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Collaborative Partnerships to Assist in Managing Adult-Onset Diabetes in Cameroon

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Abstract

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MSN, California State University Los Angeles, 2001

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Dissertation Submitted in Fulfillment

of the Requirements for the Degree of

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Abstract

Increasing rates of adult-onset diabetes in low- to middle-income countries (LMICs) present a growing healthcare concern that requires a regulatory approach and local community engagement. Cross-sector collaboration (CSC) is an effective strategy for improving community health. CSC is not effectively used to manage adult-onset diabetes in LMICs, nor is there public policy advocating CSC in the management of diabetes. This qualitative exploratory case study explored how leadership and resources affect the use of CSC to assist in managing the adult-onset of diabetes in a CSC in Cameroon. A purposeful sampling strategy was used to identify participants for semistructured interviews of 10 executives involved in the CSC. CSC theory provided a theoretical framework. Collected data were organized by audio recording, transcribing, translating, member checking, and thematically coding data using NVivo 12 software. Data from a review of documents and researcher observations were triangulated with interview data. Findings revealed that poverty, access to health care, and rising diabetes prevalence contributed to environmental turbulence. Goal-setting and objectives, intersectoral-communication, fostering trust and respect, and sharing data and motivating people presented leadership effectiveness challenges. The following resource challenges emerged in the CSC: public policy, money, skills and expertise, equipment and supplies, and connection to the target population. This increased scientific understanding could help government policy-makers and nongovernmental organizations expand public policy leading to a decrease in the prevalence and burden of adult-onset diabetes.

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Dedication

This dissertation is dedicated to my beloved mother, Antonia Aka Forju, who died unexpectedly from the complications of diabetes, a condition that could have been better managed implementing CSC strategy. Her unanticipated death was the impetus for selecting this topic in hopes of bridging the gap in scientific knowledge regarding why the strategy is not successfully used in Cameroon to assist in managing diabetes. I hope my findings could help government policy-makers and nongovernmental organizations expand public policy leading to a decrease in the prevalence and burden of adult-onset diabetes.

Acknowledgments

Without the moral support of my brother and idol, Dr. Bernard A. Foju and my mentor and editor Dr. Angela Mai, this research would go unfinished. Dr. Foju motivated me to never lose faith in my ability to complete my dissertation and gain a Ph.D. His indubitable pursuit of excellence inspired me to stay up late and progress further. Similarly, Dr. Mai, my mentor, and editor, took a special interest in ensuring that I did not lose my faith in completing this doctoral level scholarly research, especially when she found out that, like her, I was an inductee into Phi Alpha Alpha society. She always challenged me to be scholarly in my writing, productive, and conduct the study within the approved IRB guidelines. Dr. Mai was my most significant source of inspiration! Thank you, Dr. Mai.

Other family members also supported me along the way, showed genuine interest, and cheered me on. My Children Antonia Aka Forju, Christopher Jingwa Forju Jr, and wife Hermione Tchuisse were tolerant enough to let me travel from California, USA to conduct this study in Cameroon. While I was in Cameroon, my niece Mispa Atem provided needed support to ensure I was successful in this endeavor. I will ever be grateful for their support.

I thank all the academic associates who aided and encouraged me. This research would not be as complete without the invaluable scholarly guidance of Dr. Mark Gordon, exceptional content review by Dr. Christopher Jones, and the vital expert critique of Dr. Steven Matarelli, as well as the inestimable guidance provided by Dr. Felix Assah and Dr. Jean Claude Mbanya in Cameroon. Thank you all!

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Chapter 1: Introduction to the Study

Cameroon's population continues to grow despite high mortality rates (Central Intelligence Agency [CIA], 2019; World Health Organization [WHO], 2015). As of 2018, the estimated population of Cameroon was just over 25 million and growing annually at 2.5% (CIA, 2019). WHO estimated Cameroon's infant mortality rate at 5.5% (55/1000) in 2015 and the CIA reported 4.9% (49/1000) in 2018. The CIA also reported the infant mortality rate of Ghana, another West African country, at 6.1% (61/1000). Additionally, the life expectancy rate in Cameroon is shorter than in other countries. Life expectancy in Cameroon was 57 years in 2015 and 59 years in 2018 (CIA, 2019; WHO, 2015). Life expectancy in Ghana in 2018 was 63.4 years; whereas in the United States, it was 80 and 84 years for males and females respectively (CIA, 2018). Thus, Cameroon is home to increasing numbers of citizens with significantly shorter than average life expectancies.

This qualitative exploratory case study took place in Cameroon. Public policy in Cameroon continues to undergo scrutiny and development, particularly in the areas of human rights (Bruno, 2016; Raoul, 2018). Following the Human Rights Commission of the Cameroon Bar in 2016, Bruno reported that the top key recommendation was the integration of nonstate actors and ongoing evaluation of Cameroon Public Policy effectiveness. Such integration of nonstate actors supports the use of CSC between government and nongovernment organizations in broaching public policy and a multitude of human rights concerns. However, Raoul reported policy discrimination toward economically poor households.

Many citizens in this growing LMIC live under poor economic circumstances (Doffonsou & Singh, 2014; Echouffo-Tcheugui & Kengne, 2011). In 2018, 56.4% of Cameroon's population lived in urban areas, which grew 2.8% per year from 2014 to 2018 (CIA, 2018; Index Mundi, 2017). A 2001 survey found that 40% of the population in Cameroon lived below the poverty line (< $1 United States dollar [USD] per day; Doffonsou & Singh, 2014; Echouffo-Tcheugui & Kengne, 2011). When Doffonsou and Singh repeated their 2007 study, they found that 37% of the Cameroon population lived below the poverty line, reflecting only a 3% improvement. The documented unemployment rate was 30% in 2014 (CIA, 2018), further demonstrating the poor economic conditions of the country. These statistics demonstrate Cameroon's LMIC status and present a growing economic and public health challenge that requires regulatory approaches and local community engagement. A closer look at Cameroon's history related to public policy and health care helps explain the need for this case study.

In Cameroon, there is no national health insurance system, no public policy addressing private healthcare, and less than 6% of the Cameroon government expenditures goes toward health care (Our Africa, 2016; Pacific Prime, 2017). In Cameroon, out-of-pocket payments primarily fund healthcare (WHO, 2005a), which remains one of the most inequitable forms of health financing because it acts as a barrier in accessing health care to impoverished populations. About 1.3 billion people globally lack access to health care due to weak health care financing systems (Johnson, Stoskopf, & Shi, 2017). Very few people enroll in private insurance companies as health insurance is almost none existent in Cameroon (Pacific Prime, 2017). Our Africa reported that high

medical fees lead to patient deaths due to their inability to pay for treatment. As a result, life-long noncommunicable diseases requiring ongoing medical maintenance equate to death for many Cameroonians. Thus, Cameroon's lack of effective public policy about health care further impedes the country's economic standing.

The Prevalence of Noncommunicable Disease

Chronic conditions that result from noncommunicable diseases, such as heart disease and stroke, kill more people globally than the acute onset of those diseases (WHO, 2015). WHO reported that noncommunicable diseases accounted for 63% of global deaths in 2013 and projected them to outpace communicable diseases by 2030 in LMICs (Guariguata et al., 2014; Johnston & Finegood, 2015; WHO, 2015). Of 56.9 million global deaths in 2016, 40.5 million (71%) were due to noncommunicable diseases (WHO, 2016). The four main noncommunicable diseases are cardiovascular diseases, cancers, diabetes and chronic lung diseases (WHO, 2017). Over time, all four lead to serious, life-threatening complications. For example, some complications of untreated diabetes include damaged blood vessels, nervous system, and heart disease resulting in premature deaths.

The burden of these diseases is rising disproportionately among LMICs and lower-income populations (WHO, 2015). More than 82% of global deaths stemming from noncommunicable diseases occurred in LMICs (WHO, 2015), such as Cameroon, whose public-health related policies are ineffective. In 2015, WHO projected noncommunicable disease-related deaths in LMICs would rise from 14 million in 2012 to 22 million in 2030. WHO's 2017 reports demonstrated those 2015 projections were

inadequately low. Of the 31.5 million noncommunicable-disease–related deaths in 2016, over three-quarters occurred in LMICs with about 46% occurring before the age of 70 (WHO, 2017).

The leading causes of noncommunicable disease deaths in 2016 were cardiovascular diseases (17.9 million or 44%); cancers (9.0 million or 22%); and respiratory diseases, including asthma and chronic obstructive pulmonary disease (3.8 million or 9%; WHO, 2017). Diabetes caused another 1.6 million global deaths (WHO, 2017). While WHO (2015) reported that cancer has the fastest rising mortality rate globally in comparison with other noncommunicable diseases, two major factors influenced that statistic: (a) Unlike diabetes, which is typically conveyed as stratified between Type I and II, cancer reports usually combine different subtypes of cancer in one overall mortality accounting; and (b) less effective cancer diagnosis and management efforts, due to LMICs' lack of resources, make management of different cancer forms very difficult and, thus, difficult to study. According to Orang-Ojong et al. (2013), the risk of receiving a diagnosis of cancer before the age of 75 in Cameroon is 8.7%.

According to WHO (2015), in comparison to other noncommunicable diseases, the diabetes prevalence in LMICs in adults 18 years of age and above, rose the fastest, making this noncommunicable disease increasingly life-threatening in countries such as Cameroon. The International Diabetes Federation, Africa (IDFA; 2015) reported that the prevalence of Types 1 and 2 (adult-onset) diabetes would increase from 14 million in 2014 to more than 28 million by 2040 in LMICs. Therefore, I selected policy associated with adult-onset diabetes management and CSC as the focus of this study. There is a

significant gap in knowledge related to diabetes which required expanding my literature review to include all types of diabetes to establish the general ontology of the problem.

I selected Cameroon for this study due to the rising incidence of diabetes in the African region. The prevalence of diabetes in Cameroonian adults age 18 and above increased nearly 400% from 2% in 1990 to 7% in 2003 (Mbanya, Motala, Sobngwi, Assah, & Enoru, 2010). Mbanya et al. reported that 70% of people living with diabetes are undiagnosed. Mbanya et al. did not differentiate how much of that 70% was adult-onset diabetes. Other studies reported a rise of diabetes from 4% in 2010 to 7% in 2015 (IDFA, 2015; Mbanya, Assah, Saji, & Atanga, 2014). While these studies seem contradictory, all three sets of findings demonstrated a significant rise in diabetes within a brief period. Diabetes exists across all age groups, with a mean age onset of 49 ± 15 years (Hall, Thomsen, Henriksen, & Lohse, 2011). Hall et al. reported the male-female gender ratio as 2:1, thus, demonstrating a clear male predominance. It is unknown if this has changed historically due to the significant gap in the literature.

The rise in the prevalence of adult-onset diabetes is attributable to the drastic increase in sedentary lifestyles, rapid urbanization, poverty, and poor access to high-quality health care in Cameroon (Mbanya et al., 2014; Mbanya, Kengne, & Assah, 2006). Cameroon is plagued by the growing diabetes trend and is large enough to host several successful and unsuccessful CSCs. Meanwhile, the management of communicable diseases in Cameroon is highly prioritized over noncommunicable diseases which Echouffo-Tcheugui and Kengne (2011) attributed to ineffective public policy, a lack of

resources, and the underutilization of CSC. Thus, the burden of noncommunicable diseases in Cameroon is significant.

The Burden of Noncommunicable Disease

The increasing prevalence of noncommunicable diseases presents a growing economic and social-challenge worldwide that requires the engagement of the international communities in a global, societal, and regulatory approach (WHO, 2015). The most efficient way to manage and decrease the prevalence of adult-onset diabetes is through prevention (Johnston & Finegood, 2015). The management of adult-onset diabetes involves the reduction in risk factors, including aggressive tobacco control, healthier diets, reduced alcohol consumption, and increased physical activities (Thomas & Gostin, 2013; WHO, 2015). However, WHO reported that governments and international organizations focus efforts and resources on communicable diseases to the detriment of noncommunicable diseases.

Consequently, by 2030, the mortality rates from noncommunicable diseases will surpass those of communicable diseases (WHO, 2015). The group of eight leading industrialized nations (G8), central bank governors from the major 20 economies of the world (G20), and the United Nations' (UN's) Millennium goals do not target resources for the management of noncommunicable diseases (Thomas & Gostin, 2013). Millennium goals are the world's time-bound and quantified targets for addressing poverty, promoting gender equality, education, and environmental sustainability (WHO, 2015). Public policy in Cameroon follows suit. This situation creates a phase in which high mortality and increasing prevalence of diseases will continue if governments do not

seek more creative structures leading to a decrease in the prevalence of noncommunicable diseases. One solution could be the implementation of CSC synergy to fund health care programs throughout communities. Synergy is the ability of CSC partners to combine their perspective competencies and partnership resources to address the common interest in communities (Fried & Randal, 1994; Richardson & Allegrante, 2000). Such collaboration would incorporate the type of nonstate participation with government policies as suggested by Bruno (2016) and Lasker and Weiss (2003). However, Cameroon does not utilize CSCs to its best advantage to manage adult-onset diabetes, and public policy does not promote such use (Echouffo-Tcheugui & Kengne, 2011). The implementation of effective CSCs could foster the pooling of resources and expertise needed to manage adult-onset diabetes.

According to Jones and Barry (2011a) and Lasker et al. (2001), leadership and resources contribute the most to partnership synergy. Consequently, I limited this qualitative, exploratory case study to those two of the six determinants of synergy identified by the Center for the Advancement of Collaborative Strategies in Health (CACSH; 2002): (a) financial and material resources, and (b) leadership effectiveness. Accordingly, I qualitatively interviewed purposefully selected executive volunteers from the participant CSC partnership (N = 10). The purpose of my qualitative case study was to explore how leadership effectiveness and resources in a CSC, as perceived by CSC executives, affect the use of strategy to assist in managing adult-onset diabetes in Cameroon. Findings inform developing Cameroon public policy about national health management, noncommunicable diseases, and adult-onset diabetes.

Chapter 1 provides an overview of this exploratory case study and discusses how the study will add to the scientific knowledge base of the phenomenon and narrows the gap in the literature. This chapter includes a brief discussion of the study background, building on the recent scholarly research findings, and followed by the problem statement. The Purpose section provides a closer analysis that links the study to the issues it explored. Next, the Nature of the Study section includes the methodology and the rationale for selecting a qualitative case study before briefly touching on the collaborative theoretical framework of this study (see more in Chapter 2). Furthermore, this chapter presents key concepts, assumed aspects of the study, along with its scope, and outlines my qualitative research questions.

The two determinants of synergy, resources and leadership effectiveness, informed my selection of the cross-sector theoretical framework propositions that guided the qualitative interview questions for the study. Theoretical propositions provided explanations and predictions for obscure observations and phenomena. Bryson, Crosby, and Stone (2006) established the CSC propositions as key factors of the CSC theoretical framework. Subsequently, I formulated qualitative research questions (see Appendix A) based on these determinants and guided by propositions from the CSCT framework. Definitions of terms, assumptions made in the study, and the limitations of the study follow. Chapter 2 expands on the introduction in Chapter 1 and provides an in-depth scholarly literature review. Chapter 3 details the study methodology, Chapter 4 presents results, and Chapter 5 includes discussion and implication of findings.

Background

The global burden of noncommunicable diseases will surpass that of communicable diseases by 2020 (WHO, 2015). WHO forecasted that noncommunicable diseases would grow by 15% between 2010 and 2020, representing an annual growth rate of 1.5% globally. Managing adult-onset diabetes remains a challenge in LMICs where 85% of the 15 million annual global noncommunicable disease deaths occur (WHO, 2018). IDFA (2015) reported that Africa has a diabetes prevalence of 13.1%. IDFA did not distinguish between Type 1 and Type 2 diabetes. Guariguata et al. (2014) and Mbanya et al. (2014) reported that Africa experienced the highest increase in the occurrence of diabetes among LMICs. It is projected to rise by 21% between 2013 and 2035, putting estimates at 34% (13% + 21% = 34%). Cameroon has a growing diabetes trend that is projected to rise by 17% from 2013 through 2035 in the absence of effective public policy including coordinated interventions (Mbanya et al., 2014). The effective use of CSCs to address community health concerns is an applicable strategy to manage adult-onset diabetes and curb this trend.

A key driver for implementing CSCs to manage adult-onset diabetes is the recognition that complex social and health issues are beyond the realm of the government or any one sector (Bruno, 2016; Johnston & Finegood, 2015; Lasker & Weiss, 2003). The use of CSC could significantly synergize efforts to reverse the rising trends of diabetes through effective management and overall prevention (Johnston & Finegood, 2015; Thomas & Gostin, 2013). In LMICs, there is a lack of effective management of risk factors, which results in a higher prevalence of adult-onset diabetes. This management

involves aggressive tobacco control, healthier diets, reduced alcohol consumption, and increased physical activity, which have been effective in reducing the prevalence of adult-onset diabetes in LMICs (Thomas & Gostin, 2013). WHO (2013b) reported that synergized and effective CSCs in LMICs could generate adequate resources and expertise needed to improve the health and social service needs of communities. Only a few scholarly researchers looked at the efficacy of CSC in managing adult-onset diabetes influenced by resources and leadership effectiveness in LMICs such as Cameroon (Echouffo-Tcheugui & Kengne, 2011). I found no research associated with public policy aimed at health management through CSC.

Gap in the Literature

Effective synergy is required to harness CSC resources and expertise in the management of adult-onset diabetes in LMICs (Johnston & Finegood, 2015; Thomas & Gostin, 2013). However, outcomes on synergy differ between CSC partners based on the determinants of synergy between the CSCs (Jones & Barry, 2011a; Lasker et al., 2001). Rani, Musrat, and Hawken (2012) opined that building and maintaining multisector government partnerships present challenges because CSC members have noticeably different personnel competencies, performance measures, decision-making styles, organizational cultures, and motivational structures. An informed public policy could help establish competent health management strategies (Rani et al., 2012). Rani et al. conducted a qualitative review of public policy and program documents along with data gathered from global key information surveys conducted in 2004 and 2011 about five Asian LMICs. Rani et al. examined the evolving response to the global call for increased

use of CSCs across different sectors and acknowledged the need for more CSCs. Rani et al. identified limiting factors to the effective management of noncommunicable diseases as inadequate resources, financial and nonfinancial factors (resources), poor coordination (potential resources), weak alignment (potential leadership), limited human resources, and questionable implementation (leadership). Rani et al.'s findings provide insight into potential factors inhibiting the efficacy of collaboration in LMICs, thus, indicating a possible focus on leadership and resources as potential barriers to CSC synergy.

A limited number of scholarly studies exist that address the use of CSC in community health partnerships to manage noncommunicable diseases in LMICs or public policy associated with them (Johnston & Finegood, 2015; Thomas & Gostin, 2013). Echouffo-Tcheugui and Kengne (2011) conducted a meta-analysis of peer-reviewed studies addressing noncommunicable diseases (including diabetes) and CSCs in Cameroon. Echouffo-Tcheugui and Kengne scrutinized relevant publications and extracted data on the prevalence, risk factors, and complications of noncommunicable diseases. Echouffo-Tcheugui and Kengne found that private and public sectors had traditionally underused CSCs in Cameroon to manage adult-onset diabetes. No study about collaboration measured synergy relative to resources and leadership effectiveness in LMICs such as Cameroon. No study, prior to my study, analyzed findings with the intent to inform public policy related to healthcare management using CSC. In my scholarly inquiry, I aimed to increase the scientific and scholarly understanding of the health sector in Cameroon to inform effective public policy critical to overcoming the rising mortality rate resulting from increasing prevalence of adult-onset diabetes. This

study explored the underuse of CSC relative to resources and leadership effectiveness in managing adult-onset diabetes in Cameroon. This increased scholarly insight could inform positive public policy development and initiatives.

Problem Statement

Cameroon public policy does not adequately provide for health management related to noncommunicable diseases; nor does it address CSC utilization to solve this increasing social concern effectively (Echouffo-Tcheugui & Kengne, 2011; Johnston & Finegood, 2015). Prior to this study, very little was known about why CSC is underused in Cameroon, particularly in association with health management of noncommunicable diseases, including diabetes. Partnerships present a significant strategy to synergize the efforts of government and multisector partners in promoting community health issues (Thomas & Gostin, 2013; WHO, 2013b). The challenges surrounding the underuse may be hampering government efforts to develop policies that positively influence public strategy to foster CSC use in helping to manage adult-onset diabetes in Cameroon. Advocates believe that CSC could significantly synergize efforts to reverse the rising trends of diabetes through effective management and overall prevention (Johnston & Finegood, 2015; Thomas & Gostin, 2013), which could be promoted by appropriately informed public policy. Consequently, a decrease in the prevalence of adult-onset diabetes would lead to positive social change, including reduced poverty, increased life expectancy, and decreased government spending on healthcare. This qualitative case study addressed that existing gap in the literature.

Purpose of the Study

The purpose of this qualitative case study was to explore how leadership effectiveness and tangible and intangible resources in a partnership, as perceived by the CSC executives, affects the use of strategy to help manage of adult-onset diabetes in Cameroon. Triangulated findings from the qualitative interviews, observation of participants, and the review and analysis of organizational documents can inform public policy and provide information that may help CSC partnerships take actions resulting in the development of an effective collaborative process. This added scholarly knowledge will help develop appropriate and effective public policy; thus, spreading beyond the sample participants. Since demonstrated collaboration efforts promote community health in other areas (Thomas & Gostin, 2013; WHO, 2013b), this effort could increase the use of CSCs in Cameroon and associated public policy promoting CSC usage in a variety of community health efforts. Such an improvement could reduce the prevalence, burden, and mortality among the adult-onset diabetes population in Cameroon.

Research Question

The research question emerged after reviewing existing literature on the use of CSC to manage noncommunicable disease, such as adult-onset diabetes in LMICs, such as Cameroon. Prior studies demonstrated the efficacy of collaboration as a strategy to improve community health in the resource-poor settings found in LMICs. Despite this demonstrated success, Cameroon does not effectively employ partnerships to manage adult-onset diabetes nor does the country have any public policy directed at using CSC in health-care management. The effective use of collaboration in Cameroon to manage

adult-onset diabetes could reduce the country's increasing burden posed on the populace due to the increasing rate of adult-onset diabetes and the nonexistence of national health care directives. I analyzed the single, central, overarching research question by asking a series of open-ended interview questions (see Appendix A):

> How does leadership effectiveness and resource availability in a CSC, as perceived by the CSC executives, affect the use of strategy to assist in adult-onset diabetes management in Cameroon?

Framework: Cross-Sector Collaboration Theory

The framework of my study provided a focusing lens for scrutiny of the problem, literature review, and data analysis. The CSC theory (CSCT) developed by Bryson et al. (2006) guided the understanding of the CSC. Bryson et al.'s CSCT informed discussion of results and recommendations informing public policy.

Bryson et al.'s (2006) CSCT provided a useful model for understanding CSC because it was designed to analyze such collaborations accurately. Much of Bryson et al.'s work emanated from a long-standing, public-private partnership and other research of cross-sector policy tools (Solomon, 2002). The framework incorporates insights from structural theory and actor-network theory (Latour, 2005; Law & Hassard, 1999). The CSCT embodies five elements for assessing CSC effectiveness: initial conditions; process; structure and governance; contingencies and constraints; outcomes and accountabilities (Bryson et al., 2006). The inclusion of all five elements is necessary to fully consider all aspects of the CSC as they affect the partnership understanding and implementation. Bryson et al.'s CSCT incorporates the (a) contextual factors and

experiences leading to partnership formation; (b) the collaborative processes within the partnership; and (c) the structural characteristics, constraints, and contingencies limiting the partnership's effectiveness to provide a holistic method for analyzing partnerships. I evaluated the contingencies and constraints presenting implementation challenges through qualitative interviews with collaboration participants. CSCT propositions (statements held to be true within the model) guided the use of CSCT.

The CSCT embodies 21 propositions that address various aspects of the five elements embodied in the CSCT. Propositions from the framework guided the formation of the in-depth interview questions of the study (see Appendix A). A central tenet of the partnership model is the notion that by working jointly (forming CSCs) and combining effective leadership and resources, a team approach can be more constructive (Zahner, Oliver, & Siemering, 2014) than any single organization or government agency. The ideology of the CSCT infers that positive health promotion outcomes achieved using CSCs are the result of the process and the structure/governance of the partnership. Bryson et al. (2006) proposed that CSCs are more likely to succeed if leaders insist that there be accountability related to inputs, processes, and outcomes. Thus, in Chapters 4 and 5, I discuss results related to these elements with intent to inform developing public policy. Questions relating to who regulates the CSCs in Cameroon, if anyone, and what accountability exists, were among those under investigation. These questions added insight into the case study analysis.

According to Bryson et al. (2006), CSCs employ multiple methods for gathering, interpreting, and using qualitative and quantitative data. In my qualitative case study, I

formulated the open-ended qualitative questions (see Appendix A) to account for as much variation as possible. Chapter 2 presents a detailed framework discussion for understanding multisector collaborations.

Nature of the Study

In this study, based on the perspective of the executives of a CSC, a qualitative design explores how leadership effectiveness and resources affect the use of strategy to assist in managing adult-onset diabetes in Cameroon. Creswell (2013) opined that qualitative design employs an inductive theoretical approach that provides the needed flexibility to develop an in-depth understanding of the open-ended research question through a variety of data collection methods. Yin (2013) clarified that case studies provide a window to answer research questions where the researcher seeks to answer why and how in a research question. Creswell (2014) recommended an exploratory case study when the phenomenon involves a broad nature of the in-depth data. Data collection used open-ended questions (see Appendix A) during in-depth interviews of a purposeful sample of executive staff until saturation was reached. Fusch and Naess (2015) reported that qualitative saturation is the gold standard that empowers a personal lens to ensure the collection of adequate and quality data. Associated data from observations of participants and the review and analysis of organizational document review supplemented interview-related data. Organization of the analytic data included audio recording, transcription, translation, member checking, and thematically coding using NVivo 12 software (discussed in Chapter 3).

Methodology

There are several approaches to social science research with associated epistemological and ontological foundations. To address existing gaps in knowledge related to the conceptualization and functioning of health partnerships, this case study methodology included a purposeful sampling strategy involving five agencies that work on Cameroon's developing public policy initiatives to manage adult-onset diabetes. To validate the selection of an appropriate partnership, the CSC selected met the partnership self-assessment (PSAT) requirements developed by Lasker et al. (2001). The PSAT requires that the collaboration has been in existence for at least 6 months continuously working with at least three other partners (theoretical population). The CSC actions included strategic development of shared goals (managing adult-onset diabetes in Cameroon), and taking actions to implement agreed plans. In the study, the source population was estimated at 75. I conducted 10 face-to-face interviews.

Definitions

This section of the study ensured definitions of key terms and variables that were specific to this research study, may have multiple meanings or were used in studies involving CSC partnerships. These definitions clarified the operational use of key terms. The selected terminology and concepts of the study include:

Community: According to Mannarini and Fedi (2009), a community is conceptualized as "a tangible, physical entity, but also, and above all, as a relational and affective universe" (p. 223). The authors add physical proximity aids in binding a group

engaged in a common goal. The relevance of the social bonding element emerges when communities engage in comprehensive social change initiatives, such as forming CSCs.

Cross-sector collaboration (CSC): This term interchanges with CSC, partnerships, collaborative, and collaborations. CSC refers to arrangements between government, nonprofit organizations, churches, private and public-sector businesses, families, and private individuals that share responsibility for a community change effort (Crosby & Bryson, 2005).

Gross domestic product (GDP): The market value of the goods and services a country produces annually, as measured in U.S. Dollars (Lane & Milesi-Ferretti, 2001). Alternatively, GDP is a measure of a country's economic output and a major comparative indicator of economic growth. The GDPs of developing and impoverished countries are smaller than those of industrialized nations (Lane & Milesi-Ferretti, 2001).

Incidence: The annual rate of diabetes in Cameroon. Incidence represents the occurrence of an illness or new event in a population in a stated period (Aschengrau & Seage, 2008).

Leadership effectiveness: Leadership effectiveness is the ability of a person or group of people to connect CSC partners and influence the communication process between them while providing guidance during project implementation (Alexander, Comfort, Weiner, & Bogue, 2003).

Life expectancy: The number of additional years of life expected at a specified point in time, such as at birth (Kindig, 2007). Life expectancy in Cameroon is 54 – 57 years (WHO, 2015). Over time, untreated diabetes can lead to serious, life-threatening

complications thus, reducing life expectancy. The use of CSC can harness resources and expertise to reduce this risk.

Morbidity/Mortality: Used to indicate the incidence of illness (Merriam-Webster, Inc., 2012). A person can have one or several co-morbidities, which do not represent death. On the other hand, mortality refers directly to death and about health can refer to the likelihood of death from a health-related issue (Department of Health Services [DHS], 1999). In general, the mortality rate of a disease is the number of deaths as a result of the disease divided by the total population (DHS, 1999).

Prevalence: How often a disease occurs. Disease prevalence represents the number of existing cases of the disease or health condition at a certain point in time in a population and indicates the burden of the disease to that population (WHO, 2005a).

Resources: Resources denote the building block of synergy that includes both financial and nonfinancial means used to carry out the work of the CSC partners (Crosby & Bryson, 2005; Lasker et al., 2001).

Synergy/Efficacy: These terms interchange in this study. Synergy is the dependent variable operationally defined as the degree to which the CSC partnership combines the complementary values, perspectives, strengths, and resources of all the CSC partners in search of a better solution (Gary, 1989).

Assumptions

I made several assumptions in this case study. Assumptions are statements that reflect assumed conditions that held true throughout the study (Bloomberg & Volp,

2012). Assumptions are relevant in instances wherein study parameters are too elusive or too cumbersome to test within a single study design.

Participants' Honesty

This qualitative case study included interviews of key executive staff. One key assumption was that the participants provided honest and comprehensive answers to the open-ended questions and that their answers addressed the research questions presented in detail. Kaye, Jans, and Jones (2011) recommended posing nonincriminating questions to make respondents feel less threatened in answering potentially sensitive questions. Moreover, to encourage participants' honesty, complete confidentiality was afforded them by providing a confidential environment for the interview.

Mai (2018a) used this form of questioning in a mixed method multiple regression. Mai formulated both quantitative and qualitative questions in this manner, and the study presented strong reliability (r = .943). Post-hoc testing of the questionnaire using forced 3-factor extraction with Oblimin Kaiser Normalization oblique rotation also reflected high reliability (Mai, 2018b). Thus, this question format, coupled with concealed participant identities to maintain their confidentiality, increased my study's reliability.

Positive Social System Change

Most importantly, for this study, I assumed that communities perceive positive social systems change as desirable by the group of people it affects. In agreement with that idea, I assumed that communities would want to eradicate detrimental social problems, such as adult-onset diabetes upon the availability of the requisite resources and effective leadership. I assumed that communities would want such change mandated by

public policy and implemented through CSC. Positive social change implications resulting from the study included a possible reduction in the toll of premature mortality and improved quality of life of adults with diabetes in Cameroon.

Dedication of All Partners to the CSC

I assumed that the CSC organizations solely dedicated their resources and leadership to the accomplishment of the goals related to adult-onset diabetes, within the focus of the collaboration. Although this might not have been wholly true in the resource-constrained settings of Cameroon, this assumption allowed me to facilitate the in-depth analysis of the selected CSC. In instances where resources and leadership were not solely dedicated to the partnership goals, I assumed that those resources participants referred to in the study were solely dedicated to the CSC goals.

Scope and Delimitations

In this qualitative exploratory case study, data were limited to the setting of the study: Cameroon. Consequently, the scope of the study was limited to the specific collaboration sample in Cameroon. That sample had at least five partners in Cameroon, including the Cameroon Ministry of Public Health (CMPH), all with a focus on managing adult-onset diabetes. Although there were other partnerships whose activities may have indirectly affected the goals of managing adult-onset diabetes, this study did not include those other partnerships. Based on the sample criteria of the PSAT tool, not all collaborations qualified as participants for this study. Only partnerships that had worked together for a minimum of 6 months on public policy initiatives to manage adult-onset diabetes in Cameroon qualified.

Conversely, the impact of this restriction affected the generalization of the study's results across the country. Although there were several other factors that influenced the level of synergy in the collaboration, the study focused on two determinants, namely resources and leadership, to ascertain their role in driving the level of synergy of the partnership. Such focus was relevant to probe these determinants in depth.

Limitations

There were certain limitations—uncontrolled threats to validity (Yin, 2013) — anticipated in my qualitative, exploratory case study. Limitations are evident in a qualitative study where the research serves as an instrument of the study. Bias, both from myself (the researcher) and the participants, as well as limited prior scholarly publications, were anticipated limitations in this study. The validity of the study due to internal and external weaknesses, as well as construct weaknesses, can reduce a study's validity through intrinsic weakness.

Bias is a limitation that can emanate from the standpoint of the researcher or the participants. Creswell (2014) opined that researcher presence during the face-to-face, one-on-one interview may bias the response of participants. Personal bias must be addressed in qualitative studies to prevent random errors that may lead to validity and reliability issues in the study's findings (Yin, 2013). I am a retired master's of science degree prepared nurse who has been a government worker for 35 years and my beliefs and perception stem from both cultures., health-care and public administrator As a prepared nurse, I acquired additional theoretical knowledge that set me apart from

nonhealth-care-oriented researchers on this topic and provided me with a different interpretive lens related to adult-onset diabetes and other diseases.

To control bias, I employed bracketing, a process whereby researchers make a conscious effort to acknowledge their personal experiences and work to relinquish the images (Yin, 2013). I maintained objectivity by making a conscious effort to focus on the aim of the study and my role as an instrument. For example, I created a journal and listed any identified experiences, beliefs, or attitudes that had to do with the study and always referred to the journal pre- and post-interview sessions. To minimize my influence on participants' answers, I maintained similar behavior, wore similar attire, and held the same attitude; I remained fair and neutral during all data collection and data analysis processes. Moreover, I maintained a consistent tone of discourse and presentation of questions, along with any probing questions.

For the executives of the CSC partnership, bias could have stemmed from prior personal experience working in their individual nongovernment organization with the Cameroon government. If the executives had prior negative experience, such an association would naturally skew their perceptions during the interviews and alter the dynamics of their partnership. Therefore, understanding executives' prior experiences helped facilitate the identification of personal biases that may have influenced interview sessions. This understanding enabled a more transparent and balanced case study of fostering the collaborative partnership between the CSC partners and the government in Cameroon. My role as a participant observer gave me the opportunity, while collecting subjective data, to observe the participants' feelings and nonverbal responses in a real-life

setting. Thus, I avoided asking leading questions and watched for responses phrased to please the researcher.

The lack of previous research addressing CSC underutilization in Cameroon presented a limitation to my study. Several studies have focused on the use of CSC to access expertise and resources aimed at containing communicable diseases, but a limited number of scholars considered the use of partnerships similarly for noncommunicable diseases (Kantar, 1994; Zahner et al., 2014). As such, limited research was available to guide this study.

Significance

This study adds a body of knowledge related to the management of CSC. This in-depth exploration focused on how adequate resources and effective leadership in a collaboration affect the use of a strategy to manage adult-onset diabetes in Cameroon. Findings could inform public policy, make a positive social impact, and contribute to organizational sustainability. CSCs have proven to be an effective strategy for improving community health. The efficacious use of partnerships associated with public policy can harness resources and expertise to foster the management of adult-onset diabetes and a corresponding reduction in the prevalence rate of adult-onset diabetes.

Over time, untreated diabetes leads to serious, life-threatening complications, such as damaged blood vessels, nervous system collapse, and heart disease resulting in premature deaths and negative socioeconomic repercussions for the country. Yet, in LMIC, the prevalence of adult-onset diabetes continues to increase as collaboration is underused to manage adult-onset diabetes. In LMICs, building and improving the use of

CSCs have not been scientifically researched as a useful public policy strategy to provide the needed expertise and resources to accomplish major community endeavors leading to positive social change (Thomas & Gostin 2013; Zahner et al., 2014). This study drives positive social change and expands understanding and knowledge that will foster the use of partnerships within public policy to manage adult-onset diabetes.

Positive Social Change

The positive social change impact for this study includes a potential reduction in the toll of disability, premature mortality, and improved life expectancy of adults with diabetes in Cameroon. Studies have shown that the practical implementation of CSCs can assist in garnering needed resources and expertise (Thomas & Gostin, 2013; Zahner et al., 2014). The use of collaborations could help decrease poverty in impoverished populations in LMICs because adult-onset diabetes affects middle-aged adults who are often the primary providers for their families (WHO, 2013a; Zahner et al., 2014). The development of more efficacious partnerships could improve the community health and socioeconomic status of the country via effective management of adult-onset diabetes and improve public policy about collaborative health-care.

Expand Knowledge and Understanding

The findings from this qualitative case study narrow the gap in the literature regarding the implementation challenges that result in partnership underutilization in Cameroon. The results of this study provide an understanding of the impact of the challenges of fostering the use of CSC to manage adult-onset diabetes. For example, in one of the existing partnerships between the government and private sector, one of the

faith-based organizations donated clothing and medical supplies to people who were displaced to Cameroon from the Anglophone Regions (South West Region and North West Region) due to the civil unrest that started in 2016. In another example, Johnson & Johnson, Inc. provided glucometers used for blood sugar monitoring by patients with diabetes at an affordable rate. Finally, the findings from this case study could influence public policy by providing insights to support policymakers in developing policies that encourage the increased use of collaborations.

Public Policy and Practice

The underutilization of CSCs and the rising prevalence of noncommunicable diseases in LMICs raise public health concerns. Guariguata et al. (2014) pointed out the impact of the growing prevalence of noncommunicable diseases cut across regional and national boundaries. With the rapid transitions of urbanization and with the lifestyle changes that increase the risk factors for noncommunicable diseases, it is necessary to use health promotion strategies, such as CSC, more efficiently within public policy. Findings from this qualitative case study could lead to improved public policies and address the challenges of using CSC to manage adult-onset diabetes in Cameroon. Such policy changes by both the government and its partners could result in the increased use of CSCs. Moreover, the country and society could achieve numerous socioeconomic benefits with the efficacious use of CSC, including poverty reduction, a decrease in the mortality and morbidity, and budgetary relief to governments' health programs.

Gainfully employed people living with diabetes pay taxes to support the national economy. When people living with adult-onset diabetes earn a living through competitive

employment, they will be more likely to access healthcare and further improve the country's economy by spending more (WHO 2013b). Healthy citizens are better able to support a healthy country for a longer period. Also, government and the nonprofit sector will have to spend less on community health promotion programs. Chapter 2 presents these concepts in detail.

Summary

The prevalence of diabetes in LMICs is on the rise and made worse by human factors. Collaboration contributes needed resources and expertise to assist in managing and decreasing the prevalence of adult-onset diabetes. Nevertheless, countries such as Cameroon are underutilizing partnerships to manage adult-onset diabetes. Chapter 1 covered the following topics: (a) insight into the problem; (b) the purpose of the study; (c) the overarching qualitative research question; (d) the potential limitations, scope, and delimitations of the study; (e) the significance of the study; (f) the reasoning behind using the CSCT as the lens guiding the study; (g) the sample, data collection and analysis methods; and (h) meaningful terminology.

Chapter 2 presents an in-depth literature review covering the following topics: (a) a detailed analysis of the study's framework; (b) relevant background; and (c) detailed discussion of existing knowledge. Chapter 2 focuses on how those elements relate to the research questions and findings.

Chapter 2: Literature Review

Adult-onset diabetes is a noncommunicable disease with significant morbidity and premature mortality that globally affects an increasing number of people (WHO, 2015). WHO estimated that in 1998, 135 million people had diabetes globally and that number rose to 171 million in 2000 (prevalence of 2.8%). WHO forecasted that the number would reach 366 million in 2030 (prevalence of 4.4%). Also, 82% of the mortality from diabetes in 2015 occurred in LMICs (WHO, 2015). This increasing trend in mortality requires effective strategies to curb such a burden in LMICs.

High disease burdens have an adverse impact on national economies, health systems, and transcend the capabilities of a single organization or country (Thomas & Gostin, 2013; WHO, 2013a). CSC is a useful strategy for synergizing the efforts of government and multisector partners in managing diseases that affect community health (Clarke & MacDonald, 2016; Jones & Barry, 2011b; Thomas & Gostin, 2013; WHO, 2013b). Over time, untreated diabetes can exert life-threatening complications, such as damaging blood vessels and premature death, negatively impacting the country. The lack of public policy associated with national health or the underutilization of collaborative partnerships in LMICs makes it difficult to depend on this useful strategy to manage diabetes. I found no current scholarly literature to explain the poor utilization of CSC, thereby substantiating the need for research to bridge this gap.

In this qualitative exploratory case study, my purpose was to explore how leadership effectiveness and resources in a CSC, as perceived by the CSC executives, affect the use of strategy to assist in managing diabetes in Cameroon. Chapter 2 covers

the following topics: (a) presents literature reflecting my understanding of the nature of CSC partnerships and their relationship to the health of adults, age 18 and over, diagnosed with diabetes in Cameroon; (b) a conceptual view of the problem for investigation; (c) highlights the gap in existing empirical research; (d) justification of the framework; (e) the design of the study and my rationale for choosing that design; (f) an overview of diabetes and its epidemiology; (g) the barriers to managing adult-onset diabetes in Cameroon; and (h) an explanation of my study's relationship to the past and current conceptual and empirical work in the utilization of CSC partnerships to curb practical issues like managing adult-onset diabetes to decrease its prevalence. Chapter 3 details the study methodology, Chapter 4 presents results, and Chapter 5 includes discussion and implication of findings.

Literature Search Strategy

In researching current scientific knowledge, I reviewed existing scholarly literature and studies that focused on fostering collaborative partnerships as well as the challenges to managing CSCs. My systemic search of peer-reviewed literature included, peer-reviewed journal articles and literature from the Academic Search Complete, Cumulative Index to Nursing and Allied Health Literature (CINAHL), EBSCO, Emerald Insight, Expanded Academic ASAP, Google, and Google Scholar, GovInfo, Health Services and Sciences Research (HSRR), Political Science and Business Source Complete, ProQuest, PubMed, SAGE, Scholarworks, ScienceDirect, Thoreau Multi-Database Search, and United Nations Public Administration Network, among others. Combinations of key search terms related to the theoretical framework, the study's

population, the dependent and independent variables, and the methodology for my study. Those search terms included Boolean combinations of keywords such as *administration, adult-onset, business, Cameroon, capacity, collaboration, collaborative, community, cross-sector, CSC, CSCT, determinants, diabetes, disparities, effective, efficacy, framework, health, human, innovations, involvement, leadership, LMIC, low-to-middle-income-country, management, mortality, multisector, partnerships, policy, population, psychology, public, resources, sciences, services, social, theoretical,* among others.

The lack of citations, as well as relevant literature, prompted me to expand the search to find older literature, which helped me to develop this study. Several articles in journals reported on community health, nonprofit organizations, and government. A review of the reference lists of applicable articles allowed me to find additional classic and current sources. Further research helped to identify relevant reports and initiatives. WHO's (2014) online regional archives for Europe and Africa and the National Institute for Health and Care Excellence (NICE; 2014) also yielded relevant literature. The literature search revealed minimal studies performed in LMICs on the efficacy of CSC within the last 5 years (2011 through 2016). I continued my literature review to remain current (2019).

Study Theory

This section presents the theoretical framework approach that guided the study. Bryson et al.'s (2006) cross-section theoretical framework served as the theoretical foundation for my study. This theoretical framework aided exploration of the challenges surrounding the underuse of CSC to manage adult-onset diabetes in Cameroon to

thoroughly inform developing public policy. The framework informed an understanding of the study environment and guided data collection.

Theoretical frameworks guide studies differently. Frankfort-Nachmias, Nachmias, and DeWaard (2014) contended theoretical frameworks are statements of relationships between two or more variables. Frankfort-Nachmias et al. added that theoretical frameworks contain propositions that provide explanations and predictions for obscure observations and phenomena. Thus, propositions derived from theoretical frameworks are established inductively. Conversely, theoretical frameworks have solid theoretical foundations and provide structure for a study. Propositions of theoretical frameworks are formulated deductively to follow established rules for manipulating them (Creswell, 2013; 2014). Frankfort-Nachmias et al. affirmed that theoretical frameworks allow for comprehensive explanations of empirical phenomena. My study aligned well with the theoretical framework which served as the lens guiding my study.

Cross-Sector Collaborative Theory

CSCT is a robust theoretical framework used by a multitude of organizations, from social behavior to decision-making, to address community health challenges related to public policies. Guariguata et al. (2014) opined that many major community health challenges, such as HIV/AIDS and poverty, have been addressed using the CSCT in collaborative partnerships. CSC brings together diverse groups and organizations across multisector boundaries to remedy complex public problems with the aim of achieving a common good (Bryson et al., 2006). However, the establishment and implementation of CSC strategies are not without difficulties.

Many collaboration challenges arise from the failures of government and nongovernment organizations to overcome their individual weaknesses. Bryson et al. (2006) saw such challenges as a basis for integrative public leadership and combined resources. The widely cited CSCT developed by Bryson et al., with its 21 propositions, presents an optimal starting point for such integrative tactics. Bryson et al. built their work on a long-standing public-private partnership and other cross-sector policy "tools" research. The CSCT is depicted in Figure 1.

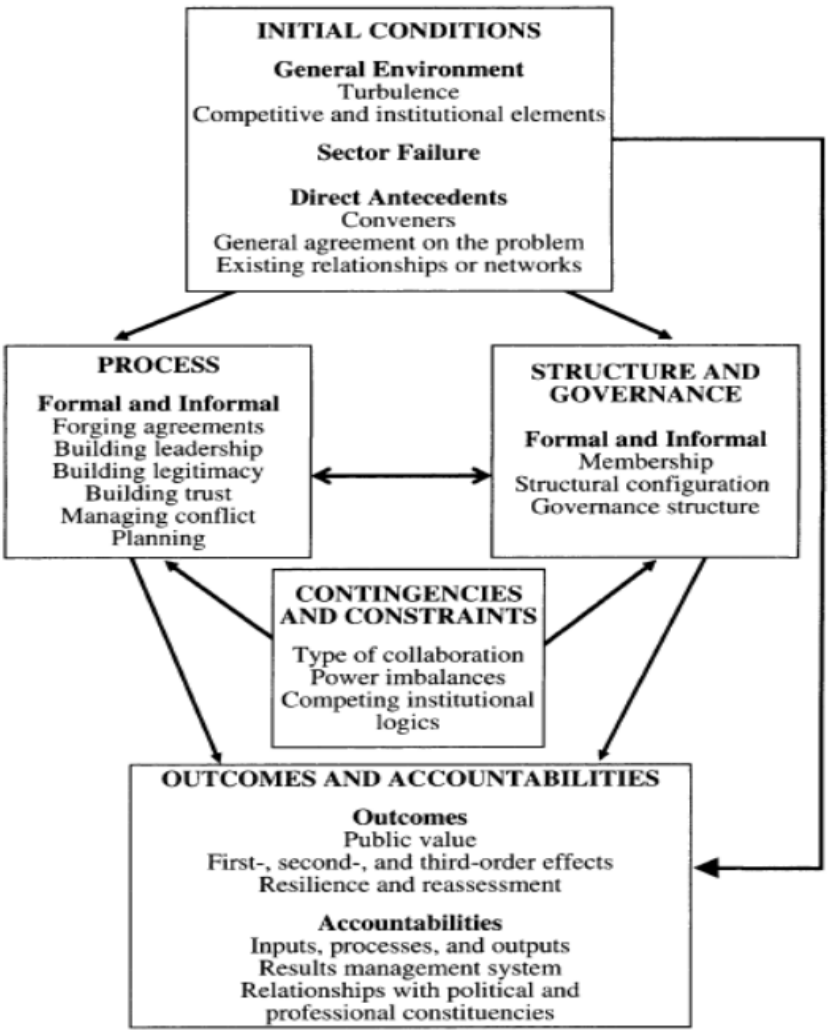

Figure 1. Cross-sector collaborative theoretical framework. Adapted from "The design and implementation of cross-sector collaborations: Propositions from the literature" by Bryson, J. M., Crosby, B. C., & Stone, M. M. (2006). *American Society for Public Administration, 66,* 44-55. doi:10.1111/j.1540-6210.2006.00665. x. Copyright 2006 by Wiley Publications. Reprinted with permission (2 October 2015; Appendix B).

Rationale for the Use of Cross-Sector Collaboration Theory

The CSCT provides a model for understanding partnerships and incorporates contextual factors and experiences that strengthen partnership formation. Romzek, LeRoux, Johnston, Kempf, and Piatak (2013) and Zahner et al. (2014) asserted that by

working jointly (forming a CSC partnership), all partners are gaining more expertise and resources inter-subjectively than they would have done separately. That notion is the pivotal idea of the CSCT model. This model has been successfully used in Georgia to foster community collaboration among a local university, a school system, and the local medical center to manage students with diabetes (Green, 2015). Green stressed the critical role of CSCT as a reasonable and cost-effective strategy for collaborating systems that seek to address a common goal or implement similar statutes. Arevalo (2017) expanded on the disparities in diabetes incidence in impoverished communities in New York versus the less impoverished ones. Considering the limited resources available to address the challenge, CSCT model was the only solution presented as hopeful in addressing the challenge of limited resources. Also, a randomized trial conducted to evaluate how community partnerships can help prevent diabetes found that diabetes prevention programs administered through an established existing community-based CSCT are effective at inducing significant long-term reductions in diabetes markers (Johnston & Finegood, 2015; Katula et al., 2013). The CSCT presents propositional inventory items structured around the five elements it embodies, namely: Initial conditions; processes; structures and governances; contingencies and constraints; outcomes and accountabilities (see Figure 1). The CSCT includes 21 propositions (see Table 1) from which key propositions guide the formulation of the qualitative case study questions.

Table 1

Components of the CSCT and its Propositions

Initial Conditions	Propositions
General Environment	1: Like all inter-organizational relationships, CSCs are more likely to form in turbulent environments. In particular, the formation and sustainability of CSCs are affected by driving and constraining forces in the competitive and institutional environments.
Sector Failure	2: Public policymakers are most likely to try CSC when they believe the separate efforts of different sectors to address a public problem have failed or are likely to fail, and the actual or potential failures cannot be fixed by the sectors acting alone.
Direct Antecedents	3: CSCs are more likely to succeed when one or more linking mechanisms, such as powerful sponsors, general agreement on the problem, or existing networks, are in place at the time of their initial formation.
Process - Formal and Informal	
Forging agreements	4: The form and content of a collaboration's initial agreements, as well as the processes used to formulate them, affect the outcomes of the collaboration's work.
Building leadership	5: CSCs are more likely to succeed when they have committed sponsors and effective champions at many levels which provide formal and informal leadership.
Building legitimacy	6: CSCs are more likely to succeed when they establish – with both internal and external stakeholders – the legitimacy of collaboration as a form of organizing, as a separate entity, and as a source of trusted interaction among members.
Building trust	7: CSCs are more likely to succeed when trust-building activities (such as nurturing cross-sectoral and cross-cultural understanding) are continuous.
Managing conflict	8: Because conflict is common in partnerships, CSCs are more likely to succeed when partners use resources and tactics to equalize power and manage conflict effectively.
Planning	9: CSCs are more likely to succeed when they combine deliberate and emergent planning; deliberate planning is emphasized more in mandated collaborations, and emergent planning is emphasized more in nonmandated collaborations. 10: CSCs are more likely to succeed when their planning makes use of stakeholder analyses, emphasizes responsiveness to key stakeholders, uses the process to build trust and the capacity to manage conflict, and builds on distinctive competencies of the collaborators.

Initial Conditions	Propositions
Structure and Governance - Formal and informal	
Membership	11: The Collaborative structure is influenced by environmental factors such as system stability and the collaboration's strategic purpose.
Structural configuration	12: The Collaborative structure is likely to change over time because of the ambiguity of membership and complexity in local environments.
Governance structure	13: Collaboration structure and the nature of the tasks performed at the client level are likely to influence a collaboration's overall effectiveness. 14: Formal and informal governing mechanisms are likely to influence collaboration effectiveness.
Contingencies and Constraints	
Type of collaboration	15: Collaborations involving system-level planning activities are likely to involve the most negotiation, followed by collaborations focused on administrative level partner and service delivery partnerships.
Power of imbalances	16: CSCs are more likely to succeed when they build in resources and tactics for dealing with power imbalances and shocks.
Competing institutional logics	17: Competing institutional logics are likely within CSCs and may significantly influence the extent to which collaborations can agree on essential elements of the process, structure, governance and desired outcomes.
Public value	18: CSCs are most likely to create public value when they build on individuals' and organizations' self-interests and each sector's characteristic strengths while finding ways to minimize, overcome, or compensate for each sector's characteristic weaknesses.
First, second and third order effects	19: CSCs are most likely to create public value when they produce positive first-, second-, and third-order effects.
Resilience and reassessment (self-explanatory)	20: CSCs are most likely to create public value when they are resilient and engage in regular reassessments 21: CSCs are more likely to be successful when they have an accountability system that tracks inputs, processes, and outcomes; use a variety of methods for gathering, interpreting, and using data; and use results in a management system that is built on strong relationships with key political and professional constituencies.

Note. Adapted from 'The design and implementation of cross-sector collaborations: Propositions from the literature' by Bryson, J. M., Crosby, B. C., & Stone, M. M. (2006). *American Society for Public Administration, 66,* pp. 44-55. doi:10.1111/j.1540-6210.2006. 00665. X Copyright 2006 by Wiley Publications. Reprinted with permission (2 October 2015; Appendix B).

Although CSCT has 21 propositions (see Table 1), only relevant propositions that address leadership and resources were used in my study. According to Jones and Barry (2011a) and Lasker et al. (2001) leadership and resources contribute the most to partnership synergy. Rabinowitz and Holt (2013) further clarified that leadership and resources are critical in developing CSC among community partnerships, support institutions, and funding agencies working together to build healthier communities.

Garcia (2016) conducted a sequential mixed method QUAN > qual study that surveyed 25 out of 40 parties (62.5%) to evaluate the components that affected the CSC functioning. In the qualitative phase, the surveyor grouped 35 items in four descriptive dimensions including partner perception of benefits, group relationship, leadership, and partner engagement. From an exploratory factor analysis of the principal components, leadership emerged as a factor that affected the cross-sector partnership functionality the most. The Cronbach's Alpha was reported $r < 0.6$ for group relation and > 0.7 for leadership (the most acceptable Cronbach's value 0.7 or greater). In another study, Pelletier, Laska, MacLehose, Nelson, and Nanney (2016) conducted a retrospective study to describe the changes that occurred in the average collaboration breath across social, political, and economic conditions of 13 different public, nonprofit, and private organizations using CSCT. The study reported a significantly higher breath collaboration to result in 9.1 out of 10 for States with physical education coordinator compared to 5.7 for States with no physical education coordinator. Also, States with higher Center for Disease Control (CDC) funding scored higher on the breath collaboration result (8.4)

compared to 6.9 for States with lower communicable diseases funding (resource). The selected propositions informed the open-ended qualitative questions of my study.

Initial condition. Initial condition refers to the existing situation of the setting before the formation of a CSC. In the initial condition category, the stakeholders of the CSC focus on issues related to the CSC's partnership relationship, the immediate pre-condition affecting the formation of a CSC, and the potential pre-existing sector failures (Bryson et al., 2006; Woulfe, Oliver, Siemering, & Zahner, 2010). In other words, stakeholders must focus on the influential paradigms that affect the change effort and understand the people who bring liabilities and assets to the CSC partnerships. According to Bryson et al., cross-sector literature has emphasized that environmental and competitive forces frequently create turbulence in launching a successful CSC (Aminde, Atem, Kengne, Dzudie, & Veerman, 2017). A deeper understanding of the environment from the perspective of the stakeholder assisted me in exploring the challenges of implementing CSCs to manage adult-onset diabetes in Cameroon.

When there are diverse challenges posed to an organization by its environmental factors, it is inherent for the organization to reach outward for solutions thereby fostering inter-organizational relationships with other organizations necessary for a formidable front to address a common challenge (Arevalo, 2017). Proposition 1 (Table 1) provides the lens formulating the open-ended question (see Appendix A) that explores the CSC leadership's understanding of environmental turbulence that can present challenges to fostering synergistic CSCs. Bryson et al.'s (2006) Proposition 2 indicates that "public policymakers are most likely to try CSC when they believe that the separate efforts of

different sectors to address a broad problem have failed, or are likely to fail, and the failures cannot be fixed by the sectors acting alone" (p. 44). Proposition 2 further guided my formulation of Question 1. Specifically, the Proposition explores the aim of the CSC's members and how the selected determinants (resource and leadership effectiveness) practically impact the CSC efficacy.

Process. Several collaborative aspects pertain to the operation section of the CSCT. These operations include forging the initial agreement, building legitimacy; leadership, managing conflict, planning, and building trust (Bryson et al., 2006). Through my study, CSC partnership effectiveness is established through analysis of its synergy and the impact of its determinants, leadership, and resources. This focus increases the emphasis on the characteristics of context, which include adjusting interventions aimed at creating networks and building capacity (Woulfe et al., 2010). Woulfe et al. studied the case of multisector partnerships and expanded the key factors required for the effectiveness of the partnership amongst which were leadership and partnership resources. Woulfe et al. stressed how the partnership should continually engage their target population to get the best out of the partnership. In Cameroon, CSC is underused (Echouffo-Tcheugui & Kengne, 2011). Thus, my focus in this study was to determine the challenges to fostering the use of CSC in Cameroon. Propositions 5 and 6 guided my understanding of the factors that the participants perceived influence the development, implementation, and evaluation of a CSC to manage adult-onset diabetes in Cameroon.

Contingencies and constraints. As CSC partnership advances, stakeholders in the partnership develop integrative processes and structures. Bryson et al. (2006) pointed

out that each member of the CSC must put up with critical contingencies such as a top-down collaboration approach versus a bottom-up collaboration power balance and compete for institutional logistics. Contrary to the bottom up collaboration approach where CSC's exist to synergize the efforts of the government, in the top-down approach, the government does not provide any funding (Bryson et al., 2006). Also, the top-down collaboration procedures emerge as a result of formal government mandates or conditions for funding whereas bottom-up approaches are implemented as grassroots initiatives by nonprofit organizations and community groups (Bryson et al., 2006). The sample CSC partnership for this study had the CMPH as one of its partners and used a bottom-up collaborative approach.

In my study, contingencies and constraints equated to challenges fostering and implementing collaborative partnerships. In this study, the contingencies and barriers were considered leadership and resources. Bryson et al.'s (2006) Proposition 6 states "CSCs are more likely to succeed when they establish -with both internal and external stakeholders- the legitimacy of collaboration as a form of organization, as a separate entity, and as a source of trusted interaction among members" (p. 44). Proposition 8 guided my exploration of the challenges of using CSC to manage adult-onset diabetes related to resources and leadership effectiveness in Cameroon.

Outcomes and accountabilities. Stakeholders in CSCs are concerned about both tangible and intangible outcomes. Van Tulder and Pfisterer (2014) explained that CSC's want their efforts to result in sustainable projects and systems that create public value and contribute to the common good. According to Bryson et al. (2006), attaining such desired

outcomes is fostered by the recognition that no single sector can solve important public problems on its own. In LMICs, government and nongovernment organizations have been unable to slow the increasing prevalence of adult-onset diabetes. Proposition 5 guided the qualitative questions (see Appendix A) that I used to explore the CSC partnership resources and leadership. Bryson et al.'s Proposition 5 indicates "that CSCs are more likely to succeed when they have committed sponsors and effective champions at many levels who provide formal and informal leadership" (p. 44). The qualitative questions explored the factors that participants perceived to influence the implementation of collaboration to manage adult-onset diabetes in Cameroon.

Barriers and Challenges to Theory Implementation

The framework identifies health outcomes achieved in collaborative partnerships as being influenced by the CSC process and the structure/governance of the partnership. The achievement of higher levels of synergy within the CSC partnership presents a challenge to LMICs as the partnership is affected by each organization's process and governance/structure. Echouffo-Tcheugui and Kengne (2011) and Rani et al. (2012) found that the implementation of CSC partnerships in LMICs was poorly aligned, without cohesive and coordinating mechanisms, lacked prioritization, and underused. Meanwhile, Lasker et al. (2001) opined that the synergy of collaboration could strengthen government actions when they form CSC's with partners who share the same views. Proposition 16 guided my formulation of question #3 through #5 that related to resources and leadership effectiveness in fostering the CSC in the setting of my study. Bryson et al.'s (2006) Proposition 16 states that "CSCs are more likely to succeed when they build

in resources and tactics for dealing with power imbalances and shocks." (p. 45). I used this Proposition to guide the formulation of qualitative questions to explore the perceived efficacy of the CSC partnership related to the management of adult-onset diabetes in Cameroon. Also, I used Proposition 16 to explore the identified challenges and the implementation outcome affecting the use of CSC to manage adult-onset diabetes in Cameroon.

Prior Application of Cross-Sector Collaboration Theory in Research

Researchers have used the CSCT to explore the types and prominent features of multisector partnerships with the aim of improving the health matrix. Zahner et al. (2014) reviewed data from websites, reports, and conducted case studies using in-depth interview questions in four counties in the United States. Zahner et al. used the CSCT to guide data collection and interpretation based on framework Propositions. Zahner et al. found that professionals and organizations formed CSCs to improve the delivery of social and health services to vulnerable populations and to generate policies and systems of change. In another study, Lu, Zhang, and Meng (2010) reviewed the utilization of CSCT in the development of e-government in the local government settings in China. Lu et al. conducted a case study on a sub-district of Chengdu in Sichuan Province. Lu et al. focused on collaboration and integration of the transactions of the administrative permit system with the goal of seeking effective collaboration between academia, local government, and other practitioners. Lu et al. found the framework to provide valuable implications to the CSC partners. Both sets of researchers concluded that CSCT was useful in conducting case studies on multisector partnerships. CSCT was the lens in my

study for exploring the challenges to fostering a synergistic CSC partnership to manage adult-onset diabetes in Cameroon.

Determinants of Partnership Synergy

Determinants of partnership synergy are elements of collaboration functions that are likely to influence the partnership's ability to achieve high levels of synergy. According to Lasker et al. (2001), the determinants of partnership synergy include; resources, partner characteristics, relationship characteristics, and external environment.

Resources. The need for resources to assist CSC to manage health issues in LMIC's has been described extensively in the literature. CSC is an effective strategy for use in the management of community health epidemics such as diabetes (Stolp et al., 2017). However, the resources required for that goal transcend the capabilities of a single entity and demand collaborative actions and mobilization of resources. CSC depends on sustained resources as the building blocks of synergy. Resources include enough human, financial, and material to carry out the responsibilities of the CSC partners (Bryson & Crosby 2008; Diaz, Stallings, Birendra, & Seekamp, 2015; Lasker et al., 2001). CSC Partnerships emphasize the value of the resources needed in the form of money or support, which could include meeting space, equipment, information, and goods (Lasker et al., 2001). Beyond these resources, CSC needs an array of expertise and skills necessary for supporting the collaboration process and coordinating the various components of their work. For example, to address the burden of adult-onset diabetes in LMICs, expertise, and skills are required to conduct community outreach programs that will improve awareness, build capacity, and decrease the burden of adult-onset diabetes.

CSC also requires less tangible, but equally critical, resources. Lasker et al. (2001) identified these resources, amongst others, as organizational, group networking, endorsements from the government that legitimizes the partnership, and from government political decision makers. CSCs vary in number, size, and in the roles, they play in communities.

Partner characteristics. Both private and nonprivate sectors have roles to play in CSC partnerships. Governments or nongovernment organizations working alone to deal with the complex demand of adult-onset diabetes in LMICs is unrealistic, could produce failures, and cannot be successful without partnership resources (Bryson et al., 2006; Danaher, 2011; Diaz et al., 2015). A successful CSC partnership needs to align and retain partners with access to needed resources. The literature on CSC partnership functioning emphasized the value of assessing heterogeneity and level of involvement in partnership. Lasker et al. (2001) pointed out that the critical issue for CSCs seeking partnership synergy is not the diversity or size of the partnership. Rather, it is the partnership mix and participation that are optimal for defining and achieving outcome goals. For example, in my study to explore how leadership effectiveness and resource in a CSC, as perceived by the executive, affect the use of strategy to assist in managing adult-onset diabetes in Cameroon. Key features that nurture the efficacy of synergy are required for a CSC to work competently. For example, a relationship of trust must exist amongst key members of the CSC leadership that are cross-sectoral with high appreciation of the different perspectives and diverse cultures (Diaz et al., 2015; Lasker et al., 2001; Solomon & Flores, 2003). The administration and management of the partnership should also be

flexible and adaptive to emerging situations. This role glues the partnership together and requires dedicated staff to handle issues that foster improved coordination among partners. Another critical characteristic that affects partnership functioning is governance. Governance influences the broad participatory process in which partners' perspectives, resources, and skills can be combined to achieve set goals. These procedures need formalization to outlast the current leadership effectiveness. Holt et al. (2013) contended that partnership efficiency of a CSC is defined by how well it engages all partners. The author added that to make the partners of a CSC partnership understand the worth of the entire partnership, the optimization of each partner's contribution through highly efficient processes is critical. Such an approach maximizes synergy and fosters the engagement of partners. In my study, in-depth interviews aided in my exploration of how leadership effectiveness and resources in a CSC, as perceived by the CSC executives, affected the use of strategy to assist in managing adult-onset diabetes in Cameroon.

Relationship among partners. Several aspects of a collaborative relationship are likely to influence the extent to which CSCs achieve a high level of synergy. A CSC with a high level of synergy relies on trust as the prerequisite for successful collaborative activities (Lasker et al., 2001). McKean et al. (2017) clarified that trust relies on the capacity for partners to listen to what others are saying (respect), which contributes to building a strong working relationship with partners. Several scholars suggested emphasizing conflict and power differentials in the discussion of partnership interactions (Rabinowitz & Holt, 2013; Sprague, Reisner, Campbell, & Brugge, 2017). Effective management of conflict and power differential can stimulate new ideas, sharpen

discussions, and propel the partnership to achieve their set goals. The identified components of the CSCT propositions guided the creation of qualitative questions exploring the leadership issues of the CSC sample. Closely linked to the internal factors are external ones that emanate from the setting of the partnership operation.

External environment. The nature of the community setting affects the working relationship of the partnership. Issues such as the community history of collaboration, competition for resources, resistance from key people, and resource deprivation status may affect how the partnership operates (Lasker et al., 2001). A supportive community can facilitate the formation and retention of strong partnerships. There may also be public and organizational policy barriers that may vary among partners, thereby challenging synergy. These policies must be streamlined to improve the communication among partners and thus increase involvement and optimize outcomes. In Proposition 6, Lasker et al. contended CSCs are more likely to succeed when both internal and external stakeholders establish the legitimacy of collaboration as a form of organizing, as a separate entity, and as a source of trusted interaction among members.

Cross-Sector Collaboration

CSC between the public, private, and third-party sectors is a strategy that is increasingly being adopted to address many of society's most complex and pressing public challenges. In my study, the terms *collaboration, partnerships*, and *cross-sector partnerships* were used interchangeably in this context. Although research on collaboration has grown, the precise definition of collaboration remains elusive (Chang, 2012; Johnston & Finegood, 2015). This lack of clarity to distinguish commonalities

between other interactions and collaboration resulted in conceptual confusion (Bedwell et al., 2012; Potočnik, & Anderson, 2016). Scholars have applied perspectives rooted in the study of networks, interorganizational relations, and the logic of collective actions in defining collaboration.

Collaboration

Collaboration has been discussed widely in modern management and public administration literature. Collaboration plays a role in the development of various theories relative to privatization, new governance, decentralized governance, and collaborative public management (Bingham, O'Leary, & Carlson, 2008). From a global perspective, collaboration is a process of operating and facilitating multiple organizational arrangements aimed at solving problems which single organizations find tough or impossible to answer (Chang, 2012). To define what collaboration means in relationship to my study, I will ascertain a deeper understanding.

The CSC participants in my study included two different types of organizations, the CMPH and four other partners. Agranoff and McGuire (2003) stated that in a collaborative relationship, a purposive relationship exists amongst at least two organizations. Heath, Appan, and Gudigantala (2017) posited that sharing mutual goals between the collaborative partners' stakeholders, which can be individuals or organizations (government, business, nonprofit organization, and community), is key to the contingent and evolving collaborative partnership. Thomson and Perry (2006) affirmed the importance of mutual benefit and autonomy as prerequisites in the collaborative partnership process. All five CSC partner participants in my study met the

criteria of having worked together for a minimum of 6 months to manage adult-onset diabetes in Cameroon.

Other necessary elements exist in a dynamic collaboration. Gary (1989) distinguished collaboration from other forms of cooperation based on four elements: the ability to address the difference constructively, interdependence of stakeholders, joint ownership of decisions, and collective responsibility for the future of the collaborative partnership. Bryson and Crosby (2008) and McGuire and Silvia (2010) agreed that both activities and actors are vital to constructing the interactions and contacts that are required in the collaborative partnership. Such interactions encompass the core concepts present to measure collaboration in empirical studies such as my intention with this study.

While no consensus exists on the definition of collaboration, uniformity does exist. Scholars agree that cooperation and collaboration differ in the degree of complexity, interaction, integration, and commitment (Thomson & Perry, 2006). Collaboration means working jointly and including other higher-order levels of collective actions that foster mutual goals with reciprocity among the individuals and the organization. Whereas, cooperation only refers to organizations or individuals who are working jointly. In a coordinative relationship, actors focus on completing their tasks, while in a collaborative relationship the focus is on how to achieve the overall goals (Bryson & Crosby, 2008; McGuire & Silvia, 2010). This research uses Bryson and Crosby's broader definition of collaboration. Thus, collaboration is:

> The linking or sharing of information, goodwill, and good intentions; resources; activities, and power or capabilities by organizations in two or more sectors to

achieve jointly, in order to an outcome that which could not be achieved by organizations in one sector separately (Bryson & Crosby, 2008).

- A successful CSC might arise from a failure to achieve results if only one party works alone.
- The success of CSC relies on the capability of each sector and how to appropriately utilize the strengths of each sector while minimizing each sector's weaknesses.
- For a CSC to be efficient, a purposive relationship must exist amongst the stakeholders.
- The sharing of mutual goals between stakeholders of the partnership is central to contingent and evolving collaborative partnership (p. 56).

The broader definition was more useful to me because it provided a more extensive foundation. In the context of nonprofit organizations, private partnerships, and the government, collaboration is used to explain the situation in which the government creates long-term relationships with nongovernment organizations and private companies (Bryson & Crosby, 2008). These relationships are used to efficiently harness resources and expertise to manage community issues (Zahner et al., 2014). The management of adult-onset diabetes is the community issue that my participant CSC was addressing. This study explored how leadership effectiveness and resources affect the use of cross-sector strategy to assist in managing adult-onset diabetes in Cameroon from the perspective of the management staff of an active CSC in Cameroon.

Types of Collaboration

Collaboration occurs at different levels involving the coordination of services within an area, partnerships, or programs to address issues. While the life cycle of cooperation of a CSC partnership may move through various levels, it is important to specify the level and focus considered in the study. The two types of collaborations discussed are *horizontal* and *vertical*. Horizontal collaboration occurs across-sectors, such as between the government, nonprofit organization, health, and nonhealth sectors that are at the same level (Chang, 2012). Vertical collaboration occurs across different levels of government, for instance, municipal and provincial (Chang, 2012). The focus of this study was in a horizontal collaboration involving disparate groups or individuals with mutual interest from different sectors coming together to address a common purpose that is the foundations of population health.

Vertical collaboration. In developed countries, intergovernmental relations and intergovernmental management forms the framework that explains vertical collaboration Mullin and Daley (2010) pointed out that vertical collaboration occurs at various and different levels of government grouping based on geography and inter-organizational divisions. In the United States, the County, State, and Federal structures charged with organizing a framework in which law enforcement, the nation's politics, tax, finance, and policy implantation operate. In this context, the local government has the authority to implement some independent laws, financial decisions, and politics. Developed countries have a grant-in-aid system, branded by bargaining, cooperation, and mutual dependence which reflects the major characteristics of vertical collaboration (McGuire, 2006). It is

noteworthy that the types of collaboration that exist in a system link closely with whether the government is Federal or Central.

In a Federalist arrangement, the intergovernmental relationship is represented as an overlapping model. Wright (2007) pointed out that the concept of federalism in the United States is not centralized resulting in the sharing of power among political centers. In Cameroon, the concept of Federalism is centralized in the nation's capital, Cameroon. In this setting, the central government makes national health care decisions and provides funding for the programs it prioritizes. The government of Cameroon spends 73% of its healthcare budget on communicable diseases and only 24% of infectious diseases, with very limited or no other source of resources available to impoverished populations (CIA, 2018). In my study, horizontal collaboration was preferred to vertical collaboration wherein Federal mandates and bureaucratic and political guidelines underpin agreements.

Horizontal collaboration. CSC partnerships can be an innovative way to solve complex public issues through cooperation across organizational and sector boundaries. Horizontal collaboration describes the voluntary interaction that occurs either between the government and private sectors, or public and private sectors, in the form of a contract or formal agreement within a policy network (Gazley, 2008). Horizontal CSC is useful because it brings together diverse expertise and resources to solve complex issues wherein solutions may lie outside the capacity of any one sector (Bryson et al., 2006). According to Bryson et al., a successful CSC often arises from the failure to achieve results if a single party worked alone. Therefore, the success of CSC relies on capitalizing on the contributing capabilities of each member of the CSC and efficient utilization of the

strength of each partner while minimizing their weaknesses. Horizontal collaboration often occurs between sectors within the health system (hospitals), between health and nonhealth sectors (social services), and across divisions, ministries, or departments within the government (Danaher, 2011). It is through this horizontal collaboration that CSC partnership thrives in addressing health issues.

Cross-Sector Collaboration in Health Management

Collaboration is a necessary and desirable strategy for use in addressing most grim and complex health challenges in society. However, evidence from the literature shows that implementing CSCs is not without its challenges (Romzek et al., 2013; Seitanidi, 2014). Potential challenges include goal conflicts, basic disagreements regarding the fundamental scientific underpinnings used for decision-making and hidden political agendas (Seitanidi, 2014). Other challenges include organizational culture between the collaborative partners that is incompatible (Romzek et al., 2013) and competition for expertise and limited resources (Guo & Acar, 2005). Effective implementation of collaboration in LMICs, such as Cameroon, is necessary to manage adult-onset diabetes.

Collaboration in LMICs

Progress is hampered in LMICs due to a lack of collaborative partnerships. In 2005, the World Health Assembly advocated for universal health coverage among member countries (WHO, 2005b). This policy involves improved health access that will promote, prevent, cure, and provide rehabilitative care at an affordable cost to all citizens (Beaglehole et al., 2011). About 1.3 billion people in LMIC lack access to health care due

to inferior health care financing systems (Carrin, Mathauer, & Evans, 2008). Also, studies show that the affordability of the cost of care remains a significant barrier in LMIC where out of pocket (OOP) spending is the primary source of funding for health care costs (Dzudie et al., 2012). This lack of governmental effort to seek innovative and goal-driven structures, such as the CSC partnership to manage health care programs in communities may result in increasing high mortality and prevalence of diseases.

Current literature recognizes and advocates the need to establish CSC to address societal issues in areas where the government alone is not able to address demands. Three top socioeconomic barriers impede LMIC's health systems from managing adult-onset diabetes in impoverished populations. WHO (2013b) described these challenges as lack of resources, poverty, and lack of expertise. Scholars recognized the value of collaboration as a powerful strategy to synergize the efforts of government and multisector partners as a response to the increasing community health demands of LMIC (Romzek et al., 2013; Thomas & Gostin, 2013). The synergism from collaboration allows partners to harness resources and expertise in a combined effort to reduce the impact of global disease burdens like diabetes (Johnston & Finegood, 2015; Zahner et al., 2014). Barriers to creating CSC partnerships to manage adult-onset diabetes in a contextualize setting like Cameroon inadvertently affect how such communities benefit from its implementation

Collaboration in Cameroon

Improving the health care status of impoverished populations is crucial for improving income, wealth, and productivity of nations. Access to preventive and

multidisciplinary care is associated with better community health outcomes and has improved with the implementation of collaboration (WHO, 2013a). However, collaboration is underused in Cameroon. Echouffo-Tcheugui and Kengne (2011) contended that Cameroon has very few specific programs with a special allocation of resources for CSCs to deal with noncommunicable diseases. Echouffo-Tcheugui and Kengne explained that the Cameroon government prioritizes funding more towards communicable diseases such as malaria and HIV. Cameroon government spending on health care has consistently been low at 4.6% (2000) and 5.1% (2012) and decreased to 4.1% (2014) of the GDP (CIA, 2018). The underutilization of partnerships as a strategy to mitigate community health issues, such as the management of adult-onset diabetes, has contributed to the increasing prevalence of adult-onset diabetes and pre-mature mortality in Cameroon. Consequently, understanding how leadership effectiveness and resource in a cross-sector collaboration, as perceived by the executive, affect the use of strategy to assist in managing adult-onset diabetes in Cameroon is paramount to improving CSC use in Cameroon.

A review of the geographical, political, and socioeconomic status of the country provided insight to the current turbulence in the setting of the study (see Table 2). According to Bryson et al.'s (2006) Proposition 1, relating to the general environment of the setting, "CSCs are more likely to form in turbulent conditions" (p. 44). CSC between the public, private, and third-party sectors is a strategy that is increasingly being adopted to address many pressing public challenges. The CSC sample that I studied in Cameroon was made up of five partners that included the government and other partners such as

nonprofit organizations (nonprofit organizations), hospital and a public pharmaceutical organization.

Table 2

Cameroon Macroeconomic Indicators 2015

	2012	2013(e)	2014(p)	2015(p)
Real GDP growth	4.4	4.9	5	5.1
Real GDP per capita growth	1.9	2.4	2.5	2.7
CPI inflation	2.4	2.3	2.5	2.5
Budget balance % GDP	-1.9	-3.7	-4.1	-4.6
Current account balance % GDP	-3.3	-3.3	-3.4	-3.6

Note. Adapted from data presented by Cameroon domestic authorities; estimates (e) and projections (p) based on calculations by Doffonsou, & R. Singh, L. S. (2014). African Economic Outlook: Cameroon. All data available in public domain. Retrieved fromhttp://www.africaneconomicoutlook.org

After approval by the Walden Internal Review Board (IRB; Approval # 11-16-18-0254946), and before to the start of the exploratory case study, I obtained a list of collaboration members that formed the sample for my research. The CMPH affirmed (via personal communication between the director dealing with noncommunicable diseases and me) the availability of the list from which the sample was selected. The CMPH has the responsibility to approve all nonprofit organizations and private health organizations that address the burden of noncommunicable diseases, such as adult-onset diabetes, in Cameroon and report of health data to international bodies, such as WHO.

Nature of Diabetes

Adult-onset diabetes poses a significant socioeconomic and public health challenge and affects people worldwide. Diabetes is a group of metabolic disorders with multiple etiology and a standard feature of a high level of blood sugar, resulting from

defects in insulin production by the pancreases, or insulin action, or both (CDC, 2012). Diabetes was previously considered undocumented in rural Africa; however, over the past few decades, diabetes has emerged as an important noncommunicable disease in Sub-Saharan Africa (SSA; Mbanya et al., 2010). Typically, blood glucose is regulated by insulin; however, blood glucose becomes elevated in the absence or the case of insufficient production of insulin by the pancreas. For people with adult-onset diabetes, the secretion of an insufficient amount of insulin or lack of insulin causes hyperglycemia (elevated blood glucose).

Hyperglycemia eventually leads to the spillage of glucose into the urine, hence, the term “sweet urine.” The diagnostic indicator for diabetes is when fasting blood glucose (FBG) is in the range of > = 11.1 mmol 1 - 1 (200 mg dl – 1; WHO, 2016). Diabetes is a serious, life-threatening disease. Poor management of the illness is associated with long-term multi-system complications and premature mortality. Diabetes presents in two primary forms; Type I diabetes that is also known as juvenile or insulin-dependent diabetes and Type II diabetes that is also known as adult-onset diabetes or noninsulin-dependent diabetes (CDC, 2012). The types of diabetes have different causal mechanisms.

Diabetes results from autoimmune disorders which damage the pancreas leading to an absent or reduced insulin production. Globally, Type I diabetes accounts for 5 - 10% of people diagnosed with diabetes (Cohen et al., 2017). Impaired metabolism of glucose causes diabetes, often as a result of risk factors such as obesity, sedimentary lifestyle, older age, family history, and race/ethnicity (Ibrahim, 2017). Adult-onset

diabetes accounts for 90 - 95% of diagnosed cases for diabetes globally and remains the most common form of diabetes in sub-Sahara Africa (Ahmed, 2016). People with diabetes are also significantly at risk for medical conditions such as coronary heart disease, perivascular diseases (blood vessel circulation disorder outside the heart and brain), and a greater likelihood of suffering from dyslipidemia (elevated plasma cholesterol, triglycerides or both; Ahmed, 2016; CDC, 2016). The two forms of diabetes exist in different prevalence across African countries.

Epidemiology of Diabetes in Cameroon

Very few countries in Africa have historically conducted epidemiological studies on diabetes. Only Tanzania and Cameroon did repeated studies using the WHO Stepwise Chronic Disease Risk Factor Surveillance Programme (Ibrahim, 2017). The epidemiology of the diabetes epidemic is a growing public health concern. Based on the WHO criteria, in urban Africa, the prevalence of diabetes has increased from 2.3% in 1980 to 4.6% in 1996 in Tanzania and has escalated four times from 1.5% to 6.6% from 1990 to 2003 in Cameroon (Mbanya et al., 2010). Cameroon was selected for this study because the country is experiencing an increase in the diagnosis, prevalence, and burden of diabetes with a projected high variance from 2013 to 2035 projections (Mbanya et al., 2010). The chart in Figure 2 compares the incidence of diabetes between 2013 and 2035 (projected) for countries with the highest prevalence in the Africa region. The chart shows that Cameroon is likely to register a 1.5% increase in the proportion of its adult population affected by diabetes (Guariguata et al., 2014). The data represents the highest increase in the region and supports the selection of Cameroon as the setting of the study.

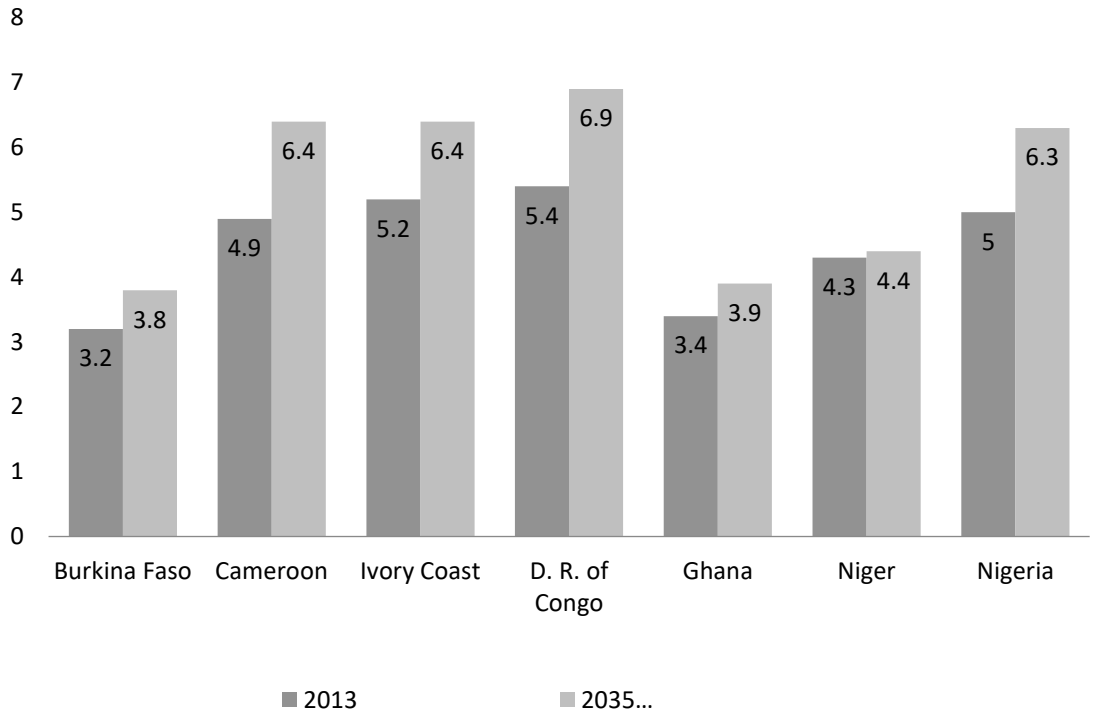

Figure 2. Prevalence of diabetes in Africa as well as proposed in 2035. Adapted from "Global estimates of diabetes prevalence for 2013 and projections for 2035," by L. Guariguata, D. R. Whiting, I. Hambleton, J. Beagley, U. Linnenkamp, & J. E. Shaw, 2014, *Diabetes Research and Clinical Practice*, *103*, pp. 137-149. doi:0.1016/j.doabress/2013.11.002

Adult-onset diabetes related mortality is significant in Cameroon. In Cameroon, diabetes accounted for 848.1 deaths per 100,000 in 2002, which represented 43% of all adult deaths (Echouffo-Tcheugui & Kengne, 2011). One of the first elaborate community-based studies on the burden of diabetes was carried out by the Health of Population in Transition Research Group (H_0TRG) in 1994 (Mbanya, Ngogang, Salah, Minkoulou, & Balkau, 1997). According to Mbanya et al., the study looked at the emergence of patients with diabetes and high blood pressure in selected urban and rural settings in Cameroon. The study's findings showed an age-standardized prevalence of

diabetes that ranged from .08% to 1.6% amongst adults in selected rural and urban regions of Cameroon. Similar studies done between 1997 and 1998 reported a prevalence rate of 2.9% to 6.2% for diabetes across rural and urban settings in Cameroon (Assah & Mbanya, 2009; Mbanya et al., 2006). Over a ten years' period (1994 - 2003), there was a ten-fold increase in the prevalence rate of diabetes in a rural and urban setting in Cameroon. However, current data shows that the prevalence rate amongst adults aged 20 to 79 in Cameroon has increased from 4.4% in 2010 to 5.7% in 2013 (Mbanya et al., 2014). Several factors attribute to this rise.

Sedentary lifestyles, poverty, and rapid urbanization are key drivers of the epidemic of chronic diseases. In Cameroon, the urbanization and social morbidity that accompany globalization and economic development are leading to an increased prevalence of diabetes and obesity (Aminde et al., 2017); WHO, 2016). Studies in Cameroon have shown an urban-rural gradient in the prevalence of diabetes, which is higher in the urban setting of Cameroon compared to other rural areas (Sobngwi et al., 2002). Moreover, there is a significant relationship between fasting blood sugar concentration for an adult with lifetime exposure to an urban setting in Cameroon (r = 0.23; $p < .001$; Fezeu, Kengne, Balkau, Awah, & Mbanya, 2010). Fezeu et al. reported that fasting glucose being highest for dwellers with the longest urban contact. Clearly, lifetime exposure to the risk factors of adult-onset diabetes varies in urban and rural settings in Cameroon.

Risk Factors for Adult-onset Diabetes in Cameroon

Available literature has strongly linked the epidemiological transition into rapid urbanization and the rise of a westernized lifestyle. Increased consumption of high-fat diets and sedimentary lifestyle is common. Sedimentary lifestyle can increase the prevalence of diabetes (American Diabetes Association [ADA]; 2014). According to the ADA, the risk of adult-onset diabetes increases with decreasing physical activity. Early studies related to the physical activity levels for adults in Cameroon showed an inverse correlation between physical activity's basic metabolic index for urban men and women (Sobngwi et al., 2002). Sobngwi et al. measured the free-living physical activity energy expenditure (PAEE) of urban inhabitants compared to rural dwellers in Cameroon. Findings from the study showed a significantly lower PAEE index for urban dwellers when compared to adults in the rural areas in Cameroon (44.2 vs. 59.6 KJ / KG, $p <$ .001). This study confirmed that the prevalence of inactivity for adults in urban settings is increased when compared to rural dwellers in Cameroon. A high level of physical activities by adults in the rural regions may also explain the lower prevalence of diabetes in that setting. Mennen et al. (2000) compared the consumption of carbohydrate and protein for adults in urban and the rural setting in Cameroon. Mennen et al.'s finding showed a nonstatistical increase in consumption of carbohydrate and protein by adults in the rural setting compared to the urban dwellers and a contradiction in the cardiovascular risk in the rural setting. Mennen et al. attributed the variation of lower cardiovascular risk to higher physical activities in the rural setting compared to urban dwellers. Sedentary

lifestyles compounded by poor eating habits are not the only risk factor present in Cameroon.

Obesity is another risk factor affecting people living with adult-onset diabetes. Kamadjeu et al. (2006) conducted a cross-sector study in four districts in Cameroon, using the WHO (2013a) Steps approach for population-based-assessment of cardiovascular risk factors. The body mass index (BMI), waist circumference, and waist to hip ratio were measured using standardized methods for 10,011 adults (6,004 women and 4,007 men, age 21 to 79). Kamadjeu et al.'s findings showed that more than 25% of urban men and 19.6% of women were overweight, and 6.5% of men were obese compared to 19.6% of women. Also, the BMI-based prevalence of obesity in the study for men was 6.5% compared to 3.2% using the waist to hip ratio model, while a higher percentage was obtained using the waist to hip ratio for women 28% compared to using BMI at 19.5% (Kamadjeu et al., 2006). Cultural beliefs also dictate health-related behaviors of adults in both urban and rural communities in Cameroon. For example, obesity is perceived as a sign of decent living and confers respect and influence both within the urban and rural communities (Cohen et al., 2017). According to Aminde et al. (2017), such perceptions emanate out of poverty, where most people are hungry, deprived, and view obesity as a social marker for wealth. The food preparation style in rural areas compared to an urban setting is another social marker for wealth in Cameroon.

In the rural areas of Cameroon, home food is cooked based on traditional staple food, while the urban areas incorporate modern Westernized food processed rich in sugar. Cohen et al. (2017) contended that urbanization, as well as globalization, have brought

changes in the socio-cultural environment involving the spread of restaurants, fast food, and western-style supermarkets (which may influence consumer food choices). However, Mennen et al. (2000) conducted a study that evaluated the usual diet of an urban and rural population in Cameroon using an interviewer-administered food frequency questionnaire. The study reported a higher intake of energy, fat, and alcohol in rural adults than with the urban dwellers. Powell, Slater, Chaloupka, and Harper (2006) explained that lower levels of cardiovascular disease found in the rural area were related to the higher levels of physical activities present in that setting.

The Burden of Adult-onset Diabetes in Cameroon

Noncommunicable diseases, such as adult-onset diabetes, are increasingly becoming a significant cause of cardiovascular disease, reductions in quality of lifestyle, and premature death in Cameroon. Lemogoum et al. (2018) and WHO (2014) reported that adult-onset diabetes, the most common form of diabetes, is becoming more prevalent in Cameroon owing to increasingly sedentary lifestyles, poverty, unhealthy diets, and poor access to high-quality healthcare. The risk factors associated with negative socioeconomic factors negatively affect the lives of people living with adult-onset diabetes in Cameroon. The economic effect is tremendous for people living with adult-onset diabetes in Cameroon. WHO (2013 a) pointed out that the burden of adult-onset diabetes is often disproportionately innate to people of working age; reducing their working ability. This decrease further leads to poverty and a decline in socioeconomic activities for this group of people who are usually the primary providers for their families. According to WHO (2016), people living with diabetes require two to three

times the health care resources when compared to nondiabetic patients. In Cameroon, 30.2% of the population lives below the poverty line (< USD 1; CIA, 2018).

Moreover, in 2011, 43% of all adult deaths in Cameroon were related to noncommunicable diseases, and 56% were related to communicable diseases (Echouffo-Tcheugui & Kengne, 2011). It is noteworthy that the prevalence of noncommunicable disease is higher in the urban centers and is now emerging in the rural communities. Fortunately, 80% of noncommunicable diseases, and their costly complications, are preventable through proper risk factor management using effective CSC (Hospedales & Jane-Llopis, 2011; Johnston & Finegood, 2015). However, significant challenges exist in the management of adult-onset diabetes in Cameroon.

Challenges in Managing Adult-onset Diabetes

Best practice standards exist for the management and ultimately reduction of the prevalence of adult-onset diabetes. Peters, Lori, and the ADA Transition Working Group (2011) recommended a holistic approach to managing people living with diabetes. Such approaches include frequently monitoring blood sugar and comparing the results to the target. Other procedures include maintaining ideal body weight, consistently participating in physical activities levels for 30 minutes a day, five days a week, and keeping regular appointments with the primary health care team to monitor blood pressure and cholesterol levels among other risk indicators. The main aim of diabetes management is to restore the altered metabolic status of the person with diabetes. To re-establish a suitable metabolic state, the blood glucose of people living with diabetes needs to be maintained at the levels within standard ranges. The ADA (2014) set the normal ranges at: before a meal 70 -

130mg / dl and 1 - 2 hours after a meal < 180 mg / dl. However, a significant problem with implementing the holistic approach is that conventional interventions tend to be externally funded and expert-driven (Mendenhall & Doherty, 2007). Studies conducted in both developed countries and LMIC portray these issues.

A variety of barriers to successful management of adult-onset diabetes presents significant problems. Nam, Chesla, Stotts, Kroon, and Janson (2011) conducted a systematic review and qualitative observational study that summarized cross-sectional control trials from 1990 – 2009. Nam et al.'s study addressed the barriers to managing diabetes. The researchers found 80 studies focused specifically on the barriers to self-management of diabetes or control of diabetes among Caucasians and minority groups in the United States. The study found adherence, beliefs, knowledge, ability, attitudes, social support, ethnicity/culture, and financial resource as the key patient factors contributing to the effective reduction of adult-onset diabetes. The studies found that financial barriers and lack of health insurance were significantly associated with nonadherence to medication and frequently missed doctor appointments. Nam et al. also reported that 60% of uninsured patients previously diagnosed with adult-onset diabetes failed to obtain care compared to 6% who were insured. Similar findings were reported in a study by Hall et al. (2011). Hall et al. conducted a literature review of published articles about diabetes from 1999 – 2011. The study concluded that diabetes constituted 90% of diabetes cases in South Sahara Africa. Hall et al. reported that many patients living with adult-onset diabetes faced a significant challenge in accessing health care. Financial resources are not the only barriers.

Societal influence presents a significant barrier to managing adult-onset diabetes in SSA. Kamadjeu et al. (2006) conducted a qualitative study to investigate lay knowledge, attitudes, and behaviors related to adult-onset diabetes risk factors in four urban health districts in Cameroon. A purposive sample of key community members was used to conduct in-depth interviews using semistructured questions. Sixty-two interviews conducted across the four sites reflected some of the key factors that drive the increasing prevalence of adult-onset diabetes. Kamadjeu et al. found a lack of knowledge of adult-onset diabetes management, poor nutritional habits, sedimentary lifestyle, cultural attachment to traditional management of adult-onset diabetes, lack of facilities to exercise, and socio-cultural barriers were all factors that contributed to poor outcomes. Many of these findings echoed Mbanya et al.'s various studies (1997 – 2014). For example, many participants thought excessive consumption of sugar resulted in a diagnosis of adult-onset diabetes and professed obesity as a sign of decent living (Kamadjeu et al., 2006). Also, Kamadjeu et al. found that, due to poverty, some participants would only seek health care when their medical condition had worsened. The implementation of effective CSC could represent a response to this challenge.

Summary

This literature review provided evidence that the prevalence of adult-onset diabetes is increasing globally and presents a significant financial and physical burden to LMICs. It showed how significant treatment barriers such as poverty and the cost of the treatment were contributing to avoidable adult-onset diabetes-related deaths of adults living in Cameroon. Like most LMICs with limited resources, public policy related to

community health priority is given to communicable diseases (infectious) such as HIV/AIDS and Ebola.

Chapter 2 provided evidence from the literature indicating how collaboration implementation is a useful strategy to address community health issues such as the management of adult-onset diabetes. My literature reviews also revealed the underuse of CSC in LMICs such as Cameroon. To date, no prior study incorporated in-depth interviews to qualitatively explore how leadership effectiveness and resources in a partnership, as perceived by the partnership executives, affect the use of strategy to assist in managing adult-onset diabetes in LMICs such as Cameroon. My study begins filling the revealed gaps in the scholarly literature.

The results of my study extend the scientific knowledge related to the reasons for the underuse of CSC in Cameroon. My findings provide insights allowing policymakers to develop public policy strategies that can foster the use of CSC to manage adult-onset diabetes. Such endeavors could result in positive social change ensuring the decrease in premature mortality and improved quality of life for people living with adult-onset diabetes. Such improvement would also increase socioeconomic status for the country and its citizens.

Chapter 2 covered: (a) a review of the scholarly literature providing an in-depth understanding of the problem; (b) the study's framework and justified the use of the cross-sectional theoretical framework; (c) a detailed overview of the CSCT and a discussion relative to how the framework provided a lens that guided this study; (d) the ontology of the study; (e) a brief profile of Cameroon, the setting for this study; and (f) an

overview of diabetes, its epidemiology, and adult-onset diabetes reduction barriers in Cameroon.

Chapter 3 covers: (a) case study research methodology; (b) justification of the study design; (c) a qualitative methods research plan dedicated to addressing the central overarching research question; (d) methodology and research plan that define the study's setting relating its importance; (e) my role as the researcher; (f) details of the research questions; and (g) potential threats to validity, issues with trustworthiness, bias, and matters related to ethical considerations.

Chapter 3: Research Method

Diabetes creates an increasing burden as one of the most troubling social challenges encountered today in LMICs (Guariguata et al., 2014; Thomas & Gostin, 2013; WHO, 2013b). Prior to this study, it was not known why CSC was underused in LMICs to manage the burden of diabetes (Echouffo-Tcheugui & Kengne, 2011). Prior scholarship pointed out that building CSC partnerships was a useful approach in addressing the burden of diabetes and improving community health problems (Robert & Hort, 2012; Thomas & Gostin, 2013; Zahner et al., 2014). Public policy associated with CSC and national health care could address the growing problem effectively. In this exploratory, qualitative case study, my purpose was to understand how leadership effectiveness and resources affected the use of CSC to assist in managing adult-onset diabetes in Cameroon, as perceived by the CSC executives. I conducted a qualitative case study that involved exploring the understanding of the participants related to the challenges and barriers to implementing CSC in Cameroon. Data were collected in an environment that was favorable to obtaining the most reliable information.

Study Setting

The objective of my study was to explore how leadership effectiveness and resources affect the use of CSC to assist in managing adult-onset diabetes in Cameroon. It was, therefore, crucial that the participants in the study felt comfortable in the setting to respond honestly and openly to questions. Martial and civil violence in Cameroon continues to escalate (Letsa, 2018); therefore, fear of legal prosecution and social interest issues could have resulted in dishonest responses to interview questions to remain out of

the physically dangerous escalations in the country. Thus, the data-collection setting and participant identification process ensured the confidentiality of participants and the phrasing of the open-ended qualitative questions was nonincriminating.

Participant Confidentiality

Key factors established complete confidentiality of the participants of the study. (a) There was no way to trace the physical address of the participants. (b) There was no way to identify participants by their responses upon analysis and dissemination. (c) There was no way for people to trace the response of a question to a participant. (d) The confidential method of identifying participants was conveyed to the participants during recruitment and before data collection. However, other factors, such as how and where data were collected, could influence the participants to answer the questions as they might think was expected, rather than honestly. Therefore, interviews were at the participants' location of choice, which was their personal offices. The collected interview data were stored in a secured locked file cabinet in my office to provide anonymity. All forms, such as consent forms, were scanned after signing and shredded immediately after scanning. Also, all interview data were transcribed and stored in a password-protected computer laptop while conducting the study. All data that was collected and associated with this study, including the research journals and field notes, were digitally copied onto a USB and placed in a locked box. The box will be saved for 5 years as evidence should it be required. After 5 years, that data will be erased.

Nonincriminating Questions

The qualitative questions were open-ended and structured (see Appendix A: Interview Questions). Phrasing the questions in a nonincriminating manner allowed the study's participants to share their honest opinions. Stuckey (2013) stated that structured questions elicited responses eagerly from participants. Research literature demonstrated that open-ended structured questions often obtain more accurate and less biased answers from participants (Supphellen, Kvitastein, & Johanse, 1997).

Research Designs and Rationale

Several diverse research models exist from which to choose to assess the level of synergy of CSC partnerships and to explore the challenges and barriers of fostering the CSC. Nevertheless, each model is associated with its own epistemological and ontological foundations. For this study, a purely qualitative model was sufficient to examine and explore the holistic view of the phenomenon. The study was a qualitative, explorative case study. Quantitative studies are deductive and emphasize post-positivist/positivist empirical, philosophical assumptions (Creswell, 2014). Post-positivists hold a deterministic philosophy that causes determines an outcome and, therefore, quantitative studies are used to identify and assess causes that influence outcomes (Creswell, 2013). Also, Creswell (2013) pointed out that examining the relationship among and between variables is central to selecting the quantitative design to conduct surveys and experiments to answer questions and hypothesis. However, in qualitative studies, the participants are the subject of the study and provide intersubjective or subjective experiences (Creswell 2014); which fits the purpose of my

study. Unlike the deductive nature of quantitative studies, Creswell (2014) highlighted that the inductive nature of qualitative study is vital in exploring under-explored phenomenon, as in the case of in this study, Therefore, the use of the qualitative approach provided rich insight and explanation into the findings and enhanced understandability from the perspective of the participants. The specific design for the study was a qualitative case study design.

Justification for Case Study Design

The specific appropriate design for my research was a case study. Case studies are used in social science research to explain why some complex social phenomenon is occurring and can incorporate qualitative, quantitative, or mixed data types (Yin, 2013). A premise for using case studies lies in the possibility of examining one significant case in great details over a period (Yin, 2013). Whereas, phenomenological studies are designed to depend solely on interviews to understand subjective, lived experience, and perspective of the participant (Yin, 2013). Case study includes qualitative interviews using open-ended questions in one-on-one interviews, observation of participants, and a review and analysis of documents (Yin, 2013). In this study, the qualitative case study approach allowed investigation into how leadership effectiveness and resources in a CSC, as perceived by the CSC executives, affected the use of strategy to assist in managing adult-onset diabetes in Cameroon. The interview questions focused on investigating how effective leadership and resources affected the CSC strategy in their endeavors to assist in managing adult-onset diabetes in Cameroon. My review and analysis of documents focused on how well the organizations were working together in a collaboration towards

a common goal of assisting in managing adult-onset diabetes. The major propositions from the framework for understanding CSC from Bryson et al. (2006) informed the open-ended qualitative questions and guided my review and analysis of documents of the CSC.

The Role of the Researcher

I did not have any relationship with the participants of the study. My role as the researcher started with a call to the CMPH to provide a list of partnerships in Cameroon in the domain of the study that had at least four partners and had been involved in the management of adult-onset diabetes for at least 6 months. Participants were given specific instructions that included: participant's recruitment, the purpose of the study, consent, how to withdraw from the study, and data collection and analysis procedures. During the interview, I collected data by prompting the participants about their perceived experiences regarding the research questions being explored. This process was done through face-to-face, one-on-one interviews using open-ended questions (see Appendix B). In such a setting, the researcher and the participant are interacting making it difficult for the researcher to be truly subjective (Creswell, 2013). Thus, the management of my bias significantly minimized the potential for researcher bias.

To manage researchers' bias, I reflected on my role in the inquiry paying attention to personal bias, values, and interests. To that end, open-ended qualitative questions were phrased naturally to allow ample opportunity for participants to explore their feelings during the interview session. I did not have an opportunity to influence the qualitative data collected as the responses from the participants were used verbatim to add a rich description and increase understanding of my findings. Also, I considered that the

participants are humans and can be forgetful, driven by a culture, and may not have been comfortable sharing information with strangers. Therefore, data was collected from enough participants to achieve saturation and qualitative responses were coded for analysis to identify themes, patterns, and trends. Moreover, I report accurately all the results collected in Chapter 4.

Research Question

The following research question guideed this project: How does leadership effectiveness and resource availability in a CSC, as perceived by the CSC executives, affect the use of strategy to assist in adult-onset diabetes in Cameroon? Interview questions were derived from the CSC theoretical framework and study research question. I used the questions formulated from the Propositions (Table 1) to explore the central overarching research question. For example, Proposition 2 indicates that "public policymakers are most likely to try CSC when they believe that the separate efforts of different sectors to address a broad problem have failed, or are likely to fail, and the failures cannot be fixed by the sectors acting alone." I used Proposition 2 to guide my formulation of the qualitative question (see Appendix A) regarding the leadership and resources of the CSC partnership.

Data Collection Strategy

Creswell (2013) observed that a qualitative case study methodology is built on the constructivist paradigm and supports the study of a complex phenomenon in a natural setting. Within the constructivist paradigm, Patton (2012) observed that face-to-face interviews and data collection are the main strategies for a case study. Furthermore,

triangulation is critical to ensure validity, rigor, and the quality of data. QSR International (2015) recommended their product, NVivo 12, for use in managing qualitative data because the software is user-friendly, supports rich text regardless of volume, uses a variety of data sources, and provides rigorous data analysis functions. In the study, I conducted one-on-one, face-to-face in-depth interviews and examined the available relevant documents that complemented interview data and provided relevant insight into triangulation strategy. The interviews involved asking open-ended structured questions to explore the participants' perceptions of the phenomena of study. The interview technique places the researcher as the tool to collect data and the participants as subjects (Creswell, 2014). The subjects for this study were executives of a CSC partnership in Cameroon. Although the number of participants varies for each study, depends on the purpose of the study, the research question, and data collection strategy; Patton recommends the researcher interview 3-5 subjects from each group until saturation is reached.

Methodology

This section discusses the study's sampling method, population, data collection, and analysis plan. A discussion of the precise methodology of the qualitative exploratory case study was important to ensure future duplication of this study in another setting, as well for strengthening the study's validity, reliability, and credibility. The methodology includes the population of the study, recruitment strategy, sampling and sampling procedures, sample size and sample methods.

Population

The specific group of the population and setting selected involve elements of familiarity with both the setting and the study's question of inquiry. The population of the study were the executives of the CMPH, civil society, nonprofit organization, or private sector that belonged to a CSC fitting the study criterion that assisted in managing adult-onset diabetes in Cameroon.

Sample Criterion

The target population for the study was purposefully selected executives of a CSC partnership who met the PSAT criteria. Setting a criterion for purposefully selecting participants for a study adds quality to the study, increases credibility, and reduces the potential risk for research bias (Creswell, 2014). As discussed in Chapter 2, the PSAT tool's criteria have been used in several studies to measure the synergy of a CSC. Based on the PSAT criteria, the CSC must (a) have been in existence for at least six months; (b) continuously working with its other four partners (theoretical population); (c) to develop strategies to achieve shared goals (managing adult-onset diabetes in Cameroon); and (d) taking actions to implement agreed plans. In the study, I estimated the source population at 75 from which I purposefully selected the executives as participants for the study.

Sample Size

The purposeful sample goal of my qualitative study consisted of 10 executives randomly selected from each of the partners in the participating CSC (n = 10). While, I used a sample of only 8, redundancy of responses indicated that saturation was met. Participants were asked to provide in-depth views about how leadership effectiveness and

resources affected the use of the strategy to assist in managing adult-onset diabetes in Cameroon.

Larger sample sizes in the qualitative approach of a case study can provide more generalizable data (Yin, 2013); however, the larger the sample, the less likely of in-depth knowledge emerging (Creswell & Plano Clark, 2011). I planned the sample size of the study to be small and based on saturation; the point at which data gathered becomes redundant. The recommended number of participants for a case study is usually a sample of three to five individuals from each theoretical population (Creswell, 2013). Therefore, in this study, there needed to be three to five key executives from each of the five theoretical populations of the CSC, yielding a total sample size between 12 and 25. However, a review of the CSC administration staff list revealed less than 12 - 25 executive staff members in any single CSC since most CSC partners have only two executives (Director and Administrator). I did not feel that had any impact on the study based on redundancy of responses equals' saturation. Miles, Huberman, and Saldana (2014) provided alternative criterion for selecting interviewees in qualitative case study to include: Someone that could extend previously provided data, new leads of importance, someone that could bridge existing elements, someone that could reinforce or identify major trends, someone that could exemplify existing evidence, or someone that could refute existing data. Considering there were five partners in the CSC and having two executives, the goal sample size for the study was 10 executive staff with that number variant depending on saturation.

Relationship between Saturation and Sample Size

Walshe (2011) explained that to maximize desired attributes in a qualitative case study that includes flexibility, a longitudinal approach, or a comprehensive approach; a balance is needed between small and larger sample size. While larger sample sizes yield generalizable data (Potter & Hepburn, 2015), a smaller sample size typically yields data with more quality, such as depth and breadth of knowledge (Creswell, 2014). Since the number of participants was inversely proportional to the quality of data obtained, the study utilized a small sample size that comprised only experienced executive staff of the CSC participant. In this study, the number of participants depended upon saturation and when the research question was adequately addressed. I originally estimated that number at 10 executives. Practically, since the CSC had less than 15 executives, that number was lower. Using a lower number with at least one executive from each of the CSC was supported by the criteria for selecting interviewees advanced by Miles et al. (2014) and discussed in the sample criterion section.

Recruitment Strategy

Participants were recruited from a selected CSC between the CMPH and four partners involved in managing adult-onset diabetes in Cameroon. A maximal variation purposive sampling method was used to select respondents/participants. I selected respondents based on their knowledge related to issues regarding the management of adult-onset diabetes by the CSC partnership. This method provided insights into the efficacy of the CSC. Frankfort-Nachmias et al. (2014) purported a maximal variation purposive sampling method to dissect the rich ideas that depict the complexity of issues.

A maximal variation purposive sampling has the strength of getting to the depth of the phenomenon faster (Creswell & Plano Clark, 2010). Thus, the selection of the collaboration executives included variation from policy maker to policy implementer. After approval by Walden's IRB to commence data collection (Approval No. 11-16-18-0254946), the recruitment strategy started with phone calls and a visit to the CMPH. The CMPH, as well as public records, have information about CSC partnerships in Cameroon that deals with adult-onset diabetes. The visits began the establishment of rapport regarding access to the study population. The CMPH has public records about all available CSCs in this domain and agreed to provide a list of the various collaborations from which I chose the CSC of interest. Upon selecting the ideal CSC, I went through public records and obtained the phone numbers of the executives. Next, I called each executive and introduced the study and invited the executives to participate in a one-hour interview at a location convenient to each participant. All participants selected their personal, private offices.

During the first 15 minutes of the allotted 1-hour interview, I explained the details of the study. Potential participants were ensured that participation was voluntary, completely optional, and that they could opt out if they so choose. Potential participants were told that they could discontinue participation at any time simply by not participating in the one-on-one interview or ending the interview at any time after it had begun. Potential participants were ensured that no one at Walden University, or any other organizations, would treat them differently if they decided not to take part in the study. Potential participants were informed that no follow-up of any kind would be necessary

after the interviews were complete. I reviewed the consent form with each potential participant in its entirety, answered any questions, and provided contact information for myself, my Chair, and the associated Walden University representative. Meanwhile, I expected to complete the interview process and transcription of the data within five weeks and the analysis of the data within six weeks.

Methodological Support

A plethora of documentation exists in the literature on the synergistic impact of CSC partnerships on improving community health, such as in the management of adult-onset diabetes. The literature review supported my methodology and provided qualitative and a few mixed-methods studies as well. My study was needed to bridge this gap in the scholarly literature and to inform developing public policy related to positive social change and national health management.

A comparative qualitative case study was conducted in the United States, using the framework for understanding CSC (Bryson et al., 2006) to explore the types and salient features of CSC in various counties that showed improving population-health matrices. Additionally, Zahner et al. (2014) collected data using websites, report reviews, and in-depth interviews using expert informants ($N = 59$) representing multisectors. Cross-case data patterns from Zahner et al.'s study provided thematic findings reflecting that outcomes attributed to CSC included short and long-term effects and contributed to improved population health.

Brennan, Brownson, and Hovemand (2012) conducted a study to examine the implementation patterns across active living by design (ALbD) community partnerships

related to the community characteristics known as the 5Ps. Brennan et al. identified the 5Ps as promotional strategies; preparation efforts; policy environment; promotions; and pragmatic and policy influences. Brennan et al. employed a mixed-method participatory evaluation design to obtain objective data and subjective perceptions related to the implementation of the 5P strategy. In the qualitative phase of the study, in-person or phone interviews were initiated with a focused group made up of staff, partners, and residents from 25 CSCs. Brennan et al.'s purpose was to increase understanding of the partnerships' activities and accomplishments. Data obtained from the qualitative phase was triangulated from multiple qualitative and quantitative sources and reduced using a systematical reduction approach to generate variables from the qualitative themes and quantitative measures. Configure frequency analysis facilitated the configuration and detection of variables. Brennan et al. found that the results supported the implementation of an ALbD community model where more preparation activities by the CSC led to a larger number of active living 5Ps. Albeit, CSC working in areas with more than 40% minority racial and ethnic background and with over 40% of the population experiencing poverty implemented fewer activities of 5Ps cumulatively.

Instrumentation

The discussion of the proposal now shifts to relevant forms of data collection processes for my studies. This study relied on two of the six typical forms of data collection that included face-to-face interviews and document review. The qualitative case studies involved in-depth semistructured interviews with executives who were

engaged with a CSC partnership in Cameroon, supplemented by document review and analysis.

Interviews

Face-to-face interviews are a first and principal way to interview executives of CSCs. Thus, it was vital that the study phenomenon was clearly defined and communicated during the interview process. Diefenback (2009) emphasized the interview be purposeful because it affords the subject an opportunity to recount their thoughts and experiences to the researcher. In this case, I was obtaining the perspectives, views, and opinions of the participants and attempting to discern their meaning as posited by Ryan, Coughlan, and Cronin (2009). Kvale (2007) explained that the researcher obtains specific descriptive data that paints a comprehensive picture of the phenomenon of the study. Kvale (2007) also clarified that the interviewer must be flexible and willing to collect unexpected data that may not follow their presupposition regarding the desired type of data they wish to collect from the interview.

In the study, semistructured interviews were conducted. Ryan et al. (2009) explained that semistructured questions created an environment for subjects to recount rich and meaningful data for research analysis. A semistructured interview can be on the telephone, by mail, or through face-to-face (Creswell, 2014). However, Patton (2012) argued that face-to-face interviews represent the most beneficial since this approach incorporates the nonverbal communication of the subjects with their spoken words. This study followed a process to recruit subjects for an interview starting from the point of identification, data collection, through analysis, interpretation, and conclusions. The

details for the recruitment of subjects was discussed in the recruitment section of this Chapter. During the interviews, I asked the interview questions laid out in Appendix B including probing questions. All participant responses were recorded using a Sony IC recorder with back-up recording systems within my personal, password-protected iPhone and iPad.

Documents

Documents, either collected from public sources or the CSC, represented the second form of qualitative data for this qualitative study. Patton (2012) explained that information revealed from a review and analysis of documents could shape the nature of the research question. Merriam (as cited in Bowen, 2009) added that "Documents of all types can help the researcher uncover meaning, develop understanding, and discover insights relevant to the research problem" (p. 29). Patton stipulated that the use of multiple forms of qualitative data provided a means of triangulation. Triangulation of data is critical in demonstrating that a qualitative study is relevant, facilitates confirmation, collaboration, and aids as a defense against bias (Potter & Hepburn, 2015). Documents for use in qualitative studies include newspaper articles, transcripts from Radio or Television, organizational reports, meeting memos, and documents that portray interactions of the organization.

Audio-Visual Recording

A standard recording device like that used by journalists, such as a Sony IC and an iPhone were used to gather primary data from the executives of the collaboration during the one-on-one interview. I used two recording devices, one as a standby in the

event of a malfunction of the primary recorder. Noteworthy, nonverbal expressions were captured in my personal field journal and scanned to digital copy after the interviews. To attempt to correct for internal validity for the study, field testing of the recording devices was performed, to ensure interviewees' and participant's voices were high and clear before the actual usage of the devices. During the interviews, I turned on the recording devices immediately before I asked the first question, and off after the participant answers the last semistructured question, and an additional question "anything to add." If at any time the participant had decided to pull out of the interview, I would have stopped the recording and respected the participant's decision.

Additional documents such as my electronic calendar of activities and journal for data tracking of the study was password-protected. I used my password protected iPad to document all interview appointments, reminders, observations, note taking, and synchronized the device with my password-protected laptop computer as needed. I kept an updated printed copy in case of any technical problem that prevented me from using the electronic media.

NVivo 12 Software

NVivo 12, a qualitative data analysis software program, was used to initiate data analysis for the study. NVivo 12 aided in identifying patterns, themes, and trends. NVivo is used in academia, government, health research, and in a diverse range of fields, including social science, to help in detailed modeling and analysis (Bazeley & Jackson, 2015). Furthermore, Bazeley and Jackson recommended NVivo because the software is user-friendly, supports rich text regardless of volume, uses a variety of data sources, and

provides rigorous data analysis. To use the software, Bazeley and Jackson recommended the researcher methodically organize and analyze data collected from the participants, assign classification, then sort and arrange information to examine any relationship, and finally combine the analysis with linking, shaping, and searching for themes. However, the use of the software came with its limitation.

Patton (2012) argued that in a qualitative study, the use of NVivo could increase deterministic and rigidity of the process. To address this limitation, the theoretical framework (CSCT) and research questions (see Appendix B) were used to guide the data analysis process. Moreover, the Committee Member and the Chair verified that the information obtained, maintained its intent, depth, and meaningfulness. However, discrepant data could have developed and needed to be examined.

Data Analysis Plan

In the study, data collection followed four steps:

1. Prepare the data for analysis.
2. Explore and code the data collected.
3. Analyze the collected data using appropriate techniques for qualitative research.
4. Collection and analysis of documents

The first step included data collection and occurred through the qualitative interviews and document analysis. Participants' responses to in-depth, open-ended questions were recorded using audio-video equipment. Documents, as listed in the Documents section, provided supplemental data for triangulation. The second step

involved data reduction as recommended by Creswell (2013). Creswell and Onweugbuzie and Leech (2007) recommended that recorded data be transcribed verbatim using an external company, thus, reducing the dimensionality. I transcribed all data, verbatim, myself. Data reduction can be achieved by keyword counts, constant comparisons, keywords in context, and performing content analysis (Onweugbuzie & Leech, 2007). I used comprehensive coding to isolate and label data.

Data Coding

The use of the theoretical framework helped focus my analysis and aided in pre-coding the themes of interest and their relationship. The underpinning of the data analysis for a qualitative study relies on coding the data acquired through the one-on-one interviews and document reviews that described the formal collaborative partnerships between the cross-sector partners and governments. Saldana (2016) highlighted that, after data collection, the coding strategy starts with the review of the research question, purpose of the study, and framework. Data from the face-to-face, one-on-one interviews was organized following Creswell's (2014) data analysis plan which moves raw data through to interpretation. Patton (2012) recommended researchers create a coding strategy to assist in the data analysis process that includes encoding and decoding. In this study, interview questions addressed these codes and did not influence the participants. Also, the coding system employed involved creating descriptive codes divided into major categories. The major categories were interconnected followed by interpretation concerning the research question.

Theory and data-driven codes were used. While theory-driven codes assisted me to confirm what the participants articulated, the data-driven codes moved the research forward forming the conclusions I drew from the qualitative case study. Data-driven codes were directly related to the interview questions posed to the participants and served to complete the linkage between the theoretical framework and the research question. In this study, while the interview questions were derived from the theoretical framework (CSCT) and research question, the data-driven codes emanated from the words of the participants in response to open-ended interview questions.

1. Theory-driven codes and related propositions:
    a. General Environment Code: Action-based reference for the general environment.
        i. Description: Proposition 1: Like all inter-organizational relationships, CSCs are more likely to form in turbulent environments. In particular,
        ii. Example: the formation and sustainability of CSCs are affected by driving and constraining forces in the competitive and institutional environments.
2. Leadership Code: Actions based references for leadership.
    a. Description: Proposition 5: CSCs are more likely to succeed when they have committed sponsors and effective champions at many levels which provide formal and informal leadership.
    b. Building legitimacy (leadership) code: Action-based reference for building legitimacy (leadership).
        i. Proposition 6: CSCs are more likely to succeed when they establish – with both internal and external stakeholders – the legitimacy of collaboration as a

form of organizing, as a separate entity, and as a source of trusted interaction among members (proposition 5 also indicative: see Table 1)

ii. Example: nonprofit organizations and governments partner multiple times, a signal of their success in fostering synergy in collaborative partnerships through:

a) Taking responsibility for the partnership Inspiring or motivating people involved in the partnership

b) Communicating the vision of the partnership

c) Combining the perspectives, resources, and skills of partners

d) Resolving conflict among partners

e) Trust, inclusiveness, and openness in the partnership that reflects their empowering people involved in the partnership

f) Creating an environment where differences of opinion can be voiced

g) Fostering respect, trust, inclusiveness, and openness in the partnership

h) Helping the partnership be creative and look at things differently

i) Working to develop a common language within the partnership

e. Resource Code: Action-based reference for the resource.

i. Description: Proposition 16: CSCs are more likely to succeed when they build in resources and tactics for dealing with power imbalances and shocks (preposition 8 also indicative: see Table 1)

ii. Example: As discussed in PSAT, to achieve synergy the nonprofit organizations and governments partner needs:

a) Financial and other capital resources

b) Money

c) Space

d) Equipment and goods

e) Nonfinancial resources

f) Skills and expertise (e.g., law, public policy, cultural competency, training, and community organizing)

g) Data and information (e.g., statistical data, values, resources, and politics)

h) Connections to target populations

i) Connections to political decision-makers, government agencies, other organizations/groups

j) Legitimacy and credibility

k) Influence and ability to bring people together for meetings and activities

3. Data-driven codes and related interview questions:

b. Code: General Environment.

i. Description: The existing situation (initial condition) of the setting before the formation of a CSC influences the formation of CSC partnerships, and the resulting synergy CSCT. The initial conditions for improving community health in the setting of my study include poverty, lack of health care access, increasing urbanization, and the growing prevalence of adult-onset diabetes.

ii. Interview question 1: What are the emerging trends that motivated the creation of the CSC architecture to manage adult-onset diabetes in Cameroon?

c. Code: Leadership.

   i. Description: This focus increases the emphasis on the characteristics of setting which include adjusting interventions aimed at creating networks and building capacity a balance of power between the CSC partners and the Cameroon government could be a recipe for a successful partnership and reflect characteristics of dynamic leadership, consistent interaction, joint decision making, and trust.

   ii. Interview question 3a: What are the major challenges related to leadership effectiveness that the CSC partnerships face when engaging in the management of adult-onset diabetes in Cameroon? (preposition 9 and 20 indicative: see table 1).

   iii. Interview question 3b: What are the major recommendations related to leadership effectiveness can you have to foster the use of CSC to manage adult-onset diabetes in Cameroon? (preposition 9 and 20 indicative: see Table 1).

d. Code: Resource.

   i. Description: Challenges that creates complexities - A strong commitment is a necessity, which is frequently challenged due to external influences, such as a lack of financial and human resources.

   ii. Interview question 4a: What are the major challenges related to financial and material resources that the CSC partnerships face when engaging in the

management of adult-onset diabetes in Cameroon? (preposition 8 and 16 indicative: see Table 1).

iii. Interview question 4b: What are the major recommendations related to financial and material resources you can offer that can foster the use of CSC to manage adult-onset diabetes in Cameroon? (preposition 9 and 20 indicative: see Table 1).

Discrepant cases were also important data to consider since that data differs and allows for consideration of other themes that were not dominant in the data. Identified codes in the text passage used pre-determined codes as suggested by Miles et al (2014). Then, a comparison across the data on leadership and resources of the CSC was performed to explore possible explanation and understanding of the study's research question.

Issues of Trustworthiness

The collection and analysis of qualitative data can be done in varied ways. Patton (2012) pointed out that credibility and data quality were critical issues in the trustworthiness of qualitative research findings. Also, validity is a central issue in research studies and reflects the truthfulness of an entire research study (Leedy & Ormrod, 20013; Neuman, 2003). Issues of credibility (internal validity) and Transferability (external validity), dependability, confirmability and intra- and intercoder reliability were considered in this study.

Internal Validity

Qualitative case studies can be high in validity since extrapolation to other studies rests on reasoning within the theoretical frameworks rather than representativeness (Blaxter, Hughes, & Tight, 2010). The internal validity (credibility) of a qualitative case study is influenced by addressing saturation, member-checking, and peer review by the committee. To address issues of credibility for this study, I field tested the recording devices before the actual use of the device. Also, multiple sources of data were collected to increase the potential for data convergence (triangulation) as recommended by Leedy and Ormrod (2013). Interview data was collected by only interviewing knowledgeable stakeholders and using recording devices.

In this study, the respondents relied on their recall of the CSC, which may have introduced recall bias. Recall bias poses a threat to internal validity as it affects the accuracy of participants' recall (Yin, 2013). Proximal incidences could have confounded the evaluation of the CSC partnership by the respondents, and this may have posed a threat. I employed member checking for reliability evaluations with the assumption that participants were honest and responded in a nonbiased fashion. Also, in the tradition of Walden University, peer review is a must for doctoral dissertations. Therefore, committee feedback continued throughout the process including development of the research question, literature review, problem statement, and study design.

A weakness in conducting this study in Cameroon was the potential need to translate the consent document into French. Cameroon is a bilingual country with both English and French the official languages. However, I am fluent in both French and

English; thus, all translations between English and French associated with this study would have been performed only by me. However, as was more likely, participants spoke both English and French. Thus, all consent documents were also presented in English.

Conversely, I had provisions for all French responses to be translated into English to ensure uniformity and reduce the chance of omitting relevant information from the interviews. Moreover, I had provisions in place for another person fluent in English and French to proofread all translations. However, as all participants were fluent in English, these provisions were unnecessary. Had I needed a third-party bilingual translator, I would have obtained consent from the person doing the proofreading including second checks on data and submitted such with my IRB application. Janesick (2011) opined that engaging another person to proofread against the interview transcripts promotes retention of the original message and increases the internal validity of a study. However, as anticipated, all the participants understood and expressed themselves fluently in English.

Triangulation was required to establish validity in this qualitative case study and was inherent in this study. I based themes on confirmed literature and used varied data sources including document review and interviews. Potter and Hepburn (2015) proposed a study's finding as being credible when triangulation among multiple methods produces a converging conclusion. This study utilized triangulation through repeated iterations of data collection and analysis, thereby confirming saturation through convergence. Jones and Barry (2011b) and Lasker et al. (2001) reported leadership effectiveness and resources contribute most to partnership synergy. Consequently, resources and leadership effectiveness were the two independent variables in this study.

External Validity

Creswell and Plano Clark (2013) proposed four approaches for the external validity (transferability) of qualitative studies that are included in this study. The qualitative standards include reporting disconfirming evidence, the use of several sources of data, and research group member verifying with the participant whether transcribed interviews and thematic findings describe their experience. Transferability threat extended beyond the process of the study and may have included participants' availability, confounding variables, researcher bias, and a limited amount of previous research. The unique characteristics of the CSC partnership environment were defined to increase transferability. External factors related to the selection of the best population for the study was analyzed and the appropriate population selected to increase validity and reliability. Discrepant data was another aspect that may have affected the external validity and is discussed next.

Discrepant data are described as either in opposition to established themes or not fitting into the themes. Discrepant data was not applicable to this qualitative design and research question since no preconceptions were made about the findings of the study. Any data not consistent with the theme was assumed to belong to the other determinants of synergy not under consideration. The focus of this study was to understand how leadership effectiveness and resources of a CSC affect the use of the strategy to manage adult-onset diabetes in Cameroon. In the case of this study, discrepant data fell into other determinants of synergy discussed in the theoretical framework section of Chapter 2.

Confirmability

According to Yin (2013), requesting the participants to review portions of the research study relevant to their contributions increases the validity of the study. Confirmability is validating that data was collected accurately from the viewpoint of the study's participants (Creswell, 2014 and Yin, 2013). Consequently, I was neutral and requested that all my interview participants review the data to ensure accuracy and a reflection of what the participant conveyed during the interview. Also, my role with the design, bias, and personal assumptions were all discussed in the bias section. Ensuring confirmability aligns well with the triangulation since the data helped validate the sentiments expressed by the participants and reinforced internal validity.

Ethical Issues

I obtained approval to proceed with participant solicitation and data collection after I had received official approval from IRB (Approval No. 11-16-18-0254946). In this study, participants were recruited on a voluntary basis, and their identities kept confidential by removing all identifying information. Before the start of the study, the purpose and nature of the study was explained to the participants before they were requested to sign consent. More importantly, the participants were informed of their rights to decline to answer any question that makes them uncomfortable or to ask that the interview was stopped.

Participants' interviews were scheduled based on their convenience to provide confidentiality. During the interview, I used a recording device Sony IC and iPad with a protected password to record participant's responses and observations respectively. All

electronic data was saved in a password-protected external hard drive with the password known only to me. In addition, all data collected will continue to be stored under lock and key in safety cabinets in a secure location for five years as recommended by Walden University. After 5 years, I will erase all data from all devices and place in an incinerator. Any hard drive that may not be incinerated will be reformatted. All forms, such as consent forms, where scanned after signing and shredded immediately after scanning. Although there are no community partner organizations regarding data sharing in Cameroon, I gained permission to access participants in some of the organizations in the CSC. Therefore, I gained any needed cooperation agreements before IRB approval (see Appendix C).

Protection of Participants

Participants in this study were adults associated with a CSC partnership in Cameroon. There was no known harm related to participation in this study, and interventions were not performed. Any difficulties demonstrated by the participants associated with this study would have been referred to local services; however, there were none needed. Informed consent delineating the participant's consent for audiotaping and statement of confidentiality was obtained before activating the recording device and beginning each interview. Participants were advised that they could withdraw from the study at any time of their choosing without penalty. Before commencing any aspect of the study, I completed Laureate International Universities (Walden ID #2906) course for student researchers (see Appendix D) and Walden IRB approved the study. The confidentiality of the participants was assured using assigned pseudonyms, unique to

each participant; wherein, only I knew which identifier correlated to each participant. Each participant was assigned a unique number during registration and all data collected from that participant was labeled only with that unique identifier after enrollment as a participant for the study. To maintain the security of data, all demographic data, questionnaires, and transcripts were stored in a locked office cabinet, in a locked box, only accessible by myself. No IRB issues were anticipated for this study.

Summary

Chapter 3 covered: (a) the purpose of the study; (b) the research design; (c) threats and validity; (d) trustworthiness; (e) the methodology used for collecting and analyzing data; (f) design; (g) potential for researcher bias; (h) how confidentiality was maintained; (i) ethical standards that met the standards set by both the IRB and the CMPH throughout the study; and (j) a comprehensive data analysis plan that focused on qualitative data that increased insights and experiences of the stakeholders intimately involved in using CSC to manage adult-onset diabetes in Cameroon. Chapter 4 covers: (a) results; (b) demographics; (c) setting; (d) data collection; (e) analysis; (f) results; and (g) evidence of trustworthiness.

Chapter 4: Results

Fostering collaborative partnerships to assist in managing adult-onset diabetes was not previously studied in LMICs nor reported upon from the perspective of leadership effectiveness and resource. Very little was known about why CSC is underused in Cameroon. The purpose of my qualitative case study was to explore how leadership effectiveness and resources in a CSC, as perceived by the executives, affected the use of strategy to manage adult-onset diabetes in Cameroon. To accomplish that, I analyzed the research question through the lens of CSCT. The research question focused on how leadership effectiveness and resource availability in a CSC, as perceived by the CSC executives, affected the use of strategy to assist in adult-onset diabetes management in Cameroon.

Chapter 4 covers: (a) the data collection process; (b) the study setting, (c) demographic data (d) data collection method; (e) a detailed description of the management of qualitative data including how the primary data were collected, transcribed, categorized, and thematically coded; (f) the process of using those codes to discern the resulting themes and emerging codes discovered during the coding process; (g) transcript quotes to support and add depth, insight, and understanding; (h) data analysis; (i) trustworthiness; (j) results; and (k) potential bias. Chapter 5 includes discussion and implication of findings.

Research Setting

The election year and sustained civil unrest likely affected the way individuals thought. Since 2016, Cameroon had been experiencing civil unrest in the Anglophone

(English-speaking) regions of the country that remained persistent during the Presidential election of November 7, 2018. A study's environment can influence the manner individuals think in response to interview questions; similarly, that environment can affect a researchers' interpretation of the collected data. Jeffrey (2016) opined that normative behavior influences perception to the point of misrepresentation. Brenner (2012) added that face-to-face, one-on-one communication increases the likelihood of such pressures. Thus, having an election year and unabated civil unrest presented a biased normative influence on the environment of the study. However, Brenner, posited that the normative bias is decreased by providing anonymity and privacy to participants—a provision that this study included.

Demographics

One CSC that met all sample criterion participated in this study. That CSC had been in existence minimum of 6 months, continuously working with its other four partners (theoretical population), to develop strategies to achieve shared goals (managing adult-onset diabetes in Cameroon) and taking actions to implement agreed plans. I interviewed eight representatives from the CSC. One participant was not available and one of the organizations interviewed did not have its data included in the data analysis and discussion. However, these exclusions did not affect the findings since all the participants were executives with deep in-sight about the inner workings of the collaboration. All the interviewed participants were in leadership positions within the CSC and frequently dealt with the CMPH. The selected participants of the collaboration

represented a broad-base of organizations that dealt with the management of adult-onset diabetes in Cameroon.

This section of the study presents the data through each question posed during the in-depth one-on-one interviews with the CSC participants (n = 8). The participants were leaders of a public and private health CSC that assists in the management of adult-onset diabetes in Cameroon. The professional characteristics of the participants ranged significantly from department directors (25%), program directors (37.5%), medical professor (12.5%), hospital administrator, and nurse (12.5%).

Data Collection

Initially, I estimated a sample size of 10 participates from five partners of the CSC; however, the final sample size was eight participants. I collected data over a 30-day period beginning November 29, 2018 and ending on December 30, 2018. Additionally, two organizational staff members provided supporting documents about how the CSC partners were working together; which, I incorporated into the data analysis. Documents from public records, researcher observation, and the Internet provided additional supplemental data for analysis and discussion included in Chapter 5.

I used two recording devices during data collection. I transferred a copy of the recorded data to my password protected laptop for safekeeping at the conclusion of each interview. I then transcribed the recorded data verbatim into my password laptop; thus, creating both an audio copy and a transcription copy immediately following each interview. I collected data from a total of eight participants. All the participants made themselves available on pre-assigned times and locations. Moreover, no participant

requested to pull out of the interview; thus, I did not need to stop the recording to respect the participant's wishes.

Documents

In the tradition of a qualitative case study approach, documents from researcher observations, publicly accessible documents from the internet, and data from participants were analyzed and triangulated with interview data. Participant D provided documents that described the activities of the collaboration, such as meeting minutes, project descriptions, and general program descriptions. Participant F provided programs and service documents, a description of Participant F's organization, and project descriptions. My review and analysis of documents focused on how well the organizations were working together in collaboration towards a common goal of assisting in managing adult-onset diabetes in Cameroon. The documents conveyed participation of partners; however, none of the information described the relationship between the partners and the government.

I reviewed publicly accessible documents through the internet. The reviewed data included: Activities of local government entity partners, published public data on the activities of partners of the collaboration, and news items. The aim of the review was to look at the activities of the collaboration and view how accessible and transparent the work of the collaboration was to the public and its partners.

A journal of my activities related to the study, including my observation of the participants during the interview was maintained. Although one of the main focuses of my interview was to record the responses of the participants, I occasionally made notes in

my hand-written journal of any significant observations during the interview. For example, Participant F had three phone calls that required I place the recorder on hold. I was given prior notification by the participant of the need to take calls during the interview due to the nature of the participants' executive position. The calls did not affect the responses of the participant. I would re-state the question and clarify the answers of the participant prior to the start of the interview, after each phone call. Also, Participant F was one of the five participants who requested to review the interview data I collected. The participant agreed that the transcribed interview data represented his response accurately.

Data Analysis

I analyzed data, focusing on understanding the broad to describe and explain the phenomenon in question and employed content analysis to provide a sense of textual data collected and highlighted the significant theme and findings. Miles and Huberman (2014) described content analysis as a systematic procedure involving constant data assessment congruent with the research question and conceptual framework of the study. Data analysis started with the data collection and continued through transcription, coding, sorting, obtaining documents, maintaining a field journal, and synthesizing the data.

Through this case study methodology, I focused on exploring how leadership effectiveness and resources in a CSC, as perceived by the CSC executives, affected the use of strategy to assist management adult-onset diabetes in Cameroon. I formulated the interview questions according to the theory and codes presented in Chapter 3 and to avoid influencing the interview participants. All references to adult-onset diabetes were meant

to reference adult-onset diabetes since that was the focus of the CSC and the position of the interview questions. I expected interview participants would focus on codes pertaining to the question being asked and that new and unexpected codes would emerge. Even though I anticipated new themes would emerge during the interview and upon reviewing the data, no new themes were discovered. The expectation of the study, to understand how leadership effectiveness and resources affect the management of the CSC, was met. Next, I present the process of moving from coded units to themes. Saldana's (2016) reference for transforming coded data into themes provided a useful process that I incorporated.

Coded Units to Larger Representations

To move from coded units to larger representations, individual transcripts where chronologically organized by interview question and imported into NVivo 12 for comparison of how the participants answered each question. The focus of the coding process was based on the CSCT construct including turbulence, leadership effectiveness, and resources (as described in detail in Chapter 2). Data were coded in line with those predetermined codes emanating from the theory-driven codes and related propositions. Response coding was also in line with those predetermined codes and helped in aggregation and categorization of responses (see Table 3). I identified the participant's unique and common threads for each of the interview questions (presented in the Results Section of this Chapter). This approach was useful to offer an understanding of the participant's responses.

Table 3

Code Frequency Table

Themes	Codes	Number of participants
Turbulence	Increasing trends in prevalence	6
	Access to healthcare	8
	Poverty	7
Leadership	Inter-sectoral communication	6
	Setting goals and objectives	4
	Fostering trust and respect	6
	Sharing data	7
	Motivating people involved in the partnership	7
Resource	Public policy and money	6
	Skills and expertise	8
	Equipment and supply	5
	Connection to target population	3

Note. Themes showing participant frequency per code.

Emerging Codes

I described emerging codes as either in opposition to established themes or not fitting into the themes. In this study, an emerging code was not pertinent to the qualitative design and research question. Consequently, I assumed any emergent data not consistent with the theme to belong to the determinants of synergy (discussed in the Theoretical Framework section of Chapter 2) not under consideration in this study. The focus of this study was to understand how leadership effectiveness and resources of a CSC affected the use of the strategy to manage adult-onset diabetes in Cameroon. Therefore, I considered any emerging data to fall into other determinants of synergy beyond the scope of this study and did not analyze them.

There was one emergent theme, however, that bears identification: That of the informal relationship between the government and partners within the CSC. Most

participants confirmed that there was no formal agreement or memorandum of understanding between them and the CMPH. A response from participant E summarises this finding.

> The collaboration between the government and its partners is not formal in Cameroon. Formal collaboration to manage diabetes does not exist. In the informal collaboration, various sectors, such as nonprofit and faith-based, meet with the government to form strategies to assist in managing diabetes in Cameroon.

Contrary to general opinion, one participant asserted that the relationship between the government and their collaboration is both formal and informal.

> There are two types of relationship the government has with its partners. Formal and informal agreements. Our collaboration would be considered both formal and informal with its members. (Participant F).

Discrepant Cases

Discrepant cases are anomalies to the research data collection process. The interviews were conducted as planned with two significant changes. The first involved the interview of one representative that did not turn out to be relevant to the study. As the interview progressed, it became apparent that the representative's organization only had a contractual agreement with the government and that agreement focused specifically on the management of noncommunicable disease in the entire country of Cameroon. Moreover, the organization did not attend regularly scheduled meetings with the

collaboration partners in Cameroon. Therefore, I did not include the data from that interview since there was no relevance to the research question.

The second issue involved one of the participants in the CSC from a faith-based nonprofit organization. The faith-based organization owned hospitals in Cameroon. Thus, its executives could have provided rich insights into the discussion. However, the selected participant traveled out of town for holiday season before the approval of IRB by the local Cameroon government Ethical Committee Review Board.

Evidence of Trustworthiness

Credibility and data quality were critical issues in the trustworthiness of my findings. Additionally, validity was a central issue that reflected the truthfulness of the entire study. Thus, I gave special attention to issues of credibility, transferability, dependability, and confirmability considered in this proposed study.

Credibility

To address issues of credibility, I field tested the Sony IC (model 1120609) recording devices before the start of the study. I also used a feature in the devices that allowed me to slow down the recording speed during replay mode to facilitate transcription of data. This feature allowed me to transcribe interview data immediately after each interview session.

In this study, the respondents relied on their recall to respond to qualitative questions; thus, participants' memories may have introduced recall bias, a threat to accuracy. Hence the five participants who opted to review their interview data were given the opportunity to do so and they all confirmed that the data represented their thoughts.

A weakness in conducting this study in Cameroon was the potential need to translate the consent document into French. However, all the participants spoke English and there was no need to translate any information from English to French. Moreover, the local official government IRB approval was also provided in English (see Appendix C).

I used a variety of data sources including one-on-one interview of participants, field notes, and document reviews. I manually transcribed all interview data and entered those transcriptions and all supplemental documents and notes into the NVivo 12 data analysis software. The use of different data sources provided source triangulation, analysis and interpretation. The use of the NVivo 12 software aided me to analytically focus and, thus, increased the worth of the data interpretation and the results of the study. Furthermore, the software helped me identify themes, compare relationships, and identify popping categories that I may have, otherwise, missed.

Dependability

Triangulation was inherent in this study. I transcribed all interview data, took field notes, collected supporting documents, and performed Internet searches to reveal additional details regarding the data collected and verify participant statements made during the interview sessions. The transcribed interview data were stored in a password-protected computer laptop during the study. The research journals and field notes were digitally copied into a USB device for safe keeping in a locked box, after which, the paper documents where shredded. All data (now digitally stored on the same USB device) will be saved for five years as evidence in case such is required. In this study, I

triangulated through repeated iterations of data collection and analysis, thereby confirming saturation through convergence.

Transferability

No disconfirming evidence was noted. Three data sources were used including interview data, collaboration documents, and the internet. Five of the eight participants elected to review their interview data and reported that the transcribed data represented their experience. Finally, two of the 10 scheduled participants were not available for an interview. Although the result in this study expressed the perception of the selected participants of the collaboration, there is a possibility for the transfer of the methodology to understand similar phenomena for improving community health. In the case of this study, the value remains at the setting level and will inform the public and private sectors in assisting in managing adult-onset diabetes in Cameroon.

Conformity

Ensuring conformity aligns well with the triangulation since the data can help to validate the sentiments expressed by the participants and reinforce internal validity. During the interview, I requested the participants clarify vague information presented to ensure questions were answered correctly. Moreover, participants were given the opportunity to review their respective transcripts for accuracy. Five participants reviewed their transcripts and verified that the transcript reflected what they had said. Also, the description of the collaboration, their activities, and partnership activity with the CMPH did not reveal any specific information that could be used to identify the individual partners that constituted the partnership. The next section presents data based on each of

the interview questions posed under the various themes during the interviews with eight participants involved in CSC for the management of adult-onset diabetes.

Study Results

In this section, I present my results organized by interview questions, themes, and as a narrative with quotes to substantiate findings. I present results to illustrate the common and divergent perspectives of the participants to explore how leadership effectiveness and resource availability in a CSC affects the use of strategy to assist in managing adult-onset diabetes in Cameroon. The collected data exemplifies the divergent and common perspectives of the participants of the CSC and divulges the dynamics that enabled the successful collaboration between the CMPH and its partners. I infer three constructs from the coded data: environmental turbulence, leadership effectiveness, and resources. I link the viewpoints of the participants to the coded data and pave the way to answering the research questions for this study.

Theme 1: Environmental Turbulence

Question one concerned the turbulence that existed prior to the start of the CSC. Turbulence refers to the existing situation (initial condition) of the setting/environment which influences the formation of CSC partnerships and the resulting synergy. I posed interview questions to elicit information on the emerging trends that motivated the creation of the CSC architecture to manage adult-onset diabetes in Cameroon. The interview question pertaining to turbulence was: Describe for me the emerging trends that motivated the creation of the CSC architecture to manage adult-onset diabetes in Cameroon? From the theory-driven code, Proposition 1 indicated that: Like all inter-

organizational relationships, CSCs are more likely to form in turbulent environments. For example, the formation and sustainability of CSCs are affected by driving and constraining forces in the competitive and institutional environments. Specific codes under turbulence representing initial conditions for CSC development included improving community health in Cameroon, poverty, lack of health care access, expanding urbanization, and the growing prevalence of adult-onset diabetes.

Increasing prevalence of adult-onset diabetes. It was a consensus among participants that the increasing trends in the prevalence of adult-onset diabetes were a major concern which orchestrated the formation of the CSC. This correlated with Echouffo-Tcheugui and Kengne (2011), who attributed the increasing prevalence of adult-onset diabetes in Cameroon to a lack of resources, ineffective public policy, and rapid urbanization.

> The need came about because there were reports of increased mortality for patients with diabetes with few health centers available…. Studies sponsored by an international funding agency revealed an increasing prevalence of diabetes. (Participant A).

From similar narrative provided by some participants, recent studies funded by international agencies revealed an increasing prevalence rate for adult-onset diabetes. WHO (2014) reported that adult-onset diabetes is becoming more prevalent in Cameroon owing to increasingly sedentary lifestyles, poverty, unhealthy diets, and poor access to high-quality healthcare. This finding necessitated the creation of an establish mechanism to collect data and monitor the prevalence of adult-onset diabetes.

> Until recent studies, zero awareness on the prevalence of diabetes or the knowledge of the extent of the burden of diabetes in Cameroon; there were insufficient data on the prevalence and mortality. So, data collection and monitoring were needed for some time to capture existing trends. In 1994 it was noted that the prevalence of diabetes was low in urban areas. However, studies carried out later showed an increasing prevalence of diabetes. (Participant D).

Participant F corroborated with a similar statement:

> The government did not know the prevalence of diabetes and was concerned. This lack of data led to a study to determine the prevalence of diabetes in many regions, including Yaounde, Cameroon. The study's finding showed that diabetes was a significant problem. Further studies showed a growing trend in the prevalence rate and mortality from diabetes, especially in Cameroon, the political capital with an increasingly urban population.

Participants recounted that, in response to the evidence of increasing adult-onset diabetes prevalence in Cameroon, it became evident of the urgent need for the government to address the situation. Thus, the formation of collaboration to enhance access to healthcare for the management of adult-onset diabetes began. All the participants reported that the CSC was formed to assist the government in the management of adult-onset diabetes. That participant understanding echoed reports by Romzek et al (2013) and Thomas and Gostin (2013) as discussed in-depth in Chapter 2.

Access to health care. Participants also indicated the lack of access to health care as a factor contributing to the formation of the CSC. Such a lack of health care access

was another identified theory driven code for turbulence in the environment and a perquisite for the formation of an efficacious collaboration in-line with CSCT. For instance, participant F mentioned that

> Although the problem of high prevalence for diabetes still exist today, it is not at the same level. A contributing factor had to do with limited available facilities to manage diabetes and lack of access on the part of the people living with diabetes.

Participant B's statement provided further clarification:

> The city did not have enough health centers to care for patients with diabetes. Therefore, there was a need to create more facilities by the government to care for diabetic patients in Cameroon.

Moreover, the challenge of limited facilities was more severe in rural areas as articulated by Participant A: "Lack of healthcare facilities that could manage diabetes especially in the rural areas was lacking."

Poverty. The challenge of access to health care for the management of adult-onset diabetes was compounded by the poor economic situation of people living with adult-onset diabetes in Cameroon. For example, many people living with adult-onset diabetes were reported poor, uninsured, and unable to access medication for the management of adult-onset diabetes. Most participants (7 out of 8) identified poverty as a factor that contributed to the turbulence in the environment.

> Poverty contributed to lack of access to health care and therefore an increase in the prevalence of diabetes. So, poverty contributed to the increasing prevalence of diabetes. (Participant E).

> Access to the available healthcare services was often difficult due to lack of insurance and poverty. Most of the people living with diabetes are uninsured or poor making access to healthcare a challenge. (Participant B).

To address the issue of the financial challenges of people living with adult-onset diabetes, participants reporting recommending to the government to consider subsidizing the care for people living with adult-onset diabetes. In this case, the targeted subsidy might be helpful:

> The program advocated for the government to increase subsidies to diabetic patients in the form of diabetic supplies (such as Insulin, diabetic strips) needed by diabetic patients who are often impoverished. (Participant C).

Theme 2: Leadership effectiveness

Interview question two pertained to leadership: What are the major challenges related to leadership effectiveness that the CSCs face when engaging in the management of adult-onset diabetes in Cameroon? This theme focused on the characteristics of the setting/environment which included adjusting interventions aimed at creating networks and building capacity (a balance of power) between the CSC partners and the CMPH. Effective leadership could be a recipe for a successful partnership influenced by dynamic leadership, consistent interaction, joint decision making, and trust. According to Bell and Cornelius (2013), collaboration face leadership challenges in lack of competencies and skills.

Inter-sectoral communications/communication among partners. Most participants (6 out of 8) reported that inter-sectoral communication was a challenge to the

synergy of the CSC. Generally, communication among partners was marred with challenges leading to the difficulty of CSC partners to implement agreed strategies between the government and the CSC.

> The leadership challenges we face include difficulties in implementing agreed upon strategies due to poor communication between the partners. The poor communication is often due to slow government response to address agreed-upon strategies between the government and its partners (Participant B).

One participant illustrated the way poor communication impacted the attendance of scheduled organization meetings to discuss partnership activities. Another respondent noted that, unlike the private sector, the government side of the partnership was not always prepared for scheduled meetings with its partners. As encapsulated in the responses below, the government side of the collaboration frequently is ill-prepared, does not communicate in a timely fashion, is late, or cancel meetings without communicating with its partners.

> So, some planned meetings are canceled, and all the attendees are not notified of the cancelation. You show up at the meeting location and find out the meeting had been canceled. The government sector has, therefore, to be blamed for slowing down panned activities of the partnership. (Participant B).

Participant A provided further insight:

> We [partners] are in different parts of the city and have to travel long distances, including the traffic constraints, to meetings and then be shocked to find out that things have not been well planned for the meeting. Addressing issues on the

> meeting agenda, you quickly discover that the private sector members of the collaboration come in well prepared, to the contrary, you will find the government side not well prepared for the meetings. It becomes clear that the private sector of the collaboration is ready to go, while the government sector is holding back the progress of the collaboration.
>
> Participant D provided specific examples:
>
> The private partners have data that the government is interested in and provide such data to the government when asked. However, there are delays in the processing and sharing of the data by the government within the collaboration and the public at large.

In a nutshell, the challenges in communication are largely due to lack of well laid down structures that could facilitate communication within the CSC. Participant D summarized the situation well:

> There are no systems set up or channels for interactions available within the collaboration, thus making communication a challenge. There are no written procedures for any interactions with the ministry, but things happen because of whom you know, what you know, and not through a formal, transparent process. Because of all these lapses, agreed upon goals and objectives are not usually met.
>
> Participant G's example added additional insight into that lack of structure:
>
> For example, we mostly communicate by phone, social media and site visits. But the challenge here is that there is no budget for that. So, I have to use my own

> money to pay for any phone bills, buy fuel, and so on. So, productivity suffers because I end up doing less and not attending all the meetings.

Setting goals and objectives. Participants also pointed out that setting goals and objectives was a leadership challenge in the partnership. It was emergent that the government side of collaboration had been lackadaisical in developing goals and strategies/policies to operationalize programs under the CSC. In view of this, respondents generally indicated that there were no clear goals to guide the activities of the CSC, as was further illustrated in the Participant F's response:

> The first challenge is that the ministry has been slow in establishing a robust strategy to manage diabetes with its partners. For example, there is a program to manage diabetes that has been developed but not yet operationalized. Mind you that a partnership has different organizations coming together. Therefore, a clear goal and objectives would go a long way to put the collaboration members on the same page. However, this is not the case. There are no clear policies on how some strategies should be followed, causing some reservation, and lack of motivation in some quarters of the collaboration.

The lackluster government attitude to developing goal and strategies/policies for the CSC for the management of adult-onset diabetes stems from the fact that government attention has largely been on communicable diseases, such as malaria, to the detriment of noncommunicable diseases, such as adult-onset diabetes.

> It took some time before the government considered diabetes as a significant disease. The focus has primarily been on communicable disease. The health care

> system in the country originated at a period before the epidemiological transition, where communicable diseases were the principal focus of the government. However, data now show that diabetes is a significant disease in the community. (Participant D).

Fostering trust and respect. Participants' identified fostering trust and respect as a challenge in the CSC. Participant's responses were quite clear that there is mistrust among CSC partners. Proposition 7 of the CSCT indicates that trust is imperative for CSC success and trust-building activities should be continuous. When appreciation of the different perspectives and diverse cultures of the CSC partners is absent, Diaz et al. (2015) and Lasker et al. (2001) indicated the CSC will be negatively challenged. Based on the narrative of respondents, the private partners do not trust the government to honor its side of the collaboration responsibilities which thwarts the progress of the CSC efforts. For example, the CMPH's attitude about developing goals and objectives for the collaboration has led to mistrust and loss of motivation among partners.

> The government is lethargic in their response or actions. It sometimes takes longer than necessary to the collaboration to implement agree-upon task. Lethargy plays on leadership because once a part of the collaboration is slow, the whole process does not work well. Lethargy then leads to mistrust, loss of motivation and passion. There is, therefore, no achievement in a length of time where there should be an achievement (due to sluggishness in the system) (Participant E).
>
> Trust is another leadership concern facing the partnership. It is not uncommon to set goals that will not be realized, even though the professional responsibility for

accomplishing the goals lies with the government side of the partnership. (Participant B).

Some CSC partners feel the CMPH is disrespectful to them as demonstrated by its actions.

> We [partners] are in different parts of the city and have to travel long distances, including the traffic constraints, to meetings and then be shocked to find out that things have not been well planned for the meeting by the government partners. (Participant A).

Some CSC partners believe the issue of mistrust within CSC is influenced by politics, especially within the CMPH. Participant A was quite despondent in their emphasis that some government leaders were not accountability.

> Unfortunately, nothing can be done because government politics gets in the way, as the leadership in the government programs have deep connections within the government circles. Timelines are missed, meetings are not attended, and no one can be held accountable in the government side of the partnership.

Frequent change in government personnel also aggravates CSC mistrust, as does the necessity to replace lost and/or misplaced data to the government side of the CSC.

> The primary leadership effectiveness issues relate to the frequent personnel changes that are made on the government side of the collaboration. The newly hired staff are frequently less qualified than the staff they replace, and this has a negative impact on the collaboration. The new staff usually have no idea of the ongoing diabetes programs, and the existing policies related to the management of

> diabetes. The frequent changes decrease productivity as the new staff would need to undergo a long period of on the job training. (Participant C).

Participant F highlighted further inefficiency:

> It's not uncommon for the ministry to ask the same data from its partners more than once. Of course, this creates problem with trust and motivation. The partnership loose trust and not eager or motivated to provide data when asked.

Sharing of data. As indicated by Participants' responses, data sharing within the CSC is a challenge. Participants indicated a significant lack of structured procedures and infrastructures to facilitate data sharing.

> The government often requests for data from its partners, but the government officials do not always process and share the data with other partners. In most cases, the same data is requested over and over which de-motivates the staff and presents an element of mistrust within the partnership. Thus, it is difficult to trust that data provided will be safeguarded and made available to the public. (Participant C).

Participants attributed the challenges with data sharing to two major factors: the unavailability of a data management system and the lack of a common data entry platform.

> Challenge has to do with data management. I experience this every day. There are no specific persons or data officers responsible for data management in most of the hospitals in the collaboration. There is no automated system to get this data. To get data I have to communicate directly with the doctor or nurse in the

partnership. Meanwhile, the doctor or nurse consider providing data as work added. (Participant G).

Participants F and E echoed the need for shared data tools and systems.

Another problem is the collaboration does not have harmonized tools used to collect data. (Participant F).

It would have been better to enter the data in a shared system for all the partners to input the required data. (Participant E).

Motivating people involved in the partnership. It emerged that people involved in CSC are not motivated to give out their best in working towards partnership goals. For example, due to the lack of funding and incentives, coupled with a lackluster attitude from CMPH staff toward the CSC, meetings are not well attended.

Diabetes meetings are usually not well attended even by government staff from the highest level, because of the lack of incentives. Whereas, the communicable disease meetings are jammed packed. Typically, some kind of refreshment is provided, and motivations given to participants at the end of the meeting. (Participant C).

Participant G provided the example:

Motivating people involved in the collaboration is a challenge. For example, partners at higher levels of the ministry hardly attend collaboration meetings for diabetes. However, collaboration meetings for communicable diseases such as HIV/AIDS are well attended. Because, the programs are well funded, and the participants will receive incentives such as transport fare, and other motivation.

Participant E emphasized the lack of motivation and passion:

> From my perspective, resources are not evenly shared between the partners. Some partners get more resources with no clear rationale. That leads to lack of motivation, those who want to work, may not be motivated to do the work to move the collaboration forward. Sometimes, I wonder why we don't succeed. I think the reason is that we don't have definite plans which is a technical thing. Because we are not able to plan well at the technical level due to lack of resources, we get the result we get. …The lack of passion on the part of the human resource in the government ministries; this leads to low motivation within the stakeholders.

It was, however, interesting to note that staff affiliated to the private sector of the CSC had other avenues for generating funds through the publication of their research papers in journals.

> Moreover, the publication of research articles in journals often provides additional revenue to motivate the staff in the partnership. The staff self-motivate through publication in journals. (Participant C).

Theme 3: Resources

This theme focused on challenges that create complexities. According to tenets of CSCT, a strong commitment is a necessity which is frequently challenged due to external influences such as a lack of financial and human resources. Regarding CSC resources, I inquired about (a) the major challenges related to financial and material resources that the CSC partnerships face when engaging in the management of adult-onset diabetes; and,

(b) I requested recommendations related to financial and material resources to foster the use of CSC to manage adult-onset diabetes in Cameroon. Every participant identified resources as a challenge to the CSC.

The need for resources to assist CSCs to manage health issues in LMIC's has been described extensively in the literature (as discussed in Chapter 2). CSC depends on sustained resources as the building blocks of synergy. Resources include enough human, financial, and material resource types to carry out the responsibilities of the CSC partners (Bryson & Crosby 2008; Diaz et al., 2015; Lasker et al., 2001). Participants in this study indicated the same.

Public policy and money. I combined public policy and money because government resource allocation for health programs is largely influenced by public policy focus. Participants reported a significant lack of funding for noncommunicable diseases. As discussed in Chapter 2, government policy has historically focused on the fight against communicable diseases, though participants indicated some improvement.

> Another resource challenge is that government prioritize spending on communicable diseases, such as HIV/AIDS, over noncommunicable diseases, such as diabetes. Even though there has been a paradigm shift where the government has increased spending on noncommunicable disease, the increase still lags behind available funding for communicable disease in Cameroon. So, there is a will by the government to increase spending on noncommunicable diseases, but budget shortfalls prevent the government from doing so. Meanwhile,

> foreign partners focus more on increasing spending on communicable diseases. (Participant G).

Participant C detailed some of the supplies needed:

> Money is not always available to the partnership to carry out collaboration activities, such as health promotion. Health promotion involves purchasing radio airtime, making posters, fliers, and publication in the local newspapers for public consumption. Occasionally, these activities are sponsored by foreign vendors or funders. However, the sponsors are not always available, hence no money available for the collaboration to carry out the promotional efforts.

Skills and expertise. One of the significant challenges of the CSC was the lack of qualified personnel to carry out the activities of the CSC at its various levels.

> The lack of qualified trained personnel at each level in the partnership remains a challenge. There is a lack of trained staff to manage the various facilities in the communities we serve as well as in the government ministries. The partners are supposed to contribute their expertise to enhance understanding regarding the management of diabetes in the community. Instead, they are called upon by the government to spend time doing work that should be done by trained and experienced government staff. So, a lack of trained dedicated government staff is the problem (Participant C).

Specific mention was made for the lack of trained nurses to manage adult-onset diabetes-related complication at the community facilities. Albeit, participants also

reported that some effort was being made to train more specialty doctors to manage adult-onset diabetes.

> A lot has to be done by the government to increase the number of competent nurses in the country. The collaboration has few nurses with skills in the management of diabetic complications, such as diabetic foot ulcer. …There is a lack of human resources, but the situation is improving at the level of the faculty of medicine and Biomedical Sciences University in Cameroon. In the medical school, about two to four doctors graduate yearly, with specialization in endocrinology management. In general, there are no apparent human resource issues related to the number of staff. The problem lies with the competency or expertise of the available personnel (Participant C).

Equipment and supplies. Related to government policy on funding communicable disease programs more than noncommunicable disease programs, Echouffo-Tcheugui and Kengne (2011) explained that the Cameroon prioritizes funding more towards communicable diseases, such as HIV. Cameroon government spending on health care has been 4.6% and 5.1% of the GDP for 2000 and 2012 respectively and decreased to 4.1% in 2014 (CIA, 2018). Participant A discussed material resources:

> Challenge I want to talk about has to do with material resources. The availability and distribution of material resources at the level of the ministry for programs is not based on needs but highly prioritized to favor communicable diseases management. This policy by the government needs to change. Diabetes is a significant disease and needs the attention it deserves from all quarters. I have

> made site visits and found supplies, such as glucometer or even blood pressure cuff, assigned for use to open up diabetes units in nondiabetes units. When you ask, the response is usually that “there is not enough funding in diabetes management.

Interestingly, due to the focus on communicable diseases, participants reported that even the supplies that are meant for the management of adult-onset diabetes are used for the management and treatment of other diseases.

> The availability of material needed by the patient and the partners is also a huge challenge. Supplies from the government to facilities are hardly used as instructed. These supplies end up being used for patients with other diseases, e.g. Malaria or HIV/AIDS. As such, the collaboration has difficulties addressing the needs of patients with diabetes. (Participant D).

Connection to target population. One major challenge was the inability of the CSC to meet the needs of the target population who are the major stakeholders in this program.

> The collaboration has been struggling to meet the needs of the communities it serves. The collaboration tries as much as possible not to focus on the challenges. However, the collaboration is not able to provide free materials, such as insulin, and glucose strips to patients who cannot afford to pay for these items. (Participant F).

As participants clearly described, once the partnership runs out of an important supply, such as the insulin provided by an international funder, the government is unable

to continue to subsidize this effort, and this affects the patients especially in the rural areas.

> Insulin is provided to the population in the partnership at a subsidized rate. However, the problem comes when the government is not able to supply insulin to the partnership at the subsidized rate. Due to this failure, patients have to buy insulin at a higher cost in private pharmacies. Moreover, even when the supplies are available, the distribution is poor. For example, people in rural areas have difficulties accessing subsidized supplies compared to the urban setting. (Participant C).

Participant D related the lack of supplies to their effect on the patients:

> The patients also feel the impact because donated supplies such as syringes and strips from foreign partners are usually in short supplies. In most cases when these subsidies are all used up, the government is not able to continue with the program. Affected patients go without the supplies or have to buy them at higher prices.

Themes 4 and 5: Recommendation for Leadership and Resources

While I asked separately for recommendations to improve leadership effectiveness and resources within the CSC, the suggestions were interrelated. This was not a surprise since these two codes were not mutually exclusive. There were two emphatic recommendations on leadership and resources: (a) increased government commitment and funding for noncommunicable diseases, particularly adult-onset diabetes, and (b) dedicated structures and supports.

Increased government commitment and funding. Participants relayed the need for the government to commit to increased funding for noncommunicable diseases, particularly adult-onset diabetes, and a reduced dependency on international aid. Participant C summed these points up well:

> A major recommendation is for government to increase spending on the management of noncommunicable disease, such as diabetes. The government has prioritized the management of communicable diseases and has put in more funding there. With better control of communicable disease now enjoyed by the country, more funding needs to be allocated to noncommunicable diseases, such as diabetes. … Diabetes should be taken seriously, starting from the ministry which is at the highest level. Clearly, a defined budget should be set aside to manage diabetes at all levels. We cannot sit and wait for International bodies to do this for us. We should do our own part.

Dedicated structures and supports. Respondents also emphasized an urgent need for government and other relevant stakeholders to put in structures to train more experts/professionals to manage adult-onset diabetes through promoting specialized education and scholarships, amongst other suggestions.

> Another recommendation is for the government to train more competent doctors and nurses specialized in diabetes management. These trained nurses care for patients with diabetes at the referral centers and communicate with physicians in the primary centers as needed. The collaboration will benefit more and reach more people with diabetes in more communities with these efforts realized. Due

> to the shortages of doctors, these trained nurses can reach more patients in health facilities where specialist doctors are not available in health centers. (Participant C).

Participant B had some constructive suggestions:

> Support in the form of offering scholarships to train staff in specialization both in the country and abroad will go a long way to improving collaborative efforts.

Some participants suggested strengthening support personnel at the CMPH of health which is the main collaborating agency of government. Qualified government administrative and technical portfolios to facilitate the activities of CSC for the management of adult-onset diabetes were also recommended.

> Therefore, it is not uncommon to hear complaints regarding poor inter-sectorial communication, lethargic responses, sharing of data, lack of motivation, and so on, within the partners and the ministry. I am saying, therefore, that the challenge is to strengthen leadership at the ministry level to improve cooperation and then extend to our partners to enhance the efficacy of the management of diabetes. (Participant F).

Participant C alluded to inadequate personnel:

> A major recommendation is for the government to hire the right person for the right job. From my point of view, putting the right person at the right place may facilitate collaborative activities in the partnership.

Some participants recommended creative alternative strategies to address the inadequate expertise of personnel, as well as incorporating other governmental agencies into the CSC.

> The partnership needs to explore alternative strategies to assist in meeting its goals. For example, we do not have enough endocrinologist, but not all diabetes patients need to see one. Deploying a strategy, such as telemedicine can allow one endocrinologist to see more patients than they do now. Even though the government needs to increase funding to assist in the management of diabetes, the partnerships need to employ 21st-century strategies, such as Telemedicine and outreach programs to assist in mitigating its shortfalls. …As you are aware, many risk factors and the determinants of diabetes are not only at the level of the ministry of health. We need to create advocacy to involve other ministries. Other ministries can contribute in their own way to assist in addressing the risk factor, yet there are not aware and involved. For example, it is clear that if we start health education early in life, children can receive health education sooner and hopefully learn early in life how to better manage risk factors for diabetes. In this case, you can see that the ministry of Education has a role to play. So, a global strategy has to be pushed to better manage diabetes to involve other ministries. (Participant F).

Summary

The purpose of my qualitative case study was to explore how leadership effectiveness and resources in a CSC partnership, as perceived by the CSC executives, affected the use of strategy to assist management of adult-onset diabetes in Cameroon. In

Chapter 4, I discussed the study's setting, demographics, data collection, data analysis, evidence of trustworthiness, and results of this study. The analysis of the data provided answers to the research question: How does leadership effectiveness and resource availability in a CSC, as perceived by the CSC executives, affect the use of strategy to assist in diabetes in Cameroon?

Several patterns emerged from the data. Finding revealed issues with leadership effectiveness and resources in the CSC that would affect the use of strategy to assist in managing adult-onset diabetes. According to the findings, leadership effectiveness was impacted by issues within the collaboration namely: inter-sectorial communication, setting goals and objectives, fostering trust and respect, sharing data, and motivating people involved in the partnership. The identified issues assisted in making leadership effectiveness a challenge in implementing CSC to assist in managing adult-onset diabetes in Cameroon.

Findings also revealed that CSC resources were affected by public policy and money, skills and expertise, equipment and supplies, and connection to target population. The identified issues assisted in making resources a challenge in using CSC to assist in managing adult-onset diabetes in Cameroon. The findings from the study provided in-sight from the perspective of the executives about how leadership effectiveness and resources provided challenges to the use of CSC to assist in managing adult-onset diabetes in Cameroon. Chapter 5 covers the following topics: (a) discussion of the data; (b) interpretation of the findings; (c) conclusion; (d) limitations; (e) recommendations for further research; and (f) closing comments.

Chapter 5: Discussion, Conclusions, and Recommendations

CSC is an effective strategy for improving community health. However, CSC is not effectively used to manage adult-onset diabetes in LMICs and there is limited public policy advocating for the management of adult-onset diabetes. This qualitative exploratory case study narrows the gap in that scholarly knowledge-base. The purpose of my exploratory, qualitative case study was to explore how leadership effectiveness and resource in a partnership, as perceived by the CSC executives, affected the use of strategy to assist adult-onset diabetes management in Cameroon.

I interviewed executives and leaders of the CSC sample in their offices and I reviewed public documents that provided insight into the partners and the government. Therefore, this discussion focuses on those in-depth, one-on-one interviews with purposefully selected executives from five organizations that formed a CSC to manage adult-onset diabetes in Cameroon. I evaluated and triangulated the qualitative data through the lens of CSC partnership theory. Central to the discussion on the interpretation of findings for this study were the three themes that emerged: environmental turbulence, issues with leadership effectiveness, and available resources. I analyzed the emergent themes drawing upon the literature, data collected, and the CSCT framework. This chapter also focuses on a discussion of my findings, limitations of the study, recommendations, implications, and the conclusion.

Interpretation of the Findings

Findings suggested that leadership effectiveness and resources in a CSC, as perceived by the CSC executives, affects the use of strategy to assist in the management

of adult-onset diabetes in Cameroon. I organized the key findings into three themes: environmental turbulence, leadership effectiveness, and resources (see Figure 3) which were reflected in the diffusion of the CSCT framework, its prepositions, and literature review. These findings are consistent with the themes presented in the proposal and emerged in the data collection process.

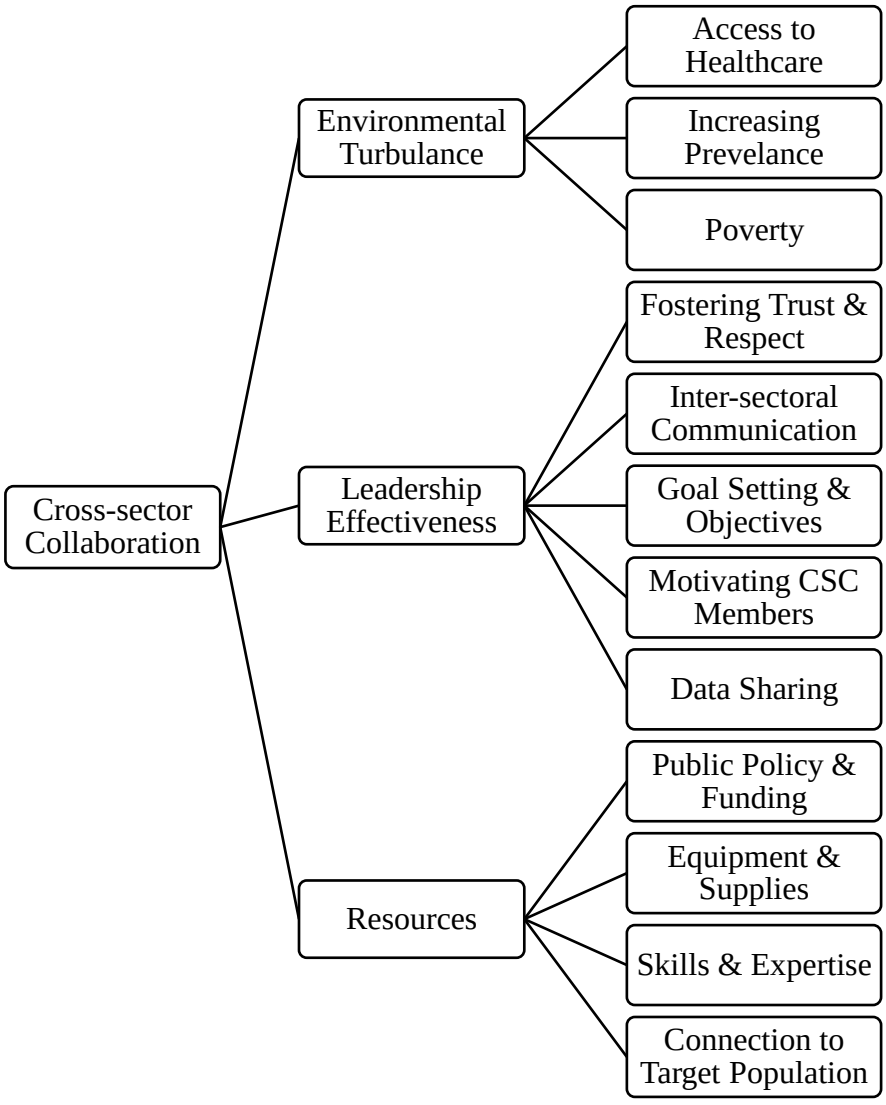

Figure 3. Results, challenges, themes. Summary of findings related to challenges in environmental turbulence, leadership effectiveness, and resource in a CSC in Cameroon.

Theme 1: Environmental Turbulence

Environmental turbulence focused on the existing environmental situation (initial condition) that existed before the formation of the collaboration. Bryson et al. (2006) and Woulfe et al. (2010) highlighted that, in the initial condition category, the stakeholders of the CSC focus on issues related to the immediate precondition affecting the formation of the CSC and the potential preexisting sector failures. In other words, stakeholders must focus on the influential paradigms that affect the change effort and understand the people who bring liabilities and assets to the CSCs. In this study, participants specified that poverty, lack of access to health care, and the increasing prevalence of adult-onset diabetes existed before the formation of the CSC; thus, those factors represent the initial condition, the environmental turbulence. Arevalo (2017) asserted that diverse challenges posed by environmental factors drive organizations to reach outward for solutions thereby fostering the collaborative relationships with other partners necessary for a formidable front addressing a common challenge. In this research, all the participants expressed environmental turbulence influenced the formation of CSC. I discuss the disclosed elements of environmental turbulence revealed by the participants next.

Increasing prevalence of adult-onset diabetes. The growing prevalence of adult-onset diabetes was the first code of environmental turbulence expressed by the participants. The increasing prevalence of adult-onset diabetes in Cameroon has been discussed in scholarly literature**.** Like Lemogoum et al. (2018) and Mbanya et al. (2014), participants reported that adult-onset diabetes was becoming more prevalent in Cameroon. Mbanya et al. related that the rising diabetes trend is projected to rise by 17%

from 2013 through 2035 in Cameroon. The growing prevalence of adult-onset diabetes was a pre-determined code from the literature and confirmed by all the participants as having existed in the environment before the formation of the CSC. For example, Participant D articulated that

> What we practically experienced was that more people were presenting in the healthcare settings with diabetes. We quickly realized that we are dealing with a high prevalence of diabetes and something needed to be done.

Access to healthcare. In Cameroon, out of pocket payments are the primary method to access health care. WHO (2005b) pointed out that out-of-pocket payments act as a barrier in accessing health care to impoverished populations and remains one of the most inequitable forms of health financing. Within a weak health care financing system, very few people enroll in private insurance companies and health insurance is almost none existent in Cameroon (Pacific Prime, 2017). Considering the management of adult-onset diabetes requires life-long medical maintenance, coupled with the increasing prevalence and mortality of adult-onset diabetes reported by the participants, it was no surprise that a lack of health care emerged as part of the existing environmental turbulence. As exemplified by Participant B:

> Access to the available healthcare services was often difficult due to lack of insurance and poverty. Most of the people living with diabetes are uninsured or poor making access to healthcare a challenge.

Poverty. Cameroon is an impoverished country were 30.2% of the population lives below the poverty line (< USD 1; CIA, 2018). Cameroon government spending on

health care has consistently been low (5.1% and 4.1% of the GDP for 2012 and 2014 respectively) with communicable diseases prioritized over noncommunicable diseases (CIA, 2018). Participants mentioned that the lack of adequate government spending on health care and poverty contributed to environmental turbulence. This assertion is correlates with Kamadjeu et al.'s (2006) statement that, due to poverty, people living with adult-onset diabetes would only seek health care when their medical condition had worsened, leading to increased prevalence and mortality. Participant B stated that

> Access to the available healthcare services is often difficult due to lack of insurance and poverty. Most of the people living with diabetes are uninsured or poor making access to healthcare a challenge.

Theme 2: Leadership Effectiveness

Leadership effectiveness is another element mentioned by the participants as having contributed to environmental turbulence in Cameroon. Public leadership effectiveness is the ability of a person or group of people to connect CSC partners and influence the communication process between them while providing guidance during project implementation (Alexander et al., 2003). Moreover, a central tenet of the CSC model is the notion that, by working jointly and combining effective leadership, a team approach can be more productive than any single organization or government (Zahner et al., 2014). From the participant's responses, it emerged that goal setting and objectives and fostering trust and respect within the partnership were some of the leadership effectiveness challenges in the CSC. These aspects are not in line with the current

literature for successful a CSC. I discuss how the identified challenges connect with scholarly literature in the discipline next.

Fostering trust and respect. Fostering trust and respect building activities in collaboration leads to more efficacious outcomes. McKean et al. (2017) clarified that fostering trust and respect within the CSC relies on the capacity for partners to listen to what others are saying (respect), which contributes to building a strong working relationship. Participants reported that partners did not always foster trust and respect which, in turn, affected the synergy of the CSC. Solomon and Flores (2003) outlined several categories of trust including blind and authentic trust. Solomon and Flores relayed that authentic trust cannot be taken for granted, it must be carefully considered by the CSC and needs to be continuous; meanwhile, blind trust occurs when evidence for distrust is rejected and requires self-deception. According to Participant A, authentic trust was a challenge for the CSC: "timelines are missed, meetings are not attended, and no one can be held accountable in the government side of the partnership."

Intersectorial communication – goal setting and objectives. Intersectorial communication, goals, and objectives for CSC should be a straight forward process. However, Johnston and Finegood (2015) opined that goal and objective alignment at the CSC level may pose significant challenges, such as in intersectorial communication, if such does not satisfy the common interests and expectations of the CSC. Lasker et al. (2001) highlight that coordinating organizational goals and communication amongst partners could help to ensure synergy and visibility of the CSC. I found that goal setting and objectives, as well as intersectorial communication, did not align with the scholarly

literature for this domain at the CSC. For example, participants conveyed that the government side of the collaboration was lackadaisical in developing goals and objectives to operationalize the CSC. Thus, how the CSC addressed goals and objectives did not meet the common interest of the CSC.

Theme 3: Resources

Resources symbolize the building block of collaboration that includes both financial and nonfinancial means used to carry out the work of the CSC. Zahner et al. (2014) highlighted that the synergism from CSC allows partners to harness resources and expertise in a combined effort to reduce the impact of global disease burdens like adult-onset diabetes. However, the central tenet of the partnership model is the notion that by forming partnerships and combining resources a team approach can be more constructive than any single organization or government (Zahner et al., 2014). In this study, I inquired about the major challenges related to financial and material resources that the CSC faced when engaging in the management of adult-onset diabetes. I found challenges with government policy regarding funding, personnel skills and expertise, equipment, and supplies in the CSC. Furthermore, I found that emergent codes connected well to scholarly literature.

Public policy and financial support. Rani et al. (2012) identified resource as a limiting factor to the effective management of disease in CSC's. Like most LMICs, Cameroon government public policy on funding noncommunicable disease is well documented**.** Echouffo-Tcheugui and Kengne (2011) reported the management of communicable diseases in Cameroon as highly prioritized over noncommunicable

diseases attributable to ineffective public policy and a lack of resources. I found that six out eight participants in this study mentioned both foreign partners and the Cameroon government prioritize funding on communicable diseases to the detriment of noncommunicable diseases. Data revealed resources as a limiting factor and relayed a need for government commitment to increased funding to the CMPH to facilitate the creation of dedicated structures and supports for noncommunicable diseases.

Skills and expertise. Expertise and skills are the nonfinancial aspects of resources. Lasker et al. (2001) pointed out that CSCs need the necessary array of expertise and skills to support an efficacious collaboration process. In this study, the participants expressed a need for trained personnel. Although Zahner et al. (2014) highlighted that the synergism from CSC allows partners to harness resources and expertise on collaboration, participants indicated that forming the CSC in Cameroon increased their number of personnel but not their expertise. Thus, my findings did not align well with the scholarly literature in this domain which suggested that forming the CSC would also increase expertise. As noted by participant C,

> The lack of qualified trained personnel at each level in the partnership remains a challenge. There is a lack of trained staff to manage the various facilities in the communities we serve as well as in the government ministries.

Equipment and supplies. The management of adult-onset diabetes requires ongoing consumption of supplies, such as testing strips, and equipment, for frequent use in monitoring blood sugar. According to WHO (2016), people living with diabetes require two to three times the health care resources compared to the management of other

diseases. Also, Rani et al. (2012) pointed out that inadequate resources (equipment and supplies) remain a limiting factor in the effective management of noncommunicable diseases. In Cameroon, 30.2% of the population lives below the poverty line making the purchase of the needed equipment and supplies a challenge (< USD 1; CIA, 2018). In this study, participants revealed that, due to the increased demands and cost of managing adult-onset diabetes, the CSC, as well as people living with adult-onset diabetes in Cameroon, do not always have adequate supplies and equipment. Bongben (2014) and Mbanya (2014) reported that, of the 700,000 people living with diabetes in Cameroon, only 39% have the equipment to control their blood sugar.

Connection with the adult-onset diabetes community. Making a connection to a target population is desirable for a CSC. Woulfe et al. (2010) advocated that CSCs should continually engage their target population to get the best out of the CSC. My findings did not align well with Woulfe et al.'s assertion. My participants articulated that the CSC had difficulties meeting the needs of the targeted population and, therefore, was not able to make connections. Participant F summed it,

> The collaboration has been struggling to meet the needs of the communities it serves. The collaboration tries as much as possible not to focus on its challenges (issues with leadership effectiveness and resource), but it has many.

Recommendations for Leadership Effectiveness and Resource

Throughout the open-ended, qualitative interviews, participants provided recommendations for CSC improvement despite the type of question being asked. I did not include such data in the study discussion, except when repeated data were presented. I

asked the participants, separately, for recommendations that could assist the CSC in overcoming the challenges related to leadership effectiveness and resources.

Participants made several recommendations (depicted in Figure 4) which I classified into two distinct areas: (a) increased government commitment and funding for noncommunicable diseases, particularly adult-onset diabetes, and (b) dedicated structures and supports. The two recommendations align well with the scholarly literature in this domain. Jones and Barry (2011a) pointed out that leadership and resources contribute the most to CSC synergy. Meanwhile, Rabinowitz and Holt (2013) clarified that leadership and resources are critical in developing CSC among community partnerships, support institutions, and funding agencies.

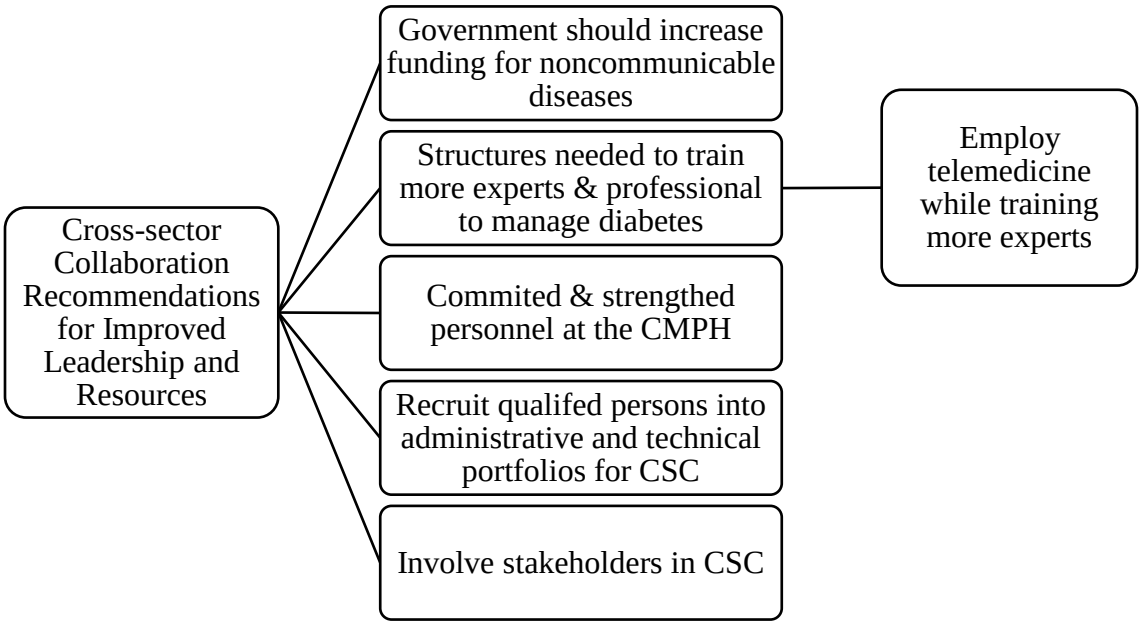

Figure 4. Participant recommendations. Shows recommendations to CSC challenges identified by the participants while responding to leadership effectiveness and resource questions during the interview, before Questions 3 and 5 related to recommendation were asked.

Analysis of Findings in Context with the Theoretical Framework

In this study, Bryson et al.'s (2006) CSCT provided a useful model in understanding the CSC and participants' responses. An analysis and interpretation of my findings in the context of CSCT are discussed next.

Environmental Turbulence

There is a relationship between the CSCT framework and the environmental turbulence that exists in a setting before the formulation of a partnership. CSCT Proposition 1 (see Table 1) guided my formulation of interview Question 1 to elicit information on the emerging trends that motivated the creation of the CSC architecture to manage adult-onset diabetes in Cameroon. Proposition 1 indicates: Like all inter-organizational relationships, CSCs are more likely to form in turbulent environments. In particular, the formation and sustainability of CSCs are affected by driving and constraining forces in the competitive and institutional environments.

I identified three environmental turbulences that aligned with CSCT Proposition 1: The increasing prevalence of adult-onset diabetes, access to health care, and poverty. All three turbulences presented significantly constraining forces that drove the creation of the CSC.

Leadership Effectiveness

Leadership, a theory-driven code, emphasizes the characteristics of a setting which include adjusting interventions aimed at creating networks and building capacity that could be a recipe for a successful partnership. The purpose of my qualitative case study was to explore how leadership effectiveness and resources in a partnership, as

perceived by the CSC executives, affected the use of strategy to assist management of adult-onset diabetes in Cameroon. CSCT Propositions 5 and 6 (see Table 1) guided the formulation of the leadership effectiveness questions in this study to understand how leadership effectiveness provided a challenge to the CSC.

I identified challenges including inter-sectoral communication, goal setting and objectives, fostering trust and respect, and sharing data. Each of these challenges correlate with scholarly literature discussed in Chapter 2. Additionally, each of these challenges directly aligns with Propositions 5 and 6 wherein participants felt they lacked committed sponsors and effective champions (leadership), as well as, any organizational legitimacy as a separate entity. The overall lack of trust and interaction among partners, aspects crucial to CSC success according to CSCT Propositions, obviously presented additional challenge to the CSC's effectiveness.

Resources

Resources are one of the two determines of synergy and a theory-driven code in this study. Propositions 8 and 16 (see Table 1) guided the formulation of the qualitative interview questions pertaining to resources. I identified several resource challenges adverse to CSCT Propositions 8 and 16, including public policy, money, skills and expertise, equipment, and supplies. While effective public policy is likely the most significant contributor to power imbalances within the CSC resources, clearly, money, skill, expertise, equipment, and supplies each contribute to shock and imbalance. I also found that CSC partners demonstrated poor or nonexistent use of the limited resources they had to equalize power or manage conflict effectively.

Limitations of the Study

This qualitative exploratory case study involved informal partners in an informal partnership between the government and its private organization partners in Cameroon. While case study research is limited in scope, findings that were expressed by the participants were most likely generalized to similar informal CSC between the government and their private partners. Although the study was carried out in one geographical location, Cameroon, it is plausible that other CSCs share such sentiments in other areas of the country; therefore, expanding potential generalizability of these findings. Moreover, the sentiments and values expressed by the participants of the CSC were consistent with what has been reported in existing scholarly literature; thus, further indication that my findings could apply to other audiences.

As a master's degree prepared nurse (MPN), I acquired additional theoretical knowledge that set me apart from nonhealthcare-oriented researchers on this topic and provided a different interpretive lens related to adult-onset diabetes and other diseases. I understand that my personal biases could have somehow affected the data collection process and data interpretation. To control that bias, I maintained a high level of objectivity by making consistent conscious effort to focus on the aim of the study and my role as a neutral instrument. For example, I created a journal and listed any identified experiences, beliefs, or attitudes that had to do with the study; and I repeatedly referred to the journal pre- and post-interview sessions. I employed bracketing, a process reported by Yin (2013) whereby researchers make a conscious effort to acknowledge their personal experiences and work to relinquish the images. Moreover, I maintained a consistent tone

of discourse and presentation of questions and probing questions, and I questioned the participants only once.

Many participants felt comfortable enough to express negative perspectives about their government partner, and some shared such without any regard to ramification. I asked open-ended questions and probed for clarification of answers to enable the participants to explore their viewpoints without any influence or leading on my part. Therefore, the participants' response reflected their viewpoints relevant to the CSC and equally validated an understanding that important challenges were present within their CSC, which need to be addressed to assure an efficacious CSC.

Recommendation

The results of this research are limited in scope related to transferability and grounded in a qualitative explorative case study tradition. Participants' expressions were likely generalized to similar informal CSC. However, the strength of my findings, derived from those participant expressions, aligned to existing literature and theory exceedingly well; thus, expanding potential transferability of findings. Furthermore, although the study's setting was geographically located in Cameroon, it is plausible that findings would also be generalize to similar settings within Cameroon or beyond. Additionally, there is a possibility for methodological transfer to future studies to understand analogous phenomena for improving community health in like settings to address this important community health problems. Therefore, further studies should look at how recommendations could be implemented to improve CSC for adult-onset diabetes management.

Knowledge about the purported challenges in the collaboration to assist in managing adult-onset diabetes in Cameroon would benefit similar research through comparison of findings between the two cities. Understanding these challenges from the perspective of executives of the collaborations would be central to enhancing synergy in the partnerships such would be central in decreasing the prevalence and improving adult-onset diabetes outcome, resulting in a desired social change in the health communities of Cameroon.

Implications

A synergic informal collaboration between the government and private partners reflects positive social change because advocates involved share a common goal and collaborate to make it a reality. The activities of CSC have the potential to immeasurably impact social change because such activities involve the communities that derive benefits from the informal collaboration. The impact of the collaboration and its resourcefulness are often life-sustaining and alter the course and shape of the lives of the beneficiaries in varied ways and forms.

With this study, I aimed to increase the scientific and scholarly understanding of the health sector CSC in Cameroon to inform effective public policy critical to overcoming the burden of adult-onset diabetes resulting from its increasing prevalence. Hence, I explored the underuse of CSC relative to resources and leadership effectiveness in managing adult-onset diabetes in Cameroon. My study satisfied the public policy while allowing for qualitative depth and insight into the findings. In this study, I found significant implication associated with positive social change and public policy.

Positive Social Change Implication

Positive social change implications resulting from my findings may be significant. Through my findings, I provide insight increasing the knowledge-base to the public and private partnership implementers which could assist in more effective CSC strategies. Such improvement, in a CSC working to manage adult-onset diabetes in Cameroon for example, could result in a possible reduction in the prevalence of adult-onset diabetes and decrease the toll of premature mortality resulting from adult-onset diabetes; which would, in turn, improved the quality of life of adults with adult-onset diabetes in Cameroon. Additionally, my findings could influence individual executives to observe their perception during advocacy for the CSC. Such increased observations could improve the awareness and attitudes of the executives and improve the level of engagement related to the implementation of the CSC mission. Similarly, improved leadership would possibly assist in further reducing the prevalence of adult-onset diabetes, decrease the toll of premature mortality, and thereby improve the quality of life of adults with adult-onset diabetes in Cameroon due to the increased synergy of the CSC.

Public Policy Implication and Practice

As reported by participants, current public policy in Cameroon regarding funding for noncommunicable disease is lacking and does not address the prevalence and burden of adult-onset diabetes. Participants expressed a need for (a) increased government commitment and funding for noncommunicable diseases, particularly adult-onset diabetes and (b) the need to put in structures in place to support and optimize CSCs like the sample in this study. Thus, public policy implications are twofold.

Increased government commitment and funding. Although the Cameroon government only spends 5.1%, on health care, it focuses efforts and resources more on communicable diseases to the detriment of noncommunicable diseases. Echouffo-Tcheugui and Kengne (2011) attributed the government's focus on communicable disease over noncommunicable disease to ineffective public policy. Many of the participants equally identified this policy as ineffective and detrimental. Participants recommended that government increase commitment and funding and create structures to assist in decreasing the prevalence and burden of adult-onset diabetes. Moreover, the government inadvertently pushes personnel to serve in communicable disease departments due to the available increased funding. Some of the participants relayed that if the government maintained the current policy, such action would create a phase continuing the rising prevalence of adult-onset diabetes and consequently increase the mortality and burden for people living with adult-onset diabetes.

The insights that this study provide can increase the knowledge base and influence the attitudes of lawmakers in the domain of public policy and public health related to government health care funding policies and amendments. Such changes would reflect an increase in government commitment and funding for noncommunicable diseases. These actions would enhance the efficacy of CSCs and decrease the burden and prevalence of people living with adult-onset diabetes.

Increased government supported structures. Participants also reported the need for the government to put in support structures in place. The respondents emphasized a critical need for government and other relevant stakeholders to train more

experts/professionals to manage adult-onset diabetes through promoting specialized education and scholarships.

Support structures. The literature suggested that there is a strong link between the advancement of support structures, improved health care, and the use of CSC. The challenges revealed in this study were largely due to lack of well laid down structures within the CSC between the government and its partners. The increased understanding of the existing issues related to support structures, from the perspective of the participants, can promote an innovative environment for public and private sector leaders to work together to lay down structures that can foster trust and respect; such as written policy and protocols, and communication; developing clear agreed on goals and objectives, for the CSC. (Ansari, 2012, Itika, 2011).

Training. Throughout this study, participants repeatedly called for enhanced personnel training for the care of people living with a noncommunicable disease, such as adult-onset diabetes. Due to resource issues, current training is mostly available to personnel caring for people with communicable diseases. Many participants called for the training to be consistent at the secondary, tertiary, and primary levels of the health care system. To ensure consistent training, the government public policy must address this issue as well.

Significance to Theoretical Framework

CSCT is a robust theoretical framework used by a multitude of organizations, from social behavior to decision-making, to address community health challenges related to public policies. This study adds credibility and utility of the CSCT framework. The

framework provided a model for understanding the CSC and explained how the contingencies and constraints presenting implementation challenges could be evaluated through qualitative interviews and analysis of participants' responses. CSCT Propositions guided the use of model. The framework, therefore, provided a focusing lens for scrutiny of the problem, literature review, and data analysis.

A central tenet of the collaboration model is the notion that by working jointly and combining effective public leadership and resources, a team approach can be more constructive (Zahner, Oliver, & Siemering, 2014) than any single organization or government agency. The ideology of the CSCT infers that positive health promotion outcomes achieved using CSCs are the result of the process and the structure/governance of the partnership. In Chapter 4 and 5, I discussed results related to these elements with intent to inform developing public policy. My findings demonstrated that the use of the CSCT framework was effective in the evaluation of the informal CSC sample in this study.

Conclusion

CSC has proven to be an effective strategy for improving community health. Although the increasing burden and rising prevalence rate of adult-onset diabetes presents a growing health care concern in LMICs requiring a regulatory approach and community engagement, scholarly literature indicated that CSC is not effectively used to manage adult-onset diabetes. Moreover, no study existed to explain why. This qualitative exploratory case study narrows that gap in the scientific knowledge base. With this study,

I explored how leadership and resources affected the use of CSC to assist in managing adult-onset diabetes in a CSC in Cameroon.

CSCT provided a model for understanding and analyzing the CSC. Data obtained from a review of documents and researcher observations were triangulated with interview data. The findings increase scientific understanding and can help government policy-makers, and nongovernmental organizations expanded public policy leading to a decrease in the prevalence and burden of adult-onset diabetes.

Although participants recognized collaboration as an important strategy for improving community health in an impoverished country like Cameroon, each participant related substantial challenges to the synergy/efficacy of this CSC sample. Through explorative case study analysis, I identified issues with environmental turbulence, leadership effectiveness, and resources that presented challenges to the CSC's efforts to assist in managing adult-onset diabetes. Understanding these challenges from the perspective of executives of the CSC sample in this study is fundamental to optimizing synergy in the CSC as such is central in decreasing the prevalence and outcome of adult-onset diabetes. Through analysis, I determined that government commitment and funding and needed support structures were the two significant barriers to the sample CSC's efficacy managing adult-onset diabetes in Cameroon.

My findings could have significant positive implications in social change and public policy in the region. Policymakers can use my results to create more effective public policies pertaining to commitment, funding, and support structures. Improved policies will in turn aid caregivers of adult-onset diabetes patients, and those diagnosed

with adult-onset diabetes, through working with the CSCs. CSC partners can use my results to improve their synergy and, thus, build a more efficacious CSC for managing adult-onset diabetes in the area. These implications could naturally lead to increased positive social change through reducing the prevalence of adult-onset diabetes, decreasing the mortality rate of adult-onset diabetes, and improving the quality of life of those diagnosed with adult-onset diabetes.

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Appendix A: Open-Ended, Structured, Qualitative Interview Questions

1. Describe for me the emerging trends that motivated the creation of the cross-sector collaboration architecture to manage adult-onset diabetes in Cameroon? (indicative of preposition 1 and 2)
2. What are the major challenges related to financial and material resources that the cross-sector collaboration partnerships face when engaging in the management of adult-onset diabetes in Cameroon? (indicative of preposition 8 and 16)
3. What are the major challenges related to leadership effectiveness that the cross-sector collaboration partnerships face when engaging in the management of adult-onset diabetes in Cameroon? (Indicative of preposition 5 and 6).
4. What are the major recommendations related to leadership effectiveness do you have to foster the use of Cross-sector Collaboration to manage adult-onset diabetes in Cameroon? (indicative of preposition 9 and 20)
5. What are the major recommendations related to financial and material resources you do offer that can foster the use of Cross-sector Collaboration to manage adult-onset diabetes in Cameroon? (indicative of preposition 9 and 20)

Appendix B: Permission to use CSCT and Associated Figure

Title: Global estimates of diabetes prevalence for 2013 and projections for 2035
Authors: L. Guariguata. D. R. Whiting, I Hambleton J. Beagley, U. Linnenkamp J E. Shaw
Publication: Diabetes Research and Clinical Practice
Publisher: Elsevier. Date: February 2014. Copyright © 2013 Published by Elsevier Ireland Ltd.

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Appendix C: Cameroon Ministry of Public Health IRB Approval

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COMITE REGIONAL D'ETHIQUE DE LA RECHERCHE POUR LA SANTE HUMAINE DU CENTRE

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Mail : crersh_centre@yahoo.com

REPUBLIC OF CAMEROON
Peace – Work – Fatherland

MINISTRY OF PUBLIC HEALTH

SECRETARIAT GENERAL

CENTRE REGIONALETHICS COMMITTEE FOR HUMAN HEALTH RESEARCH

CE N°1524 -/CRERSHC/2018

Yaoundé, le 28 NOV 2018

CLAIRANCE ETHIQUE

Le Comité Régional d'Ethique de la Recherche pour la Santé Humaine du Centre **(CRERSH/C)** a reçu la demande de clairance éthique pour le projet de recherche intitulé : **« Fostering collaborative partnerships to assist in managing diabetes in Cameroon»** soumis par Monsieur **FORJU JINGWA Christopher.**

Après son évaluation, il ressort que le sujet est digne d'intérêt, les objectifs sont bien définis et la procédure de recherche ne comporte pas de méthodes invasives préjudiciables aux participants. Par ailleurs, le formulaire de consentement éclairé destiné aux participants est acceptable.

Pour ces raisons, le Comité Régional d'éthique approuve pour une période de six (06) mois, la mise en œuvre de la présente version du protocole.

L'intéressé est responsable du respect scrupuleux du protocole et ne devra y apporter aucun amendement aussi mineur soit-il sans l'avis favorable du Comité Régional d'Ethique. En outre, il est tenu de:

- collaborer pour toute descente du Comité Régional d'éthique pour le suivi de la mise en œuvre du protocole approuvé ;
- et soumettre le rapport final de l'étude au Comité Régional d'éthique et aux autorités compétentes concernées par l'étude.

La présente clairance peut être retirée en cas de non-respect de la réglementation en vigueur et des directives sus mentionnées.

En foi de quoi la présente Clairance Ethique est délivrée pour servir et valoir ce que de droit.

LE PRESIDENT

Ampliation:
- CNERSH

REPUBLIQUE DU CAMEROUN Comité Régional d'Ethique de la Recherche pour la Santé Humaine du Centre CRERSH/C CENTRE MINISTERE DE LA SANTE PUBLIQUE

Pr. Inoni BEYE Casimir
Pharmacien

English Translation: **ETHICS CLEARANCE**

The Central Regional Ethics Committee for Human Health received and Ethics Clearance request for a research project titled "Fostering Collaborative Partnerships to Assist in Managing Diabetes in Cameroon" submitted by Jingwa Christopher Forju.

After evaluation, it is evident that the subject is of interest, the objectives are clearly defined, and the research processes do not include invasive methods that could be prejudicial to participants. In addition, the consent form to be addressed to the participant is acceptable.

For these reasons, the Regional Ethics Committee approves the execution of the submitted protocol for a Six (6) months period.

The researcher is responsible for the scrupulous respect of submitted protocol which cannot even slightly be amended without the consent of the Regional Ethics Committee. Further, the researcher is required to:

- Collaborate with all visits of the Regional Ethics Committee designed to supervise the execution of the approved protocol;
- Submit the final report of the study to the Regional Ethics committee as well as to competent National authorities interested in the research.

The present clearance could be withdrawn for the nonrespect of regulations in force and directives clearly mentioned above.

Hence, the present ethics clearance is issued to the researcher to serve any purpose for which it may be intended.

CE N^{O} 1524 /CRERSCH/2018 Yaoundé, on 28 NOV 2018

Appendix D: CITI Certificate

CITI PROGRAM

Completion Date 12-Oct-2018
Expiration Date N/A
Record ID 29057879

This is to certify that:

jingwa Forju

Has completed the following CITI Program course:

Student Researchers (Curriculum Group)
Student Researchers (Course Learner Group)
1 - Basic Course (Stage)

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