FROM AWARENESS TO ACTION ON THE NUTRITION AND EPIDEMIOLOGIC TRANSITION IN NIGERIA: THE ROLE OF POLICY ACTOR PERSPECTIVES AND STRATEGIC CAPACITY

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FROM AWARENESS TO ACTION ON THE NUTRITION AND EPIDEMIOLOGIC TRANSITION IN NIGERIA: THE ROLE OF POLICY ACTOR PERSPECTIVES AND STRATEGIC CAPACITY

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Nigeria, like other low/middle income countries, is undergoing a nutrition and epidemiologic transition. An increasing burden of overnutrition and noncommunicable diseases (NCDs) now coexists with traditional problems of undernutrition and infectious diseases. The result is that overall morbidity and mortality in Nigeria is high, and there are greatly increased health care costs. The WHO and other global health authorities strongly advocate for a multisectoral government policy to address NCDs. Nigerian policy actors are aware of the need for this policy, and a public policy unit for NCDs has existed since 1989; still, there is no formal policy on NCDs.

There are four components of policymaking – the actors, process, context and content. This dissertation assessed these four components in relation to NCDs in Nigeria. A Q-study was used to assess the perspectives of policy actors concerning NCDs, and semi-structured interviews were used to understand aspects of the policy process as well as the context of policymaking (strategic capacity). Furthermore, a descriptive epidemiological analysis of undernutrition and overnutrition in Nigeria was conducted to determine which subpopulations are at most risk for NCDs, and to identify important considerations for the content of a NCD policy.

It was found that all policy actors appeared to consider NCDs as an important issue that must be addressed, but they seemed to disagree on how to address the issue. Yet, the policymaking context was not conducive for brokering conflict and building consensus. Also, the epidemiologic analyses revealed that groups that are highly vulnerable to undernutrition also have a significant prevalence of overweight; thus developing the policy content to address NCDs will be a complex undertaking. In contrast, the policy actors appeared to perceive the issue in a simplistic manner. Similar to these findings, the factors which were reported by policy actors to be contributory to the stagnation in the policy process were related to deficiencies of the actors and context, and the low awareness of the issue.

For successful policymaking and action for NCDs in Nigeria, there is an urgent need to build strategic capacity and resolve the intricacies associated with the content for a NCDs policy.

BIOGRAPHICAL SKETCH

Olutayo Adeyemi was born in Nigeria and, except for a few weeks in Kenya, lived there all her life until she began her doctoral program at Cornell University in 2008. In 2005, she obtained a Bachelor of Science degree in Human Nutrition from the University of Ibadan, Nigeria, and in 2007, a Post Graduate Diploma in Education from the Nigerian National Teachers' Institute. After completing her undergraduate studies, she taught high school home economics and agriculture for a year, and subsequently worked with a nongovernmental organization for two years. At this organization, she was involved in several child survival and food security projects ranging from community agriculture and education interventions, to a large scale micronutrient supplementation program. Through her experiences, she came to realize that knowing the science of nutrition was sometimes not sufficient for improving nutrition at the population level, as a result of other stakeholders with different interests. This realization motivated her decision to pursue graduate studies in nutrition and public health policy, and has shaped her doctoral research program. Olutayo hopes to use her understanding of the Nigerian health system, gained during her research, to successfully work with policy actors to institute large scale nutrition action in Nigeria.

To my husband, Adekunle Adeyemi, for his love, support and sacrifice

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I have found it hard to identify a starting point from which to acknowledge persons. My journey to this dissertation is the story of my life; every single day prior to and during my doctoral program brought me a step closer to this point. And so, I write this acknowledgement knowing that I am unable able to individually recognize everyone who has been instrumental in this work.

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I am profoundly grateful for Kunle, my husband. I cannot fully describe my gratitude for your friendship, love, support, encouragement, everything! You have selflessly put my needs above yours for years, and even though it is not easy living apart, you do not complain or make me feel guilty. Though faraway, you remain my source of comfort, you make me laugh no matter what. I thank God for you every day. You are very precious my darling and I love you so much.

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LIST OF ABBREVIATIONS

ACC	Administrative Committee on Coordination
AIDS	Acquired Immune Deficiency Syndrome
BMI	Body Mass Index
CBO	Community Based Organization
CSO	Civil Society Organization
CVD	Cardiovascular Disease
DBM	Double burden of malnutrition
DHS	Demographic Health Survey
EA	Enumeration Area
FCT	Federal Capital Territory
FMOH	Federal Ministry of Health
GNP	Gross National Product
HAZ	Height-for-Age z-score
HIV	Human Immunodeficiency Virus
IOM	Institute of Medicine
IRB	Institutional Review Board
LGA	Local Government Area
LMIC	Low-middle income country
MDA	Ministry, Department and Agency
MOF	Ministry of Finance
NAFDAC	National Agency for Food and Drug Administration and Control
NCDs	Noncommunicable diseases
NGO	Nongovernmental Organization
NPC	National Population Commission

NSHDP	National Strategic Health Development Plan
PHC	Primary Health Care
PSU	Primary Sampling Unit
SCN	Standing Committee on Nutrition
SSA	Sub-Saharan Africa
UNICEF	United Nations Children's Fund
WHO	World Health Organization
WHZ	Weight-for-Height z-score

Chapter 1

Introduction

1.1. Background

Discourse about malnutrition and disease in a low-middle income country (LMIC) like Nigeria would typically invoke images of half-starved or stunted children. Undernutrition has long been recognized as a problem in this context, and has been associated with poor developmental outcomes (Black et al., 2008). Furthermore, in the past the most prevalent diseases were infectious diseases such as malaria and diarrhea, which like undernutrition were associated with deprived environments (Prentice, 2006). While undernutrition and infectious diseases are still highly prevalent in Nigeria, malnutrition and disease are increasingly being manifested as overnutrition and noncommunicable diseases (WHO, 2005; SCN, 2006). The shift from a high burden of undernutrition to an increasing burden of overnutrition is known as the nutrition transition, while the corresponding shift from a high prevalence of infectious disease to a growing burden of noncommunicable diseases (NCDs) is known as the epidemiologic transition (Popkin, 1994).

1.2. The nutrition and epidemiologic transition

According to several reports, the nutrition transition is due to a shift in dietary patterns from a diet high in fiber to one that is high in saturated fats and refined sugars, and low in dietary fiber (Popkin, 2001; 2003; Schmidhuber & Shetty, 2005). Changes in the macroeconomic environment have led to transformations in food production, processing and distribution which

have led to lowered food prices. The reduced prices, coupled with increased incomes and other factors resulting from the same macroeconomic changes, have encouraged the consumption of high-caloric foods and beverages beyond the energy intake most individuals need to maintain a healthy weight (Kumanyika et al., 2002). Diets which are high in saturated fats, refined sugars and salt and low in dietary fiber contribute to the development of overweight/obesity and the metabolic syndrome (WHO, 2004). The metabolic syndrome is a group of conditions – dysglycemia, dyslipidemia, hypertension and procoagulant state – which result from the dysregulation of metabolic processes that control blood glucose, lipids and blood pressure (Misra & Khurana, 2008); and is a mediator for several of the major NCDs – diabetes, cardiovascular disease, diabetes, cancer, and chronic respiratory diseases. Thus, the epidemiologic transition typically occurs concurrently with the nutrition transition, and reflects the interdependency between diet and health (Popkin, 1994). In addition to dietary shifts, the metabolic syndrome and epidemiologic transition is associated with other contributing factors, particularly lifestyle characteristics such as physical activity patterns, tobacco use and oftentimes alcohol intake (WHO, 2005). Physical inactivity can of itself increase the risk to NCDs, but can also work in synergy with unhealthy diets to cause overweight/obesity; another major risk factor for NCDs, in addition to being a disease in itself. Other important predisposing factors to NCDs include environmental pollution, psychosocial factors, genetic factors and impaired fetal nutrition. Programming of NCDs disease by impaired fetal nutrition appears to occur through changes to major hormonal axes that regulate growth, as well as lasting structural changes that may increase the susceptibility to metabolic stress (Delisle, 2002; WHO, 2005). Also, rapid weight gain in later childhood and adolescence in children who were undernourished prior to age two, has been shown to increase the risk of NCDs (Victora et al., 2008).

The nutrition transition began to be recognized as a problem in low income countries in the late 1980's when several forums and reports documented an emerging problem of obesity and chronic diseases in LMICs which had traditionally experienced undernourishment and nutritional deficiencies. One such forum was a 1997 WHO consultation on obesity which highlighted the prevalence of and trends in obesity in various regions of the world including low-income countries (WHO, 2000). The gravity of the problem was however not fully realized until the World Health report of 2002 was published. This report showed that both undernutrition and overnutrition were amongst the top ten risk factors for the global burden of disease and mortality, in both high income and LMICs (WHO, 2002). However, although high income countries have also experienced the nutrition and epidemiologic transition, these transitions occurred after these countries had successfully reduced undernutrition and infectious diseases. The problem with the nutrition and epidemiologic transitions in LMICs is that these countries are yet to reduce undernutrition and infectious disease (Popkin, 1994). Thus, these traditional conditions now coexist with overnutrition and NCDs within the same population and sometimes community or household, resulting in a double burden of malnutrition or disease (DBM).

1.3. The double burden of malnutrition and disease

The existence of high burdens of undernutrition/infectious diseases, and overnutrition/NCDs (or DBM) within the same population or community is an alarming situation. The DBM implies that some members of a population have shifted to one extreme of nutritional/health status, while other members remain at the other extreme (Vorster et al., 1999). Several factors such as the contributory factors to the nutrition transition, agricultural growth, changes in socioeconomic

status, a slow epidemiological transition, and changes in physical activity patterns, can contribute to the DBM (Schmidhuber & Shetty, 2005; SCN, 2006). Some research evidence also shows that the DBM can occur when women who experience fetal programming of chronic disease may, by virtue of their short stature or other nutritional inadequacies, give birth to children who also experience undernutrition and growth failure; while the mothers go on to experience overnutrition and/or chronic disease (ACC/SCN, 1992; Delisle, 2002; SCN, 2006).

1.4. Implications of the nutrition and epidemiologic transition, and the DBM

Like undernutrition and infectious diseases, overnutrition and NCDs are a significant source of morbidity and mortality, and are an economic burden. While infectious diseases remain a top cause of morbidity and mortality, NCDs are the leading cause of morbidity and mortality in most countries of the world (WHO, 2008). About 60% of all deaths are due to NCDs (WHO, 2005). Furthermore, Victora et al. (2008) reported significant associations between undernutrition and lower income in both men and women; while Yach et al. (2006) reported that as high as 25% of household income is spent on treatment costs when one member has diabetes, an NCD. In addition to lower household income and increased health costs, both groups of authors also report lower returns to education as a result of undernutrition and diabetes respectively. It is now clear that without the prevention and control of NCDs, overall morbidity and mortality will continue to remain high, and developmental goals will not be achieved (WHO, 2005). The failure to address NCDs also will undermine efforts to achieve undernutrition and infectious disease reduction goals because human, organizational and financial resources in the health

sector increasingly will be diverted to address NCDs, especially under political pressure from economically and politically privileged groups (Popkin, 1994; Stuckler et al., 2010).

Yet programmatically, the DBM has important implications for policies and programs that address the different forms of malnutrition and disease. Particularly, care needs to be taken so that one form of malnutrition or disease is not reduced at the expense of another form. Experiences from countries, such as Mexico (Fernald et al., 2008), Chile (Uauy & Kain, 2002; Corvalán et al., 2008) and Egypt (Asfaw, 2007), show that this is a valid concern. In general, efforts to address undernutrition emphasize increasing the energy density of foods, by increasing the fat content and consumption of animal sources of foods (Savage King & Burgess, 1993). On the contrary, reducing the prevalence of overweight/obesity requires decreasing the energy intake and the consumption of fats especially those from animal sources (Willett et al., 2006). The concern of reducing one form of malnutrition and disease at the expense of another form becomes even more urgent if funding for addressing any form of malnutrition or disease comes from a common pool, as programs that target solely undernutrition/infectious disease or overnutrition/NCDs will compete for funding (Popkin, 1994). Still, if the different forms of malnutrition or diseases are found exclusively in different segments or subgroups of the population, then targeting only one form may not increase the other form of malnutrition/disease.

1.5. Addressing the nutrition and epidemiologic transition and DBM

In the context of low income countries, like Nigeria, actions to address NCDs need to be undertaken while scaling up efforts to reduce undernutrition and infectious diseases (WHO, 2005; Beaglehole et al., 2007). Fundamental to any effective effort to prevent and control either

undernutrition and infectious disease or overnutrition and NCDs, is appropriate governmental action, especially policy interventions (Epping-Jordan et al., 2005; Bryce et al., 2008). Indeed, it has been specified that many of the major challenges that must be overcome to reduce NCDs are related to policy interventions (Daar et al., 2007). Policies are a guide to government action, an anticipation of what future societal needs might be, and a deliberate effort to establish processes that will produce a desirable outcome in the future (Milio, 1990). Policies structure the decision making environments that determine individual nutrition and health behavior (Wallack & Dorfman, 1996). Policies can also promote desired outcomes in ways that do not require individual behavior change (Asaria et al., 2007). This ability of policy interventions to achieve outcomes without necessarily requiring individual behavior change means that policy interventions are able to produce quick effective results; because with behavior change interventions, information to address various nutrition and health issues will compete with each other for space in the minds of the service providers and recipients, and reduce effectiveness (Reddy et al. 2005).

Nevertheless, policies are not formed in a vacuum, and policymakers are influenced by many factors, including their beliefs, values, perceptions and motivation (Black, 2001; Heaver, 2005; AbouZahr et al., 2007).

1.5.1. The policy approach

Indeed, policymaking is a series or web of events carried out by many actors. These actors have possibly different information, interests, roles and perspectives. Thus, the policymaking process often involves numerous and complex interactions amongst actors including coordination of

efforts, or contests with one another, which can determine the success or failure of the process (Clark, 2002). Therefore, while the content of the policies that would address nutrition and health problems are very important, the actors that will design these policies are even more important. Also important is the policymaking process earlier mentioned, and the context in which policymaking occurs (Walt & Gilson, 1994). The policy approach to nutrition and health intervention thus involves the combination of these four factors – actors, process, context and content – to achieve health objectives. The relationship between all four components can be seen in Figure 1.1.

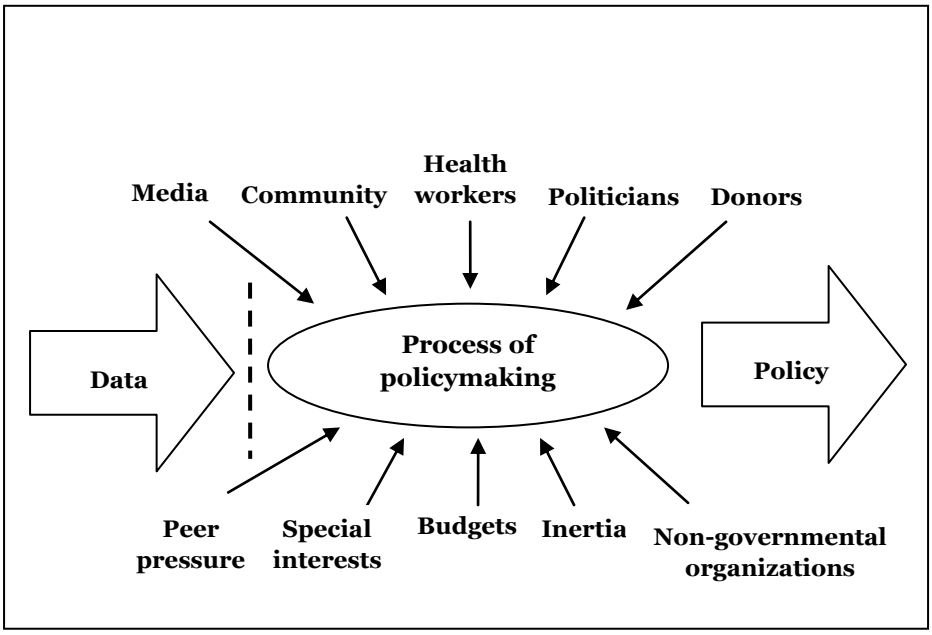

Figure 1.1. Effect of vested interests on policymaking and statistical inputs. Redrawn from AbouZahr et al. (2007)

The data is often viewed, in rational models of the policy process, as the information from which the policy content will be formed. These data include the magnitude of the problem, the evidence

that certain actions may be helpful in surmounting the problem, and the trends of the problem and the consequences of inaction. These data is fed into the policy process, which is continually influenced by many actors and contextual factors (AbouZahr et al., 2007). The outcome then should be a policy document, but as would be further discussed, this end is not a foregone conclusion.

The policy process itself can be seen as a four stage process (Lasswell, 1956; Figure 1.2). The agenda setting stage is the phase in which a few issues gain the attention of policy and decision makers. These issues become prominent out of numerous societal problems through the action of many external influences such as those shown in Figure 1.1. The policy formulation stage is the stage during which policy and decision makers make policy choices out of a wide range of possible policy options, and enact these policies. The selected policies are executed and enforced in the implementation stage, and impact is assessed in the evaluation stage. In reality, the four stages are neither distinct nor clearly defined (Walt et al., 2008). Still, each of the stages is influenced by the policy actors and contextual factors as seen in Figure 1.1.

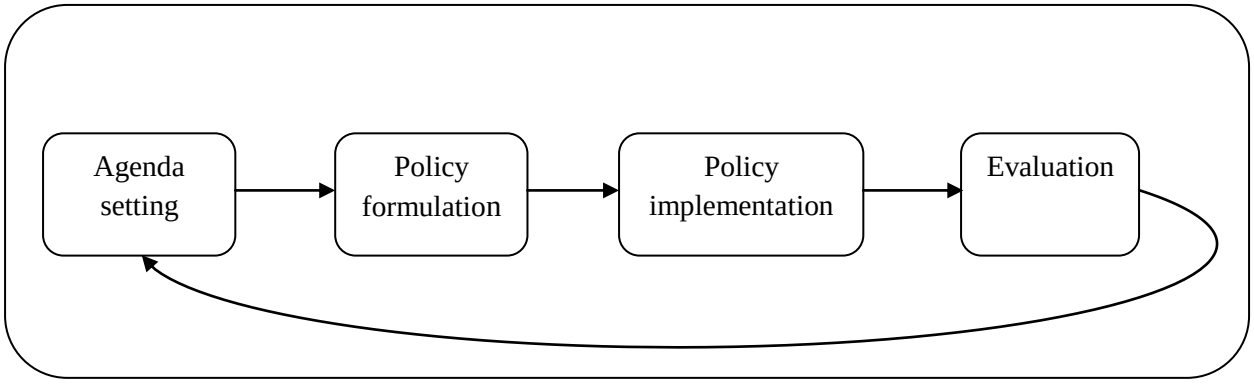

Figure 1.2. The process of policymaking. From Lasswell (1956)

1.5.2 *The role of policy actor perspectives in policymaking*

Oftentimes, failure in policymaking is due to the ineffective or selective use of information, as a result of policy actor perspectives, behaviors and institutional barriers, rather than the scientific issues involved in the generation of the information itself (Black, 2001; AbouZahr et al., 2007). Policy actors can be individuals or groups/institutions. There are several actors typically involved in policymaking. These actors can be classified as policymakers, policy shapers or influencers, policy implementers, and policy clients. Policymakers are decision-makers who have the power or authority to act on a particular issue. Policy shapers or influencers are individuals, groups of individuals or organizations that influence the decision-makers. They may or may not have formal power. Policy implementers are the means or agents by which policies are delivered to the target population. The last groups of policy actors, policy clients, are the intended beneficiaries of the policies. Frequently, policy clients have very little say in policy choices and their design, but their perspectives still influence to a great extent the effectiveness of policies (Walt & Gilson, 1994; Schneider & Ingram, 1997; Heaver, 2005; WHO, 2006; Buse, 2008).

The perspectives of all policy actors are important in determining how problems and policies are socially constructed and acted upon at various stages in the process (Buse, 2008). The perceptions of these policy actors are also central to policymaking and influence the other components of policymaking – content, context and process (Walt & Gilson, 1994); as well as policy actor behavior (Heaver, 2005). Perspectives are the knowledge, beliefs, motives and

interests that institutions and individuals hold (Heaver, 2005). Perspectives could also be the identity, expectations and demands of these individuals and institutions (Clark, 2002).

In terms of the social construction or definition of problems, policymakers often define a problem in different ways, and this construction can differ in whether or not an issue is even regarded as a problem. The definition of the problem has a major impact on the solutions that are considered the most appropriate to address the problem, as well as the most effective means of implementing these solutions. In policymaking, the definition of a problem is very important because it will influence the type of political discussion that will ensue around an issue, the chances of the issue gaining political attention and getting on the policy agenda, and the likelihood that advocates of the issue will achieve a favorable policy outcome (Rochefort & Cobb, 1994). The culture, values, ideology, political socialization and ideas of policy actors all matter in defining the problem (Rochefort & Cobb, 1994; Buse, 2008).

In addition to problem definition, the perspectives of policy actors are also important for making meaning out of the data that feeds into the process of policy making (Figure 1.1). Data, including data showing the causes of a problem, its magnitude, target population, consequences and solutions; is subject to the interpretations of policy actors. The perceptions of policy actors can for instance, lead to diverse analyses and results from the same dataset. Such differences in analyses and results could lead to the differential outcomes in the attempt to get an issue unto the policy agenda, and initiate the process of policymaking (Rochefort & Cobb, 1994; Black, 2001; AbouZahr et al., 2007).

Yet, although reaching some consensus on the definition of a problem and the interpretation of the data explaining this problem is important, it is not sufficient to get an issue on the policy

agenda. Policy actors often have goals and objectives other than proffering and formulating effective solutions to social problems. These goals may be financial, political, professional, social or related to some other factor. No matter how significant a problem is perceived, the issue may not rise to the policy agenda if policy actors do not perceive it as relevant for achieving their personal goals and objectives (Schneider & Ingram, 1997; Black, 2001; Clark, 2002). Furthermore, characteristics and behavior of policy actors such as the manner and tone with which they present or frame an issue, can determine whether or not such issues rise to the public policy agenda (Baumgartner & Jones, 1994; Schneider & Ingram, 1997). Similar policy actor factors to those that influence agenda setting can also influence policy formulation and implementation. When policy actors have to make policy choices out of a wide range of alternatives, the policy choices that get selected are often not selected because they are the most rational or effective choices. Some of the more important determinants of policy choice include policy actors' perceptions of the social, political and economic environment, the opinions of renowned colleagues, organizational pressures and preferences, their own personal experiences, values, expectations, position of authority, international pressure and locally derived information (Grindle & Thomas, 1991; Walt & Gilson, 1994; Black, 2001).

Due to the influence of policy actor perspectives, the process of policymaking depicted in Figure 1.2 in reality resembles the illustration in Figure 1.3. There is the potential for the process of policymaking to be truncated at various points as a result of policy actor behaviors and characteristics (Grindle & Thomas, 1991). Policy actors are so important to policymaking, that it has been quoted that "an understanding of policymaking requires a deep knowledge of the mental models of policy actors, which includes the manner in which they interpret the

environment and their recommendations on how the environment should be organized" (Buse, 2008).

Another hitherto unmentioned outcome of policy actor perspectives is the presence or absence of strategic capacity. For an effective public policy delivery system (in health and other sectors), capacity is needed at three broad levels: strategic, operational and beneficiary. Strategic capacity includes the human and institutional capacity (in a given policy sub-system like nutrition) to envision, create, agree upon and generate commitment to a long term approach to address an issue. It can include decision-makers and influencers in the national government, civil society and international partners. Operational capacity involves all the individual and institutional activities related to the technical formulation and implementation of the policies, including training, resource and facility management, achieving adequate coverage of services, monitoring and evaluation. The beneficiary capacity refers to the end user awareness, demand, utilization and support of the provided services (Potter & Brough, 2004; AbouZahr et al., 2007; Pelletier, 2008).

1.5.3. The case for strategic capacity

Although the presence of strategic capacity is to an extent bound up in the perspectives of policy actors, strategic capacity exists distinctly from policy actor perspectives. In fact, strategic capacity belongs more to the context component of policymaking, than to the actor component. While the perspectives of policy actors indicate their willingness to act, strategic capacity indicates whether or not the conditions that could initiate and facilitate such actions exist. Strategic capacity will allow policymakers to reach agreements, resolve conflicts and engage in

strategic communication, among other tasks (Pelletier, 2008; 2011). It is the assets and barriers that exist that would promote or impede agenda setting by policy actors. Strategic capacity also influences the awareness and concern of policymakers, and promotes their commitment. Commitment as defined by Heaver (2005) is "the will to act and to keep on acting until the job is done" (pg.3). Thus, commitment would ensure that not only are policies designed and implemented, but also that the results of policy evaluations are used to improve policies until the desired nutrition and health outcome is achieved.

Some individual actors are particularly important for the development and application of strategic capacity. These actors, referred to as policy entrepreneurs, serve to advance policy innovations with the potential of producing great policy changes. Policy entrepreneurs consider the manner in which current public policies affects the society, and ponder ways in which policies might be changed to achieve greater societal good. They also take action that may initiate the desired changes. A key part of such action is advocacy to mobilize support and enthusiasm for the policy change. Thus policy entrepreneurs are leaders of policy change who simultaneously engage in "problem definition, policy design and politicking" (Mintrom, 2000). Policy entrepreneurs are not a type of policy actors that are distinct from the four types of individual actors earlier identified. Rather, members of any of the four types of policy actors – policy influencers, policymakers, policy implementers or policy clients can be policy entrepreneurs. Unlike policy influencers, policy entrepreneurs may directly influence policy decision-makers as well as seek to change the social or institutional perception of a problem or issue (Mintrom, 2000; Pelletier, 2008).

In addition to individual characteristics, strategic capacity also encompasses institutional characteristics. Strategic capacity at the institutional level involves the structures and venues where actors interact to discuss, deliberate and decide, as well as the formal and informal procedures, practices and norms that influence their level and type of agreement, disagreement and ability to seek consensus. Hence, while individuals have the agency to act, institutional norms and arrangements can guide, structure and constrain the actions of individuals including policy entrepreneurs. Disagreements about problem definition can also occur at the institutional level (Rochefort & Cobb, 1994; Mintrom, 2000), for example the Ministries of Agriculture and Health may differ on the definition of malnutrition, its causes and solutions.

Besides policy actor perspectives, the values of policy actors are also important determinants of strategic capacity and policy actor behavior. Values are the assets, resources and sources of power that people and institutions have and use in trying to achieve their goals. The majority of daily interactions can be said to be the trading of the values that one possesses (base values), for the values that are desired for oneself or others (scope values). Moreover, policy actor perspectives can also be a function of their values (Clark, 2002).

A number of the global institutions interested in NCDs prevention and control in LMICs have recognized the importance of policy actor commitment (Armstrong & Bonita, 2003; Beaglehole et al., 2007; WHO, 2008b; IOM, 2010). However, very little attention has been given to the policy actor perspectives and strategic capacity that determine this commitment. In fact, Heaver (2005) reports that "most countries and donors assess commitment unsystematically and with more focus on formal policy than the perspectives and behavior of key stakeholders" (pg. 14).

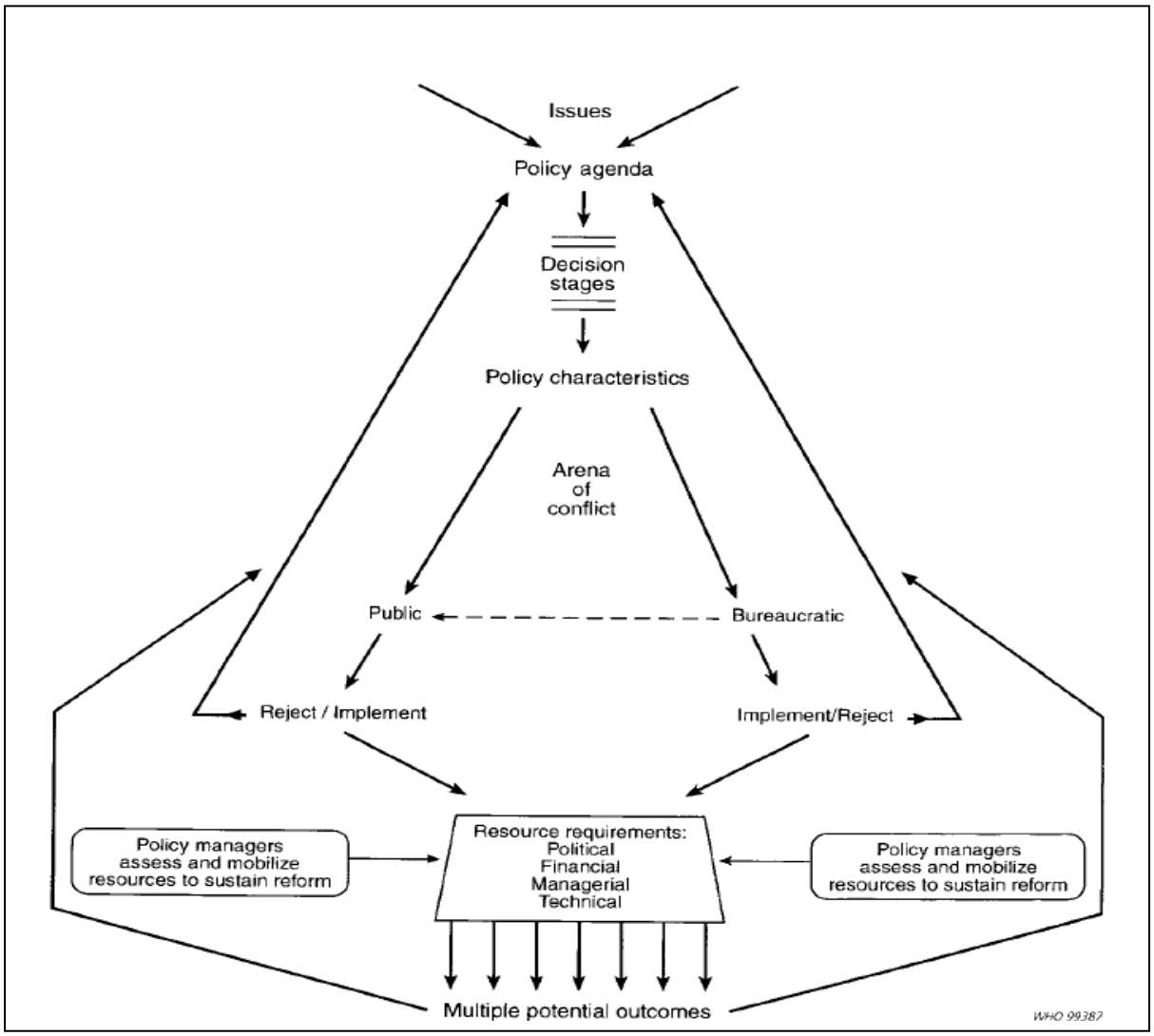

Figure 1.3. An interactive model of the process of policymaking (Grindle & Thomas, 1991)

1.6. The nutrition and epidemiologic transition in Nigeria

NCDs account for a significant burden of morbidity and mortality in Nigeria, and are also an economic burden. Estimates from the WHO report that while 69% of all cause mortality in

Nigeria in 2005 was due to infectious diseases and nutritional deficiencies, 24% were due to NCDs (WHO, 2005; Figure 1.4). Income loss from certain NCDs in this year (2005) was estimated at 400 million US dollars (about 0.5% of the gross domestic product (GDP), Abegunde & Stanciole, 2006). Yet the loss due to vitamin and mineral deficiency only, in 2004, in Nigeria, without considering the long-term losses and treatment costs was estimated at about 803 million US dollars (Winter-Nelson). By 2015, deaths from nutritional deficiencies and infectious diseases are expected to have increased by 6%, while deaths from chronic diseases are expected to increase by 24%, with a 52% increase in deaths from diabetes. Furthermore, the prevalence of overweight among both men and women is expected to increase by 10% (WHO, 2005). The loss in income from NCDs is also envisaged to accrue to 7.6 billion US dollars by 2015 (SCN, 2006).

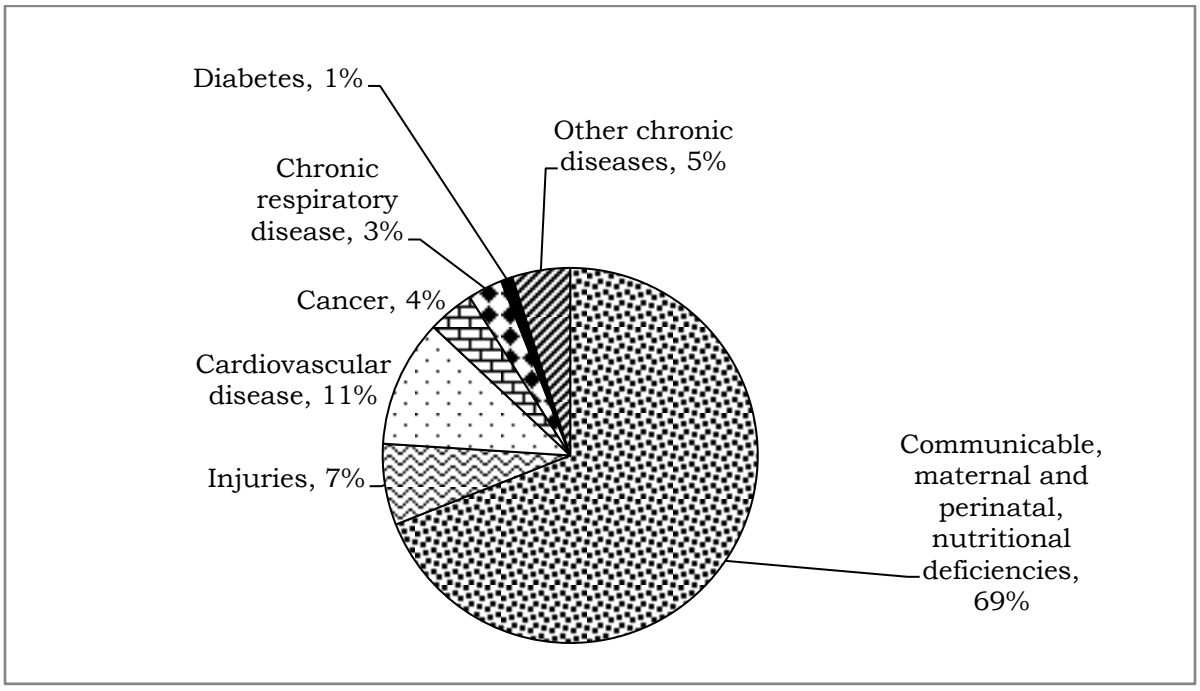

Figure 1.4. Projected deaths by all causes, all ages, Nigeria, 2005. Redrawn from WHO (2005)

Preliminary research reviewed policies and programs that were being implemented in Nigeria to address undernutrition, and overnutrition and NCDs. The study sought to identify policies that had the potential of increasing one burden while reducing the other, as well as policies that were mutually beneficial for reducing both problems. The results of this study showed that while overnutrition and NCDs are also recognized as manifestations of malnutrition and poor health, polices were overwhelmingly devoted to addressing undernutrition and infectious disease. All policy documents and program strategies to address overnutrition and NCDs were still in the planning stage, even though a unit dedicated to the issue had been in existence since 1989.

Given the apparent disconnect between the problem of NCDs in Nigeria, the recommendations from global health institutions that policy interventions are essential, and the apparent NCD policy reality in Nigeria, this dissertation investigated policymaking in Nigeria regarding the NCDs problem. The research is expected to generate knowledge about the additional measures that might be needed, beyond recommendations, if countries are to succeed in addressing NCDs.

1.7. Aims of the dissertation

The overall aim of this dissertation was to assess critical aspects of the four components of policymaking – actors, processes, context and content (Walt & Gilson, 1994) – as it related to overnutrition and NCDs in Nigeria; in order to identify needed enabling factors for initiating successful policy interventions for NCDs. Specifically, the dissertation aimed to:

a. Assess the perspectives of policy actors in Nigeria concerning NCDs and identify the dominant perspectives

b. Understand the factors affecting the first observable stage of the policy process (agenda setting) for NCDs in Nigeria
c. Explain the context of policymaking for NCDs in Nigeria, by assessing the strategic capacity available for the issue
d. Describe the double burden of malnutrition (DBM) in Nigeria and highlight key considerations for the content of a policy addressing the DBM

Following this introduction, each of the specific aims is addressed in a separate chapter. In chapter 2, the results of a Q-study conducted to address the first specific aim are presented. This study identified the dominant perspectives about NCDs among the policy actors, as well the areas of consensus and conflict about addressing the issue. Chapter 3 explores the reasons behind the lack of agenda setting for NCDs in Nigeria, and suggests ways in which the policy process may be initiated. To achieve this aim, information from semi-structured interviews was compared with existing frameworks about generating political priority and agenda setting. Subsequently, the strategic capacity for NCDs is discussed in chapter 4. This chapter also used data from the semi-structured interviews. The perceptions of policy actors about NCDs, its risk factors and impact, as well as their suggestions for addressing NCDs were assessed. The reactions of the policy actors to the international recommendations were also documented. This information was then used to infer the gaps in strategic capacity for NCDs in Nigeria. In chapter 5, particular Nigerian subpopulations at with significant prevalence of the DBM are identified, to provide needed information in planning the content of a policy for the DBM. The concluding chapter 6 summarizes the preceding four chapters, and synthesizes the implications of the results for initiating successful policy interventions for NCDs in Nigeria.

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Chapter 2

‘A vital investment’? The perspectives of Nigerian policy actors

Abstract

Previous studies have documented the increasing burden of non communicable diseases (NCDs) in developing countries, including Nigeria. The WHO and other bodies have emphasized the need for a “sound and explicit government policy” as fundamental for the prevention and control of NCDs. However, such a policy cannot be formulated without a certain level of awareness, understanding and concern among policy actors. This research assessed the perspectives of federal and state policy actors in Nigeria about NCDs. Key policy actors were identified using snowball sampling, and the perspectives of participants were assessed using Q-methodology and interviews. Three dominant groups were identified – the polycentric, the skeptics, and the contented. All groups were of the view that NCDs are a serious problem in Nigeria, and must be addressed. The groups were also of the view that effective action, which has been slow till date, is possible within the system. However, there were important differences in the emphasis of each of the groups. The polycentric emphasized non-institutionally restricted action; the skeptics perceived low institutional effectiveness, and focused on individual responsibility, and the contented stressed the effectiveness of action undertaken through existing institutions. The study found that some type of policy attention on NCDs is likely in the immediate future, but it may not be the concerted multisectoral efforts urged by global authorities.

2.1. Introduction

Similar to many low and middle income countries, nutrition and health interventions in Nigeria have mostly been devoted to the reduction of undernutrition and infectious diseases. However, a landmark report – "Preventing chronic diseases: A vital investment"- published by the World Health Organization (WHO) in 2005 provided evidence that the burden of overnutrition and non communicable diseases (NCDs) in the country is high and increasing. Twenty four percent of the all-cause mortality in Nigeria in 2005 was attributed to NCDs. The WHO report further highlighted the need and means of implementing interventions to prevent NCDs. "A sound and explicit government policy", underscored by policymaker commitment, was emphasized as being central to effective action in the prevention and control of NCDs.

Policies are a guide to government action, an anticipation of what future societal needs might be, and a deliberate effort to establish processes that will produce a desirable outcome in the future (Milio, 1990). Policies often tackle the causes of an issue in addition to the consequences (WHO, 2005). Policies also structure the decision making environments that determine individual nutrition and health behavior and the behavior of firms and other organizations (Wallack & Dorfman, 1996). A tacit assumption in public health is that there is a linear relationship between research evidence and policy, and that the existence of sufficient data will lead policymakers to make necessary policies. In reality however, data and evidence do not exist in a vacuum and policymakers are influenced by several other factors and policy actors (Figure 2.1.A. – AbouZahr et al., 2007; and Black, 2001; Yamey & Feachem, 2011). Central to the actions of each policy actor, including policymakers, are their perspectives – their knowledge, beliefs and values, as shaped by their identities, experiences and institutional norms (Rochefort & Cobb,

1994; Black, 2001; Clark, 2002; Heaver, 2005; AbouZahr et al., 2007). These perspectives influence the collective willingness of policy actors to devote attention to an issue, achieve agreement on policies and maintain the commitment to ensuring that effective action is taken (Figure 2.2.B. – Grindle & Thomas, 1991; Baumgartner & Jones, 1994; Rochefort & Cobb, 1994; Walt & Gilson, 1994; Schneider & Ingram, 1997; Black, 2001; Heaver, 2005; Buse, 2008).

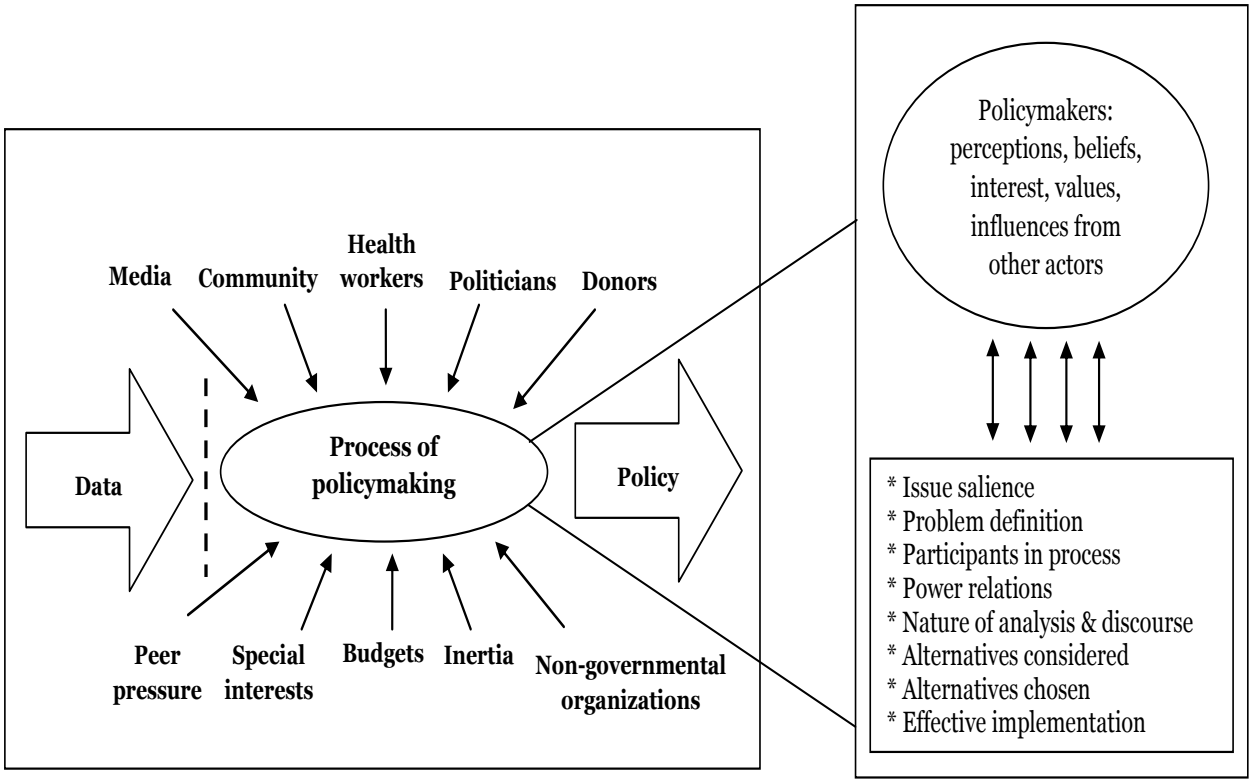

Figure 2.1.A. Effect of vested interests on policymaking and statistical inputs. Redrawn from AbouZahr et al. (2007). Figure 2.1.B. Expanded process of policymaking

Like the aforementioned WHO report (WHO, 2005), other authors and authoritative organizations have stressed the importance of policy actor commitment for NCDs prevention and control in low income countries (Armstrong & Bonita, 2003; Beaglehole et al., 2007; WHO, 2008; IOM, 2010). However, very little research attention has been given to the policy actor perspectives that determine this commitment. In fact, Heaver (2005) reports that "most countries and donors assess commitment unsystematically and with more focus on formal policy than the perspectives and behavior of key stakeholders" (pg. 14).

A few studies have assessed national capacities to address NCDs. A global survey by Alwan et al. (2001) was conducted under the auspices of the WHO and focused on whether or not national policies and plans for NCDs existed. It also included an assessment of the constraints and needs countries would face when planning, implementing or evaluating programs to prevent and control NCDs and its risk factors. The WHO repeated this survey, with the same objectives, in 2009-2010 (WHO, 2011) to monitor progress. A similar survey was also conducted by the WHO in 2006 (WHO, 2007), but with fewer questions than the ones in 2001 and 2010.

While the WHO surveys have provided important information about the burden of NCDs and the operational capacity available within countries to address them, the surveys have several imitations. The initial survey in 2001 primarily focused on detailing what was being done about the problem, but did not assess whether or not policymakers even considered NCDs prevention and control an issue worth pursuing in the contexts of their countries. The subsequent surveys improved upon this by asking participants to rank the priority given to NCDs in their countries. These later surveys were able to determine whether or not policy actors considered NCDs as important but did not explore these priority rankings and the underlying perspectives in further

detail. In fact the report of the 2010 survey cites as a limitation of the survey, its inability to provide definite information about the level of policy actor commitment and the capacity to address NCDs (WHO, 2011). Furthermore, the surveys were also conducted across many member countries, and so were unable to attain the sensitivity required to describe the situation in a specific country (Alwan et al., 2001). Other limitations arise from the fact that the respondents for the surveys were focal persons for NCDs in the countries surveyed, or a top health official. This creates potential for reporting bias about the state of the issue. Moreover, this selection of respondents also meant that there was little inclusion of the non-health sector in the surveys, even though NCDs are considered a multisectoral issue that needs to be addressed in a range of sectors outside of the health sector (WHO, 2011).

In Nigeria, past evidence has indicated some policy actor acknowledgement of NCDs as an important issue. In the previously mentioned WHO report (WHO, 2005), the then President of Nigeria made a statement pledging to implement WHO recommendations for the prevention and control of NCDs. Prior to this time, since 1989 precisely, a division dedicated to NCDs control had existed in the Federal Ministry of Health (FMOH). Furthermore, the vision of the FMOH, prominently displayed in the federal secretariat states: "To reduce the morbidity and mortality due to communicable diseases to the barest minimum, having minimal prevalence of non communicable diseases……." Despite this symbolic acknowledgment however, recent inquiries revealed that there was no formal national policy on NCDs, even though there were numerous policies related to other issues. Existing nutrition and health policies, including those published after 2005, contained only a token mention of overnutrition and NCDs. Given the apparent lack of such national frameworks for NCDs, the present research was undertaken to identify the

perspectives of key policy actors in Nigeria about the salience of NCDs in the Nigerian environment.

Specifically, the research was aimed at answering the following questions: Do Nigerian policy actors consider NCDs an important issue? What are the opinions of Nigerian policy actors about the commitment and capacity to act on NCDs?

2.2. Methods

Study population: For the purposes of this research, policy actors included individuals and institutions belonging to three classes of policy actors – policymakers, policy influencers, and policy implementers – as discussed elsewhere (Buse, 2008). A list of Nigerian institutions that were potential policy actors for NCDs was compiled based on recommendations from global institutions (WHO, 2008; IOM, 2010) as well as existing Nigerian nutrition and health policies.

Sampling: Participants were primarily recruited using snowball sampling technique. This technique is a form of purposive sampling where each identified respondent is asked to identify other policy actors (individuals and institutions) who could be significantly involved in setting a particular policy agenda (in this case related to NCDs), or who would be affected by such an agenda (Varvasovszky & Brugha, 2000). The use of this technique led to a list of specific individuals and the institutions to which they belonged. The evolving list of recruits was compared to the initial list of institutions that were potential policy actors, to ensure that every institution was represented in the study. Where gaps were identified, efforts were made to identify and recruit individuals to fill these gaps. Such individuals were usually identified

through the public relations and/or planning department of the institution, again using the snowball technique. Each participant in the study was recruited independently. Persistent communication, without coercion, was used to ensure that recruited individuals participated in the study. Individuals who declined participation at any point in the communication process (about ten people) were excluded from participating in the study. Participants were assured of confidentiality and anonymity, and verbal consents were obtained prior to each interview.

Data collection and analysis: All data was collected in English language because English is the official language in Nigeria and it was expected that all policy actors would be able to converse fluently in the language. Data were collected from November 2010 to September 2011, using the Q-sort method and post Q-sort interviews. Participants were asked to sort and rank 55 statements of opinion about NCDs into a standardized ranking distribution (Figure 2.2) based on the degree to which they agreed or disagreed with the statements. The participants were then interviewed about the reasons behind their choice of the statements at the two extremes of the distribution, as well as the placement of a few other selected statements. All data collection was conducted by the first author, using instruments that had been developed by the research team.

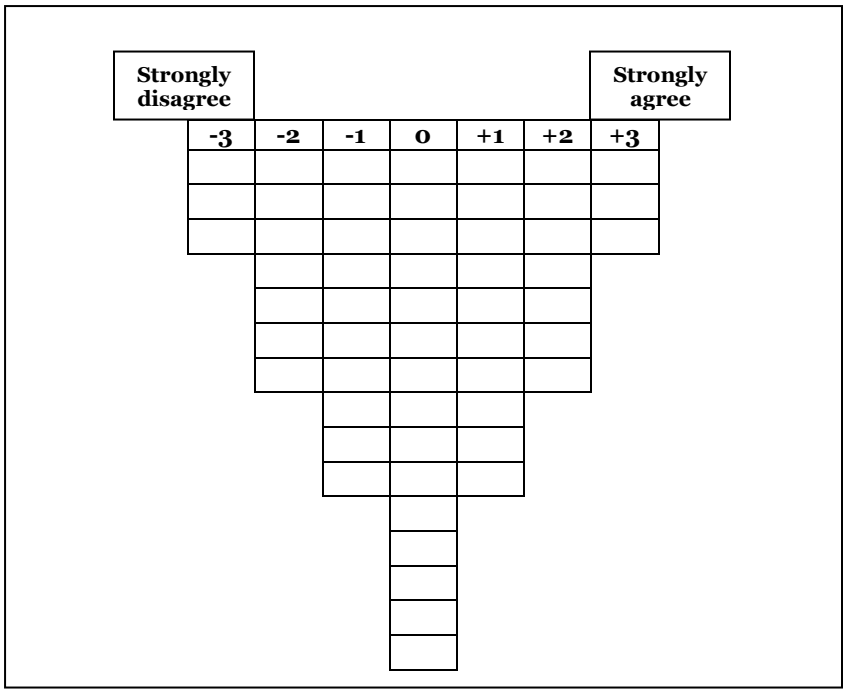

Figure 2.2. Ranking distribution for Q-sort statements

The Q-sort statements were developed based on the components of perspectives highlighted earlier – knowledge, beliefs, values, identity and institutional norms. Constructs from five theories/frameworks (one for each component of perspective) were used to guide the statement construction and ensure that a wide range of opinions about NCDs were included in the statements. The statements were constructed to cover positive or negative viewpoints of the NCDs issue for each of eight value categories from the policy sciences framework (Clark, 2002); six forms of rationality (Pelletier, 2008); four categories from the cultural theory (Swedlow, 2002); five constructs from the theory of planned behavior (Connor & Armitage, 2002); and four components of a structure from Giddens structuration theory (Cohen, 2005). The wording of the statements was obtained from two primary sources. Some statements were worded using quotes

from informal interviews with policy actors that were obtained during a preliminary research. Other statements were worded using information about common misunderstandings of NCDs as documented by the WHO (WHO, 2005).

Participants were told to react to the Q-sort statements in relation to this overarching question: What is your (policy actor) opinion about non-communicable diseases such as diabetes, hypertension, stroke and cancer? Before the commencement of the study, a pretest was conducted with two policy actors (one state level government actor and one federal level national NGO actor), to assess the coherence of the statements and the method. Subsequently, corrections to the statements were made where necessary. Each participant in the study received a 2GB flash drive as a token of appreciation. The research protocol was reviewed by the Cornell University Institutional Review Board (IRB), and was found to qualify for an exemption from the review process.

The data from the Q-sorts were analyzed using the PQ method (Stricklin & Almeida, 2004), which conducted the by-person factor analysis unique to the Q-sort method. A content analysis of the post Q-sort interviews was conducted to clarify values and participants' sorting of statements, as well as identify perspectives not captured in the Q-sort statements. Preliminary analysis was done after 56 participants had been interviewed, and again after 164 participants had been interviewed. A quick comparison of the output from the two analyses showed that, analytic saturation had been achieved with 164 participants, and recruiting was stopped. Of the 164 participants who completed the Q-sorts, 6 participants were excluded from analyses because they refused to make any attempt to constrain their ranking to the standardized distribution.

The Q-method is a unique way of studying subjectivity. The by-person factor analysis enables groups of participants to emerge. These groups consist of participants who make sense of the Q-sort statements in similar ways and thus rank them in comparable manner. As opposed to the traditional factor analysis, which identifies relationships among variables across a population, the Q-method identifies relationships among the individuals in a population, across a number of variables (statements). The method has been previously used to identify divisions in groups, areas of conflicts, as well as consensus and solutions (Watts & Stenner, 2005; Durning, 2006; Maxwell & Brown, 2000). The Q-sort method was selected over traditional questionnaires and lickert scales or interviews because the Q-sort groups participants as belonging to a distinct factor (perspective) or way of thinking. Thus, the dominant perspectives are identified, rather than merely providing the average number of participants who agree or disagree with each statement. Statistical averages have been criticized as not characterizing any particular individual's perspectives (Maxwell & Brown, 2000). The Q-method also forces participants to respond to all the questions unlike other qualitative research instruments where responses may be omitted. Likewise, the Q-sort requires more intellectual engagement by the respondents because each statement needs to be read carefully in order to make the decisions forced by the method.

The characteristics of the factors which emerged from the by-person factor analysis of the Q-sorts were independently identified by two research assistants who had been previously uninvolved in the study. These research assistants were trained about the method and how to interpret the results. After each of the research assistants had independently identified the emergent factors, they had a meeting to resolve differences and consolidate their reports. Furthermore, all the investigators in the study were blinded to which individuals belonged to each factor, until the characterization of the factors was completed.

2.3. Results

Of the 158 participants included in the study (Table 2.1.), 117 were federal level participants while the other 41 participants were state level actors. These two groups of policy actors were analyzed as two distinct populations, to avoid masking critical differences in the perspectives of the two groups. Such differences could arise because of the distinct roles the two groups of actors play – initiating and formulating policy versus implementing policy respectively, which could result in the two groups having widely divergent perspectives.

2.3.1. Federal policy actors

Two thirds of the policy actors were male, and a quarter of them were medical doctors. Many of the policy actors (48%) were in the 51-60 age range, 79% of them had postgraduate degrees, 58% of them belonged to the management/ directorate cadre, and 3% were consultants.

Table 2.1. Institutional affiliation of study participants

Institution		**Number of participants**
Federal government ministry, department, agency and parastatal in health and health service sector	Ministry department	40
	Parastatal	9
Federal government ministry, department, agency and parastatal in non-health (education; science & technology; labor & productivity; commerce & industry; communication & information; justice; finance; transport; water resources; agriculture & rural development; culture & tourism; planning; environment; lands, housing & urban development) sectors	Ministry department	27
	Parastatal	13
State government ministry, department and agency		41
International governmental organizations		5
International nongovernmental organizations		5
National nongovernmental organizations		2
Multinational food and beverage companies		5
Academia/ professional societies		4
Media		3
Others		4
Total		**158**

Perspectives of federal level policy actors about NCDs

Three distinct factors (perspectives) were identified from the by-person factor analysis. The three perspectives collectively explained 41% of the total variance in perspectives. The perspectives were defined by participants whose sorting of the statements were significantly and uniquely correlated. At the 5% level, the significance of a participant's correlation to a factor is given by $1.96\left(\frac{1}{\sqrt{N}}\right)$, where N is the number of statements (Brown, 1980). Thus to define a factor

(perspective) in this study, a participant needed to be correlated with that perspective with $r \geq 0.26$ at the 5% level of significance, and not be as strongly correlated with any other perspective. The higher the correlation coefficient r, the more strongly a participant identified with and defined a perspective. The three federal perspectives were uniquely defined by 83 of the 117 participants. The remaining participants correlated significantly with more than one perspective, or no perspective, and so were not considered in defining the characteristics of each perspective. Perspectives 1, 2, and 3 were defined by 33, 33 and 17 participants respectively (Table 2.2.). There was a strong positive relationship amongst the three perspectives. The correlation between perspective 1 and perspectives 2 and 3 was 0.77 and 0.74 respectively, while there was a correlation of 0.70 between perspectives 2 and 3. All three perspectives agreed that NCDs were a significant problem in Nigeria that needed to be addressed urgently (42: 3, 3, 3)[1]; and that effective action is possible within the Nigerian system (35: -2, -2, -2; 37: 1, 2, 2). Nevertheless, important differences existed among the three perspectives.

[1] The Q-sort statements were randomly numbered from 1-55. The figures in parenthesis refer to statement numbers followed by the rank assigned to it by perspectives 1, 2, and 3 respectively. Multiple statements are separated by semi-colons. The actual statements are listed in the appendix.

Table 2.2. Federal level perspectives by institutional affiliation

Institutional affiliation		**Polycentric**	**Skeptics**	**Contented**
Federal government health sector	Ministry department	9	8	10
	Parastatal	2	4	0
Federal government non-health sector	Ministry department	9	6	5
	Parastatal	8	4	0
International governmental organizations		1	3	0
International nongovernmental organizations		1	2	1
National nongovernmental organizations		0	2	0
Multinational food and beverage companies		1	0	0
Academia/ professional societies		0	2	0
Media		1	1	0
Others		1	1	1
Total		**33**	**33**	**17**

Perspective 1 – The polycentric[2]

Participants belonging to this perspective believe that NCDs are a real and pressing problem (42: 3, 3, 3). They opined that NCDs should be approached with a sense of urgency, repeatedly echoing the sentiment that NCDs need to be addressed (24: 2, 2, 1; 18: 2, 3, 1) and agreeing with the statement that health should be prioritized above other national objectives (3: 2, 1, 3).

In the words of the participant who correlated most strongly (r = 0.76) with this perspective: "*The health of a nation is its wealth ……We need to start addressing this because it has killed*

[2] As defined in the Oxford English Dictionary (2012), the word polycentric is an adjective which means "having several or many centres". This word was used to characterize this perspective because of their distinguishing support of a non-institutionally restricted approach to addressing NCDs.

a lot of people, innocent people who do not know [it]. It's not only malaria that we should be focusing attention on……. despite the incompleteness of our data in Nigeria, we know from available data … that chronic diseases, non communicable diseases are growing higher. Many people die now of hypertension, of diabetes. I've lost a lot of good friends from these diseases. So, we need to start looking into it, because they're neglected diseases."

Consequently, members of perspective 1 think that action on NCDs is worth their time and resources, a thought demonstrated through their strong rejection of the statements that government and WHO trainings are a waste of time (41: -3, -1, -2) and that civil servants who address NCDs are wasting time and resources (38: -3, -2, -2). Indeed, this perspective appears to value the input and contributions of the WHO (18: 2, 3, 1) and disagree with the idea that the WHO does not understand Nigeria's problems (22: -1, -1, 0). The view of the members of this perspective was also influenced by their proximity to NCDs through their own or others' experiences (14: 2, 2, 1).

The primary distinguishing characteristic of perspective 1 is its members' support of an unrestricted approach to NCD management. Members of perspective 1, more than members of perspectives 2 and 3 ($p<0.01$), emphasize unity and the importance of working together; regardless of institutional affiliation (32: 3, 1, 1). As the earlier mentioned member of the perspective ($r = 0.76$) put it, "*Health is a system. A system consists of so many parts that have to be niched together to bring forth a very strong health promotion of people. So if we work together, both learned, both non learned, both weak, both strong, both masses, without regardless to levels; we can achieve the eradication or the reduction of non communicable diseases in Nigeria*". A second participant ($r = 0.42$) noted, "*The challenges might be too*

difficult for any one person to do things. There are some things that require mass action". Yet another (r = 0.55) remarked "*No single sector can do it o! We have to work together*".

Members of this perspective also believed ($p<0.01$) that when a few people have NCDs, it is a common problem (2: 2, 0, 0) and expressed ($p<0.05$) a desire for a sort of blanket health coverage by the government (10: 3, 3, 2; 51: 2, 0, 0; 48: -2, -2, 0). Similarly, members of perspective 1 were most in support ($p<0.01$) of state independence in addressing NCDs (34: -1, 0, 0). They were likewise the perspective most in support ($p<0.05$) of the regulation of food industries, even if such regulation is partial (40: 1, 0, -1; 17: -2, -1, -1). Furthermore, members of perspective 1 most disagreed ($p<0.01$) with statements emphasizing position or authority as a precondition for action on NCDs (39: 0, 1, 1; 43: -2, -1, 0). Rather, they suggested that a contextual understanding of the issue is what is needed for individuals seeking to address NCDs (6: 1, 0, 1). According to one of the participants (r = 0.53) – "*Training, attitude and culture cannot be ruled out…. Decentralization is what is needed*".

Additionally, members of perspective 1 have a positive outlook on the place of NCDs management within Nigerian politics. They were the only perspective to unequivocally think that NCDs are politically significant and that addressing NCDs can favorably influence electoral votes (27: 1, 0, -1; 36: -1, 1, 0). They also disagreed with the idea that addressing NCDs will increase corruption (47: -3, -2, -1). Nonetheless, the perspective was relatively ambivalent about the effectiveness of the existing health system (5: 0, 0, 2; 7: -1, 1, -2). A participant (r = 0.55) commented "*It is no big deal to formulate policies, but implementing them is a problem in Nigeria. One ministry may feel or be working strongly on the issue, while another is not taking it very serious. They may not even have the facilities to implement it*".

Perspective 2 – The skeptics

Members of perspective 2, like members of perspective 1, think that NCDs are a real and pressing problem (42: 3, 3, 3) and disagree with the idea that addressing NCDs is a waste of time and resources (38: -2, -2, -2; 49: -1, -2, -2). Participants' remarks included: *"…chronic disease… It is a disease that has crept in and it is very, very important and it is affecting a large proportion of the society…… Though I can't actually come up with statistics, but I can tell you that a large number of people are going about with these diseases*". Also like those of perspective 1, members of perspective 2 stress the importance of government involvement in healthcare (10: 3, 3, 2) and likewise value the input of the WHO (18: 2, 3, 1). Members of perspective 2 also claimed personal experience with chronic disease (14: 2, 2, 1) as an influencing factor of their opinions.

The distinguishing attribute for perspective 2 was that members of this perspective were the most skeptical about the ability to tackle NCDs within the existing Nigerian health system. As earlier mentioned, members of the perspective felt quite strongly about the necessity of governmental and societal intervention in tackling NCDs (10: 3, 3, 2; 25: 0, -1, 1; 26: -2, -3, -2). The foremost participant defining this perspective (r = 0.67) observed "*The essence of governance is to put things together; it's to seek the welfare and safety of the citizenry. It's a fundamental..... It's a sacred role of governance*". Yet, they did not think that the civil service is well organized (29: 1, -1, 2) and were doubtful about ability of the FMOH to deal with NCDs (7: -1, 1, -2). One participant (r = 0.52) commented "*NCDs unit in FMOH has been around for a while. What they do is celebrate days, World Hypertension Day, etc*". Another (r = 0.54) said "*Even in [federal*

ministry of] health, there is still fragmentation. They are as yet undecided about where NCDs reduction should be domiciled". A third participant (r = 0.67) observed "*it is not only MOH, it is also the government*". Regarding the organization of the civil service, a participant (r = 0.59) noted "*civil service is not organized…… and it does not mean that all the MDAs know what they are doing. Coordination is weak*". One participant (r = 0.48) after reading the words 'civil service is very organized' commented "*I wish I could say so…..* ". Another (r = 0.52) said "*I disagree, very disorganized system*".

Likewise, members of perspective 2 felt that the existing arrangements for training public service providers needed to be restructured for better quality and results (41: -3, -1, -2). Several participants echoed an approximation of this statement made by one of them (r = 0.67) "*Government's choice of people they send, and just the people they have in the first place is often flawed or misguided..... Then the development partners now do the training, and very often the training is designed by some consultant who's having to report back to somebody who lives in a different environment, and therefore they are elevating the input to the participants to a level that I would say is not appropriate. If the training is properly targeted and the right people are trained, then it's absolutely essential and probably would be one of the biggest benefits*". Members of perspective 2 were also the only factor to disagree with the statement that the ministry of finance (MOF) is doing the best that it can (52: 1, -1, 2). A participant (r = 0.48) remarked "*the MOF is not doing the best it can. They just give a budget, there are no expected outcomes*". Members of perspective 2 were further more dissatisfied ($p<0.01$) with the current health agenda as a means of addressing NCDs (45: -1, -2, 0; 50: -2, 0, -1) and thought ($p<0.05$) that there was a need for targeting high risk individuals, as well as targeted and appropriate capacity development at all levels of heath care (12:1, 2, 2; 31: 1, 2, 3). Finally, members of

perspective 2 were more cautious than members of either perspective 1 or 3 about the systemic readiness to move forward with an NCD agenda (4: 0, 1, 0), and viewed the required policymaking with significantly ($p<0.01$) less ease (5: 0, 0, 2). One participant's ($r = 0.48$) words were "*It (*policymaking*) is a big deal*". While another ($r = 0.67$) added "*they are not able to easily do it*".

The opinion of perspective 2 about the ability of the current system to tackle NCDs may best be summed up in the words of the two highest correlated participants ($r = 0.67$) – "*One of the major problems of this country is people not knowing the importance of synergy in policy formulation and policy implementation. Everybody wants to be the leader; everybody wants to be more important than the other. Everybody wants to be seen as the one responsible and doing these things……. if you look at Nigerian books, and if you go to conferences, the contributions of Nigerians are usually very fantastic. But on ground, nothing is happening, and it's just because we cannot work together*". "*A lot of people have low capacity, have low understanding of what their role is; then cannot maintain an understanding of how they fit into the bigger picture. And they're absolutely hopeless at working even across departments within a ministry, and that makes for such inefficiencies*".

Despite their dissatisfaction with the system, members of perspective 2 expressed notable confidence and a sense of empowerment when discussing individual capacities for change. For instance members of perspective 2 disagreed more strongly ($p<0.05$), than members of either perspective 1 or perspective 3, with the idea that Nigerians are stubborn and incapable of change (53: -2, -3, -2); and with the idea that NCDs is strictly heritable and that nothing can be done

about it (16: 0, -3, -1). As one participant (r = 0.38) opined, "*[Personal] dedication can overcome challenges*".

Perspective 3 – The contented

Like members of the other two perspectives, members of perspective 3 thought that NCDs were a real and pressing problem (42: 3, 3, 3), and disagreed with statements suggesting that addressing NCDs is a waste of time (41: -3, -1, -2; 49: -1, -2, -2; 38: -3, -2, -2). Some of the comments about the salience of NCDs included these: "*Non communicable diseases are diseases of the future… it starts actually diseases of now, gradually progressing into the future. So definitely, we do need to start addressing it seriously while we can prevent pandemic of such in the future*" and "*I quite agree with statistics that chronic diseases are on the increase…… If we begin to address it now, we're doing ourselves a good in investing on health*". Members of perspective 3, like members of perspective 2, strongly stressed ($p<0.01$) ignorance as the main contributor to NCDs and viewed knowledge as an important tool in combating NCDs (31: 1, 2, 3). In the words of one participant (r = 0.45), "*information is the most important thing. We need to tell people what to do……. Nigerians…… they lack information for them to make informed decisions about how to manage their health*". Members of perspective 3 believed health should be prioritized over other national objectives (3: 2, 1, 3), similar to members of perspective 1.

The primary unique characteristic of perspective 3 was its member's higher than average satisfaction with the current performance of the Nigerian health system and role of government in health care. Member of perspective 3 most strongly agreed ($P<0.01$) with the statement that the MOF is doing the best that it can (52: 1, -1, 2) and thought ($p<0.01$) that the civil service is

well-organized (29: 1, -1, 2). In the words of the highest loader to this perspective (r = 0.57), "*We have our mandates, so each ministry knows…… what to do. They have their mandates, they know their limits. But however, we have some things crossing over. So in that situation… I think the multisectoral policies will also work*". A second participant (r = 0.55) stated *"……civil service is a structured bureaucracy, and you have to respect bureaucracy*". Perspective 3 members most disagreed about the incapacity of the civil service to expand and take on new responsibilities (28: -1, -2, -3). They also disagreed most strongly ($p<0.01$) with the idea that the FMOH is incapable of coordinating efforts to address NCDs (7: -1, 1, -2). Again, a participant (r = 0.57) remarked "*It is a health issue. Even though it is multisectoral, federal ministry of health would take the lead..... It is not right to say the units in the ministry of health cannot get their acts together.... We have our vision. We have our mission in [this department] which is different from [other departments], but we all complement each other for the same goal of the ministry*". Another participant (r = 0.53) reacted in this manner "*The ministry of health has developed a national strategic health development plan that brings…… not just the departments in ministries, it includes departments in parastatals, it also involves states and NGOs. So that is effective collaboration…… I'm sure that people that [disagree are] looking at past antecedents but I think this thing has drastically improved… The collaboration is effective and it's working*".

Furthermore, members of perspective 3 thought ($p<0.01$) that policy formulation, coordination and implementation is "no big deal" and were most confident ($p<0.01$) about the ease of acquiring funding for NCD agenda (5: 0, 0, 2; 13: 1, 2, 2). A participant (r = 0.53) stated "*We have several policies…… Each policy you formulate takes cognizance of the other agency contributors…… for their input and implementation*". They were also relatively more satisfied than members of perspectives 1 and 2 with current nutrition policy as a means of addressing

NCDs (45: -1, -2, 0). Of the three perspectives, perspective 3 also seemed the most content with the existing involvement of government in the provision of health.

Members of perspective 3 were the only ones to agree ($p<0.01$) with the statement that, "the government cannot be expected to take care of us all" (25: 0, -1, 1). They were the least supportive ($p<0.01$) of the idea that the government is liable for all citizens' health and well-being (10: 3, 3, 2), and were the least dismissive ($p<0.01$) of the idea that the government should help only the "weak and defenseless" (48: -2, -2, 0). In line with their faith in the strength of existing institutional arrangements, members of perspective 3 were the least in support of statements suggesting that one's views about NCDs could lead to personal or professional gain or harm (8: 0, -1, 3; 9: 0, 1, -1; 21: 0, 0, -1; 23: -1, -1, 0; 27: 1, 0, -1; 33: -1, -1, 0; 55: 0, 0, -3).

Distribution of federal policy actors among the three perspectives

Differences also existed in the institutional affiliations of the participants who belonged to each of the perspectives (Table 2.2.). Practically, all consultants to the federal government sectors, participants from the international governmental organizations, national nongovernmental organizations, and academia, loaded on perspective 2; and none of them loaded on perspective 3. Furthermore, no member of the government parastatals[3], the finance sector, media, or food and beverage companies, loaded on perspective 3.

[3] In the words of one of the participants "Parastatals were established to reduce bureaucracy…….. There is still some bureaucracy, but it is not as much as you have in the core ministries"

2.3.2. Perspectives of state policy actors about NCDs

At least one participant was interviewed from 20 of the 36 states in Nigeria, with at least 2 states represented in each of the 6 geopolitical regions. Participants were also interviewed from the Federal Capital Territory (FCT), which is analogous to a 37th state. All of the 41 state level participants were actors in their state civil service and health sector, except for one actor who belonged to a state run university. Table 2.3. shows the distribution of state level participants by region.

As with the federal policy actors, three of the dominant perspectives were identified. The factors were defined by 33 of the 41 participants. Perspectives 1, 2, and 3 were defined by 13, 9, and 11 participants respectively. These perspectives explained 46% of the total variance in perspectives among the state level actors. There was also a high degree of positive correlation among the perspectives. The correlation between perspective 1 and perspectives 2 and 3 was 0.73 and 0.76 respectively. The correlation between perspectives 3 and 2 was also 0.76. Again, all three perspectives agreed that NCDs were an important and pressing problem (42: 3, 2, 3) and disagreed with the notion that action is unfeasible within the Nigerian system (28: -2, -2, -2; 35: -1, -2, -2). The three perspectives also appeared to have a great respect for the opinions of the WHO (18: 3, 3, 3). However unlike the federal policy actors, the state level actors were more confident about their own ability to implement activities to address NCDs, even without the active involvement of the federal policy actors (34: 0, -2, -1; 54: 1, 0, 0). Like with the federal policy actors however, important differences also existed amongst the perspectives.

Table 2.3. Distribution of state level policy actors by region

Region	**Number of participants**
North Central	9
North East	6
North West	8
South East	6
South South	5
South West	7
Total	**41**

Perspective 1 – The cautious polycentric

The state policy actors who belonged to perspective 1 were of the opinion that health should be a national priority (3: 3, 3, 1) and that NCDs needed to be urgently addressed (18: 3, 3, 3; 42: 3, 2, 3). The participants' expressed themselves in words such as these – *"[Health] should be a national priority…… when you look at the health of Nigerians, most people are affected, one ailment or the other. This will… not boost our economy because the strength is not there for people to contribute their quota. When you look at HIV/AIDS, you look at hypertension, you look at diabetes, you look at cancer, all these are diseases that can keep somebody down… The health status of the person is reduced and he cannot contribute positively to the economy of this country. So health..... it should be given a priority in Nigeria*".

These participants supported a collective approach to addressing NCDs, and were significantly ($p<0.01$) less individualistic than perspectives 2 and 3 (2: 1, 0, 0; 32: 2, 0, 2). As opined by one participant ($r = 0.61$), "*There should be that intersectoral collaboration between departments, ministries and what have you. With this, we can achieve health for all Nigerians. So it is important that we have to work together. We have to come together…… health care under one*

roof…… all the ministries, departments, agencies..... their hands must be on deck to achieve health for all Nigerians". The participant further remarked, "*It's a collaboration between state and the [federal]. Not that the state cannot do [it alone], but… the state and the federal level will have to come together to work together. When you work together, issue of spread of chronic diseases will be limited and better results will be achieved*". The perspective was also distinctly ($p<0.05$) less fatalistic (15: 2, 1, 1; 16: -2, 0, -2) or hierarchical (1: 0, 1, 1: 30: -1, 1, 0). As one of the members of the perspective ($r = 0.62$) put it, *"…… research has been found that some influence can be done to improve the condition of those either who have it, or who are likely to have it…… we're supposed to do what we can do and then after that, we can leave it in the hands of God*".

Members of the perspective believed that NCDs should be addressed because it is the right thing to do (51: 2, -1, 2), and were least likely ($p<0.01$) to support or be influenced by statements indicating that NCDS should be addressed for professional or personal gain (8: 0, -2, -2; 9: -1, 1, 0; 33: -2, 1, 0; 47: -3, -1, -1; 49: -3, -1, -2). In the words of one of the participants who loaded strongly on this perspective ($r = 0.62$), "…… *It is duty bound on us to take care of our brothers. That's the way it should be. We should act as our brothers' keepers*". Further distinguishing this perspective is the suggestion that, although they believed in the organization of the civil service (29: 2, 2, 1) and the knowledge of health workers about NCDs (12: 1, 2, 3; 41: -2, -3, -3), they were less certain ($p<0.05$) than perspectives 2 and 3 about the ability of existing institutional arrangements to effectively address NCDs (5: 1, 2, 2; 13: 1, 2, 2; 35: -1, -2, -2; 44: 0, -2, -1). They were also notably more reluctant to suggest a role for the government in addressing the issue (10: 1, 2, 2; 48: -1, -3, -1) and implied a cautious approach to addressing NCDs (4: 1, 1, -1). According to one participant ($r = 0.62$), "……w*e've not really been concentrating on chronic*

ailments, chronic diseases like hypertension, diabetes, because we're still struggling to take care of communicable and preventable diseases. So now we have information that these things are really with us. And those information should guide us to start working towards ameliorating them or at least reducing the burden…… it's already with us because our standard of living has improved. And the more the improvement, the more we're prone to having these non communicable diseases……. We have information, [but] we still need more".

Perspective 2 – The contented

Like members of perspective 1, the participants who belonged to perspective 2 believed that health should be a key focus of the country (3: 3, 3, 1), and that NCDs need to be immediately addressed (18: 3, 3, 3; 42: 3, 2, 3). One of the participants (r = 0.72) reacted thus: "*We all know it's a serious problem. It's been reported in journals. So we need to start doing something. Although something is being done, but I think we need to reinforce*". A second participant (r = 0.64) remarked: "*Hypertension, diabetes and all that, they're serious problems……. In our country here…, I don't think we attach much importance to these non communicable diseases than communicable diseases. We look after HIV and the rest of them, while we neglect hypertension. And hypertension is a silent killer. It kills a lot of people. Equally, diabetes kills a lot of people. So I strongly believe that… Nigeria needs to get started and start solving our problems*".

However, unlike perspective 1, the perspective of these participants did not appear to be motivated by their sense of moral duty (51: 2, -1, 2; $p<0.01$) but more by the sense that NCDs were having a deleterious impact on the national economy (24: 1, 3, 1; $p<0.05$). As stated by a

member of this perspective (r = 0.59), "*When we talk of national priority, if you don't put health at that level of being made priority, we're finished! Because even the President, the key actors in government must be healthy in order to actually transform the nation, in order to develop the nation and achieve our desired growth in the economy. The people must be healthy!*" The same participant had earlier noted: "*If the people are not healthy, there is no way all the other sectors can really function. That's why they say 'A healthy nation is a wealthy nation', and that 'health is wealth'. If the people are okay, then every other sector of the economy will be okay, because the people will be there to work*". The perspective was also of the opinion that the government was liable ($p<0.05$) to mitigate such an impact (10: 1, 2, 2; 48: -1, -3, -1). As highlighted by a member (r = 0.59), "*Government is very, very key. The role of government is key in planning for the future of the people*". Another (r = 0.64) observed: "*It is government's function to look after its citizens, take care of them. Those people that are sick should go to the hospital and government should take care of them*". Again, a third member of the perspective (r = 0.72) commented "*We have voted people in. So if anything happens to any of us, by whatever form..... Government should cater for us*".

Part of the perspective's motivation to address NCDs also seemed to stem from the opinion that addressing NCDs will increase the efficiency of the health system (9: -1, 1, 0; 33: -2, 1, 0; 37: 2, 2, 0). Furthermore, members of perspective 2 appeared to have higher than average faith in the effectiveness of the existing Nigerian health system (5: 1, 2, 2; 29: 2, 2, 2; 52: 0, 1, -1) and disagreed more with statements that belittled the system or efforts taken through the system (7: -1, -2, 0; 41; -2, -3, -3; 44: 0, -2, -1). In line with their confidence in the status quo, members of perspective 2 were more likely, than other perspectives, to support hierarchical rather than unrestricted action (30: -1, 1, 0; 32: 2, 0, 2). As one member of the perspective (r = 0.72)

asserted, "*In this country we have three tiers of government, and each tier is almost autonomy. And I know that states, they have the capacity to do these things because whatever degrees those who are at the national government have, that's the same degrees too those in the state have and I think we all attended the same universities*". Likewise, another (r = 0.64) declared: "*Why shouldn't states work alone? Why must state come to the federal government to ask for everything? States…… they have money, they have subventions from government. They can take care of their people too*". The participant went on to emphasize that "*Everybody knows his or her own role. All departments know what they're supposed to do. Ministry of health knows what it's supposed to do; likewise, every other ministry*". Similarly, a participant (r = 0.72) noted "*I think [ministry of health] should be able to coordinate. More so, I'm a staff of ministry of health and I know that we coordinate such things*".

Perspective 3 – The skeptical hence individualistic

Similar to the previous two perspectives, members of perspective 3 consider NCDs as a serious issue requiring urgent attention (18: 3, 3, 3; 42: 3, 2, 3). Like perspective 2, members of perspective 3 believe that the government has an important role to play in reducing NCDs (10: 1, 2, 2). In the words of one of the participants (r = 0.54), "*WHO is definitely a leading authority and has contributed in …creating awareness globally about the health issues related to chronic diseases, non communicable diseases …and there's no doubt that we need to start looking at it seriously from this angle. Even though we're not doing much research about it …it's a serious health issue with long term complications and we do not have resources to tackle those complications. ……..So if we do not look at them now because we think it's not a problem; we do*

not have the resources to tackle with those complications. ……We need to get started on solving this problem".

However, the opinion of perspective 3 about what this governmental role should be appears to differ from that of perspective 2. Members of perspective 3 were the only ones to support ($p<0.01$) the statement that the government's duty was to provide the necessary services that would allow individuals take responsibility for their own health (25: 0, 0, 1). Along the same vein, this perspective believed more than others ($p<0.01$) that health workers needed to be appropriately trained to deliver activities to address NCDs (12: 1, 2, 3); for which individuals at risk of NCDs had been educated to demand (31: 2, 1, 2). A participant ($r = 0.60$) expressed the viewpoint in this manner: "*The truth is there needs to be capacity building. Because of the tendency like you have in emphasis being shifted to where funds are getting through – HIV/AIDS – people are now facing that and people are losing interest in [NCDs]. So there needs to be capacity building, training them on realizing that it's not only HIV/AIDS that kill us……. and if we start doing something early ……we would reduce the number that get into [NCDs] even before they get into it. There's nothing you can do if you don't have the right caliber of people with enough knowledge*". Another participant ($r = 0.54$) noted "……*I know that ignorance may contribute significantly to hypertension, diabetes, because people may be getting fat, thinking they're doing well. Whereas, when they start having diabetes or hypertension, it may be as a result of being obese. So I strongly agree that people need to be enlightened so that they can now live healthier lives – do more exercise, eat right…… And if we can only do that, it would strongly influence their health*". A third, ($r = 0.51$), said: "*Generally speaking, especially when it comes to hypertension, obesity and what have you; it is strictly due to… largely ignorance*" while another ($r = 0.63$) commented "*When people have the knowledge and the skills, they can perform better*".

Moreover, distinct from perspective 2, members of perspective 3 shared with perspective 1 skepticism about the effectiveness of the current health system (7: -1, -2, 0; 29: 2, 2, 1; 52: 0, 1, -1). For instance, in response to the performance of the MOF, a participant (r=0.47) reacted thus – "*they are not doing well at all! Who said they are doing well?*" Indeed, other comments from members of the perspective reflected disappointment with the health sector regarding NCDs. As articulated by two members of the perspective (r = 0.69 & 0.63), "*This is a very serious issue. You should have a unit that would coordinate it and put a lot of attention to achieving some good results…… You're not going to talk about chronic disease alone; you're going to talk about managing it. That's the crucial aspect of it. You don't just want to know of it, you want to manage it with all of its ramifications*". "*There are some drugs that are being given free like the HIV drugs……, forgetting about people [with] diabetes and other things. They need to also have strong concern. They need to be cared to*".

The main factor ($p<0.01$) driving the perspective of these participants appeared to be their own personal experience or proximity to NCDs (14: 0, 1, 2). As earnestly conveyed by one participant (r = 0.60), "*Some people close to me have experienced chronic disease …and I know what they've suffered from it. Some had had to lose a leg, some had had to die from it; I've lost friends from it. So I have a personal experience of chronic illness. That's why I have this opinion that it's something that we need to do. And the strange part of it is that diabetes, hypertension is increasing on a regular basis. So many people, young and old are suffering from it. So something needs to be done, and fast, about that*". Accordingly, members of this perspective were less likely ($p<0.01$) to support the opinion that more data is needed before extensively addressing NCDs in Nigeria (4: 1, 1, -1). The perspective was also more likely to disagree ($p<0.01$) with statements suggesting that NCDs were not as visible as undernutrition and

infectious diseases (45: 0, 0, -1; 50: -1, 0, -3). The member (r = 0.60) said: "*The figures are there, the life experiences are there, there is no other time to start addressing it but now. You don't need to push it to tomorrow. Now! Any time you have the opportunity of addressing it, you have to do something*". In fact, this perspective believed that NCDs are visible enough that addressing them could influence electoral votes (27: 0, 0, 1; 36: 0, 0, -1).

Distribution of state level policy actors among the three perspectives

No clear distinctions were observed among the participants who loaded on each perspective, by region or by position (88% of the participants belonged to the directorate cadre). It was not possible to examine distinctions in loading by institution because as already mentioned, virtually all of the actors belonged to the civil service health sector.

2.3.3. Comparison of federal and state level perspectives

Several themes emerged in the characteristics of both the federal and state policy actor perspectives. Collective action, government responsibility, individual responsibility, skepticism in the ability of the existing health system to address NCDs, and confidence in the ability of the existing health system to address NCDs, were distinguishing themes among the three perspectives for both federal and state policy actors. Even though the perspectives identified for the state policy actors are not exactly analogous to those of the federal actors, perspective 1 for the state actors is quite similar to perspective 1 of the federal actors, while perspective 2 of the state actors is comparable to perspective 3 of the federal actors and vice versa. The main

differences in the replication of the same perspectives in the two groups of policy actors appear to lie in their motivation for addressing NCDs. The view point of perspective 1 for both federal and state policy actors appears to have been motivated by polycentric tendencies and a sense of moral duty. Perspectives 2 and 3 of the federal actors seemed to be motivated by a rejection of defeatist tendencies and a value for enlightenment respectively; while perspectives 2 and 3 of state actors appeared to be influenced by a desire to improve the economy/ national well-being and personal experiences with the issue respectively. In addition to their sorting of the statements, these differences can be observed in the words of the participants. Furthermore, a distinct difference between the two groups of policy actors is that state actors were overall more likely to believe in the current ability of the civil service to act on NCDs (statements 5, 29).

Table 2.4. Summary of results

Areas of consensus	**Areas of dissent**
▪ NCDs are a serious problem requiring urgent attention ▪ Government intervention is necessary ▪ Action on NCDs will yield results ▪ It is possible to take action within the context of the individual sectors ▪ The health sector can and should act on NCDs even while also addressing infectious diseases ▪ Personal proximity to NCDs through own or others' experiences	▪ The ability of FMOH to coordinate multisectoral action on NCDs ▪ The effectiveness of current institutional arrangements for multisectoral action ▪ Weight of government versus individual responsibility ▪ How to implement population level measures

2.4. Discussion

The purpose of this study was to assess the viewpoints of Nigerian policy actors about the importance of NCDs, and the likely commitment and capacity to act on the issue. The results showed that all policy actors considered NCDs to be a significant problem in Nigeria and supported the need for urgent actions to address NCDs. There were however mixed reactions about the capacity to act on the issue. Important variations existed about the weight given to collective versus individual responsibility, and confidence in the ability of the health system to effectively address NCDs.

Methods considerations

A strength of this study is the fact that the study interviewed bureaucratic rather than political policy actors. Government bureaucrats are civil servants, policy actors whose jobs and positions often do not change with changes in political power. While both bureaucratic and legislative policy actors can formulate public policies, the source of most public policies is often contextual, as countries differ in the amount of power and authority that is accorded to both groups of policy actors (Nsibambi, 1992; Walt & Gilson, 1994). In some countries, the civil service is a formal sector which has a power to rival that of the political institutions (Grindle & Thomas, 1991; Walt & Gilson, 1994). The civil service in these countries is able to control the government and policymaking since its position does not change with the political headship, and there is a greater understanding of government complexities than that possessed by the political leaders.

Moreover, the civil service often has more education, as well as experience in planning, budgeting and relationships with international organizations. In the case of such formal civil service, it is also the civil servants who formulate policies, interpret them to the legislative policy actors, and ensure that these policies are approved by the political system. Thus, legislative policy actors are often marginalized from policymaking and their role becomes decision-making about the equitable allocation of resources to allow policy implementation (Grindle & Thomas, 1991). Nigeria belongs to this group of countries, hence the strength in using bureaucratic policy actors for the purposes of this study. In addition to being a major source of public policy, bureaucratic policy actors are also the principal agents for policy implementation (Nsibambi, 1992).

Another strength of the study is the fact that participants outside the health sector were included. As earlier mentioned, meaningful efforts to address NCDs must be multisectoral. Knowing the perspectives of actors in these other sectors thus enhances the relevance of the study. Consequently, this study contributes to the existing literature for understanding how to address NCDs in Nigeria and potentially other low and lower middle income countries. According to the IOM (2010), plans to address NCDs should include an assessment of the political status quo about the issue, the willingness to act on it and the capacity to act on it.

Nevertheless, the study has a few limitations. Primarily, this study was designed to find out whether Nigerian policy actors considered NCDs as an important issue, and their opinions about the willingness and ability to address NCDs in the country. The research was thus unable to assess the actual capacity to act on the issue. Moreover, the research was a study of subjectivity, so the perspectives identified may be steeped more in perceptions than reality. Still, as discussed

later in the document, perceptions can have just as great (or even greater) an effect on action as the reality.

A further limitation of the study is the fact that the perspectives of policy actors were assessed at only one point in time. The policymaking context can be very dynamic, and this may cause the results of the study to be valid only for a very short period (Varvasovszky & Brugha, 2000). The research however tried to minimize this limitation by using a wide range of policy actors at both the federal and state levels as well as across various ministries, departments and agencies, rather than just the Ministry of Health. Even if the perspectives of some policy actors were to change in the short term, it is unlikely that the dominant perspectives would change rapidly across all the policy actors (Watts & Stenner, 2005). Also, the research assessed institutional perspectives which are usually quite stable. A fourth potential limitation might arise from the number of perspectives identified. It is possible that there are other Nigerian policy actor perspectives about NCDs that were not captured by the three perspectives identified in this study. However according to Brown (1980), the number of unique perspectives that exist on an issue are limited. Hence, although there may be more policy actor perspectives about NCDs than were identified in our study, the three perspectives discussed are likely to be the most dominant perspectives. This possibility is increased by the fact that the state level Q-sorts yielded comparable results to the federal Q-sorts, despite the fact that the two populations were appreciably different in their policy roles. Attempts to identify more than three perspectives from the Q-sorts resulted in incoherent factors. Since the Q-statements used in our study were comprehensive over the determinants of perspectives, it is also not likely that a different set of statements would yield remarkably different results (van Exel & de Graaf, 2005).

A fifth potential limitation is that the positionality of the primary investigator for this research could mean that the research may be biased since this researcher is a Nigerian, and can be considered an "insider" in the research context. The positionality of a researcher can influence both the access to data and the construction of knowledge (Walt et al., 2008). However, as suggested by Walt et al. (2008), the research minimized this bias by utilizing instruments constructed objectively with the engagement of "outsiders". Moreover, multiple frameworks and theories were used in data collection, analysis and interpretation, to ensure the "high level of triangulation" required for a robust analysis, as proposed by Buse (2008). Furthermore, all components of the data collection instruments were designed to minimize the likelihood that the policy actors considered the research team as an advocate of NCDs; as such consideration could bias their responses. Likewise, the results from the Q-sort by-person factor analysis were interpreted by two research assistants who had been entirely uninvolved in both the design of the study and data collection. Lastly, all members of the research team were blinded to the identity of the participants belonging to each perspective, until the perspectives had been characterized.

Implications of findings

The study was able to address all three of the conflict levels reported by Baumgartner (1989). Baumgartner (1989) suggested that policy conflict occurs at three levels: firstly, deciding whether or not there is a problem; secondly, identifying the most appropriate solutions to the problem; and lastly, determining the best methods of implementation. Our first question – Do Nigerian policy actors consider NCDs an important issue? – addresses the first level of conflict discussed by Baumgartner (1989). The second and third levels of conflict are addressed by our

second question – What are the opinions of Nigerian policy actors about the commitment and capacity to act on NCDs? Accordingly, the rest of this section is framed around the categorization by Baumgartner (1989).

First level of potential policy conflict – deciding if a problem exists: At this level, it is not likely that conflict occurs among the participants of our study, since every perspective to the issue agrees that there is a problem. Indeed, the participants in this study seemed very knowledgeable about NCDs and did not appear to believe the misunderstandings about NCDs which the WHO reported have contributed to its neglect (WHO, 2005). This finding supports reports from other studies such as WHO (2011), who report that there is an increasing policy awareness about NCDs. Baumgartner (1989) stated that conflicts at this first level are likely to be the most extreme. The apparent agreement among the policy actors in our study, about the reality of a problem, thus indicated an inclination towards acting on NCDs.

Nonetheless, the opinion of the policy actors about NCDs being an important and urgent problem was not evidenced by ongoing endeavors to address the diseases. At the time this study was conducted, the country still lacked an official policy for NCDs; and existing prevention and control efforts were token and uncoordinated. Earlier reports (WHO, 2007; WHO, 2011; Pelletier et al., 2012) have shown that there are often important differences between policy rhetoric or attention and system commitment/ effective action. Some participants in the WHO survey of 2006 reported that even when NCDs were accorded high priority intent in their countries, the actual priority given to mounting a response to the issue was low (WHO, 2007). The WHO survey of 2010 presented similar findings. Although 92% of the countries who participated in the study reported having some documentation of intent and plans to tackle NCDs

and/or their risk factors, at least half of the plans and policies were not operational. Moreover, even the operational ones were often not adequately funded (WHO, 2011). Pelletier et al. (2012) studied agenda setting for undernutrition and not NCDs, but their report distinguishes between the factors necessary for "political attention", and that needed for "effective action". While knowledge and prioritization were crucial elements for generating political attention, they were not sufficient to ensure the development and effective operationalization of plans and strategies to combat undernutrition.

Second level of potential policy conflict – identifying the most appropriate solutions to NCDs: For this level, some conflict may be likely to occur without appropriate dialogue. The different perspectives identified appeared to attach varying importance to collective versus governmental, versus individual responsibility and action. Previous literature (Strong et al., 2005; WHO, 2005) show that all three components of action need to be present for effective NCDs prevention and control. Epping-Jordan et al. (2005) and Reddy et al. (2005) further describe how government must lead this action. Even though there are individual responsibilities for preventing and controlling NCDs, fulfilling these responsibilities can only be successful if the needed enabling environments are created. Creating these enabling environments would require the collaborative, collective action of several sectors relevant to the issue. Other research (Greener et al., 2010; Porter & Pelletier, 2011) has shown that the perceptions of stakeholders about the loci of responsibility for an issue can affect the types of policies that are supported. Though the populations studied in these two papers do not exactly match the policy actors included in our own study, both studies included policy influencers, policymakers and policy implementers in the context studied.

The different weights attached to the different loci of responsibility by the participants in our study are a cause for concern. Pelletier et al. (2012), found that the lack of consensus amongst policy actors about the best solutions for addressing undernutrition, was one of the two most limiting factors for action in several countries studied. Nevertheless, the policy actors in our study did not disagree on all aspects of the solution. The view of most of the perspectives is that programs to address NCDs and its dietary risk factors can be integrated within undernutrition programs, another recommendation for low income countries (Willett et al., 2006).

Third level of potential policy conflict – determining the best implementation methods: For the third level suggested by Baumgartner (1989), the results of this study show that Nigerian policy actors are likely to be widely divergent. As seen in the results, some policy actors believe that the current system of doing things is sufficient for addressing NCDs, while other policy actors disagree with the effectiveness of the system. It has been recommended (Epping-Jordan et al., 2005; WHO, 2005; IOM, 2010) that the most effective approach to reducing NCDs is by adopting multisectoral action to policy formulation and implementation, coordinated by the MOH. Given the mistrust in the ability of the Nigerian FMOH to coordinate action on NCDs, amongst other abilities, and the skepticism about the general ability of the various sectors to formulate and implement action on NCDs, the system does not appear to bode well for multisectoral action. The situation appears even more critical because the multisectoral interventions are expected to be incorporated into existing health frameworks within the system (Reddy et al., 2005). Again, Pelletier et al. (2012) found that the second important limiting factor, for translating political attention for nutrition into an effective response, was the ineffectiveness of the guiding institutions or structures for the multisectoral action necessary.

While the systemic inadequacies reported by the participants in our study may be perceived rather than real, the results still have important implications for the future of NCDs prevention and control. As discussed by Rochefort & Cobb (1994), reality is often socially construed based on individual assumptions, experiences and values. Such "constructions of reality" have been shown in some previous studies. For instance, Gyberg & Rydén (2011) found that portions of the perceptions of policymakers about cardiovascular health in Europe were different from the reality. Yet, the findings indicated that these differences in perceptions might constrain collective action by all groups of policymakers, as well as the extent to which action is taken by each group of policymakers. Other authors (Corrigan & Watson, 2003) have likewise explained how policymakers' perceptions can greatly influence health decision making and resource allocation to a health issue. Still, previous recommendations for NCDs (WHO, 2005; IOM, 2010) advocate for countries to strengthen their health systems. If on the other hand the reported inadequacies of the Nigerian system are real, but some key policy actors believe they are perceived inadequacies; then these policy actors may not support certain actions that might be needed to strengthen the system. Thus, even though policy actors agree that NCDs should be integrated within existing programs, the system may not be able to deliver this in the short term; contrary to the urgency required of NCDs action.

The likelihood of conflict in determining appropriate implementation methods becomes magnified when it is considered that there were pronounced differences in the institutional affiliations of the participants who belonged to each perspective. There are two possible interpretations for this finding. One interpretation may be that participants from the federal government ministry departments who were satisfied with the current system, perceived systemic inadequacies as insignificant; whereas the participants with other institutional affiliations

perceived the same inadequacies as overwhelming. A second interpretation may be that the participants from the federal government ministry departments felt a need to be defensive and so overstated the effectiveness of the system. Understandably, the participants with other institutional affiliations would have felt no such need. Regardless of which interpretation might be true, it will be necessary to seek consensus on the nature, extent and significance of the administrative problems, before moving forward on a NCDs agenda.

One enabling factor for implementing activities to address NCDs is the fact that state policy actors are also of the opinion that it is a pressing issue that must be tackled sooner than later. Although the perspectives of federal policy actors are essential for initiating policies and action on NCDs, as mentioned by the participants in this study and substantiated by earlier reports, the perspectives of state level actors are crucial for effective implementation of the policies and maintaining attention to the issue. States in Nigeria have autonomy in deciding whether or not to adopt and implement a policy, how to implement the policies, and to what scale (POLICY, 2003; Shiffman, 2007). A study by Shiffman & Okonofua (2006) reported limited implementation of safe motherhood initiatives in Nigeria, despite alarming maternal mortality rates and federal level commitment; partly because many state policy actors were unaware that the issue was a problem. The affirmative perspectives of the state actors in this study hence indicate that implementation of NCD initiatives may fare well even in the short term.

2.5. Conclusion

Although present action to address NCDs in Nigeria is in no way commensurate with the issue, policy actors agreed that NCDs are an important and urgent problem. All groups of policy actors

were willing to act on NCDs, but there were significant differences in their perceptions of the institutional ability to act according to the international recommendations of multisectoral action. There were also differences in their perceptions of how the responsibility for addressing the issue should be distributed. Other research has shown that the perspectives of policy actors can immensely influence actual actions that are taken about an issue and the commitment to the issue. Hence, while the results of this study offer some encouragement for the future of NCDs prevention and control in Nigeria; unless the differences in the perspectives of policy actors are reconciled, action may be slow, limited or ineffective.

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APPENDIX

Table 2.1 A. List of statements and ranking by the three perspectives of federal and state policy actors

			Federal policy actor perspectives				State policy actor perspectives		
No	**Statement**	**Construct, theory/ framework**	**1**	**2**	**3**		**1**	**2**	**3**
1.	People just keep talking about levels. Levels can change. The fact that I am in this position today does not mean I cannot be in another position tomorrow. I want to be free to decide what work I do	Hierarchical, cultural theory	1	1	1		0	1	1
2.	One for all, and all for one. Everybody needs help, no man is an island. We need to be our brother's keeper and work to make sure everyone has a good life. When some people get chronic diseases, it is everyone's fault and problem	Individualistic, cultural theory	2	0	0		1	0	0
3.	The health of all Nigerians should be a national priority. It is more important than electricity, education, transportation, oil and gas	Well-being, value category	2	1	3		3	3	1
4.	The man who walks carefully will not stumble. All we have so far about chronic diseases are reports from other countries. We need more information about how big the problem is in Nigeria and what causes it before we can do anything about it. It would be foolish to act without having this information	Scientific/ public health, forms of rationality	0	1	0		1	1	-1
5.	It is no big deal to formulate and implement policies and programs involving several ministries, departments and agencies (MDAs). This has been done in the past. One of the units in the Ministry of Health or another MDA can very easily coordinate the efforts for chronic disease prevention and control	Authoritative resources, structuration theory	0	0	2		1	2	2
6.	It can be so hard and frustrating to get anything done in Nigeria. Still, what really matters is to understand the environment. If I want to address chronic disease, I know where to start from	Control beliefs, theory of planned behavior	1	0	1		1	1	1
7.	It is unfortunate that the units in the Ministry of Health cannot get their act together. It is difficult for them to even relate courteously with one another. It is time we wake up and face the reality that the Ministry of Health is not in the best position to coordinate multi-sectoral efforts. Chronic disease interventions needs to be given a new home	Authoritative resources, structuration theory	-1	1	-2		-1	-2	0

Table 2.1 A. (Continued)

8.	Several respected colleagues are already working to address chronic diseases in Nigeria. If I refuse to do something, I may lose these friendships	Affection, value category	0	-1	-3		0	-2	-2
9.	Addressing chronic disease will give my department more responsibilities. It would give me an opportunity to be in charge of several new decisions and act on these decisions	Power, value category	0	1	-1		-1	1	0
10.	The role of the government is to plan for the future and help the people live good and healthy lives even when the people do not recognize this or appreciate it	Ethics, forms of rationality	3	3	2		1	2	2
11.	But this is Nigeria. Everything is a matter of who you know or luck. Just because something is referred to as a "human right" does not mean you are going to get it	Rectitude, value category	0	1	1		0	0	0
12.	Health workers do not have enough training. To reduce chronic diseases, there is a need for capacity development at all levels	Skills, value category	1	2	2		1	2	3
13.	Funding is always a very key issue. We cannot do anything to address chronic diseases without adequate funds. But this should not be a problem. There would only be a need for advocacy with the Minister for Health and other top elected officials, to ensure adequate budgetary allocations	Allocative resources, structuration theory	1	2	2		1	2	2
14.	Some people close to me have experienced chronic diseases like hypertension, diabetes. This has strongly influenced my opinion about these diseases	Proximity/attitude strength, theory of planned behavior	2	2	1		0	1	2
15.	A man controls part of his destiny. We cannot hold God responsible for everything. Our efforts can cause Nigeria to change for the better	Fatalistic, cultural theory	2	2	1		2	1	1
16.	What will be will be. If a condition runs in a person's family, the person will be likely to get this condition. There is nothing that can be done about it. Everything is in the hands of God	Fatalistic, cultural theory	0	-3	-1		-2	0	-2
17.	It is okay to talk about setting laws, regulations and enforcement mechanisms for food and other industries, but such measures will only encourage bribes and will not work in the Nigerian environment	Legal, forms of rationality	-2	-1	-1		-1	-1	-1
18.	The WHO and other leading authorities have reported that chronic diseases are a serious problem. Nigeria needs to get started on solving this problem	Respect, value category	2	3	1		3	3	3

Table 2.1 A. (Continued)

19.	Nobody is talking about chronic disease. If I could start dealing with the issue now, I would be a leader in it by the time it gains prominence	Behavioral beliefs, theory of planned behavior	-1	0	-1		-1	-1	0
20.	I have not been involved with chronic disease issues in the past, but I intend to include chronic disease related issues in the next work plan I submit to my superiors	Attitude strength, theory of planned behavior	0	0	-1		-1	0	0
21.	People think I am stupid and weak because I just keep quiet and watch them. But I don't blame them, after all, empty barrels make the most noise	Self-identity, theory of planned behavior	0	0	-1		0	0	0
22.	The Nigerian context is very different from that of other countries. Even though the WHO reports that chronic disease are a big issue, they obviously do not understand our realities and problems	Respect, value category	-1	-1	0		0	-1	0
23.	There will be enough time and opportunities for me to get involved with chronic disease prevention and control when the issue becomes more important than it is now	Attitude strength, theory of planned behavior	-1	-1	0		-1	-1	0
24.	The economy is being affected by chronic diseases. Taking care of sick people costs money and they cannot even earn the money. We need to do something about chronic disease so that the economy can improve	Economic, forms of rationality	2	2	1		1	3	1
25.	Every man for himself, God for us all. The government cannot be expected to take personal care of everybody. That is an individual job. The government can only make sure the services are available	Individualistic, cultural theory	0	-1	1		0	0	1
26.	The society should not be held responsible for people's diseases. Each person should take care of his/ herself. After all, it is everyman for himself, God for us all	Well-being, value category	-2	-3	-2		-2	-2	-2
27.	We all know health is wealth. Any politician who invests in chronic diseases would be viewed positively by a lot of Nigerians. Such a politician will have a lot of devoted followers and future support	Political, forms of rationality	1	0	-1		0	0	1
28.	Civil servants already have more than enough work to do. No reasonable person would expect them to do even more work	Power, value category	-1	-2	-3		-2	-2	-2

Table 2.1 A. (Continued)

29.	Regardless of what other people might think, the civil service is very organized. Every ministry, department and agency (MDA) knows what they are supposed to be doing and can work together effectively with other MDAs, to achieve multi-sectoral policies and programs	Performative rules, structuration theory	1	-1	2		2	2	1
30.	Everyone must find their levels. The fact that we want to work together does not mean that people should forget their level and their position	Hierarchical, cultural theory	0	0	0		-1	1	0
31.	Ignorance is the main reason why we have diseases such as hypertension, diabetes and the likes. Fat (overweight/obese) people need to be enlightened so that they can lose weight and reduce their risks of these diseases	Enlightenment, value category	1	2	3		2	1	2
32.	Working together is the key. It does not matter where the change starts from. Anybody can start to organize activities, regardless of their organization or institution	Egalitarian, cultural theory	3	1	1		2	0	2
33.	Recognizing that we have more disease will mean a greater cash flow into the relevant departments. More money will help each department achieve other goals apart from chronic disease reduction	Wealth, value category	-1	-1	0		-2	1	0
34.	States cannot act alone without national level involvement. They do not have the proper knowledge and capacity to act, even if there are international organizations willing to support state and local level ministries, departments and agencies (MDAs)	Normative rules, structuration theory	-1	0	0		0	-2	-1
35.	I do not know why we keep deceiving ourselves in this country. We are still struggling to do simple things like immunization, and we think we can handle diet and lifestyle change. We also do not have a culture of working across ministries and departments. Trying to force us to do so now is a waste of time	Administrative, forms of rationality	-2	-2	-2		-1	-2	-2
36.	Let us call a spade a spade and not a farming implement. Health is important, but it is not visible. Unlike building roads, schools, wells and boreholes, paying for activities to address chronic diseases will not win a politician votes	Political, forms of rationality	-1	1	0		0	0	-1

Table 2.1 A. (Continued)

37.	I do not see any reason why we cannot address chronic diseases with undernutrition. It is all the same thing. Poor health is poor health. Addressing chronic disease will lead to greater investments in the health sector and a more efficient system since we will be killing two birds with one stone	Administrative, forms of rationality	1	2	2		2	2	0
38.	It is a pity that some prominent researchers and civil servants in Nigeria are wasting time and resources on addressing chronic disease. I just try to avoid their meetings as often as possible	Affection, value category	-3	-2	-2		-3	-3	-3
39.	All fingers are not equal. Not everyone can wake up one day to say they are going to start changing things. You need to have some authority	Egalitarian, cultural theory	0	1	1		1	0	1
40.	Regulating the food and other industries is important for achieving good diets and health. Proper laws to guide industries need to be put in place but industries should be allowed to decide how to adopt them	Legal, forms of rationality	1	0	-1		0	0	-1
41.	The government and their development partners like WHO are always organizing trainings. All these trainings are useless and just a waste of money	Skills, value category	-3	-1	-2		-2	-3	-3
42.	Numbers do not lie. I agree with the statistics. Chronic diseases such as diabetes, heart disease, stroke and cancer, are real and increasing problems in Nigeria and we should begin addressing it now	Scientific/ public health, forms of rationality	3	3	3		3	2	3
43.	It is no news that the Nigerian environment is difficult. You have to be a director before you can do anything. People like me have to do what our superiors want. It does not matter what we think should be done	Control beliefs, theory of planned behavior	-2	-1	0		-2	-1	0
44.	Ministries, departments and agencies (MDAs) still do not understand their roles. Implementation of the National Policy on Food and Nutrition is limited and efforts to reduce chronic disease will not be effective	Performative rules, structuration theory	0	0	0		0	-2	-1
45.	There are many things wrong with the Nigerian economy. The people who die from chronic disease are old and cannot earn much anyway. When it comes to the nutrition agenda in Nigeria, addressing only food security and undernutrition will yield the greatest returns to investment	Economic, forms of rationality	-1	-2	0		0	0	-1

Table 2.1 A. (Continued)

46.	Talk about chronic disease is not a new thing. Everybody knows that something needs to be done about it. It is only that nobody has been doing anything. Once someone starts to do something, others will follow	Normative beliefs, theory of planned behavior	0	1	0		2	0	0
47.	Addressing chronic disease will increase corruption. Some people will use the opportunity to get richer with all the new money that will be coming in	Wealth, value category	-3	-2	-1		-3	-1	-1
48.	The government should neither pay for people's carelessness nor should it do something because the international agencies want it. Only the weak and defenseless groups need to be helped	Ethics, forms of rationality	-2	-2	0		-1	-3	-1
49.	Why should I add chronic disease reduction to my work and my schedule? It will not increase my salary or give me a promotion, and how am I even sure my efforts will not be in vain	Behavioral beliefs, theory of planned behavior	-1	-2	-2		-3	-1	-2
50.	Undernutrition and infectious diseases are getting all the funds, so all the health proposals are in these areas. I have not heard any mention of chronic disease	Normative beliefs, theory of planned behavior	-2	0	-1		-1	0	-3
51.	We value human rights; it does not matter whether only a few people have chronic disease. We would tackle the diseases	Rectitude, value category	2	0	0		2	-1	2
52.	The Ministry of Finance is doing the best it can. We just do not have sufficient funds to tackle chronic diseases. Moreover, the bureaucratic process for the disbursement of funds is too slow to align cash flow with needs	Allocative resources, structuration theory	1	-1	2		0	1	-1
53.	People are stubborn. Nigerians believe that being fat (overweight/ obese) is a sign of good living and high status. Providing enlightenment about healthy eating and living will not achieve anything	Enlightenment, value category	-2	-3	-2		-2	-1	-2
54.	Most state and local governments do not have a large number of health professionals. However, state and local level ministries, departments and agencies (MDAs) can take the initiative to design policies and implement programs on their own, without guidance from the national level	Normative rules, structuration theory	0	0	0		1	0	0

Table 2.1 A. (Continued)

55.	More people need to listen to me. I understand what is going on and know how to organize things. I usually make suggestions to my colleagues so that we can perform better, but they are too stubborn	Self-identity, theory of planned behavior	0	0	-3		0	-1	1

Chapter 3

Why have NCDs received so little attention in Nigeria and how may the attention be increased?

Abstract

Noncommunicable diseases (NCDs) in low and middle income countries (LMICs) increase morbidity, mortality, health care costs, and individual/national poverty; as well as overburden weak health systems and retard progress in reducing undernutrition and infectious diseases. Global health authorities have reported that "a sound and explicit [multisectoral] government policy" is indispensable for addressing NCDs in these LMICs. In Nigeria, the health ministry has had a NCD policy unit since 1989 and there has been significant policy rhetoric about NCDs; still, there is no formal policy or serious action on the issue. This research was undertaken to identify the factors that have contributed to the delay in addressing NCDs in Nigeria, and suggest ways by which attention may be increased for the issue. Semi-structured interviews were conducted with 34 policy actors in Nigeria, and results were compared with established categories of factors that shape political priority.

Several factors related to the biological/social characteristics of NCDs, lack of bureaucratic or political champions, lack of a broadly-based, effective NCD coalition and, until recently, limited attention by the international community, have contributed to the delay in addressing NCDs in Nigeria. These factors correspond well to those previously identified as being important for generating political priority. A new category of factors – stakeholder perspectives – was also identified. Nevertheless, when asked to suggest ways to increase political priority for NCDs, the policy actors did not fully perceive all that would be necessary.

3.1. Introduction

Low and middle income countries (LMICs), like Nigeria, have traditionally been associated with health problems of infectious or communicable diseases. However, beginning in the 1990's the World Health Organization (WHO) began to report an increasing burden of noncommunicable diseases (NCDs) in LMICs. NCDs contribute to overall morbidity and mortality, are chronic, and are expensive to manage. As a result, these diseases can also increase poverty and reduce the attainment of national development goals. Hence, the World Health Assembly approved a global strategy for the prevention and control of NCDs in 2000 (WHO, 2000); and the WHO has since published several reports about the issue, strategies to address it, and the capacity available for action in different countries and regions. One fundamental component for effective action on NCDs which has been highlighted in several of these reports (for example WHO, 2005), is "a sound and explicit government policy" which would provide a framework for integrated and comprehensive action on the issue.

Nigeria has received particular interest in the discourse about NCDs in LMICs. For instance, in a significant report about NCDs published by the WHO (WHO, 2005), Nigeria was one of nine select countries featured. This selection was partly based on the magnitude of the disease burden due to NCDs in the country. In another instance, the 2007 Lancet series on chronic diseases listed Nigeria as one of the 23 countries that account for 80% of the mortality due to NCDs in LMICs (Abegunde et al., 20007). NCDs have also been the focus of some in-country efforts. The vision of the federal ministry of health (FMOH) has been "to reduce the morbidity and mortality due to communicable diseases to the barest minimum, having minimal prevalence of non communicable diseases……." Hence, in addition to the divisions focused on addressing various communicable diseases, there has been a division devoted to addressing NCDs since 1989.

Furthermore, in 2005, the then President of Nigeria made statements strongly supporting immediate action on NCDs (WHO, 2005). Yet, despite these continuing acknowledgements of the existence of a problem and the need to do something about it, preliminary investigations showed that there was still no formally endorsed policy for NCDs in Nigeria. Moreover, other health policies, including those published after 2005, barely mention NCDs and efforts to address the issue have remained limited and uncoordinated.

Consequently, a recent study (Adeyemi et al., unpublished manuscript) was conducted to empirically determine the perspectives of relevant policy actors about NCDs in Nigeria. The study included 164 Nigerian national and sub-national policy actors recruited from government, nongovernmental, international, and private sector organizations. The results showed that all of the policy actors interviewed perceived NCDs as a serious problem requiring immediate attention. This apparent disconnect between the policy actor perceptions and the existing efforts to address NCDs, begs the question: Why has NCDs received so little attention in Nigeria?

This paper presents the findings of a study which assessed the factors responsible for the inattention to NCDs in Nigeria and the factors which might increase the political priority for the issue.

3.1.1. Insights from agenda setting literature

If the NCDs situation in Nigeria is described in terms of existing literature, it can be said that agenda setting and the generation of political priority for the issue has been limited. According to Shiffman (2007), political priority exists when three conditions are met. Firstly, national legislative policymakers consistently make statements that reflect concern about the issue. Secondly, policies that ensure that the issue is appropriately and comprehensively addressed are

ratified. Lastly, sufficient funds for implementing strategies to address the issue are allocated and ratified. In Nigeria, only the first condition has been met. Hence the limited agenda setting and generation of political priority mentioned earlier.

Several authors, such as those discussed below, have studied the factors that may contribute to delayed agenda setting and political priority. Hall et al. (1975) identified two propositions that determine the political priority accorded to an issue. The first proposition was referred to as 'general criteria'. This general criteria included three factors: legitimacy – whether or not the government regards the issue as one with which it should concern itself; feasibility – the existence of alternative solutions to the issue, relative to the opinions of the actors involved and the perceived availability of resources; and support – the expected political gains from addressing the issue, based on how the distribution of power, values and other social features might be changed in the process. The second proposition identified by Hall et al. (1975) was 'issue characteristics' which included six factors: the scope of the issue and its association with other issues; the status of the issue as a 'crisis'; the expected trends of the issue and the possibility of prevention; the individuals who initiate attention to the issue; the available statistical and other facts about the issue; and the degree to which the issue aligns with the ideology of the ruling political power. In addition, Hall et al. (1975) noted that changes in the issue characteristics often influences the general criteria which are thus fluid in nature.

Another author, Kingdon (1984), proposed the multiple-streams theory for agenda setting. According to this theory, an issue will rise on the policy agenda when the problem, policy and politics streams converge through steering events and/or the influence of 'policy entrepreneurs'. In other words, an issue will be acted upon when it becomes recognized as a significant public issue, there are specific policy alternatives purported to address it, and the political and social

climates are all in favor of addressing the issue. This theory was further expanded by Reich (1995) who proposed that there are five political streams which need to converge for an issue to rise on the policy agenda. These politics streams are organizational, symbolic, economic, scientific and politician politics. Thus, the action taken on an issue is influenced by competition among organizational stakeholders, the acceptance of the symbols used to refer to the issue, the efforts of the private sector to preserve economic interests, the struggle by scientists to have their research influence decision making, and the political advantage conferred by addressing the issue.

Furthermore, in their discourse about public agenda and formal agenda, Cobb and Ross (1997) also address factors that may increase political priority. As stated in Cobb & Ross (1997), the formal agenda is the policy decision about an issue that is under consideration by the government. (The process of achieving this formal agenda can therefore be said to be the agenda setting or generation of political priority). Cobb & Ross identify three factors for getting a problem unto the formal agenda: credible indicators that the problem exists, consideration of the problem by the public agenda, and presence of the problem on the formal agendas of countries with comparable social contexts. The public agenda was described as the concerns for which the public desired governmental intervention. The authors in addition discussed the importance of the groups of actors involved in getting an issue on both the public and then the formal agenda. Some of these actors are proponents of the issue, others are opponents, while others still are members of other relevant groups of actors. The influence wielded by each of these groups will determine how the issue is initiated and expanded on the public agenda, and whether it gets to the formal agenda.

Another important framework for understanding the rise of an issue on the policy agenda is the Advocacy Coalition Framework (Sabatier & Jenkins-Smith, 1993; Sabatier, 1998). This framework has five major principles. First of all, attempts to understand the policy process on an issue must acknowledge that technical information about the burden of issue, its causes, solutions, and likely trends, play an important role. Secondly, at least ten years is necessary for this understanding. Thirdly, the study of the policy process must be approached as the study of the 'policy subsystem' for an issue, involving several actors (individuals and institutions), rather than the study of a program or organization. The fourth principle is that policy subsystems must include actors from all tiers of government and international organizations. Lastly, public policies can be envisioned as being analogous to belief systems and as such, actors have priorities based on values, as well as insights about how to achieve their objectives. The framework also includes a consideration of stable and dynamic external factors that can constrain and/or enable the policy subsystem and the actors involved in this subsystem. The key assertion of the framework is then that actors form advocacy coalitions within policy subsystems; based on shared beliefs and expectations. Each coalition then strategizes to realize their particular policy objective, while taking into cognizance the policy objectives and strategies of other coalitions.

More recently, Shiffman & Smith (2007) identified four categories of factors that are necessary for an issue to receive global political priority. Specifically these categories are – the influence of the actors involved in addressing the issue, the forcefulness of the ideas that are used in framing the issue, the conduciveness of the political environment in which action is taken, and the characteristics of the issue itself. In a different publication, Shiffman (2007) also proffered related but not exactly the same factors, for generating country level political priority. This

second set of factors was classified into three categories – transnational influence, domestic advocacy, and national political environment.

Specifically for NCDs, Geneau et al. (2010) have adapted the 'political process model', to explain why NCDs have been neglected, as well as raise the priority of preventing NCDs. The model identifies three factors. The first factor is related to the framing of the issue, based on the level of awareness about it. Unless an issue is collectively defined by the public as unfair and requiring social action, the issue will not gain political priority. Geneau et al. (2010) highlighted that NCDs have been neglected because of the myths about them that define them as diseases of individual choice, ageing, or affluence. The second factor has to do with how political opportunities are structured, and how social change can be enabled or constrained by these opportunities. Action on NCDs was reported to have been delayed because there have been few political opportunities for the issue to rise on the global health agenda. The third factor is the mobilization of resources. Resource mobilization is necessary for transforming political opportunities into action. Accordingly, NCDs were said to have received little attention because donors have intentionally neglected to allocate funds to the issue.

A critical examination of the literature summarized above showed that there is considerable overlap among the agenda setting factors which various groups of authors have identified. For the purposes of this paper the categorization by Shiffman (2007) and Shiffman & Smith (2007) was assumed to be a comprehensive synthesis of all the frameworks, and used to organize the rest of the paper. This categorization by Shiffman & Smith (2007), even though provided in relation to global political priority, succinctly covers the major underpinnings of most of the other frameworks: the actors and the power they wield, the political contexts, the framing of the

issue, and the issue characteristics. Moreover, as seen in Table 3.1., these two categorizations provide readily assessable constructs.

Table 3.1. Previously identified factors for increasing political priority (Shiffman, 2007; Shiffman & Smith, 2007)

Transnational Influence
1. Norm promotion
2. Resource provision
Actor power
3. Policy community cohesion
4. Political entrepreneurship/ Leadership
5. Guiding institutions
6. Civil society mobilization
7. Focusing events
Ideas
8. Internal frame
9. External frame
Issue characteristics
10. Credible indicators
11. Competing health priorities/ Severity
12. Clear policy alternatives/ Effective interventions
Political contexts
13. Policy windows/ Political transitions
14. Governance structure

3.1.2. Research Questions

While the state of NCDs action in Nigeria reflects an absence of some of the factors identified by the various authors, the actual factors lacking are not known. Shiffman & Smith (2007) advise that no single factor is indispensable or adequate for generating political priority. These authors further suggest that the relevance of a framework should be assessed separately for each policy

issue, and that the combination of factors peculiar to the issue be determined. Accordingly, this paper examines the agenda-setting factors that are relevant to the particular case of NCDs and in the particular context of Nigeria. The specific research questions were: One, why have NCDs received so little attention till date in Nigeria? Two, how can the political priority for NCDs be increased and sustained? Three, how do the answers to questions one and two compare with previously identified factors for political priority and agenda setting? The aim of the paper is to identify why NCDs have been neglected in Nigeria and how the situation may be reversed. The paper also aims to contribute to the literature about factors that may influence agenda setting and the generation of political priorities for health issues.

3.2. Methods

For the purpose of the study, NCDs were defined as the four major NCDs – cardiovascular disease, diabetes, cancer, and chronic respiratory diseases, which were estimated to account for more than 60% of all deaths in LMICs in 2005 (WHO, 2005). To answer the research questions, empirical data were collected from Nigerian policy actors. The NCDs policy process was assumed to be a complex reality as is any policy process (Grindle & Thomas, 1991). Each policy actor was expected to have only a partial understanding of this reality, but they know the reality best, and are the only way for researchers to get access to that reality. Moreover, the policy actors were expected to collectively identify all or most of the relevant factors for agenda setting and creating political priority. Interviews were designed and conducted with the policy actors to elicit these factors. However, the research team possessed additional knowledge from the agenda setting literature and previous reports about NCDs in LMICs and Nigeria. Thus in addition to the views expressed by policy actors, the research team drew upon existing literature to qualify some

of the policy actor perspectives where appropriate. Such qualifications are distinguished as such in the discussion of results.

3.2.1. Interview design

Interview data were used to answer the first two research questions - Why have NCDs received so little attention till date in Nigeria? How can the political priority for NCDs be increased and sustained?

Study population: The policy actors included in this study included policymakers, policy influencers, and policy implementers. There are two groups of policymakers in Nigeria, as in many other countries: the elected/legislative policymakers or legislators, and the bureaucratic policymakers. The policymakers interviewed in this study were federal government bureaucratic policymakers. These were career civil servants whose jobs and positions rarely change with changes in political power. Nigeria is one of a group of countries described by Grindle & Thomas (1991), where it is these civil servants who formulate policies, explain the policies to the legislators, and arrange to have the policies approved. The legislators are then responsible for decision making regarding authorization of the policies, and the allocation of resources to implement them. Thus, the bureaucratic policymakers, unlike the legislators, have no constituencies but are instead staff of technical units in governmental ministries, departments, agencies, and parastatals.

The policy influencers recruited belonged to international governmental and national nongovernmental organizations (NGOs), as well as the media and academia/ professional societies. Participants from the organized private sector (food, beverage and advertising companies) were considered policy implementers.

Sampling: The participants included in this study were a subset of participants who had been recruited for a larger study on the perspectives of policy actors about NCDs (Adeyemi et al., unpublished manuscript). Each policy actor had been recruited using the snowball sampling technique as described by Varvasovszky & Brugha (2000). For this study, policy actors were included based on their institutional affiliations. Institutions with very specific roles related to the recommendations for addressing NCDs were included in the study. Generally, one participant was included per institution, except where there was more than one relevant department within the institution; in which case one participant was included from each relevant department. The included participant from an institution or department was usually the highest ranking officer among the officers recruited from that institution or department. In cases where it was not possible to reach the highest ranking officer for this second study, the next highest ranking officer recruited was included. All participants were autonomously recruited and verbal informed consents were obtained from each participant prior to the interview.

Data collection: Data were collected from September 2011 to November 2011, using semi-structured interviews which lasted an average of about 50 minutes. The interviews were conducted in English because English in the official language in Nigeria and it was expected that the study population would be fluent in the language. The interview guides were pretested by interviewing two policy actors who had been recruited for the larger study, but were not expected to be included in this study. All interviews were audio recorded and later transcribed verbatim. The participants were assured of confidentiality and anonymity. Each participant in the study received a combined pen holder/digital clock as a token of appreciation for participating. The research protocol was reviewed by the Cornell University Institutional Review Board (IRB) and considered to be eligible for an exemption of IRB review.

All interviews were conducted and analyzed by the first author, using a semi-structured interview guide developed by three members of the research team. The interviews covered questions ranging from participants' definition of NCDs, to their reactions to recommendations to address it. This paper presents the results about two questions – Why have NCDs received very little attention till date? How can the political attention and commitment to NCDs control be increased and sustained regardless of changes in political power? Thus, the findings from the first question in this paper do not represent the views of the policy actors about NCDs themselves, but rather their views about why the issue has not received significant attention. Likewise, the factors for increasing political priority are perceptions from the experiences of these policy actors.

Data analyses: Interview transcripts were manually read and the responses to the two focal questions (reasons for delay and ways to increase political priority) were aggregated and uploaded into Atlas.ti 7 (Atlas.ti GmbH, Berlin). These passages were read again and coded with respect to the distinct reasons for delay and distinct ways to increase political priority. This was an iterative process, such that all passages were re-read whenever a new code was formed, to ensure completeness and consistency. This process eventually led to fifteen reasons for delay and six ways to increase political priority.

3.2.2. Reexamining interview results using framework from existing literature

To answer the third question, the findings from the first two questions were compared to the list of political priority factors compiled from the categorization by Shiffman (2007) and Shiffman & Smith (2007) – Table 3.1. The results section presents these comparisons; while the discussion section explores the comparisons further, as well as includes comparisons with distinctive political priority factors identified in other frameworks.

3.3. Results

A total of 34 participants were included in the study. Analytic saturation was reached when about half of the participants had been interviewed. Still, to comply with the study design, the other half of the participants was interviewed. Table 3.2. shows the broad groupings of the institutional affiliations of these participants. The national governmental health sector comprised three institutions. The national government non-health sector included institutions in the transport, education, information, commerce, justice, finance, labor, housing, agriculture, water, planning, and environment sectors. Further breakdown of the institutions are not provided to preserve participant anonymity. A quarter of the participants were medical doctors, 70% of them were male and 80% of them belonged to the management/ directorate cadre. Furthermore, over 80% of them had postgraduate degrees. The average number of years of experience was 28 years, with a range of 16 to 40 years.

Table 3.2. Institutional affiliations of participants

Institution	**Number of participants**
National government health sector	11
National government non-health sector	13
International governmental organization	4
National non-governmental organization	1
Multi-national food and beverage companies	2
Academia/ Professional societies	1
Media	1
Others	1

3.3.1. Reasons for the delay in addressing NCDs

All the policy actors interviewed unanimously stated that NCDs are a real problem in Nigeria that needs to be given considerable attention. When, prior to asking their opinions, they had been asked to define 'non communicable diseases', nine of the policy actors gave examples of infectious diseases. However, once such policy actors had been told that NCDs referred to diseases like hypertension, diabetes, cancer and stroke, they were able to talk knowledgeably about these diseases, the risk factors, and the reasons for the delay in addressing it. The policy actors also reported that even though nothing comprehensive had been done to address the issue, the Nigerian health sector has known about NCDs for a long time. In the words of the participants, "*non communicable diseases had always been with us.*" "*The big guys know it's an issue, but we don't have a comprehensive public health initiative to address that.*" The reasons the policy actors gave for the inattention to NCDs are highlighted below. In explaining the contributory factors to this inattention, policy actors often compared the issue to communicable diseases. The following section discusses the reasons given, roughly in the order of the frequency with which they were mentioned.

1. <u>NCDs are not contagious</u>: Several policy actors discussed the fact that the non-infectious nature of NCDs has contributed to its neglect. NCDs were not seen as a threat because they are typically not spread by contact or through vectors. In contrast, communicable diseases were seen as risky, deadly, able to reach epidemic proportions very rapidly, and their occurrence is often dramatic. The policy actors said: "*Communicable diseases are easy to wipe out, wipe off a population, wipe off a community within a short [time].*" "*Because as I told you, [NCDs] don't*

happen dramatically. I've said it before, the infectious ones are dramatic. 'Hey, there's cholera outbreak here! Many people are [dying]!' But [NCDs] are quiet, slow, creeping killers."

2. NCDs are not visible: In addition to being non-infectious, NCDs were reported to be chronic in nature so the manifestations of the diseases are not seen for a long time. Moreover, even these manifestations are often not visible to others. Communicable diseases are on the other hand very visible, and it is relatively easy to identify the signs and symptoms of communicable diseases. – *"[NCDs] is not visible, like maybe HIV, it is not visible like malaria, once you have malaria, you know the symptoms, ordinarily.*" "*People don't manifest [NCDs], you don't know. Anybody who is diabetic lives a healthy [life] as it were. But if you see…… somebody who has come down fully to a full blown HIV you will see [it].*"

3. Competing priorities: Health competes with other sectors for attention, and even within the health sector, the policy actors reported that there were competing health priorities which currently have an even greater burden of mortality in Nigeria, than NCDs. The policy actors were of the view that issues like malaria, maternal mortality, neonatal mortality, measles, tuberculosis, diarrhea, chest infections still dominated morbidity and mortality in Nigeria. "*The issue is that because there're so many challenges as a country, different things are kind of jostling for attention. So you find out that some things that are really important like health, education, it's not given as much attention as they should.*" "*I think it is the competing priorities that really cause a problem.*" "*[NCDs have] not been receiving much attention because the problems on ground are so many. Malaria for instance is like a killer… maternal mortality is a problem, neonatal mortality is a problem. So by the time you now look at all those things, it's like it's overwhelming on its own. So to now shift focus and go to non communicable disease……*"

4. Public ignorance about the causes and impact of NCDs: Policy actors stated that although NCDs were known to be non-contagious, the risk factors had not been widely known. Hence, there had been a pervasive sense that nothing could be done to prevent NCDs. – "*Part of it to me is because of ignorance.*" *"[People are] more aware of communicable diseases and they're afraid, but non communicable diseases does not bother them. They believe it's natural things, they're natural, they just come on.*"

5. Belief that Africans in general are not prone to NCDs: For a long time the number of cases of NCDs diagnosed in Nigeria and Africa in general was very negligible when compared to communicable diseases, and the situation in the Western world. Hence, it was believed that Africans were 'immune' to such diseases. – "*20, 30 years ago, it used to be felt that we in Africa, we are immune, in quote, from other diseases, that the only diseases that we're prone to are the diseases of infection - malaria, tuberculosis, typhoid, lately HIV/ AIDS. It used to be very, very strange to see someone who had heart disease, or hypertension…….*"

6. Paucity of statistical evidence: The policy actors perceived that even though it had been acknowledged that there is a considerable burden of NCDs in Nigeria; little empirical data exists to quantify this burden. Thus, they felt that the government still thought that it may really not be affecting as many people as perceived. – "*On the side of the government, I think they are feeling that it is not affecting many people. They're not seeing it. It's not like HIV that we are having statistics. In this other one, we don't even have statistics, people don't have data, we don't know how many people are even suffering from it. Maybe those ones in authority will say: 'okay, after all, in my family, we don't have [it], so why is it important. But malaria, everybody is getting*

sick, people are having it, HIV, all that. So let's concentrate more on the one that we're already hearing and seeing." "*There're still no statistics to really show that this thing is increasing in number.*"

7. Previous diagnoses were mostly among the elites and the rich: Policy actors reported that even where diagnoses of NCDs had been made in the past, it had appeared to affect only the rich who were thought to be able to take care of themselves, since they made use of private health services which they could afford. Thus in a bid to make health care more equitable, the government had chosen to focus on infectious diseases – "*We had not done much in the past because we believed that these [are] problems of the rich, problems of non communicable diseases are problems of the rich people and they could take care of themselves.*" "….. *And government wants to be seen to be for all, so programs were put in place to address communicable diseases.*" Nevertheless, one policy actor stressed that this previous notion that NCDs was a problem mainly among the affluent had likely been erroneous even in the past. He said, in relation to NCDs among the poor, "*it's those who are comfortable that they get to know what killed them. Most people die without anybody doing any post mortem. You won't know what killed most people*."

8. Little external attention had been paid to NCDs: Policy actors further commented that even when it became apparent that NCDs may be a significant issue in Nigeria, very little was done about it because there had been little international reference to it. Donors had not appeared to be very interested in it, and it had not been included in the indicators being used to score the performance of the health system. – "*It's external influence really.*" "*Communicable diseases are still… grabbing a lot of attention because first of all, they've got a lot of external support; I*

mean, HIV/AIDS takes a huge chunk of the world's attention. It may not be causing a lot of mortality and morbidity, okay, but it… gets a lot of attention."

9. Lack of national political will and commitment for NCDs: The national attention paid to NCDs has not been backed up by political commitment. Despite the fact that different political regimes had talked about addressing the issue, this rhetoric had not been backed up by the provision of financial, human and material resources to address the issue. – "*Anything in this country that does not have a political will, it dies ……I'm a technocrat on my desk. If I initiate something, and I see that it's a needy thing, something that is important, and I write it up, if those that be - the politicians, the head, does not give a backing to it, it dies. ……because the support comes from them, the budgetary provision comes from them, the employment of the experts comes from them, the establishment of a facility to do all this comes from them.*"

10. Lack of global funding for NCDs – Similar to the eighth reason given, another reason policy actors gave for the delay in addressing NCDs was the deficiency in international funding for NCDs. – "*What global fund is available to address non communicable diseases? ……we're in a country whereby most of what we do is dictated from efforts of the developed world.*"

11. Inefficiencies among the relevant bureaucratic policymakers: Apart from a lack of national political will, policy actors also mentioned that some of the delay in addressing NCDs came from the slow pace at which relevant bureaucratic policymakers had acted. According to one actor, "*Let me tell you one thing about policies. The President doesn't make them. The executive arm, that is the ministries, are the ones that actually start it. If they don't start it, nobody will get to hear it or take it seriously. And that is a major problem.*" Another actor stated

"*Fine, the President has made a statement. His lieutenants should follow up. The President has so many things he is thinking about. He's made the statement, they were all there with him. When they come back home, they should follow up.*"

12. Ranking of the issue by legislators: The policy actors noted that even if every other enabler is present, but key decision makers (legislators) chose to not rank NCDs as a priority, then little would be done about the issue. – "*It's a function of who is at the helm of affairs, what he also believes in. So that… drives government policy as it were.*"

13. Perceived slow returns on NCDs investment: Like the diseases themselves, the results of interventions to prevent or reduce NCDs were perceived as being low in visibility. Policy actors commented that even when you acted on NCDs, the results were not as immediate as those for communicable diseases, and also the results were often non-tangible. – "*For non communicable diseases, …most people who want to …give their funds want immediate results ……If you distribute one thousand mosquito nets today, you can physically say: '[This] state received ten, these people received this one'. But for NCD control, you hardly see the facts and figures as you readily see with these other ones.*"

14. Perception of NCDs as a clinical issue: Another reason why NCDs has received so little attention in Nigeria is because the focus for addressing the diseases has been a clinical approach, not preventive. – "*Something has been going on in those areas from a clinical point of view, but a lot around prevention from a public health perspective has not been on.*"

15. Few pressure groups for NCDs: The lack of champions who would lobby for increasing the attention to NCDs is an additional reason mentioned as a cause of delay in addressing the

issue. – "*If you understand how policies are created, policies are either created based on evidence or created due to pressure groups; either they're interest groups who believe this has to be in place and they're putting every effort to ensure they're in place. So the bottlenecks or the limitations are that sufficient critical mass has not been created to create awareness for a need to have this in place.*"

Summary of the reasons for delay in addressing NCDs in relation to previous frameworks

Table 3.3. summarizes the factors that the participants perceived as being responsible for the inattention to NCDs in Nigeria. These factors were matched with the previously identified factors adapted from Shiffman (2007) and Shiffman & Smith (2007). The matching was done by comparing the essence of each factor mentioned by the participants with the description of the previously identified factors. Four factors perceived by the participants did not directly match any of the previously identified factors. Likewise, five of the previously identified factors were not directly mentioned by the participants. These differences are taken up again in the discussion.

Table 3.3. Comparison of the reasons for inattention to NCDs to previously identified factors for raising political priority

Previously identified factor (Shiffman, 2007; Shiffman & Smith, 2007)	**Corresponding factor mentioned for NCDs in Nigeria**
<u>Transnational Influence</u> 1. Norm promotion 2. Resource provision	 1. Little external attention had been paid to NCDs 2. Lack of global funding for NCDs
<u>Actor power</u> 3. Policy community cohesion 4. Political entrepreneurship/ Leadership 5. Guiding institutions 6. Civil society mobilization 7. Focusing events	 3. *This factor was not mentioned directly* 4. Few pressure groups for NCDs 5. Inefficiencies among the relevant bureaucratic policymakers 6. Few pressure groups for NCDs 7. *This factor was not mentioned directly*
<u>Ideas</u> 8. Internal frame 9. External frame	 8. Clinical management of NCDs 9. Belief that Africans in general are not prone to NCDs ▪ Previous diagnoses were mostly among the elites and the rich ▪ Perceived slow returns on NCDs investment
<u>Issue characteristics</u> 10. Credible indicators 11. Competing health priorities/ Severity 12. Clear policy alternatives/ Effective interventions	 10. Paucity of statistical evidence 11. Competing priorities ▪ Ranking of the issue by legislators 12. *This factor was not mentioned directly*
<u>Political contexts</u> 13. Policy windows/ Political transitions 14. Governance structure	 13. *This factor was not mentioned directly* 14. *This factor was not mentioned directly*

3.3.2. Ways to increase and sustain political priority for NCDs

1. Strategic advocacy by bureaucratic policymakers, academia, media and civil societies: Almost every participant interviewed mentioned that advocacy to legislators is important for increasing and sustaining political priority for NCDs. In the words of one of the participants, "*It's advocacy on policymakers, especially with those responsible for allocating money to different sectors of the economy, and within the sector, those who are responsible for assigning priorities to programs and budgets. Those are the people I think we need to target.*" Another said, "*The way we can increase this political will is to pay advocacy visits to those that are in charge, we expose them to what they need to know, and then ask them what we need from them. Sensitize them, create a serious awareness. Most of them don't know what goes around them."* Yet another commented - "*We can use media advocacy to get government to [act]. If you don't do anything to agitate government, …then it's business as usual. So it's the role of the media, it's important; or advocacy on the part of civil society.*" The participants further highlighted ways in which the effectiveness of such advocacy can be increased, as described below.

a. Provision of background information about NCDs, the burden of the issue, and solutions that are expected to address the issue. – "*Capacity building and skills development cuts across all strata - if you appoint somebody as a minister, yes he's qualified to be a minister, but he might have been doing his business for the last 5 years and totally detached from the developmental issues. So if he comes in, he needs to have some background briefing and understanding of the latest… on the issues… So when I say public awareness, education, I'm not restricting it to just a certain class, because unless people are on the same plain of understanding of the issue, some will be going north others will be going south. So I think that will go a long way into ensuring a continuum on the implementation of the policy. If people*

understand the issues and they maintain the same commitment with respect to what needs to be done, I think that is very important."

b. Bringing NCDs closer to home for the policy actors – Several participants stated that advocacy to the legislators should use vivid illustrations that would remind the policy actors of friends, relatives and/or acquaintances that are living with or have died from NCDs. According to one participant, "*If you go to the national assembly today, and you say: 'national assembly, these are the diseases that are killing us, even more than HIV and malaria; in fact, they kill so suddenly, this heart attack.' They have friends, they too have colleagues that just collapsed and died. They wouldn't say: 'oh no, it is not important, let's continue with this malaria thing'. They would want to also [do something] because it has affected their friends, their family, they're seeing it here and there.*"

2. <u>Identify potential policy entrepreneurs</u>: A few policy actors suggested identifying individuals who could be policy entrepreneurs. They also said it would probably be more effective if these policy entrepreneurs were legislators who have a NCD or individuals who interact with the policy actors socially and could introduce the issue informally as well as potentially follow-up on actions about it. One participant reported "*Possibly one of them is a sufferer. If one is a sufferer, he will tell the rest that 'ha, we just must do something.*'" A second participant commented while referring to a group already working to address NCDs - "*I am quite sure the caliber of people in that group will not be people that will be above the middle class, if they can come together; they meet at the Ikoyi club of this world, they meet at the Yoruba tennis club, talk about it … Some of their cronies that are in the national assembly, tell them about this, because some of them are even suffering from some of these non-communicable*

diseases, …they are living with it. You tell them 'ha guys, ……this is a policy, these are the ways we think this thing can be improved.'"

3. Obtain and disseminate statistics about the issue: The policy actors highlighted that the deficiencies in the availability and distribution of empirical data about NCDs would need to be addressed to raise political priority. It was suggested that the statistics include estimated time trends in morbidity and mortality, if nothing is done, and the impact of this. In response to the question about how to raise political attention, a participant stated - "*I think statistics, the statistics [that] show very clearly why this is a time bomb waiting to happen.*" Another observed - "*The data that is telling us that the morbidity and mortality due to non communicable disease are even more grave than those of communicable diseases, those data are new and they have not been well disseminated. …So we need to disseminate those data properly. We need to emphasize the fact that it's very, very expensive to manage non communicable diseases, but they're killers all the same. And we need to make sure that the people who suffer these things, just because the diseases are chronic, does not mean that they're well off …the cost of diabetic care is very [expensive], enormous. You need to have a lot of resources, not to talk of cancers, not to talk of other debilitating non communicable diseases.*"

4. Increase public awareness about NCDs: The participants suggested that there should be public awareness campaigns and education so that people know about NCDs and how it can be addressed. The participants said that democracy is improving in Nigeria, and the Nigerian society is becoming increasingly politically aware of their rights. Hence, providing mass information about NCDs could lead to a public demand for addressing NCDs, and the issue

could become attached to political success; thereby forcing the hand of the policy actors. In the participants' words -

"*Nigerians are becoming politically aware in a lot of things. ...As we're becoming more politically aware, it can go into one of the factors that can be factored in. ...Parties can put these things as part of their manifestoes.*"

"*For it to be able to get into political attention, people must be aware! Once people are not aware, anything that people are not aware is not of politically relevance.*"

"*Once people are aware of it and they're talking about it, the government is forced to look to that direction and act. ...If the government is saying this is where we're going and people are going this way, they can really redirect the government focus.*"

"*We will enlighten the general public and the general public will demand it as a political right. So it's like trying to encourage the consumers to understand their rights and they will demand from their political leaders to respond to their needs.*"

5. Lobbying all tiers of governance through nongovernmental organizations and civil societies: As noted by a participant, "*I think one of the things that we need to do actually is to put up groups that will lobby. I think we need to have a lobby group. So whoever is going to fight NCDs will be required to put a lobby group.*" A second participant remarked, "*Government business now is like personal business. You do a lot of legworking, connections. You look for somebody who knows, who knows, who knows. If you're waiting for government policy and program, it's survival of the fittest. It's the person that has the highest connection that can influence this. So, ……it's lobbying.*" Yet another put it in this colorful manner – "*The civil society should take up these issues, because if you [leave] government, ...they want to evade*

spending money that cannot be seen, that cannot start ringing the bell to win another one. You know health issues and so on might not be so significant, but the civil society can do something, they start shouting aloud, crying aloud. We all become aware and join them, the NGOs, everybody speaking out, 'we are dying!'"

In addition, the participants emphasized that lobbying is not a onetime affair, but something that must be done repeatedly, especially when there are changes in political administration.

6. Ensuring policy commitment to the issue at all tiers of governance: A few participants stressed that the sub-national legislators needed to be made to pledge to address NCDs, and ratify its policies and plans in a similar manner to what had been done on the international scene by the President. A participant also included having measurable timelines for addressing the issue. He said - "*It is not enough for us to say that we are part of a global agreement, we're signatories to a global agreement. We must get to a level where we are saying that this has become a national emergency and every state governor must come and sign that commitment. So every state is a signatory to that commitment at the national level, not just global. So bring the global to the national, by our multisectoral policy framework, and then everybody now coming to sign to it. And then you now set milestones: What do you want to see in 6 months? What do you want to see in 1 year? What do you expect to see in 2 years, and all of that? So that it's easy to get people to determine what progress is being made.*"

Summary of the suggestions for increasing political priority for NCDs

Table 3.4. summarizes the factors that the participants suggested for increasing the attention to NCDs in Nigeria. These factors were again matched with the previously identified factors

adapted from Shiffman (2007) and Shiffman & Smith (2007). Only one factor suggested by the participants in the study did not directly match any of the previously identified factors. However, eight previously identified factors were not directly mentioned by the participants. In addition, the suggestions for delay in addressing NCDs were matched with their corresponding reasons for inattention to NCDs. There was no corresponding suggestion for four of the reasons for inattention to NCDs. On the other hand, one of the suggestions for increasing attention to NCDs had not been perceived as a reason for inattention to the issue.

The implications of these differences are highlighted in the discussion section.

Table 3.4. Comparison of suggestions for raising political priority for NCDs to previously identified political priority factors and the reasons for inattention to NCDs in Nigeria

Previously identified factor (Shiffman, 2007; Shiffman & Smith, 2007)	Corresponding factor for inattention to NCDs	Corresponding factor for increasing attention to NCDs
<u>Transnational Influence</u> 1. Norm promotion	1. Little external attention had been paid to NCDs	1. *Not mentioned directly*
2. Resource provision	2. Lack of global funding for NCDs	2. *Not mentioned directly*
<u>Actor power</u> 3. Policy community cohesion	3. *Not mentioned directly*	3. *Not mentioned directly*
4. Political entrepreneurship/ Leadership	4. Few pressure groups for NCDs	4. Identify potential policy entrepreneurs
5. Guiding institutions	5. Inefficiencies among the relevant bureaucratic policymakers	5. *Not mentioned directly*
6. Civil society mobilization	6. Few pressure groups for NCDs	6. Lobbying to all tiers of governance
7. Focusing events	7. *Not mentioned directly*	7. *Not mentioned directly*
<u>Ideas</u> 8. Internal frame	8. Perceptions of NCDs as a clinical issue	8. *Not mentioned directly*
9. External frame	9. Belief that Africans in general are not prone to NCDs ▪ Previous diagnoses were mostly among the elites and the rich ▪ Perceived slow returns on NCDs investment	9. Strategic advocacy: Bringing NCDs closer to home for the policy actors ▪ Ensuring policy commitment at all tiers of governance
<u>Issue characteristics</u> 10. Credible indicators	10. Paucity of statistical evidence	10. Obtain and disseminate statistics about the issue
11. Competing health priorities/ Severity	11. Competing priorities ▪ Issue ranking by legislators ▪	11. Strategic advocacy: Provision of background information about the burden of NCDs
12. Clear policy alternatives/ Effective interventions	12. *Not mentioned directly*	12. Strategic advocacy: Provision of background information about existing solutions to address NCDs
<u>Political contexts</u> 13. Policy windows/ Political transitions	13. *Not mentioned directly*	13. *Not mentioned directly*
14. Governance structure	14. *Not mentioned directly*	14. *Not mentioned directly*

3.4. Discussion

NCDs are a recognized problem by policy actors in Nigeria, but there has been little progress till date on addressing the issue. The purpose of this study was to identify the factors that had contributed to the delay in addressing NCDs in Nigeria, to highlight suggestions for increasing political priority, and to compare the factors to already identified factors for generating political priority. It is important to reiterate that the reasons for delay in addressing NCDs do not reflect the perspectives of the policy actors about NCDs themselves, but rather their perspectives about why NCDs have received little attention over time. The results show that many of the factors identified by the participants in this study have been previously identified as potentially limiting factors for agenda setting and political priority. As might be expected, the suggestions for raising political priority for NCDs were related to the reasons why action on NCDs had been delayed. However, there were important differences in the factors mentioned for the inattention to NCDs, the suggestions for raising political priority, and the previously identified factors for generating political priority.

This study had several limitations. Biases and/or incompleteness could have arisen through aspects of the interview process such as time constraints, wording of the questions, interview technique, social desirability bias, personal experiences, investigator positionality and sampling. Nevertheless, the study has several strengths. Firstly, the study compiled the factors identified by the participants before any systematic review of previous literature on agenda setting and political priority. Hence, the responses of the participants were not biased by prior knowledge of political priority factors. Moreover, the population sampled comprised policy actors who are intimately familiar with the dynamics of policy change in their settings within the Nigerian context. The perspectives of these policy actors are important for at least two reasons. In the first

place, they are the best source of information to answer the questions, and combining the external information of the research team with these answers can elaborate the understanding of NCDs as a complex reality. Secondly, policy actors make decisions and act on the basis of their understandings of an issue, so it is important to know what those understandings are. This second reason is particularly salient when it comes to assessing the current level of strategic capacity to act on NCDs, and the potential effectiveness of strategies which are not based on a complete understanding of the policy process such as that provided by the literature. (This issue of strategic capacity is addressed in a separate paper).

Relating factors behind the neglect of NCDs in Nigeria to previously identified factors for political priority (Table 3.3.)

Transnational influence: The policy actors interviewed reported that the lack of funding and emphasis on NCDs by international agencies were factors that had contributed to the neglect of NCDs in Nigeria. Even though these two factors are related, there are significant differences between them. In recent years, NCDs in LMICs have started to receive considerable attention from international agencies. With the WHO publications about NCDs (such as WHO, 2005) as well as other similar publications by the World Bank (Adeyi et al., 2007) and the IOM (2010), it has increasingly been acknowledged that NCDs are an unacceptable problem in LMICs. This acknowledgement culminated in the September 2011 UN Summit on NCDs. This study was conducted at around the time of the Summit, so even though the participants in the study mentioned a lack of 'norm promotion', this lack may no longer exist. Marrero et al. (2012) have pointed out that this Summit has guaranteed that NCDs is given consideration by international agencies. However the other component of transnational influence, resource provision, has been

reported to be a challenge which is likely to persist at least in the short term. Nugent & Feigl (2010) showed that even though donor funding for NCDs increased tremendously from 2001 to 2008, in 2007 less than 3% of the total Global Development Assistance for Health was for NCDs. Also, shortly before the UN Summit on NCDs, Fidler (2011) presented an analysis which indicated that the Summit was unlikely to yield necessary funds for NCDs; a prediction which has been supported by reports published after the Summit (*Nature* Editorial, 2011; Marrero et al., 2012).

Actor power: The participants in our study identified a lack of champions, bureaucratic leadership, and civil society mobilization for NCDs in Nigeria. Even though there are local nongovernmental organizations working to address the issue, they do not appear to have wielded significant influence in lobbying for NCDs. The existing national guiding institutions for the issue were also thought to be inefficient. The substantiating evidence from literature about the need for civil mobilization and leadership is limited and mixed. In addition to the initial study by Shiffman & Smith, a study by Pelletier et al. (2012), which assessed nutrition agenda setting in five countries, found that civil society mobilization was not a crucial factor in any of the countries, while bureaucratic leadership was a crucial factor in three countries. Guiding institutions were not crucial in some countries for agenda setting, but were important for continued commitment to the issue. While neither the existence nor absence of policy community cohesion was mentioned by the participants in our study, Pelletier et al. (2012) found this to be a crucial factor in all but one country. Similarly, a report edited by Garrett & Natalicchio (2011) on multisectoral action for nutrition interventions has also documented the importance of actor power for creating political priority for an issue. The report presents case

studies from two countries, and emphasized the importance of leadership/political entrepreneurship; the convergence of the policy actors about the issue and what they intended to do about it (policy cohesion); and the efforts of guiding institutions for the issue. The report by Garrett & Natalicchio (2011) also suggested that while civil society mobilization was not critical for generating political priority, it was necessary for sustaining this priority. A fourth study by Hospedales et al. (2011) evaluated the process by which political priority was generated for NCDs in the Caribbean. This study reported policy community cohesion, and leadership/political entrepreneurship as two of the factors responsible for the increase in political priority.

Focusing events were another factor related to actor power that was not explicitly mentioned by the participants in our study for limiting political priority. However, Pelletier et al. (2012) found this factor to be critical in three of the countries they studied. Garrett & Natalicchio likewise reported focusing events as very important, as did Hospedales et al. (2011). Hospedales et al. (2011) nevertheless emphasized that raising political priority require not just one focusing event, but a process which includes several events.

Ideas category: The policy actors in our study identified several factors that are related to how the NCDs issue has been implicitly framed and understood, and how this has impacted action on the issue. The internal framing of NCDs as a clinical issue was reported as having contributed to the limited action on the issue. As documented elsewhere, clinical approaches are individual level interventions and require a well developed health care system. They are also quite expensive and do not address the need for prevention. Thus within the context of the health system of a LMIC like Nigeria, such approaches are not viable and can only hinder effective

action on NCDs. Instead, public health frames that target prevention, especially primary prevention, are needed (Caballero & Popkin, 2002; Reddy et al., 2005; Yach et al., 2006).

Other factors mentioned by the participants in our study, which appear to be related to external framing, include previously prevailing beliefs about NCDs, the population affected, and the perceptions about the political benefits of addressing them. As the participants reported, the historical portrayal of NCDs as a problem of affluence had been a limiting factor for the issue. This finding is corroborated by earlier reports. The WHO (2005) highlighted that even though this notion is a fallacy, it has prevented NCDs from being accorded necessary attention. Further on external framing, the *Nature* Editorial on NCDs (2011) also referred to the complexity of NCDs action, and the lower tangibility of the results of such action, as challenges for stimulating action on the issue. Shiffman & Smith (2007) do not specifically address this aspect of external framing, but Reich's (1995) politician politics highlighted the perceived lack of political benefits from addressing an issue as a limiting factor for agenda setting. Hence, in addition to the internal framing, the external framing of NCDs in Nigeria has also not been such as would increase the political priority of the issue.

In the previously mentioned study by Pelletier et al. (2012), both internal and external framing of the issue were crucial factors in four of the five countries studied. Hospedales et al. (2011) also reported that using resonating frames in describing NCDs was important for raising the political priority of the issue. According to the authors, data presented to policymakers was designed to "speak to the head, heart, and pocket". Likewise, Garrett & Natalicchio (2011) stressed that framing an issue in a language shared by all relevant actors is essential for generating and sustaining attention to the issue.

Political context: The specific factors included in the categorization "political contexts" as described by Shiffman & Smith (2007) appear to have been completely excluded in the factors that our participants identified as limiting for action on NCDs. The lack of reference to these factors may mean that policy windows have been present for NCDs and/or global governance structures are effective. However, it could also mean that the participants did not consider the effect of these factors on political priority for NCDs sufficiently significant to bear mentioning. It could also just be that the policy actors do not overly concern themselves with these aspects since, as was noted by Shiffman & Smith (2007), they do not have much influence over contextual factors. The study by Pelletier et al. (2012) found that this category was not crucial for nutrition agenda setting in several of the countries they studied. Conversely, Garrett & Natalicchio (2011) reported that policy windows, or "windows of opportunity", could provide the impetus that creates attention to an issue. Shiffman & Smith (2007) likewise mention that many factors related to this category may be influential for raising political priority. Other factors, which were not specified by Shiffman & Smith but which were mentioned by participants in our study, belong to this category.

The policy actors in our study identified a lack of national political will and commitment for NCDs as a limiting factor for NCDs; whereas Shiffman (2007) rather referred to this factor as a defining characteristic of a lack of political priority. Another limiting factor in our study, which was not explicitly mentioned by Shiffman, was general public ignorance about NCDs and its tractability. We are of the opinion that this factor is distinct from the perception of clear policy alternatives, because this perceived lack of tractability does not apply to policy actors. The earlier mentioned research by Adeyemi et al. (unpublished manuscript) which assessed the perspectives of Nigerian policy actors about NCDs, included the participants in this study, and

found that the policy actors considered NCDs to be tractable. Moreover, as part of the larger interview from which the findings in this paper are derived, the policy actors had been asked to mention suggestions for addressing NCDs, and all 34 of them were able to mention at least one suggestion which had been substantiated by other research. Furthermore, we are also of the opinion that the general public ignorance about NCDs is a factor which defines the political contexts rather than the issue characteristics. This categorization was made based on considerations of Cobb & Ross' (1997) discourse on public agenda. Although public awareness of an issue is not a necessary or sufficient condition for getting an issue on the public and/or formal agenda, public awareness can facilitate an issue getting on the public agenda, as well as sustain its presence on the formal agenda (Cobb & Ross, 1997). Public awareness about an issue can also encourage legitimacy as described by Hall et al. (1975). Similarly, a study by Bird et al. (2011) which assessed the priority for mental health in four African countries, found that general public ignorance about the causes and treatment of mental illness was a limiting factor for raising priority in all of the four countries.

It is necessary to add that public ignorance could have been considered as a lack of civil society mobilization, which would categorize it as a lack of actor power. However this categorization was rejected; again based on the work of Cobb & Ross (1997). Cobb & Ross suggest that while public enlightenment about an issue can facilitate civil society mobilization and vice versa, civil society mobilization does not necessarily mean public awareness of the issue. A small group of actors can mobilize to get an issue on the formal agenda while taking care that the public does not become consciously aware of the issue, to prevent opposition. Cobb & Ross referred to this as the 'inside access' model of agenda setting. In the same manner, public awareness of an issue may not necessarily engender civil society mobilization. Again, Cobb and Ross (1997) mention

that ‘intensity’, the magnitude of actor commitment to an issue is important for mobilizing support for an issue; together with the ‘scope’, the numerical strength of the actors; ‘visibility’, public awareness of the issue; and the framing of the issue.

Issue characteristics: This was another category that was emphasized in the responses of the policy actors in our study. The severity of an issue relative to other issues; the availability of credible indicators for assessment, monitoring and evaluation of the issue; and the existence of clear policy alternatives to address the issue, are features that could greatly affect the political priority accorded to an issue. While competing priorities and the lack of credible indicators were factors mentioned by several policy actors, the policy alternatives to address the issue was not at all mentioned as a limiting factor. One explanation for the policy actors not mentioning this factor may be that the existence of clear policy alternatives becomes critical only after political priority has already been raised. In the study on nutrition agenda setting by Pelletier et al. (2012), credible indicators were found to be a crucial factor in all the five countries. Competing priorities had also been present in all the countries, but unlike in our study, this was not identified as an important limiting factor in any of the countries. The availability of clear policy alternatives was likewise reported as having either an unclear role or a non-limiting role for agenda setting, in four of the five countries. However, Bird et al. (2011) found that the absence of clear policy alternatives was also a limiting factor in all four of the countries they studied; while competing priorities were a limiting factor in two of the countries.

In addition to the factors which directly corresponded to those explicitly stated by Shiffman (2007) and Shiffman & Smith (2007), our study identified other factors related to the biological characteristics of the issue. The policy actors in our study repeatedly mentioned the non-

infectious nature of NCDs and the invisibility of many of its signs and symptoms as factors which made it convenient for the diseases to be ignored. Although none of the frameworks discussed early in this document explicitly identify this factor, Bird et al. (2011) also found that the invisibility of the problem was one reason why mental health had not been given priority in all the four African countries studied.

Suggestions for increasing political priority

The participants' propositions for increasing political priority appear to be imperfectly related to the reasons for the delay in addressing NCDs in Nigeria, and also do not extensively address the factors identified by Shiffman (2007) and Shiffman & Smith (2007). This section synthesizes the results and discusses the implications of the differences among all three groups of factors: previously identified factors, reasons for inattention to NCDs, and suggestions for increasing attention to NCDs. The section is based on Table 3.4.

Transnational influence: The policy actors interviewed did not explicitly suggest a role for international influence in increasing the political priority to NCDs. A few participants mentioned the need to leverage on the attendance of the President of Nigeria, the Minister of Health and other top legislators at the UN Summit on NCDs. However, this suggestion was made in relation to the necessary roles for the national actors on the issue. It is possible that national policy actors felt that it was not their place to suggest what international authorities should do. As part of the larger interview from which data for this paper was taken, a national government participant advised that national actors on NCDs need to demonstrate through pilot efforts that they are capable of successfully acting on NCDs. The participant further said that such a demonstration could then serve as a base from which international agencies and organizations could be

petitioned for support for future efforts. This perspective was likewise expressed by another participant, a staff of an international governmental organization. This second participant observed that national actors needed to take the lead on acting on NCDs after which they would be supported by international agencies; and that international agencies were impotent if the national actors were ineffective.

Unlike some other global health issues, national leadership for NCDs has actually been reported to be the only way in which meaningful initiation of a NCDs agenda is likely to be achieved (Mendis, 2010; Marrero et al., 2012).

Actor power: Similar to the reasons identified for the delay in addressing NCDs, increasing policy community cohesion and focusing events were not directly suggested as ways to create political priority for NCDs. The participants also did not emphasize necessary improvements in the effectiveness of the guiding institutions for NCDs. Although the responses of the participants implied that the actors currently involved with addressing NCDs needed to be better organized, forceful and strategic, these allusions were not strong enough to indicate that the policy actors fully recognized the importance of effectual coalescence amongst the actors addressing NCDs. This oversight may have significant implications for the prospects of actually implementing the suggestions for NCDs agenda setting in Nigeria. Actor power factors are undoubtedly central to the success of all the other categories of factors for generating political priority. It is actors who use ideas to portray the issue, and actors navigate the political contexts. Actors can also stimulate and distribute knowledge about the issue characteristics. Even as the leadership and civil society mobilization mentioned by the participants are important, policy cohesion, guiding institutions and focusing events are equally important. Existing literature, as discussed earlier (Shiffman,

2007; Shiffman & Smith, 2007; Garrett & Natalicchio, 2011; Hospedales et al., 2011; Pelletier et al., 2012), clearly shows that these factors are crucial. It is important to emphasize that the lack of mention of these factors says nothing about their presence or absence for NCDs in Nigeria, but merely that they were not consciously considered by the policy actors interviewed as an important factor for increasing political priority.

One reason for the oversight of the importance of policy community cohesion may the fact that, as reported by the participants and evidenced by the minimal attempts to address the issue, NCDs had previously been approached as a clinical issue. Such an approach implies that only a limited class of actors and efforts has hitherto been involved in addressing the NCDs, thereby precluding the need for cohesion. Thus, to move forward on setting an agenda and creating political priority for NCDs, policy actors need to be made aware that in the bid to identify political entrepreneurs and mobilize the civil society, care must also be taken to integrate participants and knowledge from diverse sources. In fact, there is a need to form an advocacy coalition for NCDs. As defined by Sabatier & Jenkins-Smith (1993), an advocacy coalition is a group of actors drawn from several governmental institutions and the private sector. These actors have common policy beliefs about the issue of interest, and work to achieve their objectives by targeting the behavior of relevant government institutions and gradually changing these behaviors. A true advocacy coalition for NCDs in Nigeria will ensure that all the factors in the actor power category are achieved.

There is presently a NCD Alliance in Nigeria, comprised of actors like those desired in an advocacy coalition. However, by the admission of a few participants in this Alliance, the activities of the Alliance have been intermittent. It is also not clear the extent to which this Alliance incorporates actors outside of the health sector, such as the agriculture, education, labor,

transport, and other sectors that are deemed necessary for effective action on NCDs (Jamison et al., 2006; IOM, 2010).

Ideas: The participants also stressed that NCDs need to be reframed to reflect greater proximity to the legislators. While the suggestions around framing appeared to refer to the external frames, the internal frame for NCDs will definitely need to be addressed. For one thing, the coherence of the internal frame can be considered a reflection of the policy community cohesion, and can project a unified and strong front on the issue, or otherwise. Another reason is that an effective external frame is improbable in the context of a fragmented internal frame.

Political contexts: Again, the essential factors of the political context that were identified by Shiffman & Smith were not directly mentioned by the participants in our study. The participants did suggest leveraging on the nature of the national political environment to create opportunities for NCDs. Nonetheless this suggestion was made in relation to increasing the public demand for efforts to address NCDs. As evidenced by the studies of authors other than Shiffman & Smith (Garrett & Natalicchio, 2011; Pelletier et al., 2012), policy windows can be crucial for generating political priority on an issue. However, these windows are only effective if policy actors are able to maximize the opportunities they present. If policy actors are unaware of the importance of such windows, it is highly unlikely that they create them, identify them or take advantage of them.

Issue characteristics: This was the one category fully emphasized by the participants. They suggested that information be provided about the issue characteristics not only to the legislators,

but also to the general public. These suggestions are quite similar to existing literature (Shiffman, 2007; Shiffman, 2009; Geneau et al., 2010). Still, the effectiveness of this category for generating political priority was again hinged on actor power.

It was surprising that policy actors did not mention resource mobilization as a means of generating political priority for NCDs. On the contrary, the participants perceived that when political priority had been effectively generated, then the government will ensure adequate funding and sustainability for the issue. Since commensurate funding for an issue is an indicator that the issue has in fact achieved political priority (Shiffman, 2007), this assumption of the policy actors may be correct.

Reexamining the Shiffman framework

While the above discourse has attempted to fit every factor mentioned by the policy actors into the categorizations provided by Shiffman (2007) and Shiffman & Smith (2007), upon further reflection, it is worthwhile considering that these categorizations really do not fully address the factors identified by the policy actors in our study. Hence, this section addresses factors mentioned by the policy actors in our study which appear better categorized into a new category that will be highlighted.

'Ranking of the issue by legislators' was a limiting factor identified by the policy actors in our study, and was categorized under issue characteristics as identified by Shiffman & Smith. However, the sense in which the policy actors referred to this factor was more in terms of the beliefs, interests, and values of the legislators, rather than the nature of the issue itself. If the factor 'ranking of the issue by legislators' is considered the way the respondents originally

expressed it, then it becomes a characterization of the stakeholders for NCDs. These stakeholders would not be actors in the sense referred to by Shiffman, because the actors in both of Shiffman's frameworks (Shiffman, 2007; Shiffman & Smith, 2007) referred to individuals and institutions who were already involved with defining and promoting the issue. Legislators are not involved with the issue but would need to make decisions about it; thus, categorizing 'ranking of the issue by legislators' as actor power would also not be an ideal fit.

Similarly, perceived slow returns on NCDs investment as a limiting factor for agenda setting was categorized under Shiffman's ideas category as related to external framing. Hitherto, the ideas category as used by Shiffman & Smith was defined in terms of the framing of the issue by the issue proponents, and the extent to which this framing resonated with various stakeholders. Thus the category does not explicitly address the underlying values, motivations and interests, of stakeholders, that make certain frames likely to resonate than others. It is these underlying attributes – values, motivations and interests – that the factor 'perceived slow returns on NCDs investment' really refers to. A third factor 'public ignorance about NCDs' was categorized as belonging to the political context category, and the rationale for this was given. Nevertheless, with additional reflection, we consider that there is merit in also recognizing this factor as distinct from the political context. Firstly, this factor again refers to a group of stakeholders who are not captured in the categorizations by Shiffman & Smith. Secondly, Shiffman & Smith (2007) suggest that actors involved in an issue have little influence on the political context. Yet, this lack of influence is not true for public ignorance, as evidenced by the suggestions made for increasing attention to NCDs.

Ensuing from the above reflections, we propose that a sixth category – stakeholder perspectives – be added to the five categories derived from Shiffman (2007) and Shiffman & Smith (2007).

As used here, stakeholders refer to individuals, groups, organizations and institutions that would be affected by a political agenda on an issue, whether or not they would be involved in addressing that issue. Stakeholder perspectives captures the three misfit factors highlighted above: ranking of NCDs by legislators, perceived slow returns on NCDs investment, and public ignorance about NCDs. Perspectives are the knowledge, beliefs, motives and interests that institutions and individuals hold (Heaver, 2005); as well as the identity, expectations and demands of these individuals and institutions (Clark, 2002). Stakeholder perspectives determine how they define a problem, and whether they are willing to act on this problem. Indeed these perspectives influence the type of political discussion that will ensue around an issue, and the likelihood that advocates of the issue will succeed in getting the issue on the political agenda (Rochefort & Cobb, 1994). Moreover, legislative stakeholders often have goals and objectives other than proffering and formulating effective solutions to social problems. These goals may be financial, political, professional, social or related to some other factor. Thus, no matter how significant a problem is perceived, the issue may not rise to the political agenda if legislators do not perceive it as relevant for achieving their personal goals and objectives (Schneider & Ingram, 1997; Black, 2001; Clark, 2002).

As already suggested, agenda setting frameworks other than Shiffman & Smith highlight the role of stakeholder perspectives in generating political priority. Two factors in the first proposition for political priority by Hall et al., (1975) – legitimacy and support – refer to perspectives. Likewise, Cobb & Ross (1997) and Geneau et al. (2010) allude to stakeholder perspectives in their discourse about the role of the public in agenda setting.

3.5. Conclusion

The failure of countries to address important or emergent health issues is often attributed to a lack of political will (Catford, 2006). In the case of NCDs in Nigeria it appears that it is first and foremost a failure of agenda-setting on the part of bureaucratic actors and their allies. There has been periodic rhetorical support for NCDs by legislators, and the bureaucratic policy actors who make policies know that NCDs are a salient issue in the country. Yet, there is still no political priority for NCDs as might be evidenced by the enactment of policies and comprehensive plans of action, as well as commensurate funding. The factors contributing to this lack of political priority are several. There are no obvious national leaders or advocates for NCDs. The bureaucratic policymakers charged with addressing the issues appear to be bogged down by challenges which have limited their effectiveness. The influence of the civil societies and nongovernmental organizations working to address the issue has likewise been limited. The framing of the issue both among those working to address it, and among the general public and decision makers, has not also been one that would engender increases in political priority. Furthermore, the empirical data available on NCDs in Nigeria, its risk factors, distribution, and the impact on morbidity, mortality, and the economy is at best patchy, and altogether inadequate. In addition to all this, the international community has been sending mixed signals about the issue, with dialogue not backed up by resources for action. Moreover, NCDs in individuals are not easily observed without specialized testing; which means that they are by nature easy to ignore even by the people who have them.

If the agenda-setting literature is taken as a guide, it will be necessary to build a strong advocacy coalition for NCDs in order to increase the political priority for acting on the issue. This coalition would need to comprise bureaucrats in key sectors, academia, the media, NGOs, civil societies,

international agencies, the private sector, amongst others. There will also be a need for the coalition to agree on a strong, comprehensive internal frame for NCDs which incorporates both prevention and management of NCDs; and to portray this agreement when communicating the issue to legislators and the general public. Indeed, it will be necessary for the coalition to actively seek to inform legislators about the issue, its current and potential impacts, and the solutions available to address it. Likewise, the coalition will need to create a public demand for governmental intervention, while building the capacity of the legislators and bureaucratic policymakers to respond to this demand. Furthermore, particular focus would need to be given to sub-national policy actors to ensure that action actually gets taken. Whereas it would be helpful to have increased international agency and donor engagement to initiate this political priority, as has been suggested elsewhere (Mendis, 2010; *Nature* Editorial, 2011), what will really matter will be what the national policy actors are able to do.

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Chapter 4

The strategic capacity to address noncommunicable diseases in Nigeria

Abstract

Noncommunicable diseases (NCDs) are a significant problem in Nigeria, and there is the need for policy interventions to address the issue. However, strategic capacity is required to initiate and sustain the policymaking process. Strategic capacity is the ability of individual and institutional policy actors to envision, create, agree upon, and generate commitment to a long term approach to address an issue. Previous evidence from Nigeria revealed some policy awareness, but no formal policy for NCDs. This study assessed the strategic capacity for NCDs in Nigeria, using semi-structured interviews conducted with 34 key Nigerian policy actors.

Although, some elements of strategic capacity seemed to exist, there was a general lack of this capacity. The policy actors reflected a collective ability to envision a long term approach for NCDs, but there was no existing mechanism through which policy actors could pool their knowledge, expertise and other resources. Hence even though each policy actor possessed only a partial understanding of the issue, they worked in "*silos*", limiting effectiveness. The primary thing that appears to be necessary for building strategic capacity is leadership which can inspire trust and foster coalitions. The availability of fora where these coalitions can deliberate, broker conflicts and reach consensus on issues is crucial. Efforts need to be made to recognize strategic capacity as a distinctive form of capacity, and purposefully plan for and build this capacity.

4.1. Introduction

There has been increasing advocacy for low and middles income countries (LMICs), like Nigeria, to address noncommunicable diseases in addition to existing efforts to address infectious diseases (IOM, 2010; WHO, 2011). Noncommunicable diseases (NCDs) are a growing cause of morbidity and mortality in LMICs. The four major NCDs – cardiovascular disease, diabetes, cancer, and chronic respiratory diseases, were estimated to account for more than 60% of all deaths in LMICs in 2005 (WHO, 2005). For Nigeria, it was reported that while 69% of all cause mortality in 2005 was due to infectious diseases and nutritional deficiencies, 24% was due to NCDs. By 2015, deaths from nutritional deficiencies and infectious diseases in Nigeria are expected to have increased by 6%, while deaths from NCDs are expected to have increased by 24%, with a 52% increase in deaths from diabetes. The prevalence of overweight (an indicator of probable excessive body fat, and a key risk factor for NCDs) among both men and women is expected to increase by 10% (WHO, 2005b). In addition to the burden of morbidity and mortality, NCDs are also an economic burden. Income loss in Nigeria from certain NCDs, in 2005, was estimated at 400 million US dollars (about 0.5% of the gross domestic product (GDP) in that year, Abegunde & Stanciole, 2006). This loss is envisaged to accrue to 7.6 billion US dollars by 2015 (SCN, 2006).

Inaction on NCDs is not an option if LMICs like Nigeria are to achieve developmental goals (WHO, 2005; Beaglehole et al., 2007). Without the prevention and control of NCDs, overall morbidity and mortality will continue to remain high. The failure to address NCDs will also undermine efforts to achieve undernutrition and infectious disease reduction goals because human, organizational, financial and other resources in the health sector will increasingly be

diverted to address NCDs (Popkin, 1994; Stuckler et al., 2010). Hence, Nigeria would need to undertake efforts to address NCDs even while scaling up efforts to address infectious diseases (WHO, 2005; Beaglehole et al., 2007).

Several international authorities (WHO, 2005; World Bank (Adeyi et al, 2007); WHO, 2008; IOM, 2010) have suggested efficacious, cost effective interventions which LMICs can implement to prevent and control NCDs in their country. Central to these interventions is the formulation of a comprehensive national policy for NCDs (WHO, 2005; Mendis, 2010). Regardless of the efforts of international authorities, what matters most for preventing and controlling NCDs are the country-level efforts to address the issue (Mendis, 2010; *Nature* Editorial, 2011). Thus, in formulating policies and strategies for NCDs, the onus is on national governments to decide the combination of interventions would most effectively address NCDs within the contexts of their own sub-national populations; and the most appropriate ways to adapt and implement these interventions (Beaglehole et al., 2007; IOM, 2010; Mendis, 2010).

National bureaucratic policymakers in Nigeria recognize that NCDs are an important issue that needs governmental intervention (Adeyemi et al., unpublished manuscript). There has also been some acknowledgement by legislators of the need to act on the issue (Adeyemi et al., unpublished manuscript 2; WHO, 2005). However, there is as yet no concerted effort for NCDs in Nigeria. The NCDs policy is still in its draft form and has not been formally ratified. Likewise, recent national health plans have paid only a token attention to NCDs (Adeyemi et al., unpublished manuscript 2).

A common heuristic model of the policymaking process (Laswell, 1956) identifies four overlapping and iterative activities: agenda setting, policy formulation, policy implementation,

and evaluation. Although these four activities are not sequential and clearly delineated (Walt et al., 2008), they are useful initial categories for discussing the policy process. The agenda setting stage is the stage at which an issue gains political priority, and efforts to address the issue are initiated. Policy formulation refers to the selection of policy choices to address the issue, and the enactment of these policies.

Research has shown that four categories of factors are needed at the national level to generate the political priority required for instigating policy action (agenda setting) on an issue. These four categories are actor power, ideas, political contexts and issue characteristics (Shiffman & Smith, 2007). Arguably, actor power is the most crucial category of factors. It is the strength of the actors involved in an issue that would determine the influence exerted by the ideas used in framing the issue, as well as the successful navigation of the political contexts. The strength of the actors can also mobilize certain aspects of the issue characteristics such as credible indicators and effective interventions. However, besides its importance for agenda setting, 'actor power' also is important for facilitating successful policy formulation and implementation (Epping-Jordan et al., 2005).

One of the factors that determines actor power and enables actors to accomplish all that is necessary for agenda setting, policy formulation and implementation is 'strategic capacity'. Strategic capacity includes the individual and institutional capacity to envision, create, agree upon, and generate commitment to a long term approach to address an issue. It allows policy actors to resolve conflicts, reach consensus and engage in strategic communication, among other tasks (Pelletier et al., 2011).

A recent study (Adeyemi et al., unpublished manuscript 2) reports several of the factors related to actor power, ideas, issue characteristics, and political context that are necessary for generating political priority for NCDs in Nigeria. As already mentioned, strategic capacity is required to produce, navigate and/or take advantage of these factors. In addition to creating political priority, progress in addressing NCDs will require agreement on policy and intervention priorities and the ability to move these priorities towards implementation. These processes also require the strategic capacity for policy formulation as distinct from the creation of political priority. Given the need to begin to comprehensively address NCDs in Nigeria, the ultimate purpose of this paper was to assess the current state of strategic capacity for NCDs. The specific aims were:

1. To describe policy actors' perceptions about NCDs, including the causes and consequences
2. To explore policy actors' views concerning action to address NCDs, as well as the associated challenges and enablers
3. To explore policy actors' views on capacities for networking and coordination and the associated challenges and enablers
4. To infer the strategic capacity that exists for action on NCDs

4.1.1. Construction of strategic capacity

Figure 1 depicts the role of national policy actors in mobilizing and maximizing the categories of factors that will be necessary to effectively act on NCDs. As previously noted, strategic capacity is the nexus that allows policy actors to envisage this role, and successfully perform it (Pelletier, 2008; Pelletier et al., 2011). Thus, strategic capacity is the ability of policy actors to:

- Envision a long term approach to an issue: critically evaluate the knowledge about the characteristics of an issue, and decide whether to act on the issue, when to act, and the anticipated impact of such action.
- Agree on this approach: create forums for discussing the issue among a wide range of policy actors, broker conflicts among policy actors about the issue, and reach consensus on the approach for acting on the issue.
- Decide on how to employ the approach: systematically assess the operational and beneficiary capacities existing in the context in which action on the issue is necessary; and deciding what feasible policy options would most effectively meet the goals of the agreed approach to the issue.
- Strategically communicate the issue and the approach for addressing it to various audiences: develop common frames with which to portray the issue, and create as well as take advantage of opportunities to increase the relevance of the issue to legislators (policy windows).
- Seek agreement on roles and responsibilities among the policy actors: ensure that these are performed synergistically by involved policy actors, and have feedback mechanisms.
- Iteratively act until policy goals are achieved: monitor and evaluate policy process, identify areas that need improvement, and persist in activities until anticipated results are accomplished.

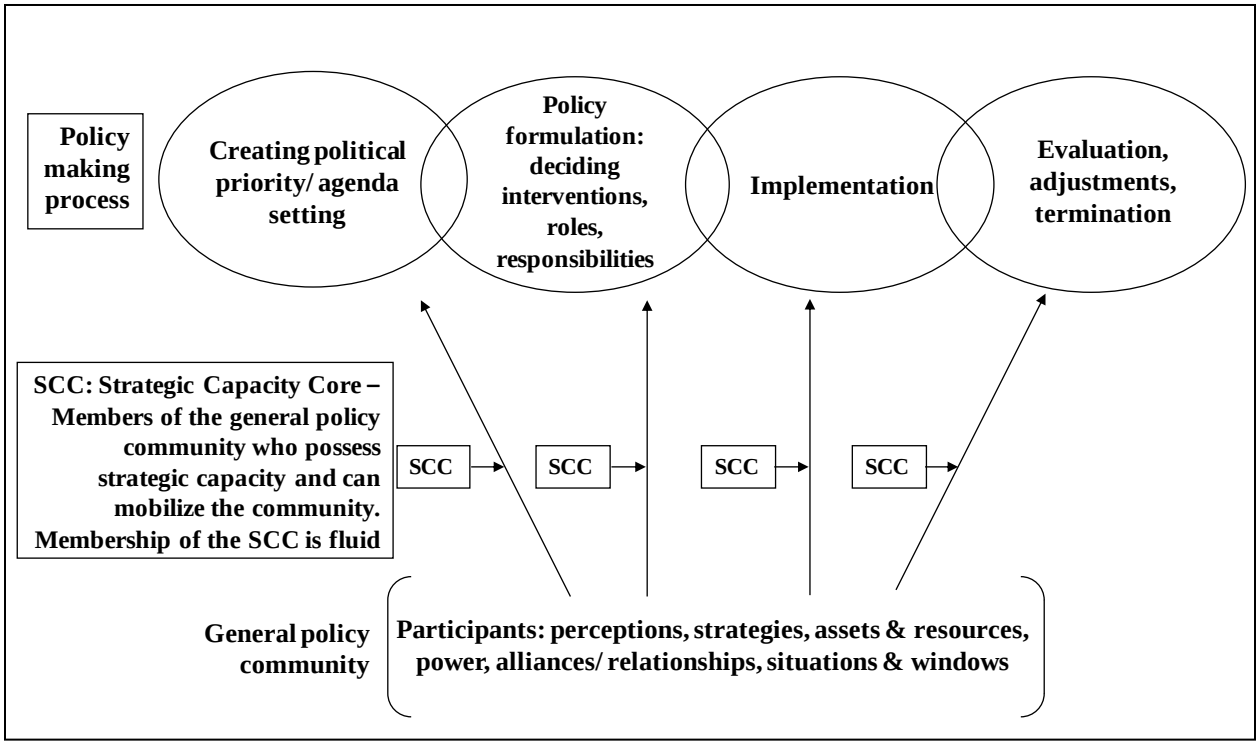

Figure 4.1. Strategic capacity and the policymaking process

4.2. Methods

Study population: The policy actors who participated in this study were policymakers (federal government bureaucrats); policy influencers (international agency staff, media, academia); and policy implementers (staff of food, beverage, and advertising organizations).

It is important to clarify the role of government bureaucrats as policymakers. This group of policymakers consists of neither politicians nor elected officers. They are career civil servants whose jobs and positions are independent of changes in political power. In Nigeria, it is these bureaucrats who staff and head the technical units of government ministries, agencies and parastatals. They also investigate policy issues, make policies, and recommend them for ratification by the elected policy actors or legislators. The role of legislators is thus decision

making to authorize the policies, as well as resource allocation for the implementation of the policies.

Sampling: Institutions with particular roles for addressing NCDs were identified from existing literature (IOM, 2010; Beaglehole et al., 2011). The highest ranking officer in the relevant departments in those institutions was then recruited. For instances where the highest ranking officer was unavailable, the next highest ranking officer was recruited. The relevant departments in each institution were identified either from department names stated in the institutional documents, or through the snowball sampling technique (Varvasovszky & Brugha, 2000).

Data collection: Data were collected between September 2011 and November 2011, using semi-structured interviews. Each potential participant was individually and independently approached and invited to participate in the study. Participants who indicated a willingness to participate were followed up until they either outright declined participation or they granted an interview. The interviews lasted an average of about 50 minutes, ranging from 30 minutes to 85 minutes. The participants were assured that their responses would be kept anonymous, and verbal informed consents were obtained from each participant. Also, they each received a pen holder/digital clock combination as a token of appreciation for their participation. All interviews were conducted and analyzed by the first author, using a comprehensive interview guide that had been developed by three members of the research team. The interviews were conducted in English Language, and all interviews were audio recorded and then transcribed verbatim. The interview guides were pretested by interviewing two government bureaucrats who were not expected to be included in the study. One of these bureaucrats was the highest ranking officer in a sub-federal government institution, while the other bureaucrat was a high ranking officer in a

relevant institution where a higher ranking officer had been recruited for the study. The research protocol was reviewed by the Institutional Review Board (IRB) of Cornell University, and was found to qualify for an exemption from the IRB review.

Interview process: The interview process was divided into three distinct phases. In the first phase, participants were asked to define NCDs in their own words and give examples. The interviewer then clarified the four major NCDs the research was interested in gaining information about. Participants were then asked whether Nigeria should be addressing NCDs, and the reason behind the responses to this question was probed. The participants were further asked to state their perspective about views that opposed theirs, as well as suggestions for addressing NCDs if they thought that NCDs should be addressed. The purpose of this interview phase was to obtain the views of participants before asking them specific questions about addressing NCDs, in order to minimize desirability bias.

In the second phase, participants were presented with seven PowerPoint slides of information about NCDs, the estimated burden relative to infectious diseases and nutritional deficiencies, the impact on life expectancy and the economy, the risk factors, and the internationally suggested policy recommendations to address NCDs. Particular emphasis was placed on nutrition as a risk factor; and information was presented on the national changes in undernutrition and overweight in children under five years old and women 15-49 years old, from 1990 to 2008, and 2003 to 2008 respectively. This nutrition information had been derived from the Nigerian Demographic and health survey (DHS), and included the national changes for different population groups including the richest and the poorest. In children, both acute undernutrition (wasting) and overweight appeared to have increased steadily in from 1990 to 2008 in all population groups;

while for women, undernutrition had decreased while overweight had increased from 2003 to 2008. The suggested policy recommendations presented to the participants were based on international suggestions for addressing both NCDs/overweight and infectious diseases/undernutrition in the context of LMICs (Jamison et al., 2006; Beaglehole et al., 2007). The recommendations included: sanitation & hygiene; food availability & regulation (including promotion of exclusive breastfeeding, reducing salt, sugar and saturated fat in processed foods, & eliminating trans fatty acids in processed foods); workplace interventions; networking & coordination within and across sectors; tobacco & alcohol control; school interventions; conducive housing & transport designs; and comprehensive health systems (including opportunistic screening in health centers, public education about healthy eating & physical activity). This phase of the interview was included to allow policy actors respond to specific questions about addressing NCDs from a standardized knowledge base, regardless of prior knowledge about NCDs or lack of such knowledge. Moreover, even if policy actors were unable to fully envisage an approach to NCDs, including this phase ensured that the research was able to assess other aspects of strategic capacity.

The third phase of the interview asked the participants to react to the information that had been presented, as well as explain potential enablers and challenges for implementing the suggested recommendations for NCDs. Participants were also asked questions about NCDs among the poor; the feasibility of integrating overweight interventions with ongoing efforts to address undernutrition; lessons that could be learned from past policy experiences; and the role of bureaucratic versus legislative policymakers in the policy process.

Data analyses: Interview transcripts were read and emerging broad themes ('super codes') such as 'challenges', 'suggestions for NCDs', 'funding', were identified in the first third of the transcripts. These themes were then applied to the rest of the transcripts. Subsequently, the interview transcripts were uploaded into Atlas.ti 7 (Atlas.ti GmbH, Berlin), and were reread to ensure complete and consistent tagging of relevant passages with the super codes. Atlas.ti 7 was used to aggregate all of the passages associated with a super code. The passages associated with each code were then read iteratively to identify specific factors within that code. For super codes where the participants described relationships, such as when discussing the contributory factors to and impact of NCDs, a box was placed around each factor mentioned, and arrows were used to highlight the relationships described by the policy actors. The resulting figures were then reassessed by rereading the passages associated with the super code corresponding to the figure, to ensure that each relationship specified in the figures had indeed been explicitly mentioned by at least one participant.

4.3. Results

Thirty four policy actors participated in the study. Analytic saturation was essentially reached when about half of these participants had been interviewed. However, the other participants were still interviewed to ensure compliance with the study design. Table 1 shows the institutional affiliations of the policy actors. The national governmental health sector included three institutions, while the national government non-health sector comprised institutions in the transport, education, information, commerce, justice, finance, labor, housing, agriculture, water,

planning, and environment sectors. Twenty five percent of the participants were medical doctors, 70% of them were male and 80% of them belonged to the management/ directorate cadre. More than 80% of them had postgraduate degrees, and the average number of years of experience was 28 years, with a range of 16 to 40 years.

Table 4.1. Institutional affiliations of participants

Institution	Number of participants
National government health sector	11
National government non-health sector	13
International governmental organization	4
National non-governmental organization	1
Multi-national food and beverage companies	2
Academia/ Professional societies	1
Media	1
Others	1

4.3.1. Responses from interview phase 1

Policy actor's perceptions of NCDs, including causes and consequences

All of the 34 policy actors perceived that NCDs were a significant and increasing problem in Nigeria, and that there was a need for government intervention about the issue. Nine of the 34 policy actors were unable to define NCDs with examples other than those of an infectious nature. However, when these policy actors were subsequently told that the research was interested in

gaining information about NCDs such as hypertension, diabetes, cancer, and stroke, even these policy actors were able to speak comfortably about NCDs and its impact. Ten of the 34 participants, seven of whom were in the non-health sector, highlighted how their own, immediate family, or colleagues experiences with NCDs had increased their consciousness of the diseases and the impact on productivity and individual finances. One of the policy actors remarked "*I'm hypertensive, I am diabetic, and I've gone to read, to research much into that. Even, I've written a book, which I've not published. So I am aware that it's something that must be given attention. And many people I've met, they are diabetic, they're hypertensive*".

Several of the policy actors, particularly the non health actors, felt that many people were occupationally prone to NCDs, especially hypertension. Among those in the top echelon professionally, the perceived increased risk of NCDs was attributed to stress on the job and greater time demands which made it difficult to regularly eat healthy meals or have time to exercise. The lower occupational levels were perceived to be occupationally predisposed to NCDs because they were exposed to economic hardships. In general, stress was one of the most common perceived contributory factors to NCDs, second only to poor diets, and preceding physical inactivity. In addition to occupation related stress and economic stress resulting from inability to make a living wage, other types of stress mentioned included: physical stress from inadequate infrastructure and social amenities, such as roads, transportation, and electricity; environmental stress as a result of pollution (air, noise, water, surface); and the psychological and emotional stress resulting from all these other stress types.

Regarding diet, policy actors highlighted the role of poor and/or excessive diets as a perceived contributory factor to NCDs in Nigeria. Several reasons were mentioned as being responsible for the poor diets. Besides the time constraints already mentioned, lifestyle changes associated with

increasing urbanization, increasing incomes, and an erroneous social perception of what constitutes a healthy diet and a comfortable life; high processing of foods, inadequate food labeling, and proliferation of fast food outlets and junk food; were additional factors said to be responsible for unhealthy diets. Although increasing incomes were emphasized as a reason for poor diets, the policy actors further said that the increases in the average income meant that lifestyle environments were sufficiently changed even for those whose individual incomes had not increased. Hence the poor, particularly those in the urban areas, were also prone to unhealthy diets, obesity, and NCDs. Increased incomes were also associated with decreased physical activity. The policy actors reported that people of higher incomes were able to afford methods of getting things done with reduced physical activity. One classic example given for this relationship was the fact that people with higher incomes often had cars, with or without personal drivers, and so expended less energy moving from one place to another.

In addition to poor diet, physical inactivity and stress, other perceived contributory factors to the apparent increase in NCDs were lack of access to information; lack of access to medical care; lack of access to healthy foods in certain places, including some job environments; excessive alcohol intake; improved diagnostic ability; and fetal programming as a result of low birth weight. Figure 4.2. summarizes the contributory factors to NCDs as they appear to be perceived by the policy actors. As depicted in the figure, the policy actors perceived many factors to be responsible for the increase in NCDs in Nigeria. Although the figure shows linear relationships between one factor and another, the reality expressed by the policy actors is a complex situation where multiple factors interact with each other to produce the outcome. Besides, the figure was unable to capture all of the relationships specified by the policy actors. For instance, the policy actors noted a link between urbanization and occupation-related stress. It was observed that

urbanization had caused the occupation structure to change and that people with low education often had to resort to stressful occupations to make a living. Urbanization was also perceived as having a link with physical stress since increasing urbanization led to greater population density and congestion.

The policy actors also expressed their views about the impact of NCDs in Nigeria. By far the greatest impact of NCDs perceived by the policy actors was the high toll on mortality, particularly among the workforce. Repeatedly, policy actors stressed that NCDs needed to be addressed because they were the cause of many sudden deaths, and reduced the life expectancy of Nigerians. In the words of one of the participants, "*People are dying in large numbers from non communicable disease. Go to hospitals and find out…… 'I saw him yesterday o! Before I knew it, the man died.' 'Why?' 'They say he just [had] a little sickness.' And if you investigate, you find out that it could be maybe something he had carried over long time [like diabetes, or a heart related issue.*" Another major impact of NCDs perceived by the policy actors were the cost implications at the individual level, and the effect these costs had on national development, both in terms of increased health care costs, as well as alternatives forgone. Likewise, policy actors mentioned the reduced work productivity of individuals who had NCDs and linked this to losses in national productivity, income, and a declining human resource capacity. The full impact of NCDs as perceived by the policy actors is depicted in Figure 4.3.

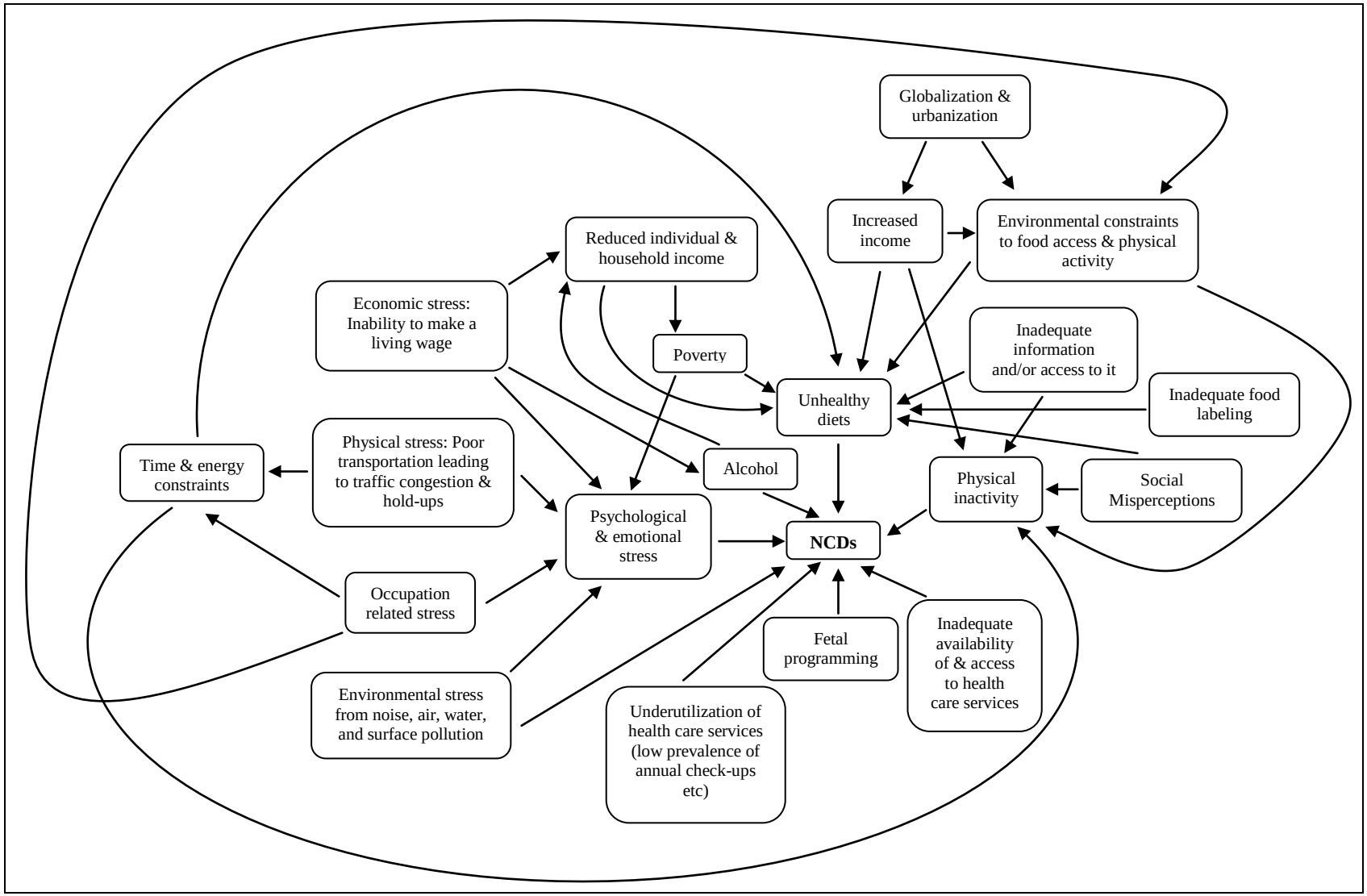

Figure 4.2. Contributory factors to NCDs in Nigeria as perceived by policy actors

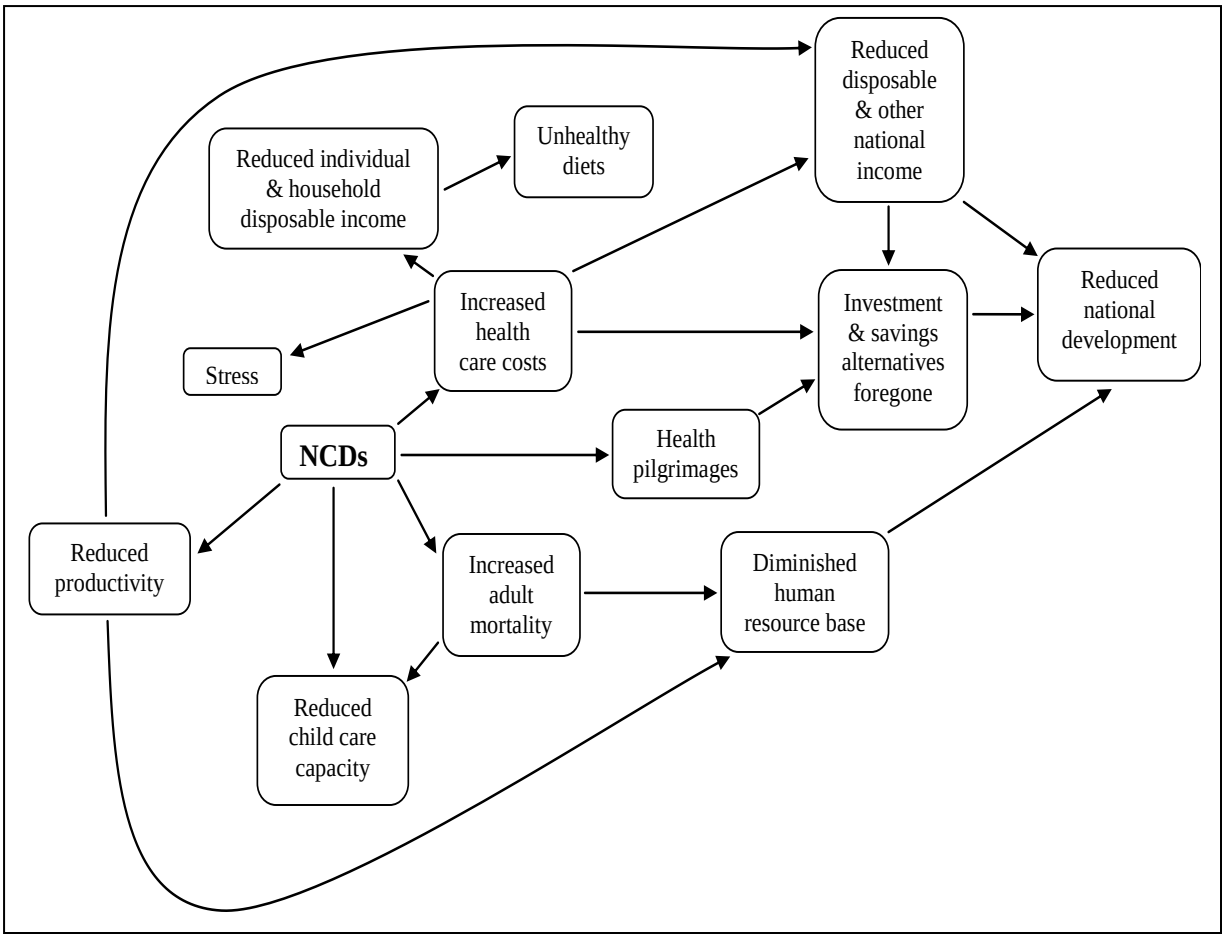

Figure 4.3. Policy actor perceived impact of NCDs in Nigeria

Perceptions of NCDs in relation to undernutrition and infectious diseases

Like already observed, all of the policy actors perceived that NCDs in Nigeria required government intervention. However, when asked about their perceptions of opposing views which suggested the need to greatly reduce infectious diseases before tackling NCDs, the reactions of the policy actors were mixed. In fact, there were three fairly distinct reactions.

Reaction 1: A large proportion of the actors were emphatic in saying that both NCDs and infectious diseases needed to be addressed with similar intensity, and that addressing one should not detract from addressing the other. These policy actors were of the view that the burden of NCDs in Nigeria was high and likely to increase because of increasing urbanization and various associated stressors which are likely to increase the risk of NCDs. These policy actors remarked that even though they did not have adequate statistical data, the available evidence had shown that if nothing was done about NCDs, the overall mortality will continue to rise even if infectious diseases were brought to a minimum. Indeed, these policy actors were of the view that the incidence and burden of NCDs is likely to overtake that of infectious diseases if nothing was done. The policy actors further noted that the Nigerian health system was not equipped to deal with managing NCDs, so there was an urgent need to prevent them. Moreover, concern was expressed about NCDs being a lot more costly to address than infectious diseases; and that overnutrition and NCDs affected both the rich and the poor alike. Infectious diseases were also perceived to be more tractable because of the perceived national experience in addressing those diseases. Additionally, the policy actors stated that having an infectious diseases, even HIV/AIDS or tuberculosis, did not preclude one from having a NCD. Infectious diseases were further perceived as being a significant cause of mortality mostly in children, while NCDs were reported as being the major cause of mortality in adults. The summary of this reaction was that "*a disease is a disease*", "*whether someone dies from communicable diseases, or someone dies from non communicable diseases, the fact is that someone has died!*" "*Non communicable diseases are responsible for quite a bit of morbidity and mortality in the country*", "*prevention is not only better, but much, much cheaper than cure*".

Reaction 2: Some other policy actors stated that NCDs need to be addressed, but with caution, particularly in relation to overnutrition as a risk factor. These policy actors perceived that undernutrition and infectious diseases were still the biggest contributors to morbidity and mortality in Nigeria. Thus, even though they reported that NCDs were significant enough to merit serious attention, the perception was that this attention did not need to be commensurate to that given to undernutrition and infectious diseases. The policy actors who reacted this way appeared to have been motivated by the limited empirical data on overnutrition and NCDs in Nigeria, when compared to data on undernutrition and infectious diseases. Moreover, these policy actors felt that infectious diseases were still not receiving sufficient attention and the mortality due to undernutrition and these diseases were either increasing, or not declining fast enough. In their own words, "*Unless you have the figures…… At the rate at which it is increasing, what is the projected level of NCDs by 2030? At the rate at which [infectious diseases] is reducing, what is the projected level by 2030? If you do that, you can get some projections. Then you will know where your priority should lie*." In addition to the view that undernutrition and infectious diseases should be addressed with greater intensity than overnutrition and NCDs, the policy actors reacting in this second manner advised that efforts to address NCDs should be focused on primary prevention, particularly by improving the social determinants of health. These activities were reported as able to result in a win-win situation, since they would address NCDs and infectious diseases simultaneously. Reaction 2 can be summed up in these words "*…we don't have very good data to quantify the actual level of each of the various types of diet related NCDs, but we know that the burden is high, looking at the cases that are seen in hospitals across the country*." "*Many of [our health] problems are interrelated…… [Primary health care] should be the area of our emphasis because primary*

health care means you are spending more of the very scarce resources you have in providing preventive medicine. Because really, where there are scarce resources, you want to protect the population by reducing the risks. You should spend your resources in that area."

Reaction 3: The perceptions of this group of policy actors were somewhat between those of the other two reactions. These policy actors viewed overnutrition and NCDs as a problem more common to the rich than the poor; partly because the rich had better access to health care and were thus diagnosed more, whereas "*you won't know what killed most [poor] people*". Still, these policy actors stated that even if the rich were disproportionately affected, the poor would suffer if NCDs were not adequately addressed. The reaction is best depicted in one participant's words – "*Our time should go more for those that are killing people most. Meanwhile the attention should not be closed to those that are not yet visible as a major killer* (NCDs)*..., because… those who are having them are the people who have the guts, they have the mouth, they have the money, they have the connections. If we don't address their issues, they will continue spending our money going for health pilgrimages to all kinds of places… And it's still our money, whether they steal it or not. Even if it is their money, it's still our money because assuming they invested that money in something else, they will employ some people. But if they're sick…… You can't stop me from spending my money when I'm not feeling fine, or the way I like; but you would stop me by making sure I'm not sick, so I don't need to spend that money that way…… So we have to find a way of looking at their issues squarely, otherwise the money that is meant for… maybe malaria of 1,000 people, will go for treating one person's hypertension.*" Additionally, these policy actors remarked that delaying action on NCDs increased the likelihood that NCDs would become a significant problem among the poor as well.

Unprompted suggestions for action on NCDs

Naturally, the policy actors' suggestions for addressing NCDs in Nigeria were very closely related to the contributory factors that had been perceived. A number of policy actors suggested that the first thing that needs to be done regarding NCDs is to formulate a policy for the issue, which is ratified, and implemented using short and long term strategies developed within the framework of the policy. It was proposed that this policy and the strategies be developed through a participatory, comprehensive, continuing conference of stakeholders in the relevant fields. The policy actors stressed the need to have mostly preventive, but also curative components for NCDs. The most common suggestion for addressing NCDs was to increase public awareness, education and enlightenment about NCDs; including enlightenment about its risk factors, prevention, screening, signs, management, non-contagiousness, health and economic impact. The perceived primary purposes of the public awareness and education was health promotion: getting people to change their diet, physical activity, alcohol, and smoking lifestyles; utilize health services; and demand healthy foods from the private sector. Several avenues for public awareness and education were proposed: incorporation of relevant issues in the curricula used in primary and secondary schools; using local languages; inclusion of education about NCDs in community meetings and religious gatherings; radio interviews and T.V. talk shows; and use of workplaces and market associations as an education platform.

The policy actors also suggested that the government make health facilities and medicines available, and increase the skills and capacity of health workers (especially those in primary health care centers). Improvements in such health infrastructure were perceived as necessary for

equipping the health system to prevent, screen for, detect and treat NCDs, as well as provide other services people were educated to demand. In providing these health services, several policy actors emphasized the need to make sure that the poor and vulnerable groups, such as the aged, had physical and financial access to the services. It was further suggested that the government reduce various stressors, by improving the quality of life; through the provision of social amenities and jobs that provided a living wage, and regulating sources of environmental pollution. Food regulation of dietary components that may increase NCDs risk was also suggested; as was food labeling to help people make the healthy choices about which they had been educated. Likewise, the policy actors proposed that the private sectors needed to be stimulated to supply these healthy choices. The enactment and enforcement of policies regulating tobacco products and advertisements to children were additional suggestions.

Furthermore, the policy actors discussed the need to advocate and mobilize legislators to give attention to health in general and NCDs in particular, and commit sufficient funding for the suggested activities. Other suggestions included the need for research to more precisely quantify the existing burden of NCDs; the disability adjusted life years (DALYs) attributable to NCDs, and the projected morbidity, mortality and economic losses if nothing was done to address the issue. Research into traditional herbs and medicines to identify protective agents for NCDs was also recommended. In addition, the policy actors advocated greater involvement of nongovernmental organizations (NGOs) and community based organizations (CBOs), in addressing NCDs. Similarly, the policy actors recommended developing partnerships with international communities, to allow provision of needed external inputs for addressing NCDs.

4.3.2. Responses from interview phase 3

Although the suggestions of the policy actors for NCDs were similar to many of the recommendations by global health authorities, their perceptions of the policy instruments to achieve these recommendations were different. They were also able to propose revisions that may be necessary to adapt the recommendations and policy instruments to the Nigerian context. This section documents the reactions of the policy actors to the recommendations. The section also includes the perceptions of the policy actors about the capacity for consensus building and brokering conflict.

Policy actor views about international recommendations for action on NCDs

Existing enablers for achieving recommendations: "*We have the people who are brilliant and can …break these various recommendations down into implementable steps. We have the institutions and we have the laws that will support all of these. And where none exists, we have the political machinery to create those laws. So we have the institutions, we have the will, we have the capacity to ensure these are done.*" "*I'm not saying the system is working, I'm not saying it is perfect, I'm not saying it is very good, but there is a system where it can be polished, things can be worked through that system and improved for better delivery.*"

Table 4.2. summarizes the enabling factors which policy actors perceived as already in existence for NCDs. The table is followed by a detailed description of each factor.

Table 4.2. Summary of existing enablers for achieving recommendations

1. Established systems and structures
2. Some ongoing dialogue and activities to address NCDs, its risk factors, and related health issues
3. Nigerians' love of life and desire for longevity
4. Relative availability of the physical, natural, financial, human and intellectual resources necessary for initiating action
5. Some private individual effort to make healthier choices about diet and physical activity
6. Some political awareness about NCDs and supportive policy rhetoric
7. Democratic system of governance
8. Recognition of challenges to the policymaking process
9. Nigeria's participation at the United Nations (UN) 2011 high level meeting on NCDs
10. The fact that NCDs also affects the rich

1. Established systems and structures – By far the most common existing enabling factor identified by the policy actors was the presence of systems, structures and processes through which each level of governance could act. To begin with, there has been a functioning program, for addressing NCDs, in the Nigerian federal ministry of health (FMOH) since 1989. Moreover, there are also existing institutional frameworks/guidelines to address most of the non-health recommendations within the relevant sectors. The actors also perceived that there were some existing institutional arrangements for multisectoral efforts. In addition, national nutrition guidelines exist which are related to the dietary risk factors for NCDs. Other enablers related to established systems and structures included existing federal channels of communication and information dissemination; the availability of nongovernmental organizations (NGOs) who are already working on the issue; as well as regulatory bodies for processed foods. Existing systems and structures were considered enablers for action on NCDs because they provided platforms

through which action could be initiated and sustained. In particular, the actors emphasized that the more effective of these structures could provide important lessons for facilitating successful action.

Policy actors also discussed systems and structures which are based off of international structures. The policy actors stated that Nigeria is a signatory to the Framework Convention on Tobacco Control (FCTC), and a lot of work around this issue had been done by the NCDs program in the FMOH. Thus, the one existing legislation supporting the recommendations for NCDs is the 'no smoking in public places' law that has been passed in many states. It was similarly mentioned that Nigeria is a member of the Codex Alimentarius Commission which sets international foods standards. The country as a result does not publish its own guidelines for standards in food processing, but rather refers to the documentation of this Commission. The Commission reportedly has a Codex committee on food labeling, which has the WHO global strategy on diet, physical activity, and health as part of its agenda. It is expected that proceedings from this committee will be implemented in Nigeria when finalized.

2. Some ongoing dialogue and activities to address NCDs, its risk factors, and related health issues – Policy actors discussed governmental efforts and activities of some NGOs and private organizations to address NCDs, as opportunities for action on the issue. Some of the efforts mentioned included evolving activities to improve the efficiency of the civil service bureaucracy, which the actors perceived would create opportunities for integrating NCDs action into the system. The actors also noted the ongoing development of a national policy on NCDs. Similarly, a public health review on NCDs in Nigeria was published by a local think-tank in 2011. Other

efforts and activities mentioned included some public awareness campaigns, anti-tobacco interventions, health system interventions, and school and workplace interventions.

For public awareness, international days designated to highlight certain NCDs and other health issues, such as the international day for breast cancer, are nationally recognized. Also text message adverts from telecommunication operators sometimes contained health tips related to NCDs. Additionally, the efforts of the WHO in mobilizing support and action for NCDs was noted. Concerning the health system interventions, it was observed that in addition to the draft NCDs policy, the NCDs program in the FMOH had been working with states to integrate NCDs into the activities of primary health care centers (PHCs). Similarly, some of the NCDs have been included in the integrated disease surveillance and response, so that there is some monitoring of these diseases. Sanitation and hygiene was reported as receiving significant attention from international organizations such as UNICEF, and there is a monthly mandatory environmental sanitation exercise enforced in many states.

Regarding school interventions, the policy actors noted that there was some inclusion of nutrition issues and NCDs in the curricula used in primary and secondary schools. Clubs such as "*consumer safety clubs*" and "*tobacco free clubs*" have also been established in many secondary schools, to increase awareness of the related issues. One policy actor mentioned that some private schools had banned children from bringing soda and soft drinks to school, thus reducing their access to it. Also, in schools with recreational facilities, children are required to engage in sports or other forms of physical activity, at certain times of the day. For workplace interventions, a few policy actors mentioned that there were occasional screening activities for NCDs in the federal government secretariat, and a few federal government establishments had put up signs to increase awareness about healthy lifestyles. There was also a monthly

walking/jogging exercise for workers in the federal service, and this was sometimes incentivized to increase turnout. It was also reported that a gym had been provided in the FCT for these workers; many ministries also had a sports club that met competitively with clubs from other ministries. Likewise, there have been similar efforts by some private organizations to increase exercise among their staff.

For adequate housing and transport design, there were reports of activities to build new roads, and repair existing bad roads. There were also reports of sidewalks and walkways being built in some residential areas and metropolis; as were reports of efforts to provide rail transportation. Similarly, attempts to improve housing situations and increase the opportunities for people to own their own houses are ongoing. A few policy actors also mentioned activities that were being undertaken to control tobacco and alcohol consumption. For tobacco, cigarette packs and advertisements were required to carry a warning from the federal ministry of health about the health implications. Regarding alcohol, attempts were being made to discourage the packaging of single servings of alcohol, to reduce drinking and driving incidents.

3. Nigerians' love of life and desire for longevity – This desire was perceived as the key to framing behavior change messages that would be accepted by the public.

4. Relative availability of the physical, natural, financial, human and intellectual resources necessary for initiating action – The policy actors perceived that Nigeria had sufficient resources to start significant action on NCDs, if only the will to do so existed.

5. Some individuals who are sufficiently aware of NCDs and its risk factors already take personal efforts to make healthier choices in diet, physical activity and overall lifestyle. Thus among groups of these individuals, there is a social desirability for salt, saturated fat, and trans fat reduction; and weight loss. It was also perceived that these groups would be receptive towards messages about healthier nutrition and physical activity.

6. Some political awareness of NCDs, and supportive policy rhetoric; as well as existing governmental/political intent to address some of the recommendations

7. The democratic system of governance, with its potential opportunities for grassroots involvement in policymaking, implementation, and lobbying for issues of concern; was another enabler stated by the policy actors.

8. Recognition of challenges to the policymaking process – A number of the policy actors were of the view that their ability to identify the bottlenecks to action on NCDs was in itself an enabling factor, because that meant that they could begin to do something about these bottlenecks.

9. Nigeria's presence at the UN 2011 high level meeting on NCDs, including the attendance of this meeting by the President and other top legislators, and the political pledge of commitment to addressing NCDs made at the meeting.

10. The fact that NCDs are not exclusive to vulnerable or marginalized groups, but also affect the rich and those in the top echelons of society, creates opportunities for rapid action on NCDs.

Challenges for NCDs recommendations: "*Generally, one thing that we don't lack is ideas. But one, our problem is implementing these ideas*", "*…lack of enforcement of policy; then the weakness of structures, we need to strengthen the structures …to actually get results, the desirable results. It's like ……where we have structures, it's like the structures are just there in name; nothing being done to… then maybe corruption also, is another factor. Maybe you go there, you bribe somebody, so the person does not actually look at what should be looked at properly…*" Then, "*[we have] all these …pockets of activities that are not connected, that are not holistic and can hardly have the desired effect.*" "*So, one of the things that I'm going to say is that: no matter what you do, there will be challenges in our country, because we have not built the institutions. And we need to build institutions, economic, social, political, that can run themselves.*"

Table 4.3. Summary of the perceived challenges for achieving the recommendations for NCDs

1.	Institutional and systemic failures/inadequacies
2.	Health policy implementation challenges and lack of accountability
3.	Limitations of ongoing interventions and activities for health issues related to NCDs
4.	General ignorance about NCDs and its risk factors
5.	Poor infrastructure and social amenities
6.	Other environmental challenges
7.	Individual level challenges
8.	Interventions may be elitist and increase rich-poor, and rural-urban disparities
9.	Social and cultural norms
10.	Competing priorities
11.	Conflicting priorities between legislative and bureaucratic policymakers
12.	Lack of champions for NCDs
13.	Poor management/low optimization of physical, natural, financial, human and intellectual resources
14.	Funding challenges
15.	Human resource challenges
16.	Opposition challenges

1. Institutional and systemic failures/inadequacies – The policy actors frequently remarked that even though there were governmental systems, structures, and frameworks in place that could facilitate action on NCDs, the effectiveness and efficiency of these systems left a lot to be desired. Policy actors highlighted gaps in the responsibilities assigned to various parts of the system. For instance, it was observed that while there are regulations for processed foods, there are no regulations for unprocessed or home-processed foods. Thus potential risk factors for NCDs, such as carcinogens, may be introduced into the food supply outside of the regulated products. It was also noted that even the existing rules and regulations were not adequately

enforced. Moreover, perceived porous national borders were reported to undermine regulation because unregulated products could be introduced into the country from elsewhere. The top-down approach for policy formulation and related matters; endemic corruption within the system, fueled by some actors' desire for self-gratification; were other perceived challenges to effective action on NCDs. Poor policy consistency, cohesion, coordination and continuity within the system, as well as fragmentation of policies, was also reported to affect the resource allocation and general ability to implement policies.

Several policy actors hinted that the inability of the NCDs program in the FMOH to produce a formal policy, after more than 20 years of its existence, was a reflection of the inadequacies and ineffectiveness of the health system. Other reported inadequacies of the health system were that the health service providers in the private sector had not been fully harnessed as part of the health service delivery system; the health system also emphasizes curative and not preventative activities. A policy actor in the health finance sector even specified that "*the national health account also shows that in the health spending, prevention spending only accounts for 14% of the total spending, while close to 70% if not more accounts for curative.*" Moreover, the national health insurance scheme (NHIS) currently implemented by the government was reported to not provide coverage for NCD conditions. One policy actor did suggest that the limited coverage was to ensure that other conditions such as communicable diseases could be covered for more people; since NCDs were expensive and chronic and the NHIS had not been developed long enough to afford the funds necessary to cover NCDs.

For sanitation and hygiene, policy actors noted that even when individuals and communities were mobilized to clean their environments, there were often delays in garbage pick-up by the government funded central waste disposal system. Coupled with weather effects, the delays in

pick-up frequently resulted in re-scattering of the garbage, which then discouraged future cleaning efforts. Tobacco and alcohol control was another aspect of the recommendation for which the structures were perceived as likely inadequate. Even though there is a no-smoking in public places law, one policy actor commented that even though he was aware of the law, he had seen very few signs advising people of it. Another actor remarked that he had never heard of anyone being penalized for contravening this law. Besides, there were concerns about whether tobacco control would have any significant impact on NCDs in Nigeria, since the prevalence of smoking is perceived to be very low (there is very little empirical data). Alcohol consumption was perceived as being much more prevalent than smoking, but with much less regulation. While alcohol is banned in public places in the FCT and in certain parts of Northern states that adhere to the Islamic law, the only warning required for alcohol products and advertisements is "*drink responsibly*". It was also reported that there is very little legislation around underage drinking and drunk driving, and what little legislation exists is not enforced.

2. Health policy implementation challenges and lack of accountability – According to the policy actors, policies could only be effective if they were successfully implemented in each of the 774 local government areas (LGAs) across the 36 states and Abuja federal capital territory (FCT). The Nigerian constitution places the health system on a concurrent list. When an issue is on the concurrent list, it means that responsibility for the issue is shared among the federal, state and LGA level, and every state and LGA have autonomy on what they choose to do about the issue and how much they choose to spend on it. Hence, any federal policy on the issue just serves as an information manual for each state and local government to decide the extent to which they want to address the issue, what they want to do about the issue, and how they intend to do this.

Sometimes, the federal government will institute nation-wide programs for sectors that are on the concurrent list. In theory, this means that the programs will be implemented in all LGAs. In practice however, the LGAs still determine the extent of implementation.

Many policies were often poorly adopted, funded, and implemented at the state and LGA level. The LGAs are responsible for policy implementation at the primary care or PHC level, and this level of health care is expected to focus predominantly on preventive services. The state level is responsible for the general hospitals which are meant to be the second level of care and receive referrals from the primary care level. The federal government is expected to be responsible for tertiary care, including research and training. However, for several reasons such as those related to funding, infrastructure and human resources, the LGA and state level are generally unable to perform their roles; leaving the tertiary level of care to pick up the slack, overburdened, and unable to fully perform research and training roles. Figure 4 illustrates the present policy dissemination and funding pathways and responsibilities in the Nigerian health system.

It was stressed that the difficulties with policy implementation were made even more severe because there was little accountability both at the institutional level, and at the systemic level.

The autonomy embedded in the concurrent system has meant that the LGA and state level policy actors were rarely accountable to the federal level actors for poorly implemented policies (top-down demand for accountability). The participants further said that in an ideal situation, the state level actors will be held accountable by the indigenes of their states (bottom-up demand for accountability). However, general public ignorance about NCDs, its risk factors and needed action, meant that there was a low demand for accountability at this level as well. The participants additionally observed that there was also little accountability at the institutional level. The implicit systemic assessment of policy actors' performance was reportedly based, not

on results, but on evidence of action. Thus, policy actors were compelled to act, but not necessarily compelled to show results.

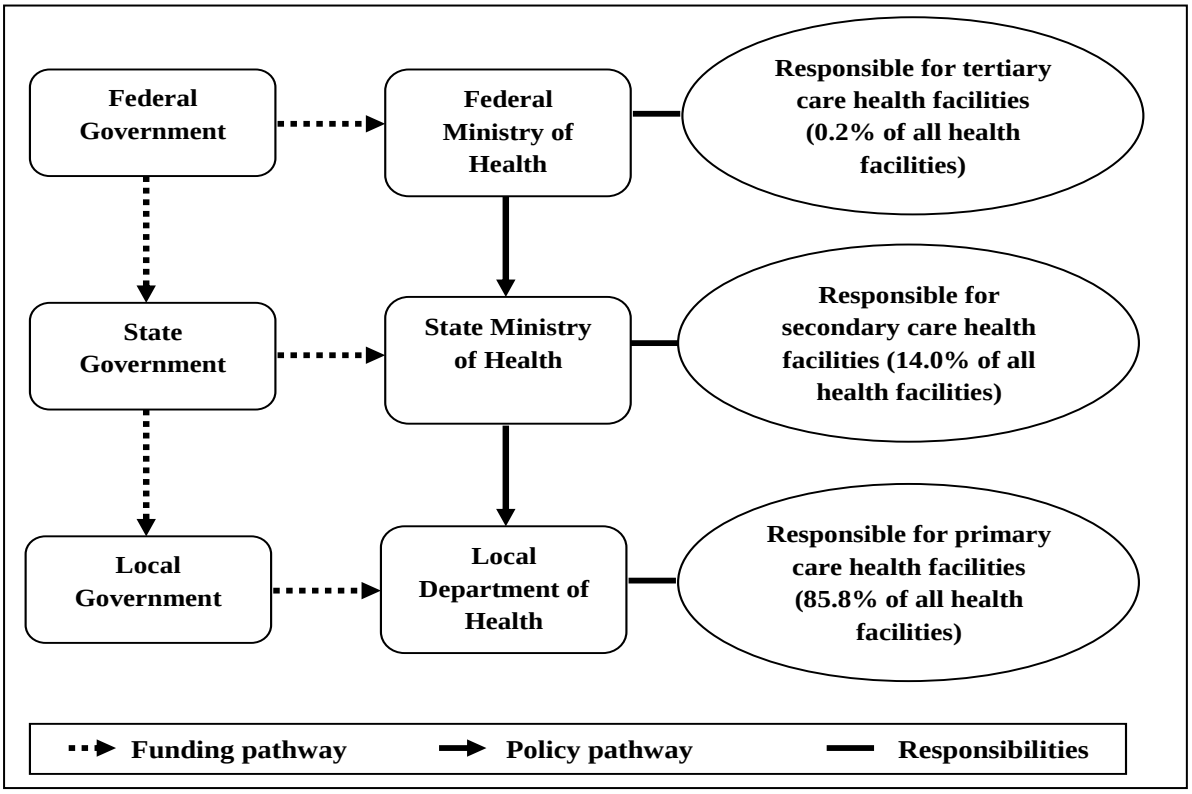

Figure 4.4. Public sector health care delivery system in Nigeria

3. Limitations of ongoing interventions and activities for health issues related to NCDs - A number of policy actors highlighted the ineffectiveness of many existing interventions. One policy actor pointed out that there had been many interventions to address undernutrition for instance, yet there had been little change in its prevalence. NCDs were thus perceived to be in danger of such ineffectiveness if appropriate measures were not put in place. Little data to explain the ineffectiveness of interventions, as a result of poor monitoring and evaluation of such

interventions, was noted as an issue that needed to be addressed. Another challenge mentioned in relation to the necessary interventions was that the benefits from intervening on NCDs were not immediately visible or tangible. This intangibility was perceived as a disincentive for concerted interventions for NCDs. Moreover, sustainability was typically neither planned nor institutionalized in interventions. Similarly, the coverage of the interventions was low.

For workplace interventions, it was found that not all of the bureaucratic policymakers interviewed about the monthly walking/jogging exercise reported by some, and corroborated by advertisements in a few buildings, as well as an informal interview with a one of the coordinators of the exercise. This reflects potential inadequate awareness and underutilization of available interventions. Additionally, a few policy actors reported that many working conditions were not conducive to exercise or interventions for other NCDs recommendations.

4. Generally ignorance about NCDs and its risk factors – The policy actors highlighted that a major constraint to achieving the recommendations for NCDs was the pervasiveness of low awareness about NCDs and its predisposing factors. It was emphasized that instituting all the recommendations for NCDs without increasing public education about the importance of the actions taken will lead to low adoption and ineffectiveness of the recommendations. Indeed, one policy actor highlighted how instituting the recommendations can even be counterproductive without adequate public education. This policy actor noted that if roads were well improved without education, nobody would want to run along the roads. Instead, "*they would drive their cars along the good roads*". Policy actors also commented that ignorance about NCDs was not strictly limited to a particular demographic, and formal education did not necessarily mean awareness of health issues and risk factors.

5. Poor infrastructure and social amenities – Poor availability of or access to well designed and maintained social amenities like electricity, roads, portable water, schools, and health centers were considered major challenges to the recommendations. The policy actors perceived that the lack of these amenities created inconveniences and/or stressors that either made the achievement of the recommendations impossible or stressful. In addition to a paucity of the health centers themselves, the policy actors noted that available health centers were often lacking in equipment, tools, and medicines; which limited the ability of the system to screen, detect, and treat NCDs. Many schools were likewise reported to be lacking in recreational facilities, which meant that the children attending those schools were compelled to sit at their desks all day, even during breaks. The imposed inactivity was reported as contributing to health risks like obesity because it increased physical inactivity as well as the opportunity for children to spend their break periods consuming more food than needed. The imposed inactivity was also perceived to limit the ability to effectively implement school interventions. For sanitation and hygiene, a lack of recycling facilities was reported as a limiting factor, while poor food processing and storage facilities resulted in seasonal food shortages and/or unaffordability.

6. Other environmental challenges – In addition to environmental challenges arising from the paucity of infrastructure and social amenities, the policy actors highlighted challenges arising from other environmental factors. One such factor was the type of place of residence. Residence in a fully urban area was considered a limitation for certain potential enablers for achieving the recommendations, like home gardening and walking/jogging/bicycling, partly due to unavailability of land for gardening and safety concerns due to heavy road traffic respectively.

One policy actor also highlighted that threats to personal security (such as robbers) in parts of the country made people leery of walking/jogging, even if the road design was conducive. The dustiness/dirtiness, even of good roads, and pollution from car emissions were other limiting factors for walking/jogging that were mentioned. Another factor related to the type of school environment was a report from one policy actor that some private schools provided three to four meals/snacks for children over the eight hour period they were in school.

7. Individual level challenges – Several challenges were perceived to potentially hinder the ability of individuals to fulfill their own responsibilities in achieving the recommendations. For instance, the policy actors discussed the fact that job insecurity, low incomes or poverty could be a major barrier to the adoption of healthier diets. Job insecurity meant that people preferred to save/invest what funds they had, rather than spend it on preventative or screening activities. Low incomes and poverty meant that individuals and households could not even afford preventative or treatment health services for NCDs, except these services were free. Low level of education was another factor mentioned that could limit the ability of individuals to benefit from the recommendations. Poor education and/or illiteracy were perceived as a barrier to accessing information about healthy lifestyles, as well as comprehending accessed information. For instance, illiterate people would be unable to read food labels, even if such labeling became mandatory. Other individual level challenges included long work hours and other stressors which constrained the time available to practice healthy choices. Inertia, and general individual unwillingness to change lifestyle, particularly diet and exercise habits, was another observed challenge. Additionally, two of the three private sector participants other than those in academia or the media perceived an individual inability to create systemic change, because of the systemic

failures. This perceived lack of self-efficacy for systemic change was reported to lead to individualism rather than a willingness to engage in collective action, and this individualism further amplified the systemic failures.

8. Interventions may be elitist and increase rich-poor and rural-urban disparities – As a result of differential access to the adequate social amenities as mentioned above, as well as differential financial capabilities and education, the policy actors were of the view that implementing the recommendations within the existing health and social system will increase health inequities. Segments of the population that are relatively well-to-do were viewed as occupying a position that would enable them take advantage of health opportunities that would be created by implementing NCDs recommendations; whereas the poor, particularly the rural poor are likely to be marginalized by default. Price deterrents as a policy instrument for tobacco and alcohol control was also perceived as likely to increase disparities. The policy actors observed that tobacco especially is habit-forming and addictive, and people who were addicted, would seek to feed their addiction by whatever means possible. Thus if increased prices are used as a tool for tobacco and alcohol control, not only would it become the luxury of the rich and a status symbol, the poor and rural are likely to resort to locally produced, unregulated alternatives/substitutes which may pose even greater risks for NCDs.

9. Social and cultural norms – The participants perceived that the diet and activity patterns that were socially construed as ideal, and which people aspired to, were contrary to some of the recommendations. For instance, people aspired to owning their own cars, driving everywhere and walking as little as possible. The ability to afford to eat at fast food outlets, as often as one

desired, was also considered a prevailing social aspiration. Another perceived social aspiration related to diet was the ability to afford to cook meals high in fat and meats, including offal, which are considered optimal meals. Similarly, the social constructions of meaning can also affect the adoption of the recommendations. As an illustration, one of the policy actors mentioned that in some parts of the country, physical activities like jogging were not socially construed as normal behavior, and engaging in such activities may be viewed negatively. Some participants also reported that cultural and religious beliefs about the causes of diseases resulted in a general reluctance to make use of health services, except in very dire cases. Hence, the use of preventative services as well as screening services, even when available, was low. Furthermore, some policy actors perceived that public education messages about healthy nutrition and physical activity may face some resistance as a result of these social and cultural norms.

10. Competing priorities – The fact that Nigeria in general had to deal with "*numerous political, economic, social, cultural, religious problems*", and the health system in particular was inundated with a significant burden of several health issues, was perceived as a challenge for immediate, commensurate, and sustained action on NCDs.

11. Conflicting priorities between legislators and bureaucratic policymakers – Another challenge perceived for the NCDs recommendations were the likely differences in priorities and approaches between the legislative policymakers, and the bureaucratic policymakers. The report of the policy actors was that policies are formulated by the bureaucratic policymakers, and are ratified and endorsed for funding by the legislators. Thus when legislators are uninformed or

uninterested in a policy, even well formulated policies do not get ratified. Equally, if legislators and even the President are very concerned and interested about an issue but bureaucratic policymakers do not coordinate to formulate a policy for the issue and act on it, then there may be policy rhetoric about the issue, but little action (as a result of the low accountability at institutional level). Thus, the structure of the system makes effective action difficult without the engagement of both groups of policymakers, who sometimes have different or conflicting priorities.

12. Lack of champions for NCDs – A dearth of individuals who were willing to commit time and effort to actively advocate for action on NCDs, and ensure that the issue becomes and remains pertinent to other policy actors was a further challenge for NCDs recommendations that was identified.

13. Poor management/ low optimization of physical, natural, financial, human and intellectual resources – Several policy actors lamented that even though the majority of the actors in the system generally knew the things that needed to be done to address NCDs and other social issues, they were not maximizing this knowledge.

14. Funding – Many of the policy actors commented about funding for all aspects of the NCDs recommendations, including advocacy and public enlightenment. The prevailing notion appeared to be that the availability of funds was not the main challenge, but the management of the available funds. The policy actors identified several potential sources of funding, and the challenges associated with each one. The primary source of funding anticipated was the

government. Policy actors highlighted that funding for NCDs recommendations could be included in annual public sector budgets and, with necessary enlightenment and advocacy, be approved. However there were still several challenges even after a budget has been approved. Firstly, the tendency was for only a proportion of the budget to be actually disbursed. A policy actor highlighted that about 53% of the budget approved for FMOH in 2010 was what the ministry actually received. Secondly, even the disbursed proportion of the budget was often released too late into the fiscal year to enable action to take place as planned. Yet the system did not allow for carryover of funds, such that policy actors could save parts of the annual allocation for their institutions until they had supplemental funds. The policy actors stated that whatever funds they had left over at the end of the fiscal year needed to be returned into the federal accounts. A further challenge was that having left over funds to return at the end of one year, increased the likelihood that they would be given even lesser funding the subsequent year. Thus, there was often pressure for funds to be spent within a time period that was insufficient to conduct any meaningful action. These constraints often then meant that the public sector funds were injudiciously spent or even misappropriated.

Corruption in the system, in addition to its effect on successful action, also reduced the willingness of international and private sector actors to contribute to funding activities conducted through the public sector. Although successive governments have made efforts to reduce corruption, and have been successful in some aspects of the public sector, lingering perceptions of corruption even for these aspects continues to hinder funding from non-governmental sources. Another way in which the private sector, foundations and philanthropists could contribute to funding is through in kind donations, rather than the money itself. The challenge with this type of

funding, however, is that some institutional norms within the public sector may prevent in kind donations.

15. Human resources – Although the policy actors had mentioned that an existing enabler was the availability of sufficient human resource to initiate action on NCDs, several policy actors qualified this perceived availability. The perceived adequacy of the numbers of workers needed to achieve the recommendations was thought to exist only at the federal level of policy formulation and coordination, but not at the state and LGA level of implementation. Also, the relative availability of workers differed according to the recommendation being considered. For instance, it was implied that the number of doctors, nurses and midwives available, relative to the population, were closer to the ideal than the number of environmental health officers, nutritionists, and other preventative health officers. The workforce to conduct research in the various sectors, "*drive advocacy*", fund raising, and public education, and manage programs, was also considered lacking. Policy actors were likewise concerned about the quality of the human resource. It was noted that many of the existing health workers may not have been sufficiently trained with respect to NCDs, and may have trouble identifying and treating them. Furthermore, even if there were sufficiently trained and adequate number of workers, the policy actors expressed concern about the likely distribution of these workers. It was observed that the lack of infrastructure and social amenities in many parts of Nigeria, including jobs for their spouses and good schools for their children, as well as tribal issues, meant that qualified workers were willing to work only in certain locations. Additionally, frequent strike actions, particularly by health workers in the public sector, meant that workers were only available to implement the recommendations part of the time. Strike actions in the education sector also meant that the

education of the health and other workers was often interrupted and suboptimal. Moreover, the unfavorable work conditions (including being overworked) which led to the strike actions also meant that workers were unmotivated/demotivated and thus not optimally effective, even when not on strike. The unfavorable work conditions as well as low employment opportunities was also reported to contribute to a 'brain drain', where trained workers left Nigeria to live and work in other countries.

16. Opposition – Several policy actors did not perceive any opposition to achieving the recommendations for NCDs. According to these actors, NCDs are such a serious, pervasive social issue that nobody would oppose efforts to prevent and reduce them, since they were aware of the potential risks to themselves and their families. Other policy actors however perceived strong opposition to NCDs, but were of the view that such opposition could be minimized through education, advocacy, and dialogue. One policy actor further added that opposition could also be minimized if funding for other health issues was not reduced to fund NCDs. Opposition was perceived as likely from individuals who have built successful businesses and/or careers from the status quo, and would like to see this status quo maintained. Private sector stakeholders whose products were likely to be regulated were another source of opposition perceived. Similarly, a policy actor perceived that there could be opposition from within the bureaucratic policymakers, if it was thought that the multisectoral approach for NCDs would infringe on institutional mandates. Furthermore, it was perceived that opposition could arise from people who thought that action on NCDs should still be postponed until other health issues received more attention. Finally, and as mentioned earlier, it was perceived that NCDs recommendations could be opposed because aspects of it were contrary to some social, cultural and religious norms

and beliefs; and also because of perceived personal losses, such as those as may arise for individuals who are addicted to tobacco for instance.

Needed enablers for achieving recommendations: The policy actors emphasized that, to ensure effective action for NCDs, enablers are needed at both the individual and systemic level. "*...For the NCDs, I think the main thing really is to just to get our health promotion out, to get the states to start doing something, and the LGAs and the communities. There's very much that can be done at the community level, but there is also quite a lot that needs government's doing. For example, if we are talking about indoor air pollution ...so long as you can't provide sustainable and clean fuel for people, they would continue to use wood. And if you can't provide adequate housing, they would continue to cook inside their living rooms and sleep there too. But there are little things that they can do in the community. They can eat healthy foods in the community, they don't have to go and look for meat pies to eat. They can eat vegetables and fruits and the healthy snacks that are already available in the community.*"

Table 4.4. Summary of the enablers needed for achieving the recommendations for NCDs

1. Persistent information dissemination to all population groups
2. Embed recommendations into the social fabric
3. Policy
4. Data
5. Decentralization
6. Enabling environments for policy implementation
7. Identify champions
8. Mobilize community partnerships and strengthen existing organizations and activities for addressing NCDs
9. Performance based scoring and accountability in the public sector
10. Regulation, enforcement and monitoring
11. Human resources
12. Learn from countries at a similar level of socioeconomic development
13. Fund raising

1. Persistent information dissemination to all population groups – All of the policy actors iteratively emphasized the importance of communication in achieving the recommendations for NCDs. Words such as advocacy, public awareness, education, enlightenment, were interchangeably used to describe this communication. The policy actors stressed that to achieve the recommendations for NCDs, there needed to be effective and persistent communication about NCDs, the recommendations and its expected impact. This communication needed to be targeted to legislators, and the general public, including children. The actors further stressed that the messages regarding the issues needed to be attractive, as well as appropriate for each population group in terms of language used, level of education, and contextual considerations. The policy actors also remarked that various communication media should be used, such as

enlightenment campaigns, written media, meetings, brainstorming sessions, the national radio network, traditional rulers, religious rulers, and celebrities.

Public enlightenment about NCDs was perceived as necessary for several purposes. Primarily, by enlightening both the legislators and the people, the government would be compelled to act, and the people would be able to meet such action halfway, by fulfilling their own roles. Specifically, giving the populace sufficient information about the issues could stimulate public demand for NCDs interventions both at the individual and at the societal level. At the individual level, people could demand for a service, for example screening, if it is not offered to them by default at the health center. Individual level roles were also perceived to include compliance with recommendations, like making healthy choices about diet, engaging in physical activities and other preventative activities. At the societal level, enlightenment about the issues could inspire a demand for legislative action. Moreover, effective communication could encourage beneficiary involvement and a participatory process that resulted in support for the recommendations and minimal public resistance to them. In addition to legislators and the general public, another group that was perceived as needing enlightenment and advocacy were the bureaucratic policymakers themselves. It was deemed necessary that the different sectors expected to be involved in achieving the recommendations for NCDs be educated about the importance of their roles and responsibilities within the action framework.

It was emphasized that enlightenment and advocacy needed to be persistent, to ensure that the messages were imbibed, as well as to minimize resistance and opposition.

2. Embed recommendations into the social fabric – Apart from utilizing multiple communication platforms for information dissemination the policy members perceived that the

recommendations for NCDs needed to be embedded into the social institutions and activities such that they unconsciously became the default. It was suggested that the recommendations be more comprehensively included into the curricula in the primary and secondary schools, so that healthy lifestyles would be the culture of coming generations. It was also suggested that the recommendations be implemented in workplaces, such as having mandatory or incentivized annual screening for NCDs. Religious centers and market associations were other specified venues for implementing the recommendations. Additionally, the participants mentioned liaising with the entertainment industry so that the recommendations, for example tobacco and alcohol control, were incorporated into onscreen life and song lyrics. Other suggestions for embedding the recommendations into the fabric of social life included adding screening for NCDs as one of the tests couples had to take before getting married or those students had to take as part of university registration processes. Likewise, the recommendations could be included in the services offered to mothers during antenatal visits, post natal care visits, and well-child visits.

3. Policy – Formulating a comprehensive policy for NCDs that included all of the recommendations and multisectoral roles was considered an urgently needed enabler. The policy actors remarked that even though action on NCDs could and should be initiated while awaiting a policy, a policy was required for the long term effectiveness and sustainability of such actions. A policy was viewed as a necessary framework for standardization of action, and a basis for monitoring action. A policy was also expected to assure institutionalization of the actions for NCDs, as well as reflect the seriousness of the government's commitment to addressing the issue. In addition, a policy was perceived as necessary to enable litigation if necessary.

Again, the policy actors emphasized the need to have just one integrated multisectoral policy for NCDs that highlighted the role of each stakeholder, rather than have a separate policy for NCDs within each sector. However, each relevant sector needed to be actively engaged in the formulation of the policy. Thus apart from the active involvement of representatives of these sectors at multisectoral meetings, there would be a need for the sector to actively discuss their role in formulating this policy, at the level of the national council for that sector. The national council for a sector is the highest policymaking structure in that sector, and typically convenes technical (bureaucratic) policymakers and legislators at the federal and state level for the sector.

In addition to integrating the NCDs across sectors, policy actors also emphasized the need to create a "connect" between the NCDs policy and other health policies, so that they are not seen as parallel, but parts of a whole.

4. Data – Several policy actors discussed the need for better statistical evidence about NCDs in Nigeria and its risk factors. This data was perceived as obligatory for ensuring purposive planning and policy formulation about the recommendations, as well as facilitating the assignment of roles and responsibilities to the relevant stakeholders.

5. Decentralization – A few policy actors suggested decentralization at different levels. Even though the concurrent system for health was designed to be a decentralized system, as implied when describing the challenges for the NCDs recommendations, this has not been the reality. Instead the state level actors typically look to the national level for "*strategic direction*", and many of the policy formulation responsibilities are undertaken at the federal level, and disseminated to the states for implementation. It was proposed that more of the policymaking

process responsibilities be devolved to the states, within the framework of a national goal. It was deemed especially necessary that states and even LGAs be involved in the development of policy instruments, approaches and strategies for implementing the recommendations within their own states. It was perceived that this decentralization will allow the incorporation of the varying cultural peculiarities among states, increase community participation in decision making, and increase the efficiency of the system and its potential effectiveness.

Similarly, some policy actors advocated for decentralization of other aspects of the health system. It was noted that although the FMOH should take the lead for NCDs, the coordination role should be shared among the relevant stakeholders. Sharing the coordination role in this manner was perceived as a way of ensuring that the non-health sectors felt a sense of responsibility for NCDs, which would serve to validate their role in addressing it. Likewise, shared coordination was expected to increase the effectiveness of actions taken.

6. Enabling environments for policy implementation – It was highlighted that the necessary infrastructure and tools for meaningful policy implementation needed to be provided for the recommendations to be successful. Among other things, roads, transportation options, portable water, waste disposal, electricity, recreational facilities in schools, health and treatment facilities, equipment, drugs, and financial resources, were considered essential. It was likewise considered essential to not only formulate the policies necessary to ensure universal access to these infrastructure, but also monitor and enforce the provision of the infrastructure. It was also suggested that the factors related to individual level challenges be addressed. Creating an enabling environment was similarly perceived to include the provision of necessary alternatives, before implementing a policy that would change the status quo. As noted by the policy actor

quoted at the beginning of the needed enablers section, the example of indoor air pollution illustrates the need for alternatives. A policy restricting the use of wood as cooking fuel, to reduce the risk of chronic respiratory diseases, which does not provide alternative sources of cooking fuel, would either be ineffective and/or create extra hardships for the people affected. Furthermore, the policy actors emphasized the need for an environment that was also enabling for the legislation and registration of civil societies and NGOs interested in addressing NCDs.

Besides its impact on NCDs, the policy actors were of the view that such enabling environments, which one actor referred to as "*life supporting systems*", would also reduce the burden of communicable diseases. Furthermore, such enabling environments will reduce some of the disincentives for trained professionals, so that they are willing to work in more parts of the country.

7. Identify champions – Several types of champions were proposed. It was perceived necessary to have people from all walks of life, who lived with NCDs, and could provide human faces for NCDs as well as convey optimism about the tractability of NCDs to the general public. The policy actors also perceived the need for champions who would leverage on personal relationships or proximity to legislators, and persuade the legislators to act on NCDs. Additional types of champions distinguished were champions from among the legislators themselves, preferably legislators who themselves had NCDs because they could better create a frame with which other legislators could identify with NCDs. Lastly, the participants observed that there needed to be champions for NCDs among the directorate cadre of the bureaucratic policymakers; so that there would be people who would call attention to NCDs in fora where these policymakers meet and deliberate.

8. Mobilize community partnerships, and strengthen existing NGOs working to address NCDs and the ongoing actions and interventions for NCDs – To encourage the continued action on NCDs, increase confidence about its tractability, provide a frame of reference for expansion of services, and increase efficiency in acting on the issue; a few policy actors underscored the importance of adding value to the ongoing efforts to address NCDs; as opposed to discarding, neglecting, or ignoring these efforts. In addition to strengthening existing organizations and activities, it was remarked that there is a need to expand the number of organizations working on NCDs by forming partnerships with other existing NGOs, community based organizations (CBOs) and civil society organizations (CSOs). These partnerships are crucial for policy planning and implementation at the state and LGA level, because they increase the human resource at this level. NGOs can also serve as liaison between the federal and these lower levels, to aid in translating national goals into contextual action.

9. Performance based scoring and accountability in government – Again, this enabler was proposed to address the two levels at which it had been considered a challenge. To promote the accountability of the states and LGAs, it was suggested that healthy competition to achieve the recommendations needed to be promoted among the states, while still allowing the states to implement the recommendations at a pace suitable to their context.

10. Regulation, enforcement and monitoring – Policy actors mentioned that the role of the private sector in achieving the recommendations needed to be regulated, and such regulations enforced. The particular recommendations of concern were the dietary, alcohol and tobacco

recommendations. Furthermore the implementation of all other recommendations also needs to be monitored, to identify achievements, failures, and needed change.

11. Human resources – Increasing and improving the workforce for policy implementation, by recruiting, training, reorientation, capacity building, and reducing brain drain, was considered necessary.

12. Learn from countries at a similar level of socioeconomic development – Identify how they are coping with NCDs, and what they are doing to resolve the issue. Determine what the best practices might be.

13. Funding – The enablers suggested for increasing funding for NCDs recommendations included some of the needed enablers already described above. Policy actors mentioned the need to actively involve numerous potential stakeholders, such as legislators, international organizations, NGOs, religious organizations and the private sector. Adequate statistical evidence of the problem was deemed necessary to help convince these stakeholders of the need to address NCDs; and the associated monetary cost and benefit implications. In addition to the statistical evidence, advocacy to all of these stakeholders would be necessary to ensure that the evidence is meaningful to them. It was perceived that using public figures that had been identified as champions for NCDs could greatly enhance a funding campaign for NCDs. Nevertheless, other factors such as the existence of a cohesive action plan, transparency and accountability in budgeting and expenditure, as well as proof of the effectiveness of planned and implemented action; would be essential for making such funding campaigns successful. Public

enlightenment was also suggested, so as to increase individual willingness to pay for some interventions like healthier foods, and gym memberships for physical activity. Other suggested potential ways to achieve funding for NCDs recommendations included cost sharing and/or service exchanges between various ministries; such that the ministry of information & communication for instance could provide mass media avenues for information dissemination by FMOH. Encouraging the private sector to get involved as part of corporate social responsibility activities was another suggestion, likewise allowing such private sector organizations to contribute to programs in kind rather than cash. Arranging with international organizations for counterpart funding for activities, as well as achieving better health insurance mechanisms were further suggestions for funding.

One other important enabler that the policy actors highlighted would be required for improving the health system funding and achieving the NCDs recommendations, among other issues, was the final approval of the national health bill. This health bill has been passed by the Senate, but is awaiting the President's endorsement to sign it into law. The health bill when passed is designed to enable the federal government to directly fund action at the state and PHC level, the bill also delineates responsibilities for each tier of governance, and increases funding for the NHIS. However, the signing of the bill into law has been opposed because some stakeholders are discontent with the assigning of roles, responsibilities and power as outlined in the document.

Policy actors' views on capacities for networking and coordination

This section summarizes the responses of the policy actors to questions about the state of networking and coordination in Nigeria. The general policy actor perception of networking,

collaboration and coordination is illustrated in these quotes from a number of actors. "*Multisectoral policies? You see, that's the problem that we are having in Nigeria. There is no collaboration. There is duplication of efforts everywhere.*" "*Nigerians don't have this culture of sharing even information;*" "*everybody wants to take glory for doing something*". "*We love working in silos. We don't… have a bigger picture*", "*even within a ministry, not to talk of multisectoral……*" "*[We] don't carefully plan for coordination and networking. We just think: oh, once we wish it, it will happen. So we write a letter to ministries, ……[we] give them the most impossible notices. We don't even explain the reason why we're calling them to the meeting sufficiently to convince them that they have to come. But if they are carefully planned, which takes times, which takes effort, they succeed.*"

Table 4.5. Summary of capacities for networking and coordination

Current State of networking, collaboration, and coordination
1. Increasing awareness of need and willingness to network and collaborate 2. Some existing but limited networking and task sharing on multisectoral issues 3. Duplication of efforts and fragmentation within the system and within institutions in the system 4. Varying meanings attached to networking, collaboration and coordination 5. Suspicions, mistrust and turf battles 6. Difficulties in delineating and coordinating financial responsibilities among collaborating institutions 7. Poor planning of collaborative meetings and disregard for people's schedules 8. Little collaboration incorporated into training of health professionals
Needed enablers for networking and collaboration
1. Transparency in the collaborative process, through continuous dialogue, information sharing, advocacy, and capacity building 2. Validation of the need, importance and contributions of all stakeholders 3. Promoting networking and collaboration as mutually beneficial to all involved stakeholders 4. Policy planning, integration and resource allocation across departments within institutions and across institutions 5. Funded coordinating entity 6. Multisectoral networking and collaboration at all levels – federal, state and LGA 7. Active involvement of stakeholders outside of the public sector

State of networking and coordination

The policy actors acknowledged that every actor within the bureaucratic sectors, as well as actors from the private sector, international organizations, NGOs, and CSOs had a somewhat unique role and responsibility to play in addressing NCDs. The actors reported that there was an

increasing awareness of the need and willingness to network and collaborate. They commented that some networking already existed in certain aspects of the system, but it was mostly limited to attendance of task groups and meetings, and often occurred at the insistence of donors. There were also a few reports of task sharing for multisectoral/cross departmental projects hosted by a sector/department that had the funding for it, as well as using education materials developed by a different sector/department for awareness creation on multisectoral/cross departmental issues. The policy actors further observed that the limited networking, collaboration and coordination led to duplication of efforts and fragmentation within the public system; and were some of the reasons why the public sector was weak and ineffective. The challenges to networking and collaboration were reported as existing not only for multisectoral efforts, but also for activities within the same sector.

Several reasons were given for the limited collaboration. The policy actors observed that these challenges were not always real, but that even when they were perceived, they still hindered effective cohesion. One reason some policy actors gave for the poor collaboration was ignorance about what networking, collaboration and coordination really meant, and how they could be achieved without infringing on any participating institution's constitutional mandate. The perceived need to define institutional and departmental territories led to turf battles which prevented or limited collaboration. These turf battles were often fed by suspicions and mistrust about the motives for collaboration, and the fear of losing one's job or funding if another institution or individual proved able to do the job. The fear of job or funding loss then often meant that institutions with potentially synergistic mandates, which would benefit greatly from working together, tended to be rivals. Difficulties in delineating and coordinating financial responsibilities among collaborating institutions were a major observed challenge to

collaboration, as was other coordination. The policy actors mentioned that unless there was a neutral coordination system, which was outside of any of the collaborating institutions, collaboration may not occur. It was stated that if one of the collaborating institutions also had the role of coordination, they may consciously or unconsciously place themselves as superior to the other institutions, and fail to validate the importance of the role of each collaborating institution. Poor planning of collaborative meetings, a disregard for people's schedules, and ultimately attendance at networking meetings by junior staff with little decision making power, were other reasons given for limited collaboration. At another structural level, a policy actor observed that multisectoral collaboration had not been incorporated into the training of health professionals in Nigeria, and having to network as professionals meant that they were leaving their comfort zones. The challenges highlighted were reported to have led to a poor history of networking, which in turn led to a normative institutionalization of compartmentalized roles, and created a cycle of little collaboration even when some actors desired otherwise.

Needed enablers for networking and collaboration

The actors noted that recent public budget challenges experienced create an opportunity to ensure that different bureaucratic sectors collaborate more effectively. They perceived that transparency in the collaborative process, through continuous dialogue, "*information sharing*", advocacy and capacity building, would greatly enhance trust and cohesion. This transparency was perceived to also include transparency in the purpose of the collaboration, as well as in the distribution and performance of roles, responsibilities, and financial obligations in the process. The actors also stressed that it would be required to validate the need, importance and contributions of all stakeholders. Likewise, the collaboration would need to be posited as

mutually beneficial to all stakeholders involved. Policy planning, integration, and resource allocation across departments within a sector and across sectors was also perceived as a potential enabler for effective networking and collaboration. For coordination of multisectoral efforts, the National Planning Commission, with a constitutional mandate for this purpose, was recognized as a potentially neutral coordinator. However, the request for coordination by this Commission needed to be proposed by the federal ministry closest to the issue for which coordination is required, or by legislators. Furthermore, the Commission would need to be funded for the coordination activities. An additional emphasis was that multisectoral networking and collaboration needed to happen not only at the federal level, but also at the state and LGA levels where such collaborations were even more sorely lacking. Similarly, the policy actors stressed that the stakeholders involved in the collaborative effort needed to more often include the private sector, NGOs, religious organizations, and traditional rulers, in addition to the public sector and international organizations.

For NCDs in particular, a NCDs Alliance was reported to exist which involves several stakeholders already involved in some aspect of addressing NCDs. The Alliance includes public sector individuals, NGOs and private health sector organizations working to address NCDs; and appears to be focused on promoting greater political attention to NCDs. However, it was not clear whether stakeholders outside of the health sector are presently involved.

Learning from past policy experiences

To provide a frame of reference as well as assess which of the identified challenges are likely to be the most limiting, and which of the enablers are likely to be critical, the policy actors were

asked to discuss previous policy issues to which they could liken the issue of NCDs; and the lessons that could be learned from those policy issues. This section summarizes the responses to this question.

A number of policy actors were of the view that the issue of NCDs could be likened to the HIV/AIDS issue. In the early years of its pandemic, HIV/AIDS experienced stages of "*denial*", "*neglect*", and "*even outrage*". However when the mortality from HIV/AIDS became too excessive to ignore, including the death of a renowned musician who was also brother to a former Minister of Health and AIDS activist; and the awareness of ways to prevent it increased, the issue began to receive intensive attention. The international community was attentive to the issue, and provided support; and the national government intervened by setting up an agency to coordinate a health and non-health response to HIV/AIDS, in addition to the unit in the FMOH that was addressing the issue. State and LGA branches of this agency were also set up, and there was a multisectoral response to the issue. Thus, the incidence and prevalence of HIV/AIDS reduced dramatically. Similarly, NCDs have experienced several years of relative inaction and denial, but with information dissemination; increasing awareness of their tractability; and commensurate investments in addressing them, which actively engages the states and LGAs; these diseases can be curtailed.

Polio was another issue to which NCDs was likened. Polio was reported to have been a considerable challenge in Nigeria. However, with huge social mobilization including the involvement of the international, traditional, religious, and business communities, as well as the governors' forum and association of LGAs, the issue continues to receive attention, and significant strides have been made towards its eradication. It was further reported that Bill Gates became a champion for polio in Nigeria when he provided major funding for the issue and met

with the President to advocate for more attention to the issue. Other private sector, particularly Rotary International was said to have also conducted effective lobbying and resource mobilization. Thus, with leadership, lobbying, and extensive social mobilization for NCDs, the polio experience shows that much can be achieved. Similarly, guinea worm eradication was reported to have largely benefitted from championship by a former, respected Nigerian military head of state - Yakubu Gowon, who through the Carter Foundation became an ambassador of good will for the issue. Hence, it was noted that if NCDs were to have a champion who is trusted, "*who can stand up for the cause*", and "*be dedicated in making sure that the funds are used for the cause that they have been collected*", there will be achievements in addressing NCDs.

The experiences of the National Agency for Food and Drug Administration and Control (NAFDAC) with addressing counterfeit medicines, and the NAFDAC registration number, were other examples policy actors used to highlight lessons that could be helpful in tackling NCDs. Counterfeit medicines had been a major problem for many years until a pharmacist who had suffered personal loss from such counterfeit products was appointed the NAFDAC Director, and became a champion in the fight against the issue. Under this leadership, the government was made to realize the import of counterfeit medicines, policies for drug regulation and control were institutionalized, and the problem remarkably declined. NAFDAC also instituted the NAFDAC registration number, a number indicating that NAFDAC had approved a food or medicinal product as safe for public consumption. It was observed that so much contextually appropriate public enlightenment had been done around the NAFDAC number that even illiterate people who lived in rural areas knew what the number meant and were able to find means to check for this endorsement. In addition to the public enlightenment to make sure the consumers knew not

to buy and/or consume a product without a NAFDAC registration number, NAFDAC concurrently instituted guidelines to ensure that companies followed the procedures to have their products inspected, and obtain a registration number. Besides, the Agency is reported to regularly monitor the continued safety of the products, as well as compliance with the use of the registration number. Based on the NAFDAC experiences, the policy actors who discussed these experiences perceived that having a champion to advocate to the government for action on NCDs, context appropriate public enlightenment about the issue, and effective regulation and monitoring; could lead to positive action for NCDs.

Furthermore, another policy actor highlighted achievements with the marketing of breast milk substitutes; this had been accomplished through regulation of the private sector that produced these breast milk substitutes. The policy actor then suggested that some aspects of the NCDs recommendations could be achieved through dialogue with the private sector, and policies that regulated their activities. Likewise, the success of the policy that put Nigeria's telecommunications into the control of the private sector, with government regulation, was noted. Other issues highlighted by the policy actors that had been perceived to be successful, and could provide useful lessons for NCDs, included polices to increase gender equality, the achievement of the home grown school feeding program in one state, and the activities of the epidemic management committee.

Apart from the success stories however, a few policy actors highlighted experiences with little effective/successful policies and programs, and noted the lessons that could be learned from those experiences. One policy actor mentioned the almost annual outbreak of meningitis in certain parts of the country. He observed that even though lessons had been learned about how to prevent future outbreaks, the preventative actions were not prioritized. Another policy actor

discussed a past policy to have one comprehensive health care center in each of the 774 LGAs in Nigeria. The aim of the policy had been to increase health care infrastructure and improve primary health care. The federal government built the comprehensive health care center, and then hand it over to the local council to manage and staff it. However, "*a major policy defect*" was that there was little dialogue with the LGAs in the design and implementation of this policy; and in many LGAs these comprehensive health centers remain unused. In the words of the policy actor, "*the local people said 'ha, you didn't tell us when we you were building this thing, so we don't know anything about it. How can you tell us to go and staff it? You should have consulted us to know whether we're even able to staff the place.' So those [centers], they're all locked up.*" The bottom line from this experience was that an effective policy for NCDs would need to engage all stakeholders and encourage their participation.

A third policy actor described the attempt to initiate "green revolution" in Nigeria. He noted how the plan became tailored not to achieve the maximum benefit, but to satisfy the interests of a subset of the actors involved, which then led to the failure of the plan. The policy actor concluded that wrong policies and policy inconsistencies were the "*bane of the country*". He subsequently emphasized that the government needed to be decisive, policymakers needed to convene and deliberate on the issues, and policies needed to be contextualized to the prevailing circumstances in different parts of the country. Lastly, a policy actor referred to the attempts by the government to institute an environmental sustainability policy. The policy was reported to include addressing desertification by planting trees. However even where the trees were reportedly planted, more trees than those planted were being cut down for cooking fuel because the government had not provided "*alternative means of energy [such as electricity] to cook their food*", and the other types of cooking fuel available were not affordable. Hence, the issue of

desertification remained. Thus if NCDs is to be successfully addressed, the policymaking process would need to ensure that the recommendations are feasible within the context of people's daily lives.

The summary of the lessons learned from these past policy experiences is that the availability of champions, government intervention, prioritization of preventive activities, public enlightenment and social mobilization, private sector regulation and monitoring, and contextually realistic interventions are likely to be very critical for achieving effective action on NCDs in Nigeria.

Other reactions from interview phase 3

Apart from the recommendations to address NCDs, several policy actors reacted to the information presented on the changes in children and women nutritional status in Nigeria. A number of the policy actors remarked that they trusted data from the DHS, and that the data from the women was plausible, but they found it very difficult to accept that overweight in children had increased. They acknowledged the high prevalence of undernutrition among the poorest children, and the high prevalence of overweight among the richest children; but they were very puzzled, and some even skeptical, about the high prevalence of undernutrition among the richest children, and the significantly increased prevalence of overweight among the poorest children.

Nevertheless when asked if undernutrition and overweight could be addressed simultaneously without negative consequences on one or the other, all of the policy actors answered in the affirmative. Policy actors perceived that with holistic, appropriate and targeted public education, people could be taught how to achieve an adequate diet and not be undernourished or

overweight. The actors noted that health workers currently delivering messages about reducing undernutrition could also include messages about preventing/reducing overweight. One policy actor did perceive that achieving "*an integrated strategy…… is easy to say, but is a little bit hard*", while another perceived that poverty could be a barrier to the effective adoption of the messages. A third actor perceived that NGOs that could effectively lobby, and funds for implementation, would be mandatory for such an integrated approach to be actualized.

In the words of the participants, "*Both of them are considered as malnutrition……, and they occur together in the same communities.*" "*…we can have a holistic approach to both. So at the time you're talking to the mother about exclusive breastfeeding for the first 6 months of life, and then you're also talking to her about the right complementary feeding, you can also talk to the same woman about her own obesity. You can talk about the right food to cook for herself and her husband. You don't need two separate interventions for her to go home and come back and learn on another day.*" "*It's easy to do. It's a matter of health promotion.*"

4.4. Discussion

The purpose of this paper was to assess the strategic capacity for NCDs in Nigeria. Earlier research had shown that limited actor power was a major reason for little policymaker attention to NCDs despite its known importance (Adeyemi et al., unpublished manuscript 2). Strategic capacity is the ability of individuals and institutions to envisage future outcomes for an issue; develop a consensual approach for achieving these outcomes; and ensure that all stakeholders concerned with the issue know and are committed to performing their roles (Pelletier et al., 2011). Strategic capacity is thus a key determinant of actor power, and its study could identify

the critical gaps that would need to be addressed to garner support and commitment for an issue. Since strategic capacity was likely to be an unknown construct to the policy actor participants, it was assessed by asking the policy actors indirect questions about the challenges and enablers for advancing the NCD agenda and then analyzing their responses in relation to the various components of strategic capacity.

Strengths and Limitations

This study is the first known study that explicitly examines strategic capacity for NCDs, whereas other studies assessing capacity for NCDs (Alwan et al., 2001; WHO, 2007; Alwan et al., 2010; WHO, 2011) have focused on the operational capacity for achieving the recommendations. This study asked questions that participants could identify with, using a semi-structured interview guide that provided uniformity in technique while allowing unrestricted responses. The technique appeared to be successful in avoiding social desirability bias in relation to strategic capacity; however, it required the researchers to make inferences about the current state of strategic capacity rather than direct questioning concerning the various components of strategic capacity. It is unclear from this study how participants may have responded if they had been questioning more directly.

Furthermore, this study was not designed to provide the percentages of participants who held a particular view concerning the various research questions. Moreover, not all of the policy actors expressly responded to all of the questions. Hence, the results provide what might be considered the aggregate perspectives of the policy actors about the questions, which might only become a shared perspective if the actors have extended opportunities to discuss these issues in the context

of formulating strategies to address NCDs. Another potential limitation of the study was that the pictures shown to policy actors to depict the international recommendations were biased towards an urban setting. In an effort to minimize the bias from this source, policy actors were directly asked about NCDs in rural areas, to reveal possibly overlooked information.

Views of the problem, causes, consequences and solutions

The interviews showed that the policy actors were able to perceive several causes and consequences of NCDs. These causes included factors that may disproportionately affect the rural areas, such as poverty and inadequate availability of access to health services, as well as factors that may disproportionately affect the urban areas, like physical stress from traffic congestion. Less than half of the participants were from the health sector and their perceptions of the contributory factors to NCDs appeared to be grounded mostly in anecdotes, media exposure, and experience rather than scientific knowledge. However, the immediate factors they identified included three of the four major risk factors for NCDs (Figure 4.2.). Stress also was a very important contributory factor for many of the policy actors, but this factor is not explicitly mentioned in most of the scientific literature about NCDs.

When asked in an unprompted manner to suggest actions for addressing NCDs, the policy actors again perceived many of the recommendations contained in the scientific literature. They also perceived that a policy and strategic plan of action was necessary for effective action on NCDs, as also stated by the WHO and other global authorities (WHO, 2005; Adeyi et al., 2007; IOM, 2010). The primary policy instrument suggested was an increase in public awareness and education about NCDs. This suggestion is again similar to other reports (Gaziano et al., 2007),

which observe that public education about the risk factors for NCDs might lead to reasonable declines in incidence of NCDs in LMICs where knowledge about NCDs is low. Other suggestions by the policy actors in our study, which are similar to those in existing literature (Reddy et al., 2005; Jamison et al., 2006), included improvements in health infrastructure, increase in availability and access to health services, training of health workers to provide services related to NCDs, regulation of dietary components that may increase the risk of NCDs, and food labeling.

When prompted to comment specifically on the international recommendations for NCDs, the policy actors identified a large number of contextual issues that would need to be addressed before the recommendations could be fully relevant, as well as revisions to the recommendations that would be necessary for them to be effective in Nigeria. Some of these contextual issues were NCDs-specific, others were generic, including a mix of political, societal, system-level, and operational issues. Based on the objectives of this paper however, the rest of this discussion focuses on aspects that are related to strategic capacity.

The current state of strategic capacity in Nigeria

Although a few elements of strategic capacity appear to exist, it does not appear to be harnessed as such. The responses of the policy actors seem to reflect their collective ability to envisage a long term approach to an issue. However, this collective ability, as well as every other element of strategic capacity, needs coalitions for the policy actors to pool their knowledge, expertise and resources. Such coalitions do not appear to exist.

Indeed, the many of the challenges reported by the policy actors highlight the need for strategic capacity. For instance, the inability of the NCDs program of the FMOH to produce a NCD policy and plan of action, after 20 years of existence, indicates a lack of strategic capacity. From the responses of the policy actors and other documentation, there have been several political opportunities for this program to formulate a NCDs policy and get it ratified. A past President of Nigeria had been informed about the development issues related to NCDs, and he made internationally public statements pledging to address NCDs (WHO, 2005) at least two years before handing over power, yet, it was reported that the bureaucratic policymakers working on NCDs did not follow-up on his pledge. More recently, a national strategic health development plan (NSHDP) for 2010 – 2015 was developed for Nigeria (FMOH, 2010), and was disseminated to all the states in 2011. Even though the Nigerian health situation analysis in this document mentioned that NCDs were a serious problem, NCDs were not explicitly included anywhere else in the plan. One policy actor who had been in the meetings where the NSHDP was finalized discussed this and stated that part of the reasons why NCDs received so little attention in the document was because there had been no advocate for it in any of the meetings. Although having a champion for NCDs does not mean that strategic capacity exists (because leadership is just one component of strategic capacity), the lack of a champion for NCDs is further proof that strategic capacity for NCDs is limited.

Additional evidence of the lack of strategic capacity is the limited networking, collaboration, and coordination that exists in the system, and is likely to exist for NCDs. The policy actors' discourse about networking and coordination reveals that the opportunities for consensus building and brokering conflict, a key element of strategic capacity, are limited within and across

institutions. Furthermore, the advocacy gaps highlighted by policy actors indicate limited strategic communication, another element of strategic capacity.

Suggestions for building strategic capacity

Some of the elements of strategic capacity highlighted in this paper have been underscored as necessary in other literature about NCDs, even though the term 'strategic capacity' was not used. In describing actions necessary for reducing cardiovascular disease (CVD), the 2010 publication by the IOM on this subject stated that "there is a need for focused leadership and collaboration centered on clearly defined goals and outcomes" (IOM, 2010: 2). Other authors (Beaglehole et al., 2011b: 449) noted that "long-term success [in acting on NCDs] requires inspired and committed national and international leadership". However, Epping-Jordan et al. (2005: 1670) best described the need for strategic capacity in addressing NCDs, when they provided a list of six factors that have been associated with successful action on NCDs. These six factors included: a community of actors who commit to needs assessment, advocacy, and the development of a national policy and plan; reiterative consultation on the policy with diverse stakeholders, until the policy is approved; the use of a "consistent and compelling communication strategy" at each stage of the policy process; and "clarity of vision on a small set of outcome-oriented objectives".

Building strategic capacity has to be purposive and planned, like any other form of capacity building. Based on the findings of this study, as well as the reports from other literature, several factors can be expected to be useful for building strategic capacity. The first thing that appears to be necessary for building strategic capacity is leadership. The sort of leadership (Mintrom, 2000; Shiffman, 2007) needed for strategic capacity involves passion for the issue; a vision of desired

outcomes, knowledge about of how to achieve these outcomes, and what stakeholders should be involved. Leadership should also include the ability to motivate other stakeholders, and build coalitions, as well as integrity to facilitate trust, and for fund raising. An understanding of the political and social context and a flexible schedule that allows time for performing roles are likewise essential for effective leadership. In addition to leadership, a fundamental requirement for building strategic capacity is the availability of fora where the coalitions (made up of multisectoral stakeholders) can deliberate to achieve the other elements of strategic capacity. Such fora require conducive physical space and time, and aligned schedules. As a matter of course, the coalition would need to create a structure to organize their activities. This structure should include institutional arrangements for participation; the assignment of roles and responsibilities; mechanisms for accountability and brokering conflict; protocols for training; anticipation of membership turn-over and how to handle this; among other issues. Furthermore, like any other form of capacity building, building strategic capacity would require funding and technical assistance. While the need for building other forms of capacity (e.g. technical, monitoring and surveillance capacity, financial capacity, and infrastructural capacity) has been highlighted (WHO, 2007; Alwan et al., 2010); the need to build strategic capacity has only been implied through the discourse on the need for leadership for NCDs. Development partners and donors need to realize that strategic capacity can be conceptualized as a separate form of capacity rather than one embedded in and addressed in an incidental way when specific projects or initiatives are created. Donors also need to realize that strategic capacity must be built, and plan for it, fund it and help countries institutionalize it.

4.5. Conclusion

Policy actors overwhelmingly acknowledge the importance of NCDs and that the national government needs to lead activities to address the issue. However, the current health system is inundated with many other problems and the process of integrating NCDs into the system appears daunting. There have been several enabling factors and opportunities for advancing the NCD agenda and many more can be created. Creating and harnessing these opportunities, and overcoming systemic challenges, requires strategic capacity. Strategic capacity can facilitate the coalescence of expertise, bureaucratic and political savvy, interests and power, boundary-spanning networks and other resources needed for a coalition of stakeholders to achieve a common, agreed-upon outcome. Successful and sustainable action for NCDs hinges upon this capacity and systematic efforts are needed to plan for and strengthen these capacities.

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Chapter 5

Who is undernourished and who is overweight in Nigeria?

Abstract

The rising prevalence of overweight and obesity in low and middle income countries has been documented, but the development of appropriate policy responses requires an understanding of the geographic and social distribution of these conditions in relation to that of undernutrition. This need is especially great in countries with marked social, cultural and economic diversity. This study examined the distribution of undernutrition and overweight in women and children in Nigeria. The anthropometric status of 27,304 women 15-49 years and 18,893 children 0-59 months in the 2008 Nigerian Demographic Health Survey was examined using complex survey design in Stata 12.1.

In general, undernutrition in women and children was higher in the three northern regions, overweight in women was higher in the three southern regions and child overweight was similar across all six regions. Also, undernutrition in women and children was inversely associated with wealth quintile in all six regions, overweight in women was positively associated with wealth quintile in all six regions, and child overweight was not associated with wealth quintile in any of the regions. Further examination revealed that a higher prevalence of overweight among stunted poor children was responsible for the lack of association between child overweight and wealth quintile. Relative to other Sub-Saharan African countries, Nigerian subpopulations, including the poorest children, had a higher prevalence of both undernutrition and overweight.

5.1. Introduction

Overweight is a precursor of obesity, which is an indication of likely excess body fat (WHO, 2000), and a primary risk factor for noncommunicable diseases (NCDs) as well as a disease in itself (Formiguera & Cantón, 2004). Although low and middle income countries (LMICs), such as Nigeria, still have a high prevalence of undernutrition and infectious diseases, a significant burden of overweight/obesity and NCDs are increasingly being documented in relation to these countries (WHO, 2005; Adeyi et al., 2007; IOM, 2010). Indeed global health authorities have noted that LMICs are experiencing a double burden of malnutrition and disease (double burden), and need to simultaneously address both forms of malnutrition and disease (WHO, 2005; Beaglehole et al., 2007; IOM, 2010). These authorities further state that nutrition and health delivery systems should not be developed vertically to tackle each form of the double burden as a stand-alone problem; rather delivery systems must be capable of addressing all forms of the double burden as a whole (Fuster & Voûte, 2005; WHO, 2005; IOM, 2010).

While the necessity of such holistic delivery systems may seem obvious in theory, it is difficult to achieve in practice. For instance, efforts to address undernutrition generally emphasize increasing the quality and energy density of foods, by increasing the fat content and the animal products in foods (Savage King & Burgess, 1993). On the contrary, reducing the prevalence of overweight/obesity requires decreasing energy intake and the consumption of fats, especially those from animal sources (Willett et al., 2006). Thus, there are situations in which efforts to reduce one form of malnutrition may adversely affect the other form. In fact, the experiences of several countries validate this concern. In Mexico a conditional cash transfer program designed to improve child growth and development amongst other factors, has been reported to have

increased the risk of overweight and obesity in adults as well as high blood pressure (Fernald et al., 2008). Likewise, Uauy & Kain (2002) documented that supplementary feeding programs to address child undernutrition in Chile inadvertently increased obesity in the children. Furthermore, Corvalán et al. (2008) report on school meal policy changes to reduce obesity in Chilean children which appear to have increased the prevalence of stunting. Similarly, Asfaw (2007) notes that Egyptian food subsidy policies lowered the prices of "energy-dense, nutrient-poor food items" relative to the alternatives, and likely contributed to the incidence of overweight and obesity in Egypt, and micronutrient deficiencies.

One way in which both forms of the double burden of malnutrition might be addressed, with minimal unintended consequences, is by effective targeting of certain aspects of policies and programs that address either form of the double burden (Gillespie & Haddad, 2001). Targeting refers to a decision about which subgroups of a population should be beneficiaries of a policy and identifying the policy instruments (programs, interventions) that would be most appropriate for implementing the policy (Mkandawire, 2005). Effective targeting thus includes determining which subgroups of the population are at risk of an outcome, identifying individuals and/or households who belong to that subgroup, and ensuring that these individuals/households, and not others, receive the benefits of the policy (Dubois, 2012). Typical types of targeting include targeting by income level, age, geographic location, or by individual characteristics (Gwatkin, 2000).

In this paper, we explore the potential utility of targeting policies/programs by economic status and geographic location in Nigeria, a country experiencing the double burden. Extensive literature exists about the relationship of income to the risk of undernutrition and overweight;

and how this relationship changes as countries move through the nutrition transition from a high prevalence of undernutrition to a high prevalence of overweight. Poverty is one of the basic causes of undernutrition (UNICEF, 1990; Osmani, 1997), and undernutrition is generally seen to decrease with income growth (Strauss & Thomas, 1998; Haddad et al., 2002). The relationship between income and overnutrition is however not so straightforward. Several studies (Sobal & Stunkard, 1989; Monteiro et al., 2004[a]; Monteiro et al., 2004[b]; McLaren, 2007) have shown that in countries with low levels of per capita income, obesity has a positive association with individual/household income, and the rich have a greater burden of obesity than the poor. However, this relationship changes direction when per capita income reaches a certain level. Thus at high levels of per capita income, obesity has a negative association with income, and the poor bear a disproportionate burden when compared to the rich. Monteiro et al. (2004[a]) found in a multicountry study of women that the poor started to experience a higher prevalence of obesity than the rich, when the gross national product (GNP) per capita reached about US $2500. This change in direction of the income-obesity association has been posited as a marker of the progression of the nutrition transition (Monteiro et al., 2004[c]).

In addition to the distribution of malnutrition (undernutrition and overnutrition) by income, environmental influences on food, health and care availability and accessibility mean that malnutrition is also often clustered by geographic region (Frongillo et al., 1997). One universal method of geographic targeting is targeting along urban/rural delineations (Gwatkin, 2000). For undernutrition, people who live in rural areas are more likely to be undernourished than those in the urban areas (Gillespie & Haddad, 2001). In LMICs, increasing urbanization has generally also been associated with higher rates of overweight (Gillespie & Haddad, 2001). However,

evidence from the U.S. shows that like income, this relationship may reverse at higher income levels (Lobstein et al., 2004).

Despite the potential value of targeting policies/programs by either income level or geographic location, identifying individuals who are at risk of undernutrition or overnutrition using either of these types of targeting in isolation can be very problematic. Previous reports (Pelletier & Msukwa, 1991; Pelletier et al., 1995; Gwatkin, 2000) have shown that these targeting types are not independent. Indeed as seen in the earlier remarks about overweight and income level, the relationship between malnutrition and income can be influenced by geographic location. Gillespie & Haddad (2001) similarly report income differences in the relationship between rural/urban residence and undernutrition. Therefore, to really ensure that the subgroups of a population that are at risk of undernutrition and overnutrition are correctly identified and targeted with policies, programs and interventions, it is important to understand the interrelationships in risk of these outcomes by income and geographic location.

Nigeria is the third of 24 countries that contribute 80% of the world's chronic undernutrition or stunting in children under five; has the second highest number of children under five with acute undernutrition or wasting; and has a significant proportion of low birth weight and child mortality (UNICEF, 2009). Nigeria is also one of the 23 countries that contribute 80% of the burden of NCDs in LMICs (Abegunde et al., 2007). These reports indicate that there is a double burden of malnutrition and disease in Nigeria that needs to be addressed. Nevertheless, it is not known whether this double burden exists in all geographic locations and income levels. This paper aims to provide this information. Specifically, the paper seeks to answer these questions:

1. Does the double burden of malnutrition exist in all geopolitical regions in Nigeria?

2. Is the association between income and overweight different in the geopolitical regions and urban and rural populations?
3. What population subgroups are most at risk of undernutrition and of overweight in each region?

5.2. Methods

Study population and sampling: Secondary data from the 2008 Nigerian Demographic Health Survey (DHS) were used to answer the research questions. The 2008 DHS was a nationally representative survey of over 36,000 households, also designed to be representative at the geopolitical and state levels (NPC & ICF Macro, 2009). A sampling frame from the 2006 Nigerian national census was used to select a representative sample, using a "stratified two-stage cluster design". In the 2006 census, each of the 774 local government areas (LGAs) across the 36 Nigerian states, as well as the Federal Capital Territory (FCT), Abuja, had been divided into localities, each of which was then subdivided into an enumeration area (EA). It was these EAs that were used as the primary sampling unit (PSU) of the DHS, and defined as a cluster. In the first stage of sampling, 602 rural clusters and 286 urban clusters were selected, and all the households in these clusters were listed and mapped. In the second sampling stage, "equal probability systematic sampling" was used to select 41 households from each cluster. Of the original 888 clusters selected, it was possible to conduct the survey in 886 clusters; using 34,070 households instead of the 36,800 initially planned, and the 36,298 selected. Among the selected households, 1654 households had been unoccupied, and 574 households were not available for interviews (non responses). The non response rate was similar in both rural and

urban areas. In the selected households, every woman 15-49 who had stayed in the household the night preceding the survey had been eligible for survey, whether or not she was a permanent member of the household. In half of the households, all men 15-59 years old who had stayed in the household the night preceding the study were eligible to be interviewed, regardless of whether or not they were permanent members of the household. Thus, 34,596 eligible women were identified, and 33,385 were included in the survey; while 15,486 of 16,722 eligible men were included in the survey. The survey was conducted from March to October 2008, including pretesting of the data collection instruments, sample selection, and interviews. Survey data was processed from July 2008 to February 2009, and the data became publicly available late 2009.

Data collection: DHS data was collected using pretested, trained interviewer administered, questionnaires. Interviews were conducted in contextually appropriate languages. Information was collected from each woman about fertility and reproductive health, child delivery, childcare and feeding practices, as well as household and environmental factors such as income level, education, occupation, sanitation and access to health services. Height and weight was collected for children under five years of age at the household level; women's height and weight was also collected. Men were interviewed about several sociodemographic issues, but their height and weight were not measured. All measurements were done by the trained interviewers, using standard protocols. All data were coded and standardized using similar methods. More details about the methods used for the DHS is published elsewhere (NPC & ICF Macro, 2009).

Data analyses: Data were analyzed using Stata 11.0 for Windows (Stata Corp. Inc., TX). The prevalence of undernutrition and overweight in the various subpopulations was obtained using the complex survey design. The complex survey design makes use of the household strata,

cluster, and sampling weights for geopolitical region and rural/urban location, to obtain unbiased, representative estimates and robust standard errors.

Child undernutrition was defined as stunting (chronic undernutrition) and wasting (acute undernutrition). Stunting was defined as height-for-age z-score (HAZ) less than minus two standard deviations of the reference population while wasting was defined as weight-for-height z-score (WHZ) less than minus two standard deviations of the reference population. Child HAZ and WHZ scores were determined using the 2006 WHO growth standards. Undernutrition in women was defined as body mass index (BMI) < 18.5 kg/m^2. For overnutrition, child overweight was defined as weight-for-height z-score (WHZ) greater than minus two standard deviations of the reference population. Overweight in women was defined as $25.0 \leq BMI < 30.0$ kg/m^2, and obesity was defined as $BMI \geq 30.0 kg/m^2$. As a result of small regional sample sizes of obese women by wealth quintile, the overnutrition indicators for women in this study were however collapsed into one overweight indicator - $BMI \geq 25.0 kg/m^2$. The definitions of undernutrition and overweight in children were based on other literature (UNICEF, 2009 and de Onis et al., 2007, for undernutrition and overweight respectively); while the definitions for women were based on classification by the WHO (2000). To assess the potential significance of the prevalence of malnutrition (undernutrition and overweight) in the various subpopulations, the Sub-Saharan African (SSA) regional prevalence for each indicator was used as a reference. The SSA prevalence of stunting, wasting, and overweight in children under five, in 2011, was 40%, 9% and 7% respectively (UNICEF et al., 2012). For women, no recent regional prevalence of underweight was found, but the age-standardized prevalence of overweight and obesity in women greater than 20 years old, in 2008, was about 30% and 11% respectively (WHO, 2012).

The particular subpopulations considered in the study were based on the region of residence, wealth quintile across and within regions, and rural/urban place of residence. To check the robustness of the relationship between wealth index and malnutrition, maternal/women's own education was substituted for wealth index, and the distribution of each form of malnutrition by maternal education was assessed. Education was used for this check because it was expected that income level would be correlated with education level. In addition, it has been shown that stunting increases the likelihood of overweight because at any given weight, shorter children are more likely to be overweight than children of normal height (Popkin et al., 1996). Thus, the relationship between stunting and overweight was assessed to see if there was a differential prevalence of overweight by stunting status.

Eligibility criteria: For children, the height and weight of 19,896 children were measured, however, children without height, weight, or age information are excluded in the DHS children data. Children with HAZ less than –6 or greater than +6 or WHZ less than –4 or greater than +6 were excluded from the data, because these scores were considered implausible. Children whose mothers were dead and foster children had also not been included in the children data (Rutstein & Rojas, 2006). Thus, the study was based on 19,010 children. For nutritional status comparisons stratified by region and urban/rural place of residence, de jure region and place of residence was used for stratification, rather than de facto region and place of residence. De facto region/place of residence was the region/place in which the participants surveyed were interviewed, and as was indicated earlier, individuals who had slept in survey households the night preceding the study, even if they were visitors, were considered de facto residents of that region/place. De jure region/place of residence was used to assess whether the region where the participants' were interviewed was their habitual region/place of residence. Thus to prevent

misclassification of regional and urban/rural exposure, this habitual residence was used. Consequently, 117 children were further excluded from all analyses involving regional or urban/rural stratification, leaving 18,893 children.

For women, the study included non pregnant women who were also more than two months postpartum of their last pregnancy. In the DHS women data set, a total of 32,462 women had both height and weight measured. However after initial calculations of BMI, 104 women with BMI less than 12.0 kg/m^2 or greater than 60.0 kg/m^2 were excluded from the final BMI data, as having improbable values (Rutstein & Rojas, 2006). Then 3,457 pregnant women were excluded, and 1251 additional women were excluded because they were within two months postpartum. Thus a final sample of 27,650 women was included in the study. For analyses stratified by region or urban/rural place of residence, a further 346 women were excluded because the regions/places where they were interviewed was not their de jure region/place of residence. The effective sample size for most of the women analyses in this study was therefore 27,304.

5.3. Results

This section first presents the national prevalence of undernutrition and overweight, in children and women, in different subpopulations without regional stratification. Secondly, the burden of undernutrition and overweight in each region is compared. Subsequently, the distribution of each form of malnutrition, by wealth quintile within each region, for children and women, is presented. For all of the results presented as graphs, the tables used in compiling these graphs are included in the Appendix, as well as the sample sizes for each cell. The description of the

prevalence of undernutrition and overweight by urban/rural residence, and by education level, as well as the actual data graphs and tables for the urban/rural and education level relationships are also included in the Appendix. It is important to note that all of the results are unadjusted.

Table 1 reports the overall prevalence of undernutrition and overweight in women and children in difference subpopulations. The table shows that overall, undernutrition in both women and children was inversely associated with increasing wealth quintile, increasing education, and urban versus rural place of residence. Overweight in women was positively associated with increasing wealth quintile, increasing education, and urban versus rural place of residence; while overweight in children did not appear to be associated with wealth quintile, education or place of residence. While undernutrition declined as wealth increased, it is important to note that the prevalence of undernutrition was quite high, even among the richest children, with 24% of them stunted, and 9% of them wasted. Although children whose mothers had tertiary education fared a little better than all other groups, 19% of them were stunted and 6% wasted.

Table 5.1. National prevalence of undernutrition and overweight in different subpopulations

	Child stunting (HAZ < –2)	Child wasting (WHZ < –2)	Child overweight (WHZ > +2)	Undernutrition in women BMI<18.5kg/m^2	Overweight in women BMI≥25.0kg/m^2
Wealth quintile					
Poorest	52.3	20.7	9.0	20.8	9.4
Poorer	48.9	17.4	8.5	15.1	13.5
Middle	41.7	11.8	9.0	11.4	19.1
Richer	33.6	9.6	8.5	9.6	25.2
Richest	24.0	9.1	9.0	6.7	37.9
Education					
No education	51.2	20.2	8.3	18.2	14.4
Primary	40.2	11.2	9.3	10.4	23.8
Secondary	28.7	8.3	9.1	9.6	23.8
Tertiary	19.3	5.8	9.6	4.5	40.7
Place of residence					
Urban	31.1	10.9	8.7	9.1	30.9
Rural	45.1	15.4	8.8	14.1	17.1
Total	40.6	14.0	8.8	12.2	22.1

Malnutrition by region

To assess whether or not the relationships observed at the national level were consistent across regions, the results were stratified by region.

Undernutrition was more prevalent in the Northern regions (Figure 5.1.). Indeed, the prevalence of stunting in the Northern regions was about 150% to 250% higher than that in the Southern regions. The prevalence of child wasting and undernutrition in women in the North East and North West was also roughly twice the prevalence in any of the other four regions. The North Central region had the lowest prevalence of all undernutrition in the North, while the South

West region had the highest prevalence of all undernutrition in the South. For all measures of undernutrition, the South East region consistently had the lowest prevalence of all the six regions. In Figure 5.2. however, it is seen that the regions with lower prevalence of undernutrition, had higher prevalence of overweight in women. The prevalence of BMI $\geq$ 25.0kg/m^2 was about 30% to 55% lower in the North East and North West than in the other four regions. The North Central region had the highest prevalence of overweight in women, among the Northern regions; while the South East region had the highest prevalence of overweight in women, across all six regions. On the contrary, child overweight did not seem to occur in any particular pattern. Indeed, it appeared that the prevalence of child overweight was almost uniform across all regions. It is important to add that, except in the North East and North West regions, the prevalence of overweight in women is higher than the prevalence of underweight.

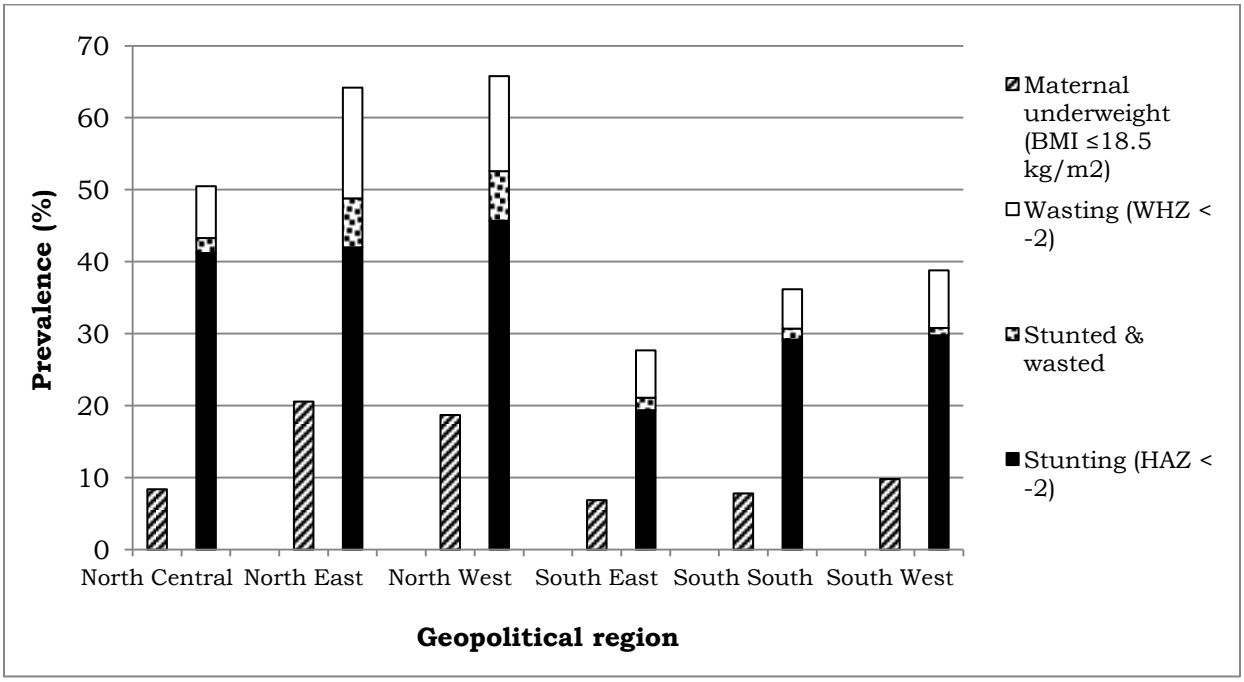

Figure 5.1. Undernutrition in children & women (2008), by region

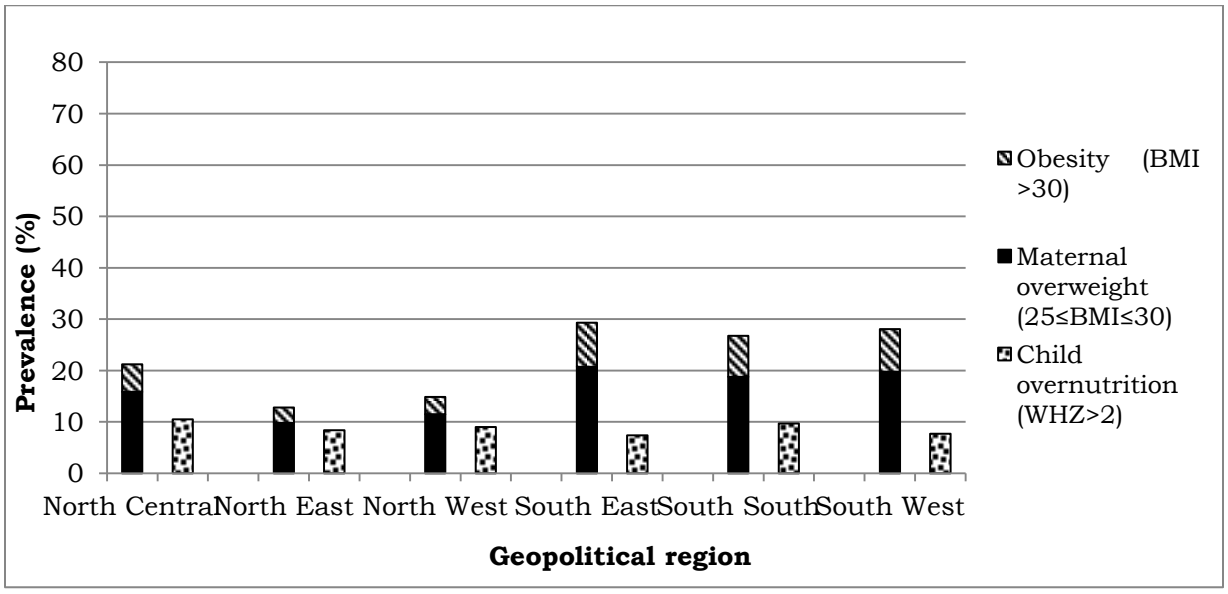

Figure 5.2. Overweight in children & women (2008), by region

Child anthropometric status by region and wealth quintile

The folowing graphs show the prevalence of stunting, wasting and child overweight in each region by wealth quintile, from the poorest to the richest. As regional comparison, the thick black horizontal line in each graph represents the Sub-Saharan African (SSA) prevalence of stunting (40%), wasting (9%) and overweight (7%) respectively, in children 0 – 59 months in 2011 (UNICEF et al., 2012).

In general, undernutrition in children was inversely associated with wealth quintile, however, to varying degrees. For stunting (Figure 5.3.), there is a sharp decline in the prevalence of stunting in richer wealth quintiles, relative to poorer ones, in the three Southern regions and the North Central region. In the North East and North West regions however, the differences in the prevalence of stunting between the rich and the poor is not very pronounced. Compared to the

SSA regional prevalence, all of the children in the North East and North West regions, including the richest, had a prevalence at or above the regional level. On the contrary, all of the children in the South East region, including the poorest, had a prevalence at, or below the regional level. In the North Central and South West regions, children in the richer wealth quintile and higher were below the SSA regional average, while in the South South, the prevalence of stunting was at the regional level at the poorer wealth quintile.

Regarding wasting (Figure 5.4.), with the exception of the richer children in the North Central region, all of the other subpopulations in the Northern regions were above the SSA regional prevalence for wasting, especially the North East and North West regions, where even the richest chldren had a wasting prevalence of about 18% and 15% respectively.The South South region was the only region where all of the subpopulations had a wasting prevalence under the regional wasting level, even if only slightly.

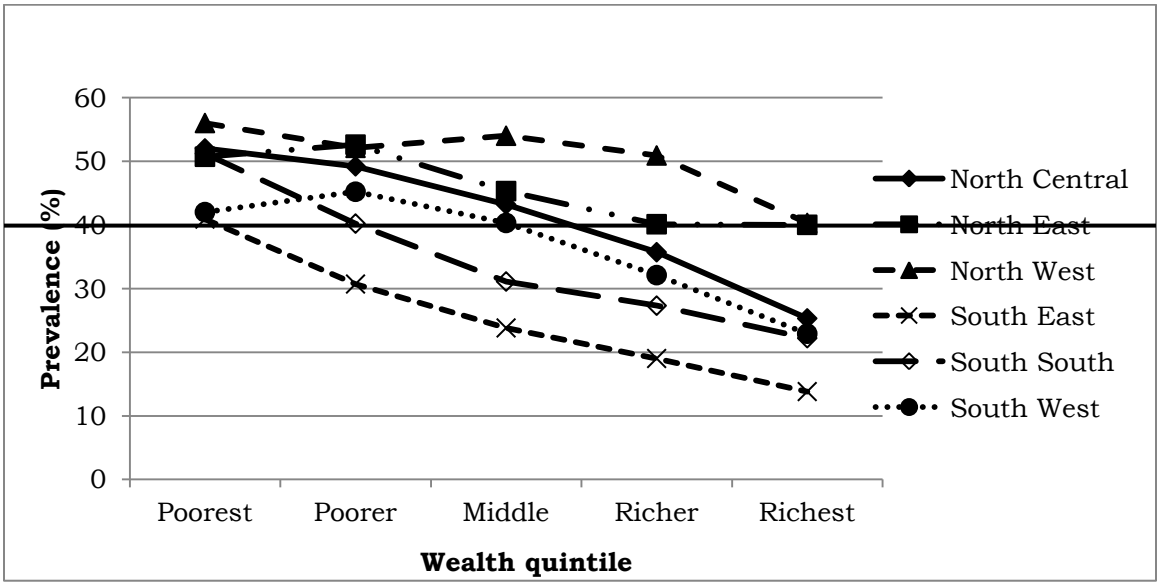

Figure 5.3. Stunting by wealth quintile by region (2008)

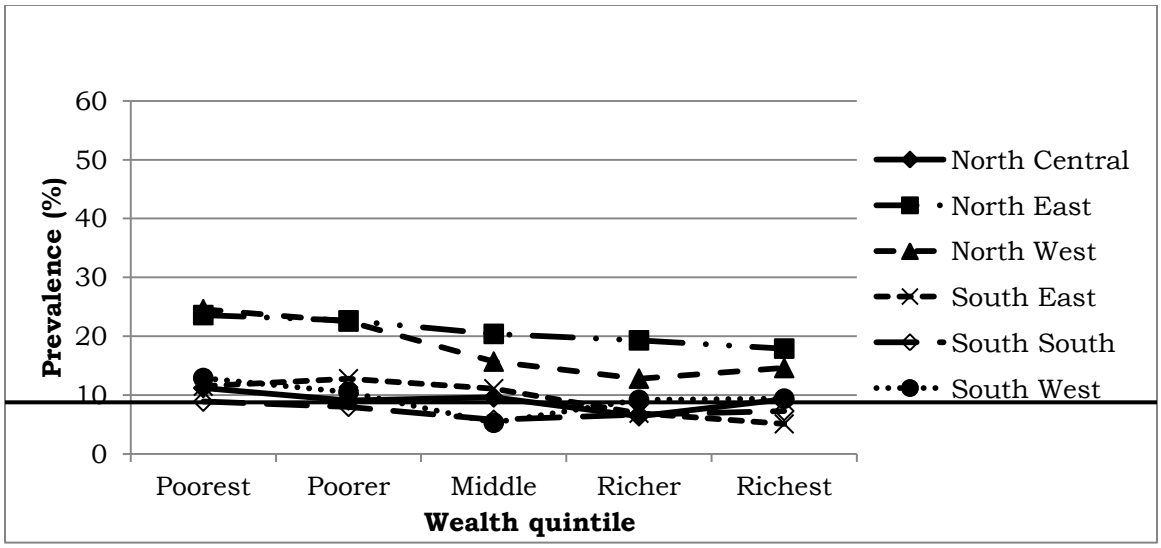

Figure 5.4. Wasting by wealth quintile by region (2008)

For child overweight (Figure 5.5.), there appeared to be surprisingly little variation among the wealth quintiles across the regions, and there was no clear pattern by wealth quintile in any region. In all regions and wealth quintiles, the prevalence of child overweight was similar to or greater than the average for SSA.

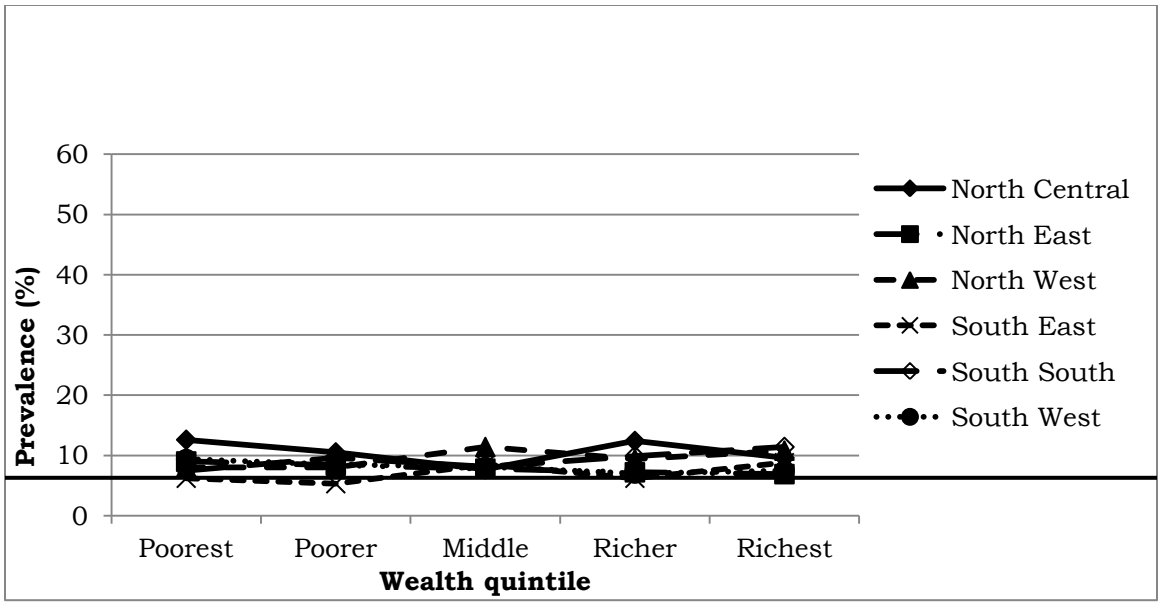

Figure 5.5. Child overweight by wealth quintile by region (2008)

When the national prevalence of child overweight in each wealth quintile was stratified by stunted versus not-stunted, interesting patterns emerged (Figure 5.6.). For instance, from the 9% of children that were overweight in the poorest quintile, 6.5% of them were also stunted, while only 2.5% were overweight but not-stunted. Generally, the prevalence of overweight among stunted children was inversely associated with increasing wealth quintile; whereas the prevalence of overweight among not-stunted children was positively associated with wealth quintile. This relationship is intuitively plausible. Since there is a higher prevalence of stunting among the lower wealth quintiles, but about equal prevalence of overweight in all quintiles; the odds that some children will have both conditions is higher in the group with the higher prevalence of stunting than in the group with the lower prevalence.

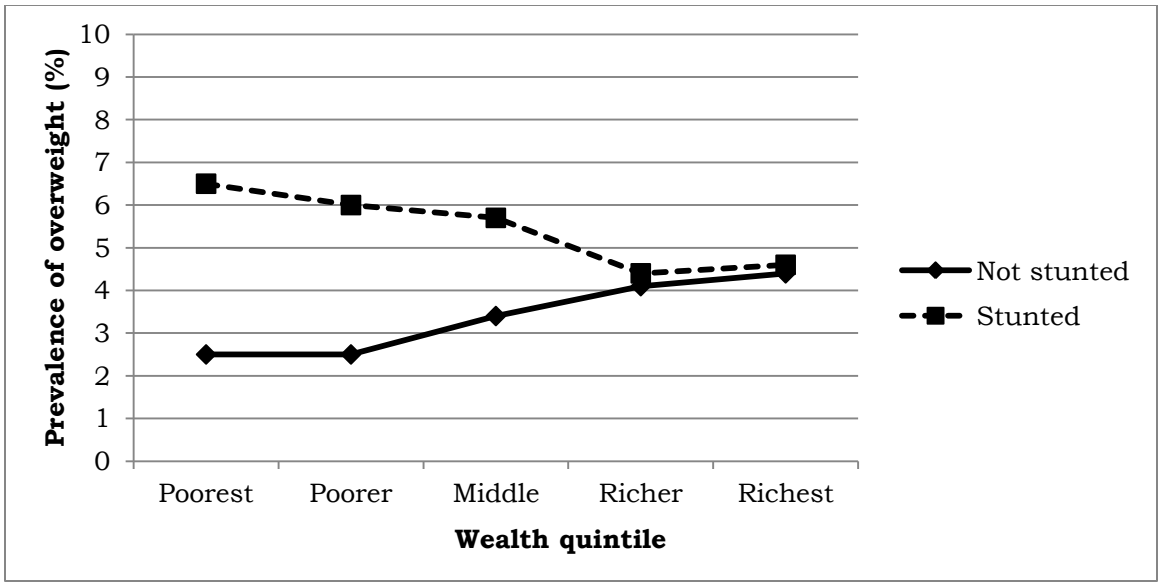

Figure 5.6. Overweight by wealth quintile (2008), stratified by stunting status

Women's anthropometric status by wealth quintile, by region

The relationship between wealth quintile and undernutrition and overweight was quite consistent in all regions (Figure 5.7. & Figure 5.8.). Undernutrition was inversely associated with wealth quintile and overweight was directly associated with wealth quintile. As at the year of this survey, 2008, there was no evidence that the richer subpopulations in any region were beginning to have a lower prevalence of overweight in women – a pattern that is expected to emerge as the nutrition transition progresses (Monteiro et al., 2004[c]). Compared to the SSA regional age-standardized prevalence of overweight, only the richest women in all the regions appear to have a higher prevalence than this level.

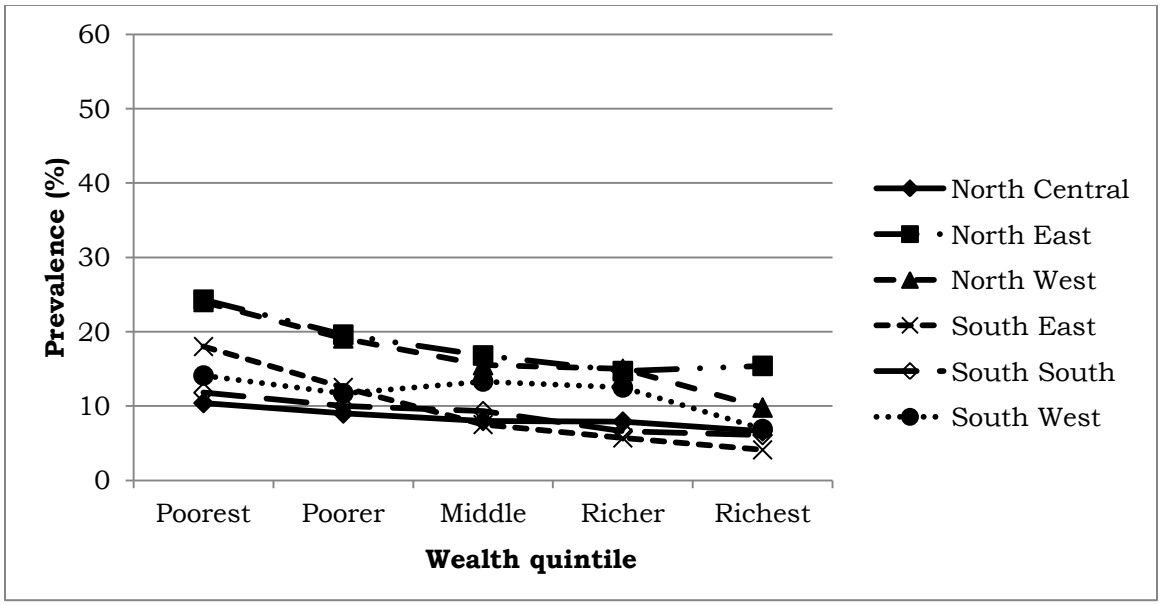

Figure 5.7. Maternal underweight by wealth quintile, by region (2008)

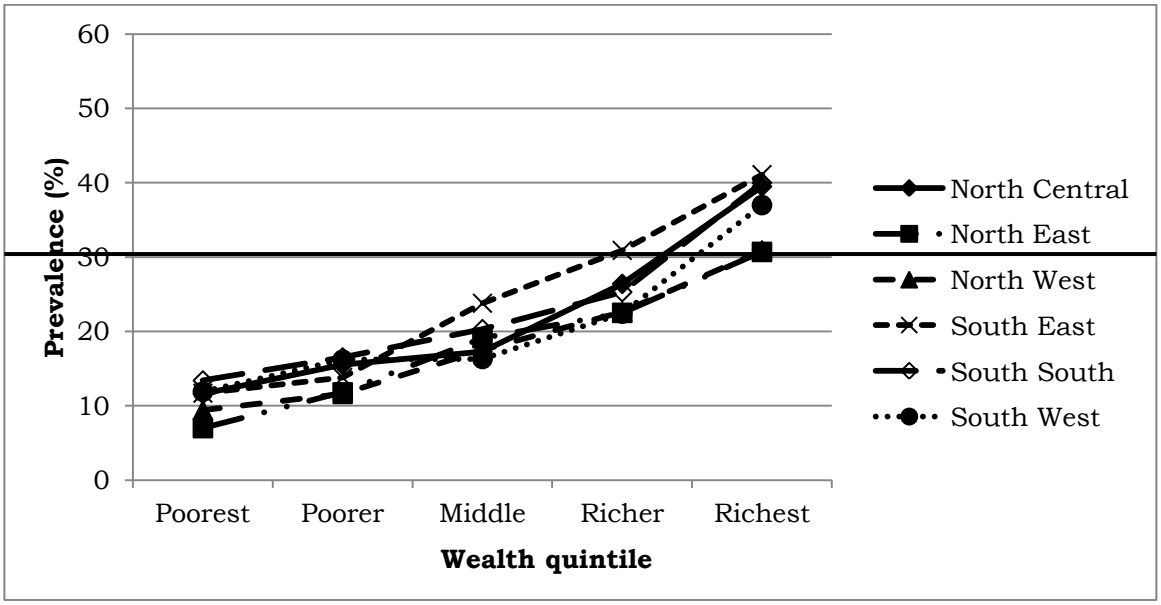

Figure 5.8. Maternal overweight by wealth quintile, by region (2008)

5.4. Discussion

This study assessed the distribution of undernutrition and overweight in Nigeria, stratified by region, as well as wealth quintile within region. The purposes of the study were to assess whether or not all Nigerian regions were experiencing a double burden of malnutrition (DBM), to assess if and how the relationship between malnutrition and income differed by region, and to identify the populations both at risk of undernutrition and overweight. The results showed that all geopolitical regions have notable prevalence of both undernutrition and overweight, but the relative importance of undernutrition versus overweight for a region varied across the regions. Regarding income, for undernutrition in women and children, belonging to a household with a higher wealth quintile had a protective effect, but this protective effect of wealth was far from complete. For overweight in women, but not in children, belonging to a poorer wealth quintile had a protective effect. Thus, the poorest children appear to be most disadvantaged for both undernutrition and overweight.

This study reported unadjusted prevalence, and so for instance, the observed relationship between wealth quintile and malnutrition could be due to a third variable (confounding). However, the aim of this study was to determine the absolute prevalence of each form of malnutrition within a particular subpopulation, and not to infer a causal effect of wealth quintile on malnutrition. This aim is best achieved using unadjusted prevalence. The study also did not take into account the fact that the age distribution of the undernourished and overweight children in each region may be different. Stunting becomes increasingly hard to address after 2 years of age (Bhutta et al., 2008), and the prevalence of stunting in children older than two years is usually higher than the prevalence in children under two years of age. Thus, the age

distribution could affect the relative prevalence of stunting, and by association, overweight. Still since the aim of this study was focused on the absolute prevalence of malnutrition in each region, and not the relative prevalence, the lack of adjustment for age is not expected to have affected the results or its implications.

Another potential limitation of this study was the fact that wealth quintiles were used to represent income level. The use of wealth quintiles which is an asset based measure, rather than income or expenditure data, has been criticized as being insensitive, and can mask significant variations in income level. However, in the context of LMICs like Nigeria, these wealth quintiles are the only practical measures and largely reduce measurement errors (Montgomery et al., 2000; Filmer & Pritchett, 2001; Minujin & Delamonica, 2003; Sahn & Stifel, 2003). Moreover the observed relationship between malnutrition and maternal/women's own education level (which is expected to correlate with true income levels (Braveman et al., 2005)), was similar to that observed between malnutrition and the wealth quintiles; thereby increasing the credibility of the results.

Thus, the results of this study have a number of important implications relating to the relationship between income level and malnutrition, the conceptualization of the nutrition transition, and the relationship between stunting and overweight.

Income level and malnutrition

As noted in the introduction, undernutrition has generally been seen to decline with increasing income (Strauss & Thomas, 1998; Haddad et al., 2002), and several reports (for example

Svedberg, 2006) advocate for poverty reduction as the way for reducing undernutrition. The results of our study also confirms that there is mostly an inverse relationship between increasing income, but the strength of this relationship appeared to vary from one region to another, and has implications for policies to reduce undernutrition by reducing poverty. In the North East and North West in our study, even though the prevalence of stunting and wasting decreased with increasing wealth quintile, the decreases were not as pronounced as those in other regions. The richest children in these regions still had a prevalence of stunting and wasting that was as high or even higher as the poorest children in some of the other regions. This indicates that increasing income in the North East and North West regions, on its own, is not likely to significantly reduce undernutrition even in the long term. Indeed, other studies have shown that the effects of income on undernutrition vary from place to place (World Bank, 2006; Gwatkin et al., 2007), implying an important role for effect modifiers such as feeding practices and health care (World Bank, 2006). Furthermore, the general prevalence of stunting and wasting among the richest children in our study was still higher than is acceptable. In a well-nourished population, it is expected that only about 2.3% of children would have HAZ or WHZ less than –2 (Rutstein & Rojas, 2006). This finding of high undernutrition among the richest children denotes that even though the poorest children are relatively at a higher risk and should receive significant policy attention, the richest children in this context are also not protected from undernutrition, and should not be assumed to be well nourished.

With respect to income and overweight, our results in women were similar to reports showing a direct relationship between income and overweight (Sobal & Stunkard, 1989; Monteiro et al., 2004[a]; Monteiro et al., 2004[b]; McLaren, 2007). The fact that no Nigerian region has seen the prevalence of overweight begin to decline with increasing income is also consistent with the

literature. As at 2011, the Nigerian GNI per capita in current US$ was about $1200 (World Bank, 2012) which is less than the US $2500 posited by Monteiro et al. (2004[a]) as the income level at which the relationship between income and overweight in adults to change. While it might be expected that the GNI per capita would vary from region to region, it is likely that across region variation is not as significant as within region variation, resulting in little variation in GNI across regions. Regarding the relationship between income and child overweight, the results were not at all as expected. It was expected that there would be evidence of an inverse relationship between income and child overweight, whereas the immediate results showed that no evidence that income is associated with child overweight. Although when the results were stratified by stunted and not-stunted status of the children, the expected relationship was observed between income level and overweight among not-stunted children; these results do not change the fact that the prevalence of overweight even among the poorest children is high, and as high as that in the richest children. These findings are worrisome because overweight is usually not considered in relation to poor and/or rural children in a LMIC like Nigeria. On the contrary, these children are considered severely deprived, and are the focus of numerous food supplementation interventions.

Stunting and overweight

A number of previous research have shown that there is a relationship between stunting and the risk of overweight (Popkin et al., 1996; Fernald & Neufeld, 2007), and this relationship may be due to biological, behavioral, or sociodemographic characteristics (Popkin et al., 1996; Uauy & Kain, 2002; Sawaya & Roberts, 2003; Fernald & Neufeld, 2007). Our study contributes to this

literature, in addition to being contextually specific for Nigeria, by providing evidence that stunting may remove income disparities in child overweight, by increasing the risk of overweight among the poor. This finding also means that if care is not taken, poorer children in LMICs like Nigeria may begin to experience a disproportionate burden of overweight when compared to richer children, because stunting can be resistant to intervention (Uauy & Kain, 2002) and the general prevalence of overweight is increasing. These findings also indicate that, as has been reported by other authors, (Uauy & Kain, 2002; Bhutta et al., 2008) there is a need for the nutrition community to revisit how stunting is addressed, particularly at child ages where the evidence shows little potential to benefit.

Rethinking the nutrition transition and the double burden of malnutrition

The nutrition transition in LMICs is often conceptualized as depicted in Figure 5.9., where there is a continuum from a high prevalence of undernutrition in a population, to a high prevalence of overweight, and the possibility of discrete populations which are affected by only one or the other. Indeed, most studies of malnutrition in LMICs focus on either undernutrition or overnutrition, rarely both. Even when the DBM has been studied at the population or household level, it has been studied as both underweight and overweight in women (Mendez et al., 2005), or overweight in women and stunting in children (Garrett & Ruel, 2005[a,b]; Khor & Sharif, 2003; Angeles-Agdeppa et al., 2003). Our study indicates that even in children, the DBM exits in all geopolitical regions in Nigeria. The prevalence of stunting, wasting, and overweight was high even in the poorest children within each region. These results signify that rather than the continuum seen in Figure 5.9., it may be better to conceptualize the nutrition transition and

DBM in terms of Figure 5.10. This figure represents a population-level recognition of the DBM (as described at the household level by Doak et al., 2005), in which children of the same age groups exposed to similar microeconomic and sociodemographic environments have developed seemingly opposing nutritional and health outcomes.

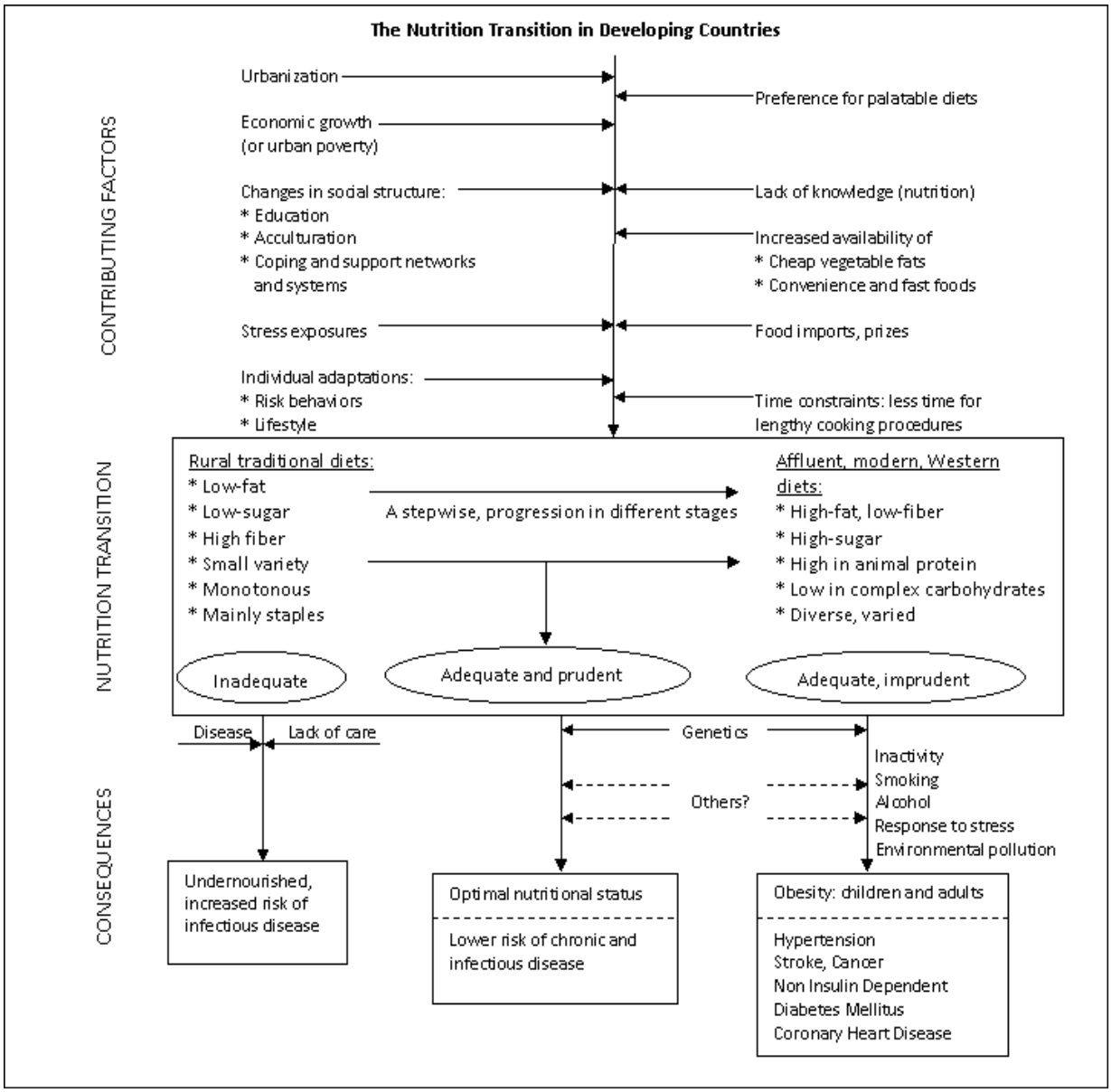

Figure 5.9. Schematic representation of the contributing factors to and consequences of the nutrition transition. Redrawn from Vorster et al., 1999

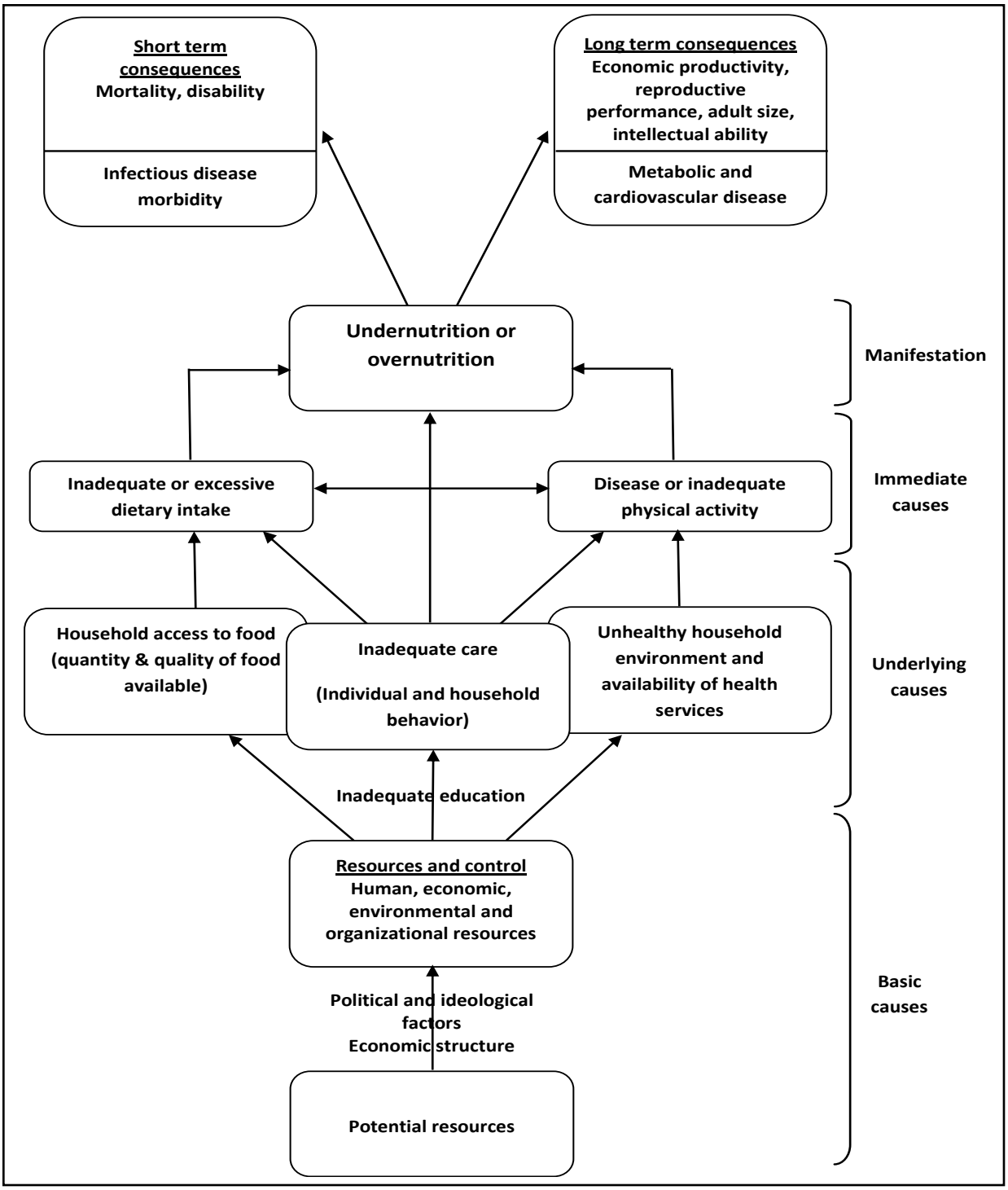

Figure 5.10. The conceptual framework of malnutrition revisited. Adapted from Haddad et al., 2004 and Black et al., 2008

Reframing the issue

As has been experienced in a number of countries, and as noted earlier, certain actions aimed at decreasing underweight might do so at the expense of overweight and vice versa. However, the larger issue of undernutrition and NCDs need not be considered in this manner. The "policy tradeoff" discourse has in fact focused on undernutrition and overnutrition as can be expressed by anthropometry. Yet, the causes of both these forms go well beyond calorie balance and therein lies the key to avoiding the supposed policy tradeoff. The nutritional basis for this is elaborated below.

In addition to the simple calorie-balance narrative, undernutrition can be examined in relation to micronutrient deficiencies and overweight can be examined in relation to the metabolic syndrome. Vitamin A, zinc, iron, and iodine deficiencies are important contributors to the global burden of undernutrition (Black et al., 2008) and these deficiencies also contribute to stunting (Branca & Ferrari, 2002; Rivera et al., 2003; Black et al., 2008). Further contributors to poor child weight and height, as seen in Figure 5.10., are illnesses such as malaria, diarrhea, pneumonia, which are the result of unsanitary environments (Black et al., 2008). These can be the focus of policy attention without incurring any risk of increasing NCDs. In a similar fashion, overnutrition in the sense of NCDs (rather than obesity alone) can be examined in relation to the excessive total dietary fats, saturated fats, trans-fatty acids, sugar, salt (sodium) and low dietary fruits and vegetables. Overnutrition is a major cause of the metabolic syndrome (Misra & Khurana, 2008) which (even in the absence of obesity) is an important mediator in the causation of several NCDs (WHO, 2004). The metabolic syndrome includes dysglycemia, dyslipidemia, hypertension, and similar conditions which result from the dysregulation of

metabolic processes that control blood glucose, lipids and blood pressure (Misra & Khurana, 2008). In addition to diet, poor physical activity also contributes to overweight/obesity and the metabolic syndrome (WHO, 2005). Impaired fetal, and early childhood nutrition are other factors which have been shown to increase the risk of the metabolic syndrome and NCDs in adulthood, as a result of changes in the hormonal axes that regulate growth and lasting structural changes that may increase the susceptibility to metabolic stress (Delisle, 2002).

In light of these considerations, and as discussed in other publications (such as SCN, 2006), undernutrition and overnutrition can be addressed simultaneously, with minimal tradeoffs, in a number of ways. These ways include the following. First, diets high in fruits and vegetables will simultaneously reduce micronutrient deficiencies as well as the metabolic syndrome. Second, addressing morbidity in children through improved sanitation, food safety, and health care services, will have a significant impact on undernutrition. Third, increasing physical activity will help in reducing obesity and NCDs and promote overall well-being. These and similar interventions which address the general nutrition and health of populations, rather than weight or other anthropometric measures per se, should be the focus of a holistic approach to address both undernutrition and overnutrition.

5.5. Conclusion

There is a double burden of malnutrition in Nigeria, and it exists in all subpopulations, especially the poorest. The results have serious implications for policies and programs to address either undernutrition or overnutrition in Nigeria. At the very least, policies that effectively reduce undernutrition without increasing overweight need to be instituted, but the

ideal situation will be to have policies that decrease undernutrition and overnutrition simultaneously. It is expected that the policy instruments to achieve such reductions will vary from region to region, and even from state to state. However, such policy instruments should include actions that address interventions like the three highlighted above – fruit and vegetable intake; improvements in sanitation and hygiene; and increased physical activity. Furthermore, it is not expected that reducing poverty, without any other intervention, will achieve much reductions in undernutrition in the North East and North West regions where the need is greatest. Additionally, ongoing programs to address nutrition in children would (as suggested by Uauy & Kain, 2002) need to track stunting and overweight, in addition to whatever other indicator is being monitored, to ensure that the program is not increasing overweight.

In general, the challenge is great for the nutrition community. Even though countries have the major role to play in reducing both undernutrition and overweight in their population, the nutrition community needs to provide them with the tools to be able to effectively do so. Figure 5.10. is a reminder that malnutrition, be it undernutrition or overweight, is a complex phenomenon that occurs at multiple levels of causation. The relationships between the different levels of causation are in many ways still unclear for both undernutrition and overweight, and having both occur in the same population greatly magnifies the complexity. The first challenge will be to identify how the three interventions – fruit and vegetable intake; improvements in sanitation and hygiene; and increased physical activity – among others, should be implemented in different subpopulations to produce significant reductions in both undernutrition and overnutrition. Still, the numerous ongoing nutrition programs around the world provide an opportunity to better understand the dynamics among these sociodemographic and behavioral

environments, and the development of overnutrition and undernutrition within the same subpopulation.

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APPENDIX

Malnutrition by urban/rural place of residence

In general, the relationship observed between undernutrition/overweight and urban/rural place of residence in each region, was similar to the relationship between these indicators and place of residence at the national level. Again, undernutrition in both women and children was mostly inversely associated with urban versus rural place of residence, while overweight in women was positively associated with urban versus rural place of residence. The differences were that in three regions, the North Central, South South and South West regions, there appeared to be no association between wasting and urban/rural place of residence. Regarding overweight in children, like the national level assessment, there did not appear to be an association with place of residence, but only in four regions. In the North East region, there appeared to be a slight inverse relationship between urban residence and child overweight, while in the South South region, this relationship appeared to be a slightly positive one.

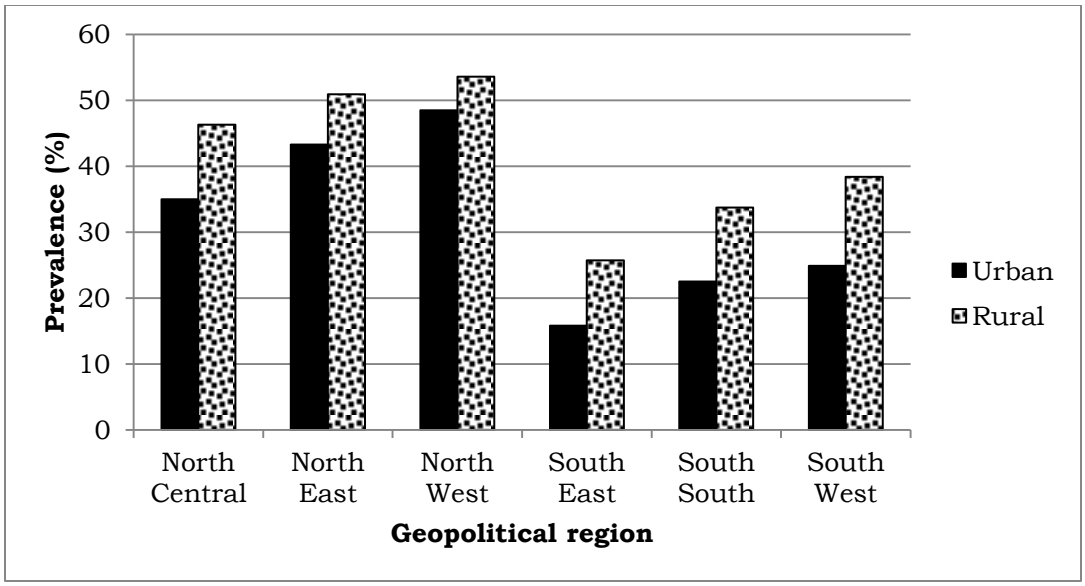

Figure 5.1 A. Prevalence of stunting by region and urban-rural place of residence (2008)

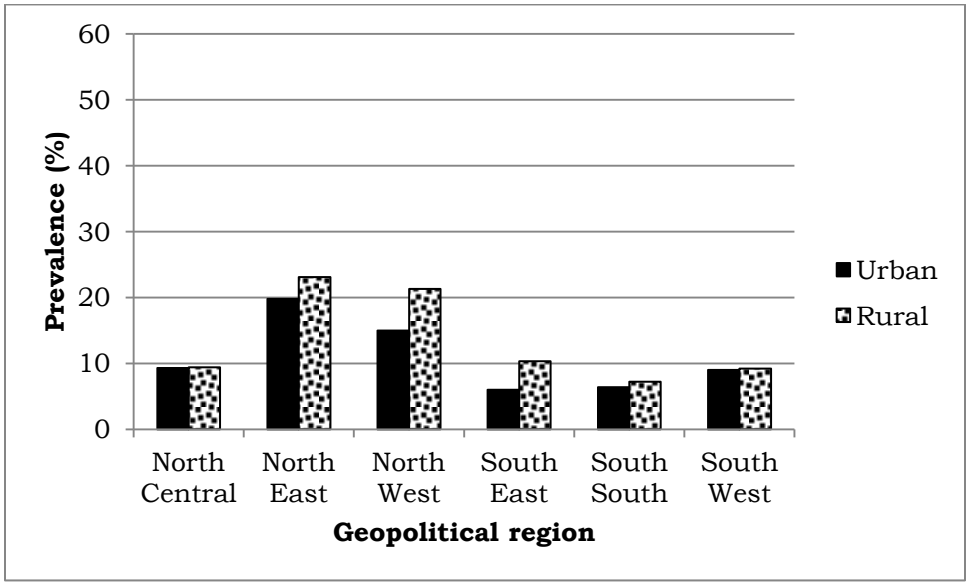

Figure 5.2 A. Prevalence of wasting by region and urban-rural place of residence (2008)

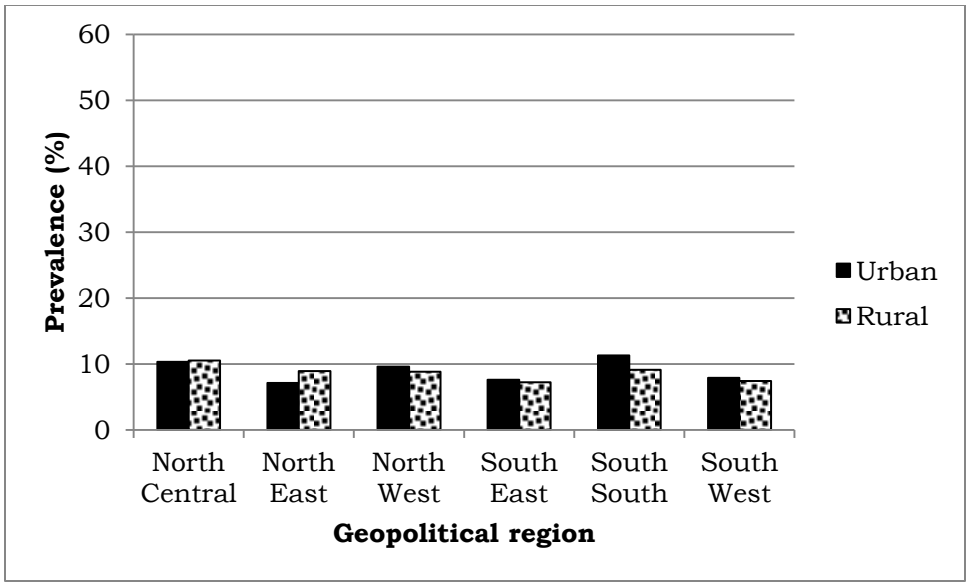

Figure 5.3 A. Prevalence of child overweight by region and urban-rural place of residence (2008)

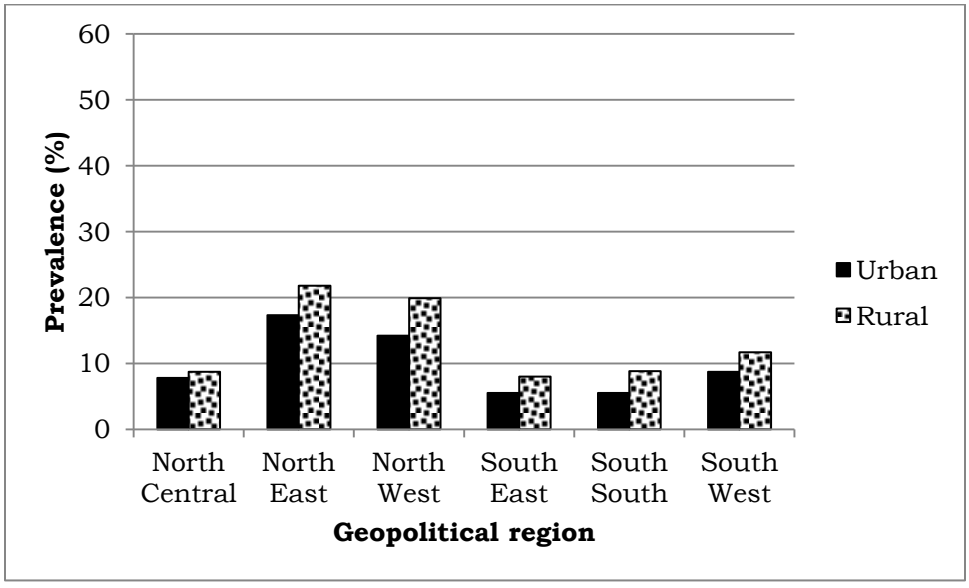

Figure 5.4 A. Prevalence of underweight in women by region and urban-rural place of residence (2008)

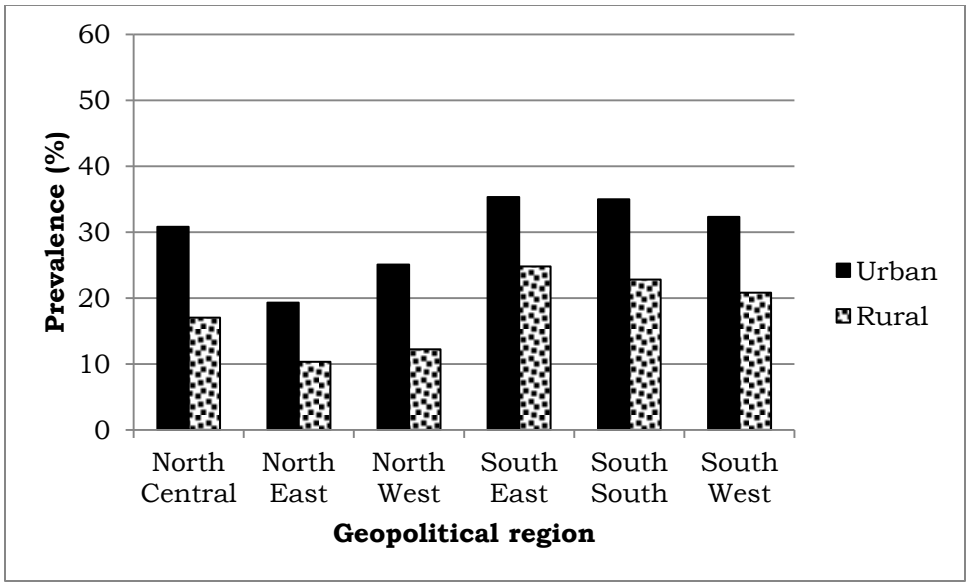

Figure 5.5 A. Prevalence of overweight in women by region and urban-rural place of residence (2008)

Malnutrition by maternal/woman's own education level

The relationships between malnutrition and education in each region were mostly comparable to the results using wealth quintiles. The major differences between the malnutrition by education level graphs, and the malnutrition by wealth quintile graphs were in children. For stunting, the inverse relationship with increasing education level appeared much more distinct in all regions, including the North East and North West regions; than the relationship of stunting with increasing wealth quintiles. Also, for child overweight, there seemed to be a slight positive relationship with increasing maternal education level, in three regions.

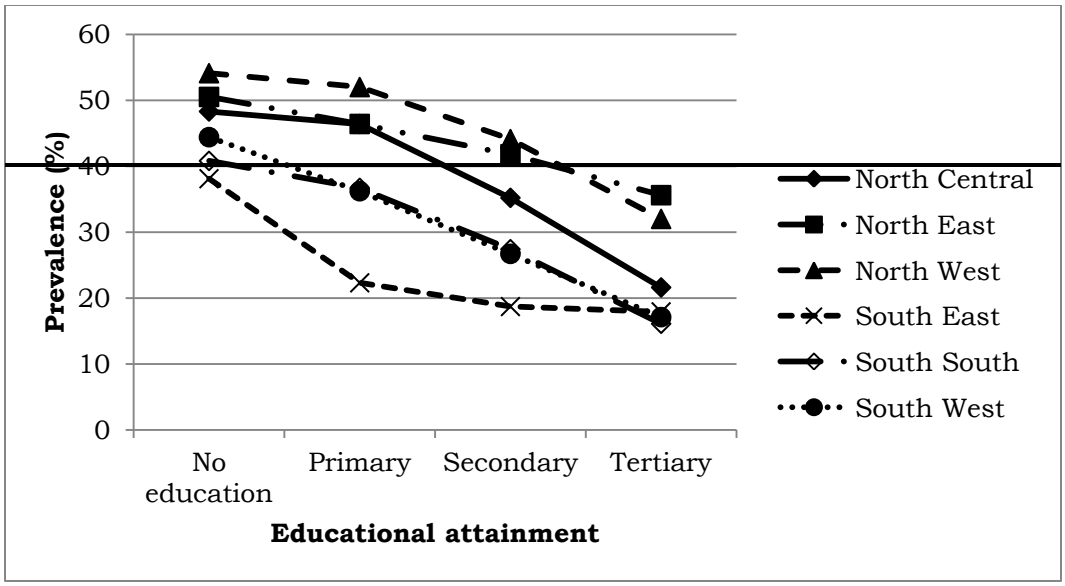

Figure 5.6 A. Prevalence of stunting by region and maternal education (2008)

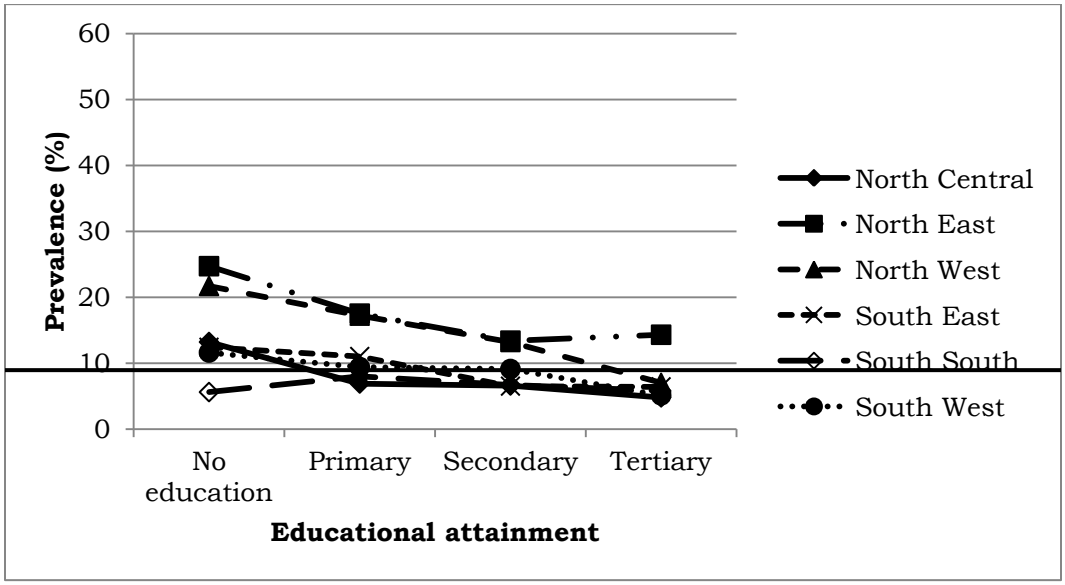

Figure 5.7 A. Prevalence of wasting by region and maternal education (2008)

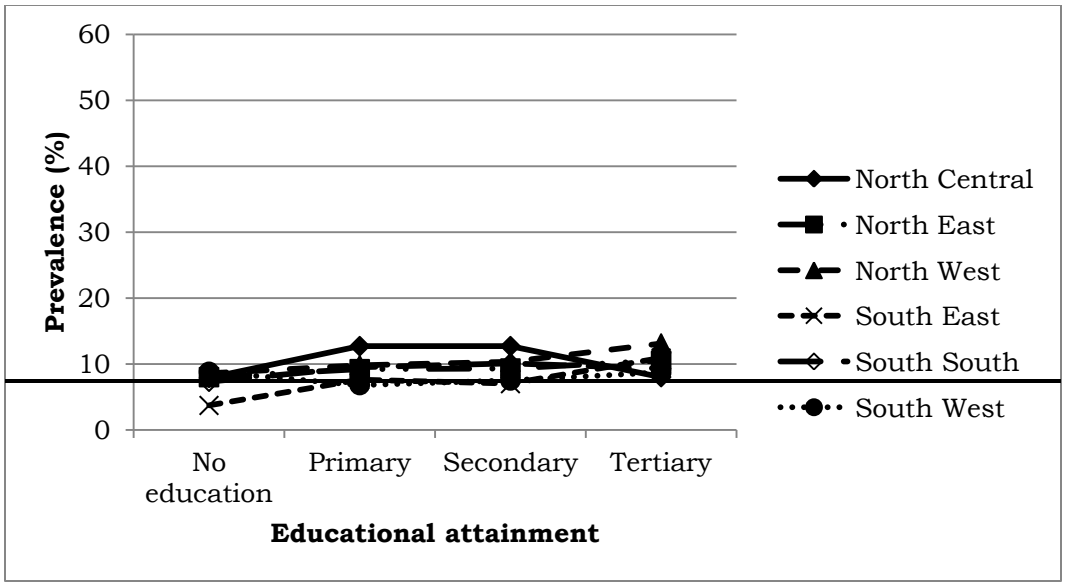

Figure 5.8 A. Prevalence of child overweight by region and maternal education (2008)

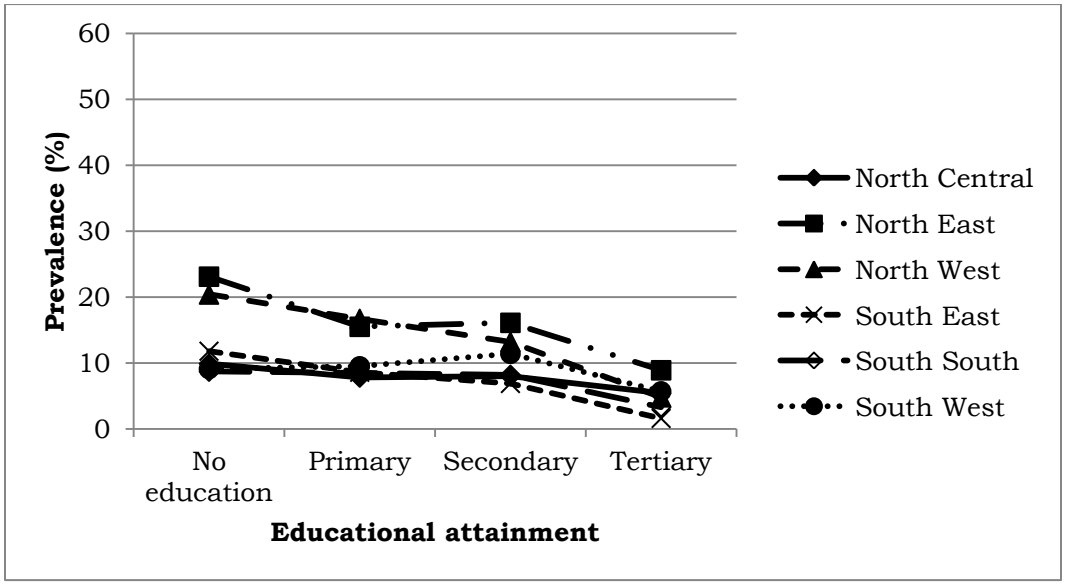

Figure 5.9 A. Prevalence of underweight in women by region and education status (2008)

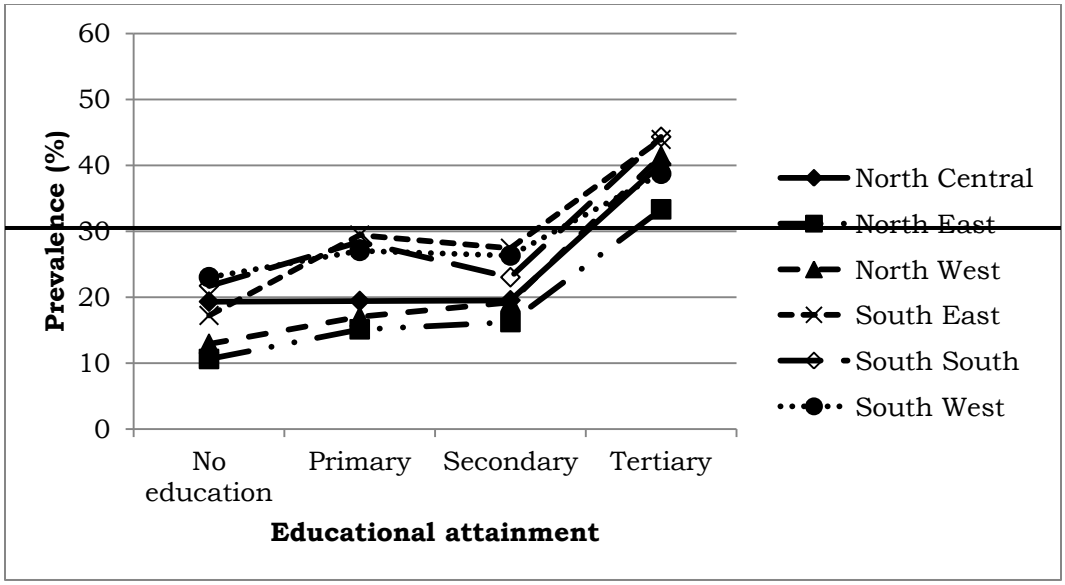

Figure 5.10 A. Prevalence of overweight in women by region and maternal education status (2008)

Prevalence of malnutrition by region and wealth quintile

Table 5.1 A. North Central: Nutritional status by wealth quintile

	Child stunting	**Child wasting**	**Child overweight**	**Underweight in women ≤18.5 kg/m^2**	**Overweight in women ≥25.0kg/m^2**	**Obesity in women ≥30.0kg/m^2**
Poorest	52.0	11.2	12.6	10.4	11.6	1.8
Poorer	49.2	9.1	10.5	9.0	15.5	2.6
Middle	43.2	9.6	7.7	8.0	17.3	3.5
Richer	35.7	6.4	12.4	7.9	26.4	6.5
Richest	25.3	9.3	9.6	6.6	39.5	13.9
Total	43.4	9.3	10.5	8.4	21.2	5.3

Table 5.2 A. North East: Nutritional status by wealth quintile

	Child stunting	Child wasting	Child overweight	Underweight in women ≤18.5 kg/m^2	Overweight in women ≥25.0kg/m^2	Obesity in women ≥30.0kg/m^2
Poorest	50.7	23.6	9.0	24.3	7.0	1.6
Poorer	52.6	22.7	8.4	19.6	11.8	1.9
Middle	45.3	20.4	7.8	16.8	19.1	4.8
Richer	40.1	19.3	7.2	14.7	22.5	6.6
Richest	40.0	17.9	6.9	15.4	30.7	9.9
Total	48.8	22.2	8.4	20.6	12.7	3.0

Table 5.3 A. North West: Nutritional status by wealth quintile

	Child stunting	Child wasting	Child overweight	Underweight in women ≤18.5 kg/m^2	Overweight in women ≥25.0kg/m^2	Obesity in women ≥30.0kg/m^2
Poorest	56.0	24.6	8.0	24.0	9.4	1.6
Poorer	52.1	22.5	8.0	19.1	11.6	1.7
Middle	54.0	15.7	11.4	15.5	17.5	4.1
Richer	50.9	12.8	9.4	15.0	22.6	6.5
Richest	40.3	14.6	10.8	9.8	30.9	10.0
Total	52.6	20.1	9.0	18.7	14.9	3.4

Table 5.4 A. South East: Nutritional status by wealth quintile

	Child stunting	Child wasting	Child overweight	Underweight in women ≤18.5 kg/m^2	Overweight in women ≥25.0kg/m^2	Obesity in women ≥30.0kg/m^2
Poorest	40.9	11.5	6.2	18.0	11.7	3.0
Poorer	30.7	12.8	5.3	12.5	13.8	3.0
Middle	23.8	11.1	8.5	7.5	23.8	4.7
Richer	19.0	6.9	6.2	5.7	30.9	9.6
Richest	13.8	5.1	8.8	4.1	41.1	14.2
Total	21.1	8.3	7.4	6.9	29.3	8.6

Table 5.5 A. South South: Nutritional status by wealth quintile

	Child stunting	**Child wasting**	**Child overweight**	**Underweight in women ≤18.5 kg/m^2**	**Overweight in women ≥25.0kg/m^2**	**Obesity in women ≥30.0kg/m^2**
Poorest	51.2	8.9	7.5	11.8	13.4	3.7
Poorer	40.2	8.0	9.6	10.0	16.5	3.8
Middle	31.1	5.8	8.1	9.3	20.3	5.0
Richer	27.3	6.7	9.9	6.6	25.3	6.3
Richest	22.2	7.3	11.4	6.1	40.0	14.7
Total	30.7	7.0	9.7	7.8	26.8	8.0

Table 5.6 A. South West: Nutritional status by wealth quintile

	Child stunting	**Child wasting**	**Child overweight**	**Underweight in women ≤18.5 kg/m^2**	**Overweight in women ≥25.0kg/m^2**	**Obesity in women ≥30.0kg/m^2**
Poorest	42.0	12.9	9.4	14.1	11.9	2.8
Poorer	45.2	10.5	8.5	11.7	16.2	2.6
Middle	40.3	5.3	8.1	13.3	16.3	3.5
Richer	32.1	9.2	7.0	12.5	22.4	6.0
Richest	22.9	9.4	7.5	6.9	37.0	12.1
Total	30.8	9.0	7.7	9.8	28.1	8.3

Prevalence of malnutrition by region and type of place of residence

Table 5.7 A. North Central: Nutritional status by type of place of residence

	Child stunting	**Child wasting**	**Child overweight**	**Underweight in women ≤18.5 kg/m^2**	**Overweight in women ≥25.0kg/m^2**	**Obesity in women ≥30.0kg/m^2**
Urban	35.0	9.3	10.3	7.8	30.8	9.2
Rural	46.3	9.4	10.5	8.7	17.0	3.5
Total	43.4	9.3	10.5	8.4	21.2	5.3

Table 5.8 A. North East: Nutritional status by type of place of residence

	Child stunting	Child wasting	Child overweight	Underweight in women ≤18.5 kg/m^2	Overweight in women ≥25.0kg/m^2	Obesity in women ≥30.0kg/m^2
Urban	43.3	19.8	7.1	17.3	19.3	5.4
Rural	50.9	23.1	8.9	21.8	10.3	2.2
Total	48.8	22.2	8.4	20.6	12.7	3.0

Table 5.9 A. North West: Nutritional status by type of place of residence

	Child stunting	Child wasting	Child overweight	Underweight in women ≤18.5 kg/m^2	Overweight in women ≥25.0kg/m^2	Obesity in women ≥30.0kg/m^2
Urban	48.5	15.0	9.6	14.2	25.1	7.8
Rural	53.6	21.3	8.8	19.9	12.2	2.2
Total	52.6	20.1	9.0	18.7	14.9	3.4

Table 5.10 A. South East: Nutritional status by type of place of residence

	Child stunting	Child wasting	Child overweight	Underweight in women ≤18.5 kg/m^2	Overweight in women ≥25.0kg/m^2	Obesity in women ≥30.0kg/m^2
Urban	15.8	6.0	7.6	5.5	35.3	10.9
Rural	25.7	10.3	7.2	8.0	24.8	6.9
Total	21.1	8.3	7.4	6.9	29.3	8.6

Table 5.11 A. South South: Nutritional status by type of place of residence

	Child stunting	Child wasting	Child overweight	Underweight in women ≤18.5 kg/m^2	Overweight in women ≥25.0kg/m^2	Obesity in women ≥30.0kg/m^2
Urban	22.5	6.4	11.3	5.5	35.0	12.7
Rural	33.7	7.2	9.1	8.8	22.8	5.8
Total	30.7	7.0	9.7	7.8	26.8	8.0

Table 5.12 A. South West: Nutritional status by type of place of residence

	Child stunting	**Child wasting**	**Child overweight**	**Underweight in women ≤18.5 kg/m^2**	**Overweight in women ≥25.0kg/m^2**	**Obesity in women ≥30.0kg/m^2**
Urban	24.9	9.0	7.9	8.7	32.3	9.8
Rural	38.4	9.2	7.4	11.7	20.8	5.7
Total	30.8	9.0	7.7	9.8	28.1	8.3

Prevalence of malnutrition by region and maternal/woman's own education

Table 5.13 A. North Central: Nutritional status by maternal/woman's own education

	Child stunting	**Child wasting**	**Child overweight**	**Underweight in women ≤18.5 kg/m^2**	**Overweight in women ≥25.0kg/m^2**	**Obesity in women ≥30.0kg/m^2**
No education	48.3	13.2	7.9	9.9	19.3	4.1
Primary	46.4	6.9	12.7	7.8	19.4	4.3
Secondary	35.2	6.6	12.7	8.0	19.5	5.2
Higher	21.6	4.8	8.0	5.4	40.2	13.0
Total	43.4	9.3	10.5	8.4	21.2	5.3

Table 5.14 A. North East: Nutritional status by maternal/woman's own education

	Child stunting	**Child wasting**	**Child overweight**	**Underweight in women ≤18.5 kg/m^2**	**Overweight in women ≥25.0kg/m^2**	**Obesity in women ≥30.0kg/m^2**
No education	50.5	24.7	8.0	23.1	10.6	2.4
Primary	46.4	17.5	9.2	15.5	15.1	4.8
Secondary	41.8	13.4	9.3	16.1	16.2	3.6
Higher	35.6	14.3	10.5	8.9	33.3	7.3
Total	48.8	22.2	8.4	20.6	12.7	3.0

Table 5.15 A. North West: Nutritional status by maternal/woman's own education

	Child stunting	**Child wasting**	**Child overweight**	**Underweight in women ≤18.5 kg/m^2**	**Overweight in women ≥25.0kg/m^2**	**Obesity in women ≥30.0kg/m^2**
No education	54.1	21.7	8.6	20.4	12.9	2.6
Primary	52.0	17.2	9.8	16.7	17.0	4.2
Secondary	44.1	13.2	10.3	13.2	19.2	4.4
Higher	32.0	7.0	13.1	4.8	41.4	15.4
Total	52.6	20.1	9.0	18.7	14.9	3.4

Table 5.16 A. South East: Nutritional status by maternal/woman's own education

	Child stunting	**Child wasting**	**Child overweight**	**Underweight in women ≤18.5 kg/m^2**	**Overweight in women ≥25.0kg/m^2**	**Obesity in women ≥30.0kg/m^2**
No education	38.1	12.4	3.7	11.8	17.2	3.2
Primary	22.3	11.0	7.6	8.6	29.4	10.3
Secondary	18.7	6.5	7.0	6.9	27.4	7.2
Higher	17.9	6.4	10.9	1.6	43.9	14.7
Total	21.1	8.3	7.4	6.9	29.3	8.6

Table 5.17 A. South South: Nutritional status by maternal/woman's own education

	Child stunting	**Child wasting**	**Child overweight**	**Underweight in women ≤18.5 kg/m^2**	**Overweight in women ≥25.0kg/m^2**	**Obesity in women ≥30.0kg/m^2**
No education	40.8	5.6	7.3	8.7	21.7	6.3
Primary	36.7	8.0	9.5	8.5	28.4	7.7
Secondary	27.4	6.7	10.1	8.2	23.0	6.5
Higher	16.1	5.8	9.3	3.3	44.3	17.3
Total	30.7	7.0	9.7	7.8	26.8	8.0

Table 5.18 A. South West: Nutritional status by maternal/woman's own education

	Child stunting	**Child wasting**	**Child overweight**	**Underweight in women ≤18.5 kg/m^2**	**Overweight in women ≥25.0kg/m^2**	**Obesity in women ≥30.0kg/m^2**
No education	44.4	11.6	8.8	9.1	23.0	7.1
Primary	36.2	9.4	6.8	9.5	27.0	7.5
Secondary	26.7	9.1	7.5	11.4	26.3	8.1
Higher	17.1	5.1	8.7	5.7	38.7	11.1
Total	30.8	9.0	7.7	9.8	28.1	8.3

Sample sizes for region and wealth index

Table 5.19 A. North Central: Nutritional status by wealth index

	Child stunting	**Child wasting**	**Child overweight**	**Underweight in women ≤18.5 kg/m^2**	**Overweight in women ≥25.0kg/m^2**	**Obesity in women ≥30.0kg/m^2**
Poorest	384	79	90	94	101	15
Poorer	404	72	87	101	183	29
Middle	378	78	69	102	226	46
Richer	185	39	63	76	268	66
Richest	119	44	46	64	395	134
Total	1470	312	355	437	1173	290

Table 5.20 A. North East: Nutritional status by wealth index

	Child stunting	**Child wasting**	**Child overweight**	**Underweight in women ≤18.5 kg/m^2**	**Overweight in women ≥25.0kg/m^2**	**Obesity in women ≥30.0kg/m^2**
Poorest	969	411	184	517	167	32
Poorer	552	215	98	216	144	23
Middle	337	140	56	126	159	40
Richer	185	87	31	81	122	36
Richest	46	21	8	24	51	17
Total	2089	874	377	964	643	148

Table 5.21 A. North West: Nutritional status by wealth index

	Child stunting	Child wasting	Child overweight	Underweight in women ≤18.5 kg/m^2	Overweight in women ≥25.0kg/m^2	Obesity in women ≥30.0kg/m^2
Poorest	848	376	128	464	183	35
Poorer	831	379	125	352	218	32
Middle	464	141	94	144	168	42
Richer	274	70	49	99	155	47
Richest	119	42	30	40	133	44
Total	2536	998	426	1099	857	200

Table 5.22 A. South East: Nutritional status by wealth index

	Child stunting	Child wasting	Child overweight	Underweight in women ≤18.5 kg/m^2	Overweight in women ≥25.0kg/m^2	Obesity in women ≥30.0kg/m^2
Poorest	63	17	10	45	22	5
Poorer	77	29	11	55	42	9
Middle	105	43	31	67	185	36
Richer	94	33	30	54	269	82
Richest	52	20	32	32	292	103
Total	391	142	114	253	810	235

Table 5.23 A. South South: Nutritional status by wealth index

	Child stunting	Child wasting	Child overweight	Underweight in women ≤18.5 kg/m^2	Overweight in women ≥25.0kg/m^2	Obesity in women ≥30.0kg/m^2
Poorest	75	14	12	25	35	8
Poorer	167	32	40	53	97	23
Middle	176	35	47	77	186	41
Richer	170	42	66	80	314	76
Richest	108	40	61	62	416	147
Total	696	163	226	297	1048	295

Table 5.24 A. South West: Nutritional status by wealth index

	Child stunting	Child wasting	Child overweight	Underweight in women ≤18.5 kg/m^2	Overweight in women ≥25.0kg/m^2	Obesity in women ≥30.0kg/m^2
Poorest	57	15	12	21	20	4
Poorer	138	32	25	55	76	12
Middle	146	19	33	86	111	23
Richer	232	58	51	147	253	69
Richest	244	96	79	131	662	212
Total	817	220	200	440	1122	320

Sample sizes for region and type of place of residence

Table 5.25 A. North Central: Nutritional status by type of place of residence

	Child stunting	Child wasting	Child overweight	Underweight in women ≤18.5 kg/m^2	Overweight in women ≥25.0kg/m^2	Obesity in women ≥30.0kg/m^2
Urban	315	89	93	125	533	159
Rural	1155	223	262	312	640	131
Total	1470	312	355	437	1173	290

Table 5.26 A. North East: Nutritional status by type of place of residence

	Child stunting	Child wasting	Child overweight	Underweight in women ≤18.5 kg/m^2	Overweight in women ≥25.0kg/m^2	Obesity in women ≥30.0kg/m^2
Urban	468	200	75	205	228	67
Rural	1621	674	302	759	415	81
Total	2089	874	377	964	643	148

Table 5.27 A. North West: Nutritional status by type of place of residence

	Child stunting	Child wasting	Child overweight	Underweight in women ≤18.5 kg/m^2	Overweight in women ≥25.0kg/m^2	Obesity in women ≥30.0kg/m^2
Urban	417	127	79	156	281	92
Rural	2119	871	347	943	576	108
Total	2536	998	426	1099	857	200

Table 5.28 A. South East: Nutritional status by type of place of residence

	Child stunting	Child wasting	Child overweight	Underweight in women ≤18.5 kg/m^2	Overweight in women ≥25.0kg/m^2	Obesity in women ≥30.0kg/m^2
Urban	119	42	49	77	378	115
Rural	272	100	65	176	432	120
Total	391	142	114	253	810	235

Table 5.29 A. South South: Nutritional status by type of place of residence

	Child stunting	Child wasting	Child overweight	Underweight in women ≤18.5 kg/m^2	Overweight in women ≥25.0kg/m^2	Obesity in women ≥30.0kg/m^2
Urban	129	41	66	68	410	144
Rural	567	122	160	229	638	151
Total	696	163	226	297	1048	295

Table 5.30 A. South West: Nutritional status by type of place of residence

	Child stunting	Child wasting	Child overweight	Underweight in women ≤18.5 kg/m^2	Overweight in women ≥25.0kg/m^2	Obesity in women ≥30.0kg/m^2
Urban	349	116	107	231	750	220
Rural	468	104	93	209	372	100
Total	817	220	200	440	1122	320

Sample sizes for region and maternal/woman's own education

Table 5.31 A. North Central: Nutritional status by maternal/woman's own education

	Child stunting	**Child wasting**	**Child overweight**	**Underweight in women ≤18.5 kg/m^2**	**Overweight in women ≥25.0kg/m^2**	**Obesity in women ≥30.0kg/m^2**
No education	687	178	114	179	363	75
Primary	481	69	132	100	266	57
Secondary	258	54	91	133	345	93
Higher	44	11	18	25	199	65
Total	1470	312	355	437	1173	290

Table 5.32 A. North East: Nutritional status by maternal/woman's own education

	Child stunting	**Child wasting**	**Child overweight**	**Underweight in women ≤18.5 kg/m^2**	**Overweight in women ≥25.0kg/m^2**	**Obesity in women ≥30.0kg/m^2**
No education	1532	682	258	719	351	75
Primary	357	126	73	115	122	36
Secondary	184	58	41	120	131	28
Higher	16	8	5	10	39	9
Total	2089	874	377	964	643	148

Table 5.33 A. North West: Nutritional status by maternal/woman's own education

	Child stunting	**Child wasting**	**Child overweight**	**Underweight in women ≤18.5 kg/m^2**	**Overweight in women ≥25.0kg/m^2**	**Obesity in women ≥30.0kg/m^2**
No education	2025	837	322	919	577	123
Primary	333	111	61	97	104	27
Secondary	155	45	35	74	118	29
Higher	23	5	8	9	58	21
Total	2536	998	426	1099	857	200

Table 5.34 A. South East: Nutritional status by maternal/woman's own education

	Child stunting	**Child wasting**	**Child overweight**	**Underweight in women ≤18.5 kg/m^2**	**Overweight in women ≥25.0kg/m^2**	**Obesity in women ≥30.0kg/m^2**
No education	76	23	7	41	43	8
Primary	143	57	41	86	201	68
Secondary	145	52	49	121	412	104
Higher	27	10	17	5	154	55
Total	391	142	114	253	810	235

Table 5.35 A. South South: Nutritional status by maternal/woman's own education

	Child stunting	**Child wasting**	**Child overweight**	**Underweight in women ≤18.5 kg/m^2**	**Overweight in women ≥25.0kg/m^2**	**Obesity in women ≥30.0kg/m^2**
No education	69	12	11	22	64	17
Primary	302	64	83	83	297	77
Secondary	299	78	117	178	506	134
Higher	26	9	15	14	181	67
Total	696	163	226	297	1048	295

Table 5.36 A. South West: Nutritional status by maternal/woman's own education

	Child stunting	**Child wasting**	**Child overweight**	**Underweight in women ≤18.5 kg/m^2**	**Overweight in women ≥25.0kg/m^2**	**Obesity in women ≥30.0kg/m^2**
No education	169	43	34	43	112	33
Primary	267	66	52	89	225	59
Secondary	320	92	87	269	529	156
Higher	61	19	27	39	256	72
Total	817	220	200	440	1122	320

Chapter 6

Conclusions

The purpose of this dissertation was to assess critical aspects of the four components of policymaking – actors, processes, context and content (Walt & Gilson, 1994) – as it related to overnutrition and NCDs in Nigeria; in order to identify needed enabling factors for successful policy interventions for NCDs. In chapter 1, the challenge posed by NCDs is highlighted, as well as the importance of policy interventions for the issue. In chapter 2, the perspectives of the actors expected to be involved in addressing NCDs are assessed in relation to the issue. Chapter 3 then explored the factors that have limited the first stage of the policymaking process for a NCDs policy (establishing political priority). Chapter 4 examined the context in which policymaking for NCDs might be expected to occur in Nigeria, including the strategic capacity to address the issue. Chapter 5 presented analysis of survey data related to the policy content, namely key considerations that must be taken into account in planning policies and programs to address overnutrition and NCDs. In this concluding chapter, the results of the preceding four chapters are synthesized to provide a single picture about the current reality of policymaking for overnutrition and NCDs in Nigeria, and actions that could yield successful results in light of this reality.

6.1. Synthesis of the findings

The results from the Q-study used to assess the perspective of federal and state policy actors about NCDs, and reported in chapter 2, showed that there is a surprising degree of agreement

among policy actors about the salience NCDs. All of the policy actors interviewed formally as well as informally, were of the view that NCDs constitute a serious problem to the Nigerian society that must be addressed. When considered in the light of information provided in chapter 4 about the roles of federal and state policy actors, these findings are remarkable. As noted in chapter 4, federal policy actors undertake predominantly policy formulation and monitoring roles; while state policy actors primarily implement policies. The fact that both groups of policy actors agree that NCDs should be addressed is very encouraging for effective action on NCDs. However, the Q study reported in chapter 2 also highlights important differences in the perspectives of the policy actors. Whereas some policy actors would prefer to ignore institutional boundaries and forge ahead with action for NCD, others perceived institutional boundaries to be overwhelming and proposed working around existing institutions as much as possible. Yet, a third group of policy actors maintained that the institutional boundaries did not hinder effective action, and should be preserved.

Although chapter 2 reveals that some policy actors view the Nigerian context as conducive for action on NCDs, and some others do not, the chapter does not provide information about what exactly this context is. This information is provided in chapter 4. In chapter 4, the utility and the inefficiencies of the system are presented. These results reveal that all of the perspectives identified in chapter 2 are partially correct. The 'polycentric' identified in chapter 2 would prefer to ignore institutional boundaries, but as seen in the discussion of networking and coordination in chapter 4, these boundaries are real and powerful. The 'skeptics' are doubtful that effective action can be undertaken within the system, but as seen from the section on past policy experiences in Nigeria, the system has recorded some successes. While the 'contented' policy actors identified in chapter 2 believe in effectiveness of the existing system, the

substantial challenges described in chapter 4 reflect that the system cannot really be considered effective. Chapter 2 and 4 both report the perceived reality as experienced by the policy actors, without providing any external evidence about the state of the Nigerian system. This was deliberately done because as noted in chapter 2, subjective realities can be construed through individual perceptions and can be a formidable influence on policy behavior (Rochefort & Cobb, 1994; Gyberg & Rydén, 2011). In actual reality, the Nigerian health system has been previously categorized as severely constrained (Lim et al., 2007).

In addition to their perception of the context, another way in which policy actor perspectives were seen to differ in chapter 2 was in their perception of the relative importance that should be given to individual versus governmental interventions for NCDs. This difference is related to the policy content. In chapter 5, descriptive epidemiology is used to highlight key considerations for the content of a policy on overnutrition/NCDs. The results in this chapter show that the double burden of malnutrition (DBM) is a very real problem even among groups traditionally considered to be vulnerable and in need of government intervention. Since overweight/obesity is a major risk factor for NCDs, it is likely that these groups are also at considerable risk of NCDs. Indeed, increasing evidence has shown that in many LMICs, the poor bear a disproportionate burden of both the morbidity and mortality due to NCDs (WHO, 2005). Morbidity from NCDs can also cause and perpetuate poverty (WHO, 2005; Yach et al., 2006; Geneau et al., 2010). The fact that some policy actors, particularly at the state level, give greater weight to individual level interventions than collective interventions (chapter 2) implies that not all policy actors are aware of or attach great weight to the influence of environmental factors on nutritional status (Figure 5.10.), and to the relationship between poverty and overweight and possibly NCDs. This perspective was also seen in the results in chapter 4, in

which some policy actors expressed considerable surprise and even indignation at the notion that the poor were also at risk of overweight, and the rich were also at risk of undernutrition.

The results in chapter 5 further indicate that the content of any policy that would address undernutrition and decrease, or at least not increase, overweight, would need to be comprehensive and regionally contextual. Yet in the 'other reactions' section in chapter 4, even when the policy actors accepted the existence of the DBM among various subpopulations, they were very simplistic in their suggestions for addressing the issue. They perceived holistic, appropriate and targeted public education as the key intervention for addressing both undernutrition and overnutrition. Their perception of this intervention also appeared to be limited to settings in which health professionals have personal interactions with individual members of the population. While such individual level interventions can play a role in reducing the DBM, they can also be quite selective, expensive and require a well developed health system. As such, they are not feasible in the context of most LMICs (Caballero & Popkin, 2002).

In chapter 3, we see that policy actors themselves reported the above issues to have limited the initiation of the policymaking process. Yet, their view of the limiting factors were lacking in some respects. Chapter 4 corroborates this finding by providing compelling evidence that the strategic capacity for NCDs is lacking in Nigeria.

6.2. A special note about characterizing the problem

It is worthwhile to particularly reiterate that undernutrition/infectious disease and overnutrition/NCDs must not be viewed as separate issues. Rather, as seen in chapter 5, undernutrition/infectious disease and overnutrition/NCDs are manifestations of the same problem, and efforts to address them must be simultaneous. Previous reports (SCN, 2006) have certainly emphasized how the same primary prevention actions apply to both manifestations. Indeed, there are important policy arguments that can be made, to heighten the appreciation of the commonalities among these problems. First, from the ethics/ human rights perspective, and as noted by some of the policy actors in chapter 4, "a life is a life" and efforts must be made to reduce risk factors for mortality, regardless of what these risk factors are. Second, with respect to human capital, both manifestations of morbidity can affect cognitive development and education, as well as economic productivity (Yach et al., 2006; Victora et al., 2008). Third, both manifestations adversely affect the gross national income and economy of a country, by increasing health expenditure, reducing disposable income, reducing income generation as a result of lost man hours, and competing with savings and investment opportunities (Abegunde & Stanciole, 2006; SCN, 2006; Victora et al., 2008). Fourth, both manifestations of malnutrition and ill health are programmed in utero, with the consequences persisting throughout the life cycle and perpetuated in future generations (Delisle, 2002; SCN, 2006). A life cycle approach is thus ideal for the two manifestations (SCN, 2006). Finally, as discussed in chapter 5, the common interventions for these two forms of malnutrition both require building the capacity of the health system.

6.3. The current reality of policymaking and action for the DBM in Nigeria

The manifestation of the DBM in Nigeria is complicated at multiple levels, and considerable effort would need to be devoted to identifying what the content of a policy to address the issues should be for different subpopulations. Without being fully aware of all the relevant issues, policy actors already implicitly disagree on what should be done and how it should be done. Yet, the strategic capacity for formulating and advancing an effective agenda for NCDs in the Nigerian context is so low that limited opportunities exist for brokering conflict and consensus building among the actors. Unless these issues related to content, actors and context are addressed, the process of making a policy for NCDs (and addressing the DBM), which has been very slow in Nigeria till date, is not likely to be successful or sustained.

6.4. Suggested immediate actions for NCDs policymaking in Nigeria

In light of the results presented in the four papers of this dissertation, as well as the above synthesis, it appears that one primary way by which successful policymaking (including implementation and evaluation) can occur for NCDs is by increasing the strategic capacity to address the issues. Fundamental to this strategic capacity is the provision of physical, institutional and cognitive space where policy actors can converge to forge agreements and resolve conflicts. At the same time as this is ongoing some members of the Nigerian nutrition and health community need to actively work on identifying policy alternatives that are likely to be contextually relevant. Contextually relevant both in terms of the environmental and behavioral context in which the DBM occurs, as well as in terms of the social, political,

economic, infrastructural and operational capacity context in which the policy will be implemented.

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