowed the researcher to formulate hypotheses mainly from the qualitative findings and partly from the literature review. To affirm and generalise the findings, the measurement model developed in this chapter is further tested, as well as the hypotheses in chapter seven.

CHAPTER SEVEN

QUANTITATIVE DATA ANALYSIS AND FINDINGS

7.1 Introduction

This chapter presents the research findings from the quantitative study, which employed a survey design. This primarily builds on the qualitative findings presented in the previous chapter. The basic information about the data is reported using descriptive statistics as outlined in section 5.9. Also, data preparation, assessment of normality, reliability and validity measures are all assessed and presented using SPSS, as well as the Structural Equation Modelling (SEM) results of the test model using AMOS 21. The chapter begins with the data preparation followed by an assessment of the basic assumptions in using SEM. This is followed by the general SEM test model and alternative models used in the analysis. The path coefficients of the main hypotheses are presented together with the moderating factors including educational background of patients, age, frequency of visits to hospital; and the length of service and gender of the doctors. As a dyadic study, the hypotheses were tested using separate datasets of the doctors and patients, then the matched dataset representing the dyad dataset. The relationship effects of the groups are presented, compared and contrasted to note the divergences and convergences between the doctors' and the patients' responses. In effect, the relationships of the constructs are investigated for the individual data as well as the dyad. This approach provides a better perspective of the data and informs good discussion and conclusions.

7.2 Model evaluation using structural equation modelling

Structural equation modelling (SEM) is considered one of the most powerful tools for evaluating complete models taking a confirmation dimension to data analysis (Bagozzi and Yi, 2012; Byrne, 2010). It does this by integrating latent and observed constructs or variables in the model, which are measured by means of a number of observable items (Bagozzi and Yi, 2012). This research presents both first and second order latent variables in the model, hence making SEM the appropriate method of data analysis.

The following sections detail the data preparation and analysis procedures employed in this research.

7.2.1 Quantitative data preparation

To analyse the data, the responses were input into SPSS 21.0. Data screening or cleaning was done which is considered an important exercise to conduct prior to the actual data analysis (Field, 2013), because data entry errors can commonly occur. This is mostly done following a range of processes aided by SPSS. First, the means and frequencies were checked for outliers, and the output showed that there were no outliers in the dataset. The frequency output for all the variables also highlighted no missing values in the data. This could be attributed to the fact that, interviews were mainly face-to-face giving respondents the opportunity to ask for clarification where necessary for the avoidance of doubt. Also, questionnaires with some uncompleted sections were rejected. This is essential when matching a dyad data set as missing values could affect the data (Kenny et al., 2006).

After the initial data screening, the two groups of data collected over the different period of times (that is early and late returned completed questionnaires) were compared to check for any possible variances in the responses. This was done using the multivariate analysis of variance (MANOVA). This was preferred to ANOVA because MANOVA include all the dependent variables of interest, consider the relationship between these variables, and also identify any possible group differences along a combination of dimensions (Field, 2013). MANOVA was performed with the independent variable 'time' where '1' denotes the early returned completed questionnaires and '2' denotes the late returned completed questionnaires. All the variables included in the study were considered as the dependent variables in the analysis. The results reveal non-significant differences between the two groups; hence there were no differences in the means when compared. The doctors data for the two groups recorded Wilk's lambda = .852, F (13,76) = 1.017, ρ = .444. The patients' data also recorded Wilk's lambda = .968, F (13,346) = .874, ρ = .581. The F-values were small or insignificant indicating less or no variability among the responses (Field,

2013). Since there was no significant difference in the responses between the two datasets, it was possible to merge the two cases together as one dataset for analysis. The issue of non-response bias was well controlled which is evident in the high response rates (see section 5.8.6). Hence considering the high response rate, and the fact that there were no significant differences between the means of the early and late returned completed questionnaires, it can be concluded that non-response bias was not problematic in this research.

7.2.2 Measure validation

The next step was to prepare the data for the multivariate analysis using AMOS 21.0. On completion of data collection, the Pearson correlation coefficient was used to assess the reliability of the scales adopted in the study using SPSS 21.0. First the Cronbach's coefficient alpha (Cronbach, 1946) was measured to assess the internal consistency. All scales recorded Cronbach alpha of $\alpha > 0.7$ with a correlation significance at the level of $p < 0.05$. The corrected inter-item correlations were all > 0.3, which suggest the homogeneity of the items in the scale (de Vaus, 2002). Nunnally and Berstein (1994) assert that Cronbach's alpha coefficient values above .70 are acceptable and robust. The Cronbach's alpha coefficient values for all the constructs in both data sets (patients and doctors) are tabulated in Table 7.1 below.

Table 7.1 Cronbach's alpha coefficient of the study variables

Construct	Patient alpha coefficient α	Doctor alpha coefficient α	Construct	Patient alpha coefficient α	Doctor alpha coefficient α
Provider-patient orientation	.944	.919	**Improved service engagement**	.909	.928
Involvement	.881	.836	**Interactions**	.930	.962
Shared decision making	.954	.884	**Learning**	.905	.918
Emotion	.950	.916	**Perceived value**	.902	.892
Trust	.943	.938	**Compliance**	.839	.842
Assurance	.919	.870	**Social skills**	.966	.942
Perception	.950	.937			

Netemeyer et al. (2003) assert that the coefficient alpha assesses the level of interrelatedness among the items to measure a single construct. To establish the robustness of the scales, convergent and discriminant validity tests were conducted. The validity of the scales was assessed using exploratory factor analysis (EFA) and confirmatory factor analysis (CFA), and that CFA helped confirm the validity of the measurement model (Hair et al., 2006).

An exploratory factor analysis (EFA) was done using SPSS while CFA was conducted using AMOS after assessing the distribution normality of the responses (skewness and kurtosis), which is presented in appendix VII. Byrne (2010, p.102) considers the assessment of normality as a "critically important assumption in the conduct of structural equation modelling (SEM) analysis". When assessing normality, values of skew and kurtosis should ideally be close to zero (0) (Byrne, 2010), Kline (2011) suggests that though there is "less consensus" about the kurtosis value, absolute values > 8 are an indication of extreme kurtosis, this is in agreement with West et al.'s (1995) value of > 7. From the normality table provided in appendix VII, the highest value of kurtosis from both datasets was 1.265, with the majority of the items having kurtosis values of < 1 or > -1, hence no item is significantly kurtotic, which makes the data suitable to be analysed using SEM (Kline, 2011).

Although the scales used in this study were mainly from previous research, some items were added following the qualitative study; also some items from the original scales were reworded although with caution not to change their meanings, hence the need to employ EFA in the analysis. EFA is considered a variable reduction technique that allows the researcher to identify the psychometric properties of the items within each construct (DeVellis, 2012). As a result, the EFA helped 'fine-tune' the measures to be included in the CFA analysis (Ng et al., 2010). The EFA was conducted employing the principal component analysis technique (Hair et al., 2006) and Varimax rotation. Conducting this test, items that cross-loaded on other factors were deleted. Likewise, items with communalities of < 0.5 as well as those with factor loadings < 0.5 were deleted from the scale. As a result, all items retained had item communalities of > 0.5, though 0.3 is considered acceptable (Field, 2013). Also, factor loadings of the retained

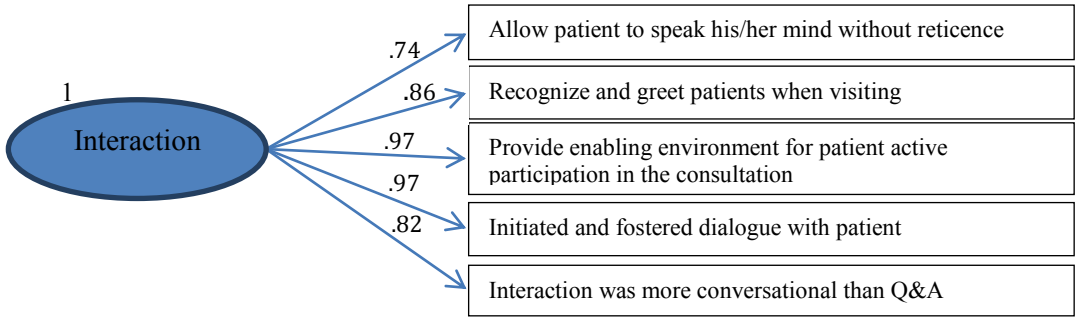
items were all above 0.5 indicating the robustness of the factors (Hair et al., 2006). This assessment was done individually for each of the datasets (doctors and patients). In the case of the patients, all items on the questionnaire except the control and demographic items were analysed together since the number of cases far exceeded the number of variables. In the case of the doctors' data, items were grouped in order to account for the variable to case ratio, which is considered acceptable (Hair et al., 2006). Hence items were grouped on the bases of the categorisations defined in the qualitative data analysis. In all cases the Kaiser-Meyer-Olin (KMO) measure of sampling adequacy were all above the threshold of 0.6 (Kaiser, 1974) with ρ-values < 0.001 for Barlett's test of Sphericity (Barlett, 1954). The lowest KMO recorded in the analysis was 0.716 (beliefs and perceptions variables of the doctor's dataset). The pattern matrixes of the EFA are presented in appendix VIII.

Using the items extracted from the EFA, a first order confirmatory factor analysis (CFA) was conducted. This approach is considered acceptable for testing a model on the basis of theory (Byrne, 2010), in which case items are specified a priori on which factors to load (Kenny et al., 2006). The CFA was employed to assess the quality of the factors extracted from the EFA (Churchill, 1979). Using AMOS 21.0 graphics, a confirmatory model was developed and tested based on the factors and items extracted from the EFA using maximum likelihood estimation. Maximum likelihood estimation in SEM surmises that the variables have a multivariate normal distribution (Kline, 2011). This is considered a robust technique because the model is evaluated using indices such as the comparative fit index (CFI), Goodness Fit Index (GFI), Root mean square error of approximation (RMSEA) etc. (Byrne, 2010). Also, covariance of some of error terms of the same factor or variable was performed for model re-specification. The final re-specified model was estimated, and the resulting factor loadings and t-values of the patients' and doctors' datasets are tabulated in Table 7.3 and Table 7.4 respectively. The factor loadings of all the items ranged from .50 to .94, which are considered as strong and robust (Stevens, 1992).

In addition to the full CFA model of the doctors' data as explained above, one-factor congeneric CFA measuring model (Rowe, 2002, 2006; Sendjaya et al., 2008) was

employed to evaluate each construct based on the EFA results, this is further explained in section 7.4.3. An example of the one-factor congeneric CFA model is presented in Fig. 7.1. Table 7.2 presents a summary of the Goodness-of-fit indices for the one-factor congeneric models of the constructs, while the standardised factor loadings of the items per construct of the patient and doctor datasets are presented in tables 7.3 and 7.4 respectively.

Fig. 7.1 One-Factor Congeneric CFA model – Interaction using Doctor Dataset



χ^2_3 = 3.072 χ^2/df = 1.024 ρ-value = .381
AGFI = .935 GFI = .987
CFI = 1.000 NFI = .994 RMSEA = .016

Table 7.2 Goodness-of-fit Indices for the one-factor congeneric models using the doctors' dataset

Construct	*No. of items*	χ^2	*df*	*ρ*	χ^2/*df*	*GFI*	*AGFI*	*CFI*	*RMSEA*
Provider Patient Orientation	7	10.795	10	.374	1.079	.965	.903	.998	.030
Involvement	5	1.150	3	.680	.503	.993	.966	1.000	.000
Perception	7	13.002	11	.293	1.182	.960	.898	.996	.045
Trust	6	5.752	5	.331	1.150	.978	.908	.998	.041
Assurance	4	.539	1	.463	.539	.997	.970	1.000	.000
Interaction	5	3.072	3	.381	1.024	.987	.935	1.000	.016
Social Skills	6	3.932	4	.415	.983	.986	.925	1.000	.000
Learning	6	5.242	7	.630	.749	.981	.943	1.000	.000
Improved Service Engagement	5	4.294	3	.231	1.431	.981	.907	.996	.070
Perceived Value	4	.317	1	.573	.317	.998	.982	1.000	.000
Compliance	5	3.342	3	.342	1.114	.985	.926	.998	.036
Emotion	4	1.524	1	.528	1.524	.978	.902	.990	.077
Shared Decision Making	6	6.396	5	.270	1.279	.977	.903	.996	.056

The CFA model was evaluated using the fit statistics indices including the Comparative Fit Index (CFI), Goodness-Fit Index (GFI), chi-square (χ^2) test and Root Mean Square Error of Approximation (RMSEA). A good fit of a model should have a χ^2/df (df – degree of freedom) of < 3 with a non-significant ρ-value, however, this test is greatly affected by the sample size and therefore, can be misleading in ascertaining a good or bad fit (Kenny et al., 2006), as in most cases the chi-square values are significant (Kline, 2011). The χ^2/df value of 1.634 and 1.321 were reported for the patients' and doctors' CFA models respectively with ρ-values < .001. These figures are well within the acceptable range; the only caveat is the fact that the chi-square value is significant. One of the most useful indicators of the model fit, the CFI, also measured reasonably well. Although CFI values > .90 could be considered appropriate of a well-fitting model; Hu and Bentler (1999) argue that a cut off value of close to .95 is more appropriate for a well-fitting model. In the patients' and doctors' CFA models, CFI values of .934 and .904 and RMSEA values of .042 and .060 are reported respectively. Byrne (2010) note that RMSEA value of < .05 indicates a good fit, and values as high as .08 indicates a reasonable fit.

After the confirmatory factor analysis, the composite reliability (CR) and Average Variance Extracted (AVE) were computed for all the constructs; the convergent and discriminant validity of the constructs were also assessed, which are presented in Tables 7.5 and 7.6 for the doctor and patient datasets respectively. This was computed with the aid of a stat tool package (an excel programme) from Gaskin (2012). The composite reliability of all the constructs was well above .70, which assesses the internal consistency of the construct and Hair et al., (2006) assert that values >.70 are considered acceptable. From Tables 7.5 and 7.6, all the constructs recorded an average variance extracted (AVE) > .50, which satisfies convergent validity of the constructs. Fornell and Larcker (1981) recommend AVE values of .5 and above. This suggests evidence of similarity between measures of the constructs. The constructs also satisfied the discriminant validity measures, which indicate that the inter-correlations between the constructs were not significantly high, but moderate. This was assessed by comparing the square of the correlations between the constructs and the AVE values for the selected constructs. Hair et al. (2006) recommend that the AVE values should

be greater than the square of the correlations.

Confirmatory factor analysis results

Table 7.3: CFA results of the patient data

Fit statistics: χ^2 = 956.394, df = 585, p = .000; GFI = .854; CFI = .934; RMSEA = .042; PCLOSE = .890

Item	Factor loading	t-value	Item	Factor loading	t-value
Social Skills					
SOSK9	.885		**Assurance**		
SOSK3	.888	10.937	ASS5	.829	
SOSK4	.815	13.201	ASS2	.883	18.136
SOSK5	.875	12.755	ASS4	.809	20.770
SOSK2	.913	14.071	ASS3	.877	17.018
SOSK7	.789	10.445	ASS1	.802	16.701
Shared Decision-Making			**Learning**		
SDM8	.870		LN1	.898	
SDM9	.773	6.347	LN3	.837	8.722
SDM7	.801	10.258	LN6	.507	11.430
			LN5	.600	7.402
SDM3	.821	8.389	**Emotion**		
SDM2	.782	7.178	EM2	.895	
SDM4	.721	4.076	EM1	.883	6.933
Perception			EM3	.926	8.616
PER8	.906		EM4	.839	12.831
PER2	.889	14.363	**Perceived Value**		
PER6	.883	14.074	PVAL3	.935	
PER5	.811	10.551	PVAL2	.865	10.127
PER4	.751	9.312	PVAL5	.822	15.847
PER3	.856	10.316	PVAL4	.780	14.848
PER1	.728	6.229	PVAL1	.783	14.675
Trust			**Provider-Patient Orientation**		
TR4	.831		PPO1	.895	12.199
TR3	.881	10.672	PPO4	.909	11.551
TR2	.916	11.000	PPO6	.899	5.625
TR5	.857	10.091	PPO2	.751	
TR1	.907	9.876	**Compliance**		
TR6	.878	6.901	CM1	.848	12.881
TR7	.843	15.472	CM2	.746	13.357
Improved Service Engagement			CM3	.852	12.222
ISE3	.858		CM4	.818	
ISE2	.808	21.333	**Involvement**		
ISE5	.845	7.964	INV2	.848	11.063
ISE4	.828	6.621	INV5	.639	10.393
ISE7	.834	4.808	INV3	.825	
ISE1	.804	4.207			
ISE6	.721	12.826			
Interaction					
INT2	.842				
INT6	.743	12.169			
INT3	.708	12.186			
INT4	.715	14.363			

Table 7.4: CFA results of the doctor data

Fit statistics: χ^2 = 820.354, df = 621, p = .000; GFI = .814; CFI = .904; RMSEA = .060; PCLOSE = .65

Item	Factor Loading	t-value	Item	Factor Loading	t-value
Provider-Patient Orientation			**Social Skills**		
PPO4	.684	6.752	SOSK9	.871	
PPO6	.682	7.223	SOSK2	.819	10.686
PPO8	.845	7.663	SOSK3	.812	8.981
PPO9	.909	6.467	SOSK4	.877	9.508
PPO10	.818	6.523	SOSK5	.846	9.551
PPO2	.760	6.492	SOSK7	.779	8.380
PPO1	.751		**Learning**		
Involvement			LN1	.776	
INV1	.834	7.102	LN2	.856	8.830
INV2	.741	7.407	LN3	.806	8.193
INV4	.773	5.409	LN4	.881	9.069
INV5	.614	6.546	LN5	.724	6.993
INV3	.684		LN6	.759	8.013
Perception			**Improved Service Engagement**		
PER1	.831	9.988	ISE2	.787	
PER2	.872	9.060	ISE3	.769	10.234
PER3	.818	8.873	ISE4	.916	9.628
PER4	.895	8.554	ISE1	.938	8.999
PER5	.782	8.801	ISE7	.809	8.308
PER6	.799	9.255	**Perceived Value**		
PER7	.827		PVAL1	.721	
Trust			PVAL4	.891	8.668
TR1	.848	11.384	PVAL3	.985	8.623
TR2	.919	9.877	PVAL5	.709	6.151
TR6	.838	10.134	**Compliance**		
TR4	.854	9.754	CM1	.750	
TR5	.801	8.833	CM2	.658	6.918
TR7	.777		CM3	.762	5.732
Assurance		5.769	CM4	.657	5.127
ASS2	.890	5.741	CM5	.660	5.149
ASS3	.874		**Emotions**		
ASS1	.579	4.463	EM3	.912	15.150
ASS4	.717		EM1	.638	7.358
Interactions			EM2	.754	9.757
INT3	.735	8.462	EM4	.991	
INT2	.859	9.667	**Shared Decision-Making**		
INT5	.967	9.726	SDM7	.624	
INT6	.974	9.482	SDM3	.896	6.482
INT7	.818	6.752	SDM4	.894	5.860
			SDM9	.861	6.337
			SDM2	.547	5.193
			SDM8	.595	6.069

From the qualitative study, the constructs were categorized under three main constructs namely; partnership (involvement, shared decision-making and provider-patient orientation), social context (social skills, interactions and learning) and beliefs and perceptions (emotion, trust, assurance and perception). Since these main constructs were used in the measurement model to test the hypotheses, it was imperative to assess their reliability and validity. Although the individual constructs measured well as earlier assessed, but they could lack homogeneity when put together as variables or items measuring the same construct, hence the need to carry out the second order CFA. The results indicate that the variables as sub-categorised in the qualitative findings measure the constructs well. The outputs of the 2nd order variables are presented in appendix IX. The goodness-of-fit indices of the second order CFA model (patient) were all reasonably good; CFI = .920; GFI = .832; RMSEA = .054; $\chi^2_{(395)} = 808.488$, $\rho < 0.001$. That of the doctor's data were also reasonably good; CFI = .900; GFI = .811; RMSEA = .077; $\chi^2_{(391)} = 598.497$, $\rho < 0.001$. Byrne (2010) asserts that RMSEA values below .08 indicate a reasonably well-fitting model. The factor loadings of the items are all above .5; hence well within the acceptable loadings as suggested by Stevens (1992). All the constructs measured a composite reliability (CR) > .7; AVE > .5, hence satisfying the internal consistency measure and convergent validity of the items. The AVE values of the constructs are greater than the square of the correlations, hence satisfying discriminant validity (Hair et al., 2006; Kim, 2000; Nunnally and Berstein, 1994). Achieving discriminant validity between constructs indicates their acceptability for hypothesis testing (Mathieu and Taylor, 2006). Bagozzi and Yi (2012, p. 18) note that, construct validity assesses the "degree of agreement of indicators hypothesized to measure a construct and the distinction between those indicators and indicators of a different construct(s)". The details of the reliability and validity measures are presented in Tables 7.7 and 7.8 for the patient and doctor's datasets respectively.

Reliability and Validity of Constructs

Table 7.5: Doctor's validity and composite reliability measures

	CR	AVE	ASS	PPO	INV	PEC	TRU	INT	SSK	LRN	ISE	PVA	COM	EMO	SDM
Assurance (ASS)	0.854	0.601	0.775												
Provider-patient orientation (PPO)	0.916	0.612	0.642	0.782											
Involvement (INV)	0.852	0.537	0.701	0.627	0.733										
Perception (PEC)	0.941	0.694	0.619	0.510	0.559	0.833									
Trust (TRU)	0.935	0.707	0.219	0.531	0.345	0.218	0.841								
Interaction (INT)	0.942	0.766	0.701	0.685	0.693	0.554	0.318	0.875							
Social Skills (SSK)	0.932	0.697	0.591	0.573	0.400	0.443	0.154	0.429	0.835						
Learning (LRN)	0.918	0.653	0.504	0.352	0.668	0.417	0.122	0.492	0.326	0.808					
Improved Service Engagement (ISE)	0.926	0.717	0.611	0.512	0.448	0.498	0.188	0.629	0.618	0.383	0.847				
Perceived Value (PVA)	0.900	0.697	0.374	0.479	0.538	0.308	0.161	0.531	0.164	0.424	0.245	0.835			
Compliance (COM)	0.826	0.505	0.503	0.379	0.622	0.597	0.481	0.339	0.158	0.451	0.327	0.176	0.711		
Emotion (EMO)	0.900	0.697	0.507	0.245	0.398	0.401	0.045	0.248	0.362	0.427	0.438	0.301	0.241	0.835	
Shared Decision making (SDM)	0.882	0.564	0.265	0.375	0.541	0.527	0.291	0.469	0.325	0.437	0.253	0.353	0.336	0.197	0.751

All correlations are significant at $\rho<0.05$

Table 7.6: Patient's composite reliability and validity measures

	CR	AVE	PPO	SSK	SDM	PEC	TRU	ISE	INT	ASS	LRN	EMO	PVA	INV	COM
Provider-patient orientation (PPO)	0.922	0.749	0.866												
Social Skills (SSK)	0.945	0.743	0.543	0.862											
Shared Decision making (SDM)	0.912	0.634	0.363	0.282	0.796										
Perception (PEC)	0.941	0.696	0.080	0.343	0.092	0.835									
Trust (TRU)	0.958	0.763	0.141	0.244	0.051	0.158	0.874								
Improved Service Engagement (ISE)	0.933	0.664	0.461	0.440	0.229	0.115	0.369	0.815							
Interaction (INT)	0.840	0.568	0.191	0.247	0.222	0.165	0.107	0.106	0.754						
Assurance (ASS)	0.923	0.707	0.223	0.281	0.014	0.177	0.366	0.411	0.128	0.841					
Learning (LRN)	0.828	0.554	0.291	0.556	0.555	0.158	0.112	0.134	0.301	0.113	0.744				
Emotion (EMO)	0.936	0.786	0.037	0.293	0.021	0.234	0.061	0.118	0.135	0.098	0.323	0.886			
Perceived Value (PVA)	0.922	0.704	0.180	0.403	0.034	0.203	0.440	0.311	0.106	0.388	0.187	0.123	0.839		
Involvement (INV)	0.818	0.603	0.380	0.309	0.353	0.169	0.143	0.392	0.551	0.155	0.193	-0.007	0.180	0.776	
Compliance (COM)	0.889	0.668	0.444	0.568	0.193	0.266	0.464	0.600	0.330	0.467	0.348	0.040	0.399	0.365	0.817

All correlations are significant at $\rho<0.05$

Table 7.7: Reliability and Validity Measures from the 2nd order CFA using the patient data

	CR	AVE	B&P	ISE	PVA	CM	PT	SC
Beliefs & Perception (B&P)	0.891	0.674	0.821					
Improved Service Engagement (ISE)	0.933	0.664	0.627	0.815				
Perceived Value (PVA)	0.922	0.704	0.691	0.311	0.839			
Compliance (CM)	0.890	0.669	0.471	0.598	0.396	0.818		
Partnership (PT)	0.841	0.639	0.381	0.616	0.234	0.581	0.799	
Social Context (SC)	0.845	0.650	0.576	0.448	0.429	0.654	0.318	0.806

All correlations are significant at ρ<0.05

Table 7.8: Reliability and Validity Measures from the 2nd order CFA using the doctor data

	CR	AVE	ISE	B&P	SC	PT	COM	PVA
Improved Service Engagement (ISE)	0.930	0.727	0.853					
Beliefs Perception (BP)	0.873	0.634	0.481	0.796				
Social Context (SC)	0.755	0.507	0.461	0.377	0.712			
Partnership (PT)	0.799	0.571	0.565	0.286	0.264	0.755		
Compliance (COM)	0.827	0.506	0.354	0.514	0.406	0.617	0.711	
Perceived Value (PVA)	0.900	0.696	0.258	0.470	0.542	0.694	0.168	0.834

All correlations are significant at ρ<0.05

7.3 Dyadic data preparation

This study collected data from both doctors and outpatients using a dyadic approach with the same set of variables. Specifically the dyad represents a one-with-many (many patients nested within one doctor), reciprocal design with distinguishable members (doctor and patient) (Kenny et al., 2006). In preparing for the dyadic data, the patients' responses were aggregated and matched with the doctors' responses to create a single data set, which is in line with previous research (Chen and Quester, 2006; Hartline et al., 2000; Plewa and Quester, 2008). In this case, the unit of analysis was the paired sample of the doctors and their respective patients. As noted from the previous section, 90 questionnaires from the doctors and 360 from the patients were

deemed appropriate for the data analysis. As a result, the patient responses were aggregated and matched with the doctor responses to create a single data set for the analysis (Kim, 2000). This approach accounted for a final sample of 90 units, for which each unit comprised of matched responses from one doctor to an average of 4 patients, constituting the dyad.

Kenny et al., (2006) note that the standard dyadic design is one in which each person is matched to the other and the two persons are measured on the same set of variables as in the case of this research. After the responses are matched, Alferes and Kenny (2009) contend that the next step before the data is finally analysed is to measure the extent to which the responses of the two members are correlated. That is to determine the non-independence in the data. They argue that the non-independence in the data is theoretically used to surmise the "reciprocity, synchrony, or influence in the dyad" and statistically allows the data to be analysed such that both dyad and person are included as the unit of analysis (Alferes and Kenny, 2009, p. 47). Hence, in this study, the individual datasets were analysed separately to test the same model as in the case of the dyadic data. This was done mainly to ascertain the effects of value co-creation on the individual actors as well as that of the dyad and note if there are any variances or difference. Secondly this was done to compensate for the relatively small sample size as in the case of the dyadic data as the unit of analysis since the patient data is large enough to provide a better representativeness of the population.

7.3.1 Convergence across groups

Following Kim's (2000) approach, convergence between the patient and the doctor's responses were assessed by mean values and correlations in the data of matched pairs using the aggregated scores of each variable (N = 90). The correlations of the matched pairs are also in accordance with the measure of non-independence between the dyad groups suggested by Kenny et al. (2006). Every mean difference between the two groups but 'shared decision-making' and 'interaction' was insignificant. However, all paired correlations across the dyad are positive and significant as presented in Table 7.9. Hence, the doctors' and patients' responses showed convergence in the remaining eleven (11) variables. Although two variables failed the paired mean test, all the variables passed the non-independence (correlation) test, which is evident in the

positive significant correlation values. According to Kenny et al. (2006) and Alferes and Kenny (2009), the extent to which the two responses are correlated is an indication of synchrony in the dyad, hence, it can be concluded that convergence is validated.

Table 7.9: Paired sample test and correlations: Convergence across the matched data

Variable	Doctor's mean	Patient's mean	Mean difference	Dyad mean score	t-value	Sig. (2-tailed)	Correlations
Provider-patient orientation	3.9676	3.9028	.06481	3.9352	1.173	.244	.385***
Involvement	3.9852	3.9006	.08463	3.9429	1.453	.150	.370***
Shared decision-making	3.9397	3.3639	.57581	3.6518	8.988	**.000**	.271**
Emotion	4.2139	4.1317	.08222	4.1728	1.199	.234	.422***
Trust	4.2937	4.1873	.10635	4.2405	1.592	.115	.427***
Assurance	3.9867	3.8877	.09900	3.9372	1.651	.102	.344**
Perception	3.9597	3.8670	.09272	3.9134	1.621	.109	.535***
Social skills	4.2500	4.1557	.09433	4.2029	1.632	.106	.473***
Interactions	3.7914	3.4192	.37212	3.6053	5.482	**.000**	.359**
Learning	3.8389	3.7392	.09972	3.7891	1.578	.118	.363***
Perceived value	4.1000	4.0233	.07671	4.0617	1.359	.178	.474***
Compliance	4.1467	4.0899	.05673	4.1183	1.136	.259	.468***
Improved service engagement	4.1016	4.0363	.06532	4.0690	1.093	.277	.425***

***$\rho < .001$; **$\rho < .05$

7.3.2 Assessment of within-group reliability (R_{WG})

In addition to section 7.3.1 above to further test for non-independence in the groups James et al.'s (1984) approach of estimating interrater agreement within groups, R_{WG} was followed. This coefficient estimates the level of within-group agreement taking into consideration the number of items, observed item variance and expected item variance if ratings were due to random measurement error (James et al., 1984, 1993). This method is suitable for estimating the level of agreement for a 5-point Likert scale (Grawitch and Munz, 2004). James et al. (1984) assert that $R_{WG} \geq .70$ indicates an acceptable level of agreement, which also suggests the appropriateness of a multilevel analysis (Grawitch and Munz, 2004). In addition, Grawitch and Munz (2004) argue that the R_{WG} statistic provides better estimates within-group agreement than intra-class correlation. They argued that as within-group agreement increases, range restrictions affect the scores, which is not accounted for in relation to intra-class correlation. However, James et al. (1993, p. 308) note that the R_{WG} statistic "does not conform to standard measurement theory", hence, Kozlowski and Hattrup (1992) suggest that R_{WG}

is used as an indicator or interrater agreement but not interrater reliability.

The within-group agreement r_{wg} as proposed by James et al. (1984) is calculated as:

$$R_{wg} = \frac{J\left[1-\left(M_S^2/\sigma_{eu}^2\right)\right]}{J\left[1-\left(M_S^2/\sigma_{eu}^2\right)\right]+\left(M_S^2/\sigma_{eu}^2\right)} \qquad \text{----------(7.1)}$$

where

J is the number of items in the measure

M_S^2 is the mean of the observed item variances

σ_{eu}^2 is the variance expected when there is lack of agreement and is calculated using the equation 7.2 below:

$$\sigma^2_{eu} = \left(\frac{A^2-1}{12}\right) \qquad \text{----------(7.2)}$$

where *A* is the number of response options for a given item measure, and 12 is a constant. Hence considering the response options of '5' as per the Likert scale used in this study, σ_{eu}^2 is computed to be equal to 2.0.

Applying equation 7.1, the R_{wg} was computed for all the measures among the groups. This was done by first computing M_S^2 for all the items using SPSS 21. The results are presented in Table 7.10. The R_{wg} scores indicate a very strong agreement between the doctor and patient responses, hence there is non-independence between the groups making it suitable for the data to be analysed as a dyad (Kenny et al., 2002).

Table 7.10: Within-group reliability (R_{wg}) scores

Measure	M_s^2	R_{wg} (Avg)
Involvement	.764	.91
Perceived value realised	.568	.93
Interaction	1.305	.83
Provider-patient orientation	.864	.94
Emotion	.367	.95
Perception	.962	.90
Trust	.637	.94
Assurance	.729	.90
Compliance	1.021	.83
Improved service engagement	.726	.92
Shared decision-making	1.420	.79
Learning	.725	.91
Social skills	.910	.92

7.3.3 Validity and construct reliability

Discriminant validity was performed after the convergence test making it possible to merge the matched responses and treated as one data set. EFA and CFA were performed with the aid of SPSS and AMOS respectively following the same method employed for the doctor's data sets outlined in section 7.2.2 above. However, in the case of the dyad, aggregates of the matched scores were used as compared to using the individual datasets as previously outlined (Chen and Quester, 2006; Hartline et al., 2000). This is possible because there is convergence and non-independence in the responses (Kenny et al., 2006; Kim, 2000). The goodness-of-fit indices and the standardized factor loadings of the first-order CFA model are presented in Table 7.11. In addition to the full CFA model of the dyadic' data as presented in Table 7.11, a one-factor congeneric CFA measuring model (Rowe, 2006; Sendjaya et al., 2008) was employed to evaluate each construct based on the EFA results as in the case of the doctors' data. An example of the one-factor congeneric CFA model is presented in Fig. 7.2. Table 7.12 provides a summary of the Goodness-of-fit indices for the one-factor

congeneric models of the constructs.

Table 7.11: CFA results of the dyadic data

Fit statistics: χ^2 = 730.001, df = 584, p = .003; GFI = .822; CFI = .910; RMSEA = .053; PCLOSE = .69					
Item	Factor loading	t-value	Item	Factor loading	t-value
Assurance			**Involvement**		
ASS1	.660		INV3	.769	
ASS4	.666	4.499	INV5	.888	8.752
ASS3	.670	4.514	INV6	.890	8.760
ASS2	.604	4.254	INV2	.615	5.818
Compliance			INV1	.530	4.940
CM5	.674		**Improved Service Engagement**		
CM4	.799	6.091	ISE7	.891	
CM3	.768	5.952	ISE6	.780	8.539
CM2	.601	4.821	ISE1	.655	7.200
CM1	.732	5.738	ISE4	.688	7.737
Emotion			ISE3	.678	7.268
EM3	.762	4.062	ISE2	.870	10.482
EM2	.550		**Learning**		
EM1	.750	4.090	LN6	.551	
Interaction			LN5	.816	5.224
INT3	.695	6.857	LN3	.853	5.324
INT2	.796		LN2	.850	5.318
INT5	.806	8.271	LN1	.506	4.502
INT6	.797	8.160	**Provider-patient orientation**		
INT7	.716	7.141	PPO10	.748	6.658
INT8	.806	8.268	PPO8	.827	7.434
INT4	.704	6.974	PPO2	.836	7.964
Perceptions			PPO6	.803	7.417
PER7	.790		PPO4	.612	5.711
PER6	.865	9.194	PPO1	.740	
PER5	.776	7.975	**Perceived value realised**		
PER4	.847	8.942	PVAL5	.770	
PER3	.709	7.125	PVAL4	.542	5.993
PER2	.816	8.498	PVAL3	.689	6.232
PER1	.819	8.558	PVAL2	.631	5.660
PER8	.652	6.444	PVAL1	.882	6.903
Shared decision-making			**Social Skills**		
SDM7	.801	6.976	SOSK9	.692	5.673
SDM8	.860	7.360	SOSK8	.763	6.144
SDM9	.604	5.320	SOSK7	.824	6.521
SDM3	.683	5.991	SOSK4	.680	5.590
SDM2	.574	5.035	SOSK5	.677	5.570
SDM4	.717		SOSK3	.778	6.241
Trust			SOSK2	.656	
TR7	.868				
TR4	.930	13.064			
TR5	.627	5.954			
TR2	.959	13.820			
TR1	.504	5.033			

Fig. 7.2 One-Factor Congeneric CFA model – Interaction using Dyadic Dataset

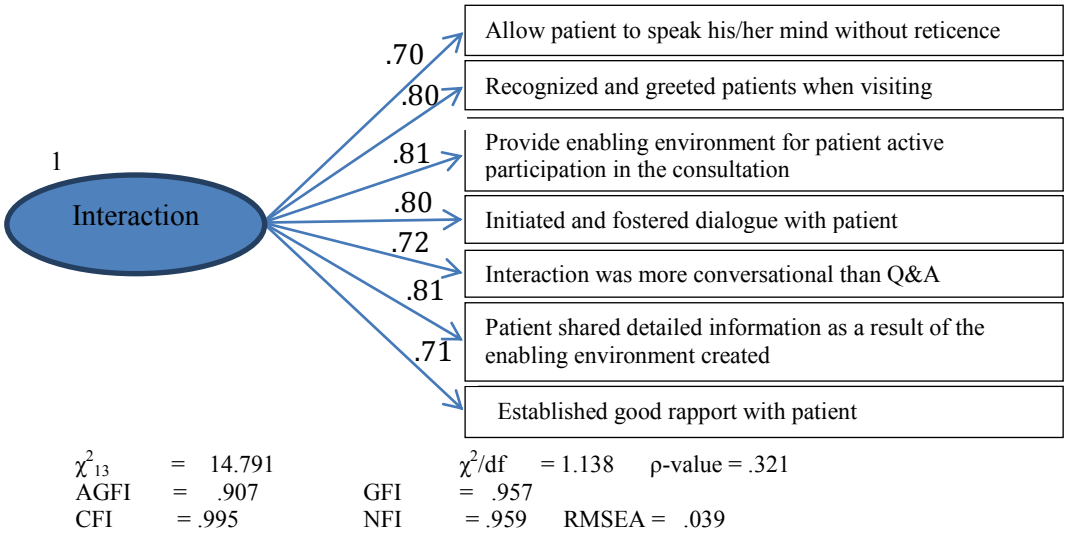


Table 7.12 Goodness-of-fit Indices for the one-factor congeneric models using the dyadic dataset

Construct	*No. of items*	χ^2	*df*	*p*	χ^2/*df*	*GFI*	*AGFI*	*CFI*	*RMSEA*
Provider Patient Orientation	6	7.509	6	.276	1.252	.973	.906	.995	.053
Involvement	5	3.296	4	.510	.824	.985	.942	1.000	.000
Perception	8	22.389	18	.215	1.244	.942	.885	.992	.052
Trust	5	.429	2	.807	.215	.998	.986	1.000	.000
Assurance	4	3.083	2	.209	1.565	.982	.909	.984	.078
Interaction	7	14.791	13	.321	1.138	.957	.907	.995	.039
Social Skills	7	18.773	14	.174	1.341	.945	.890	.983	.062
Learning	5	5.843	4	.211	1.461	.974	.902	.990	.072
Improved Service Engagement	6	7.803	6	.253	1.301	.974	.909	.995	.058
Perceived Value	5	3.352	3	.341	1.117	.985	.926	.998	.036
Compliance	5	1.917	4	.751	.479	.991	.968	1.000	.000
Emotion	3	.882	1	.728	.882	.985	.942	1.000	.000
Shared Decision Making	6	10.171	8	.253	1.271	.963	.903	.990	.055

From Tables 7.11 and 7.12, the goodness-of-fit indices of the full CFA model as well as the one-factor models were all reasonable. The chi-square test was not significant in the case of the one-factor models, however, the RMSEA ranged from .000 to .078 indicating good to reasonable model fit (Byrne, 2010). With regard to the second-order

CFA introducing the latent variables; Beliefs and perception, social context, and partnership into the model, the following indices were recorded; CFI = .918; GFI = .824; RMSEA = .065; $\chi^2_{(383)}$ = 528.042, ρ = 0.051, $\chi^2/df = 1.381$. Byrne (2010) asserts that RMSEA values below .05 indicate good fit and values as high as .08 indicates a reasonably well-fitting model. The factor loadings of the items are all above .5; hence well within the acceptable loadings as suggested by Stevens (1992). The validity measures were computed as presented in Tables 7.13 and 7.14 for all the variables and the latent variables respectively using a stat tool package (an excel programme) from Gaskin (2012). All the constructs measured a composite reliability (CR) > .7; AVE > .5, hence satisfying the internal consistency measure and convergent validity of the items. The AVE values of the constructs are greater than the square of the correlations between the constructs and their absolute correlations, hence satisfying discriminant validity (Hair et al., 2006; Kim, 2000; Nunnally and Berstein, 1994). Achieving discriminant validity between constructs indicates their acceptability for hypothesis testing (Mathieu and Taylor, 2006).

Table 7.14: Composite Reliability and Validity Measures from the 2nd order CFA using the dyad dataset

	CR	AVE	SC	PVA	COM	ISE	B&P	PT
Social Context (SC)	0.817	0.601	0.775					
Perceived Value (PVA)	0.833	0.507	0.498	0.712				
Compliance (COM)	0.842	0.517	0.545	0.299	0.719			
Improved Service Engagement (ISE)	0.894	0.588	0.400	0.299	0.322	0.767		
Beliefs and Perception (B&P)	0.818	0.533	0.321	0.406	0.320	0.390	0.730	
Partnership (PT)	0.800	0.572	0.450	0.150	0.293	0.507	0.575	0.757

All correlations are significant at p<0.05

Table 7.13: The dyadic data convergent, discriminant validity and composite reliability

	CR	AVE	ASS	PEC	SDM	TRU	PVA	EMO	LRN	PPO	SSK	INV	ISE	CM	INT
Assurance (ASS)	0.746	0.506	0.711												
Perception (PEC)	0.928	0.620	0.524	0.787											
Shared Decision-Making (SDM)	0.859	0.509	0.280	0.334	0.714										
Trust (TRU)	0.893	0.637	0.056	0.126	0.109	0.798									
Perceived Value (PVA)	0.834	0.507	0.219	0.416	0.230	0.127	0.712								
Emotion (EMO)	0.732	0.502	0.450	0.364	0.250	0.057	0.340	0.709							
Learning (LRN)	0.846	0.535	0.259	0.484	0.384	0.003	0.345	0.241	0.732						
Provider Patient Orientation (PPO)	0.893	0.585	0.360	0.443	0.414	0.233	0.151	0.254	0.419	0.765					
Social Skills (SSK)	0.886	0.528	0.429	0.685	0.285	0.197	0.537	0.427	0.493	0.330	0.727				
Involvement (INV)	0.863	0.566	0.201	0.282	0.587	0.137	0.208	0.176	0.292	0.430	0.264	0.752			
Improved Service Engagement (ISE)	0.894	0.587	0.591	0.445	0.282	0.078	0.299	0.284	0.299	0.366	0.589	0.330	0.766		
Compliance (CM)	0.841	0.516	0.489	0.627	0.186	0.373	0.299	0.438	0.396	0.333	0.490	0.171	0.322	0.718	
Interaction (INT)	0.906	0.580	0.302	0.621	0.232	0.222	0.477	0.198	0.432	0.478	0.592	0.345	0.547	0.310	0.762

All correlations are significant at p<0.05

7.4 Assumptions underlying use of SEM

The use of SEM and other multivariate methods to analyse data depends on a number of assumptions, such as univariate and multivariate normality, linearity and multicollinearity of all relationships as well as sample size (Hair et al., 1998). This section addresses the multicollinearity of the variables, sample size and use of composite variable scores.

7.4.1 Multicollinearity

Multicollinearity refers to the relationship between two or more independent variables. Hair et al. (2006) assert that the presence of high degree of multicollinearity in the data could affect the effective assessment of the independent variables. Multicollinearity is considered one of the basic assumptions underlying the use of SEM to analyse data, making it important to check before employing SEM using maximum likelihood. The variance inflation factor (VIF) was computed for each variable to assess multicollinearity. VIF values close to 1.00 are considered to have little or no multicollinearity (Hartline et al., 2000), and Hair et al. (1998) suggest a cut-off point of 10.00 as moderate and acceptable. SPSS 21.0 was used to compute the VIF for each of the independent variables. The VIF values for all variables were close to 1.00, the highest VIF of 1.608 ($p < 0.05$) occurs for shared decision-making values. The VIF values suggest that the multicollinearity among the variables is minimal and therefore, should have little or no effects on interpreting the results of the SEM output (Hair et al., 1998).

7.4.2 Sample size concerns and multivariate normality

Structural equation modelling (SEM) is a technique employed to evaluate multivariate models in which case the sample size is considered critical (Nevitt and Hancook, 2004). However, what is considered an adequate sample size suitable for SEM analysis remains debatable. While some researchers argue a minimum sample

size of ≥ 200 to be adequate, others contend that the sample size is dependent on the complexity of the model being tested (Kline, 2011). Kline (2011) notes that SEM requires a sample size to number of model parameter ratio of 20:1 acceptable; however, a ratio of 10:1 is considered adequate whereas a ratio of 5:1 is considered reasonable.

Bagozzi and Yi (2012) acknowledged the issues outlined above in relation to sample size and argue that rather than focusing mainly on the sample size, the critical issue should be the distribution normality concerns of the measures in SEM. They argue that maximum likelihood estimation procedure requires multivariate normality, however, this has been shown to be robust to measures that depart slightly from normality. Bagozzi and Yi (2012, p. 29) further noted that maximum likelihood estimation might be satisfactory with relatively small sample size if the multivariate normality of the measures is "not too far out of range". With regard to sample size to model parameter ratio, Bagozzi and Yi (2012) argued that models with ratios near 3:1 or close to 2:1 have occasionally been satisfactory; hence the emphasis should be on the distribution properties, not sample size or ratios of sample size to free parameters.

On the basis of these assertions, it became apparent of the suitability of SEM to test the model. In this case there were no issues with regard to the patient dataset with a sample size of 360. However, the sample size of 90 for both the doctor's and the dyad datasets was considered with caution for SEM analysis, as the literature suggests sample size exceeding 100 or 150 yields accurate parameter estimates (Anderson and Gerbing, 1988; Kline, 2011). To account for this short fall and make SEM appropriate for evaluating the model, composite scores were calculated for the measures included in the study (Plewa and Quester, 2008).

Also, the measures were reasonably distributed when multivariate normality was assessed using AMOS 21. A sample is multivariate normally distributed when the Mardia's coefficient is close to zero (0) with critical ratio (C.R.) less than 1.96 (Bentler, 2005). However, of most importance is the critical ratio value, and Bentler (2005) suggests that critical ratio values > 5.00 are indicative of non-normally

distributed sample. The multivariate normality test (Appendix X) reported a normally distributed data with non-significant Mardia's coefficient in the case of the patient and dyadic datasets (Patient's data – Mardia's coefficient = 1.165, CR = .556; Dyadic data – Mardia's coefficient = 1.564, CR = .376). The doctor's dataset (Doctor's data – Mardia's coefficient = 11.242, CR = 2.655) is reasonably distributed according to Bentler (2005). Bagozzi and Yi (2012) suggest that maximum likelihood estimation of small sample size may be satisfactory if the multivariate normality is 'not too far out of range'. Hence, it is argued that, the sample is suitable for SEM estimation.

7.4.3 Composite variables

This approach helps reduce the number of parameters in the model making it suitable to evaluate complex models involving small sample size (Landis et al., 2000). Composite scores for each multi-item construct were estimated by conducting a one-factor congeneric model analysis in AMOS 21.0 for each particular scale separately specifying a single factor solution as presented in sections 7.2.2 and 7.3.3. This approach helps purify the scale items, reducing the number of indicators to empirically reasonable measures of the construct (Mathieu and Farr, 1991). This was achieved following Rowe's (2006) one-factor congeneric model approach. This approach assumes that individual items measure and contribute to factor scores of the latent variable in varying degrees and that the true scores of the items are assumed to have a linear relationship (Raykov, 1997).

Following Rowe's (2006) approach, the one-factor congeneric model was first estimated using maximum likelihood setting the variance of the latent variable to 1. Magnitudes of significant factor loadings of items as well as goodness-of-fit indices were used to determine the robustness of the model. Once the model evaluation was satisfied, data imputation was performed in AMOS to generate the composite scores of the variables composing a new variable with the final scores representing the composite scores of each construct. All the congeneric models showed an acceptable fit and therefore considered appropriate to be included in the final measurement

model to test the hypothesised model. The goodness-of-fit indices used include the chi square test (χ^2) with non-significant ρ-values (ρ > .05), χ^2/df of < 3, Comparative Fit Index (CFI) with values > .95, Goodness of Fit Index (GFI) with values > .90, Adjusted Goodness of Fit Index (AGFI) with values > .90, Turker-Lewis Index (TLI) with values >.90, and Root Mean Square Error of Approximation (RMSEA) with values < .05, however values < .08 are considered reasonable (Byrne, 2010). To establish homogeneity of the model estimation across the groups, composite scores were calculated for all the datasets and used in the final measurement models. Having satisfied the basic assumptions underlying the use of SEM, the following sections address the structural model and the estimation outputs.

7.5 The general SEM model and comparison

The study used the model in Fig 7.3 to examine the associations between the constructs and test the hypotheses. This was evaluated using AMOS 21, which is considered user-friendly for data analysis involving SEM. The model was applied to the individual datasets as well the dyadic dataset. To evaluate the measurement model, the maximum likelihood estimation method was employed (Anderson and Gerbing, 1988). However, to achieve a more parsimonious model, the measurement model was re-specified. Byrne (2010) asserts that model re-specification is not confirmatory but exploratory. The model re-specification was conducted on the basis of theoretical and empirical justification (Hoyle, 1995).

The model re-specification also followed a stepwise approach taking into consideration the fit statistic and modification indices (MI) (Byrne, 2010). As a result, this was done by the specification of a residual covariance between 'social context' and 'beliefs and perceptions'. Joreskog (1993) asserts that model re-specification involving correlated errors or residuals with other variables should have a strong substantive or empirical rationale. Considering the exploratory nature of this study, the qualitative research suggests that, the actors' beliefs and perceptions are influenced by experiences derived from the social context of the encounter. Previous

research also suggests the influences of the actor's beliefs and perception on their experiences (Gentile et al., 2007), which suggests a potential relationship between these two variables. The literature suggests that forcing large error terms to be uncorrelated in model specification is rarely appropriate with real data (Bentler and Chou, 1993; Byrne, 2010). Hence, the author considers the re-specification of the model justified.

After the model re-specification, a number of fit indices were used in combination to assess the overall model adequacy (Brown and Cudeck, 1993; Hu and Bentler, 1999). The focal model was first evaluated and later compared with two rival models. Bagozzi and Yi (1988) consider model comparison as one of the essential criteria of assessing its success and robustness. As a nested model, some of the parameters could be constrained from a theoretical viewpoint to develop alternative models (Anderson and Gerbing, 1988). As a result, removing one or more parameters from the focal model formed the alternative models. In this study, the first alternative model as shown in Fig. 7.4 was developed by removing the parameter from 'compliance to medical instructions' to obtain 'perceived value', indicating no relationship between these two constructs. As shown in Fig 7.5, the second alternative model was developed by removing four parameters from the focal model, specifically parameters from 'beliefs and perception' to obtain 'compliance to medical instructions'; 'partnership' to 'compliance to medical instructions'; and 'social context' to 'compliance to medical instructions'; in addition to the parameter removed in the case of the first alternative model. This model suggests that, there is no direct relationship between 'beliefs and perception' and 'commitment to compliance to medical instructions'; 'partnership' and 'commitment to compliance to medical instructions'; 'social context' to 'commitment to compliance to medical instructions'; as well as 'commitment to compliance to medical instructions' and 'perceived value'.

Fig 7.3 AMOS focal model for the SEM evaluation

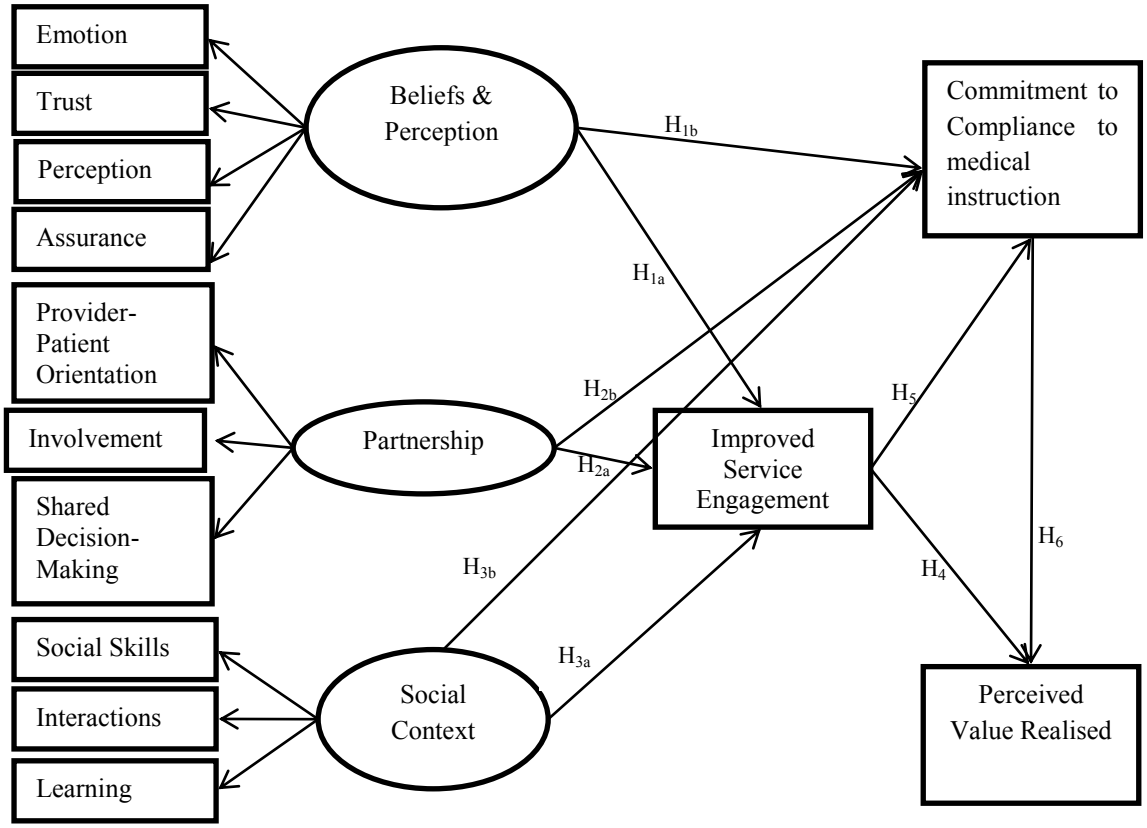


Fig 7.4 AMOS alternative model 1 for the SEM evaluation

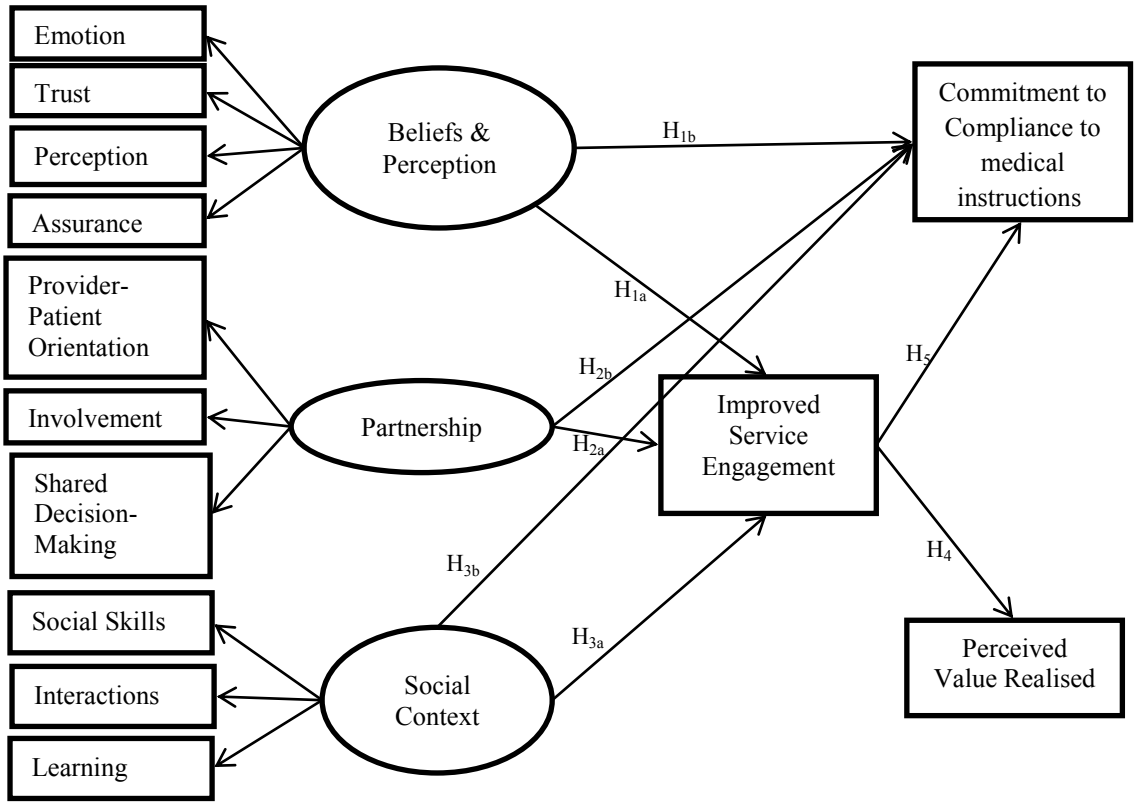
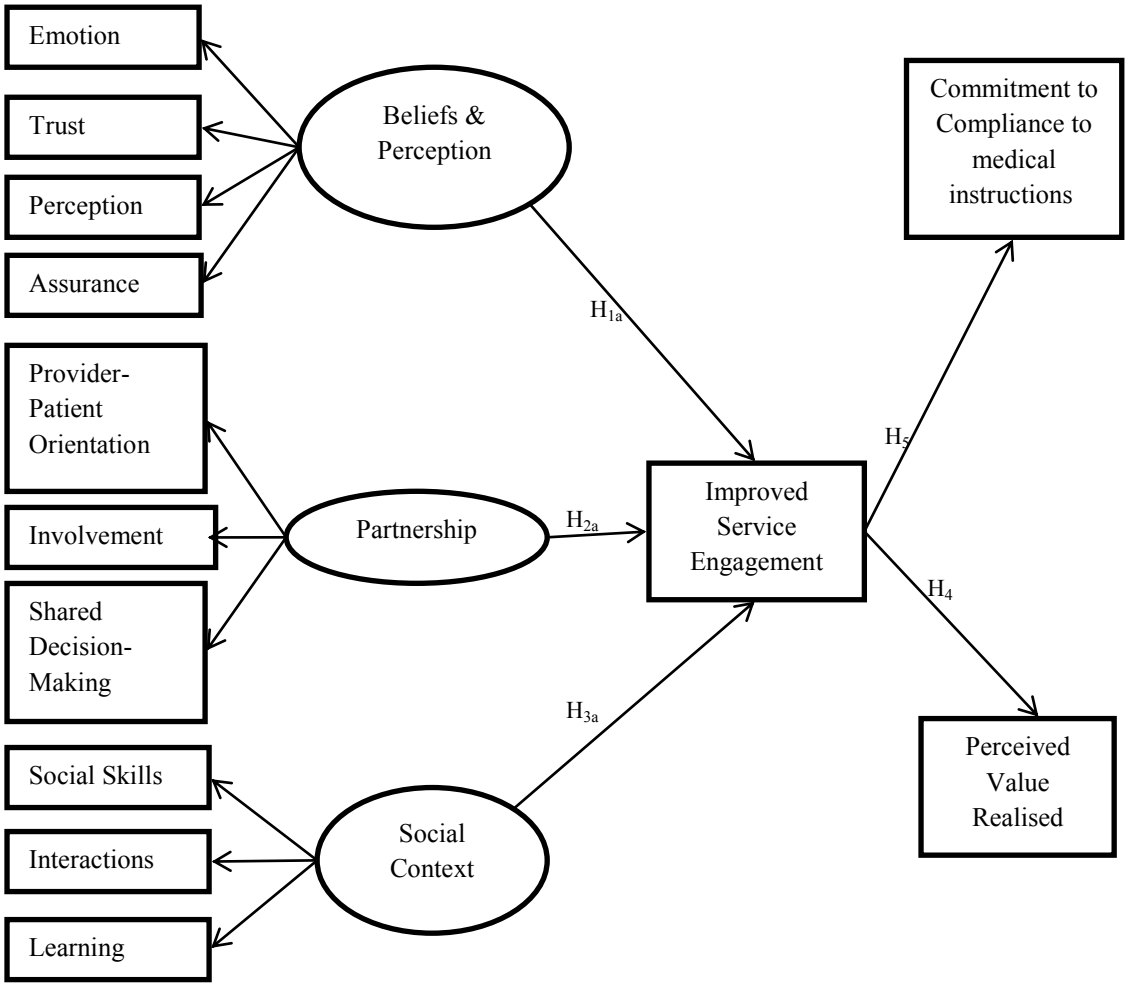


Fig 7.5 AMOS alternative model 2 for the SEM evaluation



Goodness-of-fit indices were obtained for all three models and compared to select the superior model. While some authors suggest the Chi square test (Hoyle, 2005) others have used the RMSEA, CFI and the Akaike Information Criterion (AIC) (Arnett et al., 2003). The AIC is generally used to compare rival models estimated (Kline, 2011), and smaller values of the AIC indicates a better fit of the model (Hu and Bentler, 1995). The rival models were compared using the Chi square test and the AIC, supported by the other goodness-of-fit statistics. The summary of fit statistics for the patient, doctor, and dyadic models are presented in Tables 7.15a, 7.15b, and 7.15c respectively.

Table 7.15a. Summary of fit statistics of the model - Patients

Model	χ2	df	Δχ2	Δ df	ρ	GFI	AGFI	TLI	CFI	RMS EA	AIC
Focal	57.998	40			.033	.976	.946	.962	.981	.035	129.998
Alternative 1	59.261	41	1.263	1	.032	.976	.946	.962	.980	.035	129.261
Alternative 2	72.087	44	14.089	4	.004	.971	.939	.943	.969	.042	136.087

Table 7.15b. Summary of fit statistics of the model - Doctor

Model	χ2	df	Δχ2	Δ df	ρ	GFI	AGFI	TLI	CFI	RMS EA	AIC
Focal	56.024	45			.123	.910	.818	.964	.979	.049	124.024
Alternative 1	58.251	46	2.227	1	.106	.908	.818	.962	.977	.055	124.251
Alternative 2	64.809	49	8.785	4	.053	.898	.806	.949	.969	.060	124.809

Table 7.15c. Summary of fit statistics of the model – Dyadic model

Model	χ2	*df*	Δχ2	Δ *df*	ρ	GFI	AGFI	TLI	CFI	RMS EA	AIC
Focal	55.945	53			.279	.915	.854	.979	.986	.025	123.945
Alternative 1	56.409	54	0.464	1	.296	.914	.856	.981	.987	.022	122.409
Alternative 2	79.886	57	23.941	4	.020	.891	.822	.910	.936	.067	139.886

The patient and dyadic models exhibited similar characteristics in relation to comparing the focal models to the alternative model 1 in both cases. The chi-square difference statistics between the focal model and the alternative model 1 in both cases were not significant ($\rho = 0.235$ and $\rho = 0.496$ respectively). This suggests that, the focal model and the alternative model 1 in both cases are completely equivalent and therefore, explain the data equally well (Byrne, 2010). The AIC values for alternative model 1 in both (patient and dyadic models) cases were smaller than that of the focal model. The fit statistics were similar, however, in the case of the dyadic model, the alternative model 1 presented better-fit indices than the focal model. The chi-square difference statistics were significant at $\rho < 0.05$ when the focal models in both cases

were compared to the alternative model 2 suggesting that the two models are different. The alternative model 2 also recorded the highest AIC values. Hence, the model does not explain the data well compared to the other rival models. In the case of the doctor's model, the chi-square difference statistics between the focal model and the alternative models (1 & 2) were all significant at $\rho < 0.05$. This suggests that, the focal model and the alternative models are different hence the focal model explains the data better (Byrne, 2010). The AIC value of the focal model was smaller compared to the other rival models and also reported better-fit indices. Hence the focal model better fits the data and therefore considered superior to the other alternative models.

The focal model in the case of the patients and dyadic models was selected, even though the first alternative model of the dyadic model presented better-fit indices. It is worth noting that the relationship between 'compliance to medical instructions' and 'perceived value' was not significant in the case of the patients and dyadic model, however, there was a significant relationship between these two constructs when estimated the doctor's model. The non-significance in that relationship could also account for the equivalence in the focal model and the alternative model 1 in the case of the patient and dyadic models. Hence considering the doctor's model, the focal model in the case of the patients and dyadic models was selected and used to test the formulated hypotheses. This also enabled homogeneity in comparing the same model among the three separate datasets.

From tables 7.15a, 7.15b, and 7.15c, the focal models recorded good fit indices, with CFI > 0.95, GFI > 0.90, TLI > 0.95, RMSEA < 0.05, these represent good fit of the model which suggest that the model explains the data well (Byrne, 2010; Kline, 2011). The chi-square in the case of the doctor and dyadic datasets was non-significant which indicates a good fit (Anderson and Gerbing, 1988). However, in the case of the patient dataset, the chi-square was significant ($\rho < 0.05$), this could be attributed to the large sample size. Kenny et al (2006) note that, the chi-square test is likely to be significant with large sample size, therefore, other fit indices are considered. The χ^2/df of 1.416 (patient), 1.218 (doctor), and 1.048 (dyadic) are

considered good since the values are less than 3 (Hoyle, 1995).

7.6 Structural model results

This section presents the SEM estimates of the focal and alternative models for all three datasets (patient, doctor and dyadic). The tables present the unstandardized and standardized path coefficients with their respective t-values. The standardized coefficient estimates are used in the final test of the hypothesised model. Tables 7.16a-d represent the path coefficient estimates using the patient's dataset, Tables 7.17a-d represent the doctor's dataset, whereas Tables 7.18a-d represent that of the dyadic dataset. Figures 7.6, 7.7, and 7.8 also represent the focal models with the standardised coefficient estimates of the patient, doctor and dyadic datasets respectively. The fit statistics are already presented in the previous section supporting the goodness-of-fit of the model.

Table 7.16a: Path coefficients of the focal model - Patient

Path	Unstandardized coefficient	t-score	Standardised coefficient (β)
Partnership→Improved service engagement	.397***	5.273	.411
Partnership→ Commitment to Compliance to medical instructions	.518***	5.918	.510
Beliefs perception→ Improved service engagement	.133**	2.635	.146
Beliefs perception → Commitment to Compliance to medical instructions	.459**	2.899	.313
Social Context→ Improved Service Engagement	.557***	7.314	.513
Social Context → Commitment to Compliance to medical instructions	.421**	2.867	.320
Improved service engagement→ Perceived Value	**.056***	**.786**	**.052**
Improved service engagement→ Commitment to Compliance to medical instructions	.516***	4.849	.636
Commitment to Compliance to medical instructions → Perceived Value	**-.099***	**-1.125**	**-.074**

Note:* $\rho < 0.001$; ** $\rho < 0.05$; * $\rho > 0.1$

Table 7.16b: Path coefficients of the alternative model 1- Patient

Path	Unstandardized coefficient	t-score	Standardised coefficient (β)
Partnership→Improved service engagement	.397***	5.279	.412
Partnership→ Commitment to Compliance to medical instructions	.517***	5.922	.510
Beliefs perception→ Improved service engagement	.136**	2.680	.149
Beliefs perception → Commitment to Compliance to medical instructions	.452**	2.914	.309
Social Context→ Improved Service Engagement	.561***	7.350	.515
Social Context → Commitment to Compliance to medical instructions	.418**	2.864	.313
Improved service engagement→ Perceived Value	**.007***	**.127**	**.007**
Improved service engagement→ Commitment to Compliance to medical instructions	.512***	4.814	.630

Note:* $\rho < 0.001$; ** $\rho < 0.05$; * $\rho > 0.1$

Table 7.16c: Path coefficients of the alternative model 2 – Patient

Path	Unstandardized coefficient	t-score	Standardised coefficient (β)
Partnership→Improved service engagement	.411***	5.132	.424
Beliefs perception→ Improved service engagement	.522***	5.621	.514
Social Context→ Improved Service Engagement	.686***	9.090	.570
Improved service engagement→ Perceived Value	**.010***	**.172**	**.009**
Improved service engagement→ Commitment to Compliance to medical instructions	.768***	10.984	.946

Note:* $\rho < 0.001$; ** $\rho < 0.05$; * $\rho > 0.1$

Table 7.16d: Path coefficients of the focal model and the alternative models – Patient

Path	Focal model (β)	Alternative Model 1 (β)	Alternative Model 2 (β)
Partnership→Improved service engagement (H_{2a})	.411***	.412***	.470***
Partnership→ Commitment to Compliance to medical instructions (H_{2b})	.510***	.510***	-
Beliefs perception→ Improved service engagement (H_{1a})	.146**	.149**	.550***
Beliefs perception → Commitment to Compliance to medical instructions (H_{1b})	.313**	.309**	-
Social Context→ Improved Service Engagement (H_{3a})	.513***	.515***	.576***
Social Context → Commitment to Compliance to medical instructions (H_{3b})	.320**	.313**	
Improved service engagement→ Perceived Value (H_4)	**.052***	**.007***	**.008***
Improved service engagement→ Commitment to Compliance to medical instructions (H_5)	.636***	.630***	.956***
Commitment to Compliance to medical instructions → Perceived Value (H_6)	**-.074***	-	-

Note:* $\rho < 0.001$; ** $\rho < 0.05$; * $\rho > 0.1$*

Fig. 7.6: Relationship between the constructs – Patient's model

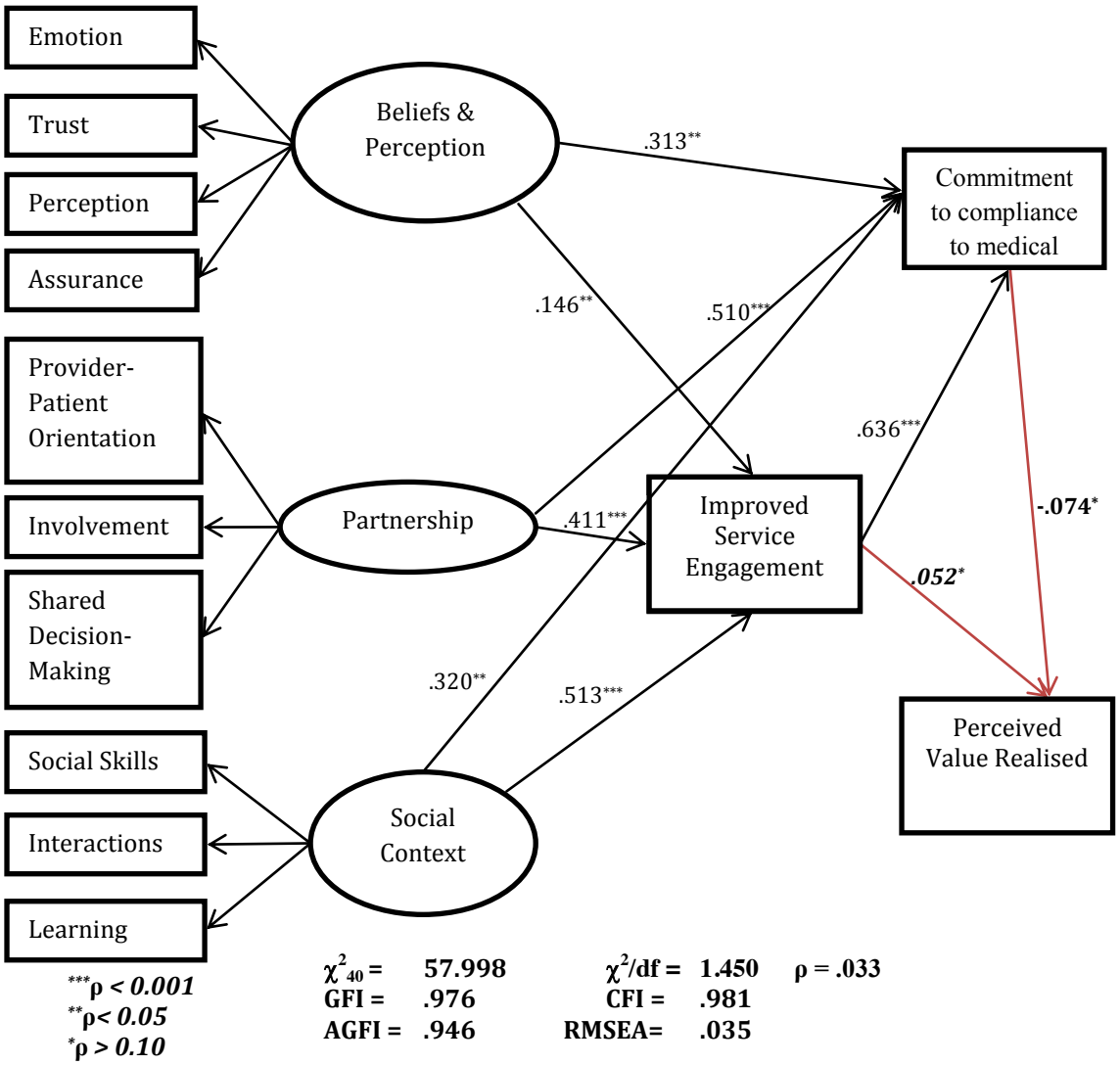


Table 7.17a: Path coefficients of the focal model - Doctor

Path	Unstandardized coefficient	t-score	Standardised coefficient (β)
Partnership→Improved service engagement	.471**	4.352	.456
Partnership→ Commitment to Compliance to medical instructions	**.036**	**.176**	**.032**
Beliefs perception→ Improved service engagement	.580**	3.826	.422
Beliefs perception → Commitment to Compliance to medical instructions	.532**	7.305	.766
Social Context→ Improved Service Engagement	.610**	4.988	.509
Social Context → Commitment to Compliance to medical instructions	.133*	2.681	.144
Improved service engagement→ Perceived Value	.731**	4.858	.796
Improved service engagement→ Commitment to Compliance to medical instructions	**-.235**	**-1.449**	**-.331**
Commitment to Compliance to medical instructions → Perceived Value	.293*	2.249	.254

Note: Significant at: ** ρ<0.001, * ρ<0.05, ρ > 0.1

Table 7.17b: Path coefficients of the alternative model 1- Doctor

Path	Unstandardized coefficient	t-score	Standardised coefficient (β)
Partnership→Improved service engagement	.470**	4.376	.458
Partnership→ Commitment to Compliance to medical instructions	**.038**	**.041**	**.033**
Beliefs perception→ Improved service engagement	.587**	3.881	.428
Beliefs perception → Commitment to Compliance to medical instructions	.526**	7.282	.764
Social Context→ Improved Service Engagement	.608**	4.971	.508
Social Context → Commitment to Compliance to medical instructions	.135*	2.680	.147
Improved service engagement→ Perceived Value	.615**	4.902	.671
Improved service engagement → Commitment to Compliance to medical instructions	**-.179**	**-1.168**	**-.254**

Note: Significant at: ** ρ<0.001, * ρ<0.05, ρ > 0.1

Table 7.17c: Path coefficients of the alternative model 2 – Doctor

Path	Unstandardized coefficient	t-score	Standardised coefficient (β)
Partnership→Improved service engagement	.485**	4.367	.463
Beliefs perception→ Improved service engagement	.626**	3.970	.440
Social Context→ Improved Service Engagement	.635**	5.011	.512
Improved service engagement→ Perceived Value	.597**	4.857	.648
Improved service engagement→ Commitment to Compliance to medical instructions	**-.235**	**-1.537**	**-.320**

***Note: Significant at** **ρ<0.001, *ρ<0.05*

Table 7.17d: Path coefficients of the focal model and the alternative models – Doctor

Path	Focal model (β)	Alternative Model 1 (β)	Alternative Model 2 (β)
Partnership→Improved service engagement (H_{2a})	.456***	.458***	.463***
Partnership→ Commitment to Compliance to medical instructions (H_{2b})	**.032***	**.033***	-
Beliefs perception→ Improved service engagement (H_{1a})	.422***	.428***	.440***
Beliefs perception → Commitment to Compliance to medical instructions (H_{1b})	.766***	.764***	-
Social Context→ Improved Service Engagement (H_{3a})	.509***	.508***	.512***
Social Context → Commitment to Compliance to medical instructions (H_{3b})	.144**	.147**	
Improved service engagement→ Perceived Value (H_4)	.796***	.671***	.648***
Improved service engagement→ Commitment to Compliance to medical instructions (H_5)	**-.331***	**-.254***	**-.320***
Commitment to Compliance to medical instructions → Perceived Value (H_6)	.254**	-	-

****ρ < 0.001, **ρ < 0.05, *ρ > 0.1***

Fig. 7.7: Relationship between the constructs – Doctor's model

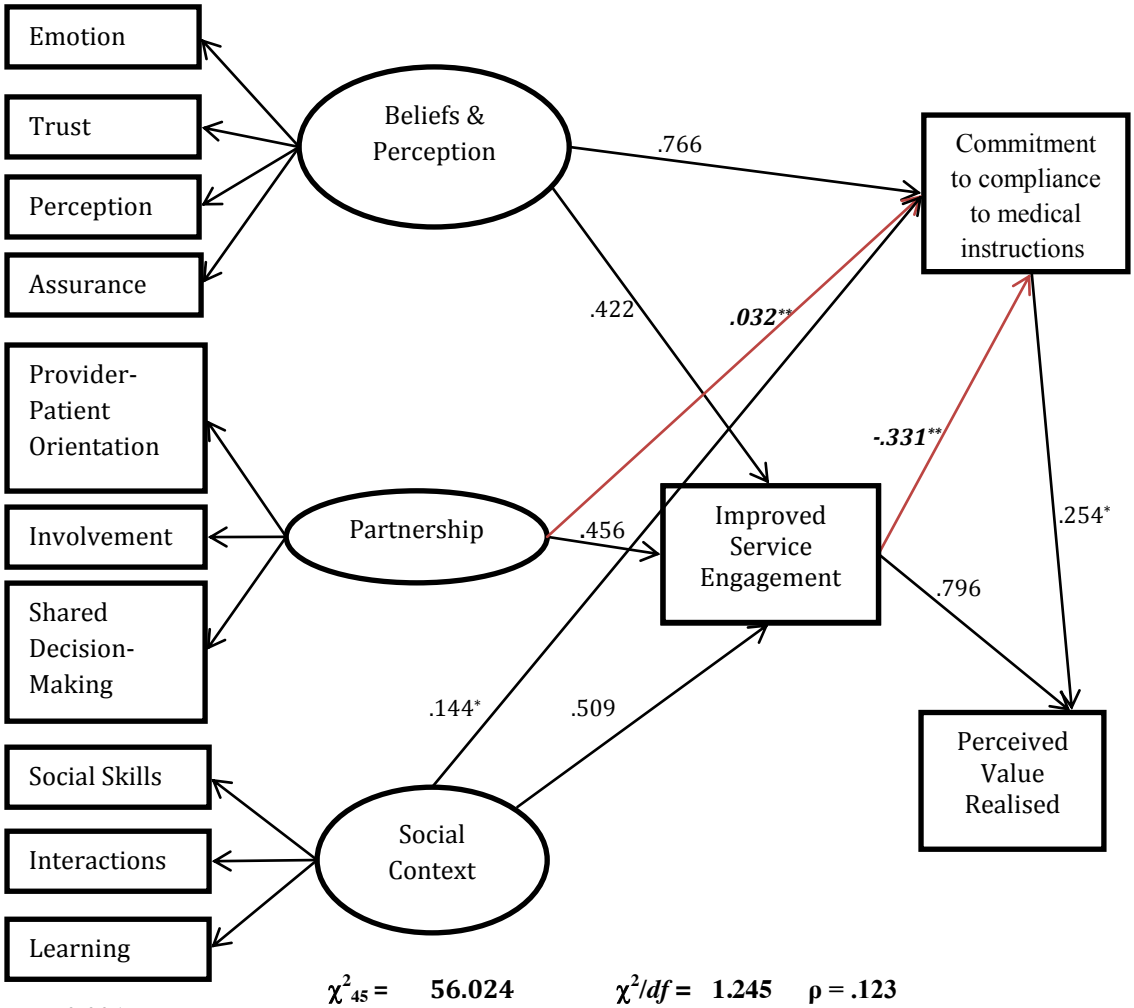


Table 7.18a: Path coefficients of the focal model – Dyadic model

Path	Unstandardized coefficient	t-score	Standardised coefficient (β)
Partnership→Improved service engagement	.551***	3.637	.466
Partnership→ Commitment to Compliance to medical instructions	.422***	3.955	.312
Beliefs perception→ Improved service engagement	.458***	4.740	.591
Beliefs perception → Commitment to Compliance to medical instructions	.574***	3.431	.705
Social Context→ Improved Service Engagement	.507***	4.949	.519
Social Context → Commitment to Compliance to medical instructions	.235**	2.856	.240
Improved service engagement→ Perceived Value	.218**	2.297	.254
Improved service engagement→ Commitment to Compliance to medical instructions	.304***	4.837	.518
Commitment to Compliance to medical instructions → Perceived Value	**.080***	**.690**	**.076**

Note: Significant at: *** ρ<0.001; ** ρ<0.05; * ρ > 0.10

Table 7.18b: Path coefficients of the alternative model 1- Dyadic model

Path	Unstandardized coefficient	t-score	Standardised coefficient (β)
Partnership→Improved service engagement	.551**	3.637	.466
Partnership→ Commitment to Compliance to medical instructions	.422**	3.955	.312
Beliefs perception→ Improved service engagement	.458**	4.740	.591
Beliefs perception → Commitment to Compliance to medical instructions	.574**	3.431	.705
Social Context→ Improved Service Engagement	.507**	4.949	.519
Social Context → Commitment to Compliance to medical instructions	.230*	2.855	.238
Improved service engagement→ Perceived Value	.245*	2.804	.285
Improved service engagement→ Commitment to Compliance to medical instructions	.304**	4.740	.517

Note: Significant at: ** ρ<0.001, * ρ<0.05

Table 7.18c: Path coefficients of the alternative model 2 – Dyadic

Path	Unstandardized coefficient	t-score	Standardised coefficient (β)
Partnership→Improved service engagement	.789*	2.287	.548
Beliefs perception→ Improved service engagement	.448**	3.898	.471
Social Context→ Improved Service Engagement	.494**	5.381	.477
Improved service engagement→ Perceived Value	.580**	3.678	.654
Improved service engagement→ Commitment to Compliance to medical instructions	.307**	3.932	.367

Note: Significant at ** ρ<0.001, * ρ<0.05

Table 7.18d: Path coefficients of the focal model and the alternative models – Dyadic

Path	Focal model (β)	Alternative Model 1 (β)	Alternative Model 2 (β)
Partnership→Improved service engagement (H_{2a})	.466	.466	.548**
Partnership→ Commitment to Compliance to medical instructions (H_{2b})	.312	.312	-
Beliefs perception→ Improved service engagement (H_{1a})	.591	.591	.471
Beliefs perception → Commitment to Compliance to medical instructions (H_{1b})	.705	.705	-
Social Context→ Improved Service Engagement (H_{3a})	.519	.519	.477
Social Context → Commitment to Compliance to medical instructions (H_{3b})	.240**	.238**	-
Improved service engagement→ Perceived Value (H_4)	.254**	.285**	.654
Improved service engagement→ Commitment to Compliance to medical instructions (H_5)	.517	.517	.367
Commitment to Compliance to medical instructions → Perceived Value (H_6)	**.076***	**-**	**-**

ρ <0.001; ** ρ < 0.05; * ρ > 0.10

Fig. 7.8: Relationship between the constructs – Dyadic model

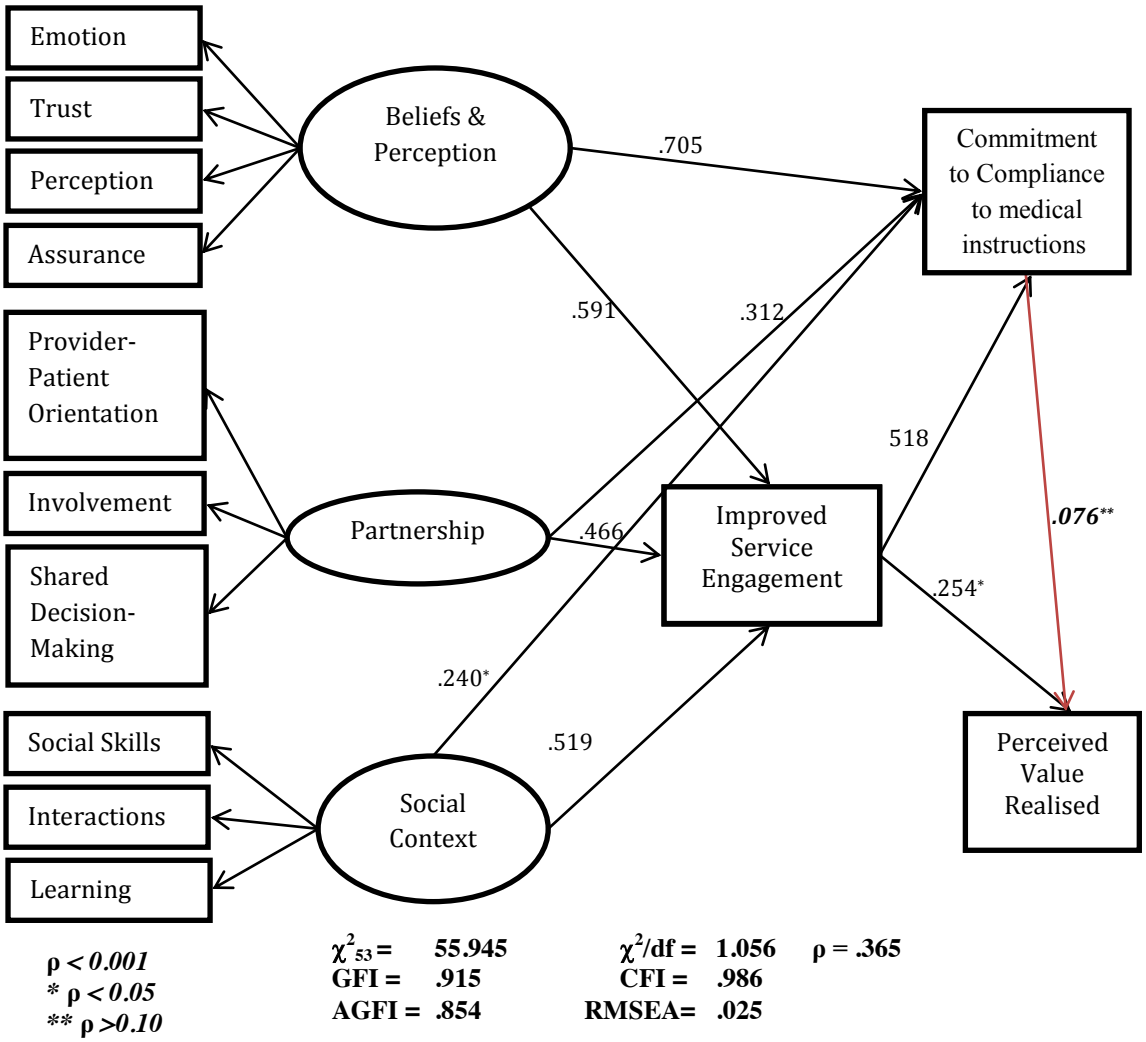


Table 7.19: Standardised loadings and R^2 values of the focal model of the groups

Path	Patient model (β)	R^2	Doctor Model (β)	R^2	Dyadic Model (β)	R^2
Partnership →Improved service engagement (H_{2a})	.411***	.407	.456***	.208	.466***	.551
Partnership→ Commitment to Compliance to medical instructions (H_{2b})	.510***	.486	**.032***	.305	.312***	.415
Beliefs perception → Improved service engagement (H_{1a})	.146**	.407	.422***	.208	.591***	.551
Beliefs perception → Commitment to Compliance to medical instructions (H_{1b})	.313**	.486	.766***	.305	.705***	.415
Social Context → Improved Service Engagement (H_{3a})	.513***	.407	.509***	.208	.519***	.551
Social Context → Commitment to Compliance to medical instructions (H_{3b})	.320**	.486	.144**	.305	.240**	.415
Improved service engagement → Perceived Value (H_4)	**.052***	.004	.796***	.259	.254**	.086
Improved service engagement → Commitment to Compliance to medical instructions (H_5)	.636***	.486	**-.287***	.305	.518***	.415
Commitment to Compliance to medical instructions → Perceived Value (H_6)	**-.074***	.004	.254**	.259	**.076***	.086

***$\rho < 0.001$; **$\rho < 0.05$; *$\rho > 0.10$

From the results presented in Table 7.19, all the hypotheses were supported with the exception of $\mathbf{H_4}$ and $\mathbf{H_6}$ in the case of the patient's model. Likewise, two hypotheses ($\mathbf{H_{2b}}$ and $\mathbf{H_5}$) were not supported from the doctor's model. However, in the case of the dyadic model, all the hypotheses were supported with the exception of $\mathbf{H_6}$. These hypotheses were rejected due to a lack of a significant relationship between the constructs. The following section briefly elaborates on the findings, which are further discussed in the next chapter.

The hypotheses relating to the effect of the value co-creation process on improved service engagement were all supported. The results showed a significantly strong positive relationship between actors' beliefs and perception and improved service engagement. Hence, $\mathbf{H_{1a}}$ is supported in both the individual and dyadic models. The

magnitude of the relationship in the case of the doctors (**β = .422, ρ < 0.001, R^2 = .208**) and the dyadic (**β = .591, ρ < 0.001, R^2 = .551**) model were stronger than that of the patient model (**β = .146, ρ < 0.05, R^2 = .407**). These also recorded a significantly moderate R^2 in all cases reflecting the strength of the associations between the constructs.

The results also showed a strong relationship between the constructs; Partnership and improved service engagement. The β-scores were relatively high in both the individual and dyadic models with similar magnitudes, hence H_{2a} is supported in all models. The high scores estimated in the patient (**β = .411, ρ < 0.001, R^2 = .407**), doctor (**β = .456, ρ < 0.001, R^2 = .208**) and the dyadic (**β = .466, ρ < 0.001, R^2 = .551**) models, which are also affirmed by their respective moderately high R^2 values confirm previous research (Aarikka-Stenroos and Jaakkola, 2012) of the need of partnership in the value co-creation process. This is also the case of the effects of the social context on improved service engagement, which recorded high β-scores across the groups, thus the patient (**β = .513, ρ < 0.001, R^2 = .407**), doctor (**β = .509, ρ < 0.001, R^2 = .208**) and the dyadic (**β = .519, ρ < 0.001, R^2 = .551**) models support the hypothesis H_3.

With varying degrees of magnitude in the β-scores and significance levels, hypothesis H_{1b} was also supported in both the individual and dyadic models. For instance, the patient (**β = .313, ρ < 0.05, R^2 = .486**) model recorded a weak relationship between the patient's beliefs and perception and improved compliance to medical instructions as compared to the doctor's (**β = .766, ρ < 0.001, R^2 = .305**) and the dyadic (**β = .705, ρ < 0.001, R^2 = .415**) models. Likewise, hypothesis H_{3b} was also supported across the groups. However, the patient model (**β = .320, ρ < 0.05, R^2 = .486**) recorded a strong effect of the social context on improved compliance to medical instructions as compared to the doctors (**β = .144, ρ < 0.05, R^2 = .305**) and dyadic (**β = .240, ρ < 0.05, R^2 = .415**) models, with the doctors' model presenting the weakest effect. As outlined, hypotheses H_{1a}, H_{1b}, H_{2a}, H_{3a} and H_{3b} are supported in

all the individual and dyadic models, though with some relative differences in the magnitudes of the effects.

Contrary to the above, the following hypotheses were supported in part across the individual and the dyadic models. With regard to hypothesis **H_{2b},** thus establishing the effect of partnership on improved compliance to medical instructions, doctors and patients had different views. While **H_{2b}** is supported in the case of the patient (**$\beta = .510, \rho < 0.001, R^2 = .486$**) and dyadic (**$\beta = .512, \rho < 0.001, R^2 = .415$**) models, it was rejected in the case of the doctors (**$\beta = .032, \rho > 0.1, R^2 = .305$**) model. Similarly, hypothesis **H_5** was partly supported across the groups; whiles the patient (**$\beta = .693, \rho < 0.001, R^2 = .486$**) and dyadic (**$\beta = .518, \rho < 0.001, R^2 = .415$**) models established a significant positive relationship between improved service engagement and improved compliance to medical instructions, the reverse is the views of the doctors (**$\beta = -.287, \rho > 0.1, R^2 = .305$**). The doctors' model established a non-significant negative relationship between these constructs. Though the individual models had contrasting effects, but the net effect of the dyadic data supported the views of the patients, which suggest that, the focal dyad are of the opinion that partnership between the patient and the doctor as well as improved service engagement has the tendency of improving patients' compliance to medical instructions.

With regard to hypothesis **H_4**, thus establishing the effect of improved service engagement on perceived value, doctors and patients shared different views. While **H_4** is supported in the case of the doctor (**$\beta = .796, \rho < 0.001, R^2 = .259$**) and dyadic (**$\beta = .254, \rho < 0.05, R^2 = .086$**) models, the hypothesis was rejected in the case of the patient's (**$\beta = .052, \rho > 0.1, R^2 = .004$**) model. Though with a low R^2 value, the dyadic model established a positive relationship between the constructs significant at the 95% confidence level, whereas in the case of the patient model, the relationship between the constructs is not significant. Considering the effect of improved compliance to medical instructions on perceived value (**H_6**), this hypothesis was supported in the case of the doctor's model (**$\beta = .254, \rho < 0.05, R^2 = .259$**), but was rejected by the patient's (**$\beta = -.074, \rho > 0.1, R^2 = .004$**) and dyadic (**$\beta = .076, \rho > 0.1,$**

R^2 = .086). These models recorded a non-significant relationship between the constructs as well as relatively low R^2 values.

The magnitudes of the path coefficients of the patient's model and doctor's model were also compared and examined any statistically significant differences in these coefficients. This was computed using the unstandardized coefficients and standard errors from the SEM output. This is presented in Table 7.20.

Table 7.20: Comparison of path coefficients of the patient and doctor's model

Path	Patient model		Doctor model		t-value	ρ-value (two-tailed)
	Coef	SE	Coef	SE		
Partnership →Improved service engagement (H_{2a})	**.397**	.075	**.471**	.108	0.465	.642
Partnership→ Commitment to Compliance to medical instructions (H_{2b})	**.518**	.087	**.036**	.204	2.396	**.017**
Beliefs perception → Improved service engagement (H_{1a})	**.133**	.050	**.580**	.151	3.590	**.000**
Beliefs perception → Commitment to Compliance to medical instructions (H_{1b})	**.459**	.158	**.532**	.073	0.230	.818
Social Context → Improved Service Engagement (H_{3a})	**.557**	.076	**.610**	.122	0.215	.830
Social Context → Commitment to Compliance to medical instructions (H_{3b})	**.421**	.147	**.133**	.050	.977	.329
Improved service engagement → Perceived Value (H_4)	**.056**	.076	**.731**	.151	4.161	**.000**
Improved service engagement → Commitment to Compliance to medical instructions (H_5)	**.516**	.106	**-.235**	.162	3.314	**.001**
Commitment to Compliance to medical instructions → Perceived Value (H_6)	**-.099**	.088	**.293**	.130	2.093	**.037**

Note: Coef – unstandardized path coefficient; SE – Standard Error

7.7 Moderating effects of actor characteristics

After evaluating the model to test the relationship between the constructs, this section aims to ascertain any possible differences or effects different moderating groups could have on the relationships outlined in section 7.6 above. This was done only for

the patient and doctor datasets. The moderating groups focused on the relationship of the key influencing factors (beliefs and perception, social context, and partnership) and improved service engagement between the actors. The factors considered include; age of the patient, educational level of the patient, as well as the frequency of visit of the patient to the hospital. In the case of the doctors, length of service and gender were considered as factors to moderate the value co-creation between the involved actors. Actor's characteristics including the factors outlined could affect value co-creation between the actors in the service encounter, and on this premise, Anderson et al. (2008, p. 376) contend the need to examine the effects of these characteristics "in a service-dominated view of marketing".

Following Anderson et al.'s (2008) approach, the continuous variables were converted to categorical variables. The sample was divided into young and old (with regard to Age), male and female (for gender), and low and high with regard to the other factors or variables. This was done by computing the median values of the variables as presented in appendix XI using SPSS 21.0, where values less through to the median was coded as Low or Young, and values above the median were considered as High or Old. Multi-group analysis was performed for each group (Age, Education, Frequency of visit, gender and length of service) using the respective datasets in AMOS 21.0. The measurement model was constrained to be identical for each pair of the moderating groups and estimated, and then compared the results with the unconstrained model. The results of the moderating groups for the patient's model and doctor's model are presented in Tables 7.21 and 7.22 respectively.

Table 7.21: Moderating groups – Patients

Path	**Age**			
	Young (β)	**Old (β)**	**χ^2**	**$\Delta\chi^2$ (df=2)**
Partnership →Improved service engagement (H_{7a})	0.106***	0.485***	168.538	8.732**
Beliefs perception → Improved service engagement (H_{7b})	0.160***	0.138***	161.684	1.878*
Social Context → Improved Service Engagement (H_{7c})	0.433***	0.301**	162.056	2.250*
	$\Delta\chi^2_{30}$ = 44.782 ρ = 0.040			

	Education		χ^2	$\Delta\chi^2$ (df=2)
	Low (β)	High (β)		
Partnership →Improved service engagement (H_{8a})	0.127***	0.417***	175.326	6.677**
Beliefs perception → Improved service engagement (H_{8b})	0.188***	0.119***	169.129	0.480*
Social Context → Improved Service Engagement (H_{8c})	0.105***	0.427***	174.856	6.207**
	$\Delta\chi^2_{30}$ = 44.899 ρ = 0.039			

	Frequency of visit		χ^2	$\Delta\chi^2$ (df=2)
	Low (β)	High (β)		
Partnership →Improved service engagement (H_{9a})	0.416***	0.388***	166.231	2.703*
Beliefs perception → Improved service engagement (H_{9b})	0.151***	0.189***	163.598	0.070*
Social Context → Improved Service Engagement (H_{9c})	0.404***	0.471***	165.356	1.828*
	$\Delta\chi^2_{30}$ = 28.410 ρ = 0.549			

***ρ < 0 .001, **ρ < 0 .05, *ρ > 0 .1*

Table 7.22: Moderating groups - Doctors

Path	Length of Service		χ^2	$\Delta\chi^2$ (df=2)
	Low (β)	High (β)		
Partnership →Improved service engagement (H_{10a})	0.255**	0.202**	247.885	1.754ns
Beliefs perception → Improved service engagement (H_{10b})	0.189***	**0.089ns**	254.273	8.142**
Social Context → Improved Service Engagement (H_{10c})	0.211**	0.308***	246.303	0.172ns
	$\Delta\chi^2_{30}$ = 97.837* **			

	Doctor Gender		χ^2	$\Delta\chi^2$ (df=2)
	Male (β)	Female (β)		
Partnership →Improved service engagement (H_{11a})	0.109**	0.498**	318.854	**59.173*** **
Beliefs perception → Improved service engagement (H_{11b})	0.293**	0.303**	263.270	3.589ns
Social Context → Improved Service Engagement (H_{11c})	0.243**	0.284***	260.576	0.639ns
	$\Delta\chi^2_{30}$ = 70.035* **			

***ρ < 0 .001, **ρ < 0 .05, *ρ < 0 .1,nsρ > 0 .1*

By means of chi square difference test, the model was tested to find any variability across the groups. From Table 7.21, with 30 degrees of freedom, the chi square difference test of the constrained model was non-significant for the groups relating to frequency of visit, but significant for the patient's age and educational background. The non-significant chi square difference test suggests that, invariance was established across the sub-group (Byrne, 2010), and therefore, cause similar effects in value co-creation. That is, there is no significant difference between low and high frequency of visits. However, a significant chi square test with regard to education and age suggests that, the groups are different and cause varying effects on value co-creation. Contrary to the group characteristics of the patients, the chi square difference test of the doctor's constrained model with 30 degrees of freedom was significant for both length of service and doctor's gender as presented in Table 7.22. This suggests that the groups are different (Byrne, 2010) and therefore, 'low' and 'high' length of service present significantly different effects on value co-creation, which is the same in the case of the gender.

Path by path analysis was conducted on all of the selected paths of interest. For the purposes of this research, the paths of the key influencing factors of value co-creation leading to improved service engagement were tested. This was done to ascertain any potential effects of the actor characteristics in value co-creation. By constraining one path (e.g. Partnership $\rightarrow$Improved service engagement), the model was estimated, and chi square difference test ($\Delta\chi^2$) for the path was conducted. This was done by comparing the chi square values of a single path constrained model to that of the unconstrained model. The procedure was repeated for each path, and the results are presented in Tables 7.21 and 7.22.

The results suggest that patient's age significantly moderates value co-creation of the focal dyad as shown in the significant chi square test. With 2 degrees of freedom, the chi square difference test was significant at the 95% confidence level in the case of the effect of 'partnership' on 'improved service engagement'. This suggests that there are significant differences between the two age groups in relation to the effects of 'partnership on improved service engagement' hence, lending support to hypothesis

$\mathbf{H_{7a}}$. However, hypotheses $\mathbf{H_{7b}}$ and $\mathbf{H_{7c}}$ are rejected suggesting no significant differences among the age groups on the paths examined as presented in Table 7.19.

The results also suggest that the patient's level of education significantly moderates value co-creation of the dyad, which is reflected in the significant chi square test. At 2 degrees of freedom, a significant chi square test was reported on the paths: Partnership →Improved service engagement and Social Context → Improved Service Engagement. This suggests that the two groups present different effects on the aforementioned paths, lending support to hypotheses $\mathbf{H_{8a}}$ and $\mathbf{H_{8c}}$ respectively. However, hypothesis $\mathbf{H_{8b}}$ is rejected suggesting no significant difference in the moderating effects of the two groups.

In relation to the moderating effects of patient's frequency of visits to a health facility, the chi square test was non-significant, suggesting no significant effects in value co-creation regardless of how often a patient visits the hospital. Likewise, there were no significant differences among the groups on the paths examined as presented in Table 7.19, hence rejecting hypotheses $\mathbf{H_{9a}}$, $\mathbf{H_{9b}}$ and $\mathbf{H_{9c}}$.

The results also suggested a significant difference in the moderating effects of a doctor's length of service on the value co-creation process. From the results doctors who have practiced from 1 - 10 years were considered as 'low' length of service when the median was computed. Although the chi square test was significant at the group level, the path analysis presented varying results. There was a significant chi square test between the groups on the path: Beliefs perception → Improved service engagement, hence supporting hypothesis $\mathbf{H_{10b}}$. However, the results also suggest non-significant differences between the two groups on the paths: Partnership → Improved service engagement and Social Context → Improved Service Engagement, hence, rejecting hypotheses $\mathbf{H_{11a}}$ and $\mathbf{H_{11c}}$ respectively.

In the case of the doctor's gender, the results suggest a significant difference between male and female doctors on the value co-creation process, which is reflected in the significant chi square test. However, the path analysis suggests non-significant differences between the two groups on the paths: Beliefs perception → Improved

service engagement, and Social Context → Improved Service Engagement, hence, rejecting hypotheses $\mathbf{H_{11b}}$ and $\mathbf{H_{11c}}$. On the other hand, hypothesis $\mathbf{H_{11a}}$ was supported, suggesting a significant difference in the effects of 'partnership on improved service engagement' between male and female doctors. These findings are further discussed in the next chapter.

7.8 Summary

This chapter has presented the results of the structural equation model and concludes that the hypothesised models explain the observed data well. The scales used in this study were assessed for reliability and validity by conducting a confirmatory factor analysis for all the separate datasets. After a series of processes outlined in the chapter, the hypothesised models were evaluated using AMOS 21.0. The results indicate that most of the hypotheses are supported and in the case of the dyadic model only one hypothesis (H_6) was rejected, whereas two hypotheses each were rejected from the patients and doctors' model. The effects of the actor characteristics on value co-creation were also examined, and while there were no significant differences in the groups with regard to the patients, the doctor's data presented some differences among the groups. The findings from the quantitative analysis together with that of the qualitative analysis are further discussed in the next chapter.

CHAPTER EIGHT

DISCUSSION OF RESULTS

8.1 Introduction

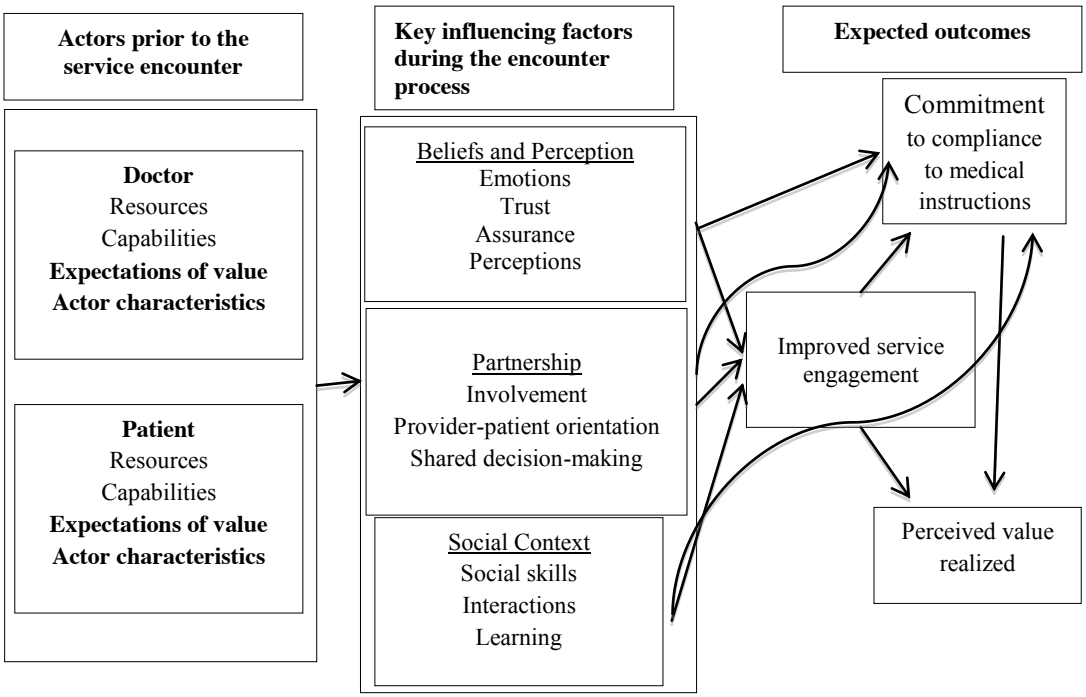
The overall purpose of this research is to *investigate and gain deeper insights into value co-creation by examining the influencing factors of the encounter process and how this impacts on the actors in co-creating value in healthcare service delivery at the micro level*. This was done through the review of the extant literature and the collection of primary data employing both qualitative and quantitative research techniques. Chapters 6 and 7 presented the results or findings from the qualitative and quantitative studies respectively. The chapter starts with an overview of the model developed for this thesis. This is followed by a detailed discussion of the results of the two empirical studies in detail in line with the research aim and objectives of the thesis.

8.2 Overview of the focal model

The study developed a model of the dyadic value co-creation (Fig. 8.1) in a healthcare setting at the micro level, to contribute to the extant value co-creation literature. The model extends on Storbacka and Nenenon's (2009) dyadic relationship model in the business-to-business (B2B) level, and applies the concept at the micro level in healthcare service delivery. This highlights the critical areas of concern in the co-creation process between the doctor and the patient in the consulting room. It is argued that actor resources, capabilities, expectations of value and personal characteristics drive the co-creation process. La Rocca and Snehota (2014) suggest that to understand value co-creation, there is a need to understand the value perceptions and meanings of the actors involved in the encounter, which is evident in this thesis. As highlighted in section 5.2 of this thesis, this model was partly developed from the extant literature and partly (if not mainly) from the qualitative research, and further tested in the quantitative study. The following

sections will discuss the actors' value expectations, key influencing factors of dyadic value co-creation, expected outcomes, and finally the moderating effects of the actor characteristics as presented in the model in Fig. 8.1.

Fig. 8.1 Dyadic value co-creation model at the micro-level in healthcare



8.3 Considerations of value to the Professional and Patient in healthcare

This section addresses the first research question of the thesis:

What does value mean to the professional and the patient/consumer in the healthcare service delivery?

This objective was introduced considering the fact that value still remains elusive (Geraerdts, 2012) in the healthcare setting. Essentially the understanding of value to the stakeholders in the service delivery influences the co-creation process. Considering the different aspirations of the doctor and the patient in the service encounter, this section explores the value perceptions of the actors, which also lays

the foundation for the value co-creation (La Rocca and Snehota, 2014) at the micro level.

The qualitative study revealed that the patients' perception of value takes into consideration their experiences in the consulting room with the doctor. Patients expect professionals to provide the right environment and engage them in a way that will lead to positive experiences. While some patients' ultimate goal is to receive treatment for their ill conditions, others believe the healing process is holistic which encompasses their psychological and emotional value. However, in all cases, they considered 'getting well' as one of their main goals of receiving care, which is also in accordance with the views of the doctors' expectations. Hence, value considerations of actors is uniquely evaluated and determined as per their respective experiences and expectations. For instance, patients' perception of value ranged from; receiving the best of care, positive experience in the consulting room, and involvement in the decision making process in which case they can also suggest treatment options, and getting well.

With some similar and different perspectives from the doctors, their views seemed to converge and diverge from that of the patients, which suggests that, both actors create value that results in an outcome, but the value created is assessed differently by the parties. Doctors on the other hand considered value of the service delivered and received at the provider-patient encounter layer as understanding the patient, making the right diagnosis, prescribing the right drugs, ensuring the functional units are working, seeing patients happy and satisfied, as well as the patient getting well. Most of the doctors also expect their patients to be open and freely share detailed information, which also assists them in arriving at the right diagnosis. They also considered getting well on the part of the patient as their main goal considering its economic importance. They argue that once the patient gets well, repeat visits to the health facility are reduced and this also reduces the pressure on the available resources, as patients do not return to the hospital with complications.

Value is considered very critical in the healthcare setting (Patel et al., 2012), since it offers both extrinsic and intrinsic benefits to the actors (Mano and Oliver, 1993).

However, the various stakeholders within healthcare perceive and assess it differently. This reflects the conflicting goals and aspirations of the professional and the patient before and after the service encounter. The qualitative findings on value perspectives revealed both convergent and divergent views from both actors. As value is widely viewed from the economic perspective (Porter, 2009), the findings suggest the need to understand value from the experiential view and consider the holistic approach to care. Zainuddin et al. (2011) note that, the experiential approach to value includes the functional, psychological and emotional perspectives of value.

Although the focal dyad reported some divergent views which implies the subjectivity of value (Cova et al., 2008; Helkkula et al., 2012), a point of convergence was noted as both actors consider the ultimate goal of delivering and receiving care as 'getting well'. However, the differences outlined in the actors' perception of value also pose a challenge in co-creation, and it is important for the professionals to orient themselves to better understand the patient. An instance is the doctors' consideration of the operational or functional units, and achieving positive outcomes as value as compared to the patient's focus on experiences in the consulting room. The findings suggest that, the value expectations of the actors, especially with respect to the patient relate to their unique set of circumstances relevant to their experiences, with an emotional and psychological effect. This relates to the notion of SDL that posits the phenomenological determination of value by the patient (Vargo and Lusch, 2008b), which also suggests the context specificity of value (Chandler and Vargo, 2011; Ng and Smith, 2012). Hence the context of the engagement between the actors is worth considering as this could impact on value co-creation at the micro level. The findings provide evidence of the importance of the service engagement and its influence on the actors' perceived value.

The service logic literature suggests that, the actors involved in the service encounter jointly create value, but the value that is realised lies in the customer's sphere (Gronroos, 2011a). This implies that the patient is the determinant of value, whereas the professional facilitates the value creation (Gronroos and Voima, 2013). However, in the joint creation of value, both actors have their respective goals or expectations

of value, resources and capabilities as shown in Fig. 8.1; hence how these are integrated in value co-creation is critical (Ng and Smith, 2012; Vargo and Lusch, 2010). As value perception is significantly influenced by the actors' experiences in the service encounter as purported in the findings, there is the need to harmonize the care delivery to the satisfaction of the parties, which could lead to the realisation of their perceived value. Several definitions of value have been proposed in the literature, which is also evident in the multidimensionality of the concept (Sanchez-Fernandez and Iniesta-Bonillo, 2007) as revealed in this study. The dimensions of value reported in the findings corroborate with Sweeney and Soutar's (2001) conceptualisation of value that include dimensions of emotional, social and functional value. In addition to Porter's (2010) conceptualisation of value, this study contends that, value in healthcare at the provider-patient encounter layer transcends beyond 'getting well' to encompass their complete experiences in the clinical encounter. Further, the findings articulate an intra- and inter-subjectivity of value, and assert that value formation or creation is highly dependent on the actors' practices in the consulting room.

The next section discusses value co-creation of the actors at the micro level, which is largely influenced by their service experiences in the consulting room.

8.4 Service experiences and value co-creation

This section will address the second research question of the thesis:

What are the key factors that affect/drive value co-creation between the doctor and patient at the micro level during the healthcare service encounter?

The study identified three key influencing factors of value co-creation at the micro level that stemmed from their experiences as presented in the model in Fig 8.1. These include the social context within which the encounter takes place, the beliefs and perception of the actors, and the partnership between the actors; which requires deeper reflection to ascertain how these influence the dyadic value co-creation and

the overall service outcome. These key factors give the impetus to value creation of the focal dyad. These also provide opportunities to better understand the differing value perceptions of the doctor-patient dyad and how this can be managed and exploited for value co-creation, which has not been well articulated in the literature (Lin and Hsieh, 2011). The co-creation of value takes into account the processes within the network of the actors in the service encounter (Gummerus, 2013). These processes are considered complex, non-linear and dynamic between the involved actors (Ng et al., 2009). This makes the actors' continuous participation in the value co-creation process largely influenced by their experiences, both past and present (Gentile et al., 2007; Payne et al., 2008). The findings suggest that creating superior actor experience is considered essential in value co-creation. Gentile et al. (2007, p.396) explained that, providing the right environment to enable the actors to "live all the moments of the relationship" to surpass their expectations greatly contributes to value creation. These are further discussed below.

8.4.1 The effects of social context

As earlier explained, the social context provides the enabling environment within which the service encounter takes place during the consultation process. It is obvious to note that once patients enter the consulting room; their primary concern is the opportunity to present their symptoms to the doctor, which forms part of understanding their health. Pendleton et al. (1984) note that, the patient's inputs in the consultation are influenced by their social situation and their quest to understand their health and secure medical assistance. It is worth noting that, the social context plays a significant role in the doctor-patient encounter. The study identified the nature of interactions of the consultation process, the social skills of the actors, and the actors' knowledge and competences (learning) as drivers of the social context of the encounter. In order to ascertain if these variables share common attributes with the social context construct they were assigned, a second-order CFA model from the quantitative results satisfied the validity measures. This suggests that, the variables

(socials skills, nature of interactions and learning) measure the same construct as presented in the model.

Within the social context, interactions between the focal dyad drive the service exchange (Ballantyne and Varey, 2006), which is also considered as one of the focal points in the co-creation process (Echeverri and Skalen, 2011; Gronroos, 2006). This is partly influenced by the quality of the relationship between the doctor and the patient and how well the doctor is able to engage with the patient and provide the enabling environment to allow the patient active participation in the consultation. The findings suggest that, establishing a two-way communication and dialogue (Ballantyne and Varey, 2006; Prahalad and Ramaswamy, 2004) between the doctor and the patient is key in enhancing the quality of the interactions. Patients are more eager to share detailed information once they are well-engaged and not merely limited to providing information or reporting symptoms of their medical condition. Most patients reported the consultation process as a classical example of a 'question and answer' session, implying fewer interactions between the two actors. This was evident in the quantitative findings where the mean score for interactions from the patients was significantly lower than that of the doctors. However, some doctors also complained of patients who are not eager to engage in any healthy interactions, which affects the diagnosis because they do not receive as much information as required to arrive at an informed decision. The findings revealed that, the ability of the focal dyad to communicate effectively in a defined social context to ensure that each actor or party understand the other is imperative. This encompassed an emphasis on listening, explaining, non-assertive response and a demonstration of understanding.

The study also revealed that the nature of interactions is influenced by the actors' social skill elements. The actor's social skills afford them the opportunity to engage well with each other and create an enabling environment for the service exchange. This is also consistent with prior research, suggesting that the doctors' interpersonal or social skill is considered critical affecting the nature of interactions between the actors (Laing et al, 2002; Lin and Hsieh, 2011). The findings suggest that the

doctor's friendliness, empathy, deference towards the patient as well as their ability to establish good rapport and foster dialogue with the patient is considered key in the value co-creation process. These skills also affect the actors' experiences either negatively or positively, which directly affect the value co-creation process. It was found that, negative experiences from the actors especially in the case of the patient, adversely affects the value that is created, in other words leading to a possible value co-destruction (Echeverri and Skalen, 2011; Ple and Caceres, 2010).

The social context also provides a platform for actors to exhibit their capabilities and competences. Hoffman and Novak (1997) pointed out that these competences help create a balance between their social skills and the challenges of their interactions. The healthcare service delivery is considered a knowledge intensive service whereby the level of doctor's expertise outweighs that of the patient (Jaakkola and Halinen, 2006), creating a challenge in the problem solving (Aarikka-Stenroos and Jaakkola, 2012). This knowledge asymmetry poses a challenge in appreciating the value co-creation process within the service. Conversely, the advent of consumerism in healthcare (Nettleton, 1995) has seen patients becoming more knowledgeable and informed as a result of access to valuable information in relation to their health needs. This approach has led to patient behaviour, which some providers in the healthcare sector find difficult to accept as the findings revealed. Table 6.1 indicates the effect of knowledge on the actor experiences in the consulting room, in which case negative experiences reported outnumbered that of the positive experiences. This presents evidence of *knowledge conflict* between the actors in the service encounter, which results in experiences that do not satisfy the expectations of the actors. The extant literature suggests knowledge as a fundamental resource in value co-creation (Ng et al., 2009; Vargo and Lusch, 2008b). However, the findings suggest that knowledge as a fundamental resource could pose a challenge in the co-creation process. This indicates that, as a social process, there is a need to understand and accommodate each other in a way that defeats the power dynamic notion between the actors. As a result, learning, knowledge sharing and creation should be managed in a holistic manner in order not to affect the value creation process adversely.

The study indicates the importance of the social context in value co-creation, which is consistent with previous research (e.g. Edvardsson et al., 2011a). With regard to the drivers of the social context of the encounter, the focal dyad agrees on the core competences regarding the doctors' social and communication skills. However, their views differed on the actual presence of these skills in consultations, which is evident in the nature of interactions reported in the findings. The social context determines the experience of the actors. Therefore, it is critical that doctors demonstrate these all-important skills in consultations. As the co-creation process suggests respective defined roles and goals of the actors (Epp and Price, 2011), the findings contend that the experiences derived from the effects of the social context could influence the patient's psychosocial activities with a net effect on value-in-use leading to value creation.

8.4.2 The influence of actors' beliefs and perceptions

The beliefs and perceptions in the value creation process between the two actors directly depict their attitudes and behaviours in the encounter, which also impacts on the service outcome. Prior research suggests customer's experience in a service is derived from their cognition, emotions and behaviours in their encounter with the provider (Gentile et al., 2007; Payne et al., 2008). This was evident in the doctor-patient encounter, in which case patients valued the experiences from the consulting room as part of the value realised in totality. The beliefs and perceptions of the actors drive their emotional appeal (Higgins et al., 1992; Sandstrom et al., 2008) as well as their level of trust and assurances that impact on the co-creation process (McKnight et al., 1998; Ranganathan et al., 2013). Patients prior to the service encounter have their perceptions of value or expectations, and their beliefs and perceptions are brought to bear in the consultation. Relative to the beliefs and perceptions of the actors in the encounter, it is apparent that, the nature of care delivered and received brings some emotional attachment to the actors as well as shared responsibilities. Likewise, the doctors' assurances to the patient allay their fears and motivate them in managing their condition. This finding provides a better understanding of the

patients' cognitive and social motivations to co-create value with the provider, which has received limited attention in the literature (Hardyman et al., 2014). From the quantitative study, these elements (trust, emotion, assurance and perception) were found to share common attributes with high level of homogeneity, which measure 'beliefs and perceptions' construct as presented in the second-order CFA measures.

Studies have shown that when customers are involved in the service encounter and their views are taken into consideration with regard to the decision making process, they are motivated and their cognitive benefits reflect the understanding and knowledge of the service they receive and how they perceive it (Chan et al., 2010). The findings suggest that actor experiences are clouded by their emotions, which evolve from their beliefs. Such emotional feelings affect their overall perceptions of the service and to a larger extent improve on their preparedness to be involved in the co-creation experience. This reflects the importance of a holistic approach to care in the healing process.

The findings also suggest that the actors' beliefs and perceptions affect the level of trust they place in each other (McKnight et al., 1998; Ranganathan et al., 2013), which is likely to influence the relationship experience and anticipates future interactions (Johnson and Grayson, 2005). It is worth noting that doctor-patient relationships characterised by trust have the tendency to exhibit greater information sharing. The focal dyad attested to this assertion. Doctors expressed that patients who place trust in them freely share information and are at peace with them. Likewise, patients also believe that, it is more comfortable to share detailed information with a doctor they trust. In effect, both actors agree that trust plays a vital role in creating harmony between them and brings out the best in the service encounter leading to improved outcomes. This is supported by previous studies suggesting that trust is strongly correlated to satisfaction with the doctor and improved compliance to medical instructions (Pearson and Raeke, 2000).

From the results, it is evident that some patients test their doctors to assess their trustworthiness, whereas others consider the openness and friendliness of the doctor. Likewise, doctors also trust that their patients will adhere to their instructions to

better manage their conditions. These findings are also consistent with previous studies indicating that trust is strengthened between the actors by their level of collaboration and competence (Hsieh et al., 2010). Building on Hsieh et al.'s (2010) study, the findings revealed trust between the doctor and the patient as both implicit and conditional, which stems from the varying expectations of both actors. The effects of trust is confirmed as an enabler of the dialogue between the focal dyad in the SDL literature (Ballantyne and Varey, 2006; Jaworsky and Kohli, 2006), and considering its importance in a relational context (Berry, 1995), it is argued to greatly affect the value co-creation process.

In addition to the emotional effects and trust, the assurances they receive from each other influence their perception of the service, which also aids in the healing process (Laing et al., 2002). It is believed that patients mainly consult their doctors to get treated for their ill condition and ultimately get well. However, the findings suggest there are some conditions, which do not require drug management, but mainly need assurances from the doctors to allay the patient's fears. In addition, the psychological component that aligns with the advice or assurance from the professional is good enough to calm their nerves and recondition their minds. Hence, the findings throw more light on patient behaviours that are both implicit and explicit in the co-creation process. It is argued that patients seldom consult doctors for reasons other than to receive treatment for their conditions, but particularly to seek emotional support, explanation and reassurance. In such situations, it is essential that doctors make time to engage well with patients and not merely rush them through the consultation process as being the case in Ghana.

These processes driven by the actors' beliefs and perceptions form an important component in value co-creation. Holbrook's (1996) definition of customer value propagates how the customer's experience defines what they consider valuable. According to Payne et al. (2008, p.87), "behaviour is the action that stem from the result of experiences". The net effect is that, the patients' actions and inactions are triggered by their experiences in the consulting room with the doctor. As a result, emotions, perceptions, trust, confidence and assurances driven by the actors' beliefs

and perceptions are particularly important in the value co-creation process. This is assured by the inner satisfaction of the actors, which also translates into optimal value-in-use on the part of the patient.

8.4.3 The effects of partnership between actors

Prominent to value co-creation is the level of partnership between the actors. Partnership requires both actors to understand each other providing a better orientation of their respective roles and responsibilities (Hennig-Thurau, 2004). Hence, this process requires resource integration from the focal dyad in order to co-create the expected value. The study revealed three key elements involved in the partnership process between the focal dyad at the micro level. These elements include the provider-patient orientation; involvement and shared decision-making; and patient compliance, which also demonstrated appreciable level of homogeneity in the measures when a second-order CFA was conducted in the quantitative study to measure partnership. These elements assign varying degrees of responsibilities to the actors, and as indicated, compliance remains the ultimate responsibility of the patient and also doubles as a partnership element as well as the expected outcome of the service. Doctors consider the compliance to medical instructions as an outcome of the service, which also affects the overall value created. However, the patients, on the other hand consider this as part of the partnership and their sole responsibility, and to some extent as an outcome in relation to 'improving their level of compliance'.

Partnership between the actors in the service encounter requires optimal cooperation from the doctor and the patient (McColl-Kennedy et al., 2012). The findings reveal the importance of the doctor-patient orientation in the partnership process that affects the service experience and the co-creation of value. This allows the actors to understand themselves and be abreast of the current trends in patient attitudes and behaviours in the consulting room. The findings suggest the need for doctors to vary their approach to the consultation and incorporate patient's views and expectations into the decision goals. In a high contact service like healthcare (Bitner et al., 1997), value co-creation could range from collaborative problem solving to developing a

personalized service towards the individual patient (Aarikka-Stenroos and Jaakkola, 2012; Prahalad and Ramaswamy, 2004). This calls for better provider-patient orientation especially on the part of the doctors to deliver superior value to the patient (e.g. Jaakkola and Halinen, 2006).

Partnership also allows for active participation or involvement of the actors in the consultation process (Claramita et al., 2011; Makaoul and Clayman, 2006). The results showed three different levels of patient involvement or participation in the consultation. These ranged from a paternalistic approach, shared decision-making, professional-as-agent. Professional-as-agent is demonstrated in cases where patients' preferences and expectations are incorporated into the decision-making (Thompson, 2007). In the value co-creation process, the paternalistic approach is considered a limitation. This approach only limits the patient to providing information or reporting symptoms and not being involved in the decision-making process. Although considered outmoded, it is practiced despite the increasing promotion of a patient-centred care approach in healthcare. This was evident in the quantitative data in which case the patient's mean scores for interaction and shared decision-making were significantly lower than the doctors. The value co-creation process requires effective deliberation and participation of both actors in the service encounter (Heinonen et al., 2013; Gronroos and Ravaid, 2011), and also allows for the effective integration of resources (Ng et al., 2012; Vargo and Lusch, 2008). Patient involvement in decision-making has received much attention in recent years, and the professionals' responsiveness and understanding of the patient preferences is critical in improving the quality of care provided. The findings reveal different expectation levels of the patients in healthcare, while some are satisfied with the paternalistic approach, others prefer to be involved in the decision-making as well. Prior research suggests that patients' experience of illness, access to information, attitude, and relationship with the clinician could affect their preferences (Gallant et al., 2012; Murray et al., 2007; Say et al., 2006).

Austin and Seitanidi (2012) opined that the dynamics of the value creation process changes as the relationship between partners evolves. Seitanidi (2008) further

explained that, partnership requires actors to adapt responsibilities that depart from their limiting predefined roles. This suggests that, actors active participation behaviours should be encouraged in the consultation process (Claramita et al., 2011). This approach seeks to empower the patients in consultations and provide them with some sense of ownership and legitimacy to contribute more to the exchange. Hence, the need for actor partnership in value co-creation is critical, improving on actor involvement, cooperation and empowerment. These processes when clearly demonstrated during the consultation process between the doctor and the outpatient are more likely to lead to positive outcomes. Hence, these key factors of the service encounter that influence value co-creation should be considered with great importance as the study purports. The next section discusses the impact of the co-creation processes on the expected outcomes from the service, making reference to both the qualitative and quantitative findings.

8.5 Impact of the influencing factors on service outcomes

This section addresses the third research question of the thesis;

What impact do these factors have on the focal dyad at the micro level in relation to the service outcome in the healthcare setting?

Value co-creation as discussed above impacts on the outcomes from the service delivered and received. The findings from the qualitative research highlighted three main possible impacts on the service delivery from value co-creation as presented Fig. 8.1. These include; improved service engagement, improved compliance to medical instructions and perceived value realized. These findings corroborate and extend on previous studies addressing areas of concern in the value co-creation. The findings from both studies (qualitative and quantitative) are presented and compared to the extant literature to consider the effects of the influencing factors outlined above on the service delivery.

8.5.1 Improved service engagement

In the context of this research, service engagement refers to how care is delivered and received between the doctor and the patient, taking into consideration the cognitive and relational factors that influence the actors' experience. The findings from both studies reveal the importance of patient empowerment and motivation in the service engagement. Patients believe that, if the professional respects their opinions and they are offered the opportunity to suggest treatment options, this will motivate them to engage well in the consultation. Hence moving away from the paternalistic approach in healthcare provides opportunities for improving on the service engagement between the focal dyad. This stage also provides an avenue for the actors to co-design the service to meet their individual needs (Prahalad, 2004a). The qualitative findings suggest that, the actor's beliefs and perceptions, level of partnership and the social context of the service delivery impacts on the service engagement during the consultation process. The quantitative study confirms the qualitative findings. The findings highlight the service engagement to provide opportunities for value to be co-created; hence some stages of the value co-creation process could be considered as antecedents to the service engagement.

The effects of beliefs and perception of the actors on improved service engagement

Service engagement between actors remains complex in the literature considering its multidimensionality (Brodie et al., 2011; Vehoerf et al., 2010). In healthcare, there is an on-going debate on patient engagement in the consulting room (Laing et al., 2002), which discusses possible difficulties and challenges especially in the case of the professional. The study considered the effects of actor emotions, perceptions, trust and assurance as critical elements that come into play during the service encounter process. As highlighted in the previous section, these elements formed the framework for measuring the actors' beliefs and perception in relation to the value co-creation process. The findings of the quantitative study purport that actor's beliefs and perceptions positively affect the level of engagement between the focal dyad. This is evident in the strong relationship between the constructs when tested in the quantitative study. Although both actors concur with the fact that their beliefs and

perceptions influence the level of engagement between them, the patients' view was not as strong as compared to that of the doctors and the dyad. However, the association between the constructs was stronger in the case of the patient's model compared to that of the doctors'. This addresses the differences between the focal dyad about their respective considerations in the consultation. While patients feel less effect of their beliefs and perceptions on the service engagement, doctors, on the other hand suggest it is one of the major influencers. Hence, the findings suggest that, doctors' perspectives on the construct appear to be more comprehensive than the patients as seen in the varying magnitudes of the effects from the individual datasets. As shown in the model (Fig. 8.1), the findings suggest that the focal dyad considers the importance of the actors' beliefs and perceptions as one of the factors that influence the service engagement. Undoubtedly, the attitudes and characteristics of the health professionals as well as the patients contribute to improving the service engagement.

This is in support of previous studies suggesting that patient's desire to engage in the consultation is more attitudinal taking into consideration the level of trust they place in the professional (Bijmolt et al., 2010). These attitudinal antecedents include the level of trust and actor perceptions of the service. Emotional involvement has also been associated with engagement in the literature (London et al., 2007). On the other hand, the doctor's preparedness to deeply engage the patient in the consultation is also primarily driven by the approach they adopt in the consulting room. Doctors view the patient's emotional factors and their perception of the professional as factors affecting the level of engagement as revealed in the study.

The qualitative findings support the results of the quantitative study. For instance the qualitative study revealed that patients' are more connected to the engagement when the doctor looks at them as they talk or report their symptoms. In some cases patients were distracted and stopped talking when there is lack of eye contact between them and the doctor, believing that the doctor is not listening. They found it quite problematic whenever the doctor turned to read their medical history or do something else. Ruusuvuori (2001) notes that, a doctor's withdrawal of their eye

contact from the patient to refer to the patient's medical history may be necessary but considered inappropriate during problem presentation. Again a study by Hall et al. (1995) revealed that the doctor's expressiveness operationalized by: less time reading medical chart, more forward lean, more nodding, more gestures, closer interpersonal distance, and more gazing; are considered as some of the non-verbal behaviours that engage the patient well. These non-verbal behaviours are directly influenced by the actor's beliefs and perceptions. In effect an appreciable level of actor behaviour influences the quality of service engagement between the focal dyad (Bijmolt et al., 2010; Jaakkola and Alexander, 2014; Saks, 2006). The findings also suggest that patients can independently express their emotions and perceptions of the professional service provided. This also suggests that, the beliefs and perception factor of the service encounter process is critical in affecting the outcome of the service as presented in the model.

The effects of the actor's social context on improved service engagement

Another element considered critical in value co-creation presented in the model as already discussed is the social context. The literature suggests the social context as one of the antecedents of service engagement (Bowden, 2009). In support of the hypothesis, the quantitative study confirms that the social context with reference to the social skills of the actors, knowledge and competence (learning), and the nature of interactions positively influence the service engagement between the actors as presented in the model. This is evident in the strong relationship between the constructs in relation to all the three datasets. This suggests that there is a strong agreement between the focal dyad in relation to this assertion, and demonstrates the critical nature of the social context in the service engagement process. It is apparent that actors' social skills coupled with their knowledge, competence and nature of interactions during the service encounter affects or impacts on the quality of the engagement that ensues. This affirms the assertion that value co-creation is dependent on the social context of the encounter (Edvardsson et al., 2011a; Gronroos and Voima, 2013).

The qualitative study also supports the findings of the quantitative study. However,

the qualitative study revealed doctors envisage a number of challenges in the consulting room that could affect the process. An instance is patients who are in a hurry to leave the health facility to work or attend to other duties, as well as patients who are nervous and shy to discuss their problems in detail. These challenges limit the nature of the engagement in the consulting room. These challenges warrant the need for a professional to be tactful and skilful enough to engage with the patient and provide the best of care possible. In co-creation, both actors are expected to incorporate their respective goals through the integration of resources (Macdonald et al., 2011; Ng et al., 2012; Vargo and Lusch, 2010). This suggests that, patients need to respect the views of the professional and vice versa. However, the professionals' communication skills and social skills significantly come into play to address these challenges (Bowden, 2009; Salanova et al., 2005).

The literature suggests the nature of interactions and actor social characteristics in the service exchange as antecedents of service engagement (Bovaird, 2007; Bowden, 2009). This supports the assertion that the social context of the service encounter greatly enhances the service engagement. This process shifts the traditional expert-based health delivery system to a co-creative system, with the potential of creating a 'collaborative competency' between the actors. This also encourages patients to devote time to learning about health related issues to help bridge the knowledge gap between the professional. It is noted that, knowledge of the patient also helps improve on the engagement process, which was shown from the qualitative findings to affect the level and quality of the interaction. Providing the right atmosphere for the patients empowers them and because, many patients are now knowledgeable with high interest in managing their conditions will help build healthy relationships (Storbacka and Nenonen, 2009). Ballantyne and Varey (2006) contend that interactions between the service actors should be dialogical delineating a two-way communication process and not a one-way process.

The results suggest that actors' social characteristics can help professionals better engage their patients and the vice versa. This provides the enabling environment for productive engagement between the actors. Gill et al. (2011) point out that most

models in the literature fall short of explaining what shapes the dimensions of the engagement because they mainly focus on the customer perspective. Findings of this study empirically provide evidence of how the social context influences the engagement process between the doctor and the patient from the dyadic perspective. Hence, this provides a better understanding of what shapes the dimensions of the service engagement.

The effects of actors' partnership on improve service engagement

Another element considered critical in the value co-creation process is the level of partnership between the focal dyad. Several authors (e.g. Bijmolt et al., 2010; Bovaird, 2007; Jaakkola and Alexander, 2014) have addressed the importance of actor partnership in the co-creation process as well as in service engagement. The quantitative findings suggest that partnership between the actors positively influences the quality of the engagement. The partnership construct in the model as presented above was measured by the doctor-patient orientation, actor involvement, and shared decision-making. The result is in support of the hypothesis $\mathbf{H_{2a}}$ and suggests a strong relationship between the two constructs when measured by the three datasets. This also suggests that the focal dyad considers partnership a critical component in value co-creation. The result is also supported by the findings of the qualitative study, suggesting that the level of partnership between the doctor and the patient in the consulting room is essential in enhancing the level of care delivered and received. The study also suggests that in healthcare, the area of partnership for consideration encompasses the actor involvement and shared decision-making (Murray et al., 2007) as well as the provider-patient orientation (Hennig-Thurau, 2004).

At the micro level, both actors pay much attention to the level of partnership in the encounter process to manage their respective activities and behaviours. Considering the continuous changes in patients' behaviours, partnership in the consulting room is tenable as suggested in the findings, hence the need to consider the patient as a partner in delivering care. The extant literature suggests partnership between the professional and the patient in that their health management positively impacts on the quality of the engagement as well as the decision outcomes (Flynn et al., 2012;

McColl-Kennedy et al., 2012).

Partnership between the focal dyad encourages the patients to take full responsibility of their condition management. The findings suggest patients are happy when involved in the decision-making process, though not considered as something done all the time in practice. Active partnership where there is a high level of collaboration between actors can achieve conformity in their respective perceptions and interest, which could help resolve the knowledge conflict that is more likely to ensue in the service encounter. The study contends that a professional-patient partnership promotes service relationship development, which also contributes to positive emotions that the patient is likely to develop towards the professional. Partnership between the actors is therefore, considered critical in the value co-creation process, which helps bring active collaboration between the doctor and the patient.

8.5.2 Commitment to compliance to medical instructions

Compliance in healthcare is considered one of the sole responsibilities of the patient (Dellande et al., 2004). This concept has received attention in the extant literature, and patient compliance has been attributed to mainly the patients' beliefs, attitudes and perceptions (Dellande et al., 2004; Wade et al., 2003). Other factors include professional-patient orientation and relationship (Jin et al., 2008; Krugger and Gerber, 1998); disease condition and treatment options (Bailey and Kodack, 2011; Buabeng et al., 2004). The patients' adherence to the doctor's advice or instructions primarily drives the overall value created from the service. The literature suggests value creation through value-in-use (Gronroos, 2011a), hence compliance plays a critical role in the value co-creation between the doctor and the patient as reported in this thesis. The factors influencing or affecting the patients' commitment to compliance to medical instructions in value co-creation as presented in the model are discussed.

Effects of beliefs and perceptions on patients' compliance to medical instructions

As noted earlier, compliance to medical instructions plays a pivotal role in the treatment regimen. However, non-compliance remains complex to comprehend as a number of interventions have failed (van Dulmen et al., 2007). The quantitative study suggests that patient's commitment to compliance to medical instructions is positively affected by their beliefs and perceptions as presented in the model in Fig. 8.1. This assertion is supported by the dyad as well as the individual datasets, which is evident in the strong relationship between the constructs. The effects were stronger in the case of the doctor and dyad datasets as compared to the patient's model. This suggests that although patients attribute their beliefs and perceptions as one of the factors influencing their level of compliance, other factors could also be considered.

From the qualitative study, it is noted that patients concede the efforts of the doctors reiterating the importance of complying with prescribed drugs. However, most of the patients attributed their non-compliant attitudes to be primarily personal and behavioural. Dellande et al. (2004) note that influences from the society or environment significantly affect their thoughts and emotions. The findings addressed these issues as patients related their inability to comply with their medications to their work, getting home late and tired, hence forgetting to take their drugs. This study affirms that patient compliance to medical instructions is greatly influenced by their beliefs and perceptions as reported in the literature (Cameron, 1996; DiMatteo et al., 2007; Wade et al., 2003). However, DiMatteo et al. (2007) suggested the need for a better understanding of the effects of beliefs and perceptions on compliance, which is addressed in this research.

The value co-creation between the focal dyad is expected to produce positive outcomes including commitment to compliance to medical instructions as explained in the conceptual development. The findings suggest positive effects from the patient's beliefs and perceptions on their commitment to compliance. The doctors believe that patients are in a position to comply if they make it a habit in the quest of managing their condition. In the light of this, doctors reiterate the need for patients to adhere to the treatment regimen, but most of them forget for reasons they do not

understand. Hence, they agree that the patient's beliefs and perceptions significantly influence their level of compliance. There is the notion that once patients comply with their medications as instructed means they will recuperate from an illness, which the actors consider as one of the perceived value created.

Previous research has addressed the effects of trust on patient compliance (e.g. Hall et al., 2002; Laing et al., 2002). The findings suggest that beliefs and perceptions, which motivate the level of trust both actors place in each other, trigger the patients' inherent motivations to psyche them to comply accordingly. Their experiences also spark these inherent motivations in the consulting room, which asserts that if a patient trusts a doctor, they are more likely to accept whatever the doctor prescribes. Likewise, the emotional effects and assurances received from a professional are also eminent in affecting their level of compliance. Although the literature suggests compliance as largely elusive (Haynes et al., 2005), this research provides new directions for providers of healthcare to understand and motivate the patient to comply with medical instructions. The focal dyad needs to work together to influence the patient in this direction. Although behavioural issues have widely been attributed to compliance in healthcare (Dellande et al., 2004), the findings extend on their study, arguing that the beliefs and perceptions of the patient with special reference to their emotions, perceptions, trust and assurances, positively affects the patient's compliance to medical instructions. These findings provide a better understanding of the effects of the actors' beliefs and perceptions in influencing patient compliance.

Effects of the social context on compliance to medication

From the above, it is noted that what transpires in the consulting room can either motivate or demotivate the patient in relation to their compliance habits. Previous research suggests that the social context should not be undermined but rather considered critical and recommends further investigation on its effects on compliance (Morris and Schulz, 1992; Vermeire et al., 2001). This is confirmed in the quantitative study suggesting that there is a significant positive effect of the social context on compliance to medical instructions, taking into consideration the actors social characteristics, knowledge and competence (learning) and nature of

interactions as shown in Fig. 8.1. Although the effects are weak especially in the case of the doctors, the focal dyad asserts a positive relationship between the two constructs. The social context affords providers an opportunity to engage better and explain the severity of the patients' condition. Previous research suggests a positive effect of the provider's social skills on patient compliance (e.g. Cegala et al., 2000; Lin and Hsieh, 2011). However, the social context presents a better perspective on improving patient compliance considering the underlying drivers. Lin and Hsieh (2011) suggested a need to examine the effects of the social characteristics on compliance from the dyadic perspective to provide a better understanding. Hence, this study responds to the call and provides a holistic view of the process from the dyadic perspective.

The qualitative findings also throw light on the quantitative results and suggest that, the social context plays a critical role in improving compliance levels of the patient. The focal dyad admitted that, the doctors' social skills and how they interact with the patient influences the behavioural intent of the patient in relation to compliance. Researchers have attributed non-compliance to the behaviours, beliefs and perceptions of the patient (e.g. Dellande et al., 2004; Lunde, 1993; McColl-Kennedy et al., 2012), which also undermines clinical outcomes. Patients noted compliance is psychological and behavioural; hence doctors can motivate them to improve. Doctors on the other hand assert that patients' compliance is mainly behavioural. However, the social context within which the encounter takes place is more likely to influence their attitude toward compliance, which has received limited attention in the literature (Vermeire et al., 2001).

The findings of this research suggest the need for providers to improve their social and communication skills to engage the patient in quality interactions. Considering the fact that interaction is a two-way communication process (Ballantyne and Varey, 2006), the patient is expected to participate fully to achieve favourable results. Past research reports that, positive emotions are more likely to develop during the service encounter with providers with excellent social skills (Lin and Hsieh, 2011). It is evident that the social context provides the enabling environment for the actors and

especially the patient to feel relaxed and receive the best of care possible. This also presents an opportunity to build an excellent interpersonal relationship between the actors with a potential positive impact on the service outcome (e.g. Johnson et al., 2003). Also within the social context, developing the capability of the actors and motivating them for active involvement in the co-creation behaviours is inherently useful. In this case patients are encouraged to actively participate in the encounter and support learning about the process outcomes (e.g. Payne et al., 2008), leading to improved compliance to medical instructions, which address the value-in-use stage of the value co-creation process. Hence, this study establishes the importance of the social context in the value co-creation process, and also as an important component of the service encounter that helps improve patient compliance.

Effects of partnership on compliance to medical instructions

The behavioural effects of compliance to medical instructions stem from what directly transpires in the consulting room between the two actors. Jin et al. (2008) found that the doctor-patient relationship or partnership in the consulting room positively influences patient's compliance. The quantitative results suggest varying assertions from the doctors and patients. From the doctors' perspective, there is no positive relationship between partnership and compliance. Contrary to their views, the focal dyad and the patients purport that the partnership between the two actors in the consulting room positively affects or influences the patients' compliance to medical instructions supporting the hypothesis as defined in the model (Fig. 8.1). The patients and the focal dyad's assertion are also congruent with previous studies (e.g. Jin et al., 2008; Morh and Spekman, 1994).

In support of the quantitative results, the qualitative findings suggest that, patients' believe doctors' understanding of their needs and involvement in consultations greatly motivates them to take full responsibility for their condition, hence improving compliance to medical instructions (Claramita et al., 2011; Makaoul and Clayman, 2006). Contrary to the assertions of the patients, some doctors argued that patient compliance is mainly behavioural and therefore, creating or establishing partnership between them will not in any way affect the patients' attitude toward compliance.

In partnership, both actors are expected to engage well in the service encounter by successfully integrating their resources. As a result, the focal dyad agreed the need to understand each other and respect their individual views and opinions. When the patient is understood and believes their goals are well incorporated into the decision goals of the professional, they feel satisfied, which motivates them to accept the doctors' instructions. In contrast to the patients' assertion, the doctor's model rejected the hypothesis purporting that, there is no significant relationship between partnership and compliance. This is in sharp contrast to the existing literature, which suggests a positive relationship (e.g. Godolphin, 2009; Lin and Hsieh, 2011). This caveat could be due to the fact that, doctors in the past might have tried all they could to motivate patients in relation to complying with medical instructions, but proved futile. In view of this, they argue that compliance is mainly behavioural, which solely depends on the patients' attitude toward managing their condition. However, the doctors' assertion is not completely out of place considering compliance as a complex problem in healthcare (van Dulmen, 2007). Hence, the doctors' assertion could mainly be as a result of their past experiences in delivering care to patients.

In contrast to the doctors' assertion, the focal dyad and the patients assert that, there is a positive relationship between partnership and compliance. This also lends support to proponents of the partnership theory (e.g. Brinkerhoff, 2002; Austin and Seitanidi, 2012) who contend that; partnership in the business setting is more likely to improve the service outcome leading to value creation. Relative to healthcare, both actors benefit from an active partnership, which leads to improved compliance (Gill et al., 2011; McColl-Kennedy et al., 2012). This approach reduces the pressure on doctors who have to see the same patients over a period with possible complications resulting from non-compliance. The findings present contrasting views from the actors suggesting a need to consider the different aspirations of the actors in the service exchange that also impacts on the service outcome.

Effects of improved service engagement on compliance to medical instructions

Service engagement as already discussed takes into perspective the actors' approach and level of engagement in the service delivery process. This comprises of the

actors' experiences in the consulting room and how these are managed and translated into positive gains in the service provided. The literature suggests that the approach and characteristics of the actors in the service encounter is more likely to impact on the outcomes of the service (e.g. Auh et al., 2007; Dellande et al., 2004; Echeverri and Skalen, 2011). Contrasting findings were reported in the quantitative study, while the patient and the dyad reported a positive relationship between improved service engagement and compliance to medical instructions, the doctors' model rejected the hypothesis. The focal dyad firmly asserts a strong relationship between the improved service engagement and compliance as the model presents, which is also evident in the high factor loadings reported.

In support of the quantitative findings, the qualitative study also found that, the quality of the engagement between the actors is more likely to affect the level of compliance on the part of the patient. This was the view of the focal dyad, suggesting that both actors considered the service engagement very critical and as an outcome of the value co-creation process, which also could positively affect patient compliance. The qualitative findings revealed differences in the views of the doctors in relation to compliance, while some maintained that compliance is mainly behavioural and personal, arguing that providing the best of care is limited to improving it, some also shared that improved service engagement between the actors is more likely to influence the patient's compliance. The varying assertions of the doctors could also account for the rejection of the hypothesis in the quantitative study.

The argument put up by the doctors is not different as discussed above in relation to partnership and compliance. The assertion from the doctors largely support previous studies that suggest compliance as mainly behavioural (DiMatteo et al., 2007; Lin and Hsieh, 2011), however, motivating the patient could change their attitude or habits. Service engagement plays a major role in the value co-creation process (Jaakkola and Alexander, 2014), as it influence possible outcomes from the service encounter. Therefore, if the actors are well engaged resulting from the value co-creating activities it is more likely to influence positive outcomes. The contrasting views from the individual actors also indicate that, the actors have different

perspectives about their expectations of the care delivered and received. Arguably, what patients consider as relevant to managing their condition might be quite different from the perspective of a professional. While patients consider the importance of partnership and improved service engagement to influence their level of compliance, doctors' perception of compliance is mainly dependent on their past experiences. They assert the patients behavioural and attitudinal factors primarily drive compliance.

Improved service engagement also seeks to empower patients and allow active participation in the consultation process, as they are involved from the start to finish (e.g. Gill et al., 2011). The findings of this research contend that patients are motivated through the social characteristics of the doctor in a well-focused engagement in the consulting room. This encourages patients to take full responsibility of their condition and in effect become more conscious of adhering to the doctor's instructions.

8.5.3 Value realised

Value perceptions of the actors involved in the service encounter as discussed in section 8.3 reveals the different perspectives of what they consider as value. Despite the subjectivity of value, it is important to ascertain the value gained by the dyad from the service encounter. It is evident that the value in healthcare is remarkably different from the traditional business sector (Young and McClean, 2008); however, there are some similarities in relation to experiential value as presented in this thesis. Perceived value realised in this study overarches the overall outcome of the service influenced by the value co-creation process. From the qualitative findings, the overarching outcomes ranged from improved wellbeing, getting well (treated and healed), experiential and emotional value, etc. This is considered one of the expected primary outcomes of the clinical encounter between the focal dyad as presented in the model in Fig. 8.1. Although value perceptions remain subjective, the study asked questions relevant to measuring the concept in line with the research aims using

items from the value literature (e.g. Mathwick et al., 2001; Sweeney and Soutar, 2001). The effects of the service engagement and patient compliance on the overall perceived value realised are discussed in detail.

Effects of improved service engagement on perceived value realised

Service engagement as discussed above depicts the concept of co-design in the co-creation process (e.g. Prahalad, 2004), which are also an outcome and a mediator of the process. The literature suggests that, these processes significantly influence the actors' determination of value created from the service encounter. The quantitative findings suggest a contrast between the patients and doctors as well as the focal dyad. The doctors and the dyad models purport that there is a positive influence of improved service engagement on the perceived value realised. However, the patients reject this hypothesis. It is worth noting that although the focal dyad asserts a positive relationship between the constructs, but reports of a weak association, whereas the doctor's model presented a relatively strong association. The varying assertions from the patients and doctors suggest the subjective nature of what is perceived as value.

The results of the quantitative study are partly supported by the qualitative findings. From the qualitative study, the focal dyad noted that, improving on the service engagement would be beneficial to them. Particularly, the patients confirmed that improving on service engagement in the consulting room would lead to positive experiences, which is also inherent on their emotional appeal, hence leading to better outcomes. To the patient, managing their ill condition is not only about taking the medications, but also the psychological component that comes with the service. The doctors also affirmed the views of the patients but noted some of the challenges in relation to time pressure and the number of patients they have to see per day. However, they also believe in the holistic view of delivering healthcare service to the benefit of both actors.

The doctors believe that improving the service engagement is more likely to address the concerns of the patients, provide a positive experience, so as to motivate and

instil their emotional appeal. This is also supported by the focal dyad. This finding is supported in previous studies, suggesting that, the quality of the service engagement would lead to positive outcomes of the service from both perspectives (e.g. Gallant et al., 2013; Gill et al., 2011). Although there could be challenges in the service delivery, there is a need to provide the right environment, understand each other, and better integrate the actors' resources to influence the overall value created (Gummesson and Mele, 2010; Ng et al., 2012; Ramaswamy, 2011). This study has examined the experiences of the actors in the consulting room and contends that, the actor's experiences significantly influence the outcomes of the service and for that matter, the value that is created. The subjective meaning of value to the focal dyad poses a challenge in the service provision, in which case some of the views are tangential to each actor's stance. This is the case whereby the hypothesis is partly supported and partly rejected by the actors involved in the service encounter.

The patients' rejection of the hypothesis, purporting that, there is no relationship between improved service engagement and perceived value realised, presents the complexity of the patient-consumer (Gabriel and Lang, 2008). It is noted that the emotional experiences of patients in healthcare delivery greatly influence their value perceptions, making them either satisfied or not (Gabriel and Lang, 2008; Helkkula et al., 2012). However, improving on the service engagement presumably asserts that all parameters are put in place to ensure better service provision leading to positive experiences. This finding is in contrast to the qualitative results and the extant literature that reports a positive relationship between the constructs (e.g. Chan et al., 2010). This caveat could be attributed to the varying value needs and expectations of the patient.

It can be argued that, the perceived value realised from the focal dyad in the service encounter is subjective and complex in relation to the individual actors. Although subjective, it is measurable and the quantitative measurement model attests to that. The findings provide a better understanding of the processes and challenges ensued in the service engagement and how it impacts on the value co-creation process. This has received less attention in the literature as most studies have focussed on the

activities of the actors (e.g. McColl-Kennedy et al., 2012).

Effects of commitment to compliance to medical instructions on perceived value realised

The concept of value co-creation professes that for value to be created, there ought to be value-in-use by the consumer, which is facilitated by the provider (Gronroos, 2011b; Voima and Gronroos, 2013). One of the expected service outcomes from the dyadic value co-creation at the doctor-patient encounter layer of the care delivery is the commitment on the part of the patient to comply with medical instructions. This in turn, is expected to affect the value determined by the involved actors in the service encounter as value is perceived as "trade-offs between benefits and sacrifices within relationships" (Blocker, 2011, p. 534), which is also uniquely assessed and determined by the beneficiary (Lusch and Vargo, 2014). The quantitative study measured the effects of commitment to compliance to medical instructions on perceived value realised as presented in the model (Fig. 8.1). From the doctors' model, there is a significant positive effect of compliance to medical instructions to perceived value realised. This hypothesis was, however, rejected by the focal dyad and the patient's models, suggesting that, there is no positive relationship between the constructs. The doctors' assertion affirms previous studies, whereby patient compliance is found to positively relate to health outcomes (e.g. DiMatteo et al., 2002; Schmidt and Woolaway-Bickel, 2000; Vermeire et al., 2001). The extant literature suggests that compliance is strongly correlated to treatment outcomes, which are also well projected to relate to the overall value gained from the service. In effect compliance to medical instructions is an important link between process and outcome in healthcare, and in particular with regard to the value co-creation process. Other studies have established a positive relationship between compliance to medical instructions to enhance the overall satisfaction of the actors in the service encounter (Dellande et al., 2004). Considering perceived value as an antecedent or determinant of satisfaction (Caruana et al., 2000; Chan et al., 2010), compliance to medical instructions is likely to influence the overall value realised by the actors.

The qualitative findings suggest that, improved compliance is paramount in

managing the ill condition of the patient. Considering the rampant reports of non-compliance in healthcare, doctors take all steps to reiterate the need for patients to comply with medical instructions in order to get well. An assertion widely reported by the patients interviewed. This is, therefore, considered essential as part of the service outcomes by the focal dyad, which is also in support of previous research (e.g. Dellande et al., 2004; Jaakkola and Halinen, 2006). However, the qualitative findings present mixed reactions from the actors in support of the quantitative findings. Whereas doctors assert that improved compliance would lead to improved wellbeing resulting from positive service outcomes, the patients reported that, compliance is just one of the factors. This assertion is firmly supported by the doctors who argue that, patients complying with medical instructions are less likely to revisit the health facility with complications, hence putting less strain on the available resources. This also suggests that, the pressure on doctors to attend to a high number of patients on a daily basis is well controlled, which falls well in line with the doctors' perception of value. However, patients rather consider the relative importance of their experiences in the consulting room.

Hence, considering the varied meanings of value, it is not unusual for the patients as well as the focal dyad to reject this hypothesis. Schmidt and Woolaway-Bickel (2000, p. 13) reported, "patients estimates of compliance were not significantly associated with most outcome measures". This suggests that, patients have other considerations with regard to the service outcome, which could also explain the reason the hypothesis was rejected. The qualitative findings also partly support this assertion, as patients' consideration of value encompasses their overall experiences in the consulting room. The focal dyad however, believes that compliance plays a vital role in the treatment process or outcome. However, in view of value perceptions, compliance is considered as one of the outcome measures. Hence this result is not completely out of place in relation to the extant literature, considering the complex nature of the patient-consumer. The contrasting finding also suggests a need to focus more on the patient experiences that drive the value co-creation process, which also stems mainly from the service encounter.

8.6 Effects of actor moderating characteristics in value co-creation

Co-creation of value underpinned by service-dominant logic is inherently customer oriented and considers the customer as a co-creator of value (Vargo and Lusch, 2004) or creator and determinant of value (Gronroos, 2008; Heinonen et al., 2010). The literature recognizes the multidimensionality of the service concept (Cook et al., 1999) and, therefore, as the actors (provider and patient) in the service take on greater roles as co-creators of value, gaining deeper understanding of the moderating effects of the actor characteristics on value co-creation is necessary. Anderson et al., (2008) note the need to consider actor characteristics that could influence the co-creation of value in the service-dominant era of marketing as presented in the model. The moderating characteristics under consideration include the patient's age, level of education, and frequency of visit to a health facility; and the doctor's gender and length of service. However, the effects of actor characteristics on the value co-creation process have received little or no attention in the literature. In this thesis, the moderating effects of the actor characteristics were mainly conducted to mediate the effects of the value co-creation elements on improved service engagement. This section discusses the actor moderating characteristics and how it influences the value co-creation process between the focal dyad.

8.6.1 Patient personal characteristics

Patient characteristics have been demonstrated to impact on their satisfaction (Cooil et al., 2007; Homburg and Giering, 2001), but these effects have not been investigated on how they influence the value co-creation process. However, the literature suggests that knowledge about the moderating effects of these characteristics is essential in creating customer segments (Anderson et al., 2008). In the light of this, considering the complex nature of the patient-consumer (Gabriel and Lang, 2008), the effects of patient characteristics on the co-creation process were examined. The quantitative findings suggest significant differences in relation to the age groups as well as the patient's educational background on the co-creation process. However, there were no differences with regard to the patient's frequency of

visit to a health facility. Relative to the individual paths examined, 'Partnership → Improved service engagement' recorded a significant chi square test with respect to age and education of patients, suggesting differences in the groups. However, only educational background of the patient recorded a significant chi square test on the path 'Social Context → Improved Service Engagement', which also suggests differences in the groups. The path 'Beliefs perception → Improved service engagement' recorded no differences irrespective of the age, education or frequency of visit.

In relation to the partnership between the actors, the results indicate that, older patients and those with high educational background can build good partnerships with their doctors better than younger patients as well as those with low educational background. This could be attributed to the fact that, with increasing age, patients tend to build lasting relationships with doctors. Again, the general notion is that, patients with high educational background tend to engage better in the consulting room than those with low educational background. However, the results of the qualitative study presented mixed reactions from the patients, although doctors attested that educated patients engage better in the consulting room. This results in enhanced participation or involvement behaviours from the patient, as well as enhanced participatory decision-making style on the part of the doctor (e.g. Kaplan et al., 1995). Anderson et al. (2008) found age to affect the attribute and overall satisfaction of the customer. Although not directly aligned with this study, but considering value creation as an antecedent or predictor of satisfaction (e.g. Chan et al., 2010), it is argued that age directly affects the value co-creation process. Also, the literature on service-dominant logic asserts knowledge as a fundamental resource in the value co-creation process (Vargo and Lusch, 2004), implying that the actor's knowledge of the service stimulates better and effective interactions (social context). This also relates well to the consumerist attitude of patients reflecting their quest to seek knowledge on clinical conditions (e.g. Lilley, 2000; Nambisan and Nambisan, 2009). The findings build on these studies by examining the influence of education and age on the critical areas of the value co-creation process at the micro level. The

findings, therefore, suggest that, enlightened and informed patients as well as older patients get the best from the service exchange by engaging better with the doctors.

The findings also suggest that frequency of visit had a significant positive effect on the value co-creation process leading to improved service engagement; however, there were no differences between the groups (i.e. low and high frequent visits). Frequency of visit is explained as the number of times the patient visits a health facility and interacts with the provider (doctor) (Lin and Hsieh, 2011). Whereas frequency of visit of the patient is found to build a relationship with the provider, it also influences actors' friendship (Lin and Hsieh, 2011). In contrast to previous studies (e.g. Cooil et al., 2007; Lin and Hsieh, 2011), the findings suggest no significant difference between patients who frequent the facility and those who occasionally visit. As explained in the qualitative findings, patients who occasionally visit the hospital reported that the doctor's approach in the consulting room was critical in affecting the value co-creation process. They believe that although they occasionally visit the hospital, they still receive the best of care expected; this explains why both groups presented similar effects on the value co-creation process. It can be argued that the effect of frequency of visit to a health facility on the value co-creation process is rather small, and much depends on the approach of the doctor (e.g. Roter et al., 2002).

From the findings, it is argued that patient characteristics positively impact on the value co-creation process during the service encounter between the focal dyad. However with the exception of patient's frequency of visit, there were significant differences between the two groups of patient characteristics (education and age) examined. The findings also corroborate Anderson et al. (2008), suggesting that the value co-creation in the service-dominant era of marketing could be influenced by the actors' personal characteristics. However, this study extends on their selection of customer characteristics examined to include education and frequency of visit to a health facility.

8.6.2 Doctor's moderating characteristics

Doctor's personal characteristics in medical practice have been found to drive the consultation process between the patient and the doctor (e.g. Kaplan et al., 1995; Thornton et al., 2011). Some of these characteristics include gender, experience or length of service of a doctor, age and other social characteristics. This thesis examined the effects of the doctor's length of service and gender on the value co-creation process and how this impacts on the level of service engagement between the actors. The quantitative findings suggest significant differences in relation to the doctor's gender as well as their length of service on the co-creation process. However, when the individual paths were examined, the effects were only significant on the path, 'Partnership → Improved service engagement' with respect to gender, and 'Beliefs perception → Improved service engagement' with respect to length of service. This is evident in the significant chi square test recorded, suggesting that the two groups of the respective characteristics are different. The path 'Social context → Improved service engagement' recorded no differences irrespective of the gender and length of service.

The findings suggest a significant effect of partnership on improved service engagement, purporting that female doctors engage in more active partnership behaviours than their male counterparts (e.g. Roter and Hall, 2011). From the findings, it is argued that the doctor's gender influence the consultation process between the actors. However, the qualitative study suggested varying views, while some patients were of the view that female doctors were more engaging than their male counterparts, others thought both genders are equally good in relation to their approach to the consultation. In the service encounter, both genders provide the right environment for the patient, and place equal trust in their patients and provide care that evokes the patient's emotional appeal. However, with regard to building active partnership between the focal dyad, female doctors are more eager to involve the patient in an active participatory decision-making process compared to their male counterparts. On the other hand, there was no difference in the level of partnership in consultations regardless of the length of service. This also suggests that, doctors

(whether low or high length of service) appreciate and understand the need to deliver patient-centred care to the benefit of the patient, taking into perspective their ability to motivate the patient in active participatory decision-making. The findings suggest that doctor's length of service does not affect or influence their approach in engaging the patient in the consulting room.

The medical literature widely asserts female doctors engage in a communication style that tends to stimulate the patient to be more intimate and actively engaged in consultations as compared to their male counterparts (Hall et al., 2011; Roter and Hall, 2004). In contrast to the extant literature, the findings suggest no significant differences in the doctor's gender with regard to the social context, which characterise the social skills of the doctor and the level of interactions between the actors with particular reference to the communication style. Likewise, there were no significant differences between the groups in relation to the doctors' length of service. The findings of the qualitative study also support the quantitative results, suggesting no difference in the approach to care delivery with regard to doctor's length of service, an assertion that was shared by the focal dyad. The patients interviewed believe that the doctors' attitude in the consulting room is not different whether old or young. The assertion is that, the older the doctor, the longer the years of practice and the vice versa. The doctors concurred with the patients and further asserted that, the approach adopted in the consulting room is dependent on the individual and not necessarily the experience or years of service in the profession.

Krupat et al. (2000) assert that patient-centred care is not an exclusive preserve of the younger doctors. The findings corroborate Krupat et al.'s (2000) assertion; however, the two groups in relation to the doctor's length of service differed in the effects of their beliefs and perceptions on improved service engagement. Doctors with more years of practice assert there is no effect of beliefs and perceptions on improved service engagement. This suggests that the level of trust in the encounter, emotions and perception of the actors do not impact on how well a patient is engaged. Contrary to their views, doctors with less number of years of practice believe there is a significant positive relationship between actor beliefs and perceptions and improve

service engagement. In effect, there is a significant effect of a doctor's length of service and gender on the value co-creation process, which provides a new dimension to explore in the value co-creation literature.

8.7 Summary

This chapter discussed the research results presented in chapters 6 and 7. A detailed discussion of results integrated the overall findings across all parts of the quantitative and qualitative data analysis. The study found that value co-creation between the focal dyad of the doctor and the patient is driven by their experiences in the consulting room, which is also driven by their individual value perceptions. Value was found to be intra-subjective and inter-subjective to the actors involved in the service encounter, with varying perceptions and considerations. As discussed, value co-creation does not result merely from the interactions between the actors but require the consideration of other attributes as outlined. Therefore, the need to consider the social context of the service encounter, the beliefs and perception of the actors, and the actors' partnership is imperative in the value co-creation process. These three critical areas identified in the findings are found significantly to influence the value co-creation process between the focal dyad at the micro level. The chapter also discussed the impact of the value co-creation process on the service delivery to include; improved service engagement, improve compliance to medical instructions, and overall perceived value realised. The effects of actors' moderating characteristics on the value co-creation process are also discussed, and found that these personal characteristics positively influence the process.

The next chapter will conclude the thesis with a summary of the key findings from the study and present the implications and directions for future research.

CHAPTER NINE

CONCLUSION

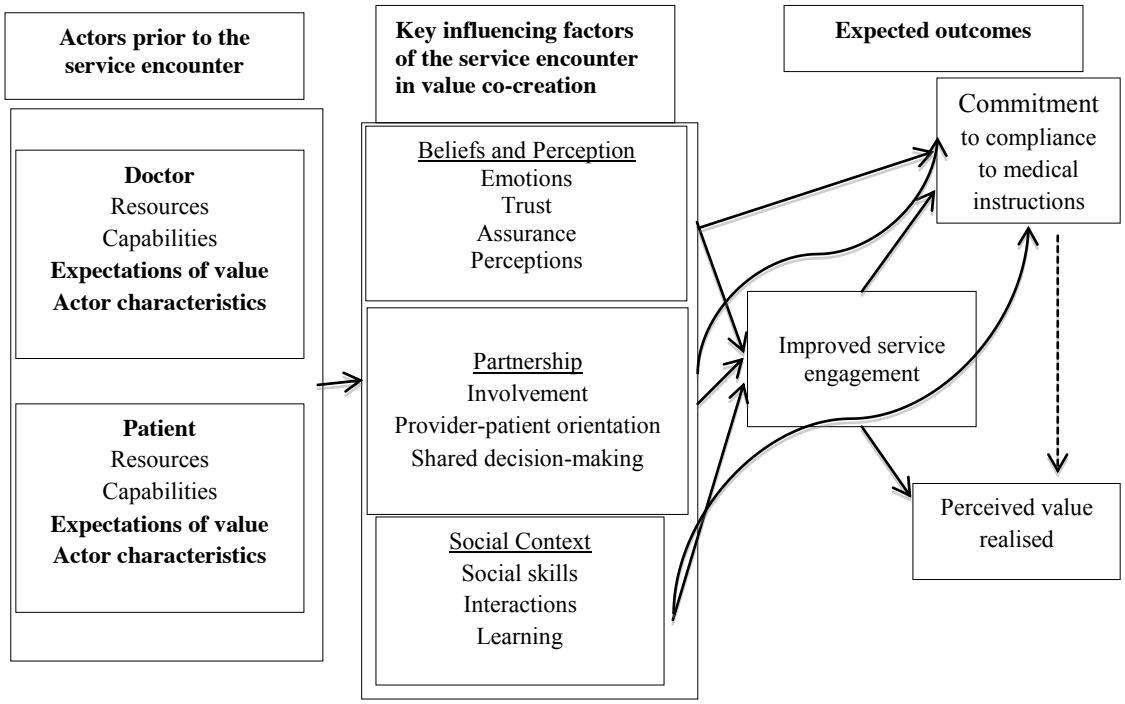
9.1 Introduction

This concluding chapter draws together the key contributions of the thesis. The chapter begins by outlining the conclusions drawn over the course of this study and provides a summary of the key findings. The following sections will discuss the contributions that this study makes to the value co-creation and healthcare literature and its implications for managerial practices. Then it goes on to discuss its limitations and suggest future directions for research related to the value co-creation process.

9.2 Dyadic model of value co-creation in healthcare delivery

A number of studies have focused on the actor activities in the value co-creation process outside the service encounter. Thus, activities put forward by firms to engage customers, and activities observed by consumers to engage with the firm to co-create value (McColl-Kennedy et al., 2012). Others have examined co-creation through experience (Helkkula et al., 2012; Spena et al., 2012). This study empirically examined the influencing factors of the encounter process and how this impacts on the actors in co-creating value in healthcare service delivery at the micro level. This was focused on looking at the micro level, specifically what transpires in the consulting room between the doctor and the outpatient. The findings led to the development of the dyadic model of value co-creation (Fig. 9.1) in a healthcare setting at the micro level that has received little or no attention in the literature. This model is the first of its kind to provide insights into value co-creation of the focal dyad at the micro level in a healthcare setting, which presents both theoretical and managerial implications.

Fig. 9.1 Dyadic value co-creation model at the micro-level in healthcare



9.2.1 Value meanings to the focal dyad

Value in healthcare transcends beyond the economic view as defined by Porter (2010) to the experiential perspective (Holbrook, 2006a; Mathwick et al., 2001; Zainuddin et al., 2011). The findings also articulate the intra- and inter-subjectivity of value as patients had diverse views of what value means to them in receiving healthcare, which also differs from the views of the doctors. The complexity of value perspectives of the actors in the service encounter affirms the nature of value that is created (Saarijarvi et al., 2013). The literature suggests value to be "idiosyncratic, experiential, contextual, and meaning laden" (Vargo and Lusch, 2008, p. 7), which is uniquely assessed and determined by the beneficiary. The value perceptions of the patient identified in this thesis outline the experiential nature and how this is exchanged between the focal dyad. This also provides insights into understanding the varying interpretations of value to the dyad in the healthcare setting. It is worth noting that the value perceptions or expectations of the actors in the encounter

significantly influence the overall value that is realised or determined as presented in the model (Fig. 9.1). In effect, considering the experiential view of value, it is imperative for doctors to understand and embrace the holistic nature of the service encounter.

In line with Holbrook's (2006a) typology of customer value, the meanings ascribed by the actors present both "extrinsic and intrinsic" benefits. The recognition of patients as co-creators of value (Vargo and Lusch, 2008) affirms the importance attached to their value perceptions and creation. The findings suggest the patient's value perceptions are linked to their experiences with emotional and psychological effects in the consulting room, whereas doctors consider the functional (utilitarian) value. Gentile et al. (2007, p. 404) assert that "living a positive customer experience" is essential in value creation, which also requires an "adequate balance between utilitarian and hedonic value" to the involved actors. This suggests the need for both actors to understand each other and provide an atmosphere to integrate their respective resources better in service delivery. Hence, the need to integrate their respective goals and expectations is important in value co-creation.

9.2.2 Influencers of dyadic value co-creation

The study provides insights into the key influencing factors of value co-creation of the dyad at the micro level and its impact on the service outcome, which stems from the actors' experiences. The dual effects examined in this study also differentiate it from previous studies. The study identified three key factors that influence value co-creation at the micro level as presented in the model in Fig. 9.1. These include the social context within which the encounter takes place, the beliefs and perception of the actors and the partnership between the actors. These require deeper reflections to ascertain how they influence the dyadic value co-creation and the overall service outcome. From the findings, it is evident that value co-creation of the focal dyad (doctor and patient) is fuelled by the experiences of the actors in the consulting room as well as their value perceptions as outlined above. In chapter three of this thesis,

various arguments relating to value co-creation were presented and discussed. The findings from the literature suggest a conceptual understanding of how value is created, but how firms engage customers especially at the micro level is not explicitly addressed with regard to the fundamental factors to be considered.

Service-Dominant logic considers the customer as "always a co-creator of value" (Vargo and Lusch, 2008b), and as a creator of value with respect to the service logic's view (Gronroos, 2008). This consideration also presents a pluralistic view of value co-creation in relation to the changing relationship between providers and patients (customers) as well as a changing perspective of the role that the patient plays in service delivery. As a result, it is essential to examine the practices or processes that transpire between the dyad in the consulting room that impacts on their experiences to further the creation of the perceived value. This study identified three key factors with their respective underlying elements as drivers of the co-creation process between the dyad at the micro level. These are not technologically driven as presented in most studies.

The findings also further the understanding of value co-creation through service experience as propagated by previous research (Cova et al., 2008; Gentile et al., 2007; Prahalad and Ramaswamy, 2004). This study examined the relevant variables, linked or connected, and grouped them to define the social context, partnership, and beliefs and perceptions of the actors that influence value co-creation as presented in Fig. 9.1. Previous studies have considered them in isolation, for instance social context (Edvardsson et al., 2011; Lin and Hsieh, 2011), elements of beliefs and perceptions (McKnight et al., 1998; Payne et al., 2008; Ranganathan et al., 2013; Sandstrom et al., 2008), and partnership (Austin and Seitanidi, 2012; Makaoul and Clayman, 2006; McColl-Kennedy et al., 2012). However, this thesis examined the nested effects of these elements in the co-creation process and from the dyadic level, which differentiates it from previous studies. The findings suggest the need to consider these key factors when investigating value co-creation both in theory and practice. This also provides a basis to argue that patients do not only participate in consultations as providers of information or reporting symptoms, they want to be

fully involved, suggest treatment options, and be considered as partners in the service delivery. These key factors significantly affect the service dimensions and outcomes leading to expected improved service engagement of the actors, commitment to compliance to medical instructions on the part of the patient, and overall realisation of perceived value of both actors.

9.2.3 Resources as causes of conflicts between actors

Axion 3 (FP_9) states, "All economic and social actors are resource integrators" (Lusch and Vargo, 2014, p. 74). Resource integration is a central concept in SDL that represents a continuous process defined as a "series of activities performed by an actor" (Payne et al., 2008, p. 86). This implies that, service cannot be separated from the resource integrating activities performed by the involved actors taking into consideration their operant resources (e.g. knowledge and skills) (Peters et al., 2014). This also promotes social interactions between the actors through the integration of resources in order to co-create value (Ballantyne and Varey, 2006; Vargo et al., 2008). As consumers are considered as co-creators of value or creators of value (Gronroos and Ravald, 2011; Heinonen et al., 2013; Prahalad and Ramaswamy, 2004), they are empowered to play an active role in the service exchange. Customers are therefore part of the operant resources of the firm (Ng et al., 2012; Vargo and Lucsch, 2004) and determinant of value (Gummesson, 1998). In this case enlightened and informed customers (patients) become endogenous to the firm and not exogenous as in the goods logic era of marketing.

As patients become more knowledgeable in an attempt to bridge the knowledge asymmetry gap between the providers creates tension in the encounter. This is also propelled by the upsurge of consumerism in healthcare whereby patients make specific demands and pre-empt the diagnosis. This practice is observed in some of the encounters leading to conflicts between the actors. Some of the professionals are not in support of these behaviours; however, the patient also considers it as contributing to the consultation. These practices lead to *knowledge conflict* between

the actors, which negatively affect their experiences in the consulting room. As already outlined in this thesis, a patients' consideration of value goes beyond just getting well to encompass the overall experience in the consulting room. Ple and Caceres (2010) assert that resources that are considered fundamental to drive the value co-creation process not only create value but also could destroy it. This assertion is affirmed in this study, purporting that bridging the gap of the knowledge asymmetry between the professional and the patient create tensions in the consulting room that affects their experiences leading to possible value co-destruction. Although, this was not explicitly investigated in this study, further research to examine resources and management of knowledge conflicts in the dyad is essential.

9.3 Contribution to knowledge

The literature on SDL and value co-creation presents a diversity of interpretations on the formation and creation of value. The need to understand the key factors influencing value co-creation between the actors at the micro level is critical; however, this has received limited attention in the literature. In this respect, this thesis contributes to further the understanding of value co-creation between the actors at the micro level from a doctor-patient dyadic perspective. It also provides empirical evidence to contribute to advancing the knowledge of value co-creation. The findings of this thesis contribute to the literature in areas including:

- Further understanding of the micro level factors influencing value co-creation from the dyadic perspective
- Understanding value in healthcare service delivery at the micro level
- Recognition of actor characteristics as moderating effects on value co-creation
- Methodological implications in value co-creation research

Micro level factors influencing value co-creation from the dyadic perspective

The thesis empirically examined value co-creation from both patients and doctors to understand their respective views and contrast the findings by examining the provider-patient encounter layer. This provided clarity in understanding the differing actor perceptions of value and key factors that influence the co-creation of value of the focal dyad at the micro level. As a result, three key factors influencing value co-creation of the focal dyad were identified. These include the social context within which the encounter takes place, the beliefs and perceptions of the actors and the partnership between the actors that influence the dyadic value co-creation process and the overall service outcome. These micro-level activities seek to improve the doctor-patient service encounter and lead to improved service outcomes overall

In healthcare setting, models developed by Nambisan and Nambisan (2009), McColl-Kennedy et al. (2012) and Elg et al. (2012) provide useful insights of contributing to the concept of value co-creation. Unfortunately, these lack the explicit understanding of the differing perceptions of the actors and the key micro level factors that influence value co-creation from the dyadic perspective. The model developed in this thesis (Fig. 9.1) furthers our understanding of the fundamental processes that drive value co-creation of the dyad at the micro level. This also illustrates how the dyadic value co-creation is modelled in the healthcare setting at the micro level, which is lacking in the literature. The model provides insights into value co-creation of the dyad and its impact on the service outcome, which stems from the actors' experiences. This model extends on Storbacka and Nenonen's (2009) conceptualisation of the dyadic value co-creation (business-to-business) and relates it to the business-to-customer (B2C) segment by examining the doctor-patient encounter layer.

Furthermore, the dual effects examined in this study also differentiate the findings from previous studies, by clarifying the individual aspirations and considerations from both perspectives in the co-creation process. While an increasing relevance is placed on co-creating value from the dyadic perspective (Lin and Hsieh, 2011; Saarijarvi et al., 2013), only few have been reported (Aarikka-Stenroos and Jaakkola,

2012; Storbacka and Nenonen, 2009). These typically remain at the exploratory level with frameworks or propositions that have not been tested quantitatively to assess its robustness and generalizability. Again most of the dyadic studies have focussed on the business-to-business (B2B) sector (e.g. Aarikka-Stenroos and Jaakkola, 2012; Storbacka and Nenonen, 2009), could not identify any empirical B2C work focusing at the micro level. The study responded to this omission and clarified the micro level factors that drive the value co-creation of the actors. Differences in actors' perspectives in relation to commitment to compliance and overall realization of perceived value are eminent in the findings, which is evident in supporting and rejecting related hypotheses. The study also highlights the factors of concern in service engagement as discussed and how the experiences from such encounters influence value creation. This suggests that actor experiences in the encounter play a significant role in value co-creation and, therefore, how doctors engage with patients is essential, hence contributing to the service literature.

Empirically, this study also addresses Vargo and Lusch's (2008) conceptualisation of value co-creation and posits that value does not only result from the mere interaction between actors, but requires other processes or activities as explained in the conceptualisation. Payne et al.'s (2008) model offers an interactive framework between the actors considering their emotion, cognition and behaviour as well as co-creating opportunities. Their model is helpful as it presents an "interconnected set of processes" between the actors (Payne et al., 2008, p. 86). On this basis, this study takes a deeper look into the influencing factors of the dyad to understand the nested effects inherent in actor behaviours. In this regard, this thesis explores the social context, beliefs and perceptions, and partnerships that significantly influence value co-creation leading to positive service outcomes. Hence, this thesis provides empirical insights to operationalize and understand the influencing factors of the value co-creation concept at the micro level between the focal dyad in a healthcare setting and their impacts on the service outcomes.

Understanding value in healthcare service delivery at the micro level

Value in healthcare or the medical literature has mainly been focussed on the economic benefits to the individual, the health system and the State (McMahon Jr and Chopra, 2012; Patel et al., 2012). A view that is well articulated by Porter (2010), defining value as health outcomes achieved relative to cost. The findings suggest different dimensions of value reported by the actors, which extends beyond the economic view of value discussed in the medical or healthcare literature. This thesis contends that value in healthcare is primarily self-oriented that is driven by their experiences, emotions and the functional attributes. Hence, value in healthcare service delivery at the micro level should be conceptualised from the experiential perspective (Mathwick et al., 2001), which requires active collaborative behaviours of the provider and the patient. The perception of value and its antecedents implies that the actors (doctors and patients) share different views in co-creating value in healthcare. For instance, the findings suggest that patients do not only consider 'getting well' as the only value received from the service, but their experiences in the consulting room as well. Hence, the patients' value perceptions are linked to their experiences in the consulting room, whereas doctors consider the functional (utilitarian) value. The experiential value perspective will allow providers to better understand the complex nature of the patient and deliver care in a holistic manner that would evoke positive experiences in the consulting room. The study highlights the differing meanings of value to the involved actors and in line with the SDL view of value, both actors determination of value is unique and experienced differently based on the service performed by the actors.

Recognition of actor characteristics as moderating effects on value co-creation

Further, this thesis contributes to SDL and value co-creation literature by examining the moderating effects of actor characteristics, which have received little or no attention in prior research. The results suggest that the focal dyad's personal characteristics including age, educational background, gender and length of service positively affect the value co-creation of the parties. The study has revealed that older patients attribute improved service engagement more towards the effectiveness

of the partnership between the focal dyad compared to the young patients. However, the other paths examined did not show any significant differences between the groups. Patients with high educational background also consider the level of partnership and social context to have a more pronounced effect on service engagement than those with a lower educational background. Hence, patients with some appreciable level of education tend to engage better in the consulting room. However, the study revealed no significant difference between patients with low or high frequency of visits to a health facility. Female doctors were also found to have stronger partnership behaviours with their patients than their male counterparts, hence attributing the effectiveness of the service engagement more towards building partnerships in the consulting room. However, there were no significant differences between the genders on the effects of beliefs and perception and social context on improved service engagement. Furthermore, doctor's length of service was also found to have no significant difference in the effects of partnership and social context on improved service engagement. This thesis has found that value co-creation is significantly affected by the actors' personal characteristics, which are also driven by their perception of value. Hence in line with prior research (e.g. Anderson et al., 2008), the findings provide good insights on the effects of actor characteristics in value co-creation within the healthcare service, which could also be replicated in other service settings.

Methodological implications in value co-creation research

The findings contribute to the value co-creation literature, which is still at the exploratory level. Most work concentrates on theoretical aspects (Fisher and Smith, 2012; Hardyman et al., 2014) and a number of qualitative studies add some exploratory substance in certain areas. How are these connected when it comes to value co-creation? Despite its importance, this holistic question has not received much research in relation to applying quantitative research techniques to test models or frameworks proposed in the literature. Therefore, the present study employed a mixed method approach using a sequential exploratory design (SED), followed up

with quantitative research. The combination provides an in-depth understanding of the phenomenon examined (Harrison and Reilly 2011).

The results of the quantitative study presented quite different findings between the two groups interviewed (doctors and patients) in some of the measures when compared to the qualitative findings as discussed in chapter eight. These findings suggest the need to test the conceptual models proposed in the value co-creation literature to ascertain their robustness. This study tested the proposed model of the dyadic value co-creation process. The study contributes in this respect to the literature laying the foundation to develop a validated scale to measure the value co-creation process. Hence the model measurement builds on the discourse on the application of quantitative approaches for examining value co-creation.

9.4 Managerial implications

This study examined value co-creation between the doctor and the outpatient at the micro level taking into consideration actor experiences and characteristics in the consulting room. A number of factors were found to drive the consultation process between the focal dyad that affects the co-creation process impacting on the service outcomes. The study suggests that there is a need to practice a patient-centred care approach in delivering care and with patients considered as partners. A patient-centred care approach is highly promoted (Elwyn et al., 2012; Gill et al., 2011), however, there seems to be limitations in positioning healthcare as patient-led in practice as the doctor largely dominates the encounter (Collins et al., 2007). The findings suggest the need for providers to take a holistic view of service delivery and consider the key influencing factors of co-creation at the micro level to allow patients active participatory behaviours. Healthcare is considered a high level participating service (Bitner et al., 1997; Wilson et al., 2012) in which case the success of the outcome regarding the patient's state of health depends on their active participation (Gill et al., 2011; McColl-Kennedy et al., 2012). As a consequence, ineffective co-creation of the service can lead to unproductive outcomes to the detriment of the patient's health.

The conceptualization of value co-creation as outlined in this thesis suggests the need to consider actors' value expectations before, during and after the encounter process. This is seen in the convergent and divergent views of the value perceptions of the actors. While doctors consider the operational or functional units within the hospital as well as a positive outcome of the service as their perceived value, patients on the other hand consider 'getting well' in addition to their total experiences in the service encounter. This brings to the fore the emotional aspects of service delivery which the patient finds it critical in the treatment process. This calls for a mutual understanding of the focal dyad during the encounter process. In this respect, doctors should understand the patient's expectations or goals and incorporate these goals into decision goals. Doctors should also adopt delivery approaches that would evoke positive experiences to the patient in the consulting room. For instance, patients were satisfied in situations where they were involved in the decision-making process. They felt respected and thought the clinical decisions were tailored to their needs and consistent with their values. There is also a need for providers to improve their communication skills and responsiveness in order not to upset the patient that could adversely affect their experience in the consulting room.

The findings suggest that the doctor-led, paternalistic approach is commonly in place when providing health care. This practice has consequences on the patient experience, as most patients prefer to be involved in the consultation from the start to finish. While patient involvement or participation in the consulting room is widely researched, most studies rationalize it as demand for prescription (Jaakkola and Halinen, 2006). It is worth noting that, the service engagement process between the focal dyad potentially contributes to the varying degree of outcomes as evidenced in the quantitative findings. This suggests the importance patients attach to their experiences in the consulting room. As patients ascribe different meanings to what they consider as value, doctors are encouraged to take cognizance of the beliefs and perceptions of the patients and provide the right social context for the service encounter. Moreover, building partnerships with patients in an attempt to deliver quality of care is recommended.

The findings suggest that these micro level influencing factors significantly affect the value co-creation process. In relation to providing the right social context for the encounter, doctors are required to provide a friendly atmosphere and encourage patients to participate actively in the consultation process. There is also a need for providers to reorient to better understand patients and especially the current trend in behaviours and attitudes. This could also avert the knowledge conflict that could arise as already discussed in section 8.4.1. Patients are also encouraged to understand their roles in the encounter and cooperate with the doctor in order to provide the best of care. In the light of this, providers are encouraged to incorporate essential behavioural and psychosocial aspects of the service experience and provide a patient-centred care (share decision-making approach), which seeks to empower patients and encourage active participation.

The customer-centred view of marketing points out the criticality of patient experience in the co-creation of value (Heinonen et al., 2010; Helkkula et al., 2012). The findings highlight the influence of the patient and doctor characteristics on the value co-creation process, and posit that, patient characteristics in relation to age and educational background affects the service engagement in the consulting room. For instance, the partnership behaviours are more pronounced in patients with high educational background than those with low educational background. Likewise, older patients are able to build good partnerships with their doctors than the young ones. These attributes present different perspectives on the part of the patient, which affect the co-creation process with respect to creating varying service experiences. It is evident that demographic factors affect the patient's preferences in playing an active participatory role in the decision-making process. In order to bring parity in consultation preferences, doctors are expected to understand each patient's needs and adopt an approach that would encourage passive patients to interact actively and respect their views.

Finally, the model provides insights into the co-creation of value relevant to the doctor-patient encounter. The findings highlight the importance of creating an encounter environment that encourages actor orientation and empowerment. This

allows actors to value the knowledge they possess and appreciate the psychosocial factors pertinent to the encounter process in order to play an active role in the co-creation process. This is critical considering the changing nature of the relationship between the doctor and the patient as a result of the upsurge of consumerism in healthcare. The study provides a clear understanding of the changing trends in patient behaviours and the need for doctors to incorporate the patients' expectations and goals into their decision goals. In support of Heinonen et al. (2010), suggesting that the patient is the central focus of the service without which value is not created, their experiences in the consulting room significantly affect the overall value realised or determined. These experiences are also affected by how actors integrate available fundamental resources. The study noted the effect of knowledge (a fundamental resource of the value co-creation process) on the actors' experience in the consulting room. The effects are reflected in the high number of adverse experiences reported in the qualitative study, resulting from knowledge conflict between the actors in the service encounter.

The study revealed that doctors do not welcome the consumerist attitude of the patients, which is stimulated by the patient's acquired knowledge, leading to a misunderstanding between the actors and subsequent negative experiences in the consulting room. In effect, if the overall experience does not satisfy the expectations of the patient, then value is not created considering Vargo and Lusch's (2008b) premise of value being uniquely determined by the client. Previous research has argued that the fundamental operant resources do not only co-create value but could co-destroy value (Echeverri and Skalen, 2011; Ple and Caceres, 2010). The findings suggest that patients' acquisition of knowledge and demand for a specific request is not completely out of place, especially in an era promoting patient autonomy (Taylor, 2009). However, it appears doctors are not particularly used to such behaviours, hence resulting in knowledge conflict between the actors. Hence, how the actors in the service encounter integrate these resources is essential in the value co-creation process. Misunderstanding and mismanaging of actors' resources could lead to conflicts in the encounter that could adversely affect their experiences resulting in possible value co-destruction. This also calls for actors to take

cognisance of the key influencing factors addressed in this thesis in order to avert such conflicts from happening in future consultations. Hence, as knowledge is considered one of the fundamental resources of value co-creation (Vargo and Lusch, 2004), it will be beneficial for actors to understand each other and accept the changing trends especially in the case of informed and enlightened patients. In order not to compromise the quality of the decision outcome as well as the patient experience, doctors should be tactful in handling such situations by clearly explaining the net effects to the patient. Hence, the integration of resources (knowledge and skills) plays a critical role in the co-creation of value. Therefore, how the focal dyad engages with each other and share relevant information will most likely improve on the service outcome.

9.5 Research limitations

The findings of this study provide robust support for the theoretical model and predicted relationships. However, like any research, this has limitations. The findings may be limited by the conclusions drawn from one region of the country and especially one where overall satisfaction levels may be high compared to other regions. Although the Greater Accra Region is a cosmopolitan region in Ghana with people from all the regions of the country, the perception of patients and doctors could vary across regions, which could limit the basis for generalisation. However, time constraints and resources meant that the study could only be conducted in the Greater Accra Region of the country.

The healthcare service comprises of different professionals who also interact with the patients and contribute to the overall value that is created by the actors; therefore, focusing on the doctors alone and their encounter with the patients may not present a true picture of the perceptions of the patient. However, the dyadic nature of the study allows for only two actors to be considered, which meet the aim of this research. Also, because the data was collected from outpatients, there was no distinction with regard to patients with acute and chronic conditions. It is believed that patients with

chronic conditions have regular repeat visits to hospitals and hence are more likely to build a long-term relationship with the doctors that could affect their understanding and perception of the co-creation process. As a result, this study did not consider the relationship effects on value co-creation.

The study also focused on the experiential view of value of the patient resulting from the clinical encounter with the doctor. This therefore, limits the findings of this study as it does not shed light on other value perspectives (e.g., social value, economic value) to the patient, the provider, and the healthcare system as a whole.

The conceptualized measurement models of the groups were re-specified to improve parsimony. The exploratory nature of re-specifications was noted (Byrne, 2010, Kline, 2011) and interpretations and justifications of changes were explained (Kline, 2011). Nevertheless, re-specification may rely on theory and the characteristics of a specific sample, especially considering the relatively small sample size used for the estimation of the doctors and dyadic models (n = 90). The final measurement models are thus limited to a given sample until tested by means of an independent and preferably larger sample. Although this was verified using the large patient sample size, it is still recommended for further verification.

Furthermore, this study is one of the few empirical researches to examine value co-creation between the focal dyad at the micro level. The study employed a cross-sectional non-experimental research design, which could pose limitations with regard to claims of causality as tested in the measurement model (Mathieu and Taylor, 2006). It is also acknowledged that a degree of heterogeneity in cross-sectional responses could be reported among the groups, but these were limited. Although the model was tested using three different datasets (i.e. patients, doctors, and dyadic datasets) with not much significant differences, which affirms its robustness, a further test is recommended to explore the healthcare setting and other service settings.

9.6 Directions for future research

This thesis has demonstrated value co-creation between the focal dyad at the micro level in the healthcare setting. The study identified three key micro-level influencing factors of concern in value co-creation that comprises of the social context, beliefs and perception of both actors, and partnership between the actors. These are affirmed to influence the service experience of the actors and the value co-creation process of the dyad. In effect when these factors are considered during the service encounter, there is a high probability of co-creating the expected value as these provide the right environment to engage in a holistic manner. There is a need to further explore these micro-level influencing factors (social context, beliefs and perceptions of actors, and actor partnership) to better understand the dyadic value co-creation and the overall service outcome. Also, further research is needed to confirm and expand on the results of this study by replicating it in other service settings to test the measurement model to ascertain its robustness.

Value is considered subjective and "meaning laden", which suggests the variability in value perceptions and experiences of actors as confirmed in this study. This also suggests that value perceptions are influenced by a person's beliefs and norms, which could be influenced by the cultural background of the actors. As a result, further work can be done to consider the cultural effects on the value co-creation process using this model. Likewise, the model presented in this thesis could be tested in the private and public healthcare providers in other geographical contexts to ascertain its robustness. Also value was examined from the experiential perspective in this study and does not consider the assessment of social and economic value for both patients and providers or the healthcare system. In this vein, further research is needed to examine the social and economic value from the doctor-patient encounter taking into consideration the micro-level influencing factors identified in this thesis.

The study was conducted in a context with different professionals working together as a team to provide the health needs of the patients. This suggests that, the patient comes into contact with other healthcare professionals other than a doctor. Although the study focused on only the doctors and the patients in line with the aims of the

thesis, the patients overall value could be influenced by the actions of the other professionals they contact during their visit to the facility. For instance, a patient's encounter with the nurse before seeing the doctor could alter his/her mood or complexion, which can affect how he/she engages with the doctor in the consulting room. Further research is needed to consider other professionals involved in healthcare service delivery with direct contact with the patient.

Given the paucity of dyadic reciprocal datasets in the value co-creation process of the doctor-patient encounter, this study provides some compelling insights that will help the design of future research. Further research could also adopt research designs including experiments and longitudinal models to confirm the results achieved in this study. This could also further the understanding of the value co-creation process in cases where the fundamental resources supposed to enhance the co-creation effects, rather tend to co-destroy the value expected. This approach could also be designed to examine the relationship effects on the co-creation process and compare patients with acute conditions to those with chronic conditions. The longitudinal approach will be appropriate to compare these two groups of patients, since it will require time for relationship building to occur, which is not particularly feasible in a cross-sectional study.

The study also examined the effects of actor characteristics on the dyadic value co-creation in the context of healthcare. This still remains at the exploratory stage focusing on healthcare service delivery. Further research could examine the net effects of the actor demographic characteristics on value co-creation in other service settings to confirm the results reported in this thesis.

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APPENDICES

Appendix I

Greater Accra population by district (2010 census data)

Districts	Population
Accra Metropolis	1,854,189
Adentan Municipal	127,788
Ashiaman Municipal	187,304
Dangme East District	124,248
Dangme West District	129,181
Ga East Municipal	278,102
Ga South Municipal	269,297
Ga West Municipal	187,139
Ledzokuku Krowo Municipal	307,342
Tema Metropolis	368,393
Total	**3,832,983**

Source: GARHD (2011)

Appendix II

Ethical approval letter from GHS-ERC

GHANA HEALTH SERVICE ETHICAL REVIEW COMMITTEE

In case of reply the number and date of this Letter should be quoted.

My Ref. :GHS-ERC: 3
Your Ref. No.

Research & Development Division
Ghana Health Service
P. O. Box MB 190
Accra
Tel: +233-302-681109
Fax + 233-302-685424
Email: nitadzy@yahoo.com

20th December, 2013

Kofi Osei-Frimpong
University of Strathclyde Business School
Glasgow, UK

ETHICAL APPROVAL - ID NO: GHS-ERC: 05/11/13

The Ghana Health Service Ethics Review Committee has reviewed and given approval for the implementation of your Study Protocol titled:

"Value co-creation in health care service delivery: a dyadic perspective"

This approval requires that you inform the Ethical Review Committee (ERC) when the study begins and provide Mid-term reports of the study to the Ethical Review Committee (ERC) for continuous review. The ERC may observe or cause to be observed procedures and records of the study during and after implementation.

Please note that any modification without ERC approval is rendered invalid.

You are also required to report all serious adverse events related to this study to the ERC within seven days verbally and fourteen days in writing.

You are requested to submit a final report on the study to assure the ERC that the project was implemented as per approved protocol. You are also to inform the ERC and your sponsor before any publication of the research findings.

Please always quote the protocol identification number in all future correspondence in relation to this approved protocol

SIGNED.....
DR. CYNTHIA BANNERMAN
(GHS-ERC VICE-CHAIRPERSON)

Cc: The Director, Research & Development Division, Ghana Health Service, Accra

Appendix III

Participant Information Sheet

Participant Information Sheet

Name of department: Marketing

Title of the study: Value co-creation in health care service delivery: a dyadic perspective

Self-introduction

The researcher or interviewer will introduce himself to the participant and establish a good rapport with the interviewee.

What is the purpose of this study?

This study aims to investigate the concept of value co-creation in the health care setting from the physician and patient perspective (dyadic perspective). **Specifically, the research seeks to understand what happens in the consulting room when the patient visits the doctor, in relation to patient involvement, how doctors engage patients to actively participate in the consultation, how both doctors and patients cooperate with each other and how these affects the quality of the outcomes.** The concept of value co-creation basically relates to the increasing role played by customers/patients within the activities of an organisation (and in this case, the health care sector), in which case the patient is informed and active; **which is different from the past when patients were not informed in relation to health issues.** This study seeks to propose ways by which the doctor and the patient could engage each other to improve on the service delivery and the quality of the outcomes.

Your participation

The study is investigating the service delivery between the doctor and the patient and its impact on the service outcome from the physician's and the patient's perspective. Therefore, responses from both doctors and patients are

considered crucial. However, it should be noted that your decision to participate in this study is voluntary and you have every right to refuse to be interviewed or withdraw at any time during the course of the interview without any consequences.

The interview process

The interviews will be held in the OPD or any other location within the premises of the hospital that is most suitable for you. Interviewing takes the form of a face-to-face interview with a questionnaire where respondents are required to determine their degree of agreement or disagreement. The interview session will last between 30-40 minutes. The data collected will be analysed by the researcher for academic purposes.

Will my taking part in this study be kept confidential?

All information provided during the interview will be kept confidential. For academic purposes, the responses will remain anonymized and the data will be stored on my computer for the duration of my PhD and under no circumstances will it be leaked to other persons.

What will happen to the results of the study?

The findings of this study will be used mainly for my PhD work, and as well as any potential journal publication. In any case, no names including that of the hospital will be disclosed.

What now?

If you are happy to take part you will be asked to sign a form giving your permission. Signing the consent form does not mean you must take part. Even if you agree now, you can change your mind without giving any reason.

Name and address of researcher

Kofi Osei-Frimpong

PhD Marketing Student, University of Strathclyde, Sir William Duncan Building, 130 Rottenrow, Glasgow, UK. G4 0GE

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Appendix IV

Consent Form

Consent Form

Name of department: Marketing

Title of the study: Value co-creation in health care service delivery: a dyadic perspective

I confirm that I have read and understood the information sheet for the above project and offered the opportunity to ask questions for further clarification.

I understand that my participation is voluntary and that I am free to withdraw from the project at any time, without giving any reason.

I understand that any information recorded in the investigation will remain confidential and my identity will be protected.

I agree to be interviewed.

Name:
Date:
Signature:

Appendix V

Discussion guide

A) Interviewee represents the patients perspective

1. Introduction
   a. Self-introduction of the interviewer
   b. Explain the purpose of the meeting
   c. Explain the purpose and objectives of the study
   d. Guide interviewee through the information sheet and consent form
   e. Introduction of interviewee (name, age, educational background)

2. Past experiences of the service encounter with the physician (with emphasis on incidents)
   a. Identify key incidents and ask for detailed description
   b. How incidents were handled/managed (negative/positive)
   c. Effects on the service encounter
   d. Your perception of these previous experiences

3. The service encounter process
   a. Describe the consultation process
   b. Cover the following areas among others:
      i. Involvement
      ii. Explaining
      iii. Opportunity to ask questions
      iv. Understanding
      v. Assertive responses
   c. Interaction process
      i. Information sharing,
      ii. Listening,
      iii. Communication (in terms of language usage)
   d. Any specific roles?
      i. Active
      ii. Passive
   e. Expectations before, during and after the encounter
   f. Your expectations of the physician
   g. What kind of resources or contributions are needed from the patient
   h. What does the patient do before and after the service encounter

4. Behavioural issues
   a. Describe the relationship with the physician
      i. Effects on your participation in the service
   b. Doctor orientation and collaboration
   c. Viewpoint on physician's social attributes
      i. Social skills (friendliness, listening, conversational)

ii. Empathy
iii. Deference

d. Effects on the level of participation or involvement in the service
e. Beliefs and perceptions in consultations
f. Patient compliance and influencing factors

5. Perceptions of value
   a. Perceived value of the consultation
   b. What value means to the patient
   c. Value outcomes of the service
   d. Impacts of the value co-creation process on the service delivery
   e. Effects of actor characteristics on the value co-creation process
      i. Gender of doctor, Age, Education, Frequency of visits, length of service of doctor

6. Closing phase
   a. Check to see if all necessary areas are covered
   b. Any additional information
   c. Any question
   d. Thank the participant

B) Interviewee represents the doctors perspective

1. Introduction
   a. Self-introduction of the interviewer
   b. Explain the purpose of the meeting
   c. Explain the purpose and objectives of the study
   d. Guide interviewee through the information sheet and consent form
   e. Introduction of interviewee (name, age, educational background)

2. Past experiences of the service encounter with the patient (with emphasis on incidents)
   a. Identify key incidents and ask for detailed description
   b. How incidents were handled/managed (negative/positive)
   c. Effects on the service encounter
   d. Your perception of these previous experiences

3. The service encounter process
   a. Describe the consultation process
   b. Cover the following areas among others:
      i. Involvement
      ii. Explaining
      iii. Opportunity to ask questions
      iv. Understanding
      v. Assertive responses
   c. Interaction process
      i. Information sharing,
      ii. Listening,
      iii. Communication (in terms of language usage)
   d. Any specific roles of patients?
      iii. Active
      iv. Passive
   e. Expectations before, during and after the encounter
   f. Your expectations of the patient
   g. What kind of resources or contributions are needed from the patient
   h. What does the doctor do before and after the service encounter

4. Behavioural issues
   a. Describe the relationship with the patient
      i. Effects on your participation in the service
   b. Patient's orientation and collaboration
   c. Viewpoint on how your social attributes influence the encounter
      i. Social skills (friendliness, listening, conversational)
      ii. Empathy
      iii. Deference
   d. Effects on the level of participation or involvement in the service
   e. Beliefs and perceptions in consultations
   f. Patient compliance and influencing factors

5. Perceptions of value
   a. Perceived value of the consultation
   b. What value means to the doctor
   c. Value outcomes of the service
   d. Impacts of the value co-creation process on the service delivery
   e. Effects of actor characteristics on the value co-creation process
      i. Gender of doctor and patient, Age, Education, Frequency of visits, length of service of doctor

6. Closing phase
   a. Check to see if all necessary areas are covered
   b. Any additional information
   c. Any question
   d. Thank the participant

Appendix VI

Questionnaire

QUESTIONNAIRE - PATIENT

Unless otherwise stated, please circle the corresponding number that addresses their experiences and opinions on the service you received in the consulting room. The responses range from Strongly Disagree (1) to Strongly Agree (5).

Strongly Disagree Disagree Uncertain Agree Strongly Agree

1 2 3 4 5

Please answer each question based on your understanding and opinions about each statement.

All answers will be confidential and your anonymity is respected.

DOCTOR-PATIENT PARTNERSHIP

This section aims to understand the level of partnership between you and the doctor during consultations. The following statements emphasise on the doctor-patient orientation, patient's general involvement in consultations and your participation in the decision-making process to understand the level of partnership. Please circle the number that mostly reflects your opinion.

	STATEMENT	**Strongly Disagree**	**Disagree**	**Uncertain**	**Agree**	**Strongly Agree**
PPO	**PROVIDER-PATIENT ORIENTATION (PPO)**					
1	The doctor makes recommendations that match my needs	1	2	3	4	5
2	The doctor is committed to understanding my needs	1	2	3	4	5
3	The doctor is committed to engaging me in the consultation	1	2	3	4	5
4	The doctor is committed to providing me the service I require	1	2	3	4	5
5	The doctor ensured the service is really beneficial to me	1	2	3	4	5
6	The doctor considered me as his/her main priority	1	2	3	4	5
7	The doctor has genuine interest in me as a	1	2	3	4	5

	person in managing my condition					
8	The doctor ensured I received the best of care with service tailored for me	1	2	3	4	5
9	The doctor demonstrated an understanding of my problem	1	2	3	4	5
10	The doctor allowed me to say everything I think is important	1	2	3	4	5
11	The doctor encouraged me to actively participate in the consultation	1	2	3	4	5
12	The doctor's approach motivated me to really play an active role in the consultation	1	2	3	4	5
INV	**PATIENT INVOLVEMENT (INV)**					
1	I made considerable effort to discuss my condition with my doctor	1	2	3	4	5
2	I spent a lot of time sharing information about my needs and opinions with the doctor	1	2	3	4	5
3	I was actively engaged and involved in the consultation	1	2	3	4	5
4	The doctor listened carefully to what I had to say	1	2	3	4	5
5	I am very much involved in deciding how the services should be provided	1	2	3	4	5
6	My suggestions or contributions are relevant in the decision-making even though the doctor knows best as an expert	1	2	3	4	5
SDM	**SHARED DECISION-MAKING (SDM)**					
1	The doctor informed me of the need to participate in the decision making process	1	2	3	4	5
2	My doctor asks for suggestions from me regarding treatment options	1	2	3	4	5
3	My doctor encourages suggestions about appropriate treatment of my illness	1	2	3	4	5
4	Both the doctor and I participated extensively in planning treatment of my illness	1	2	3	4	5
5	The doctor explained the reason for a medical examination	1	2	3	4	5
6	The doctor explained the diagnosis to me	1	2	3	4	5
7	The doctor discussed the prescription with me	1	2	3	4	5
8	Together, the doctor and I set goals and discuss treatment options	1	2	3	4	5
9	I helped the doctor in planning my	1	2	3	4	5

	treatment

PATIENT'S PERCEPTIONS/BELIEFS

This section addresses the beliefs and perceptions of the patient in relation to the consultation. The statements comprise of issues relating to trust, assurance, emotions and perceptions. Please circle the number that mostly reflects your opinion.

	STATEMENT	Strongly Disagree	Disagree	Uncer tain	Agree	Strongly Agree
TR	**TRUST (TR)**					
1	I trust that the doctor would be considerate of my needs and put them first.	1	2	3	4	5
2	I would trust that doctor so much I would always try to follow his/her advice	1	2	3	4	5
3	I share detailed information with the doctor because I trust him/her	1	2	3	4	5
4	If that doctor told me something is so, then I would believe it must be true	1	2	3	4	5
5	I trust the doctor to keep the information we discussed totally private	1	2	3	4	5
6	I would trust that doctor to tell me if a mistake was made about my treatment.	1	2	3	4	5
7	I trust my doctor's judgement	1	2	3	4	5
ASS	**ASSURANCE (ASS)**					
1	The doctor is very careful delivering the care	1	2	3	4	5
2	My views and feelings were respected	1	2	3	4	5
3	The doctor is honest and genuine, which gives me the assurance I need	1	2	3	4	5
4	The assurances I received from the doctor was stimulating	1	2	3	4	5
5	The assurances I received from the doctor was timely	1	2	3	4	5
EM	**EMOTIONS (EM)**					
1	Pleased with the doctor	1	2	3	4	5
2	Content with the service I received	1	2	3	4	5
3	I am happy with the level of care received	1	2	3	4	5
4	I was emotionally fulfilled at the level of	1	2	3	4	5

	care I received					
PER	**PERCEPTIONS (PER)**					
1	The doctor was sympathetic to my problems	1	2	3	4	5
2	The doctor was willing to help me in managing my condition	1	2	3	4	5
3	I felt safe interacting with the doctor	1	2	3	4	5
4	The doctor gave me the attention I required	1	2	3	4	5
5	The doctor was encouraging and pleasing	1	2	3	4	5
6	My doctor seems to care about me	1	2	3	4	5
7	The doctor paid attention to my privacy	1	2	3	4	5
8	The doctor considered my inputs as relevant	1	2	3	4	5

SOCIAL CONTEXT

This section addresses the social context within which the service encounter takes place. These statements are tailored to understand the nature of interactions in the consulting room, demonstration of doctor's interpersonal and social skills as well as demonstration and promotion of learning during consultations. Please circle the number that mostly reflects your opinion.

	STATEMENT	**Strongly Disagree**	**Disagree**	**Uncertain**	**Agree**	**Strongly Agree**
SOSK	**DOCTOR'S SOCIAL SKILLS (SOSK)**					
1	The doctor gave me the kind of respect I expected	1	2	3	4	5
2	The doctor was friendly	1	2	3	4	5
3	The doctor's interpersonal skill was excellent	1	2	3	4	5
4	The doctor was very engaging	1	2	3	4	5
5	The doctor and I seemed to find more things to talk about	1	2	3	4	5
6	The doctor empathized with me	1	2	3	4	5
7	The doctor tried to establish a personal relationship with me	1	2	3	4	5
8	The doctor-patient relationship was cordial	1	2	3	4	5
9	The doctor was decorous when interacting with me	1	2	3	4	5

10	The doctor cooperated with me	1	2	3	4	5
LN	**LEARNING (LN)**					
1	I seek interest in searching for information relating to healthcare	1	2	3	4	5
2	I received some level of education from doctor relevant to health needs	1	2	3	4	5
3	I ask others for information on related health issues	1	2	3	4	5
4	Reading on health issues helps me manage my condition well	1	2	3	4	5
5	Learning keeps me informed and enhance the level of engagement in my encounter with the doctor	1	2	3	4	5
6	I have paid attention to doctors' behaviour and approach in consultations, which informs my level of engagement	1	2	3	4	5
INT	**NATURE OF INTERACTIONS (INT)**					
1	The doctor welcomed me nicely to the consulting room	1	2	3	4	5
2	The doctor greeted me in a way that made me feel pleased and at ease	1	2	3	4	5
3	The doctor allowed me to speak my mind without reticence	1	2	3	4	5
4	The doctor established a good rapport with me	1	2	3	4	5
5	The doctor provided the enabling environment for me to actively participate in the consultation	1	2	3	4	5
6	The doctor initiated and fostered dialogue with me	1	2	3	4	5
7	The interaction was more conversational than questions and answers	1	2	3	4	5
8	I shared detailed information with the doctor as a result of the enabling environment he/she created	1	2	3	4	5
9	The doctor used language I could easily understand	1	2	3	4	5

CONSEQUENCES OF THE CO-CREATION PROCESS

This section addresses potential effects or impacts of the processes examined (Parts 1 – 3) could have on the service delivered. The following statements are related to the patients' level of compliance to medical instructions, improved service engagement, and your overall perceived value of the service. Please circle the number that mostly reflects your opinion.

	STATEMENT	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
ISE	**IMPROVED SERVICE ENGAGEMENT**					
1	The doctor demonstrates an understanding on my specific needs	1	2	3	4	5
2	The doctor is empathetic to my condition	1	2	3	4	5
3	The doctor is able to 'tune in' to me as unique	1	2	3	4	5
4	The doctor does more than usual in the engagement process	1	2	3	4	5
5	I am happy to engage the doctor without being intimidated	1	2	3	4	5
6	A collaborative effort of the doctor and patient is more likely to improve on the level of care	1	2	3	4	5
7	The level of care delivered is excellent	1	2	3	4	5
CM	**IMPROVED COMPLIANCE (CM)**					
1	I return to the service provider based on the schedule he/she suggests	1	2	3	4	5
2	I am inclined to follow the instructions from the service provider	1	2	3	4	5
3	I accept and follow the advice from a doctor because I was involved in the consultation process	1	2	3	4	5
4	I adhere to the instructions given by the doctor, because I consider it as my role and responsibility	1	2	3	4	5
5	My engagement in the service encounter has improved my level of compliance	1	2	3	4	5
PVAL	**PERCEIVED VALUE REALISED (PVAL)**					
1	The service was valuable to me	1	2	3	4	5
2	The time with the doctor is worth spending	1	2	3	4	5
3	My goal of coming here is achieved	1	2	3	4	5
4	I have a good impression about the doctor	1	2	3	4	5

	and would recommend him/her to others					
5	Overall I am very happy with the service	1	2	3	4	5

GENERAL INFORMATION

Please circle one that applies to you

Gender

a. Male
b. Female

Age (in years)

a. 21 – 30
b. 31 – 40
c. 41 – 50
d. 51 – 60

Educational background

a. Senior High School
b. Diploma
c. Higher National Diploma
d. Undergraduate
e. Bachelor's degree
f. Post-Graduate
g. Other
   Please specify:…….

Approximately how frequently do you visit the hospital?

a. Less than a month
b. Between 1 – 3 months
c. Every 6 months
d. Once a year
e. Other
   Please specify:……

THANK YOU

QUESTIONNAIRE - DOCTOR

Unless otherwise stated, please circle the corresponding number that addresses your opinions on the service you delivered in the consulting room. The responses range from Strongly Disagree (1) to Strongly Agree (5).

Strongly Disagree Disagree Uncertain Agree Strongly Agree

1 2 3 4 5

Please answer each question based on your understanding and opinions about each statement.

All answers will be confidential and your anonymity is respected.

DOCTOR-PATIENT PARTNERSHIP

This section aims to understand the level of partnership between you and the patient during consultations. The following statements emphasise on the doctor-patient orientation, patient's general involvement in consultations and their participation in the decision-making process to understand the level of partnership. Please circle the number that mostly reflects your opinion.

	STATEMENT	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
PPO	**PROVIDER-PATIENT ORIENTATION (PPO)**					
1	I make recommendations that match the patient's needs	1	2	3	4	5
2	I am committed to understanding patient's needs	1	2	3	4	5
3	The patient was very engaging	1	2	3	4	5
4	I am committed to providing the service that patients require	1	2	3	4	5
5	The service is beneficial to the patient	1	2	3	4	5
6	Patients are my main priority in the consulting room	1	2	3	4	5
7	Patient was encouraged to take interest in managing their condition	1	2	3	4	5
8	Patient received the best of care with service tailored to his/her needs	1	2	3	4	5
9	Patient's problems are understood and treated differently	1	2	3	4	5

10	Patients were encouraged to say everything they think it's important	1	2	3	4	5
11	Patients were encouraged to actively participate in the consultation	1	2	3	4	5
12	The patient was motivated to play an active role in the consultation	1	2	3	4	5
INV	**PATIENT INVOLVEMENT (INV)**					
1	The patient made considerable efforts to discuss his/her condition with me	1	2	3	4	5
2	The patient spent time to share detailed information about his needs and opinions with me	1	2	3	4	5
3	The patient was actively engaged and involved in the consultation	1	2	3	4	5
4	The patient's concerns were listened carefully	1	2	3	4	5
5	The patient is very much involved in deciding how the services should be provided	1	2	3	4	5
6	The patient's suggestions or contributions are relevant in the decision-making	1	2	3	4	5
SDM	**SHARED DECISION-MAKING (SDM)**					
1	The patient was informed of the need to participate in the decision making process	1	2	3	4	5
2	The patient was asked for suggestions regarding treatment options	1	2	3	4	5
3	I encourage patients for suggestions about appropriate treatment of my illness	1	2	3	4	5
4	Both the patient and I participated extensively in planning treatment of his/her illness	1	2	3	4	5
5	The reason for the medical examination was clearly explained to the patient	1	2	3	4	5
6	I explained the diagnosis to the patient	1	2	3	4	5
7	I discussed the prescription with the patient	1	2	3	4	5
8	Together, the patient and I set goals and discuss treatment options	1	2	3	4	5
9	The patient helped in planning his/her treatment	1	2	3	4	5

PATIENT'S PERCEPTIONS/BELIEFS

This section addresses the beliefs and perceptions of the patient in relation to the consultation. The statements comprise of issues relating to trust, assurance, emotions and perceptions. Please circle the number that mostly reflects your opinion.

	STATEMENT	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
TR	**TRUST (TR)**					
1	I trust that the patient and the doctor will be considerate of each other and put the patient's needs first	1	2	3	4	5
2	Patients are more eager to follow my advice because of trust we have for each other follow his/her advice	1	2	3	4	5
3	Patients are more likely to share detailed information with the doctor because they trust me	1	2	3	4	5
4	The patient is more likely to believe anything I tell them, because of the level of trust they have in the doctor	1	2	3	4	5
5	Patient's information is kept totally private and confidential	1	2	3	4	5
6	The patient trust that mistakes made about their treatment will be made known to them	1	2	3	4	5
7	My patients trust my judgement	1	2	3	4	5
ASS	**ASSURANCE (ASS)**					
1	I am very careful delivering the care	1	2	3	4	5
2	Patient's views are respected	1	2	3	4	5
3	My honesty and genuineness in handling patient's problems gives them the assurance they need	1	2	3	4	5
4	Patients are happy and stimulated by the assurances they receive	1	2	3	4	5
5	Patients receive timely assurances	1	2	3	4	5
EM	**EMOTIONS (EM)**					
1	I am pleased with my patients attitude in the consulting room	1	2	3	4	5
2	Patients are content with the service they receive	1	2	3	4	5
3	I am happy with patient's reactions towards the care they received	1	2	3	4	5
4	Patients are emotionally fulfilled at the level of care received	1	2	3	4	5

PER	PERCEPTIONS (PER)					
1	I am sympathetic to the patient's problems	1	2	3	4	5
2	I always do my best to help the patient in managing their condition	1	2	3	4	5
3	Patients interact with me freely	1	2	3	4	5
4	The patient received the needed attention	1	2	3	4	5
5	Patients are generally happy with the level of care they receive	1	2	3	4	5
6	The patient's welfare is my priority	1	2	3	4	5
7	I pay much attention to the patient's privacy	1	2	3	4	5
8	I consider patient's inputs as relevant	1	2	3	4	5

SOCIAL CONTEXT

This section addresses the social context within which the service encounter takes place. These statements are tailored to understand the nature of interactions in the consulting room, demonstration of doctor's interpersonal and social skills as well as demonstration and promotion of learning during consultations. Please circle the number that mostly reflects your opinion.

	STATEMENT	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
SOSK	**DOCTOR'S SOCIAL SKILLS (SOSK)**					
1	I treat patients with respect and ensure they feel at home	1	2	3	4	5
2	The patient considers me friendly	1	2	3	4	5
3	Patients are generally satisfied with my interpersonal skills	1	2	3	4	5
4	The patient was very engaging	1	2	3	4	5
5	The patient and I seemed to find more things to talk about	1	2	3	4	5
6	I empathized with the patient	1	2	3	4	5
7	I try to establish a personal relationship with the patient	1	2	3	4	5
8	The doctor-patient relationship was cordial	1	2	3	4	5
9	The patient is decorous when interacting with me	1	2	3	4	5
10	I cooperated with the patient	1	2	3	4	5
LN	**LEARNING (INV)**					
1	I am delighted in seeing patients with interest in learning on health related issues	1	2	3	4	5
2	I encourage patients to read on health	1	2	3	4	5

	related issues					
3	Patients also learn by asking others for information on related health issues	1	2	3	4	5
4	Reading on health issues will enhance patient's involvement or participation in consultations	1	2	3	4	5
5	Learning keeps the patient informed and enhance their level of engagement in the consulting room	1	2	3	4	5
6	I have paid attention to patients' behaviour and approach in consultations, which informs my level of engagement	1	2	3	4	5
INT	**NATURE OF INTERACTIONS (INT)**					
1	Patients are welcomed nicely to the consulting room	1	2	3	4	5
2	Patients are greeted in a way that make them feel pleased and at ease	1	2	3	4	5
3	Patients are allowed to speak their mind without reticence	1	2	3	4	5
4	I established a good rapport with the patient	1	2	3	4	5
5	An enabling environment was provided to allow patient active participation in the consultation	1	2	3	4	5
6	I initiate and foster dialogue with the patient	1	2	3	4	5
7	The interaction was more conversational than questions and answers	1	2	3	4	5
8	The patient provided detailed information with me as a result of the enabling environment created	1	2	3	4	5
9	I used language the patient could easily understand	1	2	3	4	5

CONSEQUENCES OF THE CO-CREATION PROCESS

This section addresses potential effects or impacts of the processes examined (Parts 1 – 3) could have on the service delivered. The following statements are related to the patient's level of compliance to medical instructions, improved service engagement, and your overall perceived value of the service. Please circle the number that mostly reflects your opinion.

	STATEMENT	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
ISE	**IMPROVED SERVICE ENGAGEMENT**					
1	My understanding of the patient's specific needs enhance the engagement	1	2	3	4	5
2	I am empathetic to the patient	1	2	3	4	5
3	I consider each specific patient as unique and different	1	2	3	4	5
4	I do more than usual in the engagement process considering the patient's demands	1	2	3	4	5
5	I provide a friendly environment to allow patients engage without any intimidation	1	2	3	4	5
6	The collaborative effort of the doctor and patient is more likely to improve on the level of care	1	2	3	4	5
7	The level of care delivered is excellent	1	2	3	4	5
CM	**IMPROVED COMPLIANCE (CM)**					
1	The patient is more likely to return to the service provider based on the schedule he/she suggests	1	2	3	4	5
2	The patient will be more inclined to following the instructions from the doctor	1	2	3	4	5
3	The patient will accept and follow the advice from the doctor because he/she was involved in the consultation process	1	2	3	4	5
4	The patient will adhere to the instructions given by the doctor, because they consider it as their role and responsibility	1	2	3	4	5
5	The patient engagement in the service encounter will improve their level of compliance	1	2	3	4	5
PVAL	**PERCEIVED VALUE REALISED (PVAL)**					
1	The service is valuable to both the patient and the doctor	1	2	3	4	5
2	The time with the patient is worth spending	1	2	3	4	5
3	My goal is more likely to be achieved because of patient's enthusiasm and motivation to comply with medications	1	2	3	4	5

4	The patient will be more satisfied and would recommend the doctor to others	1	2	3	4	5
5	The patient is happy because they contributed to the decision-making process	1	2	3	4	5

GENERAL INFORMATION

Please circle one that applies to you

1. Age

   a. 21 – 30 years
   b. 31 – 40 years
   c. 41 – 50 years
   d. 51 – 60 years
   e. Other
      Please specify:……

2. Gender

   a. Female
   b. Male

3. Professional rank
   a. Medical Officer
   b. Senior Medical Officer
   c. Principal Medical Officer
   d. Specialist
   e. Senior Specialist
   f. Consultant
   g. Other
      If other, please specify:…….

4. Doctor's length of service (in years)

   a. 1 – 5
   b. 6 – 10
   c. 11 – 15
   d. 16 – 20
   e. 21 – 25
   f. 26 – 30
   g. Other
      Please specify:……..

Thank you

Appendix VII

Distribution normality of responses (Doctor Data)

Descriptive Statistics

	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
PPO1	3	5	4.03	.694	-.044	.254	-.885	.503
PPO2	3	5	4.09	.681	-.112	.254	-.807	.503
PPO3	3	5	3.78	.556	-.043	.254	-.214	.503
PPO4	3	5	4.08	.674	-.093	.254	-.759	.503
PPO5	3	5	4.08	.691	-.103	.254	-.866	.503
PPO6	3	5	3.96	.652	.044	.254	-.592	.503
PPO7	3	5	3.92	.707	.111	.254	-.963	.503
PPO8	3	5	3.90	.735	.160	.254	-1.116	.503
PPO9	3	5	3.98	.687	.028	.254	-.835	.503
PPO10	3	5	3.96	.598	.013	.254	-.127	.503
PPO11	3	5	3.98	.636	.018	.254	-.458	.503
PPO12	3	5	3.87	.674	.164	.254	-.771	.503
INV1	3	5	3.98	.580	.000	.254	.070	.503
INV2	3	5	4.04	.616	-.025	.254	-.300	.503
INV3	3	5	3.82	.488	-.418	.254	.492	.503
INV4	3	5	4.09	.664	-.100	.254	-.696	.503
INV5	3	5	4.02	.599	-.007	.254	-.128	.503
INV6	3	5	4.06	.588	-.008	.254	-.031	.503
SDM1	3	5	4.21	.609	-.140	.254	-.452	.503
SDM2	3	5	4.38	.610	-.426	.254	-.634	.503
SDM3	3	5	4.32	.633	-.384	.254	-.652	.503
SDM4	3	5	4.20	.603	-.113	.254	-.400	.503
SDM5	3	5	4.28	.600	-.194	.254	-.540	.503
SDM6	3	5	4.33	.581	-.196	.254	-.635	.503
SDM7	3	5	4.22	.595	-.110	.254	-.405	.503
SDM8	3	5	4.27	.614	-.227	.254	-.565	.503
SDM9	3	5	4.24	.692	-.367	.254	-.864	.503
EM1	3	5	4.34	.673	-.541	.254	-.715	.503
EM2	3	5	4.18	.696	-.256	.254	-.902	.503
EM3	3	5	4.14	.680	-.186	.254	-.809	.503
EM4	3	5	4.19	.669	-.237	.254	-.757	.503
TR1	3	5	4.39	.665	-.634	.254	-.620	.503
TR2	3	5	4.32	.633	-.384	.254	-.652	.503
TR3	3	5	4.20	.674	-.262	.254	-.786	.503
TR4	3	5	4.27	.650	-.326	.254	-.692	.503
TR5	3	5	4.27	.667	-.363	.254	-.757	.503
TR6	3	5	4.28	.561	-.020	.254	-.465	.503
TR7	3	5	4.33	.600	-.284	.254	-.624	.503
AS1	3	5	3.71	.604	.225	.254	-.569	.503
AS2	3	5	4.14	.663	-.167	.254	-.709	.503
AS3	3	5	3.93	.716	.099	.254	-.015	.503
AS4	3	5	4.02	.670	-.025	.254	-.722	.503
AS5	3	5	4.12	.615	-.074	.254	-.355	.503
PE1	3	5	4.04	.778	-.078	.254	-.331	.503
PE2	3	5	3.98	.779	.039	.254	-.338	.503
PE3	3	5	3.94	.740	.089	.254	-.147	.503
PE4	3	5	4.02	.687	-.028	.254	-.835	.503
PE5	3	5	3.84	.748	.263	.254	-1.160	.503
PE6	3	5	4.02	.670	-.025	.254	-.722	.503
PE7	3	5	4.06	.709	-.080	.254	-.975	.503
PE8	3	5	3.77	.619	.194	.254	-.538	.503
SSK1	3	5	4.39	.631	-.531	.254	-.607	.503
SSK2	3	5	4.27	.667	-.363	.254	-.757	.503

SSK3	3	5	4.22	.700	-.336	.254	-.906	.503
SSK4	3	5	4.23	.704	-.363	.254	-.920	.503
SSK5	3	5	4.34	.690	-.575	.254	-.754	.503
SSK6	3	5	4.32	.615	-.323	.254	-.624	.503
SSK7	3	5	4.13	.674	-.164	.254	-.771	.503
SSK8	3	5	4.18	.663	-.212	.254	-.724	.503
SSK9	3	5	4.20	.622	-.161	.254	-.506	.503
SSK10	3	5	4.21	.551	.073	.254	-.136	.503
INT1	3	5	3.89	.756	.188	.254	-.215	.503
INT2	3	5	3.57	.582	.435	.254	-.704	.503
INT3	3	5	4.00	.764	.000	.254	-.273	.503
INT4	3	5	3.74	.801	.498	.254	-1.265	.503
INT5	3	5	3.78	.761	.400	.254	-1.164	.503
INT6	3	5	3.76	.769	.453	.254	-1.167	.503
INT7	3	5	3.84	.792	.287	.254	-.345	.503
INT8	3	5	3.81	.792	.352	.254	-.316	.503
INT9	3	5	3.73	.731	.464	.254	-1.000	.503
LN1	3	5	3.92	.691	.103	.254	-.866	.503
LN2	3	5	3.76	.769	.453	.254	-1.167	.503
LN3	3	5	3.88	.700	.173	.254	-.926	.503
LN4	3	5	3.92	.738	.124	.254	-1.134	.503
LN5	3	5	3.57	.582	.435	.254	-.704	.503
LN6	3	5	3.99	.772	.019	.254	-.307	.503
PV1	3	5	4.04	.702	-.062	.254	-.932	.503
PV2	3	5	4.13	.584	-.021	.254	-.124	.503
PV3	3	5	4.11	.626	-.082	.254	-.430	.503
PV4	3	5	4.11	.678	-.138	.254	-.790	.503
PV5	3	5	4.10	.704	-.142	.254	-.946	.503
CM1	3	5	4.22	.576	-.042	.254	-.310	.503
CM2	3	5	4.17	.623	-.127	.254	-.468	.503
CM3	3	5	4.19	.634	-.175	.254	-.565	.503
CM4	3	5	4.12	.650	-.124	.254	-.616	.503
CM5	3	5	4.03	.741	-.053	.254	-.156	.503
ISP1	3	5	3.87	.603	.061	.254	-.279	.503
ISP2	3	5	4.24	.708	-.390	.254	-.931	.503
ISP3	3	5	4.14	.758	-.249	.254	-.209	.503
ISP4	3	5	4.12	.684	-.159	.254	-.831	.503
ISP5	3	5	4.02	.734	-.035	.254	-.118	.503
ISP6	3	5	4.17	.723	-.264	.254	-1.036	.503
ISP7	3	5	4.14	.696	-.203	.254	-.902	.503
Valid N (listwise)								

Distribution normality of responses (Patient Data)

	Min	Max	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
PPO1	2	5	3.87	.771	-.132	.129	-.581	.256
PPO2	2	5	3.93	.744	-.245	.129	-.338	.256
PPO3	2	5	3.95	.779	-.263	.129	-.521	.256
PPO4	2	5	3.87	.812	-.384	.129	-.290	.256
PPO5	2	5	3.91	.777	-.551	.129	.187	.256
PPO6	2	5	3.99	.816	-.573	.129	-.064	.256
PPO7	2	5	3.95	.806	-.230	.129	-.728	.256
PPO8	2	5	3.86	.778	-.111	.129	-.636	.256
PPO9	2	5	3.79	.706	-.164	.129	-.158	.256
PPO10	2	5	3.90	.760	-.209	.129	-.437	.256
PPO11	2	5	3.91	.748	-.287	.129	-.227	.256
PPO12	2	5	3.92	.729	-.353	.129	.006	.256
INV1	1	5	3.85	1.104	-.698	.129	-.434	.256
INV2	1	5	3.88	1.042	-.814	.129	.031	.256
INV3	1	5	3.95	1.089	-.779	.129	-.257	.256
INV4	1	5	3.89	1.105	-.732	.129	-.433	.256
INV5	1	5	3.95	1.076	-.743	.129	-.409	.256
INV6	1	5	3.92	1.068	-.744	.129	-.310	.256
SDM1	2	5	3.39	.707	1.088	.129	.430	.256
SDM2	2	5	3.42	.688	.928	.129	.201	.256
SDM3	1	5	3.32	.673	.889	.129	.366	.256
SDM4	1	5	3.36	.682	.724	.129	.986	.256
SDM5	1	5	3.32	.677	.909	.129	.361	.256
SDM6	1	5	3.39	.711	.782	.129	.772	.256
SDM7	1	5	3.37	.687	.774	.129	.974	.256
SDM8	2	5	3.34	.664	1.049	.129	.814	.256
SDM9	2	5	3.37	.680	.937	.129	.495	.256
EM1	2	5	4.18	.885	-.822	.129	-.199	.256
EM2	2	5	4.14	.913	-.831	.129	-.182	.256
EM3	2	5	4.11	.927	-.714	.129	-.501	.256
EM4	2	5	4.09	.881	-.701	.129	-.283	.256
TR1	3	5	4.20	.632	-.189	.129	-.607	.256
TR2	3	5	4.22	.660	-.274	.129	-.754	.256
TR3	1	5	4.11	.703	-.352	.129	-.012	.256
TR4	1	5	4.11	.690	-.350	.129	.138	.256
TR5	1	5	4.17	.688	-.436	.129	.223	.256
TR6	3	5	4.28	.631	-.310	.129	-.667	.256
TR7	3	5	4.21	.681	-.296	.129	-.852	.256
AS1	1	5	3.72	.828	-.627	.129	.399	.256
AS2	3	5	3.96	.632	.031	.129	-.486	.256
AS3	1	5	3.84	.925	-.641	.129	.231	.256
AS4	3	5	4.00	.682	.003	.129	-.839	.256
AS5	3	5	3.92	.641	.075	.129	-.572	.256
PE1	3	5	3.83	.666	.210	.129	-.773	.256
PE2	3	5	3.86	.651	.143	.129	-.671	.256
PE3	3	5	3.88	.674	.143	.129	-.803	.256
PE4	3	5	3.72	.598	.191	.129	-.568	.256
PE5	3	5	3.87	.691	.182	.129	-.905	.256
PE6	3	5	3.93	.639	.058	.129	-.547	.256
PE7	3	5	3.93	.670	.087	.129	-.766	.256
PE8	3	5	3.91	.612	.048	.129	-.348	.256
SSK1	3	5	4.11	.644	-.103	.129	-.605	.256
SSK2	3	5	4.09	.672	-.103	.129	-.786	.256
SSK3	3	5	4.14	.706	-.203	.129	-.983	.256
SSK4	3	5	4.13	.674	-.161	.129	-.804	.256

SSK5	3	5	4.17	.658	-.198	.129	-.727	.256
SSK6	3	5	4.23	.644	-.247	.129	-.682	.256
SSK7	3	5	4.16	.691	-.228	.129	-.902	.256
SSK8	3	5	4.12	.684	-.156	.129	-.861	.256
SSK9	3	5	4.21	.675	-.277	.129	-.822	.256
SSK10	3	5	4.21	.659	-.256	.129	-.749	.256
INT1	1	5	3.55	.922	-.290	.129	-.589	.256
INT2	1	5	3.48	.953	-.208	.129	-.777	.256
INT3	1	5	3.47	.961	-.252	.129	-.739	.256
INT4	1	5	3.39	1.020	-.172	.129	-.854	.256
INT5	1	5	3.29	1.054	-.094	.129	-.816	.256
INT6	1	5	3.32	1.072	-.091	.129	-.607	.256
INT7	1	5	3.38	1.019	-.078	.129	-.879	.256
INT8	1	5	3.53	.975	-.329	.129	-.720	.256
INT9	1	5	3.39	1.114	-.029	.129	-.135	.256
LN1	1	5	3.82	1.023	-.367	.129	-.539	.256
LN2	1	5	3.89	1.114	-.114	.129	-.836	.256
LN3	1	5	3.68	1.086	-.283	.129	-.873	.256
LN4	1	5	3.58	1.137	.040	.129	-.166	.256
LN5	1	5	3.40	1.110	-.072	.129	-.084	.256
LN6	1	5	3.79	1.129	-.172	.129	-1.029	.256
PV1	1	5	4.11	.758	-.638	.129	.823	.256
PV2	1	5	4.09	.733	-.853	.129	.802	.256
PV3	1	5	4.02	.758	-.602	.129	.814	.256
PV4	1	5	4.21	.745	-.615	.129	.881	.256
PV5	1	5	3.77	.730	-.655	.129	.989	.256
CM1	2	5	4.14	.701	-.743	.129	1.135	.256
CM2	2	5	4.02	.700	-.515	.129	.489	.256
CM3	2	5	4.11	.594	-.516	.129	.762	.256
CM4	1	5	4.18	.701	-.703	.129	1.232	.256
CM5	1	5	3.96	.815	-.637	.129	.536	.256
ISP1	1	5	4.04	.777	-.706	.129	1.064	.256
ISP2	1	5	3.84	.772	-.852	.129	.519	.256
ISP3	1	5	3.85	.773	-.529	.129	.553	.256
ISP4	1	5	4.24	.792	-.647	.129	.681	.256
ISP5	1	5	4.01	.740	-.651	.129	.837	.256
ISP6	1	5	3.94	.793	-.738	.129	.840	.256
ISP7	1	5	4.13	.765	-.422	.129	.417	.256
Valid N (listwise)								

Appendix VIII

EFA pattern matrices of the datasets

Doctor's data set – Partnership variables

Pattern Matrix

	Component		
	1	2	3
PPO6	.876		
PPO8	.869		
PPO4	.866		
PPO9	.861		
PPO2	.834		
PPO1	.832		
PPO10	.786		
INV1		.885	
INV4		.874	
INV2		.830	
INV3		.811	
INV5		.636	
SDM3			.974
SDM7			.967
SDM4			.834
SDM9			.810
SDM2			.640
SDM8			.626

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.743
Bartlett's Test of Sphericity	Approx. Chi-Square	721.630
	df	105
	Sig.	.000

Doctor's data set – beliefs and perceptions variables

Pattern Matrix

	Component			
	1	2	3	4
PER2	.932			
PER3	.901			
PER4	.893			
PER1	.840			
PER7	.801			
PER6	.757			
PER5	.755			
TR1		.870		
TR5		.864		
TR7		.848		
TR4		.848		
TR2		.833		
TR6		.819		
EM4			.960	
EM3			.949	
EM2			.877	
EM1			.853	
ASS4				.923
ASS1				.874
ASS3				.854
ASS2				.773

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.716
Bartlett's Test of Sphericity	Approx. Chi-Square	1067.930
	df	190
	Sig.	.000

Doctor's data set – social context variables

Pattern Matrix

	Component		
	1	2	3
INT5	.936		
INT2	.929		
INT6	.913		
INT7	.866		
INT3	.839		
SOSK4		.899	
SOSK5		.881	
SOSK9		.873	
SOSK3		.852	
SOSK7		.842	
SOSK2		.820	
LN5			.932
LN2			.830
LN4			.820
LN6			.813
LN3			.777
LN1			.726

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.789
Bartlett's Test of Sphericity	Approx. Chi-Square	1345.215
	df	190
	Sig.	.000

Doctor's dataset - improved service engagement (ISE), perceived value realised (PVAL) and Compliance (CM)

Pattern Matrix

	Component		
	1	2	3
ISE3	.906		
ISE4	.891		
ISE7	.878		
ISE1	.878		
ISE2	.823		
PVAL3		.868	
PVAL1		.823	
PVAL5		.805	
PVAL4		.709	
CM1			.835
CM2			.780
CM5			.745
CM4			.737
CM3			.731

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.806
Bartlett's Test of Sphericity	Approx. Chi-Square	665.133
	df	120
	Sig.	.000

Exploratory Factor analysis of dyadic data

Dyadic data – partnership variables

Pattern Matrix

	Component		
	1	2	3
DYADPPO8	.919		
DYADPPO6	.868		
DYADPPO1	.847		
DYADPPO2	.845		
DYADPPO10	.803		
DYADPPO4	.607		
DYADINV5		.895	
DYADINV3		.873	
DYADINV2		.840	
DYADINV4		.847	
DYADINV1		.643	
DYADSDM8			.915
DYADSDM2			.901
DYADSDM7			.888
DYADSDM9			.784
DYADSDM4			.613
DYADSDM3			.503

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.830
Bartlett's Test of Sphericity	Approx. Chi-Square	954.066
	df	120
	Sig.	.000

Dyadic data – beliefs and perceptions variables

Pattern Matrix

	Component			
	1	2	3	4
DYADPE2	.915			
DYADPE1	.909			
DYADPE4	.864			
DYADPE6	.849			
DYADPE3	.823			
DYADPE7	.789			
DYADPE5	.759			
DYADPE8	.662			
DYADTR4		.869		
DYADTR1		.856		
DYADTR7		.815		
DYADTR2		.789		
DYADTR5		.745		
DYADEM3			.765	
DYADEM1			.745	
DYADEM2			.563	
DYADAS4				.875
DYADAS1				.712
DYADAS3				.689
DYADAS2				.588

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.786
Bartlett's Test of Sphericity	Approx. Chi-Square	742.001
	df	120
	Sig.	.000

Dyadic data – social context variables

Pattern Matrix

	Component		
	1	2	3
DYADINT2	.870		
DYADINT4	.820		
DYADINT3	.795		
DYADINT6	.790		
DYADINT7	.768		
DYADINT5	.686		
DYADINT8	.645		
DYADLN5		.987	
DYADLN3		.874	
DYADLN2		.822	
DYADLN1		.786	
DYADLN6		.749	
DYADSK5			.809
DYADSK4			.759
DYADSK8			.680
DYADSK3			.680
DYADSK7			.664
DYADSK2			.547
DYADSK9			.527

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.837
Bartlett's Test of Sphericity	Approx. Chi-Square	896.565
	df	136
	Sig.	.000

Dyadic data – improved service engagement (DYADISE), perceived value realised (DYADPV), and compliance (DYADCM)

Pattern Matrix

	Component		
	1	2	3
DYADISE3	.874		
DYADISE7	.855		
DYADISE2	.831		
DYADISE6	.782		
DYADISE1	.712		
DYADISE4	.695		
DYADPV2		.855	
DYADPV3		.826	
DYADPV1		.825	
DYADPV5		.786	
DYADPV4		.628	
DYADCM1			.877
DYADCM4			.780
DYADCM5			.770
DYADCM3			.767
DYADCM2			.726

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.781
Bartlett's Test of Sphericity	Approx. Chi-Square	807.764
	df	120
	Sig.	.000

EFA – Patient's data set

Pattern Matrix

	Factor												
	1	2	3	4	5	6	7	8	9	10	11	12	13
SSK9	.936												
SSK5	.911												
SSK3	.903												
SSK4	.861												
SSK2	.844												
SSK7	.829												
PER8		.909											
PER2		.897											
PER6		.889											
PER3		.834											
PER5		.824											
PER4		.793											
PER1		.735											
SDM4			.878										
SDM3			.844										
SDM7			.843										
SDM9			.828										
SDM8			.811										
SDM2			.809										
TR4				.925									
TR3				.904									
TR2				.865									
TR5				.832									
TR1				.815									
TR6				.765									
TR7				.720									
INT2					.841								
INT3					.765								
INT6					.700								
INT4					.675								
ISE3						.921							
ISE2						.864							
ISE5						.794							
ISE4						.782							
ISE7						.665							
ISE6						.664							
ISE1						.664							
ASS5							.872						
ASS2							.857						
ASS4							.851						
ASS3							.846						
ASS1							.807						
INV3								.785					
INV5								.740					
INV2								.680					
LN6									.892				
LN5									.885				
LN1									.810				
LN3									.705				
PPO1										.934			
PPO6										.780			
PPO4										.751			
PPO2										.710			
PV3											.897		
PV1											.854		
PV2											.846		

PV5											.784		
PV4											.776		
EM2												.922	
EM3												.920	
EM1												.919	
EM4												.850	
CM1													.832
CM2													.764
CM3													.733
CM4													.593

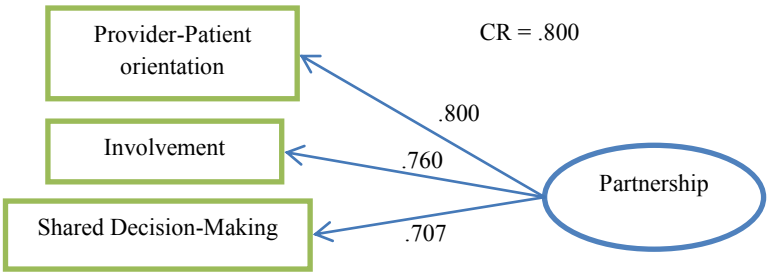
KMO and Bartlett's Test

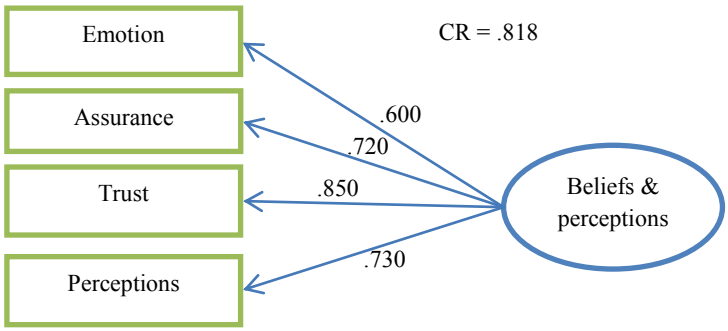
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.837
Bartlett's Test of Sphericity	Approx. Chi-Square	19828.278
	df	2775
	Sig.	.000

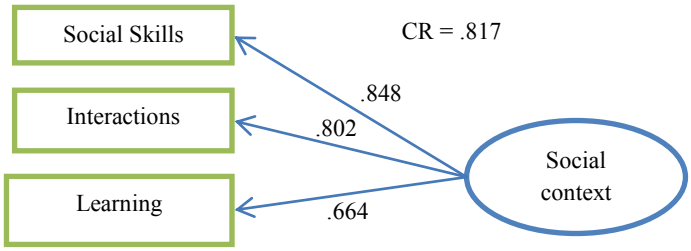
Appendix IX

Assessment of second-order variables

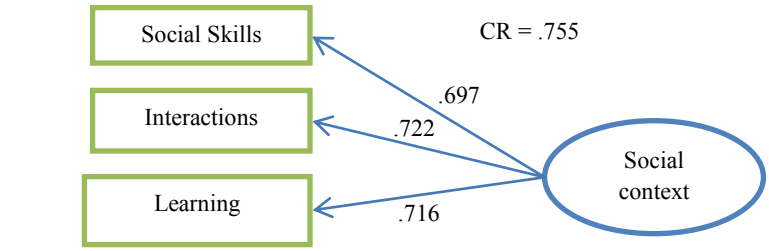
Dyadic dataset

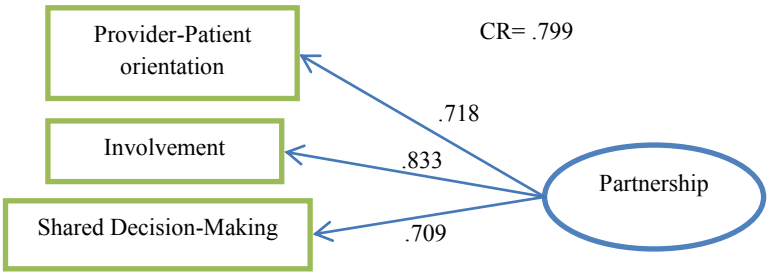


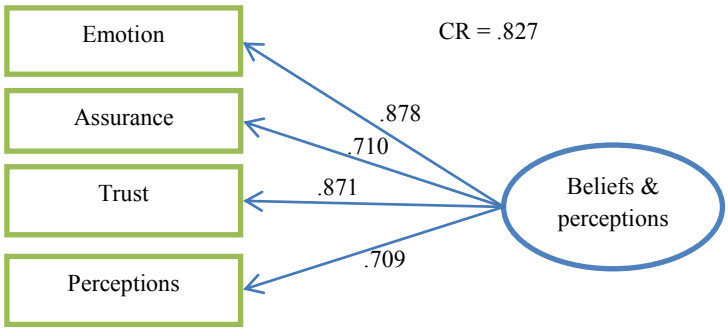




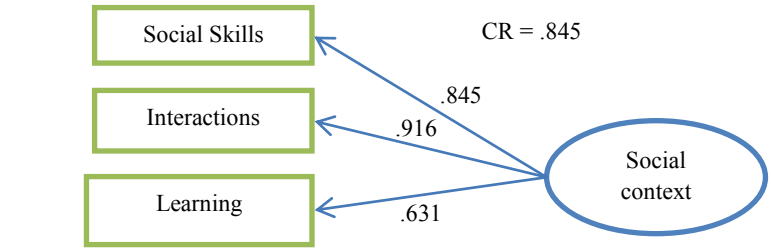
Doctor dataset

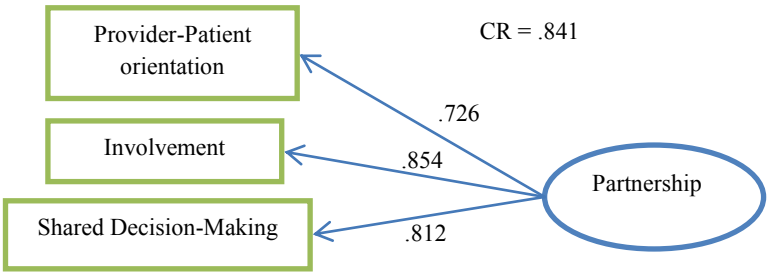


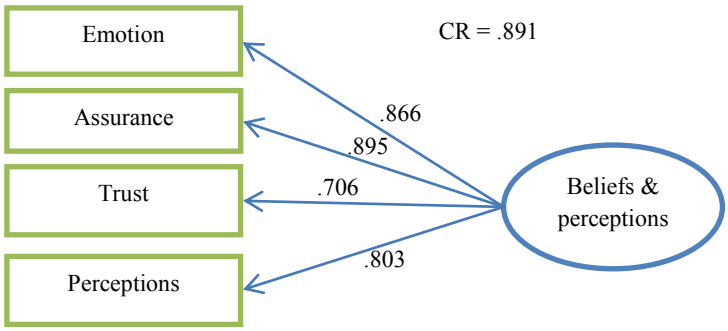




Patient dataset







Appendix X

Assessment of multivariate normality – AMOS output

Dyadic data

Variable	min	max	skew	c.r.	kurtosis	c.r.
Improved service engagement	3.084	4.529	-.229	-.888	-.709	-1.373
Compliance	2.733	4.048	.152	.589	-.371	-.718
Learning	1.682	2.889	.277	1.074	-.362	-.701
Perceived value	2.536	3.998	-.133	-.516	-.229	-.443
Involvement	2.145	3.432	-.104	-.404	-.654	-1.267
Shared decision-making	2.275	3.522	.090	.350	-.969	-1.877
Provider-patient orientation	2.508	3.703	.113	.437	-.937	-1.814
Interaction	2.617	3.882	.172	.664	-1.240	-2.402
Social skill	2.198	3.477	-.329	-1.275	-.708	-1.372
Trust	2.545	4.314	-.395	-1.531	-.122	-.235
Emotion	1.499	2.761	.286	1.109	-.252	-.489
Assurance	2.169	3.179	-.289	-1.118	-.014	-.028
Perception	2.568	4.413	-.001	-.002	-.704	-1.363
Multivariate					**1.564**	**.376**

Assessment of multivariate normality

Doctor's data

Variable	min	max	skew	c.r.	kurtosis	c.r.
Improved service engagement	2.509	4.182	-.128	-.488	-1.049	-1.998
Compliance	2.303	3.838	-.058	-.222	-.325	-.619
Learning	2.548	4.247	.089	.339	-1.165	-2.217
Perceived value	2.542	4.237	-.084	-.322	-.415	-.790
Involvement	2.720	4.534	.305	1.162	-.186	-.354
Shared decision-making	1.924	3.240	-.167	-.637	-.562	-1.070
Provider-patient orientation	2.336	3.894	.009	.035	-.667	-1.270
Interaction	2.263	3.771	.354	1.348	-1.193	-2.271
Social skill	2.682	4.470	-.414	-1.577	-.838	-1.596
Trust	2.934	4.890	-.410	-1.560	-.512	-.975
Emotion	2.987	4.978	-.193	-.735	-.790	-1.504
Assurance	1.740	2.899	-.066	-.250	-.755	-1.438
Perception	2.976	4.959	-.010	-.036	-.991	-1.887
Multivariate					**11.242**	**2.655**

Assessment of multivariate normality

Patient's data

Variable	min	max	skew	c.r.	kurtosis	c.r.
Improved service engagement	1.298	4.938	-.454	-3.489	.889	3.419
Compliance	2.126	4.995	-.412	-3.172	1.312	5.048
Learning	1.129	4.969	.043	.333	-.695	-2.673
Perceived value	1.076	4.938	-.607	-4.666	1.326	5.099
Involvement	.973	4.538	-.104	-.802	-.591	-2.273
Shared decision-making	.887	4.137	.696	5.356	.413	1.590
Provider-patient orientation	.920	4.888	-.260	-2.004	-.562	-2.163
Interaction	.815	4.296	-.097	-.743	-.447	-1.721
Social skill	1.211	4.943	-.459	-3.530	-.333	-1.279
Trust	1.348	4.810	-.635	-4.885	.940	3.616
Emotion	.933	4.823	.270	2.075	-.980	-3.768
Assurance	.737	4.023	-.614	-4.727	1.105	4.250
Perception	.991	4.953	-.305	-2.348	-.266	-1.023
Multivariate					**1.165**	**.556**

Appendix XI

Median Values of the Moderating Factors

Doctor's length of practice

Statistics

N	Valid	90
	Missing	0
Median		2.00

Length of practice

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 - 5 years (1)	33	36.7	36.7	36.7
	5 - 10 years (2)	18	20.0	20.0	56.7
	11 - 15 years (3)	12	13.3	13.3	70.0
	16 - 20 years (4)	7	7.8	7.8	77.8
	21 - 25 years (5)	14	15.6	15.6	93.3
	26 - 30 years (6)	6	6.7	6.7	100.0
	Total	90	100.0	100.0	

Patient's frequency of visit to a health facility

Statistics

N	Valid	360
	Missing	0
Median		4.00

Frequency of visit to hospital

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	< month (1)	39	10.8	10.8	10.8
	between 1 - 3 months (2)	64	17.8	17.8	28.6
	every 6 months (3)	27	7.5	7.5	36.1
	once a year (4)	71	19.7	19.7	55.8
	Other* (5)	159	44.2	44.2	100.0
	Total	360	100.0	100.0	

*Patients attend hospital only when they are sick and most of them answered 'once in 2 years or more'

Patient's age

Statistics

N	Valid	360
	Missing	0
Median		2.00

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	21 - 30 years (1)	141	39.2	39.2	39.2
	31 - 40 years (2)	107	29.7	29.7	68.9
	41 - 50 years (3)	41	11.4	11.4	80.3
	51 - 60 years (4)	71	19.7	19.7	100.0
	Total	360	100.0	100.0	

Patient's educational background

Statistics

N	Valid	360
	Missing	0
Median		2.00

Educational background

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Other* (1)	64	17.8	17.8	17.8
	Senior High School (2)	142	39.4	39.4	57.2
	Higher National Diploma (3)	45	12.5	12.5	69.7
	Professional Qualification (4)	24	6.7	6.7	76.4
	Undergraduate (5)	30	8.3	8.3	84.7
	Bachelor's Degree (6)	40	11.1	11.1	95.8
	Post-Graduate (7)	15	4.2	4.2	100.0
	Total	360	100.0	100.0	

*Other – include patients who have received basic education (Junior High school, vocational school or middle school in Ghana)