

**SPATIO-TEMPORAL ANALYSIS OF POPULATION AGING IN
KWARA STATE, NIGERIA**

BY

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MARCH, 2015

DECLARATION

I declare that the work in the Dissertation entitled “**SPATIO-TEMPORAL ANALYSIS OF POPULATION AGING IN KWARA STATE, NIGERIA**” was carried out by me in the Department of Geography under the supervision of Prof. M. Mamman, Prof. J.G. Laah and Prof. J.A. Ariyo.

All information derived from literature has been duly acknowledged in the text and a list of references provided. No part of this dissertation has been previously presented for another degree or diploma at this or any other university.

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CERTIFICATION

This dissertation titled “**SPATIO-TEMPORAL ANALYSIS OF POPULATION AGING IN KWARA STATE, NIGERIA**” meets the regulations governing the award of the degree of Doctor of Philosophy (Ph.D) in Geography of the Ahmadu Bello University, and is approved for its contribution to knowledge and literary presentation.

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DEDICATION

This Dissertation is dedicated to my beloved parents Hon. Justice Abdulkadir Orire (CON) (The Sarkin Malamai Ilorin) and Alhaja Zainab Abdulkadir Orire.

Also, to the 'love of my life', the only 'omo to fine ju'; Mrs Kuburat Ismail Orire (Nee Yinusa) and to the extended Orire Family.

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ABSTRACT

Population aging is a term for shifts in the age structure of a population toward older ages, caused by longer life expectancy and declining fertility rates. Knowledge of a population's age profile is essential because it is a major determinant of service requirements, labour supply, consumer demand, and potential for future natural increases, development planning and evaluation of the quality of census enumeration. This study analysed the spatio-temporal pattern of population aging in Kwara State, Nigeria. Specific objectives are to:- examine the characteristics of the aging population; explain the trend of aging population; examine the factors that shape the pattern of aging; examine the health conditions of aging population; and examine the social conditions of aging population all in time and space in the study area.

To achieve the objectives, the major data required in addition to basic demographic characteristics of respondents include household socio-economic characteristics; medical histories; living arrangements; coping strategies; patronage of geriatric infrastructures; as well as proportion and distribution of the aged population from two censal periods. Primary sources of data were questionnaire administration and Focus Group Discussion (FGDs). Additional data were sourced from census figures from the 1991 and 2006 censal periods and related published documents. Multi-Stage sampling approach was employed to sample 488 respondents age 60 and above, from six of the 16 LGAs spread across the study area. In addition to the use of descriptive statistics, trend analysis, factor analysis, multiple and stepwise multiple regression techniques were employed to analyse the data. Trend Analysis was used to examine the pattern of the aged population over time, while factor analysis was used to reduce the dataset as well as determine the variables accounting for spatial variability. The factor scores derived from the procedure was used to map the pattern of aging over space. Multiple and stepwise multiple regression analyses were used to rewrite the model equation with intention of arriving at the best fitted model.

The findings revealed that 56.6% of respondents are males and 43.4% female. Also, 88% are in the young-old (60 - 79) age group, while 72% are muslims, 23.4% christians and 4% traditionalists. Religion serves as the most important later life coping strategy. Also, trading/business and farming are the most important occupations engaged in by 67.6% of the elderly. However, 21.7% earn about ₦23,000 and above, while about 60% generate less than ₦16,000 per month mostly through pensions and filial obligations. Also NHIS enrolment rate is low (19.3%), while duration of enrolment among 52.1% of enrollees is between 3-5 years. Lack of awareness/poor orientation were the chief reasons militating against utilization of the scheme. Furthermore, the results of trend analysis technique revealed a gradual increase in the aged population over the years, with Ifelodun (23,556) and Ilorin West (14,634) the most populous aged LGAs in 1991. However, by 2006, Ilorin West (21,037) and East LGAs (11,148) were the most populous. The result of factor analysis procedure identified 14 factors as contributing 63.95% to the variance in the explanation of aging, while stepwise multiple regression results further reduced these factors to 10 (Social wellbeing, Income, Support, Economic factor, Disability, Diseases, Health Insurance, Residential Quality, Recreational factor and Safety Nets). These factors were found to contribute 53.4% to the explanation of the pattern of aging, and with Social Wellbeing factor (SCWF) the most important factor influencing the aging pattern in Kwara State contributing 24.2% explanation.

The study concluded that aging has been on the increase in the study area. The population of the aged also varied in space from one LGA to the other, while the factors affecting aging also differ spatially. In this light, the factors affecting aging and the aged coping strategies differs from one LGA to the other. The study recommended among others, the establishment of a pro-elderly social health insurance or risk pooling scheme by government; and the need for structural incentives and creation of opportunities for many economically active aged people is essential, among others.

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Aging is a continuous, complex, and dynamic process that begins with birth and ends with death. Aging of population (also known as demographic aging and population aging) is a summary term for shifts in the age distribution (age structure) of a population toward older ages (Gavrilov and Heuveline, 2003; Arokiasamy, Bloom, Lee, Feeney and Ozolins 2011; Bloom, 2011). The age of a population, or a group of people, can change over time and become younger or older (Anderson, 2011). A process in which older persons become a proportionally larger share of the total population is also known as population aging (NPC, 2003). Population aging according to Population Reference Bureau (PRB, 2004) occurs when the median age of a country or region rises. This happens because of rising life expectancy or declining birth rates. Population aging is a global phenomenon (Vierck and Hodges, 2003; Ajomale, 2007). By the year 2025 the total number of elderly people in the world will reach 1.2 billion, which indicates that by this time 15% of the total populations will reach 60 years or more (UN, 1997). United Nations also stated that the world is experiencing an age-quake. Every month, one million people reach 60 years of age. In 1999 there were 593 million elderly people in the world and this figure is expected to triple to nearly 2 billion by the year 2050 (UN, 1999).

Population aging will become perhaps the most important demographic dynamics affecting families and societies the world over in the coming decades (Velkoff and Kowal, 2006). In almost every country, the proportion of people aged over 60 years is growing faster than any other age group (UN, 2009). This is as a result of both longer life expectancy and

declining fertility rates (WHO, 2011). Buttressing this fact, the United Nations (2010) and Pillay and Maharaj (2013) opined that the 60+ population in 1980 was 378 million. However, 3 decades later, the figure doubled to 759 million and is projected to rise almost threefold to two billion by 2050. It is true that the number of elderly people is increasing rapidly in the developed countries but it is also increasing rapidly in the developing countries (Taj-Uddin, Islam, Alam and Baher, 2010). More than half of the world's older population lives in developing countries (UNFPA, 2002). In fact, the number of elderly people is increasing day by day at an alarming rate. Nearly 63% of the population age 60 and older currently resides in developing countries, and this percentage will increase to nearly 73% over the next 25 years (Velkoff and Kowal, 2006). In addition, Velkoff and Kowal (*op cit*) equally noted the stark contrast in the comparatively well-documented cause and implications of aging in developed countries and the limited understanding of the demographics of aging of the developing countries. According to Redburn (1998), “ practically all the countries in the southern, western and northern Europe are ‘older’ than the United States if we look at the percentages of their population over 60” (Vierck and Hodges, 2003 p.31).

The United Nations Population Division, equally affirmed that in 2000 about 606 million people globally were aged 60 and above, the equivalent of the entire current population of the United States, UK, and Netherlands combined (Vierck and Hodges, 2003). In the USA, there are a lot of care services for the elderly people. There are old homes, day-care centres and elderly societies for elderly people. According to Eberstadt (1997) population aging is a great challenge for the health care systems as nation's age, the prevalence of disability, frailty and chronic diseases, Alzheimer's disease, cancer and many other diseases is expected to increase dramatically. The incidence of lifestyle diseases increases among the elderly people over the whole world which is not a sudden onset

phenomenon but an accumulation of changes in the expression of genes in response to nutrition and environment from conception (Rush, 2006). Also, majority of the living condition of the elderly is poor, where most live in dilapidated and poorly equipped dwellings as seen in many third world countries.

However, over the past decade in Asia, aging has become one of the emerging problems in especially in Bangladesh. A problem that has been on a gradual increase with its far reaching consequences. Kabir (1987; 1994) found out that in poor families, both in rural and urban areas of Bangladesh, older people are often unable to meet the demand for food due to poverty. Hossain, Akhtar and Taj-Uddin, (2006) equally found out that aged people in Bangladesh are mostly suffering from various complications, physical diseases and the number is increasing day by day but the services provided through government hospitals are inadequate compared to the needs of the people. A small proportion (6%) of the total population of Bangladesh constitutes the elderly population, but the absolute number of them is quite significant (about 7.2 million) and the rate of their increase is fairly high. This change in population characteristics will have serious consequences on society as well as on the overall socio-economic development of the country (Banglapedia, 2006).

Rapid socio-economic and demographic transitions, mass poverty, changing social and religious values, influence of western culture and other factors, have broken down the traditional extended family and community care system that look after the welfare of its elderly citizens. Most of the elderly people suffer from some basic human problems such as poor financial support, senile diseases and absence of proper health and medical facilities, exclusion and negligence, deprivation and socio-economic insecurity (Rhaman, 2000). In Asia, the crisis is an immediate one (World Bank, 1994); China stands out as the most rapidly aging society and its population structure will be closer to that of the developed regions by

2025 (United Nations, 1999a, 1999b). In Africa, aging is a crisis that is just beginning to reveal its shape; at present, it is a family crisis (Apt and Greico, 1994; Apt, 1995). In demographic terms, the proportion of Africa's population aged 65 and over stands at 3.1 per cent (United Nations, 1999a, 1999b). Although sub-Saharan Africa's older population is not as large in size as in other regions of the world (for instance in 2005, the proportion of the 60+ population in Europe and North America was 20.7% and 16.9%, while in sub-Saharan Africa it was 4.7% (US Census Bureau, 2005), it must still be considered as a potential cause for concern since Africa is aging at a time when its resources are being depleted (Apt, 2000). In fact, the number of older people is growing more rapidly in sub-Saharan Africa (SSA) than in the developed world. This increase in the number of older people will occur despite the excess mortality due to AIDS that many countries are currently experiencing (Velkoff and Kowal, 2006).

The most rapid growth in the elderly population is expected in western and northern Africa, whose older populations are projected to increase by a factor of nearly 5 between 1980 and 2050 (Apt, 2000; McLigeyo, 2002). Of relative importance is the fact that the number of the very old in Africa is also expected to grow at a very fast rate. Between 1980 and 2025, the population aged 75 and over will increase by 434 per cent in Eastern Africa, 385 per cent in Middle Africa, 427 per cent in Northern Africa and 526 per cent in Western Africa (Apt, 2000). In Western Africa, Nigeria will be among the countries in Africa that will experience large increases in this age group. A fact attributed to the general increase in life expectancy and declining birth rates across board. This unprecedented growth of the elderly population is causing widespread concern (Onyebueke, 2008). Therefore, the absence of conscious programs targeted toward providing for the needs of the elderly at the state level

and by extension Nigeria in general, could possibly be due to ignorance of the way the population is aging or lack of relevant data for planning and policy formulation.

Another unique feature of Africa's aging situation is that by 2020, rural segregation of the old will manifest itself and the older segment of the African population will be concentrated primarily in rural areas (Apt, 2000). Consequently, the aforementioned scenario is also traceable amongst majority of the elderly population in Kwara State (Nigeria) for example, where most reside in rural communities where the culture of saving for the old age has never been a norm (Udoh, 2006; Adedokun, 2010). Rather, adult children, particularly sons, are considered to be the main source of security and economic support to their parents, particularly in the time of disaster, sickness and in old age (Cain, 1986; Dharmalingam, 1994; Devasahayam, 2009).

Aging and longevity have together occupied the world's platform of popular concerns in the past century. Besides the demographic factors, there are economic and social factors that are bound to impact adversely on older persons during the current process of urbanization and industrialization occurring in the developing regions of the world, including Africa. That process gradually weakens traditional family bonds that provide centrality and social roles for older persons (Adamchak, 1995; Vatuk, 1996). In Nigeria, urbanization has further worsens the predicaments of the elderly, mostly due to the general lack of a social security scheme and the broken down of the traditional sense of family responsibility (FGN, 2004). However, understanding the spatial and temporal contexts of communities contributes to an understanding of why variation exists both between and within communities, in terms of both socio-demographic change and the relationship between that change and policy (Appleton, 2000).

There is no simple panacea for addressing the problem of meeting the social and economic needs of an aging world (AGES, 1995; Apt, 2000). The orthodoxy of the industrialized world—the welfare state, old-style public pension schemes and public-financed medical provision - are all experiencing major difficulties. The crucial question is whether the cultural norms of African countries will remain strong enough for families to maintain their ties to older members as the dependency burden increases in the twenty-first century (Shuman, 1991; Apt, 1992, 1996, 2000). It is an established fact that populations differ significantly over space and time in terms of age, sex, ethnicity, household and other compositional traits. The knowledge on the structure of a population especially its age profile, is therefore particularly important because it is a major determinant of service requirements, labour supply, the level and nature of consumer demand and the potential for future natural increase (McCracken and Siciliano, 2011). However, an appreciation of spatio-temporal dimensions of change is essential for policy actors since variations in trend across space and time demand different policy responses (Appleton, 2000). It is against this background that this research in Kwara State has been carried out. The rationale of this research is to gain or understand the nature of the shifts in the age distribution/aging of population and its various dimensions across Kwara State over specific time periods. This is essential for planning, awareness creation, as well as public policy formulation needed to satisfy the needs and enhance the welfare of the aged citizens of Kwara State and the country in general.

1.2 STATEMENT OF THE RESEARCH PROBLEM

The United Nations in 2005 projected the elderly population (60+) in Africa and West Africa to be 5.2% (47.4 million) and 4.7% (12 million) respectively. While the population of Nigeria according to the 2006 Census figure is 140 million (NPC, 2006), making her the most

populated African nation (Kinsella and Velkoff, 2001) and the ninth in the world, (UN, 2005). Life expectancy at birth in Nigeria stands at 51.6 years, with a population growth rate of 2.5%, and 5% (6.4million) (from year 2000-2005) of the total population aged 60 and above (UN, 2005; Ajomale, 2007; Abiodun, Adekeye and Iruonagbe, 2011). Kwara State in north-central Nigeria with a growth rate of 2.8%, a dependency ratio of 96.0 (NPC, 1991), 87.78 and about 5% between age 60 and above (NPC, 2006) covers about 4.1% (37,700km²) of the Nigerian landmass (NPC, 1998), has over the years experienced rapid population growth. This rapid change in total population has also been noticed in the proportion of people aged 60 years and above in Kwara state and Nigeria as shown in Table 1.1. The choice of Kwara State is predicated on the fact that it is one of the states having a higher percentage (6.9%) of elderly population than the national average of 5.2% in 1991 (NPC, 2003). Also, Kwara State used to be regarded as ‘civil service state’ because of low internally generated revenue (IGR) and national revenue allocation. Consequently, she experiences a high level of youth emigration mostly towards cities like Abuja or Lagos in search of greater economic opportunities (NPC, 1992). This ultimately affects the rate of remittance/care to the elderly/dependants negatively or positively.

Table 1.1: Numerical and Percentage Distribution of Population Age 60 and Above

| Year | Nigeria ^{Million (%)} | Kwara State ^{Thousand (%)} |
|------|--------------------------------|-------------------------------------|
| 1963 | 1.9 ^{**} | * |
| 1991 | 4.6 (5.2) | 107,462 (6.9) |
| 2005 | 6.4 (5.0) | 116,099 (5.0) |
| 2025 | 11.5 (6.0) | 181,114 (5.0) • |
| 2050 | 25.5 (9.9) | 307,894 (5.0) • |

* Not Available. • Author’s 2006 Census Projected Figures. Source: Compiled from NPC, 2006; UN, 1997, 1999, 2002.

** Culled from Asiyanbola, 2005

The present economic realities coupled with harsh government reform policy, material deprivation and the neglect of the older people has created an army of beggars abandoned to fend for themselves daily on our streets, and around homes/offices of political office holders

in the State (Ajomale, 2007). This has created an increasingly visible social and public health problem, and by extension an additional strain on the economically active population in Kwara State. It also has a direct bearing on intra and intergenerational equity and solidarity which forms the foundation of society. These intergenerational support systems according to Cliquet and Nizamuddin, (1999) are crucial to the well-being of both the younger and older generations. It is a known fact therefore, that the problem of aging has turn into a global phenomenon and indeed a critical policy issue receiving some recognition not only from developed nations but, by authorities of developing countries. This is the more reason for population aging research and why the government of Kwara needs to brace up, because to the best of this writer's knowledge there has been no conscious program or project targeting the aged like old peoples' homes, specialized geriatric care, and social welfare schemes in the state presently. Lack of social safety net programmes or pension to reduce old age poverty and support households, especially for those who cannot earn an income and are not covered by the contributory pension scheme have left many aged at the mercy of the vagaries of society (Asagba, 2005). The reason for these, as affirmed by Akeredolu-Ale, (2003); Isiugo-Abanihe and Wahab, (2009), might have arisen from the erroneous belief that older persons are social misfits and have no place in societal development.

An awareness of the effects on the population pyramid attributable to better healthcare and improved living conditions combined with a projected decrease in fertility is by some seen as a problem that may appear in the future (Clausen, Sandberg, Ingstad and Per Hjortdahl, 2000). This is why aging population according to Abdulraheem and Abdulrahman (2008) has recently become a focus and getting public attention especially in Nigeria and other developing countries. This is because the age profile in a nation's population structure is very important while determining the service requirement, availability of labour, trend in

consumer demand and the potential for future natural increase in population. Nigeria and other countries, see this emerging issue as a serious future challenge since studies (Ajomale, 2007; Velkoff and Kowal, 2006; Kinsella and Velkoff, 2001; Apt, 2000; World Bank, 1994; United Nations, 1991; 1999a; 1999b) have shown that the greatest increase in the elderly population is taking place in the developing and middle income nations of the world. These nations according to Ajomale (2007) are countries that are now experiencing rapid shifts from high mortality and high fertility to much reduced fertility and greater longevity.

Macroeconomic studies have also tend to examine the effect of population age structure on labour productivity, and the general consensus is that an aging population exerts a negative effect on labour productivity (Davis, 2005; Feyrer, 2008) or on economic growth (Bloom and Williamson, 1998; Headey and Hodge, 2009). Based on the 1991 population census, about 6% of the Nigerian population was aged 60 years and above (Abdulraheem and Abdulrahman, 2008), while findings of the 2006 National Census confirmed an increase in the percentage and the number of those aged 60 years and above (NPC, 2009). In the coming years, the aging population is expected to increase in number and life expectancy rates will gradually increase with significant social and economic implications for individuals and the Nigerian government. For example, the old-age dependency ratio is not high at present (at least compared with the developed nations) but it will increase in the coming years. This serves as pointer to problems to come.

A number of studies on aging have been conducted. For instance, Taj-Uddeen *et al.* (2010), focused on the socio-economic status of the elderly in Bangladesh; Hossain (2006) and Khan, Hafiz and Leeson, (2006) both focused on the demography and problems of aging while Islam and Nath (2010) tried measuring the past and future aging processes, also in Bangladesh. Waldo and Freeman (1989) studied the trend in health and the socio-economic

status of elderly on medicare expenditures; Kaldi, (2005) also focused on the elderly employment status in Tehran; Feyrer (2008), on the linkage between age structure and productivity, Davis (2005) on challenges posed by aging on financial and monetary stability; while Bloom, Canning and Fink (2008), focused on population aging and economic growth. Ironically, only two studies conducted about 30 year ago by Abuzar (1982) in India and Chen (1982) in Malaysia on aging through a spatio-temporal view point was actually found.

However, in Africa several studies on the subject of aging have equally been attempted by numerous authors. Some of these are Velkoff and Kowal (2006); Cohan and Menken (2006) on the changing aging demography; Aboderin (2006) on intergenerational support and old age; Adamchak (1995) on pension and household structure of older persons in Namibia; Clausen *et al.* (2000) on morbidity and healthcare utilization among the elderly in Botswana; while Atp, Nana Araba, did extensive studies in Africa and Ghana on family support to the elderly in 1992; redefining caring for the aged (1995); coping with old age (1996) and rapid urbanization and older persons living arrangements (2000).

Scholars in Nigeria are equally not left out in aging studies. These are seen in the works of Machu (2005) who examined the socio economic and health conditions of the elderly in Kaduna state; Adebayo (2006) on geriatric housing conditions in Ibadan; Abdulraheem and Abdulrahman (2008) a retrospective study on morbidity pattern amongst the elderly; Odufuwa (2010) on vulnerability and coping measures, while health expenditure impacts on the elderly population was examined by Olaniyan, Olayiwola and Odubunmi (2011), among others. Looking through the array of studies, none has actually taken the spatio-temporal approach to the population aging study in Africa. Secondly, regardless of the various view points from which aging has been examined, none has actually been conducted

in Kwara State. This now calls for a study on the spatio-temporal approach to examine aging in Kwara State, which is the focus of this study.

In order to fill the existing gaps in knowledge, the following research questions are posed:

- i. What are the characteristics of the aging population in Kwara State?
- ii. How is the health and social lifestyles of the aged population in Kwara State?
- iii. What is the trend of population aging in Kwara State?
- iv. What are the factors that shape population aging in the study area?
- v. Is there any difference in the pattern of aging in time and space in Kwara State?

1.3 AIM AND OBJECTIVES

The aim of the study is to analyze the spatio-temporal pattern of population aging in Kwara State. The specific objectives to achieve the aim are to:

- i. examine the characteristics of the aging population in time and space in Kwara State.
- ii. examine the health conditions of aging population in time and space in Kwara State.
- iii. examine the social conditions of aging population in time and space in Kwara State
- iv. explain the trend of aging population in time and space in Kwara State; and
- v. examine the factors that shape the pattern of aging in time and space in Kwara State.

1.4 SCOPE OF THE STUDY

This study focuses on the spatio-temporal analysis of the aged population in Kwara State. Six administrative headquarters have been systematically selected from six Local

Government Areas namely Asa, Baruten, Ekiti, Ilorin West, Oyun and Patigi from the 16 LGAs of the State. These formed the spatial units of study from where a total of 488 copies of questionnaire were administered. Also, the spatio-temporal variations, the socio-demographic and economic characteristics of the elderly and the implication of these changes for the general wellbeing and development of the State were examined. The population of people from age 60 and above obtained from the 1991 and 2006 National Census figures and subsequent projection from 1991 to 2025 form the temporal frame for examination.

1.5 JUSTIFICATION OF THE STUDY

Information on age is important not only for demographic analysis of mortality, fertility, nuptiality *et cetera*, but also for development planning and evaluation of the quality of census enumeration. Any discussion of a country's educational needs, labour force participation, family composition, political participation, migration, would not be complete without information on age. The problems in collecting reliable information on age and by extension aging, particularly in African societies have been well documented (NPC, 1998; Ewbank, 1981).

Consequently, planners have relied on incomplete or sometimes spurious data for policy making which has not helped in adequately catering for the aged. Besides, a problem in the Nigerian society is the general assumption that care for the elderly has always been provided by the extended social/family system – and that this provision of care services has always been adequate. This assumption according to Apt (1995); and Aboderin (2006) is not totally true considering the spatial extent of Nigeria. This now calls for a research that will adequately examine several dimensions of population aging problems such as the socioeconomic and demographic implications, health and medical consequences, the spatio-temporal dynamics of aging, vulnerability to the challenges of aging; coping strategies

adopted by aged and several related issues. Kwara State, situated in the middle-belt of Nigeria is a 'gateway' between the North and the South and in fact a "melting point" for the northern and southern cultures (Oyebanji, 2000) with different dispositions to aging. This strategic location provides opportunities for rapid socio-economic exchange (Oyebanji, 2002) and understanding the diverse cultural norms on aging in this area. This is important to demographers, population geographers and policy makers on geriatric issues and welfare.

The findings from this study is expected to further broaden our understanding of the subject of population aging. Particularly, agencies like the NPC; Ministries of Health and Social welfare; Non Governmental Organizations and the legislature will also benefit from the findings of this study. It will improve our understanding of the various coping strategies; care practices adopted and other health challenges being faced over time by the elderly citizens in various communities. This study would also be of immense value to governments at all levels in their efforts at raising the welfare of senior citizen in Nigeria. The findings would serve as guide for responsive policy formulation for improving access to and utilization of pro-elderly infrastructure, particularly in Kwara State and Nigeria in general.

1.6 ORGANIZATION OF THE STUDY

This dissertation consists of seven chapters. Chapter one is the introductory section which looked at the background to the study, the statement of the research problem, the aim and objectives of the study, the scope and justification for its choice. Chapter Two is the literature review which consists of two sections.

(i) the review of concepts and theories on aging; and (ii) review of previous research works on aging and aging population. The review concisely provides a summary of the related studies on aging population conducted by individual or groups of researchers and organizations. In Chapter Three, the study area and methodology was looked into. Issues like location and size,

climate and rainfall, vegetation, relief and drainage, population and people, socio-economic characteristics as well as social infrastructure in the study area were looked into. Also data types and sources, analysis and presentation were equally treated. Chapter Four analyzes respondents' demographic/socio-economic characteristics and discussion of survey findings. In Chapter Five, an attempt was made to analyze respondents' health and nutritional profile, social and recreational lifestyles. Chapter Six looks at the trend of aging population across the spatial locations, and also examined the factors that accounts for spatial variability in aging amongst respondents across space. Finally, the last Chapter seven highlights the summary of main research findings and stressing the implications of the findings on planning. The chapter also contained recommendations as well as suggestions on areas for further research.

CHAPTER TWO

CONCEPTUAL ISSUES, THEORETICAL FRAMEWORK AND LITERATURE REVIEW

2.1 CONCEPTUAL ISSUES

2.1.1 Aging

This is a process of gradual and spontaneous change resulting in maturation through childhood, puberty and young adulthood and the decline through middle and late ages (Okunola, 2002; Adedokun, 2010). Aging is also defined as the organic process of growing older and showing the effects of increasing age (www.senescence.info). Aging is a lifelong process and varies in its effects from individual to individual. Changes occur in human life with aging, such as grey hair, baldness and failing health, not all changes are however deleterious as aging can be characterized by increased wisdom and experience. In the words of Okunola (2002), it is believed that where maturation ends and decline begins are not perceptibly discernible as at one end is adolescence and at the other is senescence. The elderly according to authors like Kaiser and Camp, (1993); Adebayo, (2006) are those who have attained the age of 60 and above.

The impact of an aging population has generated considerable debate in recent times. This emerged against a background of the rapid change in the environment and peculiar circumstances facing the aged in contemporary society. There has been a growth in public awareness and interest in aging issues, as well as increased pressure on older people in the workplace, combined with the rapid growth in early retirement. Marshall (1998) described aging as the physiological process of growing older. In his analysis, this process has vital social and cultural dimensions, which affects what is generally seen as a biological

inevitability. Age is a cultural category and its meaning and significance vary both historically or culturally (Okumagba, 2005). In traditional African societies, the care of the aged or elderly is the basic responsibility of the family. The elderly are supported by a strong kinship network and extended family system in Africa; in which the elderly are highly respected and are seen as repositories of knowledge and custodians of culture.

2.1.1.1 Meaning and Nature of Aging

Aging is referred to as the regular changes that take place in biologically mature individuals as they advance through life cycle (Cole and Harris, 1980). Aging is a process of getting old and all people affected by this process are regarded as the elderly. It is defined legally, socially and culturally (Nicholas, 1980). In the process of aging, the skin wrinkles, power of seeing and hearing diminishes, hair turns white and is gradually lost; reflexes slow and the body organs deteriorate. It is on this premise that Hendricks and Hendricks (1986) submitted that aging involves a pattern of changes not only in the structure and functioning of the body but also in the adjustments and behaviour of the person. In line with the aforementioned assertions, aging can be viewed as a sequence of events that take place during an individual life course.

Aging varies not only among persons but also within a person. Changes also occur in sensory activities with age, long sightedness is common as are cataracts. Hearing ability declines with a gradual loss of the ability to hear frequencies. In light of this, Cole and Harris (1980) submitted that there is no fixed time in a person's life when he or she becomes old. To Cole and Harris (1980), aging is a gradual and sometimes almost imperceptible process, thus the most noticeable changes are that the heart pumps less blood and the lungs take in less air, there is a decrease in the production of digestive juices in the intestine and the filtering rate of the kidney is often reduced by half.

With age, there is also little change in mental ability. However, it should be noted that under most circumstances, the ability to learn does not change with age. Old people constitute a minority group in the society. They are relatively powerless, their behaviour and traits are stereotyped and regularly depreciated and devalued by the dominant group and most important because of their age, the elderly are signed out for differential and unfair treatment. So, it is obvious that growing old is a dynamic change redefinition of social identities and adjustments in psychological functioning.

2.1.2 Age Structure

The age structure of a population affects a nation's key socio-economic issues. Countries with young population (high percentage under age 15) e.g. developing countries like Nigeria, India need to invest more in schools, while developed countries like Japan, USA etc. with older populations (high percentage ages 60 and above) need to invest more in the health sector, because the risk of health problems rises precipitously in very old age (Adebayo, 2006). Also this will have tremendous impact on economic growth, savings, investments, taxation, housing, intergenerational transfers and consumption etc. (United Nations, 2002). The age structures can also be used to help predict potential political issues. For example, the rapid growth of a young adult population unable to find employment can lead to unrest. Given that large shifts in age structure are being compressed into a relatively short period in developing countries, meaning they will have less time than the developed countries to adapt to the problems posed by the changing age structure (United Nations, 2001). Therefore, rapid changes in age structure may be more difficult for developing nation's societies to manage than changes that occurs over a longer period of time. This has important implications for public policies on health care, pension schemes and economic prosperity (Ajomale, 2007).

2.2 THEORETICAL FRAMEWORK

2.2.1 Social Theories of Aging

2.2.1.1 Social Conflict Analysis

Social conflict analysis is based on the idea that different age categories have different opportunities and different access to social resources, creating a system of age stratification. This analysis lays so much emphasis on aging and inequality. Age stratification is one focus of social conflict analysis. To conflict theorists, age based hierarchy is inherent in an industrial-capitalist society. In line with Marxist thought, Spitzer (1980) points out that a profit oriented society devalues any category of people that is economically unproductive. To the extent that older people are less productive, then our society labels them as mildly deviant. Social conflict theory adds to an understanding of the aging inequality and explaining how capitalism devalues the elderly. The geography of inequality determines who gets what and in which location (Smith, 1974).

In this sense, any space occupied by the aged usually lack similar facilities found in areas occupied by the youthful population. This is contrary to welfarist approach in geographical analysis that every member of the society should not be deprived based on race, socio-economic status or the place they occupied (Oyebanji, 1986). This shows that rural areas where the aged reside should not be deprived. From the foregoing, it can be deduced that the social interaction theory seems to favour the establishment of structures that enables the elderly in our societies cope well with the circumstances of aging than the functional structuralist approach. However, the social-conflict perspective can be described as that with the least disposition towards providing adequate coping structure for the aged because of their low productivity.

2.2.1.2 Role theory:

This is one of the oldest gerontological theories, dating back to the 1940s (Cottrell, 1942). It postulates that throughout the life course people play many roles to assist with developing self-concepts, setting norms of behavior and defining the individual (Healy, 2004). This means that individuals play a variety of roles during their life stages: child, adult, spouse, parent, employer, employee, grandparent, and retiree. Roles are often sequential, some are concurrent, and individuals lose and gain roles throughout life. But positive interpretations of the role theory show that different roles emerge which allow older individuals to experience ‘role release’ in that they are less bound by social expectations and can dare to be different (Riley, Kahn and Foner, 1994).

2.2.2 Structural Functional Perspective

2.2.2.1 Disengagement Theory

This theory suggests that society’s stability is assured when social roles are passed on from one generation to another through an “inevitable act of mutual withdrawal or disengagement, resulting in decreased interaction between the aging person and others in the social system to which they belong” (Cumming and Henry, 1981). The disengagement theory equally suggested that gradual disengagement from social life and an increasing focus on the inner self is a natural process of human ageing, because physical and mental decline is inevitable (Gondo, 2012). Disengagement is a strategy to ensure orderliness in the operation of the society by removing aging or aged people from productive roles while they are still able to perform them. This change paves way for young workers to replace the disengaged old ones. The idea that the society enhances its orderly operation by disengaging people from positions of responsibility as they reach old age is a welcome development to structural

functionalists. However, this analysis fails to address the side effect on the aged such as inability of older workers to disengage from paid employment because they do not have financial resource to fall back on, while many of them regardless of their financial circumstances do not wish to disengage from their productive roles. This may likely be due to the fear of an uncertain future. Consequently, as older people are disengaged they become vulnerable to socio-economic ills when there is no income to support them and interaction with the society diminishes. Hence, ability to cope is undermined, further compounding their problems.

2.2.2.2 Mutation Accumulation Theory of Aging

This evolutionary theory, suggested by Medawar (1946, 1952), considers aging as a by-product of natural selection. According to this theory, aging is a non-adaptive trait because natural selection is negligent of events that occur in a few long-lived animals that provide little additional contribution to offspring numbers. This explanation of aging is similar to the evolutionary explanation of vision deterioration and ultimate blindness of cave animals: if some function cannot be used to provide reproductive advantage, it will not be supported by selection pressure and maintained in future generations (Bengston, Silverstein, Putney and Gans, 2009).

The probability of an individual reproducing depends on age. It is zero at birth and reaches a peak in young adults. Then it decreases due to the increased probability of death linked to various external (predators, illnesses, accidents) and internal (senescence) causes. In such conditions, deleterious mutations expressed at a young age are severely selected against due to their high negative impact on fitness (number of offspring produced). On the other hand, deleterious mutations expressed only later in life are relatively neutral to selection because their bearers have already transmitted their genes to the next generation. Note that

mutations can affect fitness either directly or indirectly. For example, a mutation increasing the risk for leg fracture, due to a low fixation of calcium, may be indirectly as deleterious to fitness as a mutation directly impairing the eggs nesting in the uterus (Le Bourg, 2001). From an evolutionary perspective, it does not really matter if the organism is at risk not to reproduce because many spontaneous abortions occur, or because it becomes an easy prey for a predator (in nature) or a criminal (in society).

According to this theory, persons loaded with a deleterious mutation have fewer chances to reproduce if the deleterious effect of this mutation is expressed earlier in life. For example, patients with progeria (a genetic disease with symptoms of premature aging) live for only about 12 years (Turker, 1996) and, therefore, cannot pass their mutant genes to subsequent generations. In such conditions, the progeria stems only from new mutations and not from the genes of parents. By contrast, people expressing a mutation at older ages can reproduce before the illness occurs, such as the case with familial Alzheimer's disease. As an outcome, progeria is less frequent than late diseases such as Alzheimer's disease because the mutant genes responsible for the Alzheimer's disease are not removed from the gene pool as readily as progeria genes and can thus accumulate in successive generations (Le Bourg, 2001). In other words, the mutation accumulation theory predicts that the frequency of genetic diseases should increase at older ages (Bengston *et al*, 2009).

Mutation accumulation theory allows researchers to make several nontrivial testable predictions. In particular, this theory predicts that the dependence of progeny lifespan on parental lifespan should not be linear, as is observed for almost any other quantitative trait demonstrating familial resemblance (for example, body height). Instead, this dependence should have an unusual nonlinear shape with an increasing slope for the dependence of progeny lifespan on parental lifespan for longer-lived parents. This prediction follows

directly from the key statement of this theory that the equilibrium gene frequency for deleterious mutations should increase with age at onset of mutation action because of weaker (postponed) selection against later-acting mutations (Charlesworth, 1994). The term “equilibrium gene frequency” refers here to the ultimate, time-independent gene frequency, which is determined by mutation-selection balance (equilibrium between mutation and selection rates).

According to the mutation accumulation theory, one would expect the genetic variability for lifespan (in particular, the additive genetic variance responsible for familial resemblance) to increase with age (Charlesworth, 1994). The additive genetic variance refers here to variance of additive genetic origin (variation due to the additive effects of genes on a particular trait in a genetically heterogeneous population), and this variance increases with an increase in mutation frequencies (Charlesworth, 1994). The predicted increase in the additive genetic variance could be detected by studying the ratio of additive genetic variance to observed phenotypic variance. This ratio (the so-called narrow-sense heritability of lifespan) can be easily estimated as the doubled slope of the regression line for the dependence of offspring lifespan on parental lifespan (Falconer and Mackay, 1996; Lynch and Walsh, 1998). Thus, if the ages at death were indeed determined by accumulated late-acting deleterious mutations, one would expect this slope to become steeper with higher parental ages at death (Gavrilova, Gavrilov, Evdokushkina, Semyonova, Gavrilova, Evdokushkina and Andreyev, 1998). This prediction was tested through the analysis of genealogical data on familial longevity in European royal and noble families, data well known for their reliability and accuracy. It was found that the regression slope for the dependence of offspring lifespan on parental lifespan increases with parental lifespan, exactly as predicted by the mutation accumulation theory (Gavrilova, *et al.*, 1998; Gavrilov and Gavrilova, 2001; Gavrilova and

Gavrilov, 2001). The current status of the mutation accumulation theory could be characterized as a productive working hypothesis pending further validation.

2.2.2.3 Modernization Theory

Modernization model of aging stipulates that social and economic changes associated with modernization produce a relative decline in the status and welfare of older people. Demographic forces are thought to play a role here as well, not only in the putative link between small proportions of old people in the population and their high status in the past but also in a somewhat more complicated fashion. The fact that women bore children until they were about 40, combined with the fact that people presumably did not live as long in the past, meant that there was no old age distinct from middle age (Haber, 1983). In this view, with increase in longevity, the limitation of childbearing to the younger fecund years, and the increased movement of adult children away from the parental home, a distinct period of old age became established, one in which the elderly were increasingly isolated and powerless.

The tendency of old people to become more isolated from work and family with modernization has, however, been denied by many scholars (Sokolovsky, 1997). Criticisms come primarily from two sources. First of all, historians have identified past Western societies in which old people were not provided support by kin and suffered from economic privation. Second, anthropologists and others have demonstrated that not all small-scale societies accorded high status to the old. They have shown that in many non-western societies today, urbanization has not undercut heavy reliance on extended kin relations. On the contrary, such ties continue to provide older people in these societies with security, and status.

Part of the confusion in all this stems from the imprecise or muddled nature of the modernization concept. Modernization has been identified variously with urbanization,

industrialization, the demographic transition, the spread of public, secular schooling, the spread of state-run welfare institutions, the advent of modern medicine, and many other developments. There is no clear reason why all of these forces should be thought to have the same impact on the status or welfare of older people. One of the most common claims of the modernization and aging literature is that in the past old people were provided a secure existence through co-residence with their children (a scenario still common in Africa and most developing countries). Such co-residence was often associated with households that were economic units, providing older people both with continued work roles and with control over property that placed them in a position of authority over their adult children.

Critics of the modernization model have jumped at the evidence coming in from the work of the Cambridge Group and others (Laslett 1972) seeming to suggest that extended families were not in fact common in the Western past. As Gratton (1986) explained, "The most striking criticism [of the modernization model] sprang from the startling discovery that the nuclear household was the predominant form in preindustrial western societies. This discovery, led to the conclusion that the aged could not have exercised power through an extended family."

It is not at all certain that older people in general lived apart from their children in the European past, nor even that they do in all places today. Mitterauer and Sieder's (1982) characterization of living arrangements in Austria is of interest here. In harmony with the traditional modernization model, they argue that "historically speaking, the isolation of the aged . . . is a relatively recent phenomenon. It is mainly a result of industrialization and urbanization". They bolster their case by pointing to contemporary Lower Austria, contrasting the high proportion (44%) of people over age 60 in the rural population who live with one of their married children to the low proportion (14%) among the non rural population.

In conclusion, this study has adopted both Social and Structural Functional approaches especially the Role Theory as well as the Disengagement and Modernization Theories as its theoretical framework. This is because they appropriately describe the main crux of this study which is an analysis of the different scenarios faced by the elderly in our societies. That is the elderly experiencing ‘role releases’ as well as the relative decline in status and welfare as a result of the socio-economic changes associated with modernization.

2.3 LITERATURE REVIEW

2.3.1 Defining and Measuring Population Aging

As the study of population aging is often driven by a concern over its burdening of retirement systems, the aging of population is often measured by increases in the percentage of elderly people of retirement ages (Gavrilov and Heuveline, 2003). The definition of retirement ages may vary (specialized retirement age of 70 years for Supreme Court Judges and Professors in Nigeria) but a typical cut-off is 65 years, and nowadays a society is considered relatively old when the fraction of the population aged 65 and over exceeds 8-10%. By this standard, the percentage of elderly people in the United States stood at 12.6% in 2000, compared with only 4.1% in 1900 and a projected increase to 20% by the year 2030 (Gavrilov and Heuveline, 2003).

A related measure of population aging is the elderly dependency ratio (EDR): the number of individuals of retirement ages compared to the number of those of working ages. For convenience, working ages may be assumed to start at age 15, although increasing proportions of individuals pursue their education beyond that age and remain, meanwhile, financially dependent, either on the state or, increasingly, on their parents or bank managers. The ratio of the elderly dependent population to the economically active (working) population is also known as old-age dependency ratio, age-dependency ratio or elderly

dependency burden and is used to assess intergenerational transfers, taxation policies, and saving behaviour.

Another indicator of the age structure is the aging index (sometimes referred to as the elder-child ratio), defined as the number of people aged 60/65 and over per 100 youths under age 15. In 2000, only a few countries (Germany, Greece, Italy, Bulgaria, and Japan) had more elderly than youth (aging index above 100). By 2030, however, the aging index is projected to exceed 100 in all developed countries, and the index of several European countries and Japan are even expected to exceed 200. To date, aging indexes are much lower in developing countries than in the developed world, but the proportional rise in the aging index in developing countries is expected to be greater than in developed countries (Gavrilov and Heuveline, 2003).

These indicators of population aging are mere head-count ratios (HCR), that is, they simply relate the number of individuals in large age categories. These indicators fail to take into account the age distribution within these large categories, in particular among the elderly. When the fertility and mortality trends responsible for population aging have been fairly regular over time, the population growth is positively correlated with age (i.e., the oldest age groups are growing fastest). This implies that if the proportion of the population over age 65 is increasing, within that 65-and-over population the proportion over, say, age 80 is also increasing. As health, financial situation, and consumption patterns may vary greatly between 65 year olds and 80 year olds, simple ratios conceal important heterogeneity in the elderly population. Increasingly, attention is paid to the "oldest olds" (typically age 80 and over). A long-time subject of curiosity, the number of centenarians is growing even faster. Estimated at 180,000 worldwide in 2000, it could reach 1 million by 2030 (United Nations, 2001).

The second class of indicators for population aging is the group of statistical measures of location (median, mean and modal ages of population). The median age: the age at which exactly half the population is older and another half is younger:- is perhaps the most widely used indicator. For the year 2000, the median age in the United States was 36 years, a typical age for most developed countries and twice the median age for Africa (United Nations 2001). Because it is more sensitive to changes at the right-hand tail of the age distribution (i.e., the oldest old ages), the mean age of population might in fact be preferred to the median age to study the dynamics of population aging (Gavrilov and Heuveline, 2003).

Since population aging refers to changes in the entire age distribution, any single indicator might appear insufficient to measure it. The age distribution of population is often very irregular, reflecting the scars of the past events (wars, depression etc.), and it cannot be described just by one number without significant loss of information. Were the age distribution to change in a very irregular fashion over the age range, for instance, much information would be lost by a single-index summary. Therefore, perhaps the most adequate approach to study population aging is to explore the age distribution through a set of percentiles, or graphically by analyzing the population pyramids. Demographers commonly use population pyramids to describe both age and sex distributions of populations. Youthful populations are represented by pyramids with a broad base of young children and a narrow apex of older people, while older populations are characterized by more uniform numbers of people in the age categories.

2.3.2 Demographic Determinants of Population Aging

To understand the demographic factors that cause population aging, demographers often refer to stable populations (Preston *et al.* 2001; Gavrilov and Heuveline, 2003). This population model assumes that age-specific fertility and mortality rates remain constant over time, resulting in a population with an age distribution that eventually ceases to change. It

becomes “stable” (Bharathi, 2012). Conversely, the model according to Bharathi, suggests that in a population closed to migration, any change in age structure, population aging in particular, can be caused only by changes in fertility and mortality rates. The influence of changes in fertility rates on population aging is perhaps less intuitive than that of mortality rates (Gavrilov and Heuveline, 2003). Everything else constant, however, a fertility decline reduces the size of the most recent birth cohorts relative to the previous birth cohorts, hence reducing the size of the youngest age groups relative to that of the older ones.

The effects of changes in mortality rates on population aging appear more intuitive, but are in fact more ambiguous. If increases in the human life span are correctly linked to population aging, reductions in mortality rates do not necessarily contribute to population aging. More specifically, mortality declines among infants, children and persons younger than the population mean age tend to lower the population mean age. A moment of thought suggests that indeed a reduction of neonatal mortality (i.e., death in the first month of life) adds individual at age 0 and should lead to the same partial alleviation of population aging as an increase in childbearing.

Population aging is thus related to the demographic transition. That is the processes that lead a society from a demographic regime characterized by high rates of fertility and mortality, to another one with lower fertility and mortality rates (Gavrilov and Heuveline, 2003). In the course of this transition, the age structure is subjected to different influences. In the typical sequence, the transition begins with successes in preventing infectious and parasitic diseases that most benefit infants and young children (Bharathi, 2012). The resulting improvement in life expectancy at birth occurs while fertility tends to remain unchanged, thereby producing large birth cohorts and an expanding proportion of children relative to adults. Other things being equal, this initial decline in mortality generates a younger population age structure.

After initial and sometimes very rapid gains in infant and child mortality have been achieved, further mortality declines increasingly benefit older ages and are eventually accompanied by fertility declines. Both changes contribute to reverse the early effect of mortality decline on the age structure, and this synergy is known as the double aging process. This corresponds to the experience of most developed countries today, but further decomposition suggest that their history of declining mortality is the dominant factor in current aging (Preston, Himes and Eggers 1989). Mortality declines continue in these countries and the decrease in mortality rates among the oldest-old (85+ years) has actually accelerated since the 1950s (Gavrilov and Gavrilova, 1991). This latest phase of mortality decline, which is concentrated in the older age groups, is becoming an important determinant of population aging, particularly among women.

The rate of population aging may also be modulated by migration. Immigration marginally slows down population (in Canada and Europe, for example), to the extent immigrants tend to be younger than the population average and have higher fertility than do the native-born (Bharathi, 2012). On the other hand, emigration of working-age adults accelerates population aging, a phenomenon that can be observed now in some Caribbean nations. Population aging in these countries is also accelerated by immigration of elderly retirees from other countries, and the return migration of former emigrants who are above the average population age. Some demographers expect that migration will have a more prominent role in population aging in the future, particularly in low-fertility countries with stable or declining population size (Gavrilov and Heuveline, 2003). The effects of migration on population aging are usually stronger in smaller populations, because of higher relative weight (proportion) of migrants in such populations.

2.3.3 Dynamics of Population Aging

The current level and pace of population aging vary widely by geographic region, and usually within regions as well, but virtually all nations are now experiencing growth in their numbers of elderly residents. The percentage of world population aged 60 and over only increased from 5.2% in 1950 to 6.9% in 2000. In Europe, however, the proportion is 14.7% in 2000. For a long time, the highest proportions were found in Northern Europe (e.g., 10.3% in Sweden in 1950), but had moved South by 2000 (18.1% in Italy). The proportions of elderly are lower outside of Europe with the notable exception of Japan where it increased from 4.9% in 1950 to 17.2% in 2000. In Africa it was 5.2% by 2005 (Kinsella and Velkoff, 2001; UN, 2005). The age structure of the United States continues to be marked by the large birth cohorts of the baby boom (people born from 1946 through 1964), not yet aged 65. The proportion of the elderly population in the U.S. which was 12.3% in 2000, remains low compared to the developed country standards (Gavrilov and Heuveline, 2003).

2.3.4 The Basis of Investigating into Population Aging

People are living longer and, in some parts of the world, healthier lives. By 2030, 1 billion people will be age 65 years and older. While this is a major achievement of the last century, significant challenges now confront humanity. Societal aging may affect economic growth, family sustainability, and international relations. Nigeria, with a population of about 140 million (NPC, 2006) has about 76 million constituting the dependent population made up of both the children below age 18 and the elderly of 60 years and above (NBS, 2007). This figure shows that about 54% of population is dependent and this is expected to increase over the years going by the population demographic transition theory (Olaniyan *et al*, 2011).

Several studies have also shown that per person expenses are greater among the elderly than the non elderly (Waldo and Freeman, 1989; Cutler and Meara, 1997; Hitiris and

Posnett, 1992). In addition, Ried (1996) suggested that more is spent on the elderly on a per capita basis with a ratio of 2.9 in Sri Lanka. In most developing nations with the extended family system still common, the elderly live under the care of their children and financial support remains their main source of funding (Mosley, Bobadilla and Jamison, 1993). The proximity of elderly to death was also found to exert significant negative effects on healthcare expenditure. This is the case when Hitiris and Posnett (1992) estimated that per capita personal health expenditures among the oldest (85 years and above) were three times higher than those in the age group 65-74 years and twice those in the age group 75-84 years in the United States. Another reason why population aging matters, especially in developing world, and most especially Nigeria, is the changes in the family structure over the years.

2.3.5 Dynamics in the Nigerian Family Structure

The Nigerian family used to consist of members of the extended lineage: parents, grandparents, aunts, uncles, brothers, sisters, cousins, nephews, nieces, etc. – a large family indeed. Before “westernization” came to “weaken” the concept of the extended family system and replace it with the nuclear family, the extended family as a social structure served more or less as a form of social insurance (traditional safety net) for old age (Ajomale, 2007). There is an observable progressive shift away from the traditional family. Traditional functions of the family like care and social support for older family members have gradually decreased in the recent past due to economic problems, migration and influence of foreign culture. Family members however are unable to effectively cope with the challenges of daily living. Emphasis is now on the nuclear family of “me, my wife and my children” at the expense of other members of the wider family network, especially the older ones who look up to the younger generation to provide them with economic security in old age. The government does not provide social security for older persons. These changes in family

structure in Nigeria have caused gradual disintegration of the extended family and of the communal sense of living in Nigerian society (Ajomale, 2007).

Neglect of filial obligations due to these structural changes has further impoverished older people and created more physical and social distance between family members. A lot of these older people have resorted to begging in order to survive or getting employed as cleaners, security guards, load carriers, or petty traders. It is gratifying to note that social support traditionally given to older persons still exists: daughters and daughters-in-law coming to the rescue of older people – though sometimes with adverse effects to their own health and domestic relationships. In Nigeria, the family is charged with the responsibility of the provision of care and support for the older person. Such care and support are voluntary and reciprocal, without any form of compensation. Family members, especially adult children, form the bulwark of informal support for older persons. The care of the older relative is a value which is culturally rooted and highly respected.

2.3.6 Notable Features of Population Aging

The most rapid growth occurs in the oldest age groups – the oldest –old (80+ or 85+ years) and centenarians (100+ years) in particular. In other words, population aging is becoming “deeper” with preferential accumulation of particularly old and frail people. Secondly, population aging also causes changes in the living arrangements resulting in increasing number of older people living alone. Thirdly, Population aging is particularly rapid among women, resulting in “feminization” of population aging (because of lower mortality rates among women). Fourthly, another consequence of lower female mortality is the fact that almost half of older women (45%) in 2000 were widows, thus living without spousal support (Gavrilov and Heuveline, 2003). Lastly, since older persons have usually lower income with

a higher proportion living below the poverty line, population aging is associated with poverty, particularly in developing countries.

The number of older persons and pace of aging vary widely between and within regions, and typically more developed regions have higher proportions of their populations in older age groups than do developing regions. In 2005, with over 6 million people above 60 years, Nigeria ranked among the top 30 countries in the world with older population (Cohen and Menken, 2006). South Africa had just over 3.4 million. Six additional Sub-Saharan African nations had over 1 million people aged 60 and over in the year 2005 (Cohen and Menken, 2006). While population aging represents, in one sense, a success story for mankind (massive survival to old ages has become possible), it also poses profound challenges to public institutions that must adapt to a changing age structure. The first challenge is associated with dramatic increase in the older retired population relative to the shrinking working ages, which creates social and political pressures on social security programs.

Population aging is also a great challenge for the health care systems. As nations age, the prevalence of disability, frailty, and chronic diseases (Alzheimer's disease, cancer, diabetes, hypertension, cardiovascular and cerebrovascular, incontinence, osteoporosis, arthritis, eye problems, frequent falls (which can lead to fractures) and many other diseases) is expected to increase dramatically (Gavrilov and Heuveline, 2003, Levy, 2012). This made some experts to raise concerns that mankind may become a global nursing home (Eberstadt, 1997). An increase in the prevalence of mental health problems, especially dementia was also linked to population aging by the World Health Organization. World Health Organization (1998) projected that Africa, Asia, and Latin America will have more than 55 million people with senile dementia in 2030. The aging of the population is indeed a global phenomenon that requires international coordination of national and local actions. The United Nations and

other international organizations developed recommendations intended to mitigate the adverse consequences of population aging. These include reorganization of social security systems, changes in labour, immigration and family policies, promoting active and healthy life styles, and more cooperation between the governments in resolving socioeconomic and political problems posed by population aging (Gavrilov and Heuveline, 2003). On the positive side, the health status of older people of a given age is improving overtime now, because more recent generations have a lower disease load. Older people can live vigorous and active lives until a much later age than in the past and if they are encouraged to be productive, they can be economic contributors as well (Adebayo, 2006). Also the possibility should not be excluded that current intensive biomedical anti-aging studies may help to extend the healthy and productive period of human life in the future (de Grey, Aubrey, Gavrilov, Olshansky, Coles, Cutler and Harman, 2002).

2.3.7 Challenges of Population Aging

Population aging generates many challenges and sparks concern about the pace of future economic growth, the operation of financial integrity of healthcare and pension systems, and the wellbeing of the elderly.

2.3.7.1 The Size and Quality of Workforce

Economic prosperity depends crucially on the size and quality of workforce. As people pass through the 50s and beyond, their labour force tends to decrease (Bloom, Boersch-Supan, McGee and Seike, 2011). The stock of assets could also decrease as the elderly increasingly rely on their savings to finance their spending. The combination of possible labour market tightening and dis-saving, raises concerns that the steeply aging

countries will experience slower economic growth (Boersch-Supan and Ludwig, 2009; Bloom *et al*, 2011). Some countries may even face the shrinkage of their economies.

2.3.7.2 Labour Force Participation

Labour force participation declines with age, especially after age 50, but work patterns for older people vary among and within countries (Kinsella and Phillips, 2005). Older people in more developed countries are generally less likely to work than those in less developed countries. Only 2% of men age 65 and older participate in the labour force in some countries, whereas more than one-half are economically active in certain less developed countries. National differences in labour force activity, is associated with societal wealth (Kinsella and Phillips, 2005). Wealthier countries tend to have much lower labour force participation rates among older residents than do low-income countries (Clark, York and Anker, 2000). Older men and women in less developed countries are much more likely to work than those in industrialized nations. Older people in predominantly rural agrarian societies often work out of necessity. Retirement may be a luxury reserved for urban elites. More than 50% of all older men are considered economically active in countries like Bangladesh, Indonesia, Jamaica, Pakistan, Mexico and Zimbabwe (Kinsella and Phillips, 2005). Older women workers in less developed countries work in agriculture (OECD, 2000).

2.3.7.3 The Economic Impact of Population Aging

(a) The Importance of Age Structure

Models and perspectives on the determinants of economic growth are plentiful in the academic literature (Bloom, *et al*, 2008). Some frameworks highlight the importance of improved productivity within all sectors, and the need for sectoral shifts, i.e., the reallocation of labour from the low productivity agricultural sector to the higher productivity industry and

service sectors. Others like Tyres and Shi, (2007) emphasize the contribution to growth of technological progress, human capital, institutions and governance, macroeconomic and trade policies, and random shocks. Still others stress feedback effects that run from economic growth to technical progress and human capital accumulation, which in turn influence economic growth. Tyers and Shi (2007) introduce demographics (population size and its age, sex, and skill composition) into a dynamic computable general equilibrium model of the world economy with exogenously-determined age patterns of labour force participation, consumption, and savings. Their work indicates that accelerated population aging (via lower fertility) tends to enhance real per capita income growth in regions with very young populations and slows it in regions with older populations and low rates of labour force participation among the elderly (e.g., Western Europe). Based on a model that is similar in spirit, though demographically less fine-grained, McKibbin, (2006) reaches qualitatively similar conclusions, but also highlights the implications of global demographic change for international trade and capital flows and therefore for domestic economic performance.

Paul Krugman has expressed a dim view of such concerns in so far as they apply to the social security system in the United States, because its critics misrepresent its financial stability and are motivated by concerns that go far beyond social security itself. The key premise here is that changes in population age structure may exert a significant influence on economic growth. We adopt a life cycle perspective, based on the fact that people's economic needs and contributions vary over the various stages of life. Specifically, the ratio of consumption to production tends to be high for the youth and elderly and low for working-age adults. This means that key drivers of economic growth such as aggregate labour supply, productivity, consumption, and savings will tend to vary depending on where most people fall in the life cycle. Among these factors, it is well understood that labour supply and savings are higher among working-age adults than among those aged 60 or above. Other things equal,

therefore, a country with large cohorts of youth and elderly is likely to experience slower growth than one with a high proportion of working-age people (Bloom, *et al*, 2008).

The value of this approach can be seen in an analysis of the impact of changing age structure on East Asia's remarkable economic growth in the second half of the 20th century (Bloom and Williamson, 1998). Rapid declines in infant and child mortality in the region began in the late 1940s, and these declines triggered a subsequent fall in fertility rates: the crude birth rate dropped from over 40 births per 1,000 people in 1950 to just over 20 by 1980. The lag between falling mortality and fertility created a "baby boom" generation, which was larger than the cohorts that preceded and followed it. As this generation reached working age, it boosted savings rates and also the size of the labour force; from 1965 to 1990, the working-age population grew by 2.4 per cent annually and the dependent population by just 0.8 per cent. Bloom and Williamson (1998), Bloom, Canning, and Malaney (2000) estimate that this "demographic dividend" explains up to one-third of East Asia's economic miracle between 1965 and 1990. Bloom, Canning, and Sevilla (2003) provide a more extensive exposition of this phenomenon, while Bloom and Canning (2008) emphasize the importance of appropriate institutions and policies in bringing about the demographic dividend.

(b) Accounting Effects of Population Aging

If age-specific behaviour with respect to labour supply and savings were fixed, labour supply and savings per capita would tend to decline with a rising elderly share of the population. Keeping all other factors such as productivity and migration equal, this would imply lower growth in income per capita. This frame of reference appears to underlie the rather alarmist views of commentators such as Peter Peterson, who has argued that, "global aging could trigger a crisis that engulfs the world economy [and] may even threaten democracy itself" (Peterson, 1999; Bloom, *et al*, 2008).

2.3.7.4 Living Arrangements and Family Relationships

In the past, and still today in many less developed countries, the higher status of the elderly was tied partly to the fact that as old age approached, they were situated in their own housing unit. Even if they live with their children, it was likely that the children (typically a son with his family) were actually living in the parental home, rather than the other way around (Kertzer, 1995; Weeks, 2005). The concept of filial piety, of respect for one's parents, has been a traditional value in most cultures, encouraging children to take care of their parents when the need arises. Of course, in high-mortality societies, the probability that parents would survive to old age (and the probability that their children would survive to assist them) was low enough so that relatively few people ever had to make good on that concept (Weeks, 2005). In modern times, society after society has bemoaned the fact that the multi-generational family has been a victim of “the movement towards smaller families, the expansion of the female labour market, the geographic mobility of villagers, and the tendency of the young towards individualistic life styles” (Sung, 1995). To be sure, not all older people necessarily want to live with their children, especially if they are forced to be dependent on the children.

A global phenomenon of “intimacy at a distance” has been emerging amongst older people (Weeks, 2005). Those who co-reside with children do so out of necessity, not necessarily because they prefer that arrangement (Da Vanzo and Chan, 1994). Although, some elderly people move around the time of retirement, most people age in place. This has led to the creation of what are sometimes called “naturally occurring retirement communities” (NORCs). A term originally applied to places that are attractive to older migrants, and then became retirement communities (Hunt, 1984), but over time it has been applied to any apartment building or neighbourhood where a high percentage (50% more) of

the residents are more than 60yrs of age. This is the spatial component of the life course. People are attracted to neighbourhoods and particular apartment buildings because of the similarity of other people's demographic characteristics, including the stage of life. Then, perhaps even without people realizing it, the population ages together and becomes a retirement community (Weeks, 2005).

It is probably most accurate to say that diversity in living arrangements is as much a part of the lives of older people as it is among the young. In more developed societies, the diversity of living arrangements among the elderly is compounded by patterns of marriage, divorce, and remarriage in combination with differences in mortality between males and females (Weeks, 2005). The unbalanced sex ratio at older ages in most societies signals a change in marital status, which in turn means a change in living arrangements for many people as they grow older. In American and European societies, older people are much more separated from their children than in Asian societies, such as Japan (Kinsella, 1995; Weeks, 2005). In Japan, it has long been the norm for older parents to live with a child (usually the eldest son).

2.3.7.5 Poverty and the Aged

There are several factors that contribute to the chronic poverty among the aged in societies. As in most communities, high proportions of the poorest are the aged who have been physically weak and suffer ill health (Bird and Shenyekwa, 2003). Amongst the aged, the chances of being poor increases with age, and they grow up becoming unrelated individuals. According to National Population Commission (NPC, 2006), a third of the older elderly counted by the commission as unrelated individuals were below poverty threshold. Although, old age in general does not mean being in absolute poverty, growing beyond sixty-

five increases the chances of becoming poor because the older one is, the more their income levels declines (Thompson and Schulz, 1975). Thus growing old means continued income deprivation relative to that of a young people.

2.3.8 Coping Strategies among the Aged

Coping strategies are emotional and mental response that helps us deal with stress. They are positive reinforcement and reinforce self-esteem. There are many coping strategies that could be of immense help to an individual like thinking confidently and optimistically in the face of bad news which often assist in overcoming challenges and increase the likelihood of a sound health (Foundation for Health and Ageing, 2005). Various strategies are adopted by the aged in order to cope with aging which specifically deals with things like physical disabilities, loneliness, rejection and feeling of worthlessness. Emotional stress such as these is so powerful. The elderly find it difficult to live or cope in a society which views them negatively. Thus, if nothing is done to redress this negativity, the stress of aging can be one of the most destructive, mental and physical process the aged often experience in their lives. Because the aged are more prone to stress as they age, coping strategies for them are very important for continued health and well being.

The aged persons in some part of Nigeria adopt some livelihood and coping strategies, some of which are reliance on casual labour as a livelihood strategy, assisting fishermen, carrying and crushing stones, fetching water etc. This form of labour is poorly remunerated and puts the employee at the mercy of the employer, who often exploits the worker by getting too much done at the cheapest cost. Self employment is also a livelihood strategy the aged are involved in, which consists of petty trading, production and sale of local hand crafts and intellectual services etc. Regarding coping strategies, most aged persons in rural areas, are

also heavily dependent on remittances from their children mostly in form of cash or kind (Najjumba and Milindwa, 2003). Participation in community and kinship activities is another form of coping measure adopted by the elderly in most societies. This serves as a major source of personal satisfaction. Being involved plays an important role in improving self-esteem and giving meaning to life. This is true for people of all ages, but is especially important for older adults. Becoming more involved and finding ways to contribute to communal affairs (i.e. participation in group activities, volunteering works, social activities amongst others), also helps to fight depression and improve overall wellbeing of the aged.

In conclusion, this chapter examined related conceptual and theoretical issues that revolve around the aging population phenomenon. While several related and relevant research materials were equally sourced, reviewed and their areas of influence and similarity on the main crux of study properly encapsulated in this section.

CHAPTER THREE

STUDY AREA AND METHODOLOGY

3.1 STUDY AREA

3.1.1 Location and Size

Kwara State is located between Latitude $8^{\circ} 05'$ and $10^{\circ} 05'$ North and Longitude $2^{\circ} 50'$ and $6^{\circ} 05'$ East of Greenwich Meridian (Oyebanji, 2000). The state occupies an area of $36,825\text{km}^2$ of land and shares boundary with Niger State in the north, Kogi and Ekiti States in the east, Osun and Oyo States in the south and an International boundary with the Republic of Benin in the West (See Figure 3.1). There are sixteen Local Government Areas in the state and these include Asa, Baruten, Edu, Ekiti, Ifelodun, Ilorin East, Ilorin South, Ilorin West, Irepodun, Isin, kaiama, Moro, Offa, Oke-Ero, Oyun and Patigi. Kwara State is divided into three senatorial zones of Kwara North, Kwara Central and Kwara South for efficient and equitable governance of all parts of the state. Most of the industrial establishments and government offices are located in Ilorin the state capital, which is 306km from Lagos and 500km from Abuja (Kwara State Diary, 2004). The urban bias in development is manifested by the high rate of migration from rural areas of Ilorin the state capital and the other towns (Oyebanji, 2000).

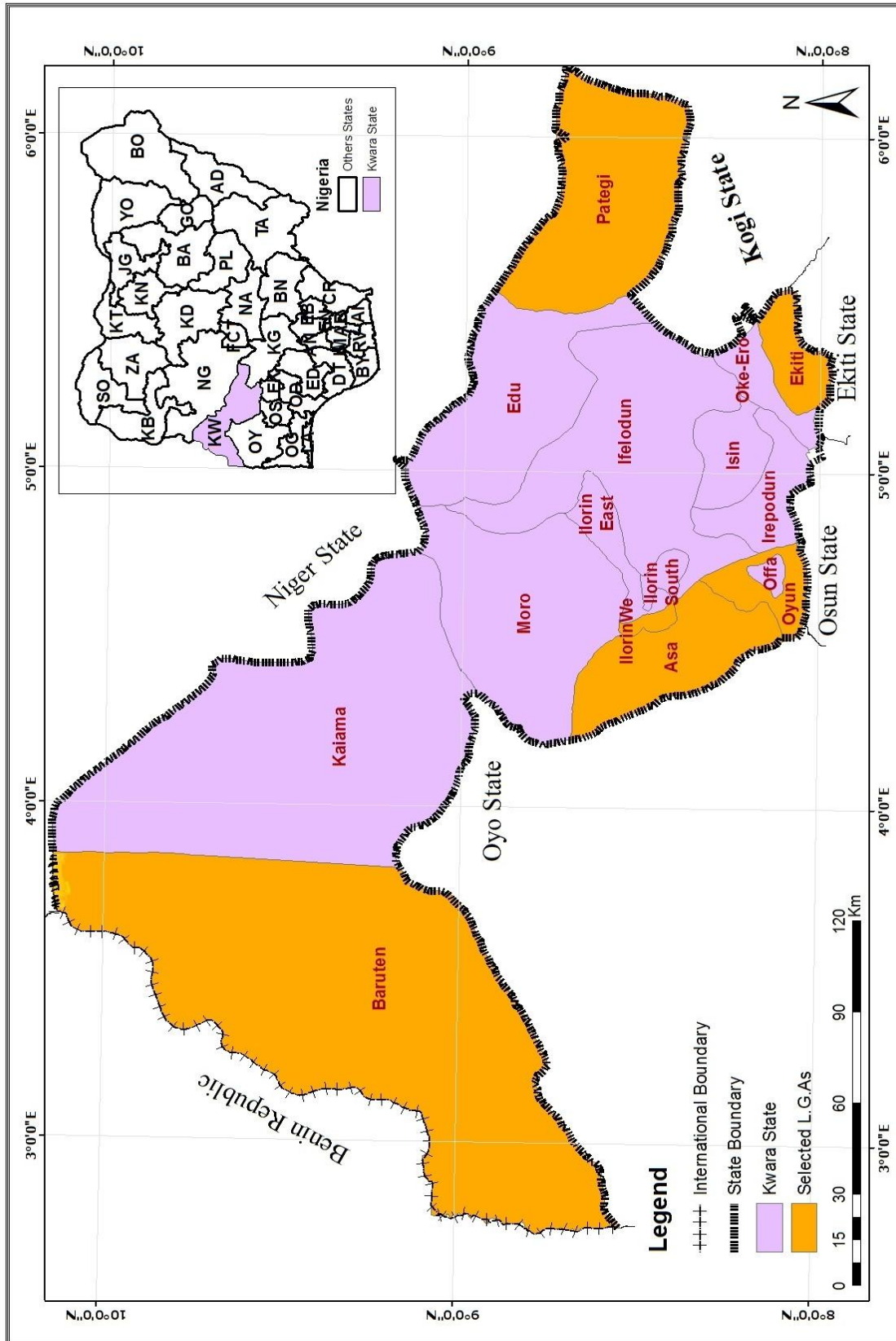


Figure 3.1: Kwara State Showing the Selected Local Government Areas
 Source: Adapted from Kwara State Ministry of Lands and Housing, 2012

3.1.2 Relief and Drainage

The landscape of Kwara consists of a relatively flat and undulating land with interspersed hills and valleys in parts of Baruten, Kaima and Moro LGAs. The most spectacular landforms in the state include Sobi hill at the outskirts of Ilorin, both Oke-Agbanna hills and Owu waterfalls in Ifelodun LGA, and a range of hills near Kaima town (Kwara State Diary, 2004). The major rivers in the state include the Niger, which forms the natural boundary of the state in the North, Wessa, Moshi and Teshi in the northwestern parts of the state and rivers Asa, Awon, Oshin and Moro in the central areas of the state.

3.1.3 Climate

The climate of the state is characterized by both the wet and dry seasons, each lasting for about six months. The region is characterized by double rainfall maxima. The rainy season begins at about the end of March and lasts till October, while the dry season begins in November and ends in early March. The total annual rainfall in the state ranges from 800mm to 1,200mm in the northwest and 1,000mm to 1,500mm in the southwest (Muhammad-Lawal and Omotesho, 2006). Based on the updated Koppen-Geiger world climate classification as depicted by Peel, Finlayson and McMahon (2007), Kwara State lies within a region described as tropical climate (Aw). Temperature is uniformly high throughout the year except in July-August when the clouding of the sky prevents direct insolation, (Olanrewaju, 2010). The state has a mean temperature of 30° C – 35° C (Taiwo, 2005). This range places the state within the transitional zone between the climate and vegetation types of the northern and those of the southern Nigeria.

3.1.4 Vegetation

The natural vegetation comprises guinea and derived savanna and rain forest. The guinea savanna predominates in Baruten, Kaiama, Moro, Asa, Patigi, Edu, and Ifelodun. The derived savanna is a predominant of Ilorin South, Ilorin East and Ilorin West, Offa, and part of Ekiti, Oke-Ero, Irepodun, Isin and Oyun Local Government Areas; the last five have some lowland rain forest vegetal cover (Kwara State Diary, 2004).

3.1.5 Historical Development

The study focuses on Kwara State, one of the north central states of Nigeria. Kwara State was created on the 27th of May, 1967 along with eleven other states in the Federation (Kwara State Gazette 1985-1991). The State was made up of former Ilorin and Kabba Provinces of Northern Region of Nigeria. Initially, the state was called Central Western State, but was later changed to “Kwara”, the local name of the River Niger. In 1976, part of the state was carved out and merged with parts of the then Benue – Plateau State to form Benue State. Ilorin was made both Kwara State capital and the head quarter of Ilorin Division. As at that time, Ilorin Division comprised all towns and villages within Ilorin Emirate (Kwara State Diary, 2004).

Furthermore, in 1996 another part of the State, that is Borgu LGA was merged with the present Niger State while Kogi, Okene, Okehi and Yagba LGAs were carved out and merged with parts of the then Benue State to form Kogi State. However, at present the study area is discussed under its physical and human characteristics in the sections that follow. These attributes include the location and size of the study area, relief and drainage, climate, vegetation, population and people, socio-economic characteristics of the inhabitants and available social infrastructure in the area.

3.1.6 Population and People

The 2006 population census by the National Population Commission put the population of Kwara State at 2,371,089 people with 1,220,581 males and 1,150,508 females (Federal Government of Nigeria, 2007). When compared with the 1991 census which put the state's population at 1,548,412 people, of which 773,182 were males and 775,230 females (NPC, 1998; Oyebanji, 2000), a great increase in the population indicating rapid population growth could be observed. With an average density of 48 persons per sq. km., Kwara state is one of the most sparsely populated states in Nigeria, given the national average of 96 persons per sq.km (Oyebanji, 2000). The state is made up of four main ethnic groups namely, Yoruba, Nupe, Fulani and Baruba (Kwara State Diary, 2004). The last group found mainly in Kaiama and Baruten LGAs, while the Nupes dominate Edu and Patigi LGAs. The Yorubas, who are in the majority, are found in the remaining twelve LGAs (i.e. Asa, Ekiti, Oke-Ero, Ifelodun, Ilorin East, Ilorin West, Ilorin South, Irepodun, Isin, Moro, Offa and Oyun). However, some Fulanis and Hausas are spread across Edu, Patigi, Kaiama, Baruten, Ilorin East, Ilorin South, Ilorin West, Moro and Asa LGAs (Oyebanji, 2000).

3.1.7 Socio-Economic Characteristics

The mainstay of the economy of the state is agriculture. More than 90 percent of the State's rural populations who form the bulk of her total population are engaged in farming. The climate of the state supports tall grass interspersed with short scattered trees. This attribute predisposes the people of Kwara State to make farming their major occupation. Food crops such as maize, sorghum, beans, groundnuts, yam, cassava, sweet potatoes and guinea corn are cultivated in most parts of the state with the exception of some part of Edu local Govt Area (Shonga and Tsaragi towns) where rice and sugar cane are mainly cultivated (Kwara State Diary, 2004). Tree crops such as cashew, cocoa, oranges are also intensely

cultivated in parts of the southern senatorial zone of the state. Livestock rearing, especially cattle are kept by the nomadic fulanis with semi permanent and sedentary structures in few places. Few residents in the state also keep other livestock such as goats, sheep, poultry, fish farming and bee keeping.

The important socio-economic facilities of the study area include educational facilities, health facilities and market just to mention a few especially in the most urbanized areas of the state. Other economic activities in the study areas of the state include trading, artisans, and salary earning opportunity in industries, companies, private offices, educational institutions, hospitals and few available government establishments among others (Oyebanji, 2000).

3.1.8 Social Infrastructure

Primary schools and enrolments in them are largest at Ilorin, relative to other urban settlements. Ilorin also houses two of the four universities (Federal and Private), while Omu-Aran and Malete have the remaining private and state universities respectively. Ilorin the state capital also houses the polytechnic and one of the three colleges of education, the other two are at Oro and Lafiagi towns respectively. Kwara State can boast of both public and privately owned health facilities. Some of these include hospitals, nursing homes and leprosy hospitals. The university teaching hospital and the Sobi specialist hospital (one of the four) are both at Ilorin, providing specialist healthcare services (Oyebanji, 2000). There are also 14 general hospitals, 1 dental centre and about 166 maternity/ rural health centres spread across all the 16 LGAs in the state (KWSG, 2008). The Kwara State water board is responsible for water supply to homes and factories in Ilorin town. Most L.G.A headquarters have pipe borne water supply, though erratic. Many bore holes have been drilled in rural areas, where the

problem of water shortage is most acute. The majority of rural people and even urban dwellers still rely on streams and wells for their water needs (Oyebanji, 2000).

In order to further strengthen the transportation network in kwara state, and link up the urban centres with each other and with rural areas, the state had introduced a mass transport system to complement the dwindling efforts of private transporters. Also, government has not relented in its efforts at building and rehabilitating both urban and rural roads from time to time, and these efforts have been greatly complemented by those individual communities (Oyebanji, 2000). Generally, the state has good inter-state and intra-state transportation networks. Improved modern and dependable communication services are vital for successful socio-economic development. Thus, newspapers, other elements of the mass media, as well as postal and telephone services are important. The state has its own daily newspaper (The Herald and the Daily Pilot), six radio stations (2 Federal, 2 State and 1 each for Private and institutional), 2 television stations and post offices, postal agencies as well as internet cafes in several towns.

3.2 METHODOLOGY

3.2.1 Introduction

The success of any research is determined by the appropriateness of its methodology. Methodology in geographic analysis encompasses a range of systematic procedures such as classification of data, sources of data and analysis of the data. This section discusses the various methods that were used in the generation of study data. The section also highlights sources of data, the sampling design, questionnaire administration and methods of analyzing generated data.

3.2.2 Reconnaissance Survey

A reconnaissance survey was conducted so as to be well acquainted with the study area and to properly identify the households with elderly people. These were subsequently numbered serially with the assistance of local resource persons and opinion leaders who are familiar with the environment.

3.2.3 Types of Data Utilized

The types of data utilized in this study were guided by the objectives of the study. Essentially, they are a combination of both primary and secondary data types.

3.2.4 Sources of Data

3.2.4.1 Primary Sources of Data

These are first hand information derived through observations, questionnaire administration and oral interviews. The questionnaire administered was designed to elicit information on the following:

- i. Basic demographic data like sex, age, marital status, religion, level of education, household size and residential preference.
- ii. Information on household socio-economic characteristics: nature of marital union, duration of union(s), actual number of children (surviving), vocational skill, occupation, source and level of income.
- iii. Information on respondent's medical history.
- iv. Information on population distribution of the elderly groups in the study area.

Qualitative research technique like the Focus Group Discussions (FGDs) was also employed which involved bringing together selected groups of the elderly, based on their

gender and age cohort as well as their cultural norms and values, to explore various challenges and issues they face individually or collectively in the society. This technique provided more useful information not derived from the questionnaire and particularly appropriate in gaining their confidence where sensitivity in divulging information to outsiders is a problem. Six FGD sessions, one in each L.G.A, were held with a maximum of 6-10 people per session. These brainstorming sessions were guided by an illustrative discussion guide and probes (See Appendix III). The medium of communication was English as well as a prevailing local language (Yoruba, Nupe and Batunu) as the case may be. Nonetheless field assistants proficient in the local tongues were also recruited to reduce language barrier where necessary. Note taking coupled with tape recording were employed in information gathering in order to overcome inherent shortcomings when only one is used.

3.2.4.2 Secondary Source of Data

Secondary data were obtained from related books, journals, published and unpublished texts, documents, magazines, conference articles, government ministries and agencies. The ministries concerned are the Ministry of Health, Ministry of Information and Home Affairs. Other government agencies visited were the national and state office of the National Population Commission (NPC) for Census (1963, 1991 and 2006) and National Demographic and Health Survey (NDHS) documents for Nigeria. Other relevant information was sourced from publications of the United Nations, World Bank, World Health Organization, United Nations Population Funds (UNFPA), National Bureau of Statistics and related websites.

3.2.5 Sampling Design and Sample Size

In order to select respondents for the questionnaire survey, a multi-stage sampling procedure was used. In the first stage, the state was divided into the three senatorial districts of north, central and south respectively, with their various LGAs alphabetically arranged. In the second stage, systematic sampling technique was used in which the various LGAs in each senatorial zone are serially numbered. Thereafter, every first and last LGA is selected per senatorial zone and this gives a total of six LGAs as shown in Table 3.1.

Table 3.1: Population of Aged and Proportion for Questionnaire Administered.

| S/ N | KWARA STATE SENATORIAL ZONES | L.G.A OF KWARA STATE | SELECTED L.G.A | Selected Towns (L.G.A Headquarters) | Total L.G.A. Population (2006 Census) Source: FGN, 2007. | Total Population of Aged(60-85+ yrs) (2006 Census) | 1 Percent of the Aged Population (Per L.G.A). |
|-------------|---------------------------------------|----------------------------|-------------------|---|--|--|--|
| 1 | KWARA NORTH | Baruteen | Baruten | Kosubosu | 206,679 | 8,868 | 88 |
| 2 | | Edu | | | 201,642 | 8,379 | |
| 3 | | Kaiama | | | 124,015 | 4,285 | |
| 4 | | Moro | | | 108,715 | 6,228 | |
| 5 | | Patigi | Patigi | Patigi | 110,852 | 4,460 | 44 |
| 6 | KWARA CENTRAL | Asa | Asa | Afon | 124,668 | 6,926 | 69 |
| 7 | | Ilorin East | | | 207,462 | 11,148 | |
| 8 | | Ilorin South | | | 209,251 | 9,261 | |
| 9 | | Ilorin West | Ilorin West | Ilorin | 365,221 | 21,037 | 210 |
| 10 | | Ekiti | Ekiti | Osi | 54,399 | 3,000 | 30 |
| 11 | KWARA SOUTH | Ifelodun | | | 204,975 | 10,020 | |
| 12 | | Irepodun | | | 147,594 | 7,673 | |
| 13 | | Isin | | | 59,481 | 3,012 | |
| 14 | | Offa | | | 88,975 | 4,200 | |
| 15 | | Oke-Ero | | | 56,970 | 2,878 | |
| 16 | Oyun | Oyun | Ilemona | 94,454 | 4,724 | 47 | |
| KWARA STATE | | | | | 2,371,089 | 116,099 | 488 |

Source: Computation from the 1991 and 2006 Census.

The third stage involved the use of systematic sampling technique, to determine the actual settlements/towns from which respondents were chosen. Based on the aforementioned approach, every LGA headquarter was sampled. This is because of the high possibility of getting the required number of target population. Therefore, a total of six towns were selected. In the final stage, purposive sampling technique was used in selecting the respondents, which was 0.1 percent of the elderly population in each of LGA based on the 2006 population Census figures (See Table 3.1). Purposive sampling was employed because the respondents are special people to find. A total of 488 copies of questionnaire were therefore administered. Since this study is designed to be a detail study which depends more on data collected at individual rather than aggregate level, the purposive sampling technique is therefore more useful for identifying specific cases for detail investigation (Abumere, Okafor and Oluwasola, 2002; Suleiman, 2009).

Lastly, to select respondents, a systematic sampling technique was employed whereby households that were previously identified through the assistance of local resource persons were serially numbered in line with the number of elderly persons, who were solicited to participate in the study. Every 3rd house was used as the sampling point till the total number of designated respondents in the settlements was captured. It is noteworthy that in cases where no respondent was available in a chosen house, the next house automatically is considered and the procedure of three interval continued.

3.2.6 Method of Data Analysis and Results Presentation

Descriptive and inferential statistics were used in the analysis of generated field data. This is because the data collected are both qualitative and quantitative in nature. The descriptive statistics used are tabulation and cross tabulation particularly because Theakstone and Harrison (1975) suggested that these techniques are good for summarizing geographical

data. Other descriptive techniques are frequencies, cumulative frequencies, and percentages. Also a demographic statistical analysis of the population of the elderly was carried out. Equally, the inferential tests like, trend analysis was used to examine the proportion of the elderly population over time, while Factor Analysis using the Statistical Package for Social Science (SPSS) 15.0 version was used in determining the variables that account for the pattern of aging over space. Factor Analysis has been widely used in both human and economic geography (Berry, 1966; Cox, 1969; Clayton, 1974 and Abumere, 1980). Factor Analysis was considered useful because although, there is always a problem of finding appropriate and adequate label for the factor groups, it is useful for arranging the complex nature of variables that account for the spatial disparity in the aging process amongst the aged. Moreover, it is also useful for extracting a smaller set of factors which accounted for most of the variance in the original data as well as re-organizing the data set in orthogonal form. Apart from weighing each variable according to the strength of its correlation with other variables, it identified the group of variables that have common variance (Robinson, 1998; Yusuf, 2011).

However, for the purpose of this study, all values with a coefficient of 0.60 were selected as factor defining variables. It is noteworthy that a fundamental problem of factor analysis is the inability to adequately categorize and name the factors into appropriate classification for mapping. This problem is managed by a careful consideration of the pattern of loadings to name the factors. Multiple and Stepwise Multiple Regression Analyses were used to model the spatial pattern of these changes in the aging population in Kwara State. The choice of multiple and stepwise regression is informed by its statistical power to establish a relationship between dependent and independent variables. The regression model is of the form: $Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + \dots b_{43} X_{43} + e$ where

Y = Aging (60 and above)

a, b₁, b₂, b₃, b₄, b₅, b₄₃ are constants of regression equation to be estimated.

- X₁ = Sex of Respondents (SEX) (Male = 1, Female = 2)
- X₂ = Age at last birthday (AGE) (in Years)
- X₃ = Marital status (MARST) (Single = 1, Married = 2,Widowed = 5)
- X₄ = Nature of Marital Union (NMU) (Monogamous = 1, Polygamous = 2)
- X₅ = Duration of Marital Union (DMU) (in Years)
- X₆ = Number of Children Ever Born (NCEB) (None = 0, 1-2 = 1, 11 and above = 4)
- X₇ = Number of Surviving Children (SCHILD) (Size of children in household)
- X₈ = Highest Educational Qualification (HEQ) (Non = 0, Quranic = 1.... Others = 5)
- X₉ = Occupation (OCCUP) (Civil servant = 1, Trader = 2,Others = 5)
- X₁₀ = Income per Month (INCPM) (amount in Naira)
- X₁₁ = Main Source of Material Support (MSMS) (Spouse = 1, Children = 2, ...Others = 5)
- X₁₂ = Nature of Support (NSPPTP) (Financial = 1, Medical = 2,Others = 5)
- X₁₃ = Regularity of Support (REGSUPP) (in Months)
- X₁₄ = Source of Economic Security (SECS) (Savings = 1, Investments = 2,Others = 4)
- X₁₅ = Present Residence (PRES) (Ownership status)
- X₁₆ = Who u Reside with Presently (WRW) (Living alone = 1, Family members = 2, Extended Relatives = 3Others = 5)
- X₁₇ = Hospitalized in the last 12 months (HSPZD) (No = 0, Yes = 1)
- X₁₈ = History of Ailment (HISAIL) (No = 0, Yes = 1)
- X₁₉ = Nature of Ailment (NAILM) (Diabetes/body ache =1, Heart ailments =2, ...Others = 5)
- X₂₀ = Institution for Remedy (INST) (Hospital = 1, Traditional healers =2,Others =5)
- X₂₁ = Any Disability (DISABILITY) (No = 0, Yes = 1)
- X₂₂ = Nature of Disability (NDISABILITY) (Hearing defects = 1,Eye problem = 5)
- X₂₃ = Availability of Family Doctor (FAMDOC) (No = 0, Yes = 1)
- X₂₄ = Who Pays Medical Bills (PYMEDBIL) (Children = 1, Govt. = 2,Others = 5)
- X₂₅ = Are you enrolled on the NHIS (NHIS) (No = 0, Yes = 1)
- X₂₆ = Duration of NHIS (DUNHIS) (in Years)
- X₂₇ = Reason for non - Enrolment (NOTNHIS) (Deterring reasons)
- X₂₈ = Income earning activity presently (INCACT) (No = 0, Yes = 1)
- X₂₉ = Kind of income earning activity (KINACT) (Farming = 1, Business = 2,Others = 4)

- X₃₀ = Are u a member of a social group (SOCGRP) (No = 0, Yes = 1)
- X₃₁ = Type of Social Group (TSOCGRP) (Religious = 1, Community = 2,Others = 5)
- X₃₃ = Type of Recreational group (TRECACT) (Sport = 1, Clubbing = 2,Others = 5)
- X₃₄ = Regularity of Recreational act (REGRECR) (Daily = 1, once weekly = 2, ...Others = 5)
- X₃₅ = How is an average day like? (AVDAY) (Attending Educ. Class = 1, Praying/Religious duties = 2,Others = 5)
- X₃₆ = Availability of Specialized Hospitals (SPHOSP) (No = 0, Yes = 1)
- X₃₇ = Availability of Old Peoples' homes (OLDHOM) (No = 0, Yes = 1)
- X₃₈ = Availability of Pro-elderly Recreational Clubs (RECLUBS) (No = 1, Yes = 1)
- X₃₉ = Social engagements normally attended (SOCENG) (Marriages = 1, Burials = 2,Others = 5)
- X₄₀ = How many times do you eat daily? (EATDLY) (Once = 1, Twice = 2,Others = 4)
- X₄₁ = Do you eat balanced meal regularly? (EATCARB) (Daily = 1, Twice weekly =2, Thrice weekly = 3Others = 5)
- X₄₂ = Do you boil drinking water? (BOILH2O) (No = 0, Yes = 1)
- X₄₃ = Reason for not boiling drinking water (DBOILH2O) (No time = 1, Dirt can't kill = 2, Water is portable = 3, and Others = 4)

e = error terms

CHAPTER FOUR

DEMOGRAPHIC AND SOCIO-ECONOMIC CHARACTERISTICS OF RESPONDENTS

4.1 INTRODUCTION

This section of the study presents the data as well as analysis of the results. The data is presented in the form of tables and figures. Demographic, social and economic characteristics of respondents collected through questionnaire survey were analyzed. By this, the background characteristics considered were sex, age, marital status, nature and duration of marital unions, fertility status, educational attainment, occupational status, income earned, types and source of other economic security and their living arrangements. These are important variables necessary for the understanding of the pattern and effects of aging on the elderly.

4.2 LOCAL GOVERNMENT AREAS OF RESIDENCE

The distribution of respondents into Local Government Areas can be seen in Table 4.1. Baruten has 18%, Patigi 9%, Asa 14.2%, Ilorin West 43%, while Ekiti and Oyo LGAs has 6.2% and 9.6% respectively.

Table 4.1: Distribution of Respondents according to Local Government of Origin

| Local Government Area (LGA) | No of Respondents | Percentage |
|------------------------------------|--------------------------|-------------------|
| Baruten | 88 | 18.0 |
| Patigi | 44 | 9.0 |
| Asa | 69 | 14.2 |
| Ilorin West | 210 | 43.0 |
| Ekiti | 30 | 6.2 |
| Oyo | 47 | 9.6 |
| Total | 488 | 100.0 |

Source: Field Survey, 2012

The reason why Ilorin west has the highest proportion of respondents is because it has the highest population size (365,221 (FGN, 2007) and by extension the largest proportion (21,037 (NPC 2006) of the aged population when compared with other LGAs.

4.3 SEX

The distribution of the population, according to sex shows that 56.6% (276) of the respondents are males, while 43.4% (212) are females as shown in Figure 4.1. This finding is corroborated by NPC (2003) which confirmed that there are more males (54%) than females (46%) in all age groups 60+. This is smaller than their share of the total national population; (about half), (NPC, 2001:8). Besides, the result could be a function of questionnaire administration whereby males are easier to access because of their roles as heads of households. This pattern could also be traced in part to socio-cultural factors, a result of the less dominant role performed by women especially in decision making as well as household headship, which is mostly performed by men in most communities.

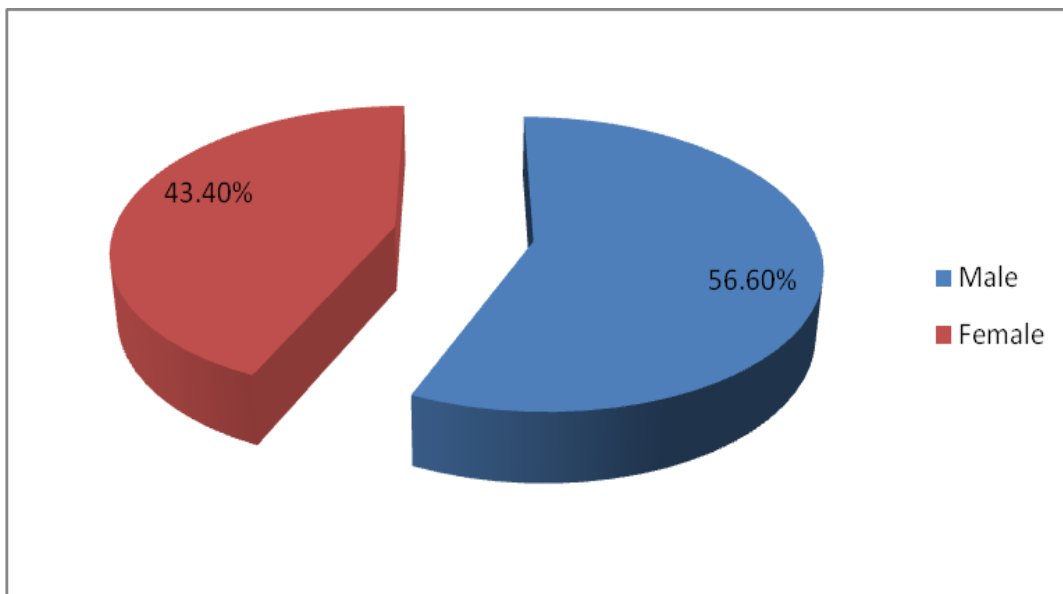


Figure 4.1: Gender Distributions of Respondents.

Source: Field Survey, 2012

4.4 AGE

Majority of respondents (43.2%) are between ages 60-64, 30.9% are between 65-69 years, while 13.5% are between 70-74 years (See Table 4.2). Three widely recognized age brackets within the elderly population according to NPC, (2003); Vierck and Hodges (2003), Gavrilov and Heuveline (2003), Gondo, Furuna, and Kobayashi, (2005), Adebayo (2006) and Gondo (2012), are: the ‘young old’, ‘middle old’ or ‘aged’ and the ‘oldest old’. The ‘young old’ (60-64, 65-69, and 70-74 years) are in the majority, forming 88% of the respondents. The ‘aged’ (75-79 years) are 6.4%, while the ‘oldest old’ (80 years and over) are 5.7% as shown in Table 4.2. The large proportion of those between ages 60 to 74 years (young old) is not unexpected. This is because of the rapid increase in the number of individuals from the ‘base’ generation (reference to the pyramidal shaped age structure of the Nigerian population) who have reached older ages and thereby, swelling the ranks of the elderly population.

Table 4.2: Distribution of Respondent by Age Group

| Age Group (Years) | No of Respondents | Percentage |
|-----------------------|-------------------|--------------|
| No Response | 1 | 0.2 |
| 60 – 64 } | 211 | 43.2 |
| 65 – 69 } (Young Old) | 151 | 30.9 |
| 70 – 74 } | 66 | 13.5 |
| 75 – 79 (The Aged) | 31 | 6.4 |
| 80 + (Oldest Old) | 28 | 5.7 |
| Total | 488 | 100.0 |

Source: Field Survey, 2012

In addition, the health status of the elderly has been improving overtime now, because more recent generations have a lower disease load than in the past (de Grey *et al*, 2002). This is clearly possible due to the successful result of improvements in public health and medicine (Anderson, 2011); better nutrition, lifestyle changes, educational and socioeconomic improvements, as well as social support systems (Gibney, Marino, Ljungqvist, and Dowsett, 2005; Solomon, 2001; Olayiwola, Olarewaju, Adelekan, Arigbede and Afolabi, 2013). Also

availability and access to qualitative and timely health care provision (i.e. presence of a teaching hospital, 4 specialist and 16 general hospitals and about 166 maternity/dispensaries among others across the state (KWSG, 2008) available to every Nigerian citizen in Kwara State could also be responsible for the increase in life expectancy. The effect of these, coupled with declining fertility rates and longer life expectancy (WHO, 2011) will surely lead to an increasing aged population. These are reasons why Arokiasamy *et al*, (2011) and Bloom (2011), declared that the world population is undergoing a dramatic shift in age structure, with rapid population aging among its notable characteristics. Even, among the elderly, as asserted by Jurich (2000), those 80 years and older will increase more rapidly. This however, according to NBS, (2007) will increase the proportion of the dependent population of 76 million (54%) (NPC, 2006) over the years going by the population transition demographic theory (Olaniyan *et al*, 2011).

4.5 RELIGION

The distribution into the various religious beliefs adhered to by respondents is shown in Figure 4.2. In all, 72% (350) of the respondents are adherence to the Islamic faith. This trend is not unexpected, as Kwara State, especially the capital city, Ilorin, has always been regarded as one of the prominent Muslim areas in the State (Saliu and Jawondo, 2006).

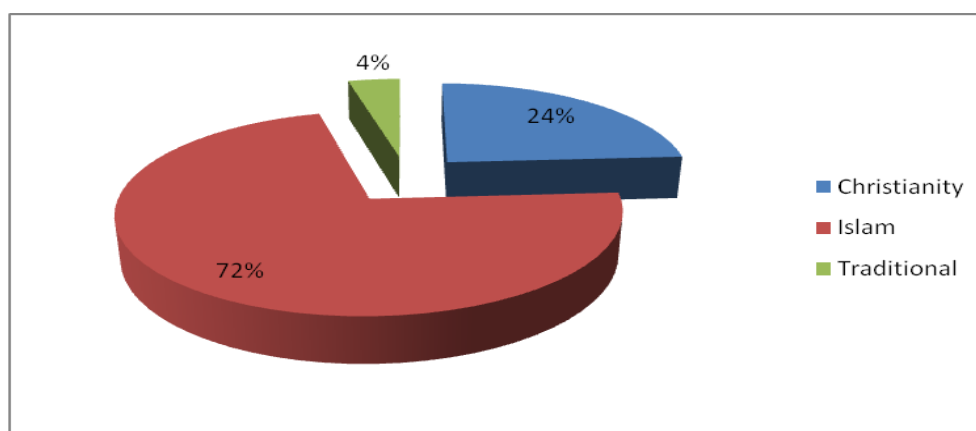


Figure 4.2: Distribution of Respondents according to Religious Affiliations.
Source: Field Survey, 2012

Also, 23.4 % (114) practice Christianity which are found largely around parts of the Southern areas, while about 4% (20) found majorly in Baruten Local Government Area are Traditional believers. Religion has the potential to influence the way of live of people thereby affecting their longevity. The influence of religion on the elderly was equally reaffirmed by McFadden (2005) as an important factor utilized in coping with the demands of later life by the aged in societies.

4.6 EDUCATION

Table 4.3 reveals that about 32% have no formal schooling, while 30.1% acquired quranic education. Also, 14.3% acquired only primary education, 10.2% secondary and 11.3% had up to tertiary level education. Adult education, NCE, vocational skills learnt from artisanship, apprenticeship, culture and oral tradition among others, account for 2.3% of other forms of education acquired by respondents (See Table 4.3).

Table 4.3: Distribution of Respondents according to Educational Attainment

| Education | No of Respondents | Percentage |
|------------------|--------------------------|-------------------|
| None | 155 | 31.8 |
| Quranic | 147 | 30.1 |
| Primary | 70 | 14.3 |
| Secondary | 50 | 10.2 |
| Tertiary | 55 | 11.3 |
| Others | 11 | 2.3 |
| Total | 488 | 100.0 |

Source: Field Survey, 2012

The high percentage of those without any formal or quranic education is not unexpected. This is because as corroborated by NPC (2006), about 55.5% (Nigeria) and 71.8% (Kwara State) of the aged population are not literate (can neither read nor write with understanding of short statements in any language), NPC (2006). This finding is similar to that of Fajemilehin and Odebiyi (2011), in which about 78% of the elderly studied in Ife/Ijesa district of Osun State, had no formal education.

4.7 OCCUPATION

Figure 4.3 shows the distribution of respondents by occupation. It shows that most respondents (39.3% (192) are in Trading/Business, followed by Farming with 28.3% (138), Artisan (in jobs like carpentry, tailoring, auto-mechanic, driver, hunting, plumbing, technician among others) accounted for 6.4% (31) of the respondents. Also, other jobs like fishing, pottery works, cloth weaving, clergy, security guard, load carriers among others are some other jobs respondents are into accounting for 3.3% (16) (See Figure 4.3).

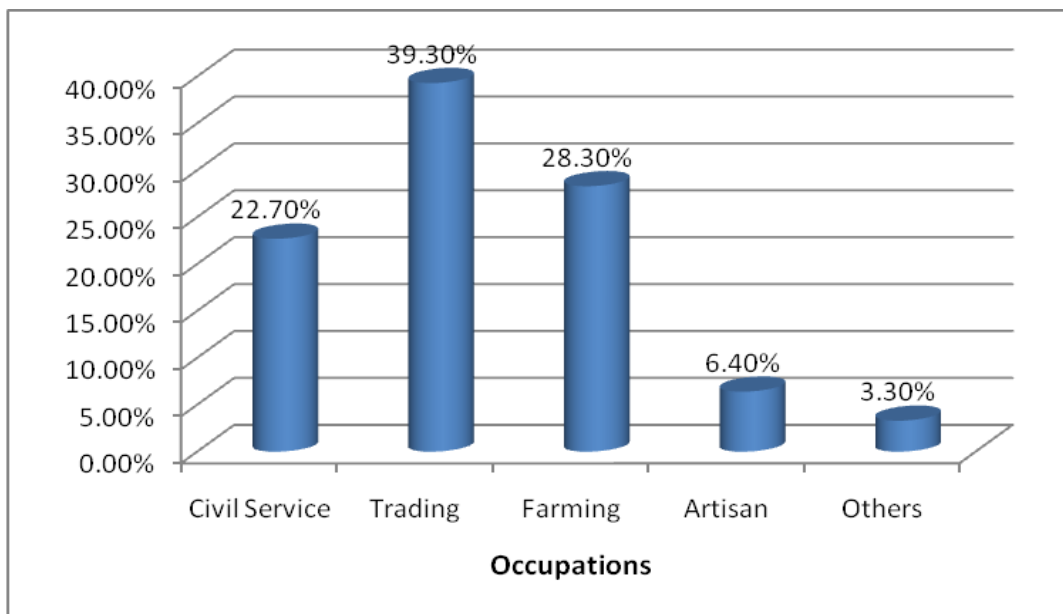


Figure 4.3: Distributions of Respondents according to Occupation

Source: Field Survey, 2012

Trading/Business and farming account for 67.6% (330) of all occupations which respondents engage in as depicted in Figure 4.3. Interestingly, about 50% of Kwarans are engaged mostly in subsistence agriculture (NPC, 2009), with the elderly said to be the greatest contributor (68.7%, NPC, 1991) to agriculture and related works in Nigeria. Also, about 15.9% are also reported to be in the sales works (NPC, 2003).

4.8 INCOME

The level of income an individual earns could greatly influence his or her wellbeing. Therefore, information into the respondents' finances earned on monthly basis was obtained. Income generated per month is as seen in Table 4.4. Here, 21.7% of respondents earned ₦22,001 and above, 13.9% earned between ₦10,001 - ₦16,000, while 8% has a monthly income of ₦16,001 – ₦22,000 only. However, 22.7% earned less than or equal to ₦5,000 per month. The relatively high percentage (60%) with monthly incomes of less than ₦16,000 is not surprising. This is because majority of respondents 60 years and over, are expected to have retired or with reduced levels of participation in active economic activities. Hence, most aged persons, according to Najjumba and Milindwa (2003) are thereby heavily dependent on remittances from their children mostly in form of cash or kind.

Table 4.4: Distribution of Respondents by Monthly Income

| Income Per Month (₦) | No of Respondents | Percentage |
|----------------------|-------------------|--------------|
| No Response | 6 | 1.2 |
| ≤ 5,000 | 111 | 22.7 |
| 5, 001 - 10, 000 | 158 | 32.4 |
| 10, 001 - 16, 000 | 68 | 13.9 |
| 16, 001 - 22, 000 | 39 | 8.0 |
| ≥ 22, 001 | 106 | 21.7 |
| Total | 488 | 100.0 |

Source: Field Survey, 2012

This is probably why a third of the older elderly counted as unrelated individuals by the NPC (2006), were below poverty threshold. This is corroborated by Thompson and Schulz, (1975), when he affirmed that growing old does not mean being in absolute poverty, growing beyond sixty-five increases the chances of becoming poor because the older one is, the more their income levels declines. Further explanation on this can be derived from Table 4.5

4.8.1 Other Sources of Economic Security at Old Age

Here, other sources of economic security common amongst respondents' are personal savings (contributory pension scheme inclusive for retirees), assets like landed properties,

farm land, fishpond, livestock etc; Investments in company shares, bonds, educational and endowment insurance, contracts and commercial business enterprises were noted. Monetary savings is the most prominent form of economic security relied on by 49.2% of the respondents (See Table 4.5). Reason for this was corroborated by Asagba (2005), in which older people were reported to be having higher accumulated savings per head than younger people, although may be spending less on consumer goods. Acquired assets (buildings, automobiles, livestock, farm lands, as well as jewelleries among others) gave some economic security to 33.2% of the respondents as shown in Table 4.5.

Table 4.5: Sources of Economic Security at Old Age

| Source of Economic Security | No of Respondents | Percentage |
|------------------------------------|--------------------------|-------------------|
| Savings | 240 | 49.2 |
| Investments | 76 | 15.6 |
| Assets | 162 | 33.2 |
| Others | 10 | 2.0 |
| Total | 488 | 100.0 |

Source: Field Survey, 2012

However, the reliance on investment from company or bank shares, bonds among others as economic security is the third most prominent, and relied on by 15.6% of respondents. This is also in line with recommendations by scholars like Okunola (2002) and Adedokun (2010), where people were encouraged in preparation for old age to learn to invest in company shares, endowment insurance, personal saving schemes or even maintaining professional occupations after retirement, and various other ventures. This is because economic power determines the social status of the elderly and influences perceptions on the contributions they make to society (Hooyman and Kiyak, 1988). However, only about 2% reported depending solely on other forms (children, relatives, divine help, government etc.) of security at old age (See Table 4.5).

4.9 MARITAL STATUS, DURATION AND TYPE OF UNION

Table 4.6 depicts the marital status, duration and type of marital unions. Majority of respondents, (75.4%) are in marital unions, 19.3% are widowed, while 2.5% and 2% are separated and divorced respectively. Clearly the elderly desire to have someone beside them to provide assistance, companionship, reduces boredom and its associated health problems. Evidence of this belief in the institution of marriage can also be seen with just about 4.5% separated/divorced.

Table 4.6: Respondents by Marital Status, Type of Marital Union and Duration of Marriage

| Marital Characteristics | No of Respondents | Percentage |
|--|--------------------------|-------------------|
| Marital Status | | |
| No Response | 2 | 0.4 |
| Single Never married | 2 | 0.4 |
| Married | 368 | 75.4 |
| Separated | 12 | 2.5 |
| Divorced | 10 | 2.0 |
| Widowed | 94 | 19.3 |
| Total | 488 | 100.0 |
| Duration of Marital Union (Years) | | |
| No Response | 4 | 0.8 |
| < 10 | 0 | 0 |
| 10 – 19 | 45 | 9.2 |
| 20 – 29 | 168 | 34.4 |
| 30 – 49 | 217 | 44.5 |
| 50 and Over | 54 | 11.1 |
| Total | 488 | 100.0 |
| Type of Marital Union | | |
| No Response | 4 | 0.8 |
| Monogamy | 221 | 45.3 |
| Polygamy | 263 | 53.9 |
| Total | 488 | 100.0 |

Source: Field Survey, 2012

This finding about the belief in the institution of marriage is equally corroborated by Wahab (2013) in a study of elderly Ijebus of south western Nigeria in which majority (47%) of his respondents were in marital unions. The relatively high percentage of the widowed is to

be expected given the age of respondents. Many would have lost their spouses by age 60 years. This is in line with the finding of Gavrilov and Heuveline (2003), (when stating a consequence of lower female mortality in the year 2000), where almost half of older women (45%) were widows, thus living without spousal support. Also, 44.5% of respondents have been in marital union for durations ranging between 30 to 49 years, 34.4% have been married between 20 and 29 years, while about 11.1% had been married for 50 years and over (See Table 4.6). Table 4.6 also shows the distribution of respondents by type of marital union. Almost 54% of respondents are into multiple wife unions, a practice traceable to the influence of both Islamic and cultural norms of the people which allows the practice of polygamy. This fact was equally corroborated by Wahab and Isiugo-Abanihe (2010) in a study of elderly Ijebus in Ogun and Lagos State, where 67.4% (546) of respondents were in polygamous union and 32.6% (264) in monogamous union. Also, global records according to Nielsen (2004), shows that polygamy was particularly common in advanced horticultural systems in which women's labour generated most resources whereas it occurred less frequently in more advanced, agrarian societies. Though, polygamous arrangements were frequently considered a preferred choice even if less common in practice (Gray, 1998; Clark, 1998), likewise, it is feasible among poor families in many cases albeit on a much reduced scale (Scheidel, 2009).

4.10 NUMBER OF CHILDREN

Table 4.7, reveals that about 14.1% reported a birth of between 6 to 10 children, 44.3% had 3 to 5 children, and 34.2% had between 1 - 2 children. About 5.7% have no children. Reason for this lack of birth might be due to infertility amongst couples and death of spouses. It is understood that fertility, which is the occurrence of live birth, is a natural determinant of population (Barrete, 1996; Olorunfemi, 2004). Therefore, an examination of respondents' fertility is very fundamental since it is believed that adult children, particularly

sons, are considered to be the main source of security and economic support to their elderly parents, particularly in time of disaster, sickness and old age (Cain, 1986; Dharmalingam, 1994; Devasahayam, 2009).

Table 4.7: Number of Children Ever Born by Respondents

| Number of Children Ever Born | No of Respondents | Percentage |
|-------------------------------------|--------------------------|-------------------|
| No Response | 8 | 1.6 |
| 0 | 28 | 5.7 |
| 1-2 | 167 | 34.2 |
| 3-5 | 216 | 44.3 |
| 6-10 | 69 | 14.1 |
| Total | 488 | 100.0 |

Source: Field Survey, 2012

Findings from Wahab (2013) in Ijebuland, also shows majority of respondents have large families, that is, families with more than four children. By this, a high preference for large family sizes, peculiar to most African cultures was noticed. These findings are in consonance with those by NPC, (2000) and Ahmed, (2012), in which a high fertility level of 5.2 children per woman was recorded. Also, a mean of 5.2 children was recorded by Mamman and Ogbonna (1993) amongst 600 ever-married women in Kaduna metropolis.

Furthermore, respondents' number of surviving offspring, especially at old age is shown in Table 4.8. The highest reported number of surviving children per respondent was 22. In addition, the largest percentage (17%) of respondents had as much as 5 surviving offspring. Also, about 53.8% of all surviving births can be traced to those having between four to seven offspring. Cumulatively, a total of 3,156 births was recorded and with an average of 6.47 births per individual. This finding conforms to that by the National Demographic and Health Survey of 1990, in which it was affirmed that Nigerian women will have an average of 6 children by the end of their reproductive years (NPC, 2000a).

Table 4.8 Respondents' Number of Surviving Children

| Number of Surviving Children | Frequency | Percentage | Cumulative Percentage | Cumulative No of Surviving Births |
|-------------------------------------|------------------|-------------------|------------------------------|--|
| 0 | 9 | 1.8 | 1.8 | 0 |
| 1 | 5 | 1.0 | 2.8 | 5 |
| 2 | 28 | 5.7 | 8.5 | 61 |
| 3 | 33 | 6.8 | 15.3 | 160 |
| 4 | 73 | 15.0 | 30.3 | 452 |
| 5 | 83 | 17.0 | 47.3 | 867 |
| 6 | 63 | 12.9 | 60.2 | 1,245 |
| 7 | 48 | 9.8 | 70.0 | 1,581 |
| 8 | 32 | 6.6 | 76.6 | 1,837 |
| 9 | 13 | 2.7 | 79.3 | 1,954 |
| 10 | 46 | 9.4 | 88.7 | 2,414 |
| 11 | 12 | 2.5 | 91.2 | 2,546 |
| 12 | 12 | 2.5 | 93.7 | 2,690 |
| 13 | 13 | 2.7 | 96.4 | 2,859 |
| 14 | 5 | 1.0 | 97.4 | 2,929 |
| 15 | 3 | 0.6 | 98.0 | 2,974 |
| 16 | 2 | 0.4 | 98.4 | 3,006 |
| 17 | 2 | 0.4 | 98.8 | 3,040 |
| 18 | 3 | 0.6 | 99.4 | 3,094 |
| 19 | 1 | 0.2 | 99.6 | 3,113 |
| 21 | 1 | 0.2 | 99.8 | 3,134 |
| 22 | 1 | 0.2 | 100.0 | 3,156 |
| Total | 488 | 100.0 | | Mean: 6.47 |

Source: Field Survey, 2012

The relatively small proportion in mortality amongst surviving offspring could modestly be linked to the successes and advancements in medical care, improved nutrition and the general awareness about the need for personal and environmental hygiene. However, this can also be as a result of respondents not willing to provide information about a deceased child.

4.11 TYPE OF HOUSING

Adebayo (2006) reiterates that a very vital human need which provides both psychological relief and physical shelter is housing. The issue of housing has always been global, which could be because most human activities are done in, on or under it. Therefore, the type of housing arrangement amongst respondents is quiet crucial towards the

enhancement of the lifestyle and wellbeing of elderly citizens. Table 4.9 shows where respondents' reside as at time of survey. Thus, about 60% of respondents live in their personal houses. This is to be expected as most people would have acquired their personal houses before retirement age. This finding is in consonance with that of Asiyanbola (2005) where about 64.4% of the studied elderly in Ibadan, lived in owner occupier accommodation. Also, 24.6% reside in their extended family houses, while only about 13.1% live in rented apartments.

Table 4.9: Distribution of Respondents according to Present Housing

| Present Housing | No of Respondents | Percentage |
|------------------------|--------------------------|-------------------|
| No Response | 8 | 1.6 |
| Personal House | 293 | 60.0 |
| Rented House | 64 | 13.1 |
| Family House | 120 | 24.6 |
| Others | 3 | 0.6 |
| Total | 488 | 100.0 |

Source: Field Survey, 2012

Also, living 'alone' in rented apartments especially at older ages is not widespread amongst respondents. This finding is in line with that by Mosley *et al*, (1993) in which the elderly in most developing nations (with the extended family system still common) live under the same roof as their children and familial support remains their main source of funding. Interestingly, institutional residency, that is public or privately owned geriatric homes/institutions are very unpopular amongst respondents. However, the living arrangement of respondents is further examined, as can be seen in Table 4.10.

4.12 LIVING ARRANGEMENTS

Living arrangement according to Van Solinge (1994) is a function of various factors, that is, marital status, health status, financial dependency, as well as cultural traditions like kinship ties and the availability of social support for the elderly. This therefore becomes an important factor for the overall wellbeing of the elderly and also mirrors the extent of the

available support for the elderly from the family network (Okumagba, 2011). Living alone, living with the nuclear family members (polygamous family structure inclusive), with extended relatives as well as with non relations were the noted living arrangements (See Table 4.10). Table 4.10 depicting who they presently reside with shows cohabitation with relations as the most profound.

Table 4.10: Distribution by Person Respondent Reside With

| Person Residing With | No of Respondents | Percentage |
|-----------------------------|--------------------------|-------------------|
| No Response | 8 | 1.6 |
| Living Alone | 55 | 11.3 |
| Family Members | 348 | 71.3 |
| Extended Relatives | 63 | 12.9 |
| Non Relatives | 14 | 2.9 |
| Total | 488 | 100.0 |

Source: Field Survey, 2012

Here, about 71.3% (348) live with one or more of their family members, while 12.9% (63) stay with one or more member of the extended family. This finding is actually in agreement with those of Kertzer (1995) and Weeks (2005), in which it was reported that, even if the aged live with their children, it is likely that the children (typically a son with his family) are actually living in the parental home, rather than the other way around. Those residing alone make up 11.3%, while a few, 2.9% reside with non family members, which could be house helps, nurses, workers or even neighbours as the case may be (See Table 4.10).

4.13 TYPE AND SOURCE OF SUPPORT

4.13.1 Type of Support

Table 4.11 shows the type of support and assistance rendered to respondents in the study area. Here, four major forms of support mostly recieved through filial associations (Intergenerational transfers) were identified. About 65.2% of respondents recieve financial assistance, 10.5% and 13.9% recieve medical support (such as drugs, payment of medical or hospital bills among others.) and foodstuffs respectively (See Table 4.11). About 2.3% get

support for their clothing needs especially during celebrations like festivals, weddings, birthdays among others.

Table 4.11: Nature and Sources of Most Recieved Support

| Nature of Support | No of Respondents | Percentage |
|--------------------------|--------------------------|-------------------|
| Financial | 318 | 65.2 |
| Medical | 51 | 10.5 |
| Foodstuff | 68 | 13.9 |
| Clothing | 11 | 2.3 |
| Others | 40 | 8.1 |
| Total | 488 | 100.0 |

| Source of Support | | |
|--------------------------|------------|--------------|
| Spouse | 45 | 9.2 |
| Children | 292 | 59.8 |
| Extended Family | 43 | 8.8 |
| Pension | 66 | 13.5 |
| Others | 42 | 8.6 |
| Total | 488 | 100.0 |

Source: Field Survey, 2012

This is especially from children, relatives or friends working or living abroad and in various towns and cities nationwide. This finding is in line with Najjumba and Milindwa (2003) where the elderly depend on remittances from their children mostly in form of cash or kind.

4.13.2 Source of Support

Also, about 5 main sources of support (i.e. spouse, extended relatives, children, public and social pensions) are identified (See Table 4.11). Major source of remittances were from the offspring (children) of the aged. Here, almost 60% of respondents agreed to having received help mostly from their children, whom they either reside with or are in the diaspora. This finding is in line with that by Okumagba (2011), in which majority (36.79%) of the elderly in his study in Delta State, received support from their children. This has also been affirmed by Najjumba and Milindwa (2003), as a major coping strategy dependent upon by most aged persons in rural areas. Public pension mostly for government retirees accounted

for 13.5% of remitted aid making it the second most important major source of support. Support is equally derived from individual spouses (9.2%) and extended family system (8.8%) respectively (See Table 4.11). Other sources of support contributing to almost 8.6% of respondents are investments, assets, salaries and allowances etc., mostly to those in self employments or salary earners who are still in government or corporate services.

4.13.3 Regularity of Support

Having examined both the nature and major sources of economic and material support as presented in Table 4.11, the regularity of these shades of support is equally essential. Hence, Table 4.12, revealed that 28.1% of respondents get support ‘every six months’, about 38.9% get support ‘quarterly’, while 25.2% receive support regularly or ‘monthly’. However, 7.8% reported receiving all forms of assistance from any source. The above scenario can be said to confirm the trending global phenomenon among the elderly, which Weeks (2005) called “intimacy at a distance”.

Table 4.12: Regularity of Support Received

| Regularity of Support Received | No of Respondents | Percentage |
|---------------------------------------|--------------------------|-------------------|
| All the time | 38 | 7.8 |
| Every six months | 137 | 28.1 |
| Quarterly | 190 | 38.9 |
| Monthly | 123 | 25.2 |
| Total | 488 | 100.0 |

Source: Field Survey, 2012

Thus growing old means continued income deprivation relative to that of young people. And as Bittner, Edwards and George, (2010) puts it, stress occurs when the affected person has fewer resources to overcome the challenging situation he finds himself and there is less probability of effective coping skills and resources. Hence, coping strategies for the elderly are very important, some of which apart from filial supports, are relied on like, casual labouring, acquired assets, investments, contract appointments and self employment, which

consists of petty trading, production and sale of local hand crafts, rendering of religious and intellectual services etc.

CHAPTER FIVE

HEALTH AND SOCIAL CONDITIONS OF RESPONDENTS

5.1 INTRODUCTION

This section presents data and analysis of results on respondents' health (status, history and nature of ailment suffered, remedies utilized, access to health facilities, disability suffered, health insurance among others) and nutritional profile (eating regime, diet, hygiene), social as well as recreational habits. These are important variables necessary for the understanding of the characteristic pattern and effects of aging on the elderly.

5.2 HEALTH CARE

5.2.1 Hospitalization of Respondents

Information such as status of hospitalization in the last 12 months, history of ailments or infirmities and the nature of the ailment suffered among others were collected through questionnaire survey. Figure 5.1 shows status of hospitalization in the last one year. Here, about 43% (210) of respondents affirmed 'yes', to have been hospitalized while 56.8% (278) responded 'no', haven't been hospitalized in the last one year. It is assumed according to Awoyemi, Obayelu and Opaluwa, (2011) that good health leads to improvement in life expectancy, which is a robust indicator of human development.

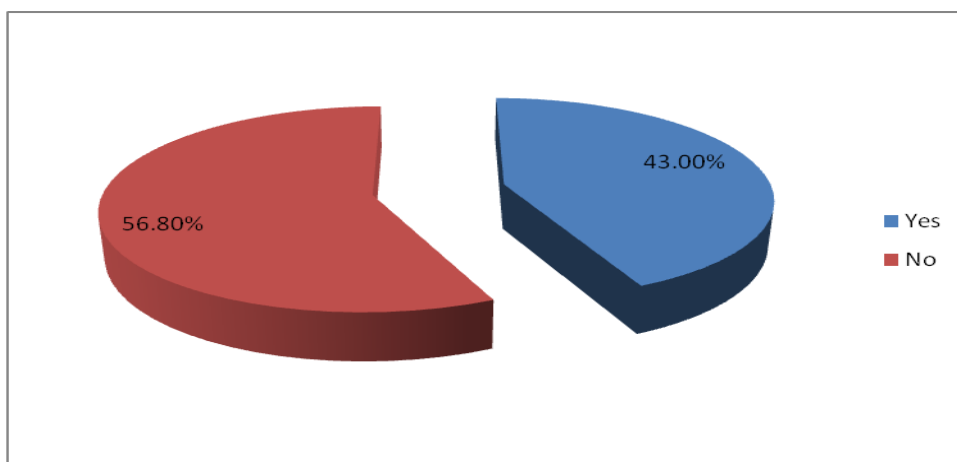


Figure 5.1: Hospitalization of Respondents in the last One Year

Source: Field Survey, 2012

This is because good health, according to the World Health Organization (2011) is key, if older people are to remain independent and to play a part in family and community life.

5.2.2 Nature of Ailments Suffered

Having examined respondents' histories of hospitalization, the nature or type of infirmity suffered in the last 12 months was also examined. Hence, as shown in Table 5.1 five major group of ailments suffered were identified. About 17.6% (86) affirmed suffering from Diabetes and Body Ache (or Musculoskeletal Pain), while both Heart Related Ailments and Eye Problem accounted for 10.7% (52) and 15% (73) respectively. Further still, Accidents (such as automobile, occupational, and domestic) and other types of ailment (such as Malaria Fever, Rheumatism, Ulcer, Stroke, Hearing Problems, Arthritis, Spondylosis, Chronic Cough and Osteoporosis among others) accounted for 5.3% (26) and 5.9% (29) respectively. Although, almost half of the sampled respondents did not attempt this question because they answered 'No' infirmity suffered (See Table 5.1).

Table 5.1: Distribution of Respondents by Nature of Ailments Suffered

| Nature of Ailment | No of Respondents | Percentage |
|--------------------------|--------------------------|-------------------|
| Diabetes / Body Ache | 86 | 17.6 |
| Heart Related Ailments | 52 | 10.7 |
| Eye Problem | 73 | 15.0 |
| Accident | 26 | 5.3 |
| Others | 29 | 5.9 |
| Not Applicable * | 222 | 45.5 |
| Total | 488 | 100.0 |

Note: * Refers to those that reported no case of ailment in the last 12 months

Source: Field Survey, 2012

Incidences of ailments or infirmities amongst the aged is not unexpected. This is because as posited by Gavrilov and Heuveline (2003) and Levy (2012), the prevalence of disability, frailty and chronic diseases (Alzheimer's, cancer, diabetes, eye problems, hypertension, arthritis, cardiovascular and cerebrovascular, fractures, senile diseases and stroke among others) is expected to increase dramatically as nations' age. This is why nations

with older populations according to Bloom *et al* (2008), need to invest more in the health sector.

5.2.3 Remedies for Ailments

Age according to Dias, Severo and Barros, (2008) is expected to be positively related to utilization of health facilities. And the nature or type of relief to ailment or infirmity sought for by individuals especially during ill health is very important to the health and wellness of the individuals and by extension the community as a whole. However, respondents' healthcare delivery sources are explained in Table 5.2. Here, the sources of treatment are grouped into five major types and these are: hospitals, traditional medicine healers, faith-based healers, self medication and 'others'. The utilization of the orthodox hospital for treatment of infirmities is the most sought after in the study area accounting for about 67.2% (328) as seen in Table 5.2. This finding is reaffirmed by Dias *et al*, (2008) in which utilization of orthodox healthcare facilities is said to be positively influenced by age. Also, traditional herbal healing homes gave relief to about 17.6% (86), while 7.9% (38) engage in self medication.

Table 5.2: Institutions Used for Treatment

| Institution Used For Treatment | No of Respondents | Percentage |
|---------------------------------------|--------------------------|-------------------|
| Hospital | 328 | 67.2 |
| Traditional Healer | 86 | 17.6 |
| Faith - Based Healer | 5 | 1.0 |
| Self Medication | 38 | 7.9 |
| Others | 31 | 6.3 |
| Total | 488 | 100.0 |

Source: Field Survey, 2012

The belief in the efficacy of traditional herbal treatments is still quite popular amongst respondents due to easy access and affordability. This is because inadequate access to health services in the words of Mafimisebi and Oguntade (2010 and 2011) determines, to a large extent, the decision of rural households to either patronize orthodox medicine (OM) or

traditional medicine (TM). Also, dissatisfaction with government health facilities according to the World Bank's (1996) Participation Poverty Assessment report is a recurring theme that has led to increasing reliance on traditional and informal private health providers throughout Nigeria. Hence, source of remedy or treatment, and how accessible they are especially at periods of need is therefore crucial to understanding the success and adequacy of societal healthcare delivery system. This is because healthcare utilization of a population according to scholars like Chakraborty, Islam, Chowdhury, Bari and Akhter (2003); Manzoor, Hashmi and Mukhtar, (2009); and Onah, Ikeako and Iloabachie, (2009) is related to the availability, quality and cost of services, as well as to socio-economic structure, and personal characteristics of the users. Also, distance as observed by World Bank (1993) and Buor (2003) may also be a constraint to willingness and ability to use health facilities.

5.2.4 Disabilities Suffered by Respondents

Disability has been defined as “a restriction or lack (resulting from an impairment) of ability to perform an activity in the manner or within the range considered normal for a human being” (WHO, 1980:27; NPC, 2003). Respondents were asked whether they suffer any form of disability or not. As depicted in Table 5.3, 87.3% of respondents did not suffer any form of disability; while as many as 12.7% suffer from one form of disability or the other. This finding is in line with that of the 1991 census of Nigeria from which a Crude Disability Rate (CDR) of 0.48% or 4.8 disabled persons per 1,000 for the total national population across all ages was found (NPC, 1998). Note that CDR is defined as the proportion of population that is disabled in the total population, usually expressed in units per 100 or 1,000 or 10,000 persons depending on the frequency of occurrence of the disabilities in a population (NPC, 2003). In addition, the nature of disabilities old people suffer from as shown in Table 5.3 are; hearing defects (1.6%), eye problem/blindness (50.0%), knee problem/ numbness of the limbs (16.1%), ulcer (22.6%), deformity due to past accidents

(9.7%) among others. Disabilities (blindness, deafness and restrictions in physical movements) according to Adekun (1984) and Yu (1991) tend to be related to the deterioration people experience as they grow older.

Table 5.3: Distribution by Respondents' Disability Status

| Distribution according to Disability Status | No of Respondents | Percentage |
|--|--------------------------|-------------------|
| Any disability suffered? | | |
| Yes | 62 | 12.7 |
| No | 426 | 87.3 |
| Total | 488 | 100.0 |
| Nature of Disability Suffered | | |
| Hearing defects | 1 | 1.6 |
| Eye problem/blindness | 31 | 50.0 |
| Knee problem/numbness of the limbs | 10 | 16.1 |
| Ulcer | 14 | 22.6 |
| Deformity due to past accidents | 6 | 9.7 |
| Total | 62* | 100.0 |

Note: * Total refers to only those who suffered any form of disability.

Source: Field Survey, 2012

However, cases of blindness/eye problem accounted for about half (50.0%) of all cases of disability suffered by respondents. This finding is also in line with the assertion by NPC (2003) in which blindness was said to be the most common type of disability among the elderly accounting for more than four in ten of all disabilities in Nigeria. Conditions like Ulcer, Heart problem or body ache were the second most commonly suffered disability. Numbness of the limbs or knee problems was the third most common disability amongst the elderly. Only 16.1% respondents suffer from this set of medical conditions also. However, cases of accident related deformities were witnessed. A case of hearing defect was reported by a respondent (See Table 5.3).

5.2.5 Access to a Personal/Family Physician

In general terms, about 214 representing 43.9% of respondents have access and thereby enjoy the services of a family physician who often time is readily available to attend

to them as well as members of their families. However, 56.1% do not have a family physician as shown in Table 5.4. Reason for this could be traced to the challenges (i.e. poverty, illiteracy) faced by healthcare seekers in accessing health facilities in most parts of Africa (UNICEF, 2005; BBC, 2006; 2007).

Table 5.4: Distribution of Respondents according to Access to Family Physician and Frequency of Hospital Visitations

| Access to Family Physician | No of Respondents | Percentage |
|---|--------------------------|-------------------|
| Yes | 214 | 43.9 |
| No | 274 | 56.1 |
| Total | 488 | 100.0 |
| Frequency of Hospital Visitation | | |
| Not at all | 99 | 20.3 |
| Daily | 5 | 1.0 |
| Weekly | 25 | 5.1 |
| Monthly | 75 | 15.4 |
| Occasionally/Quarterly | 284 | 58.2 |
| Total | 488 | 100.0 |

Source: Field Survey, 2012

This according to the BBC (2006) is because in Nigeria for example, it is not uncommon for rural women to walk 26 miles to seek medical assistance. And utilization rate of health facilities according to scholars like Noor, Zurovac, Hay, Ochola and Snow (2003) and Al-Taiar, Clark, Longenecker and Whitty (2010) diminishes with distance. Elderly persons as posited by Beland, Lemay, Philibert, Maheux and Gravel (1991) utilize healthcare resources at rates just above those of other age groups. Even though aging is linked to hospital use (Solder and Martin, 1985), it seems that nearness to death rather than aging is responsible for this relationship (Roos, Montgomery and Roos, 1987). This is a reason why enquiry about access to personal or family medical practitioner and how often do respondents' visit the hospitals as they live and progress in years is very essential.

5.2.6 Frequency of Hospital Visitations

As depicted in Table 5.4, periods of visitations were grouped into five. Close to 80% (389) of respondents actually do utilize hospital services. Majority of these respondents totalling around 58.2% (284) do visit the hospital as a result of ill health or other medical consultations on occasional or quarterly basis (every 4 months). This finding is in line with the assertions by Ingram and Lawson (1982), Solder and Martin (1985) and Beland *et al*, (1991) that the increase in healthcare utilization by the elderly in the last four decades has been attributed to how the health care system functions rather than to aging. How often are respondents' visits to their various healthcare providing institutions especially amongst those patronizing the hospitals, is equally relevant in understanding the state of health and access to proper medical care at various stages of their lives. Hence, the frequency of visitations amongst respondents is examined, in order to determine whether or not similarities or differences do manifest across their ranks. This is necessary because individuals aged 65 and older as estimated by Roos, Shapiro and Roos (1984) use 1.7 more physician visits per year than those in the 25 to 44 (youthful) age bracket.

Furthermore, about 15.4% (75) visit every month, 5.1% (25) go for treatment on weekly basis (especially those suffering from chronic infirmities needing constant treatment), while only 1.0% (5) reported daily visits to the hospital which might be due to the severity of the ailments they suffer from. Implication of this on the concerned patient and his or her support system is likely to be enormous, both on their financial capacity and psychological wellbeing. However, about 20.3% (99) have not been to the hospital in the last 12 months as shown in Table 5.4). This is not to say they have not been sick, rather they prefer treatment from other sources. An estimated 75% of Nigerians according to Adesina, (2008) and Adefolaju, (2011) still prefer to solve their health problems by consulting the traditional healers. Reasons are that traditional medicine is more accessible, cheaper and more holistic

than the western alternative (Adefolaju, 2011). These reasons were further clarified from the respondents during the Focus Group Discussion sessions. A probe to find the reason for not utilizing hospital services when sick was attributed to the aforementioned (Cost, Religion, Distance, Illiteracy among others). For instance, one elderly male stated:

“God is the only one who possesses remedies. I don’t trust the doctors at all.”
(Mr Alabi, Ilorin)

Another elderly male echoed:

“The cost of seeking for treatment from the hospital these days is not cheap especially for us retiree and poor masses. That is why we prefer our local herbs.”
(Alhaji Abdulraheem, Ijagbo)

The healthcare utilization of a population according to Chakraborty *et al*, (2003) and Onah *et al*, (2009) is related to the availability, quality and cost of services, as well as to social-economic structure, and personal characteristics of the users. This is reflected in the words of a female discussant as thus:

“The only public hospital around our community is in the next town, which is too far for me to go alone and the transportation here is poor, except I wait until my children come around.”
(Hajia Salamatu, Afon)

This is probably why both public and private healthcare facilities according to Onokerhoraye, (1999) are sparsely provided in many regions within the country and often regions with difficult terrain and physical environment are neglected. This could be why several rural studies according to Goodman, Fisher, Stukel and Chang (1997); and Mattson (2010) have shown that long distance to health facilities tend to have negative effect on frequency of visits to seek health care. This is because utilization rate of health facilities diminishes with distance (Stock, 1983, Noor *et al*, 2003 and Al-Taiar *et al*, 2010) and the quality of transportation and road conditions (Blandford *et al*, 2012).

However, Alhaji Koro’s view on non-utilization of hospital goes thus:

“Everyone knows of the efficacy of our local herbs, those hospital drugs are said to have side effects after use.”
(Alhaji Koro, Patigi)

5.2.7 Payment of Hospital/Medical Bills

Respondents' capacity to access and pay for required healthcare service is an issue worth examining. Hence, about 57% (277) actually responded to this section of the questionnaire. Of this proportion, about 48.4% (134) indicate offsetting of medical bills by themselves (personal savings), while 42.2% (117) relied on their offspring (See Figure 5.2). Also, 7.6% (21) relied on government (that is health insurance scheme); while 1.10% (3) have theirs settled through their company or organization's employee medical schemes (peculiar to the banks, private and multinational corporations among others). About 0.72% (2) sort out the medical bills through other means (such as extended family, friends, NGOs, religious charities among others). Health care expenditure burden of the elderly has been a major concern of discussion in literatures (Selden and Banthin, 2003; Maliki and Prasetyo, 2006; and Fukawa, 2007). Selden and Banthin, (2003) found widespread prevalence of high healthcare expenditure burdens among adults in the United States. Findings from this study (See Figure 5.2) equally reaffirmed this opinion, because majority (27.5%) personally pays their medical bills.

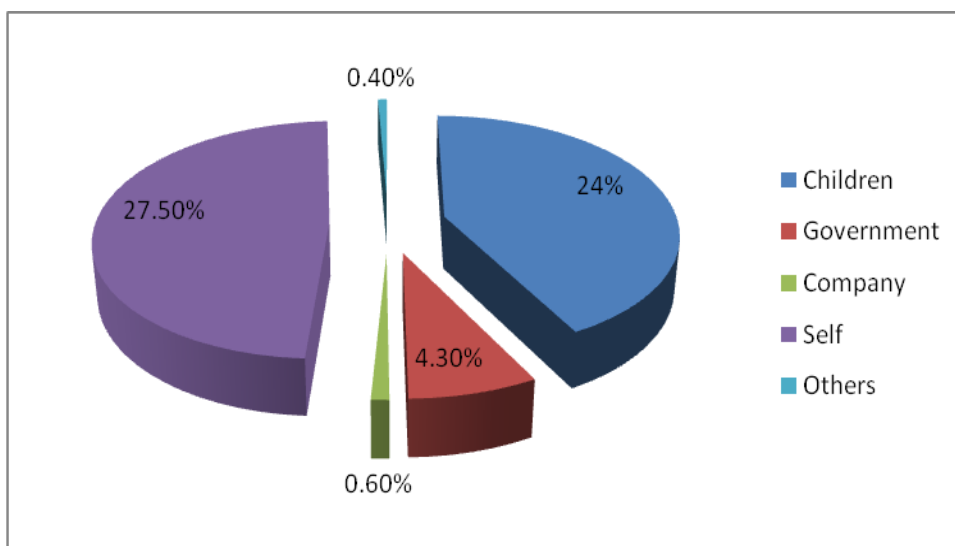


Figure 5.2: Distribution of Respondents by Person Who Pays their Medical Bills

Source: Field Survey, 2012

Also in a study on the changes in financial burden for healthcare by Wagstaff (2006) in America, it was discovered that adults aged 55-64 years were most likely (about 30.6%) to incur total burdens exceeding family income compared to adults age 18-34 years (about 14.5%). However, the ability to offset or pay bills of whatever sort (that is medical, household and social) is very crucial to individuals and especially important for older adults. Becoming more involved and finding ways to contribute to communal affairs (such as participation in group activities, volunteering works, social activities amongst others), also helps to fight depression and improve overall wellbeing of the aged. Hence, health insurance as defined by the OECD (2004) is a way of distributing the financial risk associated with the variation of individuals' health care expenditures by pooling costs over time through prepayment and over people by risk pooling. This is why the need for a pro-elderly health insurance or risk pooling scheme in Kwara State and the Nation in general is essential and long overdue. This will greatly enhance the welfare of the seniors and reduce the burden from out-of-pocket expenditures incurred periodically by the elderly, relations and care givers.

5.3 ENROLMENT IN THE NATIONAL HEALTH INSURANCE SCHEME (NHIS)

The Federal Government of Nigeria established an insurance scheme dedicated to catering for the health needs of the citizenry, especially those in public employment. The scheme established under Act 35 of 1999 (www.nhis.org.ng) is aimed at providing easy access to healthcare for all Nigerians at an affordable cost through various prepayment systems. This is very essential because moving away from out-of-pocket payments for health care at the time of use to prepayment (health insurance) is an important step towards averting the financial hardship associated with paying for health services (WHO, 2010; Acharya, Vellakkal, Taylor, Masset, Satija, Burke and Ebrahim, 2012). Respondents were asked if they are on the National Health Insurance Scheme. Of the 488 respondents, only 19.3% (94) confirmed being on the scheme, while 80.7% (394) are not as shown in Table 5.5.

Duration or how long respondents, especially those who have enrolled in the insurance scheme have been in it was equally analyzed, and depicted in Table 5.5. It was therefore revealed that 52.1% of those enrolled had been in for between 3 and 5 years, while 26.6% reported enrolling in the scheme between a period less than or equal to 2 years respectively. Also, 8.5% in between 6 and 8 years, while almost about 10% started since 12 or more years ago (See Table 5.5). Financial constraint according to scholars like Ranson, (2002); Russell, (2004); Garg and Karan, (2009); Acharya *et al*, (2012) is one of the major barriers to access to health care for marginalized sections of society in many countries. This is because a high proportion of the worlds' estimated 1.3 billion poor have no access to health services simply because they cannot afford to pay at times of need (Dror and Preker, 2002). And many of those who do utilize these services suffer financial hardship, or are even impoverished because they have to pay (WHO, 2010).

Table 5.5: Enrolment and Duration in the National Health Insurance Scheme

| Enrolment in the NHIS | No of Respondents | Percentage |
|--------------------------------------|--------------------------|-------------------|
| Yes | 94 | 19.3 |
| No | 394 | 80.7 |
| Total | 488 | 100.0 |
| Duration of Enrolment in NHIS | | |
| ≤ 2 years | 25 | 26.6 |
| 3-5 | 49 | 52.1 |
| 6-8 | 8 | 8.5 |
| 9-11 | 3 | 3.2 |
| ≥ 12years | 9 | 9.6 |
| Total | 94* | 100.0 |

Note: * Total refers only to those who are already enrolled on the scheme.

Source: Field Survey, 2012

This is not surprising because just only about 4.5 million Nigerians (most especially those in the Federal Public Service) have enrolled on this scheme since its introduction in 1999 till August, 2012 (Nigerian Tribune, 2013). This scenario is evident in an earlier study in Nigeria by Ibiwoye and Adeleke (2008), in which a continuous increase in number of NHIS enrolee from 4.5% in 2000 and 2003 to 13.6% in 2004, 27.6% in 2005 and 31.6% in

2006 was noticed. However, since there is no social health insurance scheme(s) targeting the elderly in the country, the proportion of the non enrollee amongst respondents is anticipated.

5.3.2 Reasons for Non Enrolment in the National Health Insurance Scheme (NHIS)

However, of interest to the study were the reasons why as much as 80.7% of respondents as shown in Table 5.5 indicated their non participation in the NHIS. About 5 groups of reasons as shown in Figure 5.3 were identified. Almost half (49.8%) gave different reasons for this decision. However, 52.7% (128) of them gave 'Poor orientation/Unaware as reasons for their non participation. Also, about 21% (51) gave reasons such as lack of access, not practiced in my area as basis, while those who have no trust, no health problem or not interested in the scheme were about 10.3% (25) of the respondents. Moreover, 8.2% (20) claimed due to retirement, lack of fund or time factor as reasons, while about 7.8% (19) were due to unemployment, not applicable or not being civil servants as a reasons.

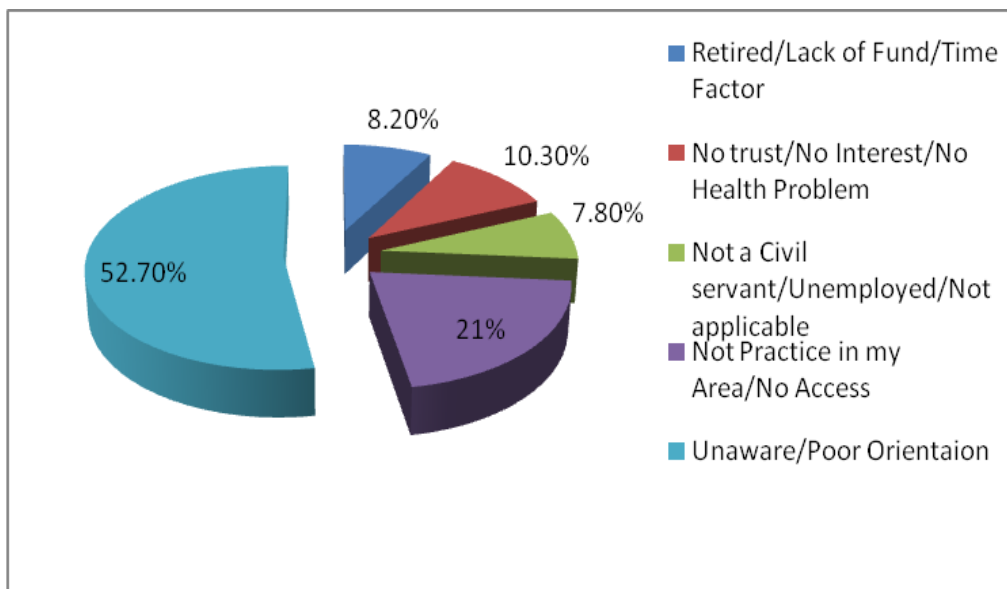


Figure 5.3: Distribution by Reasons for non Enrolment in the NHIS
Source: Field Survey, 2012

However, reviewing the different reasons, it was concluded that the chief reason for the low patronage across the state was the very poor orientation and publicity about the insurance scheme amongst the citizenry. This finding therefore supports that by Ibiwoye and

Adeleke (2008), in which as much as 36% of their respondents reported not having heard of the NHIS as reason for not enrolling in the scheme. This calls for a more reinvigorated campaign and transparency about the purpose and process of the scheme amongst the populace by the scheme and government. Also, there is high illiteracy rate amongst the elderly, of which as much as 31.8% are without any quranic or formal schooling experience as depicted earlier in Table 4.3.

5.4 NUTRITIONAL STATUS

Individual nutritional status according to the WHO (2001) and Adamu, Adjei and Kubuga (2012) depend on the interaction between food eaten, the overall state of health and the physical environment. For one to have a very good or optimum nutritional status, one must be both food and nutrition secured, however most people are on borderline nutrition because nutrition security is difficult to achieve (Williams and Schlenker, 2003; Adamu *et al*, 2012). Respondents were asked about their nutritional habits, which is equally essential to the wellness and overall wellbeing of the aged. Questions about the number of times they eat daily, how often are foods containing essential nutrients consumed and if they boil their drinking water were asked. This is because lack of access to safe water is a crucial factor that has affected the health status of the people, which is reflected in the prevalence of water related diseases in most communities (ADB, 2001). Table 5.6 shows the distribution of respondents' daily eating habits. A total of 475 (97.3%) responded to this question out of which 81.4% have 3 square meals daily. However, 13.1% and 0.6% have their meals only 'twice' and 'once' per day respectively. Only about 4.9% have their meals more times than was the norm (such as 4 or more times daily). This could be due to individual medical and nutritional requirements adhered to by respondents.

Table 5.6: Daily Feeding Regimes

| Daily Feeding Regime | No of Respondents | Percentage |
|---|--------------------------|-------------------|
| Once | 3 | 0.6 |
| Twice | 64 | 13.1 |
| Thrice | 397 | 81.4 |
| Others | 24 | 4.9 |
| Total | 488 | 100.0 |
| Regularity of Consumption of a Balanced Meal | | |
| Daily | 139 | 28.5 |
| Twice Weekly | 73 | 15.0 |
| Thrice Weekly | 152 | 31.1 |
| Four Times Weekly | 93 | 19.1 |
| Others | 31 | 6.3 |
| Total | 488 | 100.0 |

Source: Field Survey, 2012

This is why the nutrient requirements by individuals according to Ojo (1991) and Adamu *et al*, (2012) are determined by factors like sex, age, body weight and climate. In aggregate, 28.5% of respondents eat a balanced meal on daily basis, 15% have a balanced meal at least ‘twice weekly’, while the majority, 31.1 % have theirs at least ‘thrice weekly’ (See Table 5.6). A diet containing adequate amounts of all the necessary nutrients required for healthy growth and activity according to the Free Dictionary (2012) is balanced. However, a balanced diet not only includes sufficient energy for a person’s needs but all of a person’s dietary requirements in the correct proportions (www.ivy-rose.co.uk). Adherence to a ‘balanced’ dietary regime is noted amongst respondents in the study area. Eating nutritiously is a habit needed for longer and ailments free lifestyle amongst seniors. This is because nutrition as posited by scholars such as Anderson, Porteous, Foster, Higgins and Stead (2004); Prell *et al*, (2005); Ajala, (2006); Ozcelik, Surucuoglu and Akan (2007); Yahia, Achkar, Abdallah and Rizk (2008); and Anetor, Ogundele and Oyewole (2012) is a major modifiable determinant of chronic diseases. And this is why nutrition related non communicable diseases such as hypertension, obesity, diabetes mellitus, chronic renal failure, cancer and gout are major contributors to the global disease burden (Adamu *et al*, 2012).

Though some of these conditions may not necessarily originate from diet, they require dietary management to improve quality of life and reduce mortality.

Furthermore, another issue very crucial to the health and wellness of individuals in our society is the availability and access to portable water for individual needs and wants. Respondents were asked whether they boil their drinking water or not and also provide reasons for individual choices. These are depicted in Figures 5.4 and 5.5 respectively.

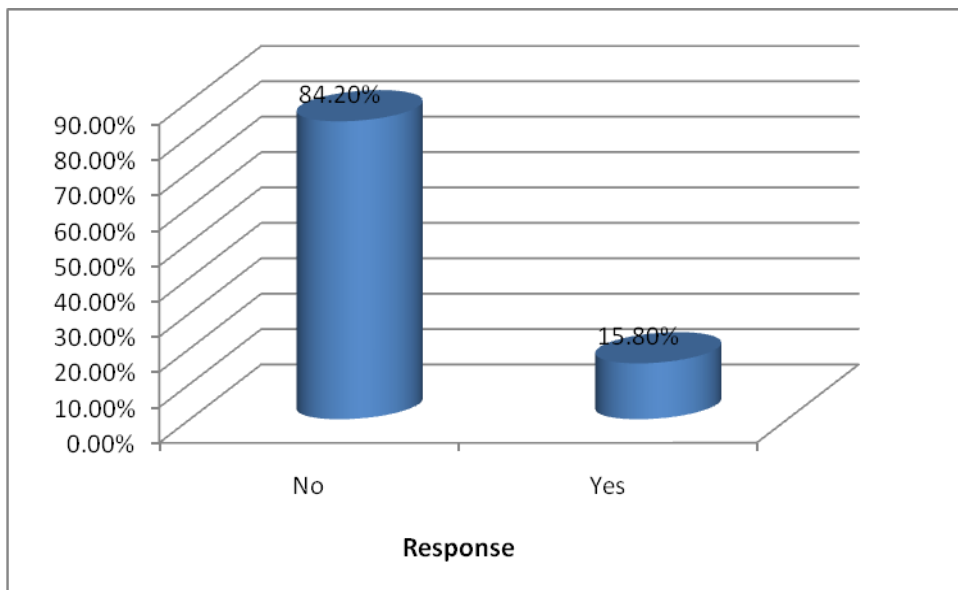


Figure 5.4: Distribution by Respondents who Boil Drinking Water
Source: Field Survey, 2012

Figure 5.4 show that only 15.8% (77) boil their drinking water, while 84.2% (411) do not. This therefore shows a high reliance in the portability of the sources of water most respondents have access to and utilizes. A study by Orire and Abdulraheem, (2012) indicates that majority of residents of Ilorin have access to well, tap and bore hole water in that order. Even for the state as a whole, Adedayo and Ifabiyi (1999) reported that pipe borne water runs few days in a week, implying that people will have different storage types for pipe borne water which is considered as potable. Hence no need to boil such water. Besides, several reasons were provided for not boiling their drinking water by respondents. These reasons however, were analyzed as seen in Figures 5.5.

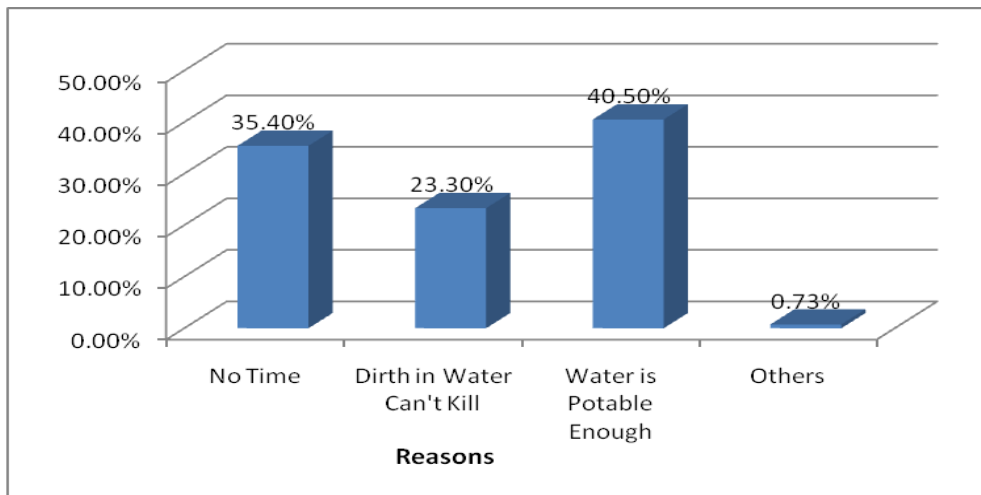


Figure 5.5: Reasons for Not Boiling Drinking Water

Source: Field Survey, 2012

However, from enquiries as Figure 5.5 depicts, as much as 40.5% (167) of respondents claimed their water is potable enough to drink, 35.4% (146) had no time boiling their water, while about 23.3% (96) believed dirt in water neither can, nor kill or harm them. However, 0.73% gave other reasons such as old age; no affinity for boiled water, consumption of (pure) sachet water, as well as, it is my wife’s duty to provide clean water among others. These reasons were derived from responses during FGD sessions especially while probing into the reasons for not adopting the boiling and filtering system in water purification. A discussant stated:

“As the household head, issue like going to boil the water I use is not my duty. Because it is the duty of my wife to fetch and provide good drinking water for our use.”

(Mallam Saidu, Baruten)

An elderly female also stated thus:

“Thirst for water does not kill.”

(Iya Bisola, Ekiti)

Another elderly male discussant also echoed:

“In this age of the sale of pure (packaged) water, why will I waste time boiling water before drinking? I usually send the kids to buy pure water.”

(Alhaji Baba Bida, Ilorin)

However, Alfa Razak’s view on boiling of drinking water goes thus:

“We use water from the borehole now, since water from the utility board is not reliable, unlike before.”

(Alfa Razak, GRA, Ilorin)

5.5 SOCIAL AND RECREATIONAL LIFESTYLE

5.5.1 Social Lifestyle

Social activities are other forms of coping strategies adopted by the elderly in most societies. Being involved plays an important role in improving self esteem and gives meaning to life. As Table 5.7 shows, all the respondents confirmed being members of one or multiple groups within the communities. However, for ease of analysis, only the most engaged social activity by individual respondent was asked. Examining the different types of social groups or associations respondents belong to, 42.2% of them are members of religious groups (such as Federation of Muslim Women Association of Nigeria (FOMWAN), TAOHEED Muslim Women Association, Christ Apostolic Church (CAC), Evangelical Church of West Africa (ECWA), Christian Women Association of Nigeria (CWAN) among others. Also, 25%, 11.9% and 1.8% belong to community, occupational and recreational groups accordingly. However, about 19.1% are found in other social groupings (such as tribal, age group or self help groups among others).

Table 5.7: Distribution of Respondents by Social Grouping and Social Engagements

| Type of Social Group | No of Respondents | Percentage |
|----------------------------------|--------------------------|-------------------|
| Religious | 206 | 42.2 |
| Community | 122 | 25.0 |
| Occupational | 58 | 11.9 |
| Recreational | 9 | 1.8 |
| Others | 93 | 19.1 |
| Total | 488 | 100.0 |
| Common Social Engagements | | |
| Marriages | 225 | 46.1 |
| Burials | 83 | 17.0 |
| Naming Ceremonies | 58 | 11.9 |
| Birthdays | 7 | 1.4 |
| Others | 115 | 23.6 |
| Total | 488 | 100.0 |

Source: Field Survey, 2012

Participation in religiously inclined groups is noticed amongst the majority of respondents, while participation in community or kinship activities ranked second. This

finding is equally in line with McFadden (2005) in which the importance of religion in the later life of an elderly is stressed. However, patronage of occupational based associations including 'cooperative' or 'thrift' collecting groups ranked third in order of popularity. Recreational groups were ranked the least. Participation in community and kinship activities and finding ways to contribute to communal affairs (such as participation in group activities, volunteering works, social activities, as well as filial responsibilities, amongst others), serves as a coping strategy and as well, a major source of personal satisfaction for people of all ages, but is especially important for older adults within our communities. This is because an elder's role within the family according to Chow (1996) and Lee and Mjelde-Mossey (2004) forms the basis for ways of coping and finding meaning of life.

Social activities in later life can lead to less disability, lower mortality risk, and better mental health (Mendes de Leon, Glass and Berkman, 2003; Glass, Mendes de Leon, Bassuk, and Berkman, 2006; Lehning and Harmon, 2013). Besides, it also helps to fight depression and improve overall wellbeing of the aged. Research into the social life of the elderly according to Shaw, Krause, Liang and Bennett (2007) suggests that older adults often have smaller social networks and less contact with members of their networks than those at younger ages, and that the loss of social ties is predominantly with those who are not family members. In addition, having social networks according to Lehning and Harmon (2013) may increase an older adult's ability to receive social support or assistance with everyday tasks. For these reasons and more, respondents' communal lifestyles are of essence to this study.

5.5.2 Common Social Engagements

Furthermore, participation in social engagements or ceremonies by the respondents was equally examined. To better understand respondents' social and recreational lifestyles, the various societal engagements they normally participate in, as well as their day to day

schedules, were examined. Note also that the social engagement respondents mostly engage in by priority was asked. As depicted in Table 5.7, the common social engagements are: marriage and christening ceremonies, birthday celebrations, burials and others (such as religious celebrations, endowment lunch, graduation ceremonies, tribal and age grade gatherings, professional or self help associations events, anniversary and house warming celebrations, among others) respectively. As depicted, the most prominent social function amongst people of all ages, and the aged as well, is the celebration of conjugal (marriage) unions. This is so because about 46% of all respondents indicated marriage as their major social engagement. A constellation of several 'other' engagements like community welfare gatherings, artisanal graduations ('freedom'), conflict reconciliations, youth mentorship schemes, religious activities, solitary rumination, tribal events as well as a combination of all human social engagements among others, represented 23.6% of the engagements.

Besides, Burial events are not essentially 'ceremonial' rather are periods for sober reflections, prayers and consolations amongst communities in Kwara State and Nigeria in general, due mostly to the various religious norms and customs that enjoin such. About 17% of elders regarded burial outings as their main social function, while 11.9% preferred Naming or Christening ceremonies. The birth of a new born child regardless of culture, age and belief is an event of joy and happiness to all and sundry. Child christening is of particular importance to the elderly within our communities, mostly due to the function and duties like naming of child, teaching of weaning (prenatal, natal and post natal) practices, caring for the new mother, and being repository of culture and traditions, are duties mostly performed by this group of citizens. Attendance of Birthday celebrations was the least prominent (1.4%) social functions amongst respondents (See Table 5.7). In other words, respondents' day to day schedules was equally scrutinized. This was done to further understand the social lives of respondents. How an average day is spent by respondents shows that praying and other

religious duties are the major activities performed by as much as 41% (200) of these senior citizens as shown in Figure 5.6. This finding is in line with McFadden (2005), where religion was noted as an important factor utilized by the aged in coping with later life demands. Besides, 32.8% (160) engage mostly in either farming or commercial activities.

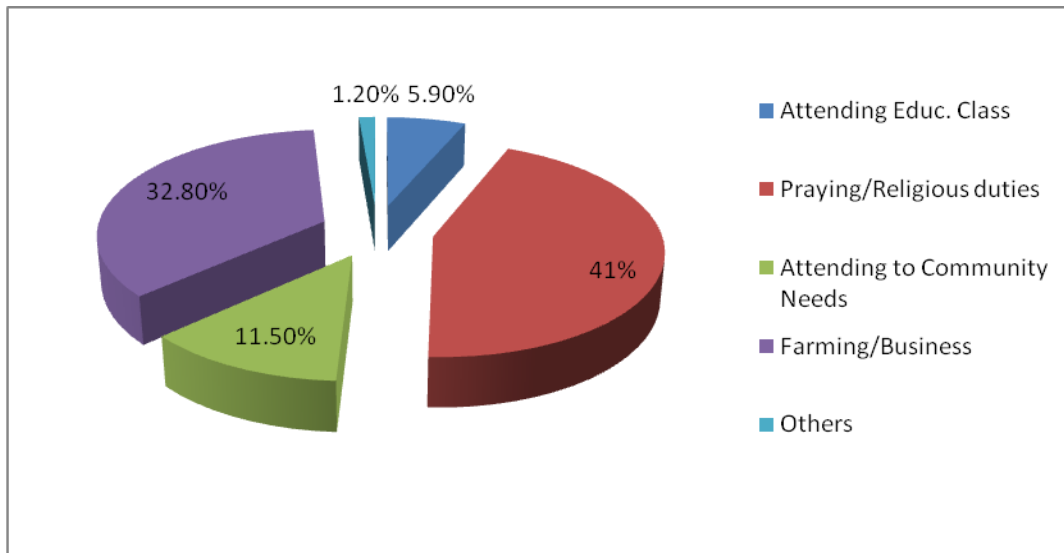


Figure 5.6: Distribution of Respondents according to their Day to Day Activities
Source: Field Survey, 2012

Attending to community needs and enrolment in adult educational classes are the third (56) and fourth (29) in order of prominence amongst respondents. Other daily activities like partaking in domestic chores, visiting friends, having siesta among others are engaged into by about 1.2% of respondents. These are shown in Figure 5.6.

5.5.3 Recreational Life

Recreation and Leisure have multiple meanings based on individual perception (McLean, 'undated'). Recreation according to the Longman Dictionary of Contemporary English (1995) is defined as an activity that is done for pleasure or amusement. Of essence to the enhancement of the lifestyle and wellbeing of the populace and most crucially to our elderly citizens is the act of recreation. Acts of recreation are perceived as an elitist way of showing affluence, especially amongst the uninformed in our communities. Recreation can be derived from a variety of means, which is via sporting activities, clubbing, movie watching,

music, tourism and visitations among others. Table 5.8 shows the various recreational or leisure activities engaged in by the elderly in Kwara State. Also, being involved in multiple recreations is expected. However, for ease of analysis, only the most engaged recreation by individual respondent was asked. As depicted in the table, visitation or visiting friends and relations is the main recreational activity performed by as much as 38.5% of respondents. This finding is in agreement with that of Bowling (2005) in Britain, where social relationships was one of the factors linked to well-being and quality of life in the elderly.

In addition, Peil and Sada (1985) in their study of cities in tropical Africa saw visit as an aspect of the maintenance of rural-urban contacts and potentiality of social change. Visits serve as occasion for provision of material help. It is also important for social and psychological support derived from the maintenance of kinship ties (Okumagba, 2011). While watching of movies (18.4%) and clubbing (10.0%) were the third and fourth major leisure activities amongst the population. Sporting activities like exercises and going to the gymnasium, among others, is the major leisure act amongst 8.6% of respondents as depicted in Table 5.8.

Table 5.8: Distribution of Respondents according to Recreational Activities

| Recreational Acts | No of Respondents | Percentage |
|--------------------------|--------------------------|-------------------|
| Sport | 42 | 8.6 |
| Clubbing | 47 | 10.0 |
| Visitation | 188 | 38.5 |
| Movie Watching | 90 | 18.4 |
| Others | 121 | 24.8 |
| Total | 488 | 100.0 |

Source: Field Survey, 2012

However, other activities like reading newspapers and novels, folk telling to grandchildren, writing, walking, sleeping, listening to music, hunting and praying among others ranked second, and is common amongst 24.8% of respondents. Furthermore, Table 5.9 shows the regularity of participation in individual recreational activity. About 40.5% (17) of respondents who engage in sports do so daily while, majority of them (42.9%) practice sports

once in a week. However, only 7.1% and 9.5% go sporting bi-weekly and once in a month respectively. Visit to friends and relations was majorly done once in week by as much 42.6% those respondents that engage in visitation as a recreation, while 34% do this once in a month. Also about 10.6% each visit relations either daily or twice in a week. Furthermore, movie watching is done by majority (35.6%) of the elderly daily, while about 32.2% do this once in a week (See Table 5.9).

Table 5.9: Regularity of Participation in Recreational Activity
Regularity of Participation

| Recreational Activities | Daily | | Once in a Week | | Twice in a Week | | Once a Month | | Others | | Total (%) |
|-------------------------|------------|-------------|----------------|-------------|-----------------|-------------|--------------|-------------|-----------|------------|-------------------|
| | Freq | % | Freq | % | Freq | % | Freq | % | Freq | % | |
| Sporting | 17 | 40.5 | 18 | 42.9 | 3 | 7.1 | 4 | 9.5 | 0 | 0.0 | 42 (100.0) |
| Clubbing | 4 | 8.5 | 27 | 57.4 | 7 | 15 | 9 | 19.1 | 0 | 0.0 | 47 (100.0) |
| Visitation | 20 | 10.6 | 80 | 42.6 | 20 | 10.6 | 64 | 34.0 | 4 | 2.1 | 188(100.0) |
| Movie Watch | 32 | 35.6 | 29 | 32.2 | 7 | 7.8 | 21 | 23.3 | 1 | 1.1 | 90 (100.0) |
| Others | 34 | 28.1 | 24 | 19.8 | 13 | 10.7 | 20 | 16.5 | 30 | 24.8 | 121(100.0) |
| Total | 107 | 21.9 | 178 | 36.5 | 50 | 10.2 | 118 | 24.2 | 35 | 7.2 | 488(100.0) |

Source: Field Survey, 2012

In addition, Table 5.9 shows that majority of respondents combined, that is 36.5% recreate on weekly basis, while only 21.9% (107) engage in recreation on daily basis. This finding agrees with that of Asiyanbola (2005) in Ibadan; where only about 9.4% of the studied elderly are involved in social activities (recreation etc) on daily basis. Besides, 10.2% (50) have their leisure bi-weekly, while those who recreate on month by month basis are 24.2% (118). Only 7.2% (35) of the aged recreate without any particular routine and whenever they desires.

5.5.4 Geriatric Care and Recreational Facilities

Participation in programmes that keep the body and soul fit according to Sturnieks, St George and Lord (2008) is very important to old people and their interest has to be considered before introducing them to any coping programme. Fostering acts of recreation amongst the elderly in our communities is a task that must be done. This is crucial because of

the indifference towards the benefits derivable in regular recreation by majority of the populace. Thus, enhancing the adoption of regular recreational actions, will in no small way promote sound and healthy living amongst our aging relations and us. However, the provision and accessibility to geriatric facilities and institutions, both by the government and private care givers is very essential. This is why respondents were asked either or not facilities like Geriatric hospitals and homes, as well as Recreational clubs are located and accessed by them in their local environments (See Table 5.10).

To ascertain these, probe for the availability of specialized infrastructure and dedicated public facilities for the welfare and care of the aged was done through questionnaire and FGD sessions. Through the responses as shown on Table 5.10, almost half (49.4%) of respondents affirmed that there is the availability of specialized hospitals for the elderly in their various communities, while about 50.6% said 'No'. Likewise, as much as 70.5% deny the availability of recreational clubs, but about 29.5% affirmed the existence of such facility within their environs. To further examine these reports, questions' regarding the provision of specialized elderly oriented public facilities was fielded during the discussion sessions. An elderly woman reported:

“There are hospitals like the General hospitals, Civil Service Clinic, University Teaching hospital around from where we treat ourselves whenever we are sick. Although, the Government is trying her best, the only problem is that we aged have to queue alongside other non elderly patients and the senior doctors are not always there, only the student doctors attend to us.”

(Alhaja Saratu, Baaboko Ilorin)

Table 5.10: Distribution of Respondents by Social Facilities Available to the Elderly

| Specialized Hospitals | No of Respondents | Percentage |
|------------------------------|--------------------------|-------------------|
| Yes | 241 | 49.4 |
| No | 247 | 50.6 |
| Total | 488 | 100.0 |
| Recreational Clubs | | |
| Yes | 144 | 29.5 |
| No | 344 | 70.5 |
| Total | 488 | 100.0 |
| Old Peoples' Homes | | |
| Yes | 131 | 26.8 |
| No | 357 | 73.2 |
| Total | 488 | 100.0 |

Source: Field Survey, 2012

This is not surprising because most of the recreational facilities in the state are concentrated only in the urban centres (Oyebanji, 2000). Moreover, 26.8% affirmed the existence of old peoples' or geriatric homes while majority (73.2%) noted non existence and by extension accessibility to such institutions. Interestingly, institutional care for elderly persons in Nigeria sounds "unnatural" and may be regarded as taboo by most folks (Uwakwe and Modebe, 2007). Although, at present there are no well organized old peoples' homes or aged institutions in Nigeria. Only a few available homes, about 3 nationwide as at 2007 posited by Uwakwe and Modebe (2007) are run by charitable organizations that are only able to cater for just an insignificant number of the aged. The scenario notwithstanding, regular source and continuity of care has been noted to significantly reduce the likelihood of hospitalization (Gill and Mainous, 1998) and emergency room visits (Falik, Needleman, Wells and Korb, 2001 and Agbogidi and Azodo, 2010).

Note that, to most of the respondents, there seem to be no distinction between the public 'in-patient' or 'out-patient' general hospitals or clinics, and a specialized (dedicated) geriatric hospital; so far the required Medicare or treatment is accessed. Reason could as well be due to the high level of illiteracy (38.1%) amongst respondents (See Table 4.3 in Chapter

4). Moreover, agriculture is the mainstay of the economy of majority of the elderly inhabitants of this area (about 50% of Kwarans are engaged in agriculture (NPC, 2009). Regardless of this some participate as members in one recreational act or are aware of the existence of such facilities like the Ilorin International Golf Club (IIGC), Ilorin International Tobacco Company Club (IITCC) and Police Officers' Mess Tennis Club, and the State Sports Stadium Complex. However, the provision of appropriate health and wellness services to the elderly has emerged as one of the major challenges of this century (Stone, 2000). Elderly care according to Agbogidi and Azodo (2010) represents a significant unmet health need and thus provision and utilization of facilities is therefore very important.

CHAPTER SIX

TREND OF AGING POPULATION ACROSS TIME AND SPACE AND FACTORS DETERMINING SPATIAL VARIABILITY IN AGING IN KWARA STATE

6.1 INTRODUCTION

In this chapter, analysis of the total annual aged population; annual increase in the aged population; average annual change as well as factors that determines spatial variability in population of the aged (60 + years) in the study area were discussed. Also, time series analysis was utilized to determine the trend equations and plot a 35 years (1991-2025) trend in the population of the elderly in the six selected LGAs of Kwara State. Factor analysis, multiple as well as stepwise multiple regression analysis were used in determining variables accounting for spatial variability and rewriting model equation.

6.2 SPATIO-TEMPORAL CHANGE IN POPULATION AGED 60 (YRS) AND OVER

To establish the situation of aging population in Kwara State, the 1991 and 2006 census figures of the population 60+ years was extracted (See Table 6.1). From these, the population aging map of the state is produced as represented by Figures 6.1 and 6.2. From these, it is observed that in the year 1991, Ifelodun (23,656) and Ilorin West (14,634) were the most populous aged areas, while by 2006, Ifelodun dropped to the third most populous area, and instead we have Ilorin West (21,037), Ilorin East (11,148) and Ifelodun (10,020). Furthermore, the least aged populated areas in 1991 as shown in Table 6.1 and Figure 6.1 are Isin (1,794) and Ekiti (1,930), while by 2006 census; it was Oke Ero (2,878), Ekiti (3,000) and Isin (3,012) respectively (See Figure 6.2). The above scenario can aptly be linked to the migratory pattern in the state, since Kwara State according to the NPC (1992) estimates, experiences a high level of youth emigration mostly towards Ilorin or other urbanized cities in the country. The consequence of this, in a part is that for better care, and the satisfaction of

filial obligations, most elderly reside permanently or partially with their offspring and kins, leaving the origin sparsely populated.

Table 6.1: Proportion of the Aged (60+ Yrs) from the 1991 and 2006 Census Figures for Kwara State

| Local Government Areas | 1991 | | 2006 | | Difference | |
|------------------------|---------------|--------------|----------------|--------------|---------------|-------------|
| | No | % | No | % | No | ± % |
| Asa | 4,092 | 4.2 | 6,926 | 6.0 | 2834 | 1.8 |
| Baruten | 5,753 | 6.0 | 8,868 | 7.6 | 3115 | 1.6 |
| Edu | 4,847 | 5.0 | 8,379 | 7.2 | 3532 | 2.2 |
| Ekiti | 1,930 | 2.0 | 3,000 | 2.6 | 1070 | 0.6 |
| Ifelodun | 23,656 | 24.4 | 10,020 | 8.6 | -13636 | -15.8 |
| Ilorin East | 7,358 | 7.6 | 11,148 | 9.6 | 3790 | 2.0 |
| Ilorin South | 7,983 | 8.2 | 9,261 | 8.0 | 1278 | 0.2 |
| Ilorin West | 14,634 | 15.1 | 21,037 | 18.1 | 6403 | 3.0 |
| Irepodun | 5,643 | 5.8 | 7,673 | 6.6 | 2030 | 0.8 |
| Isin | 1,794 | 1.8 | 3,012 | 2.6 | 1218 | 0.8 |
| Kaiama | 3,793 | 4.0 | 4,285 | 3.7 | 492 | -0.3 |
| Moro | 4,519 | 4.7 | 6,228 | 5.4 | 1709 | 0.7 |
| Offa | 3896 | 4.0 | 4,200 | 3.6 | 304 | -0.4 |
| Oke-Ero | 1998 | 2.1 | 2,878 | 2.5 | 880 | 0.4 |
| Oyun | 2660 | 2.7 | 4,724 | 4.1 | 2064 | 1.4 |
| Patigi | 2370 | 2.4 | 4,460 | 3.8 | 2090 | 1.4 |
| State Total | 96,926 | 100.0 | 116,099 | 100.0 | 19,173 | 19.8 |

Source: Author's Computation from 1991 and 2006 Census Figures

Secondly, by the time the emigrated youths becomes aged, most decide to stay abroad, rather than return back to an unknown or a less familiar country home as the case may be. This scenario is peculiar to most communities in the State especially in LGAs like Ifelodun, Ekiti, Irepodun where the Igbomina people (known for their high immigrant population in cities like Lagos, Abeokuta, Ilorin, Ibadan, Cotonou among others) are. However, Figure 6.3 depicts the rate of increment between the two censal periods. Here it was noticed that it is only Ifelodun that has an increase in elderly population from the 1991 census year higher than that of 2006, while other areas experience divergent but higher increases in their 2006 figures than their 1991 figures. These can also be seen in Table 6.1. It is also important to note that Kwara State, as a consequence of successive boundary adjustment exercises from State creations since 1967 has lost considerable land area as well

as human and material resources. For instance, with a land area of about 60,388 sq.km and a population of over 4.0 million (up to 26 August, 1991) suddenly came down to about 32,500 sq.km and 1.55 million people respectively, giving the state a population density of 48 persons per sq.km (Oyebanji, 2000). All these have had significant effects on the population trend of the state, and most especially on the local government areas.

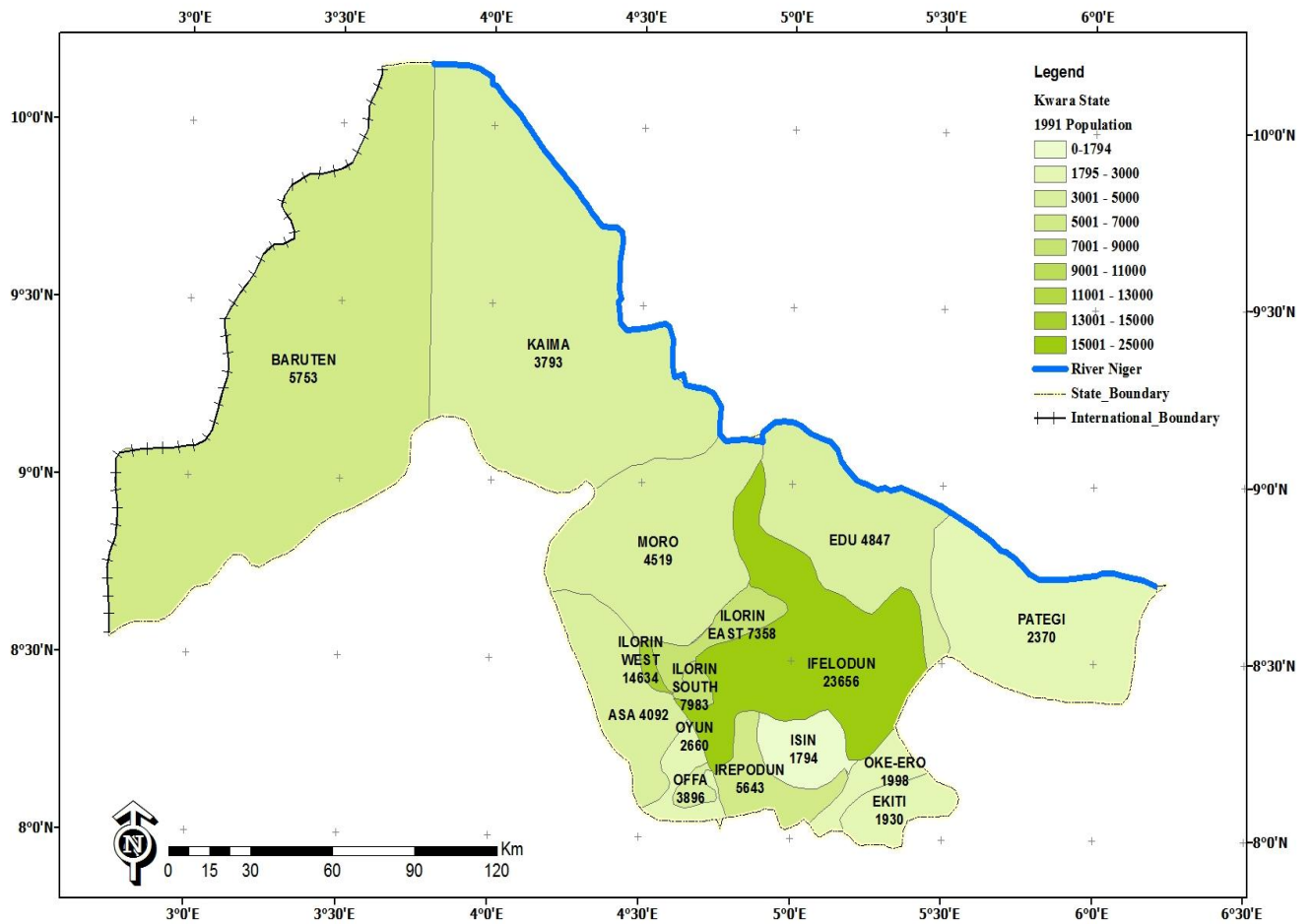


Figure 6.1: The 1991 Aged Population Map of Kwara State
 Source: Field Survey, 2012

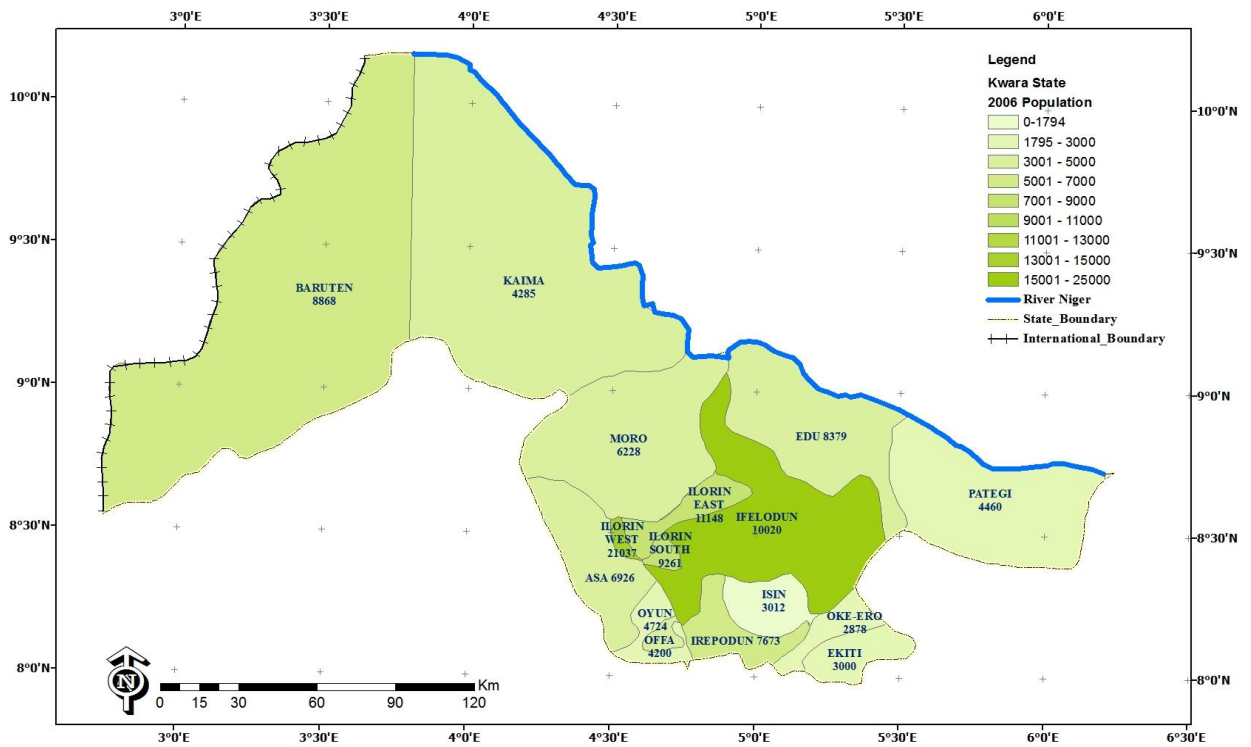


Figure 6.2: The 2006 Aged Population Map of Kwara State
 Source: Field Survey, 2012

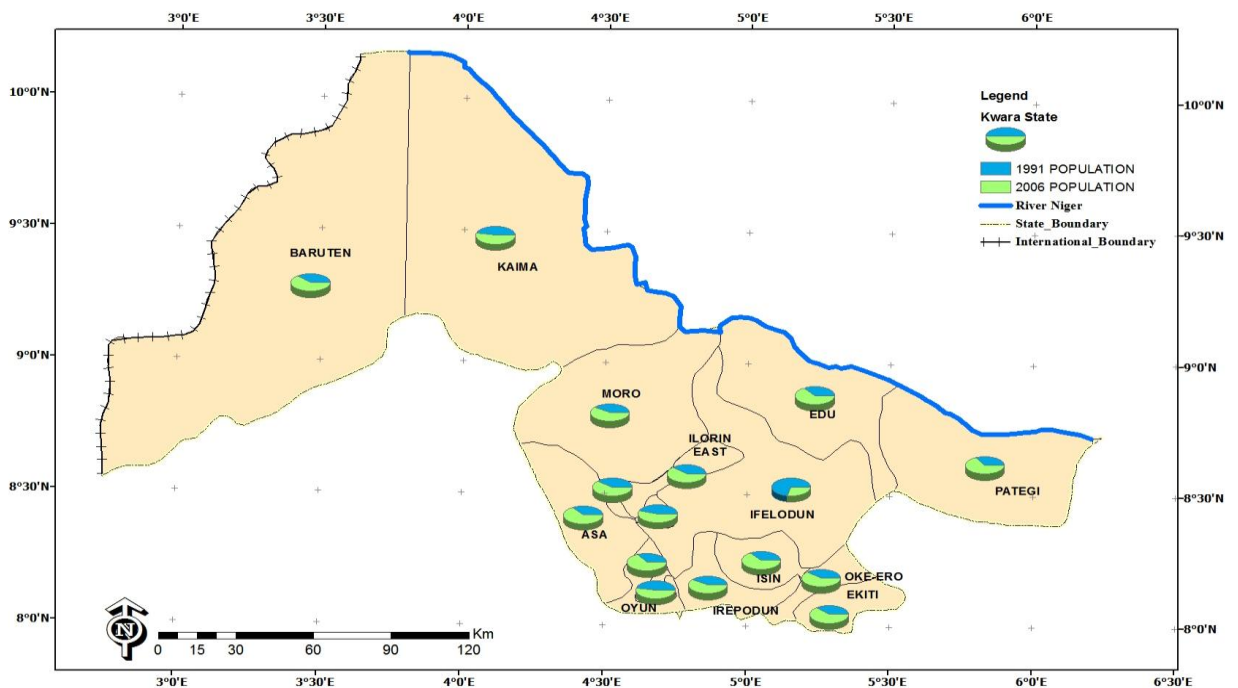


Figure 6.3: The Rate of increment in Aged population between the 1991 and 2006 Census figures in Kwara State.
 Source: Field Survey, 2012

In order to establish the level of increase in the elderly population in individual local government areas of the state, the 1991 and 2006 population census figures by age-groups were projected using the National Population Commission (NPC) 1991 census projected medium range average annual growth rates (%) and the 2006 census percentage growth rate for Kwara State (Table 6.2). Note, that the National Population Commission recommends medium projection for use and application (NPC, 2004). Table 6.3 presents thirty-five (35) years (1991-2025) projected annual population of the age group 60 years and over for the state and the studied local government areas of Baruten, Patigi, Asa, Ilorin West, Ekiti and Oyun, respectively. The total projected thirty-five (35) year addition to the elderly (60+ yrs) population for the studied locations are as follows; Baruten (11,126), Patigi (6,120), Asa (8,911), Ilorin West (27,568), Ekiti (3,780) and Oyun (6,332). Also, as shown in Table 6.3, a total of 126,206 aged inhabitants of the state are projected to be added within the same time period. Furthermore, the average thirty-five year change or increase for the respective locations was equally calculated. Here, average annual increases of 5048.24 aged are expected to be added to the seniors' group. In addition, an average annual addition of 318.0 (Baruten), 175.0 (Patigi), 254.6 (Asa), 787.7 (Ilorin West), 108.0 (Ekiti) and 180.9 (Oyun) individuals were expected to attain or join the 60+ age groups in their respective local government areas (See Table 6.3).

Table 6.2: Population of the Aged (60 Years and Over) from 1991 – 2025 in Kwara State

| Year | Baruten | Patigi | Asa | Ilorin West | Ekiti | Oyun | Growth Rate (%) |
|------|---------|--------|-------|-------------|-------|------|-----------------|
| 1991 | 5753 | 2370 | 4092 | 14634 | 1930 | 2660 | 2.8** |
| 1992 | 5914 | 2436 | 4207 | 15044 | 1984 | 2734 | " |
| 1993 | 6080 | 2504 | 4325 | 15465 | 2040 | 2811 | " |
| 1994 | 6250 | 2574 | 4446 | 15898 | 2097 | 2890 | " |
| 1995 | 6425 | 2646 | 4570 | 16343 | 2156 | 2971 | " |
| 1996 | 6605 | 2720 | 4698 | 16801 | 2216 | 3054 | " |
| 1997 | 6790 | 2796 | 4830 | 17271 | 2278 | 3139 | " |
| 1998 | 6980 | 2874 | 4965 | 17755 | 2342 | 3227 | " |
| 1999 | 7175 | 2954 | 5104 | 18252 | 2408 | 3317 | " |
| 2000 | 7239 | 3641 | 5653 | 17171 | 2449 | 3855 | 3.37* |
| 2001 | 7491 | 3768 | 5850 | 17770 | 2534 | 3989 | 3.32* |
| 2002 | 7748 | 3897 | 6051 | 18380 | 2621 | 4126 | " |
| 2003 | 8014 | 4031 | 6259 | 19011 | 2711 | 4268 | " |
| 2004 | 8289 | 4169 | 6474 | 19664 | 2804 | 4415 | " |
| 2005 | 8574 | 4312 | 6696 | 20339 | 2900 | 4567 | " |
| 2006 | 8,868 | 4460 | 6926 | 21037 | 3000 | 4724 | 2.8** |
| 2007 | 9,166 | 4610 | 7159 | 21744 | 3101 | 4883 | 3.36* |
| 2008 | 9,474 | 4765 | 7400 | 22475 | 3205 | 5047 | " |
| 2009 | 9,792 | 4925 | 7649 | 23230 | 3313 | 5217 | " |
| 2010 | 10,121 | 5091 | 7906 | 24011 | 3424 | 5392 | " |
| 2011 | 10,464 | 5264 | 8174 | 24825 | 3540 | 5575 | 3.39* |
| 2012 | 10,819 | 5442 | 8451 | 25667 | 3660 | 5764 | " |
| 2013 | 11,186 | 5627 | 8738 | 26537 | 3784 | 5959 | " |
| 2014 | 11,565 | 5818 | 9034 | 27437 | 3912 | 6161 | " |
| 2015 | 11,957 | 6015 | 9340 | 28367 | 4045 | 6370 | " |
| 2016 | 12,361 | 6218 | 9656 | 29326 | 4182 | 6585 | 3.38* |
| 2017 | 12,779 | 6428 | 9982 | 30317 | 4323 | 6808 | " |
| 2018 | 13,211 | 6645 | 10319 | 31342 | 4469 | 7038 | " |
| 2019 | 13,658 | 6870 | 10668 | 32401 | 4620 | 7276 | " |
| 2020 | 14,120 | 7102 | 11029 | 33496 | 4776 | 7522 | " |
| 2021 | 14,582 | 7334 | 11390 | 34591 | 4932 | 7768 | 3.27* |
| 2022 | 15,059 | 7574 | 11762 | 35722 | 5093 | 8022 | " |
| 2023 | 15,551 | 7822 | 12147 | 36890 | 5260 | 8284 | " |
| 2024 | 16,060 | 8078 | 12544 | 38096 | 5432 | 8555 | " |
| 2025 | 16,585 | 8342 | 12954 | 39342 | 5610 | 8835 | " |

Source: Author's Computation from 1991 and 2006 Census Figures

* Projected Average Annual (Medium Variant) Growth Rates for Kwara State from 1991 Population Census. ** Average Annual Growth Rate for Kwara State from the 1991 and 2006 Censuses.

Table 6.3: Annual Changes (Increases) in Aging Population from 1991-2025 in Kwara State

| Year | Baruten | Patigi | Asa | Ilorin West | Ekiti | Oyun | Growth Rate(%) |
|---------------------------|---------------|--------------|--------------|----------------|--------------|--------------|-------------------|
| 1991 | 161 | 66 | 115 | 410 | 54 | 74 | 2.8** |
| 1992 | 166 | 68 | 118 | 421 | 56 | 77 | " |
| 1993 | 170 | 70 | 121 | 433 | 57 | 79 | " |
| 1994 | 175 | 72 | 124 | 445 | 59 | 81 | " |
| 1995 | 180 | 74 | 128 | 458 | 60 | 83 | " |
| 1996 | 185 | 76 | 132 | 470 | 62 | 85 | " |
| 1997 | 190 | 78 | 135 | 484 | 64 | 88 | " |
| 1998 | 195 | 80 | 139 | 497 | 66 | 90 | " |
| 1999 | 64 | 687 | 549 | 1081 | 41 | 538 | " |
| 2000 | 252 | 127 | 197 | 599 | 85 | 134 | 3.37* |
| 2001 | 257 | 129 | 201 | 610 | 87 | 137 | 3.32* |
| 2002 | 266 | 134 | 208 | 631 | 90 | 142 | " |
| 2003 | 275 | 138 | 215 | 653 | 93 | 147 | " |
| 2004 | 285 | 143 | 222 | 675 | 96 | 152 | " |
| 2005 | 294 | 148 | 230 | 698 | 100 | 157 | " |
| 2006 | 294 | 148 | 230 | 698 | 100 | 157 | 2.8** |
| 2007 | 298 | 150 | 233 | 707 | 101 | 159 | 3.36* |
| 2008 | 308 | 155 | 241 | 731 | 104 | 164 | " |
| 2009 | 318 | 160 | 249 | 755 | 108 | 170 | " |
| 2010 | 329 | 166 | 257 | 781 | 111 | 175 | " |
| 2011 | 343 | 173 | 268 | 814 | 116 | 183 | 3.39* |
| 2012 | 355 | 178 | 277 | 842 | 120 | 189 | " |
| 2013 | 367 | 185 | 287 | 870 | 124 | 195 | " |
| 2014 | 379 | 191 | 296 | 900 | 128 | 202 | " |
| 2015 | 392 | 197 | 306 | 930 | 133 | 209 | " |
| 2016 | 404 | 203 | 316 | 959 | 137 | 215 | 3.38* |
| 2017 | 418 | 210 | 326 | 991 | 141 | 223 | " |
| 2018 | 432 | 217 | 337 | 1025 | 146 | 230 | " |
| 2019 | 447 | 225 | 349 | 1059 | 151 | 238 | " |
| 2020 | 462 | 232 | 361 | 1095 | 156 | 246 | " |
| 2021 | 462 | 232 | 361 | 1095 | 156 | 246 | 3.27* |
| 2022 | 477 | 240 | 372 | 1131 | 161 | 254 | " |
| 2023 | 492 | 248 | 385 | 1168 | 167 | 262 | " |
| 2024 | 509 | 256 | 397 | 1206 | 172 | 271 | " |
| 2025 | 525 | 264 | 410 | 1246 | 178 | 280 | " |
| Total | 11126 | 6120 | 8911 | 27568 | 3780 | 6332 | |
| Average Change | 317.90 | 174.9 | 254.6 | 787.7 | 108.0 | 180.9 | |

Source: Author's Computation from 1991 and 2006 Census Figures

* Projected Average Annual (Medium Variant) Growth Rates for Kwara State from 1991 Population Census. ** Average Annual Growth Rate for Kwara State from the 1991 and 2006 Censuses.

Furthermore, the projected population figures were subjected to time series analysis in order to determine the trend over a thirty-five (35years) period and there by determining the trend line equations for future forecast of the aged population for the respective Local Government Areas as Shown in Figures 6.4 to 6.9. In addition, six different trend line equations and R^2 values is generated which can be used to plot future population trends, and these are as follows: Baruten LGA ($y = 321.0x + 4586$ ($R^2 = 0.97$)); Patigi LGA ($y = 180.1x + 1839$ ($R^2 = 0.99$)); Asa LGA ($y = 265.0x + 3224$ ($R^2 = 0.98$)); Ilorin West LGA ($y = 726.4x + 11758$ ($R^2 = 0.96$)); Ekiti LGA ($y = 109.1x + 1537$ ($R^2 = 0.97$)) and Oyun LGA ($y = 185.4x + 2082$ ($R^2 = 0.98$)). These are equally represented in Figures 6.4 to 6.9.

As shown in Tables 6.2 and 6.3, and the plotted time series graphs in Figures 6.4 to 6.9, a steady upward trend in growth of the aged (60 +) population is noticed. However, the rate of increase dropped in 1999 in areas such as Baruten, Ilorin west and Ekiti LGAs while it rose in areas such as Patigi, Asa and Oyun respectively. Reasons for this may be as a result of the creation of new states and LGAs just before the 1991 census and also in 1996. The resultant boundary changes could have affected the process of population apportionment (FGN, 2007). It may also be recalled also that the 1991 and 2006 censuses were conducted in different months and seasons and the mobility of the population in terms of direction and quantum is unevenly distributed over the year. Thus LGA populations could be influenced favourably or adversely by population movements which is seasonal or due to several other factors like political, social, religious, ethnic, administrative and even international events.

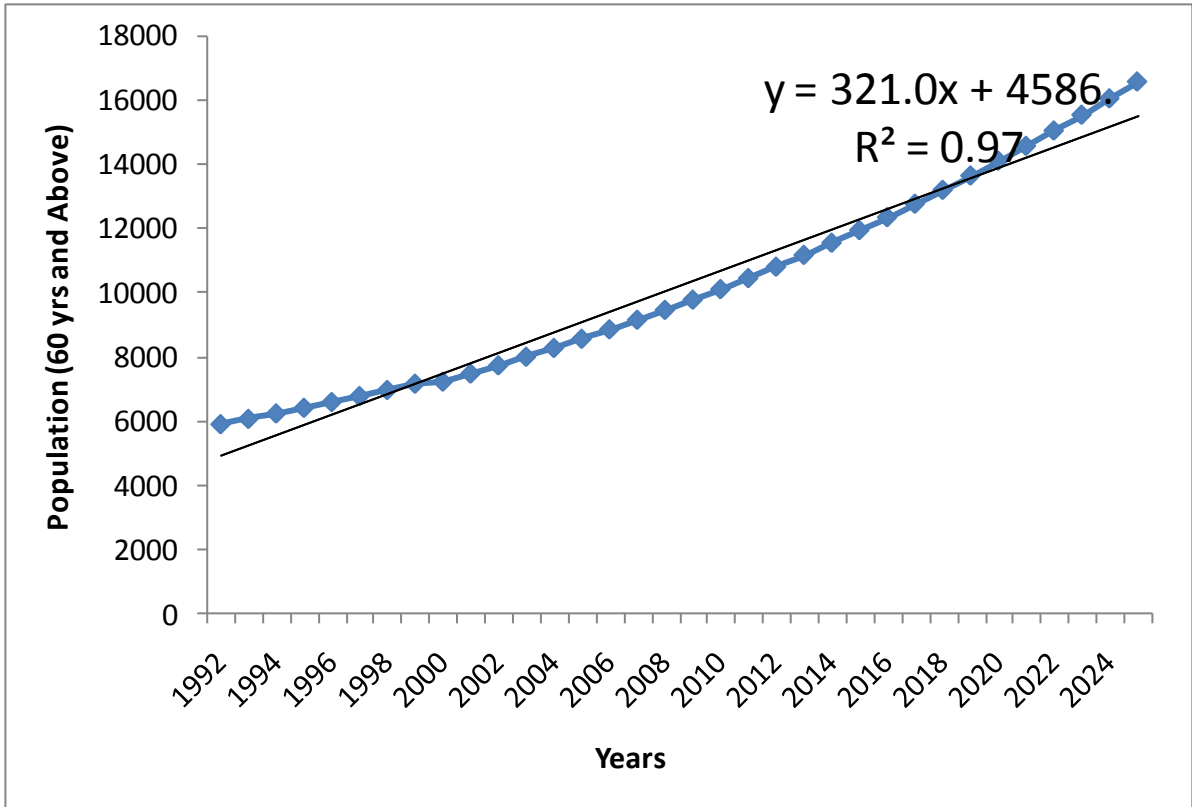


Figure 6.4: Trend of Population Aged 60+ Years in Baruten LGA
 Source: Author's Computation from 1991 & 2006 Censuses

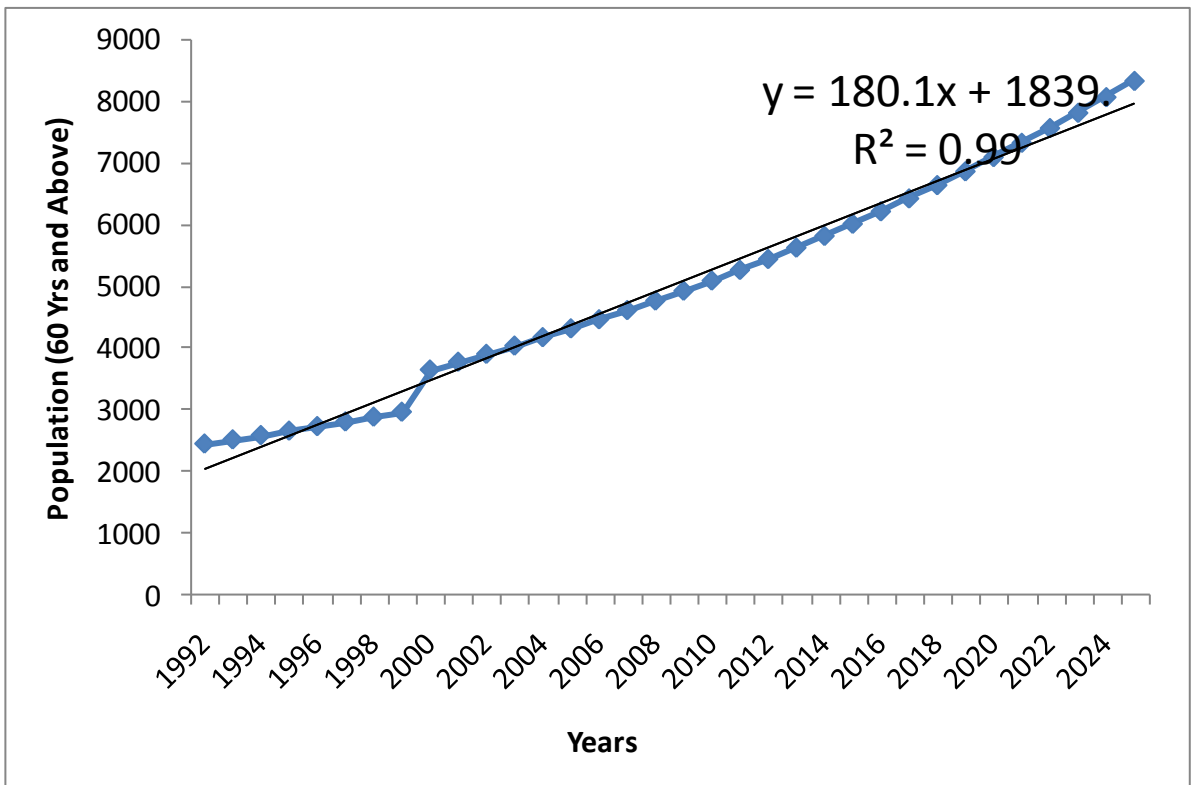


Figure 6.5: Trend of Population Aged 60+ Years in Patigi LGA
 Source: Author's Computation from 1991 & 2006 Censuses

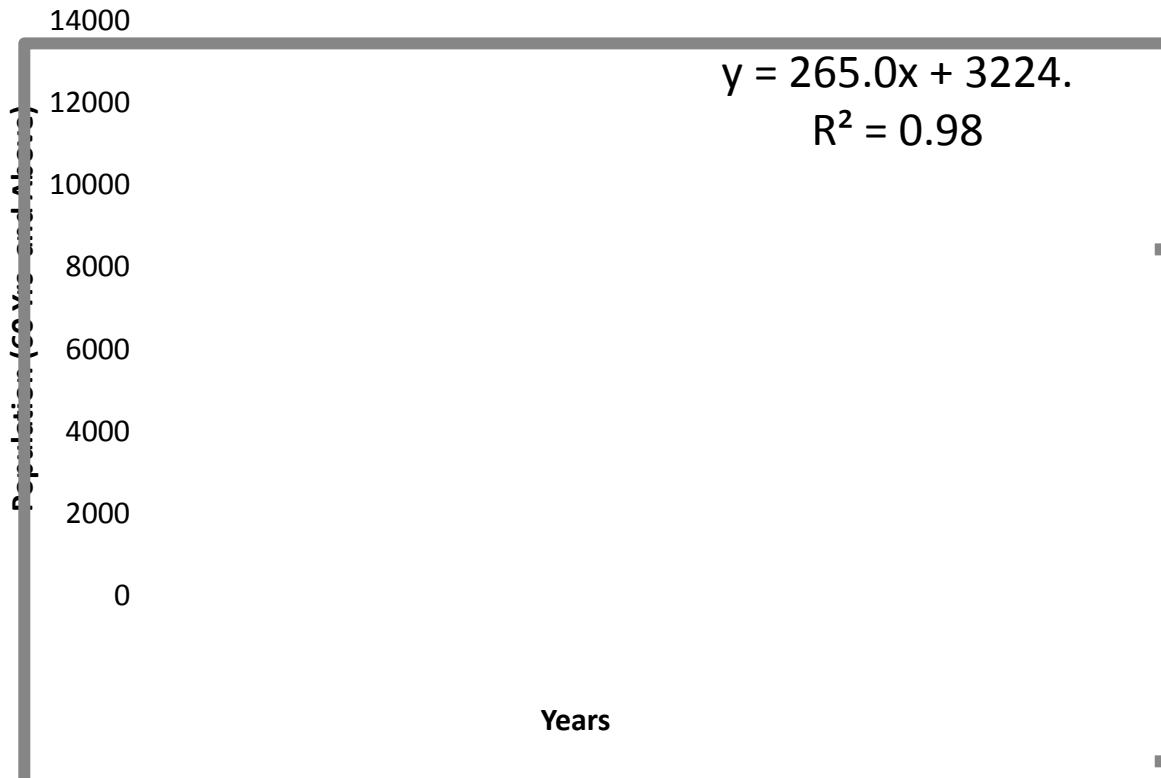


Figure. 6.6: Trend of Population Aged 60+ Years in Asa LGA
 Source: Author's Computation from 1991 & 2006 Censuses

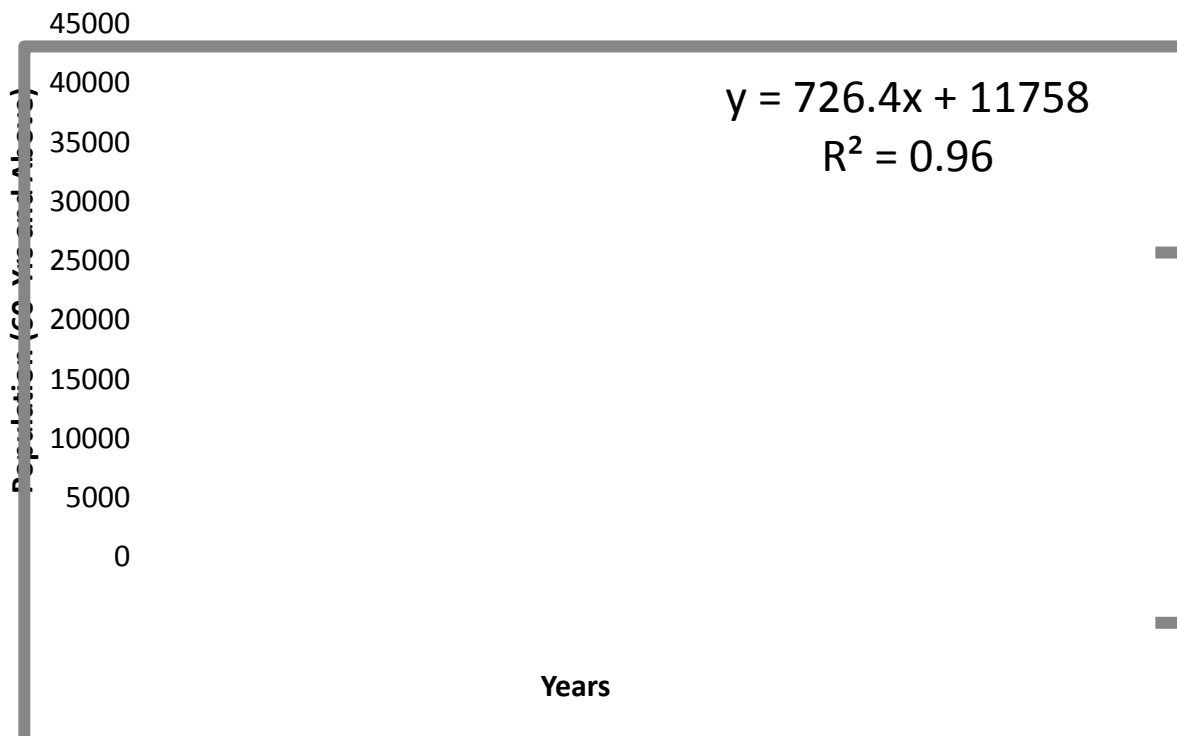


Figure. 6.7: Trend of Population Aged 60+ Years in Ilorin West LGA
 Source: Author's Computation from 1991 & 2006 Censuses

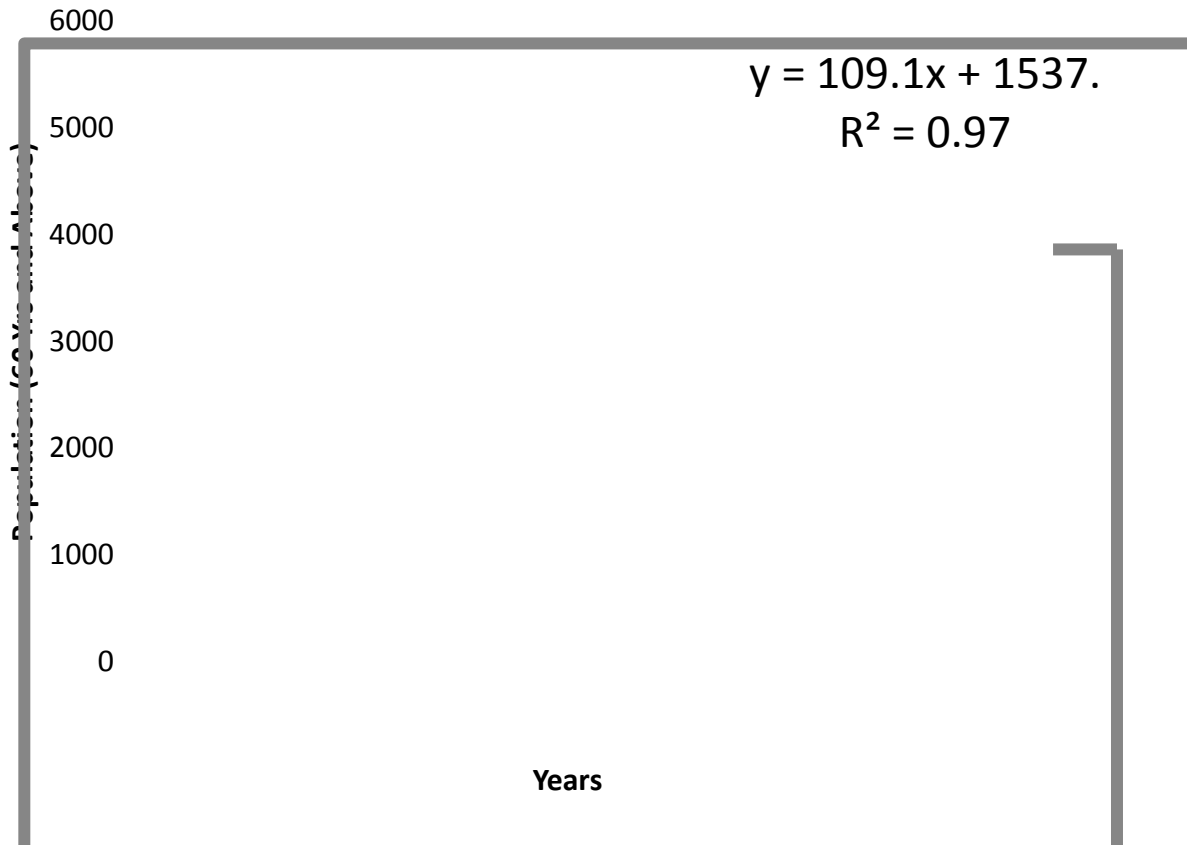


Figure 6.8: Trend of Population Aged 60+ Years in Ekiti LGA
 Source: Author's Computation from 1991 & 2006 Censuses

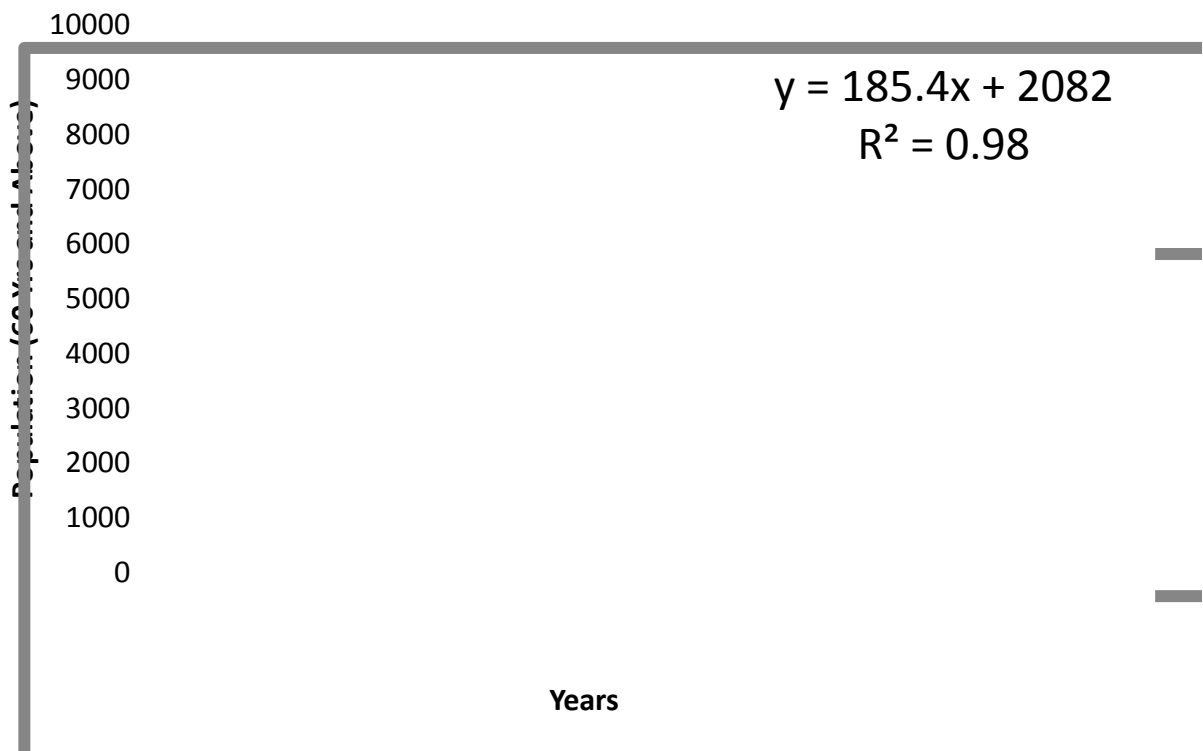


Figure 6.9: Trend of Population Aged 60+ Years in Oyun LGA
 Source: Author's Computation from 1991 & 2006 Censuses

By implication, this connotes a continuous rise in the absolute number of those joining the seniors' group or as Arokiasamy *et al*, (2011) and Bloom, (2011) puts it 'shifts in the age structure of a population toward older ages' in our societies. Reasons for this, as discussed earlier in chapter one, can be traced to rising life expectancy, (aided by better nutrition, lifestyle changes, improvements in education and socioeconomic life as well as support systems) and declining birth rates prevailing in our respective societies. In addition, increase in longevity according to the United States Centres for Disease Control and Prevention (USCDC, 2013), has been traced to the effective health strategies and advance in medical treatment which contributed to a dramatic increase in average life expectancy especially in the twentieth century. Many of the diseases that claimed our ancestors – including Tuberculosis (TB), Diarrhoea and Enteritis, and Syphilis – are no longer the threats they once were. In addition, rise in the incidences of youthful mortality and among the working adults, means that children are likely to die before their parents in some cases, and thereby living the elderly with reduced support and an increase in the proportion of the elderly population. Moreover, looking at the trend in aged population in Figures 6.4 to 6.9, it was discerned that the aged population declined below the trend line from the year 2006, while it is expected to rise above the trend lines in the year 2019 across the spatial locations. Reason for this according to FGN, (2007) could be traced to several social disturbances due to political, ethnic and religious reasons at certain areas presently and during the period of the past two censuses. This possible population movement of precisely unknown quantum and direction could be short or long termed and therefore accordingly be reflected in population of the affected LGAs or States. Note that the similarities reported could also be as a result of the constant population growth rates utilized in the projections.

6.3 FACTORS DETERMINING SPATIAL VARIABILITY IN AGING IN KWARA STATE

6.3.1 Factors that Shape the Pattern of Aging in Kwara State

The results of the Factor analysis after varimax rotation for the sampled six LGAs show some underlying factors. These factors are 14 in number. They altogether explained 63.95% of the variance in the explanation (See Table 6.4)

Factor 1 is an index of Social Wellbeing. The factor has the strongest loading on Local Government Area. It is equally strongly loaded on two other variables: Duration of marital union and Availability of Specialized Hospitals. This factor has the greatest contribution to the pattern of aging in Kwara State offering 6.53% explanation to the variance and an eigen value of 3.01. Factor 2 is a measure of Health Insurance. This offered 6.16% to the explanation with an eigen value of 2.84. Its highest loading is on Enrolment on the National Health Insurance Scheme (NHIS). It is equally strongly loaded on Duration of enrolment on the National Health Insurance Scheme (NHIS), Reasons for non enrolment on the National Health Insurance Scheme (NHIS) and Availability of old peoples' homes (See Table 6.4). Factor 3 is a measure of Diseases, contribute as much as 5.37% to the explanation and an eigen value of 2.50. Its highest loading is on Any History of Ailment. It equally loaded strongly on Nature of Ailment, and Hospitalization in last 12 months. Factor 4: index of Safety Nets. This factor contributes 5.28% to the variance. It has an eigen value of 2.43. The highest loading is on the Number of children ever born. It equally loaded strongly on Duration of marital union and Number of surviving children.

Table 6.4 Distribution of Factors Controlling the Pattern of Aging in Kwara State

| Variables | Factor | | | | | | | | | | | | | |
|---|-------------|--------------|-------------|-------------|--------------|-------------|-------------|--------------|-------------|-------------|-------------|--------------|-------------|-------------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Local Govt Area | .801 | .124 | -.084 | -.155 | .125 | .031 | -.028 | -.090 | -.063 | .052 | .010 | .010 | -.052 | .003 |
| Senatorial Zone | -.151 | .227 | -.077 | -.109 | .272 | .023 | .222 | .093 | .294 | -.004 | .577 | .114 | -.130 | -.034 |
| Sex | -.026 | .002 | -.104 | -.080 | -.131 | -.001 | -.049 | -.763 | .115 | -.054 | -.023 | -.027 | .115 | .053 |
| Age at last Birthday | .492 | -.110 | .148 | .088 | -.238 | -.279 | .175 | -.031 | -.101 | .045 | .254 | .060 | .027 | .101 |
| Marital Status | .239 | -.116 | .061 | -.042 | -.140 | .014 | .158 | -.627 | -.071 | -.081 | -.025 | .096 | -.043 | -.025 |
| Nature of Marital Union | -.084 | .085 | -.075 | .571 | -.103 | .139 | .095 | -.269 | .244 | .048 | .059 | .096 | -.230 | -.087 |
| Duration of Marital Union | .672 | -.117 | .033 | .317 | -.050 | 6.96E-005 | .023 | -.063 | -.075 | -.044 | .213 | .058 | -.029 | .041 |
| No of Children Ever Born | .032 | -.119 | .039 | .856 | .015 | -.059 | .025 | .093 | -.053 | -.067 | .023 | .027 | .147 | .038 |
| No of Surviving Children | -.062 | -.118 | -.008 | .848 | -.004 | -.033 | .128 | .180 | -.075 | -.033 | .048 | .038 | .107 | -.023 |
| Religion | -.498 | .104 | .016 | .244 | -.338 | .067 | .065 | .057 | .031 | -.037 | .279 | .120 | .001 | .022 |
| Highest Educ. Qualification | .119 | .154 | .007 | -.135 | .665 | -.016 | -.040 | .160 | .075 | .263 | .127 | -.065 | -.050 | -.164 |
| Occupation | .008 | -.193 | -.018 | .015 | -.590 | -.013 | .037 | .440 | -.167 | .029 | .055 | .208 | .034 | -.009 |
| Income per Month | .075 | .015 | -.084 | .066 | .682 | .057 | .073 | .228 | -.013 | .213 | .222 | -.072 | -.047 | -.010 |
| Main Source of Material Support | .099 | .000 | .112 | -.018 | .505 | .159 | .041 | .205 | -.104 | -.025 | -.315 | .036 | -.037 | .255 |
| Nature of Support | .076 | .071 | .170 | .050 | -.027 | -.034 | -.048 | .019 | -.017 | .120 | .632 | -.095 | -.080 | .088 |
| Regularity of support | .242 | .068 | .035 | .063 | .160 | .032 | -.184 | -.071 | .074 | -.017 | .469 | -.031 | .300 | -.139 |
| Source of Econ Security | -.116 | -.066 | .100 | .242 | .380 | -.075 | .015 | .151 | -.193 | -.054 | .379 | .065 | .184 | -.045 |
| Present Residence | .099 | -.005 | .112 | -.095 | -.053 | .055 | .053 | -.046 | .193 | -.191 | .014 | .086 | -.109 | .714 |
| Who U Reside With Presently | .037 | .013 | -.061 | .008 | -.039 | .003 | .074 | .003 | -.054 | .294 | .123 | .055 | .491 | .499 |
| Hospitalized last 12 month | -.087 | .026 | .777 | .036 | .057 | -.086 | .158 | .023 | .160 | .082 | .024 | -.002 | .040 | .091 |
| History of Ailment | .012 | -.030 | .889 | .007 | .007 | .003 | .091 | .014 | .036 | .005 | .063 | .040 | .013 | .008 |
| Nature of Ailment | .048 | .010 | .798 | -.023 | -.035 | .016 | .112 | .003 | -.042 | .092 | .050 | -.053 | -.046 | .044 |
| Institution used for Treatment | -.144 | -.111 | -.217 | .047 | -.273 | .035 | .093 | .060 | -.212 | -.297 | .341 | -.005 | .010 | .154 |
| Any Disability | .005 | -.062 | .204 | .043 | .031 | -.029 | .866 | -.036 | -.026 | .129 | .016 | .026 | -.024 | .038 |
| Nature of Disability | -.026 | -.045 | .193 | .153 | -.015 | -.021 | .863 | -.039 | .007 | .114 | -.036 | .071 | .017 | .019 |
| Family Doctor | -.033 | .197 | .191 | -.030 | .226 | .080 | .196 | .183 | .213 | .620 | .085 | -.030 | .047 | -.072 |
| Who pays Med. Bill | -.068 | .020 | .042 | -.037 | .092 | .149 | .153 | .035 | .012 | .748 | .062 | .020 | .030 | -.044 |
| Are you on NHIS | .057 | .847 | .032 | -.092 | .119 | .060 | .018 | -.076 | -.094 | .119 | .058 | -.078 | .100 | .022 |
| Duration of NHIS | .040 | .816 | .005 | -.082 | .161 | .050 | .007 | -.065 | -.185 | .038 | .023 | -.058 | .145 | .035 |
| Reasons not on NHIS | .215 | -.613 | .029 | -.034 | -.034 | .024 | .080 | -.212 | -.066 | -.145 | -.072 | .293 | .065 | .092 |
| How often is hospital visitatn | .399 | .105 | .192 | -.096 | .259 | -.017 | -.069 | .067 | .199 | .405 | -.119 | .178 | .062 | .068 |
| Present income earning Activity | -.130 | .022 | -.027 | .027 | -.043 | .863 | -.023 | .028 | -.056 | .091 | -.049 | -.051 | .069 | .023 |
| kind of income earning Activity | .100 | .042 | .014 | -.057 | .144 | .834 | -.108 | -.134 | .005 | .078 | .040 | .007 | -.106 | .053 |
| Are u a member of a Social Group | .266 | .070 | -.092 | .093 | .012 | .344 | .191 | .223 | .340 | .195 | -.056 | -.196 | .357 | -.015 |
| What type of Social Group | .150 | .085 | -.111 | .057 | .087 | .367 | .162 | .322 | .264 | .273 | .001 | -.173 | .280 | -.086 |
| What type of Recreational Act involved in | -.005 | -.188 | .100 | -.147 | .038 | -.060 | .103 | -.220 | .598 | .052 | .163 | .081 | .155 | -.022 |
| How often do you Recreate | -.162 | .035 | .096 | .071 | .031 | .056 | -.105 | .031 | .722 | .126 | -.068 | -.116 | .097 | .135 |
| How is an average day like | -.304 | -.064 | -.033 | -.050 | -.147 | .414 | .226 | .175 | .122 | -.023 | -.064 | .043 | .268 | -.139 |
| What social engagements u normally attend | .095 | .094 | -.113 | -.330 | .074 | .297 | .214 | .182 | .128 | -.291 | .144 | .078 | .171 | -.339 |
| Availability of Specialized Hospitals | .557 | .384 | -.026 | -.162 | .025 | .092 | -.022 | .031 | .165 | -.183 | -.198 | .111 | .011 | -.140 |
| Availability of old peoples' homes | .149 | .598 | .025 | -.058 | -.134 | -.051 | -.166 | .173 | .352 | -.076 | .107 | -.067 | -.054 | -.085 |
| Availability of Recreational Clubs | .382 | .375 | -.204 | -.266 | -.108 | .109 | .040 | -.029 | .167 | .058 | .018 | -.024 | -.022 | -.475 |
| How many times do you eat daily | -.122 | .111 | .026 | .090 | -.048 | .019 | -.050 | -.070 | .134 | -.032 | -.041 | .030 | .677 | -.053 |
| How often do you eat a balanced meal | -.413 | .033 | .020 | .034 | -.145 | .074 | .078 | -.071 | .164 | .131 | .015 | .260 | .328 | -.080 |
| Do you boil your drinking Water | .144 | .137 | .040 | -.136 | .191 | .055 | -.010 | -.094 | .005 | -.001 | .172 | -.764 | .071 | -.091 |
| Reason for not boiling drinking water | .179 | -.186 | .009 | .006 | .020 | -.026 | .089 | -.118 | -.071 | .025 | .103 | .835 | .113 | .020 |
| A. Eigen Value | 3.01 | 2.84 | 2.50 | 2.43 | 2.40 | 2.20 | 2.06 | 1.91 | 1.90 | 1.90 | 1.80 | 1.74 | 1.50 | 1.40 |
| B. % Variance | 6.53 | 6.16 | 5.37 | 5.28 | 5.20 | 4.80 | 4.50 | 4.15 | 4.04 | 4.02 | 3.90 | 3.80 | 3.30 | 3.04 |
| C. % Cumulative Variance | 6.53 | 12.70 | 18.06 | 23.34 | 28.54 | 33.30 | 37.80 | 41.91 | 45.95 | 49.97 | 53.90 | 57.64 | 60.91 | 63.95 |

Source: Computation from Field Survey, 2012

Note: See Appendix I for the list and definition of variables.

Factor 5 is a measure of Economic Support. Offered 5.20% to the explanation with an eigen value of 2.40. It loaded strongly on income per month. It equally loaded strongly on highest educational qualification and occupation. Factor 6 is a measure of Income. This factor

contributes 4.80% to the variance, and an eigen value of 2.20. The highest loading is on the present income earning activity the elderly are involved in. It equally loaded strongly on the kind of income earning activity the aged are engaged in. Factor 7 is named index of Disability. It offered 4.50% explanation and with an eigen value of 2.06. The factor has its highest loading on whether there is any disability. It is also strongly loaded on the Nature of disability suffered by the elderly. Factor 8 (measure of Demographic Factor) contribute as much as 4.15% to the explanation, and an eigen value of 1.91. The factor has its highest loading on sex of the elderly. It is equally highly loaded on marital status of the aged. Factor 9 is an index of Recreational Factor. This contributes 4.04% to the explanation and an eigen value of 1.90. The factor loaded strongly on how often the elderly recreate. It is equally strongly loaded on what types of recreational acts are involved in. Factor 10 is a measure of Healthcare Delivery Factors. The factor offered as much as 4.02% explanation to the variance. It has an eigen value of 1.90. The highest loading is on who pays medical bill. It is also strongly loaded on Availability of Family Doctors.

Factor 11 is named index of Support, and offered 3.90% to the explanation with an eigen value of 1.80. It loaded strongly on the Nature of support to the elderly. It is equally loaded strongly on the Senatorial zone from where the elderly is from. Factor 12 is an index of Personal Hygiene. Offered 3.80% explanation and an eigen value of 1.74. It is strongly loaded on the reasons for not boiling drinking water. It also loaded strongly on whether drinking water is boiled by the elderly before consumption. Factor 13 is a measure of Dietary Factor. Offered 3.30% to the explanation and an eigen value of 1.50. It is loaded strongly on the number of times the elderly eat daily. Factor 14 is an index of Residential Factor. Contributes as much as 3.04% explanation and an eigen value of 1.40. It is strongly loaded on the present residence of the elderly (See Table 6.4).

According to the above, 14 important variables underlie the pattern of aging in Kwara State. These variables includes: Social wellbeing, Health insurance, Diseases, Safety Nets, Economy, Income, Disability, Demography, Recreation, Healthcare delivery, Support, Personal hygiene, Dietary regime and Residence. Therefore aging in Kwara State can be summarized.

6.3.2 Relationship between Aging and Spatial Variables in Kwara State

The results of the factor analysis were subjected to multiple and stepwise regression analysis so as to predict the relationship between age and factors determining pattern of aging across the different LGAs studied. The result of the multiple regression analysis (See Table 6.4a) showed that all the 14 variables identified were important in the explanation and they contributed 54.1% explanation to the variation in aging in Kwara State. The relationship can be predicted with equation 1. Also, the stepwise regression analysis (See Table 6.4b) however revealed that only 10 out of these 14 variables were actually important in the explanation, and they all contributed 53.4% explanation to the pattern of aging in Kwara State. This relationship can be predicted with equation 2.

$$Y=2.000+.572scwf-.128Hein+.172Dsce+.103Snet-.276Econ-.325Incm+.203Dsty-.036Demg-.117Recr+.052Htca+.295Scsp+.069Prhy+.032Diet+.117Abqu..... (eq. 1)$$

$$(R^2 = 54.1\%; SE = 0.79848)$$

$$Y=2.000+.572Scwf-.325Incm+.295Scsp-.276Econ+.203Dsty+.172Dsce-.128Hein+.117Abqu-.117Recr+.103Snet (eq. 2)$$

$$(R^2 = 53.4\%; SE = 0.80140)$$

Table 6.4a: Multiple Regression between Age and Spatial Variables

| Variables | Unstandardized Coefficients | | Standardized Coefficients | T | | Sig. | | % R ² Explained |
|---------------------------------------|-----------------------------|------------|---------------------------|--------|------------|------|--|----------------------------|
| | B | Std. Error | Beta | B | Std. Error | | | |
| 1 (Constant) | 2.000 | .036 | | 55.275 | | .000 | | |
| factor1. Social Wellbeing (Scwf) | .572 | .036 | .492 | 15.792 | | .000 | | |
| factor2. Health Insurance (Hein) | -.128 | .036 | -.110 | -3.544 | | .000 | | |
| factor3. Diseases (Dsce) | .172 | .036 | .148 | 4.747 | | .000 | | |
| factor4. Safety Nets (Snet) | .103 | .036 | .088 | 2.834 | | .005 | | |
| factor5. Economic Factor (Econ) | -.276 | .036 | -.238 | -7.630 | | .000 | | |
| factor6. Income (Incm) | -.325 | .036 | -.279 | -8.964 | | .000 | | |
| factor7. Disability Factor (Dsty) | .203 | .036 | .175 | 5.598 | | .000 | | 54.1 |
| factor8. Demographic Factor (Demg) | -.036 | .036 | -.031 | -.982 | | .327 | | |
| factor9. Recreational Factor (Recr) | -.117 | .036 | -.101 | -3.225 | | .001 | | |
| factor10. Health Care Delivery (Htca) | .052 | .036 | .045 | 1.444 | | .149 | | |
| factor11. Support (Scsp) | .295 | .036 | .254 | 8.136 | | .000 | | |
| factor12. Personal Hygiene (Prhy) | .069 | .036 | .060 | 1.917 | | .056 | | |
| factor13. Dietary Factor (Diet) | .032 | .036 | .027 | .877 | | .381 | | |
| factor14. Residential Quality (Abqu) | .117 | .036 | .101 | 3.227 | | .001 | | |

Source: Computation from Field Survey, 2012

Table 6.4b: Stepwise Multiple Regression between Spatial Variables and Age of Respondents

| Variables | Unstandardized Coefficients | | Standardized Coefficients | T | | Sig. | | R Square Explained (%) | |
|-------------------------------------|-----------------------------|------------|---------------------------|--------|------------|------------|------------|------------------------|--|
| | B | Std. Error | Beta | B | Std. Error | Individual | Cumulative | | |
| 10 (Constant) | 2.000 | .036 | | 55.074 | | .000 | | | |
| factor1. Social Wellbeing (Scwf) | .572 | .036 | .492 | 15.734 | | .000 | 24.2 | 24.2 | |
| factor6. Income (Incm) | -.325 | .036 | -.279 | -8.931 | | .000 | 7.8 | 32.0 | |
| factor11. Support (Scsp) | .295 | .036 | .254 | 8.107 | | .000 | 6.5 | 38.5 | |
| factor5. Economic factor (Econ) | -.276 | .036 | -.238 | -7.602 | | .000 | 5.6 | 44.1 | |
| factor7. Disability factor (Dsty) | .203 | .036 | .175 | 5.577 | | .000 | 3.1 | 47.2 | |
| factor3. Diseases (Dsce) | .172 | .036 | .148 | 4.729 | | .000 | 2.2 | 49.4 | |
| factor2. Health Insurance (Hein) | -.128 | .036 | -.110 | -3.532 | | .000 | 1.2 | 50.6 | |
| factr14. Residential Quality (Abqu) | .117 | .036 | .101 | 3.215 | | .001 | 1.0 | 51.6 | |
| factor9. Recreational factor (Recr) | -.117 | .036 | -.101 | -3.214 | | .001 | 1.0 | 52.6 | |
| factor4. Safety Nets (Snet) | .103 | .036 | .088 | 2.824 | | .005 | 0.8 | 53.4 | |

Source: Computation from Field Survey, 2012

6.3.3 Pattern of the Factors Controlling Aging in Kwara State

Figure 6.10(a-n) explained the spatial pattern of the factors controlling aging among the aged in Kwara state. Factor 1 (Social Welfare) plays dominant role in the explanation of aging in places such as Ilorin West, Ekiti, Oyun and Asa LGAs respectively, as well as many other places. However, this factor is of less importance in Baruten and Patigi LGAs (See Fig. 6.10a). Health Insurance (Factor 2) is important mostly in Asa, Ilorin West and parts of Oyun

and Patigi LGAs. Conversely, Health Insurance is of less importance or prominence in Baruten, Ekiti and parts of Asa LGA. This could be as a result of poor orientation, unavailability and the general lack of adequate awareness about the scheme in these areas. Also, there is a dearth in institutions (Hospitals) either private or public, where such insurance facility can be accessed by most population especially in Baruten, which is why a larger proportion of their patients patronize the services of traditional healers (See Fig. 6.10b).

Factor 3 (Diseases) especially the history of ailments suffered and hospitalizations by respondents plays dominant roles in the explanation of pattern of the causes of aging in all the six LGAs. Cases of ailments such as Diabetes, Eye problems and Aches and Pains are the commonest nature of ailments found in the state, which accounted for more than 40% of reported cases of ailments amongst respondents (See Table 5.2). However, diseases are less prominent reasons for accelerated aging in few areas around Asa, Ilorin West, Baruten, Ekiti and Oyun LGAs (See Fig. 6.10c). Safety Nets (Factor 4), is also one of the most important aging controlling factors among the elderly in the state. This is because it is a major coping strategy employed by majority of the aged population. This traditional safety net (an important customary duty) especially through intergenerational remittances between parents, offspring and spouses is important in caring and enhancing their individual wellness and wellbeing. This factor is more prominent in Kwara North (Baruten and Patigi). It is equally important in parts of Asa, Ilorin west, Ekiti and Oyun respectively (See Fig. 6.10d).

Economic Support (Factor 5), especially the ability of the seniors to individually cater for themselves, which is enhanced mostly through acquired level of education, occupation and the ability to generate income is equally an important aging controlling factor in the state. This factor is mostly prominent in Ilorin West and Ekiti LGAs. This could be due

to the high level of participation of the elderly in economic activities, which enhances their lifestyles and proportion of income generated as seen in Table 4.10b. Moreover, the need for monetary security is higher in these areas, especially Ilorin West which is an urban environment and rely more on cash economy (See Fig. 6.10e). Factor 6 (Generated income) the amount of income earned periodically by the aged is equally a crucial aging controlling factor in the state. This factor is mostly prominent in Baruten and Ekiti LGAs. It is equally important in parts of Asa, Ilorin West and Oyun (See Fig. 6.10f). Disability (Factor 7) amongst the aged population is very prominent in Asa, Ilorin West and parts of Baruten LGAs. However, it is of lesser prominence in Patigi, Ekiti and Oyun LGAs (See Fig. 6.10g). Demography (Factor 8), i.e gender, and nature of the marital unions entered into by the aged, exert some positive influence on the wellbeing and care the elderly population, especially when care giving is forthcoming and regular. However, this factor is very prominent in almost all the LGAs. Conversely though, it is not so prominent in parts of Patigi and Oyun LGAs (See Fig. 6.10h).

Recreation (Factor 9) the need for regular recreation by the elderly, needed for sound body and mind is noted. This is very prominent in Asa, Ilorin West, and Baruten LGAs. This might be due to the higher level of stress faced especially amongst city dwellers (Ilorin West) and Asa (which has a higher proximity to the city); thus, need for recreation is enjoined. However, it plays a less prominent role in Ekiti, Patigi and parts of Baruten LGAs. Reasons could be that majority are still involved in physical activities such as farming and long distance trekking, biking etc. Also, majority of their diets are lesser in cholesterol which thereby reduces cases of obesity and cardiac ailments (See Fig. 6.10i). Factor 10 (Health Care Delivery); Access to health care which is aided by the aged ability to pay bills and access to personal physician while ill, plays a very prominent and important role in the explanation of

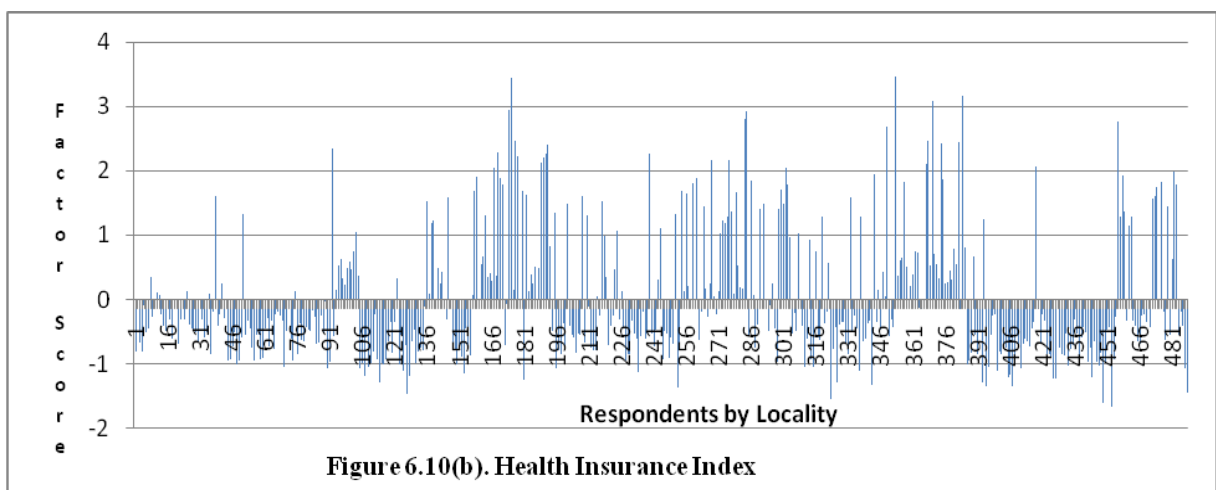
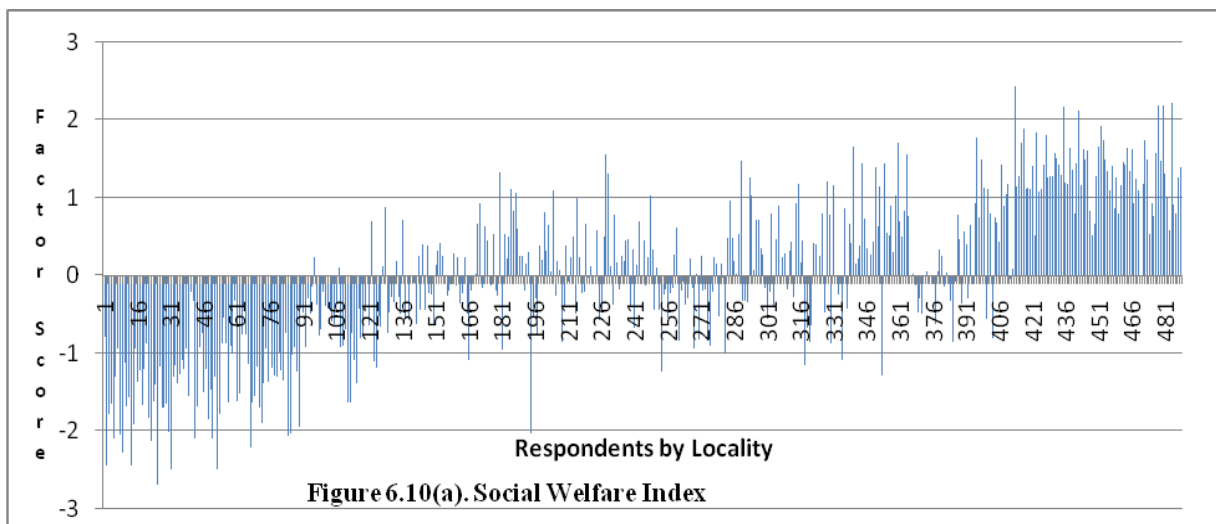
aging in Baruten, Ilorin West and Oyun. Reasons for this in Baruten, might be because of fewer medical personnel and institutions practicing the act of care giving. Also, the ratio of available health personnel/institution to population is very low, due to higher rate of urbanization and the tendency for higher immigration into the city, as may be seen in Ilorin West and parts of Oyun. However, health care delivery plays a less prominent role in explaining aging in Patigi, and parts of Ekiti LGAs (See Fig.6.10j).

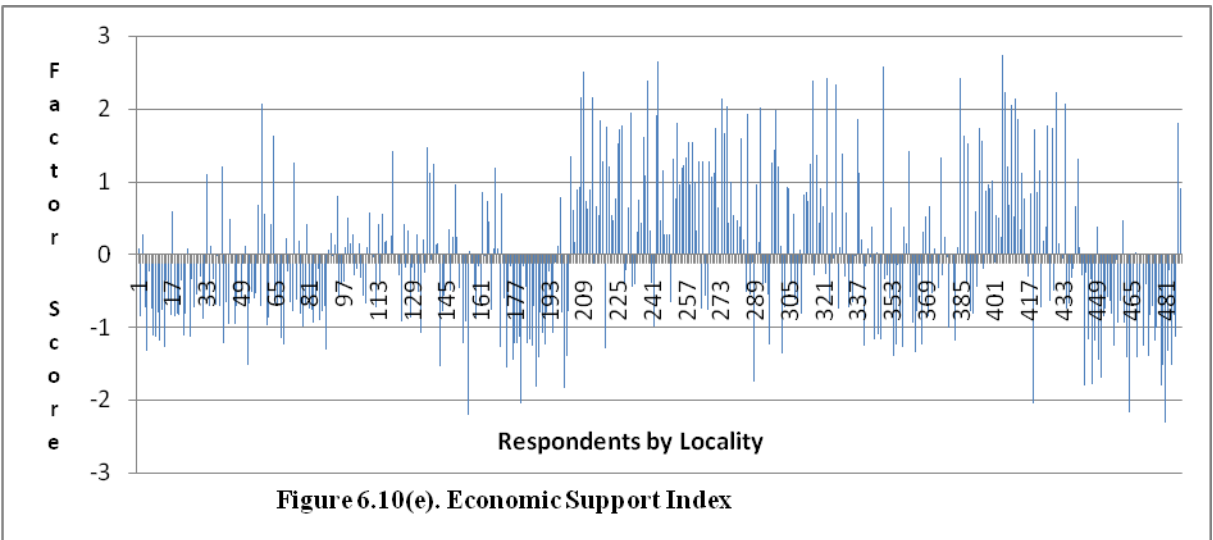
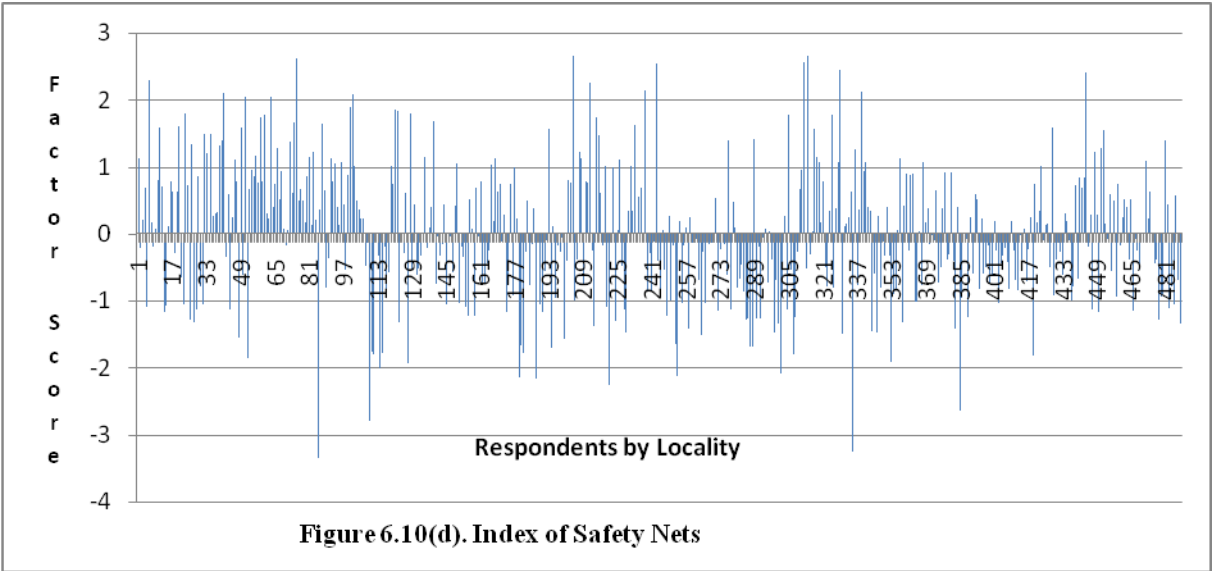
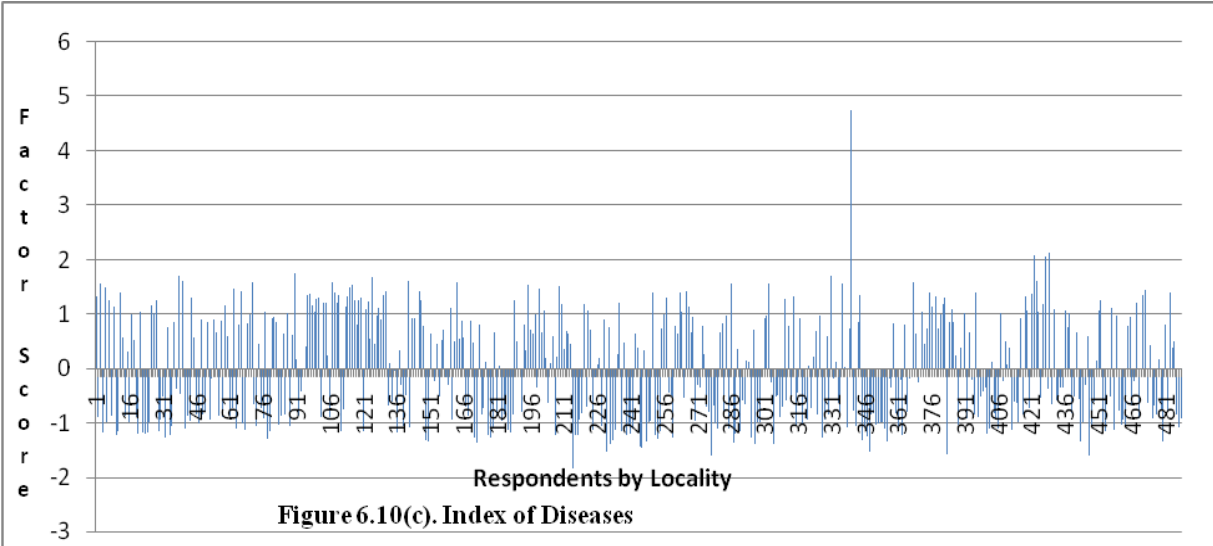
Factor 11(Domestic support) The need for domestic aid by the elderly plays a more prominent role in aging in Ilorin West, Asa and Patigi LGAs, while it is of lesser prominence in Baruten, Ekiti and Oyun LGAs (See Fig. 6.10k). Personal Hygiene (Factor 12), amongst the aged, and especially in the type of water for drinking and domestic needs, and whether it is boiled or portable for drinking is not very prominent in Baruten and parts of Ilorin West. Reasons being that, although there are no public utility water lines especially in baruten, the provision of boreholes, and wells short distances coupled with more hygienic environment/lower population densities, enhances access to clean and portable water. However, personal hygiene is very essential and prominent in Asa, Ilorin West, Patigi, Oyun and Ekiti. Reasons could be due to urbanization (poor sanitation around most residential environments). Also, although Patigi LGA is a riverine area, the tendency for water borne ailments is equally very rife (See Fig. 6.10l).

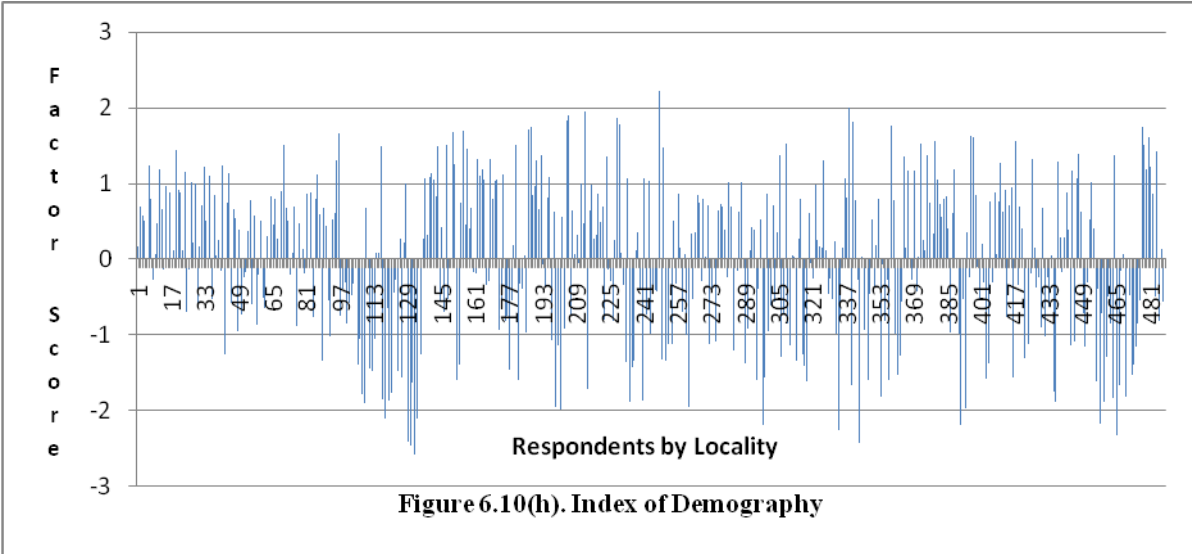
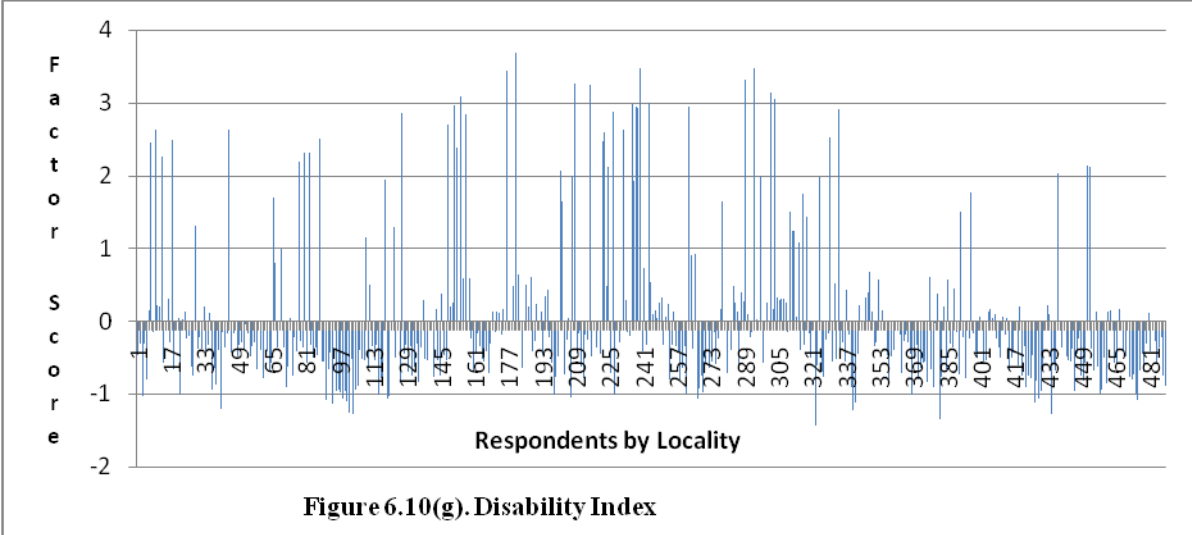
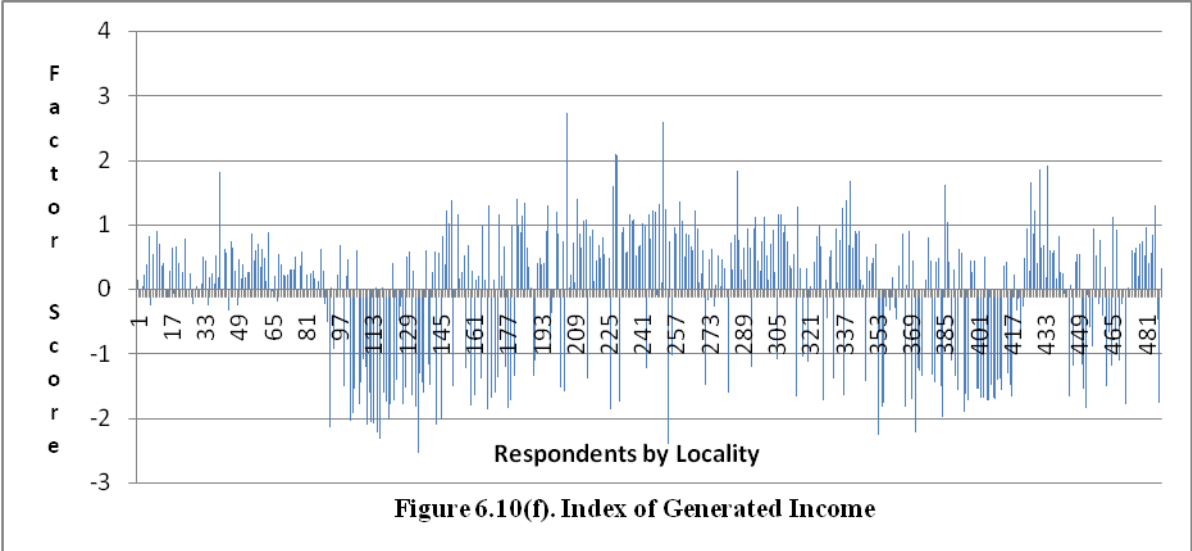
Factor 13 (Dietary pattern) is important in the explanation of aging in all the six LGAs. This is so, because majority of the aged and by extension the populace, eat at most three square meals daily. Also, it is an unequivocal fact that food is very essential for proper and sustained living. However, the number of times food is consumed is of less importance to aging explanation in parts of Ilorin West, Ekiti and Oyun LGAs because, there is higher level of stress and cost of living around the urbanized localities than the rural areas, where there is

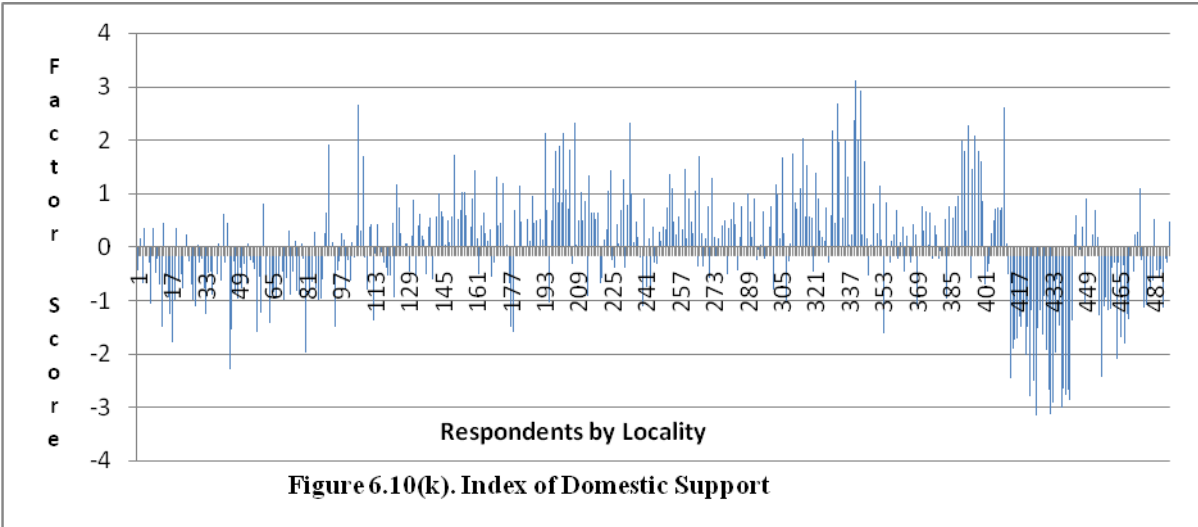
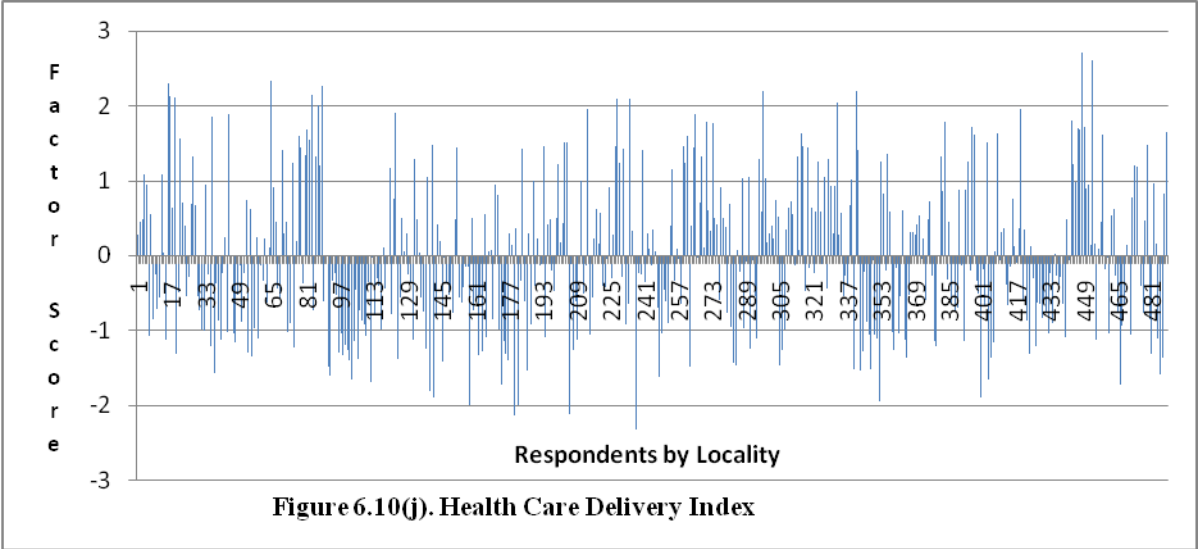
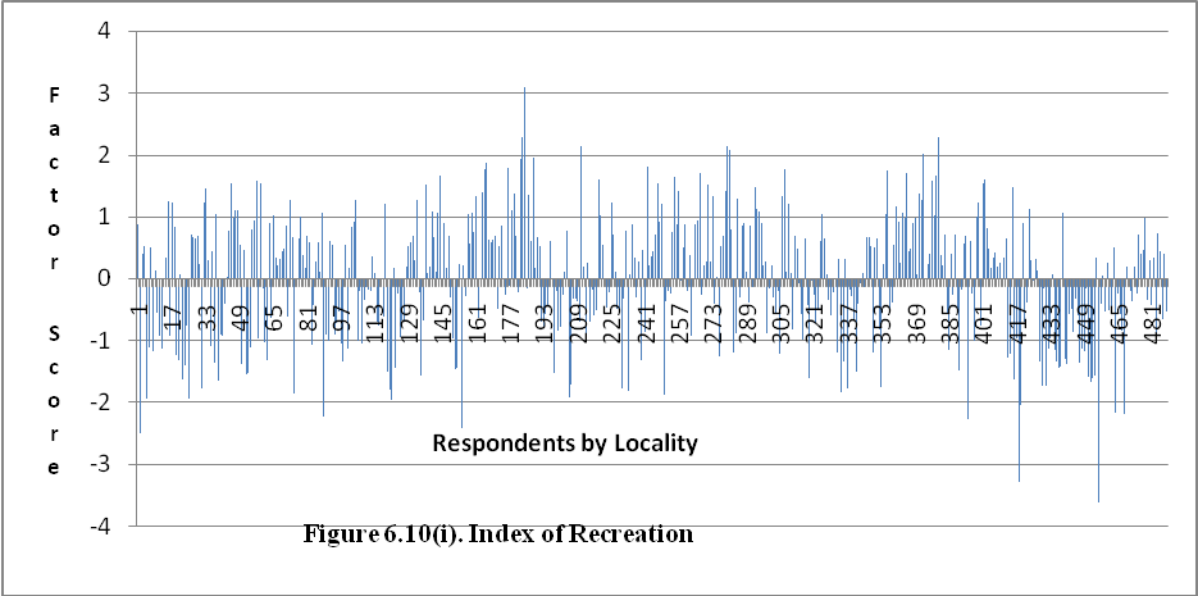
an higher possibility of subsistent farming especially around Baruten, Asa and Patigi LGAs (See Fig. 6.10m). Factor 14 (Residential Pattern) Ownership and status of residency amongst the elderly plays a very prominent role in the explanation of aging in Patigi, Baruten, Asa, Ilorin West and ekiti LGAs. However, it plays a less prominent role in Oyun LGA. Also, in parts of Patigi, Asa and Ilorin West LGAs. As explained in earlier chapters, majority of the aged either resides in their personal homes or family houses, which often time guarantees sustained care and companionship from nuclear and extended relatives, and by extension, old age will be less problematic and boring for most elderly persons (See Fig. 6.10n).

KEY: BARUTEN..... (1 – 89) PATIGI (90 - 133) ASA (134 - 202) ILORIN WEST..... (203 - 412) EKITI (413 - 442) OYUN (443 - 488)









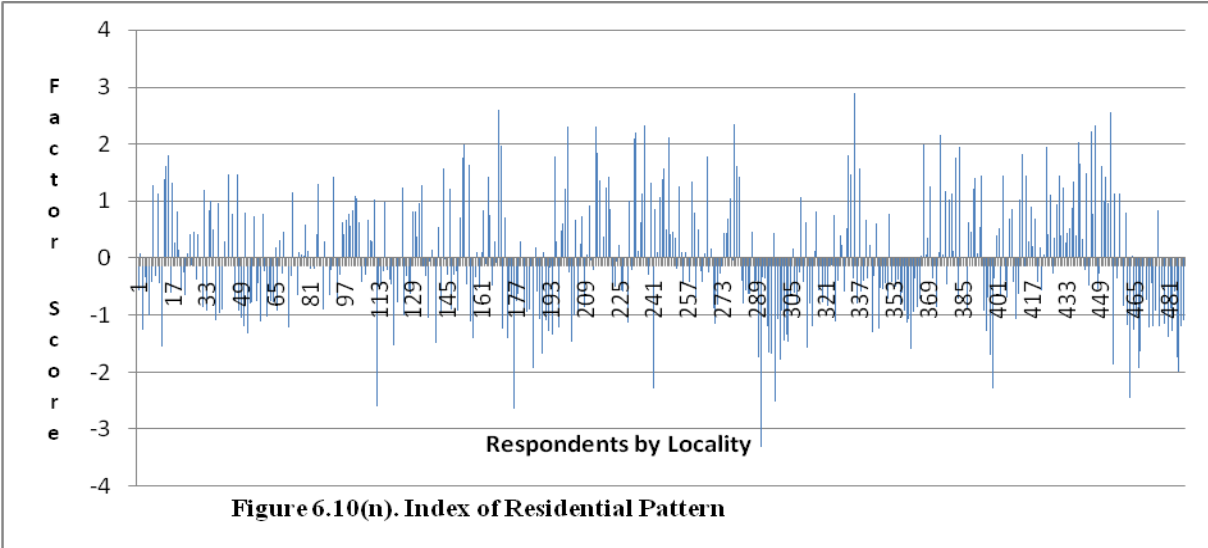
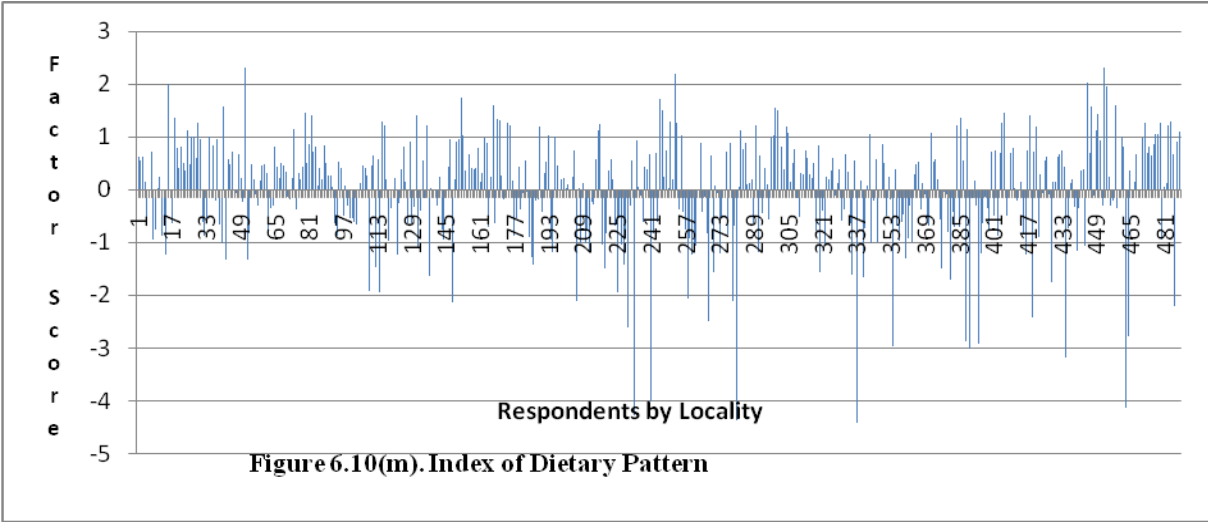
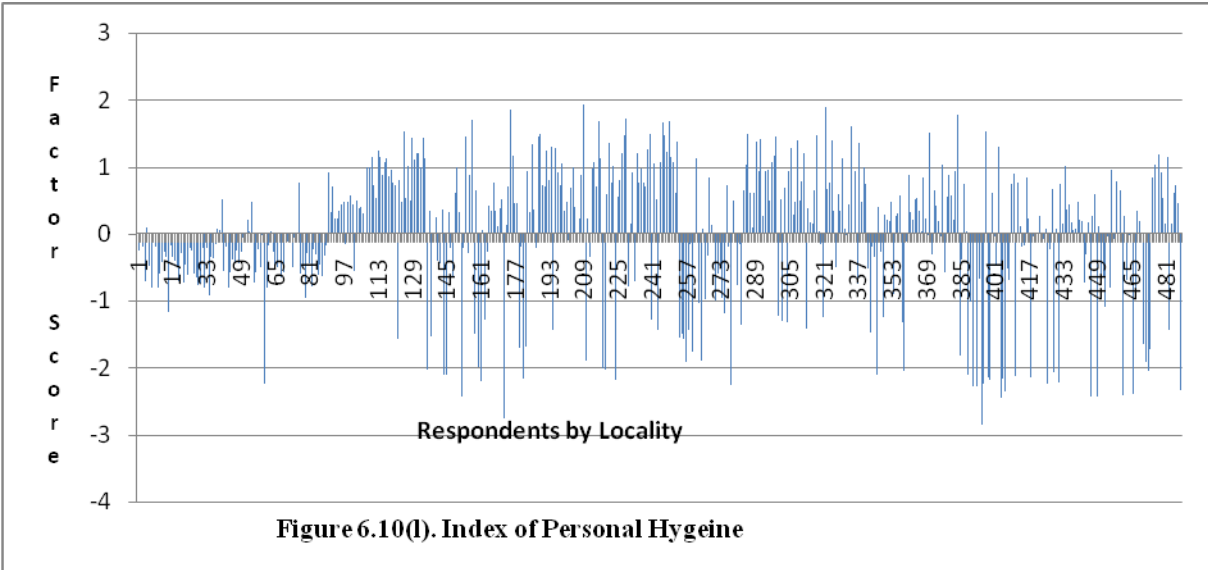


Figure 6.10 (a-n) Spatial Pattern of the Factors controlling Aging in Kwara State.

In conclusion, the study has succeeded in identifying 10 critical factors which contributed 53.4% to the variance in aging which in combination exert significant influence on the aging process and pattern amongst the elderly in Kwara State. These factors in order of influence are: Social Wellbeing, Income, Support, Economic, Disability, Diseases, Health Insurance, Quality of Residence, Recreation and Safety Nets.

The need for reliable and adequate social infrastructure like specialized hospitals as well as lasting care derived from marital relationships in old age aids the wellbeing of the aged, while insufficient income affects the low level of economic activities among them. Also, absence of health insurance scheme particularly for the elderly affects their ability to age gracefully. However, the social support available to the elderly from their children and other relatives where available, appear to substitute for the deficiency observed in the factors with negative impacts. Also absence of physical disability and diseases is a good contributor to the survival of the aged, while adequate recreation, secured housing coupled with uninterrupted filial care and companionship are also of essence. In situation where the aforementioned positive factors are available and the negatives controlled or absent, tends to influence the aging process amongst the elderly.

CHAPTER SEVEN

SUMMARY, RECOMMENDATIONS AND CONCLUSION

7.1 INTRODUCTION

The study mainly examined the spatio-temporal pattern of population aging in selected LGAs of Kwara State, Nigeria. Consequently, certain conclusions may have been drawn from the result of the analysis based on empirical evidence. This was achieved through the use of questionnaire analysis, focus group discussions (FGDs) as well as published demographic data. The focus is to find out respondents' demographic and socio-economic characteristics, coping strategies, living arrangements, health and nutritional profiles, social and recreational lifestyles, the aging population trend over years, as well as the factors affecting the aging pattern across space. The summary of findings, policy implications, recommendations, suggestions for future research and conclusion are discussed in this chapter.

7.2 SUMMARY OF MAJOR FINDINGS

The study revealed that the aging population is divided into three recognised age brackets (young old, middle old or aged and the oldest old) with the young old (60 – 64, 65 – 69, 70 – 79 years) in the majority representing 88% of respondents. This is to be expected due to the rapid increase in the number of individuals from the 'base' generation who are now aged. A consequence of the overtime improvement in health status of recent generation of the elderly who possess lower disease loads than the past. In addition, improvements in public health, medicine, availability and access to timely and qualitative healthcare provisions, coupled with declining fertility rates and longer life expectancy have all aided this rapid aging process in our societies.

The findings revealed that greater parts, about 72% of respondents are Muslims, with 23.4% Christians while only 4% mainly around Baruten LGA are Traditionalists. Religion is said to have the potential to influence people's way of life; thereby affecting longevity and equally an important factor utilised by the elderly in coping with the demands of later life.

The study also found that trading/business and farming accounted for 67.6% of all occupations the elderly are engaged in Kwara State; with the elderly said to be the greatest contributor (68.7%, NPC, 1991) to agriculture and related works in Nigeria. Consequently, about 60% of respondent earn less than 16,000 monthly; while only 21.7% earn 22,001 and above per month. Reason could be since majority are expected to be retirees in the case of public servants, with reduced level of active economic participation which ultimately leads to heavy dependence on intergenerational remittances.

The study also observed a gradual increase in the population of the aged over a period of years through Trend analysis. It was observed that Ifelodun (23,556) and Ilorin West (14,634) LGAs were the most populous aged areas according to the 1991 census figures. However, by 2006 census, Ifelodun (10,020) dropped to the third most populous area coming after Ilorin West (21,037), Ilorin East (11,148) LGAs respectively.

Also, the rate of increment in growth between the two censal periods revealed that only Ifelodun LGA has the population of the elderly from the 1991 census figure higher than that of 2006. Other LGAs experienced divergent but higher increases in the 2006 figures. A total of about 126,206 elderly individuals are projected would be added within the 35 year estimated period. Moreover, an average annual increase of 5048.24 aged persons is expected to be added to this senior's group in the state.

Conversely, the study further discovered that Isin (1,794) and Ekiti (1,930) LGAs were the least aged populated area by 1991, while by 2006 census the pattern is Oke Ero (2,878), Ekiti (3000) and Isin LGAs respectively. The above scenario can aptly be linked to the migratory pattern in the state, since Kwara State, reaffirmed by the NPC (1992) estimates, experiences a high level of youth emigration mostly towards Ilorin or other urbanized cities in the country. In fact, the frequent boundary changes before and after the 1991 and 2006 censuses according to FGN, (2007), thus could also have affected the process of population apportionment due to this and other factors.

Factor analysis revealed 14 factors which all cumulatively contributed 63.95% to the variance explanation of the pattern of aging in Kwara State. However, multiple and step-wise multiple regressions further reduced these factors to 10, with all cumulatively contributing 53.4% R^2 explanation to the variance in aging. The factors in order of importance are social wellbeing, income, support, economic factor, disability, diseases, health insurance, residential quality, recreational factor and safety nets. However, social wellbeing factor (Scwf) contributed 24.2% explanation, making it the most important aging influencing factor in Kwara State.

In light of this, when observed on Local Government Area basis, Marital Union factor (Maru) has the most influence with 59% out of the cumulative 72.9% contribution to aging in Asa LGA. Baruten LGA has Medical History factor (Medh) contributing the most (11.98%) of the 64.7% contribution, while Ilorin West is mostly influenced by Material Support factor (Mtsp) contributing 16.3% of 57.4% for the LGA. Ekiti LGA has Economic Support factor (Esup) having 22.1% and Recreational factor (Recr) 21.1% contributing the most influence to aging. However, Oyun LGA has Demographic factor (Demg) exerting the most influence

with 47.5% of the cumulative 78.4%. Also, Marital Union factor (Maru) also exerts the most influence in Patigi LGA with 19% of the cumulative 48% in the LGA.

7.3 RECOMMENDATIONS

Without doubt the process in which older persons become a proportionally larger share of the total population as a result of declining birth rates or rising life expectancy is referred to as aging population. Its rapid increases across developed and developing countries especially Nigeria and Kwara State in particular, coupled with mass poverty, socio-demographic transitions, changing social values, as well as diminishing social and economic capacity to satisfy intergenerational filial obligations to the elderly in our communities are causes for concern. To ameliorate this global demographic concern, the following is therefore recommended:

There is the need for a pro-elderly social health insurance or risk pooling scheme in Kwara State and the nation in general. The need for the provision and accessibility to geriatric infrastructures (such as specialized hospitals and seniors homes) which could be either public or private sector owned. The absence of this insurance scheme as noticed in the study, which is essential and long overdue lead to as much as 48.4% of the elderly personally catering for their medical/hospital bills, while 42.2% rely on their offspring. Its establishment in Kwara State will greatly enhance the welfare of the elderly and reduce the burden from out-of-pocket expenditures incurred periodically by the aged citizens and relatives in various communities. However, in areas where this is available, adequate awareness campaign and orientation should be carried out. This is necessary because about 52.7% indicated poor orientation/lack of awareness as chief reasons for non participation in government health schemes.

Also, the need to encourage recreation and sporting activities amongst citizens, especially the seniors is of great essence. This is crucial because of the perceived indifference towards the benefits derivable in regular recreation, notice in the cause of this study among the majority in the populace. Through this, the promotion of sound and healthy lifestyle amongst the elderly will be enhanced. Also, an adult's ability to receive social support and assistance with everyday tasks as affirmed by scholars may increase through having social networks and this further help in reducing the periodic pressure on filial coping mechanisms in the society.

The importance of religion should equally be stressed and promoted. This is because it is the most important social avenue the elderly associates with. Here about 40.2% enjoyed the guidance and tranquillity found in religion (Table 5.7). Participation in religiously inclined groups, occupational, social groups and scholarship should be encouraged, because religion plays important roles in later life.

Government needs to offer structural incentives to working longer, make work more attractive, flexible and manageable for older workers, and revise the ageist attitudes of many employers (this is crucial because about 74.2% are still economically active and engaged in in economic ventures while about 67.6% are still engaged in occupations like Trading/Business and Farming in the study. This is essential because an elder's role within the family or society forms the basis for ways of coping and finding meaning life as well as a source of personal satisfaction to them. This is better than just wasting away and becoming miserable and burden to themselves and the society.

Furthermore, positive and equitable policies must be designed to ensure that the elderly are financially and medically secure in their old age. People need to rely on social solidarity across the generations when they are old as they do when they are young. Nigeria needs to

maintain socially equitable policies since reducing access to education, employment, housing and healthcare will only serve to produce inequalities and enhance greater dependence in later life. For instance, with the rate of illiteracy as high as 31.8% (Table 4.3) only about 29.7% generates on a monthly basis an income of ₦17, 000 and above (Table 4.4), while as much as 65.2% receives financial support (Table 4.10) from relations and well wishers.

There is also the need to enact and strictly enforce policies that would address old age induced disabilities including curative and preventive health measures. Special education (education for the disabled) should be included in the Adult Literacy Programmes. Basic eye care ought to be integrated into the primary healthcare programme and eye care should be subsidised. This is important because cases of blindness and eye defects accounted for about 50% of all cases of disability amongst this study's respondents (as shown in Table 5.3) is also the most significant disability affecting the elderly in our societies (NPC, 2003). There is need for immediate introduction of free medical care for people of age 60 and above.

There is also the need for legislation requiring adult children especially through empowerment to promote support for their aging parents – although traditional family support structures are still strong, cases of abuse and neglect are rife. Finally, all tiers of Government, the Organised Private Sector, Non-Governmental Organizations and Communities all have important organizational roles to play in ensuring the care and wellbeing of the elderly.

7.4 CONCLUSION

The world as a whole and developing countries and Nigeria in particular, are moving through a demographic transition to 'greater' societies. The challenge however is to promote healthy and productive aging in these added later years of life, and to adjust societal practices and structures to include older people as contributors to society. Aging should be viewed as a

natural part of the life course and population aging as a transition not crisis, in that older people are active and productive rather than 'a burden' upon society and will continue to play a valuable role in the future. Giving the opportunity, the elderly also do have the ability to work for longer to help fund a comfortable standard of living in retirement or later in life. They can also contribute more through taxation, and to fund more of their own health and social care. Finally, the analysis of the aging population or the elderly in selected settlements in Kwara State has been done, and the characteristics, trend, health and social conditions as well as social wellbeing (Scwf) factors which exerts the most significant influence on its dynamic pattern established.

7.5 SUGGESTIONS FOR FUTURE RESEARCH

Notwithstanding the various findings in this study, there are still some key issues, which would require the attention of future researchers. These are:

One important variable to be considered especially in understanding the travails and plight of the aged in most of our localities are vulnerabilities to the challenges of aging. Also, the health and psychological effects of the mandatory retirement age on elderly government workers who often time are experienced and still very active is needed. Hence, study into labour force participation of the elderly is another area requiring further research.

Another area requiring further research is on the literacy and educational attainment of the aged. This is because the levels of both according to the National Population Commission are generally low among elderly Nigerians. For instance, it was said that in 1991, only one-quarter of the elderly were literate or have had some educational attainment. However, one significant policy issue is the need to encourage, all over the country,

widespread participation of the elderly, particularly females, in adult literacy/educational programmes.

An important focus for future research could also be in the aspect of gender variability in population aging. This will assist in the understanding the similarities as well as differences in the rate and pattern of population aging amongst the male and female gender required for planning purposes in our societies.

There is the need to study the important demographic, social and economic differences that have direct relevance to public policy and programmes for the elderly now and in the future. This is necessary because of the dearth of accurate, timely, accessible and reliable data on the elderly, and the need for such data is becoming more acute to policy and programme planning as aging becomes more salient and as the various sections in the country intensifies the decentralization of development programmes.

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APPENDIX I

Table 5.0 List and Definition of Variables

| Variables | Definition |
|-----------------------------|---------------------------------------|
| X ₁ SEX | Sex of Respondents |
| X ₂ AGE | Age at last birthday |
| X ₃ MARST | Marital status |
| X ₄ NMU | Nature of Marital Union |
| X ₅ DMU | Duration of Marital Union |
| X ₆ NCEB | Number of Children Ever Born |
| X ₇ SCHILD | Number of Surviving Children |
| X ₈ HEQ | Highest Educational Qualification |
| X ₉ OCCUP | Occupation |
| X ₁₀ INCPM | Income per Month |
| X ₁₁ MSMS | Main Source of Material Support |
| X ₁₂ NSPPTP | Nature of Support |
| X ₁₃ REGSUPP | Regularity of Support |
| X ₁₄ SECS | Source of Economic Security |
| X ₁₅ PRES | Present Residence |
| X ₁₆ WRW | Who u Reside with Presently |
| X ₁₇ HSPZD | Hospitalized in the last 12 months |
| X ₁₈ HISAIL | History of Ailment |
| X ₁₉ NAILM | Nature of Ailment |
| X ₂₀ INST | Institution for Remedy |
| X ₂₁ DISABILITY | Any Disability |
| X ₂₂ NDISABILITY | Nature of Disability |
| X ₂₃ FAMDOC | Family Doctor |
| X ₂₄ PYMEDBIL | Who Pays Medical Bills |
| X ₂₅ NHIS | Are u on NHIS |
| X ₂₆ DUNHIS | Duration of NHIS |
| X ₂₇ NOTNHIS | Reason for Non enrolment |
| X ₂₈ INCACT | Income earning activity |
| X ₂₉ KINACT | Kind of income earning activity |
| X ₃₀ SOCGRP | Are u a member of a social group |
| X ₃₁ TSOCGRP | Type of Social Group |
| X ₃₃ TRECACT | Type of Recreational group |
| X ₃₄ REGRECR | Regularity of Recreational act |
| X ₃₅ AVDAY | How is an average day like |
| X ₃₆ SOCENG | Social engagements normally attended |
| X ₃₇ EATDLY | How many times do you eat daily? |
| X ₃₈ EATCARB | Do you eat balanced meal? |
| X ₃₉ BOILH2O | Do you boil drinking water? |
| X ₄₀ DBOILH2O | Reason for not boiling drinking water |

APPENDIX II

**DEPARTMENT OF GEOGRAPHY
FACULTY OF SCIENCE
AHMADU BELLO UNIVERSITY, ZARIA**

Dear respondents

The questionnaire is for a research on the spatio-temporal approach towards analyzing population aging in Kwara State. Your sincere response will be of great assistance towards achieving the objectives of the study. All information will be treated as confidential.

Thank you.

Please Tick (✓) where appropriate.

Section A: General Characteristic of Respondents

1. Name of Town LGA
2. Sex a. Male () b. Female ()
3. Age at last birthday a. 60-64 () b. 65-69 () c. 70-74 () d. 75-79 () e. 80 and Above ()
4. Marital Status a. Single () b. Married () c. Separated () d. Divorced () e. Widowed ()
5. Nature of Marital Union a. Monogamous () b. Polygamous ()
6. Duration of Marital Union (Yrs) a. 1-9 () b. 10-19 () c. 20-29 () d. 30-49 () e. 50 & above ()
7. Number of Children ever born. a. None () b. 1-2 () c. 3-5 () d. 6-10 () 11 and above ()
8. Number of Surviving Children
9. Religion a. Christianity () b. Islam () c. Traditional () d. Atheist () e. Others
10. Highest educational qualification a. None () b. Quranic () c. Primary () d. Secondary () e. University/Polytechnic () Others (Specify).....
11. Occupation a. Civil Servant () b. Trader () c. Farmer () d. Artisan () e. Others (Specify).....

Section B: Socio-Economic Profile of the Elderly.

12. Income per month (N) a. $\geq 5,000$ () b. 5,001-10,000 () c. 10,001-16,000 () d. 16,001-22,000 () e. $\leq 22,001$ ()
13. What is your main source of material support? a. Spouse () b. Children () c. Extended Family () d. Pension () e. Others (Specify).....
14. What is the nature of the support? a. Financial () b. Medical () c. Foodstuff () d. Clothing () e. Others (Specify).....
15. How often do you get the support? a. Very often () b. Often () c. Not very often () d. Not at all ()
16. Which if these sources of economic security do you have?
a. Savings () b. Investments () c. Assets () d. Others (Specify).....
17. Where do you reside presently? a. Personal House () b. Rented House () c. Family house () d. Others (Specify).....
18. Who are you residing with now? a. Living alone () b. Family members () c. Relatives () d. non - relatives () e. Others (Specify).....

Section C: Health Profile

19. Have you ever been hospitalized in the last 12 months? a. Yes () b. No ()
20. Do you have any history of medical ailment? a. Yes () b. No ()
21. If 'Yes' state nature of ailment(s)? a. Diabetes/body ache () b. Heart related ailment () c. Eye problem () d. Accident () e. Others (Specify).....
22. When sick, from which institution do you seek remedy? a. Hospital () b. Traditional healer () c. Faith-based Healer () d. Self Medication () e. Others (Specify)
23. Are you suffering from any disability? a. Yes () No ()
24. If 'Yes' please state the nature of disability
25. Do you have a family doctor? a. Yes () b. No ()
26. If 'Yes' who pays the medical bill? a. Children () b. Government () c. Company () d. Self () e. Others (Specify).....
27. Are you on the National Health Insurance Scheme (NHIS)? a. Yes () b. No ()

28. If 'Yes', how long have you been on the scheme? a. ≥ 2 yrs () b. 3-5 () c. 6-8 () d. 9-11 () e. ≤ 12 ()
29. If 'No', why are you not on the scheme?
30. How often do you visit the hospital for treatment? a. Not at all () b. Daily () c. Weekly () d. Monthly () e. Occasionally ()

Section D: Coping Strategy

31. Are you into any income earning activity presently? a. Yes () b. No ()
32. If 'Yes' what kind of activity? a. Farming () b. Business Centre () c. NGO () d. Others (Specify).....
33. Are you a member of any social group/society? a. Yes () b. No ()
34. If 'Yes', what type of group do you mostly attend? a. Religious () b. Community () c. Occupational () d. Recreational () e. Others (Specify).....
35. What type of recreational activity are you mostly involved in? a. Sport () b. Clubbing () c. Visitation () d. Watching Movies () e. Others (Specify).....
36. How often do you recreate? a. Daily () b. Once in a Week () c. Twice in a week () d. Once a Month () e. Others (Specify).....

Section E: Social Life.

37. How is an average day like? a. Attending Educational Class () b. Praying/Religious duties () c. Attending to Community needs () d. Farming/Business () e. Others (Specify).....
38. What social engagement do you normally attend most? a. Marriages () b. Burials () c. Naming Ceremonies () d. Birthdays () e. Others (Specify).....
39. Please, tick (\surd) which of these facilities are available in your area.

| Available Facilities For the Elderly | Yes | No |
|--------------------------------------|-----|----|
| 1. Specialized Hospitals | | |
| 2. Old peoples' homes | | |
| 3. Recreational Clubs | | |

Section F: Nutrition.

40. How many times do you eat in a day? a. Once () b. Twice () c. Thrice () d. Others (Specify).....

41. How often do you eat carbohydrate, protein, fruits and vegetables in a meal? a. Daily () b. Twice weekly () c. Thrice weekly () d. Four times a week () e. Other (s).....
42. Do you boil your drinking water? a. Yes () b. No ()
43. If No, why don't you? a. No time () b. Dirt in water can't kill () c. water is portable enough () d. Others (Specify).....

APPENDIX III

Focus Group Discussion Guide

Illustrative FGD Discussion Guides and Probes

| Core Questions | Related Probe Questions |
|--|---|
| <p>General Questions.</p> <ol style="list-style-type: none"> 1. How will you describe a typical days' activity as an aged? 2. Are there roles played as elders in the community? 3. How do you manage through these hard times? 4. How much do you know about the Nigerian Policy on the Welfare and Care of the elderly? | <p>Probe for the various daily routines.</p> <p>Probe for comments on their experiences as elders in the community.</p> <p>Probe for their experiences as related to the financial conditions, high cost of living, societal ills etc.</p> <p>Probe for comments on their awareness of the Policy, its objectives and area of coverage etc.</p> |
| <p>Questions on Coping Strategies.</p> <ol style="list-style-type: none"> 1. What form(s) of support do you receive from government? 2. What other source(s) of support/assistance do you have as an elderly person? 3. How regular are these supports? 4. Are there dedicated public facilities for the welfare and care of the aged? 5. What are the prevalence rates of various ailments and chronic conditions among the elderly? 6. What type of care service do you require? 7. How often are these care services needed? 8. Do you believe that the older a person becomes, the more the challenges faced by the care giver? | <p>Probe whether there are any organized pro-aged form(s) of support/assistance.</p> <p>Probe for other source(s) and form of support apart from government.</p> <p>Probe the reliability of these assistances.</p> <p>Probe for the availability of specialized infrastructure like: elderly homes, geriatric clinics, sports & recreational facilities etc.</p> <p>Probe for the prevailing types of infirmity/ailment commonly suffered in the community, rate of occurrence etc.</p> <p>Probe for the immediate relief measures needed as treatment.</p> <p>Probe for the frequency of these needs.</p> <p>Probe for comments about old age, challenges faced and boding anxiety.</p> |

APPENDIX IV

Table A1: Demographic Characteristics of Respondents

| CHARACTERISTICS | | SAMPLED LOCAL GOVERNMENT AREAS | | | | | | Total (%) |
|--|-----------------|--------------------------------|-----------|-----------|-------------|-----------|-----------|------------------|
| | | Baruten | Patigi | Asa | Ilorin West | Ekiti | Oyun | |
| (A) AGE AT LAST BIRTHDAY (Years) | 1. No Response | 0 | 0 | 0 | 1 | 0 | 0 | 1 (0.2) |
| | 2. 60-64 | 67 | 10 | 30 | 82 | 8 | 14 | 211 (43.2) |
| | 3. 65-69 | 18 | 19 | 15 | 72 | 11 | 16 | 151 (30.9) |
| | 4. 70-74 | 2 | 9 | 8 | 34 | 6 | 7 | 66 (13.5) |
| | 5. 75-79 | 1 | 4 | 4 | 15 | 2 | 5 | 31 (6.4) |
| | 6. 80 and over | 0 | 2 | 12 | 6 | 3 | 5 | 28 (5.7) |
| | 7. Total | 88 | 44 | 69 | 210 | 30 | 47 | 488 (100) |
| (B) MARITAL STATUS | 1. No Response | 0 | 2 | 0 | 0 | 0 | 0 | 2 (0.4) |
| | 2. Single | 1 | 0 | 1 | 0 | 0 | 0 | 2 (0.4) |
| | 3. Married | 83 | 23 | 56 | 155 | 17 | 34 | 368 (75.4) |
| | 4. Separated | 1 | 2 | 0 | 8 | 1 | 0 | 12 (2.5) |
| | 5. Divorced | 2 | 1 | 1 | 4 | 0 | 2 | 10 (2.0) |
| | 6. Widowed | 1 | 16 | 11 | 43 | 12 | 11 | 94 (19.3) |
| | 7. Total | 88 | 44 | 69 | 210 | 30 | 47 | 488 (100) |
| (C) DURATION OF MARITAL UNION (Years) | 1. No Response | 2 | 0 | 0 | 2 | 0 | 0 | 4 (0.8) |
| | 2. < 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 (0.0) |
| | 3. 10-19 | 26 | 6 | 2 | 10 | 0 | 1 | 45 (9.2) |
| | 4. 20-29 | 40 | 15 | 23 | 80 | 1 | 9 | 163 (34.4) |
| | 5. 30-49 | 17 | 19 | 32 | 96 | 24 | 29 | 212 (44.5) |
| | 6. 50 and over | 3 | 4 | 12 | 22 | 5 | 8 | 54 (11.1) |
| | 7. Total | 88 | 44 | 69 | 210 | 30 | 47 | 488 (100) |
| (D) TYPE OF MARITAL UNION | 1. No Response | 1 | 2 | 0 | 1 | 0 | 0 | 4 (0.8) |
| | 2. Monogamy | 31 | 19 | 31 | 93 | 20 | 27 | 221 (45.3) |
| | 3. Polygamy | 56 | 23 | 38 | 116 | 10 | 20 | 263 (53.9) |
| | 4. Total | 88 | 44 | 69 | 210 | 30 | 47 | 488 (100) |
| (E) RELIGION | 1. No Response | 2 | 0 | 0 | 2 | 0 | 0 | 4 (0.8) |
| | 2. Christianity | 2 | 2 | 6 | 54 | 30 | 20 | 114 (23.4) |
| | 3. Islam | 66 | 42 | 63 | 154 | 0 | 25 | 350 (71.7) |
| | 4. Traditional | 18 | 0 | 0 | 0 | 0 | 2 | 20 (4.1) |
| | 5. Total | 88 | 44 | 69 | 210 | 30 | 47 | 488 (100) |

Source: Author's Fieldwork, 2012

Table A2: Respondents' Educational Attainment across Local Government Areas

| LGAs | Highest Educational Qualification | | | | | | Total |
|------------------|-----------------------------------|-------------------|------------------|------------------|------------------|-----------------|------------|
| | None | Quranic | Primary | Secondary | Tertiary | Others | |
| Baruten | 37 | 44 | 2 | 3 | 2 | 0 | 88 |
| Patigi | 3 | 35 | 3 | 3 | 0 | 0 | 44 |
| Asa | 29 | 21 | 16 | 1 | 2 | 0 | 69 |
| Ilorin West | 43 | 43 | 32 | 39 | 44 | 9 | 210 |
| Ekiti | 18 | 0 | 7 | 1 | 3 | 1 | 30 |
| Oyun | 25 | 4 | 10 | 3 | 4 | 1 | 47 |
| Total (%) | 155(31.8) | 147 (30.1) | 70 (14.3) | 50 (10.2) | 55 (11.3) | 11 (2.3) | 488 |

Source: Author's Fieldwork, 2012

Table A3: Distribution of Respondents into Occupational Groups by Local Government Areas

| LGAs | Occupation | | | | | Total |
|---------------------|-------------------|-------------------|-------------------|-----------------|-----------------|------------|
| | Civil Servant | Trader | Farmer | Artisan | Others | |
| Baruten | 10 | 15 | 63 | 0 | 0 | 88 |
| Patigi | 4 | 28 | 10 | 2 | 0 | 44 |
| Asa | 7 | 30 | 26 | 5 | 1 | 69 |
| Ilorin West | 74 | 89 | 22 | 14 | 11 | 210 |
| Ekiti | 8 | 11 | 9 | 0 | 1 | 30 |
| Oyun | 8 | 19 | 8 | 10 | 2 | 47 |
| Total (%) | 111 (22.7) | 192 (39.3) | 138 (28.3) | 31 (6.4) | 16 (3.3) | 488 |
| Cumulative % | 22.7 | 62.0 | 90.3 | 96.7 | 100.0 | |

Source: Author's Fieldwork, 2012

Table A4: Nature of Support Recieve by Respondents Across LGAs

| Local Govt. Area | Nature of Support | | | | | Total |
|---------------------|-------------------|------------------|------------------|-----------------|-----------------|------------|
| | Financial | Medical | Foodstuff | Clothing | Others | |
| Baruten | 77 | 3 | 8 | 0 | 0 | 88 |
| Patigi | 24 | 10 | 7 | 3 | 0 | 44 |
| Asa | 36 | 13 | 17 | 0 | 3 | 69 |
| Ilorin West | 129 | 23 | 28 | 5 | 25 | 210 |
| Ekiti | 22 | 0 | 0 | 0 | 8 | 30 |
| Oyun | 30 | 2 | 8 | 3 | 4 | 47 |
| Total (%) | 318 (65.2) | 51 (10.5) | 68 (13.9) | 11 (2.3) | 40 (8.1) | 488 |
| Cumulative % | 65.2 | 75.7 | 89.6 | 91.9 | 100.0 | |

Source: Author's Fieldwork, 2012

Table A5: Sources of Most Recieved Support by Respondents Across LGAs

| Local Govt. Area | Source of Support | | | | | Total |
|---------------------|-------------------|-------------------|-----------------|------------------|-----------------|------------|
| | Spouse | Children | Extended Family | Pension | Others | |
| Baruten | 1 | 67 | 9 | 10 | 1 | 88 |
| Patigi | 2 | 36 | 2 | 3 | 1 | 44 |
| Asa | 8 | 39 | 7 | 8 | 7 | 69 |
| Ilorin West | 25 | 113 | 22 | 35 | 15 | 210 |
| Ekiti | 0 | 7 | 1 | 5 | 17 | 30 |
| Oyun | 9 | 30 | 2 | 5 | 1 | 47 |
| Total (%) | 45 (9.2) | 292 (59.8) | 43 (8.8) | 66 (13.5) | 42 (8.6) | 488 |
| Cumulative % | 9.2 | 69.0 | 77.8 | 91.3 | 100.0 | |

Source: Author's Fieldwork, 2012

Table A6 Distribution of Respondents according to Present Housing across LGAs

| Local Government Areas | Present Housing | | | | | Total |
|------------------------|-----------------|-------------------|------------------|-------------------|----------------|------------|
| | No Response | Personal House | Rented House | Family House | Others | |
| Baruten | 0 | 69 | 2 | 17 | 0 | 88 |
| Patigi | 1 | 19 | 5 | 19 | 0 | 44 |
| Asa | 1 | 42 | 11 | 15 | 0 | 69 |
| Ilorin West | 4 | 121 | 36 | 46 | 3 | 210 |
| Ekiti | 0 | 13 | 2 | 15 | 0 | 30 |
| Oyun | 2 | 29 | 8 | 8 | 0 | 47 |
| Total (%) | 8 (1.6) | 293 (60.0) | 64 (13.1) | 120 (24.6) | 3 (0.6) | 488 |
| Cumulative % | 1.6 | 61.7 | 74.8 | 99.4 | 100.0 | |

Source: Author's Fieldwork, 2012

Table A6 Distribution according to Institutions Used for Treatment by LGAs

| Local Govt. Area | Institutions Used | | | | | Total |
|---------------------|-------------------|--------------------|--------------------|-----------------|-----------------|------------|
| | Hospital | Traditional Healer | Faith-based Healer | Self Medication | Others | |
| Baruten | 40 | 44 | 0 | 3 | 1 | 88 |
| Patigi | 31 | 4 | 0 | 7 | 2 | 44 |
| Asa | 46 | 13 | 2 | 6 | 2 | 69 |
| Ilorin West | 166 | 14 | 3 | 17 | 10 | 210 |
| Ekiti | 16 | 0 | 0 | 0 | 14 | 30 |
| Oyun | 29 | 11 | 0 | 5 | 2 | 47 |
| Total (%) | 328 (67.2) | 86 (17.6) | 5 (1.0) | 38 (7.9) | 31 (6.3) | 488 |
| Cumulative % | 67.2 | 84.8 | 85.8 | 93.7 | 100.0 | |

Source: Author's Fieldwork, 2012

Table A7 Distribution of Respondents by Social Grouping across LGAs

| Local Government Areas | Type of Social Group | | | | | Total |
|------------------------|----------------------|-------------------|-------------------|------------------|----------------|------------|
| | Others | Religious | Community | Occupational | Recreational | |
| Baruten | 18 | 23 | 40 | 6 | 1 | 88 |
| Patigi | 36 | 4 | 2 | 2 | 0 | 44 |
| Asa | 0 | 38 | 22 | 8 | 1 | 69 |
| Ilorin West | 24 | 100 | 44 | 36 | 6 | 210 |
| Ekiti | 8 | 14 | 7 | 1 | 0 | 30 |
| Oyun | 7 | 27 | 7 | 5 | 1 | 47 |
| Total (%) | 93 (19.1) | 206 (42.2) | 122 (25.0) | 58 (11.9) | 9 (1.8) | 488 |

Source: Author's Fieldwork, 2012

Table A8 Distribution of Respondents by Common Social Engagements across LGAs

| Local Government Areas | Common Social Engagements | | | | | Total |
|------------------------|---------------------------|-----------|-------------------|-----------|------------|------------|
| | Marriages | Burials | Naming Ceremonies | Birthdays | Others | |
| Baruten | 23 | 64 | 1 | 0 | 1 | 88 |
| Patigi | 29 | 0 | 9 | 6 | 0 | 44 |
| Asa | 28 | 1 | 12 | 0 | 28 | 69 |
| Ilorin West | 105 | 14 | 15 | 1 | 75 | 210 |
| Ekiti | 18 | 3 | 9 | 0 | 0 | 30 |
| Oyun | 22 | 1 | 12 | 0 | 11 | 47 |
| Total | 225 | 83 | 58 | 7 | 115 | 488 |

Source: Author's Fieldwork, 2012

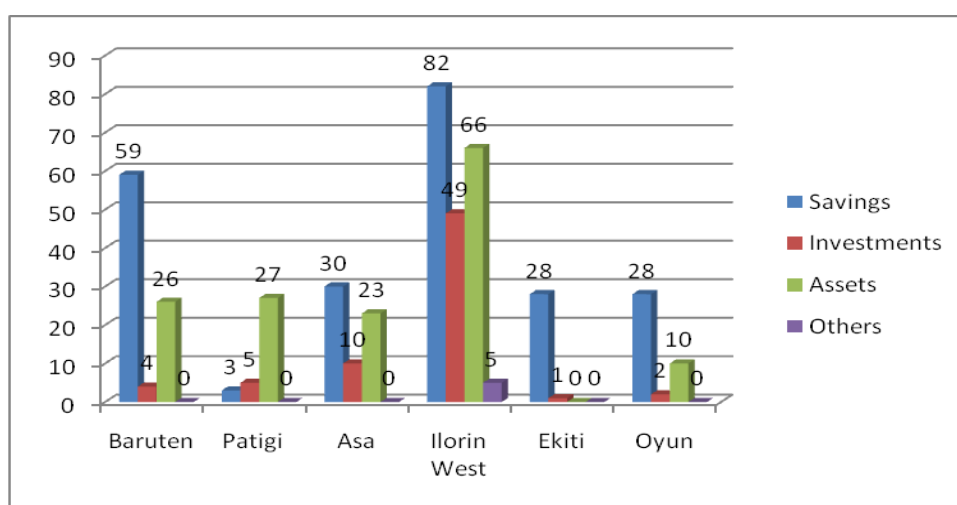


Figure A1: Distribution of Respondents' Present Source of Economic Security across LGAs

Source: Author's Fieldwork, 2012

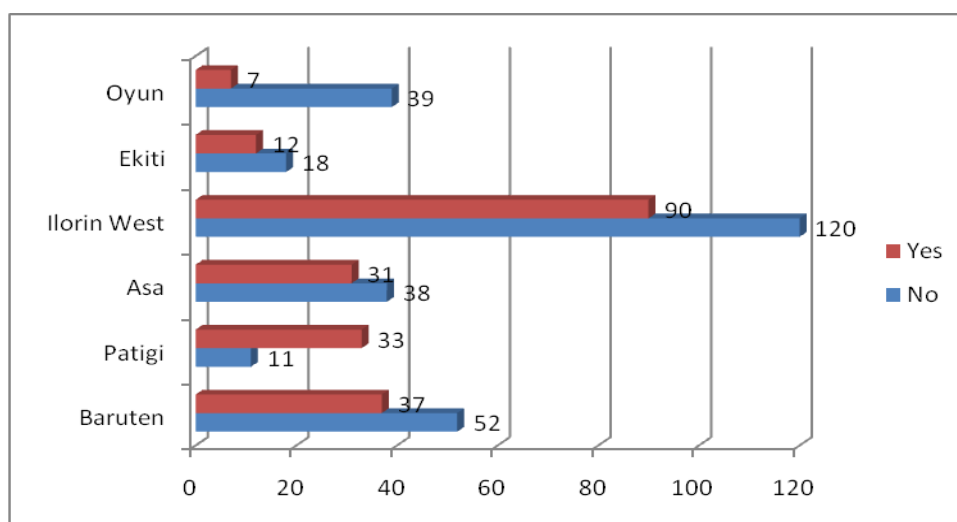


Figure A2: Distribution of Respondents' Hospitalization Status Across LGAs

Source: Author's Fieldwork, 2012

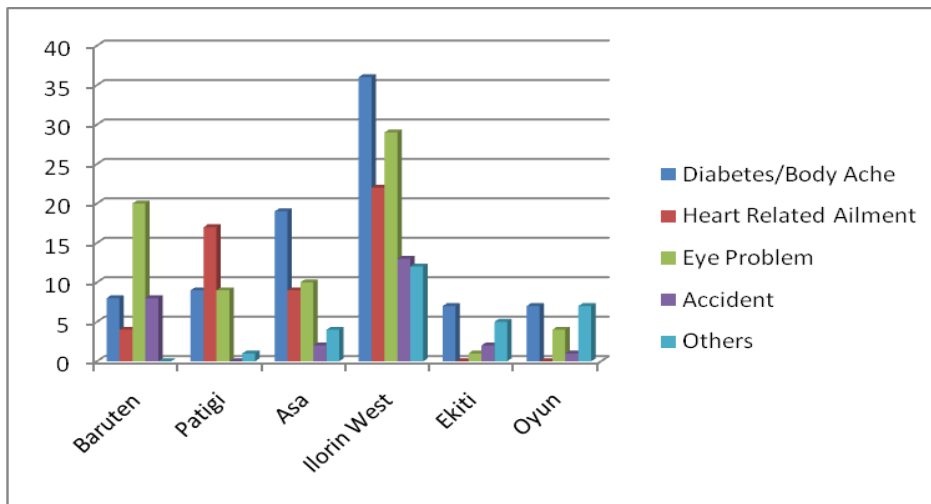


Figure A3: Nature of the Ailments Commonly Suffered by Respondents' Across LGAs.
 Source: Author's Fieldwork, 2012