

UNIVERSITY OF GHANA

COLLEGE OF HUMANITIES

**PARENT-CHILD LIVING ARRANGEMENTS AND CHILDREN'S
ATTAINMENT OF THE REQUIRED LEVEL OF EDUCATION IN
GHANA**

BY

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**THESIS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON IN
PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF
PH.D DEGREE IN POPULATION STUDIES**

REGIONAL INSTITUTE FOR POPULATION STUDIES

DECEMBER, 2017

ACCEPTANCE

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DECLARATION

I hereby declare that, except for references to other people's work which have been duly acknowledged, this work is the result of my own research and that it has neither in part nor in whole been presented elsewhere for another degree.

Eric Adjei Boadu
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Date

DEDICATION

This Thesis is dedicated to my beloved wife, Mrs. Belinda Bamfoa Boadu and my five pleasant children, Kofi Kyeremateng, Adjoa Botwe, Afua Adjeiwaa, Akua Bamfoa and Akosua Tutuwaa.

ACKNOWLEDGEMENTS

My greatest appreciation goes to the Almighty God for sustaining me throughout the period in which I carried out this piece of research work.

I am extremely grateful to Prof. John K. Anarfi, Prof. Samuel Nii Ardey Codjoe and Dr. Ayaga A. Bawah, who were my supervisors for their extensive comments, critical remarks, invaluable aid and counsel at all stages of the preparation of this thesis. Their careful proofreading further improved the quality and brought the pieces together into a whole.

I am also grateful to Prof. Stephen O. Kwankye, Dr. Mumuni Abu, Dr. (Mrs.) Delali Badasu and Dr. (Mrs.) Faustina Frempong-Ainguah for their invaluable suggestions and encouragement. I still remember their words of encouragement which gingered me on to complete this research work amidst very difficult times. I am grateful to Dr. Adriana Biney who constantly kept me updated on academic events happening at RIPS and inviting me to attend some of them. I am as well grateful to all the PhD students at RIPS as well as the administrative staff for their friendly reception. I cannot forget the technical support I received from my friend Mr. Jonas Akpagli at certain stages of my work.

I am deeply and sincerely grateful to my immediate family members for the enormous sacrifices (financial and time) they had to make during the period in which I undertook this research project. My wife Belinda Boadu was so keen and eager to see me complete my Ph.D and that gave me a lot of motivation to carry on with the work amidst the challenging times. I am also grateful to my children Kofi, Adjoa, Afua, Akua and Akosua who inspired me.

Finally, it would not be possible for me to name all my numerous friends and loved ones who in their own unique ways offered their support throughout my study. In my mind, their names and faces will ever remain indelibly impressed and to them I will remain grateful always. I must however, emphasize that I am solely responsible for any errors and criticisms that may arise as a result of this study.

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LIST OF ABBREVIATIONS AND ACRONYMS

AIDS	-	Acquired Immune Deficiency Syndrome
ASRD	-	African Security Dialogue and Research
BECE	-	Basic Education Certificate Examination
CHRAJ	-	Commission on Human Rights and Administrative Justice
CRC	-	Convention on the Rights of the Child
DHS	-	Demographic and Health Survey
DOVVSU	-	Domestic Violence and Victim Support Unit
FCUBE	-	Free Compulsory Universal Basic Education
GBC	-	Ghana Broadcasting Corporation
GDHS	-	Ghana Demographic and Health Survey
GES	-	Ghana Education Service
GoG	-	Government of Ghana
GSS	-	Ghana Statistical Service
HIV	-	Human Immunodeficiency Virus
JHS	-	Junior High School
MDG	-	Millennium Development Goals
MoE	-	Ministry of Education
NELS	-	National Education Longitudinal Study
OLS	-	Ordinary Least Square
PLA	-	Parent Living Arrangements
PHC	-	Population and Housing Census
SDG	-	Sustainable Development Goal
SHS	-	Senior High School
UPE		Universal Primary Education
UN	-	United Nations
UNESCO	-	United Nation Educational, Scientific and Cultural Organization
UNICEF	-	United Nations International Children Education Fund

ABSTRACT

Background: The study of parent-child living arrangements and children's required level of education attained was borne out of observations made and concerns shown by the researcher towards people who have experienced the phenomenon of single parenting. Most of the arguments are that children suffer when they grow in any other type of parent-child living arrangements other than both parents. As more single-parent families appear in societies, interest grows as to the effect of these households on children's wellbeing. Assessing the risks and impacts of family instability on children is therefore essential in planning programmes and policies to promote healthy children and families. The study used data from Ghana's Demographic and Health Surveys (GDHS) of 2008 and 2014. The number of children involved were 14,491 in 2008 and 13,339 in 2014. The response rate for each of the data sets yielded 99 percent.

Method: Parent-child living arrangement was categorized into four namely; child does not live with any of his/her biological parents, child lives with mother alone, child lives with father alone and child lives with both parents. The required level of education was also categorized into three as follows: the child has no education, the child is not attending the required level of education and the child is attending the required level of education based on the expected school going age of the child. All other variables were treated as control variables. The study was guided by two theories namely; Family Deficit Model (March, 1990; Thiessen, 1997) where we argued for the nuclear or two-parent households as the idea family structure rather than the Family Risk and Protective factor Model (Donahoo, 2003) which does not regard the single-parent family as irregular family structure. Data were analyzed in four stages (namely; univariate, bi-variate, trivariate and multivariate analyses) for children aged 6-17 years and categorized into their school going ages. Statistical Package for Social Sciences (SPSS) software was used to do the analysis. The study was organized into eight chapters.

Results: Half (50%) of the children (6-17 years) live with both parents. Twenty percent live with only their mothers, another 20 percent do not live with both whereas seven percent live with only their fathers. Higher proportion of children who are resident in rural areas live with both parents (55% in 2008 and 57% in 2014) than children in urban areas (44% in 2008 and 43% in 2014). From the bi-variate analysis, higher proportion of children who come from households categorized as poorer or poorest (worse) live with both parents than children from households categorized as richer or richest (better) in both 2008 and 2014. Less proportion of children who do not live with any of their parents than children who live with either one or both parents are attending the required level of education. The proportion of children who live with only their mothers and are attending the required level of education constitutes the highest followed by children who live with both parents. This finding might be possible because of the predominance of the extended family system in Ghana where other family members try to support single mothers to take care of their children coupled with the fact that women are more likely to invest in the lives of their children because of the anticipated benefits they expect to receive from their children in future.

In 2008 and 2014 children in households below the wealthiest/richest category are more likely than the wealthiest to have no education or not to be attending the required level of education than to be attending the required level of education. The results from the multivariate analyses are consistent with that from the bi-variate analyses that indicated a significant association between household wealth status and children's attainment of the required level of education.

Conclusions: The data could not prove that parent-child living arrangements have strong and consistent effect on children's required level of education attained but rather household wealth perhaps due to the strong support especially financial that most Ghanaian households receive from extended family members.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Achieving increased access to education as well as the required level at the right time is the foundation to improving people's lives and also to ensuring sustainable development. Good quality education can affect positively one's personal life, community, and entire generation. The United Nations Educational, Scientific and Cultural Organization (UNESCO) for example, has an aim to improve access to quality education for all in order to transform society by helping people develop knowledge, skills, values and behaviours needed for sustainable development (UNESCO 2013). The Sustainable Development Goal four (4) calls for inclusive and quality education for all and to promote lifelong learning (UN 2015).

Globally, the number of out-of-school children who are of primary school going age declined from nearly 100 million to 59 million between 2000 and 2013 (UNICEF, 2017). Since then, progress stalled and as a result, the world could not achieve the Millennium Development Goal (MDG) two (2) of achieving universal primary education by 2015. There is still a long way to go before achieving universal primary education (UPE) in some regions. Moreover, the challenge seems to be greater in West and Central Africa, where net enrolment rate stagnated at 74 percent in 2013 (UNICEF, 2017).

Meanwhile, in a developed country like the United States of America, elementary and high school attendance has over the years remained to be the bulk of school enrollment partly because, enrollment is generally compulsory for children aged between 5 and 18 years (Davis and Bauman 2013). In 2011 for instance, 82 percent of children aged 6-17 years in the United

States of America attended their correct grades (grades that are commensurate to their age) (Davis and Bauman 2013) compared to Ghana's less than 45 percent (GSS, 2015).

Moreover, UNESCO's education for all assessment, indicates that, the proportion of secondary school students who enrolled and completed is low for Ghana (38%), compared to Egypt's 70 percent, Brazil's 59 percent and Kenya's 41 percent whereas the out of school rate for primary is high for Ghana (30%), compared to Kenya's 15 percent and Brazil and Egypt's low rate of three percent each. Similarly, out of school rate at the secondary level is also higher for Ghana (20 percent) compared to Egypt's 10 percent, Kenya's three percent and Brazil's two percent (UNICEF, 2017).

Meanwhile, Ghana's Ministry of Education (MoE) has a vision to provide education to all Ghanaians at all levels to enable children especially to develop the skills that will help them to develop their potential to be productive and to promote socio-economic growth for national development (MoE, 2010). Furthermore, the Ghana Education Service (GES) has a vision to create the right environment in all educational institutions and to those in management positions so as to sustain effective teaching and learning (MoE, 2010).

The Ghana Statistical Service (GSS) has indicated that human resource development essentially relates to the formal education, training and utilization of human potentials for social and economic progress (GSS, 2005). In the GSS (2005) report on Socio-Economic and Demographic Trends, it was stated that education forms one of the five components of human resource development in addition to four others such as health and nutrition, the environment, employment and political and economic freedom. Moreover, education was considered to be essential factor and serves as a basis for the others to thrive and develop (GSS, 2005). Education

is therefore a fundamental human right as Ghana has signed into and adopted article 26 of the Universal Declaration of Human Rights of 1948.

In Ghana, several efforts such as governments sensitizing parents on the need to send their children and wards to school, the elimination of school fees, the introduction of the capitation grant among others are all geared towards increasing school enrolment at the basic level. The above initiatives were carried out as part of the measures implementing certain aspects of Ghana's 1992 Constitution that stipulates that basic education "shall be free, compulsory and available to all." The Free Compulsory Universal Basic Education (FCUBE) reforms of 1996 were also designed to support the free and compulsory basic education policy. FCUBE was even extended from 6 to 9 years by adding the 3-year junior high school (JHS) level. In 2002, it was extended to 11 years, when the government added two years of pre-primary, which was considered as a key factor to help prepare children for primary school (MoE, 2010). All these have resulted in increasing access to education at all levels by increasing the proportion attending school (MoE 2010; GSS, 2015).

Records in Ghana show that enrollments in primary education and junior high school between 2002 and 2010 grew by 50.9 percent and 24 percent respectively (World Bank, 2013). However, less than 40 percent of students who finished basic education (primary and junior high school) went to enroll in a senior high school (World Bank, 2013). The above analyses show that not all the children who start school (as a cohort) remain in school as they move up their educational ladder to complete and graduate.

Several reasons and factors may account for the drop in the enrolment rates as educational levels increase. Some of the factors may include inadequate educational facilities, issues about finance

for education, failure in school and dropping out of school, changes in parents' living arrangements with children among others. Parent-child living arrangements could have major influence on the education of children (Zeng & Xie, 2014; Zhou, Murphy & Tao, 2014). For instance, it has been recorded in the 2007 Ghana Maternal and Health Survey report that, the characteristics of households, including the type of parents' living arrangements with their children, may have demographic, social and economic implications and well-being of individuals that live in them.

Changes in parent-child living arrangements may arise as a result of death, divorce, separation or child abandonment that may also reflect in changes in household headship. For instance, Popenoe (1996) postulated that getting to the end of the twentieth century there will be a rapid and drastic increase in the number of households with only one parent living with children. Oparinde (2010) indicated that globally, twenty to thirty percent of all households have females as the heads of household. Amato (1993) found that about twenty percent of children born just before the nineteenth century will have to experience the death of a parent before the children attained fifteen years. Norton and Glick (1986) projected that nearly 60 percent of American children will live part of their childhood in single-parent families. In 2006, nearly thirteen million households in the United States of America were headed by single-parents, 80 percent of which were headed by females (Navarro, 2008). Kreider and Fields' (2005) study indicated that about 1.5 million children have their parents go through divorce every year in the United States of America. It was also estimated that about 40 percent of children in America will experience parental divorce before they become adults (Kreider and Fields 2005). In South Korea, where societal disapproval of unmarried mothers is strong, nearly two percent of births in 2007 were to unmarried women (Sang-Hun, 2009). Oparinde (2010) cited countries like

Ghana, Kenya, Rwanda, Cuba, Puerto Rico, Trinidad and Tobago, to have over 25 percent of their households being headed by women.

The HIV/AIDS menace has even worsened the situation of children who have to live with either one or none of their parents in the household. For instance, it was estimated that over 14 million children in Africa were orphaned by HIV/AIDS deaths (Doku, 2009). By the end of 2010, nearly 17.1 million (range from 15.4 to 19.1 million) children below 18 years of age have lost one or both parents to AIDS (Chi and Li, 2014) and millions more are likely to lose their parents to HIV/AIDS (Chi and Li, 2014). In such a situation when the children have no one to support them through education, they stand the risk of abandoning school, or dropping out to work in order to engage in any activities that will enable them to survive.

Meanwhile, Ghana's Maternal Health Survey (2007) report indicates that nearly one-third (32%) of households in Ghana was headed by women (GSS, 2009). The Ghana Demographic and Health Survey (GDHS) final report indicated that female-headed households constitute 33.7 percent (GSS, 2008). The proportion of female-headed households in Ghana, therefore, has gradually increased from the 29 percent in 1970 to about 35 percent in 2010 (GSS, 2013). Since in many Ghanaian cultures households are largely headed by males, many of the female headed households are likely to be single-parent households. It can then be assumed that in Ghana about one-third of households are headed by single-parents. Moreover, Ghana Statistical Service (GSS, 2015) has reported that about 90 percent of children less than 18 years have both parents alive whereas analysis from the GDHS in 2014 has indicated that 50 percent of children live with both parents. This will imply that the difference between the proportion of children who have both parents alive and those who live with both parents (which constitutes 40 percentage points) will either live with only one of their parents or will not live with any of their biological

parents. This trend has the potential to arouse social concerns because of the belief that single-parent households typically have fewer resources, particularly time and income, than two-parent families (Kim and Sherraden, 2011; Boggess, 1998).

The purpose of this study, therefore, is to assess the effect of parent-child living arrangements on children's required level of education attained. This will help provide information that will be relevant to sustainable family institutions and possibly help to formulate appropriate policies related to marriage, childbearing as well as child care and maintenance with particular reference to child education for national level as well as international level development.

1.2 Statement of the Problem

In Ghana, almost three-quarters (74 percent) of primary school age children attend school (attendance rate range from 58% to 76%). However, less than a half (43%) of secondary school going age group attends secondary school (this ranges from 28% to 43%) which has resulted in secondary school gross attendance rate of 58 percent in 2008 (rate ranges from 34% to 58% (GSS et al., 2008). Moreover, many of the children attending primary school are outside of the official age range (over 35% analysis from GDHS of both 2008 and 2014) and so this has reflected in the difference between net and gross attendance rates. This trend can have greater impact on the educational infrastructure, the teaching and learning experience in the classroom, student-to-student relationship or interactions and also for educational planning in general (MoE, 2010). Being over-age in a class is a prime factor contributing to repetition and drop out as many over-aged children do not complete the cycle (MoE, 2010; Zimiles; and Thiessen, 1997 and Lee, 1991) because they find it difficult to connect to school (Mulkey et al., 1992).

Ordinarily, child upbringing, including educational development depends so much on parents involving fathers and mothers who are living together. For instance, one of the efforts that led to the improvement in admission and enrollment rates to basic education in Ghana during the past decade, apart from the efforts of successive governments was because many parents were willing to send their wards to school at the officially recommended age (MoE, 2010). This is because in a household where father and mother are present, decisions are jointly taken, roles are shared and resources (such as time and money) pooled together from both to take care of the household members and their needs. In such a double-parent household, it is expected that children will have adequate resources and be attending the required higher level of education than where there is only one parent who has to take all the decisions, provide all the needed household resources and at the same time take care of the household chores. This group of researchers views the households where children live with both parents as the ideal households for children's development. Children who live with only one of their parents are viewed as lacking the needed community resources and so they blame failures on the fact that those children live with only one of their parents. (Forry et al. 2010; Liu's 2007; Milla and Ridge, 2001; Thiessen, 1997; Seifer et al, 1992; Marsh, 1990).

Other researchers, however, do not attribute any failures especially in school in its entirety to the presence or absence of a parent or both parents but rather the circumstances that surround every household's living arrangement (Donahoo, 2003; McLanahan and Sandefur, 1994; Mott, 1994) and that living in any kind of parent-child living arrangement must not necessarily ascribe doom to any particular child to failure as many children from one-parent homes have grown up to become productive adults (McLanahan and Sandefur, 1994). The above arguments suggest that previous studies have not been conclusive as to which type of the parent-child living arrangements is more beneficial to children's attainment of the required level of education.

A review of the previous studies on parent-child living arrangements has revealed three major research gaps. Firstly, it has been found that previous studies in discussing the effect of parents living arrangements on children's educational attainment, focused largely on single parents versus or both parents and ignored children who do not live with any of their parents (Sigle-Rushton and MacLanaham, 2004; Donahoo 2003; Fronstin et al. 2001; Thiessen, 1997; Seifer et al, 1992; Krein and Beller, 1988). Moreover, the majority of the studies discussed single parents without separating single fathers from single mothers (Liu, 2007; Milla and Ridge 2001). However, the few studies that discussed some of the differences between single fathers from single mothers are studies that were carried out over two to three decades ago such as Mulkey et al. (1992); Wallerstein and Corbin (1986); Hetherington et al. (1982). What needs to be noted is that fathers and mothers have different approaches to child upbringing and so have different motives for sending children to school and keeping them longer in school.

Secondly, most of the previous studies were not based on national level surveys and so may not have wider coverage except a few ones such as, Fronstin et al. (2001) and Rouse & Barrow (2006). The data used for this study are the 2008 and 2014 GDHS data sets. These two data sets have advantage of being national level survey with wider coverage and fair representation of all the segments of the nation. This makes the findings from the study comparable both nationally as well as internationally. Because the two data sets are being used, there is an advantage of doing two period trend analyses and to confirm findings.

Thirdly, many of the previous studies were carried out in the developed world (Baraja 2011; Barrow 2006; Fronstin et al. 2001; Hoffman and Duncan 1988, etc.) with quite different cultural contexts from that of the developing world. The issues of children who live with single parents

or children who do not live with any of their parents and who are viewed as vulnerable households (Tartari 2008; Liu 2007; Thiessen, 1997 Marsh, 1990) in Ghana, can be considered as mere speculations or peoples' perception since there is no any known empirical data or comprehensive study to indicate that single-parent households or households where children do not live with any of their biological parents have worse educational outcomes than households where children live with both parents. This is because, there may be children who lived with both of their parents and did very well in their educational attainment but there are also anecdotal evidence of some children who lived with both of their parents in the same household but could not do well in their educational development. The same may apply to children who live with one-parent as well as children who live with none of their biological parents. In Ghana for instance, the support that some households receive by way of remittances from members of the extended family is enormous (Adams et al. 2008). The support can be both financial and non-financial which can be used to take care of children's education. As Donahoo (2003) had indicated, personality, availability of social support and family cohesion constitute some of the factors that can have divers implications on children's development. In this case, the measure of educational attainment based on the presence of both parents in the house, one of the parents or absence of both parents might not be a direct measure. The above constitute some of the research gaps that this study seeks to address with the four categories of parent-child living arrangements and three levels of educational attainment together with the selected control variables.

1.3 Research Questions

The study attempts to answer the following research questions:

- i) What is the situation of parent-child living arrangements in Ghana and how does each situation differ across segments of the Ghanaian population?

- ii) What are the required levels of educational attainment that is commensurate with the official school going ages of children 6-17 years in Ghana?
- iii) What are the determinants of children's required level of educational attainment in Ghana?

1.4 Rationale of the Study

This study is relevant because, previous studies analysed children's educational attainments by parent-child living arrangements and compared single-parent households with double parent households (e.g, McLanahan and Sandefur, 1994; Murry et al. 2001) and ignored children who do not live with any of their parents. Moreover, Bajara (2011) did an extensive and critical review of previous studies on marital disruption and children's educational attainment and discovered that majority of the previous works focused on the negative effects that children who live in father-absent households to the neglect of the others. In Bajara's view, the disadvantages have been focused on half of the issue. In Ghana, the trend in changes in parent-child living arrangements gives it a basis for detailed study to be carried out based on the four categories of parent-child living arrangements that have been categorized in this study (i.e., children who do not live with any of their parent, children who live with only their mothers, children who live with only their fathers as well as children who live with both of their parents). This will ensure that all the possible living arrangements are covered as a way of contribution to knowledge gap.

Again, this study is relevant because in Ghana, even though the GDHS collects data on parents' living arrangements and children's education among others, the report does not provide detailed and comprehensive analysis of the relationship between parents' living arrangements with children and the required level of education attained. This signifies another important research interest which this study attempts to investigate. In order to help formulate policies that will

help improve childcare and maintenance. In addition, the DHS has a wider coverage because it is a national survey. This gives the findings from this study fair representation internally and the findings can also be compared to findings from other countries.

Also, many of the previous studies were conducted in developed countries with different socio-cultural contexts from that of the developing countries. This study is being conducted in a developing country and so will play a complementary role to what has been done elsewhere in the developed world.

Finally, international organizations after praising Ghana for some success in increasing its educational enrolment rates, called for efforts to search for other possible solutions that will help reduce barriers to children's educational attainment besides the role the respective governments of Ghana have played (UNICEF, 2013). For that matter, obtaining baseline information on the role parent-child living arrangements play in children's required level of educational attainment and the format for studying this relationship will serve as a contribution to literature on the predictors of children's attainment of the required level of education. This study will serve as a basis to design and execute similar studies in future for developing countries and Ghana in particular with the introduction of the free senior school education policy (GoG, 2017). Based on the above, this study cannot only be considered as timely and useful but also justifiable.

1.5 Objectives of the Study

The focus of this study is to establish a relationship between the different parent-child living arrangements and children's required level of education attained. The objectives are formulated with the research questions in mind. The specific objectives of the study are to:

- i) analyse the background characteristics of children under the different parent-child living arrangements
- ii) analyse the background of children based on parent-child living arrangement and the required level of education attained
- iii) investigate the factors that affect children's level of educational attainment

1.6 Organization of the Study

This study is organized into eight chapters. Chapter One is the introduction to the study which includes the background to the study, statement of the problem, research questions, rationale for the study and research objectives. Literature review is presented in Chapter Two where two contrasting viewpoints on the effect of single-parenting on children's development were discussed such as the family deficit and the risk and protective factor models. The same chapter discusses the algorithm for predicting the impact of family structure on children as well as the study's conceptual framework. Chapter Three takes care of the study methodology. The subtitles include data sources and explanation of data analysis. Chapter Four is the analysis of background of children expressed in frequencies and percentages. Chapter Five is the bi-variate analysis of demographic, social and economic characteristics of children by parent-child living arrangements. Chapter Six provides the analysis of relationship between parent-child living arrangements and children's required level of education attained by selected demographic and socio-economic variables. The analysis of the results of determinants of children's required level of education attained has been presented in Chapter Seven. Chapter Eight has been used for the discussion of the key findings of the study, conclusions and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Through the literature search, it has been found that a number of studies have been undertaken on parenthood and children's educational attainment. A structured systematic approach was used to search for relevant materials to make the literature review more complete including synonyms with key words such as "family structure", "parenting", "single parent households", and child fostering which may be linked to the study topic including online sources. The literature review is very important to answer what is known about the topic and the gaps of knowledge that may exist. It helps to demonstrate what has been recommended for further research by earlier studies that will help to fill the identified gaps or to depart from certain approaches either in methodology or in the data analysis. Unfortunately, not much information on the topic was found in Ghana. In this chapter, the literature review has been organized into components such as: the educational reforms in Ghana, family structure and children's educational attainment as well as other socio-economic factors that affect children's educational attainment. Other components include the theoretical framework of the effect of family structure on children such as family deficit model which considers only double-parent families as having the ideal family structure for children and all other families to be bad for children as well as risk and protective factor models which considers all families as having both strengths and weaknesses for children who live in the family. There is also in this chapter, algorithm for predicting the impact of family structure on children, the conceptual framework and hypotheses for the study which are all derived from the literature review.

2.2 Educational Reforms in Ghana

Based on stakeholders expressed concerns about the effect of public education in Ghana which has failed to meet expectations in terms of its coverage, quality, equitableness and economic utility, the government of Ghana in 1987 commissioned a committee to review the existing education system. This necessitated Ghana's Ministry of Education (MoE) to introduce a restructured educational system that gradually replaced the British-based O-level and A-level systems. The education reform in 1987 introduced the junior high school (JHS) and senior high school (SHS) concepts (Keteku, 1999).

a) Primary School

Various governments in Ghana have demonstrated their intentions to lay a strong foundation for secondary education. At the basic education level, pre-school education has officially been incorporated into the education system and all primary schools are required to have nurseries and/or kindergartens. Hence the introduction of:

(i) 2 years of Kindergarten and

(ii) 6 years of Primary

These form part of the educational reforms/interventions for the new universal and continuous basic educational programme. The introduction of the 2 years of kindergarten education is to ensure that pre-school education which plays a crucial role in the formative years of the child, progressively becomes part of the universal, free and compulsory basic education structure. The academic structure for the basic schools ensures that Ghanaian children enter class one (first grade) during the calendar year in which they reach their sixth birthdays.

b) Junior High School

Junior high school (JHS) comprises Forms 1 through 3 (grades seven through nine). Admission is open to any student who has completed primary class six with no entrance exams. Junior secondary schools are part of the country's nine-year basic education scheme to which all Ghanaian children are entitled. Junior high schools are usually sited on the same compounds as primary schools, and the school year for both systems runs for forty weeks. The majority of JHS teachers are certified. However, in urban private schools, university graduates are found on teaching staff (Keteku, 1999).

At the end of JHS Form 3 (ninth grade, fourteen years of age), students take the Basic Education Certificate Examination (BECE). The BECE is administered and graded by West Africa Examinations Council (WAEC). Grading is on a descending 1-9 scale and consists of continuous assessment grades submitted by the student's school (30%) and the BECE national exam (70%). Admission to the senior high school (SHS) is based exclusively on BECE results. At the most competitive senior secondary schools in Ghana, students may need nine or ten grades of '1' on their BECE exams to gain admission. The junior high school lays emphasis on general comprehensive education where pupils are to be exposed to a wide range of subjects and skills (Keteku, 1999).

c) Senior High School

Senior high school (SHS) consists of Forms 1 through 3, equivalent to the American grades ten through twelve. An announcement from Ghana's Ministry of Education (MoE) stated among other things that the new senior high school reforms have been developed in response to criticism that, in the past, this level of education has been overly academic and removed from

the country's development and manpower trends. The reforms included a core curriculum to be followed by all senior secondary students, along with five specialized programs (Keteku, 1999). The educational reforms have witnessed some level of political twist in the past three decades. Amongst these is the three-year senior secondary school system which was changed to the four-year senior high school after the 2007/2008 academic year which has since 2009 been reverted to the former three years.

d) The Free Senior High School Policy

The government of Ghana in 2017 switched policy to a free senior high school policy with the aim to reduce poverty by finally eliminating the financial burdens parents face in paying their children's school fees. The current policy on senior high school education is to provide free education which covers areas such as free tuition, no library fee, no boarding fee, no science laboratory fee, no examination fee, no utility fee, free meals for both boarders and day-students, no Parent-Teacher Association (PTA) fee, and free textbooks for all at the senior high level. As part of the government strategies to help curb down the financial burden on parents, the free senior high school policy introduced by the government is seen by many as a step in the right direction Abdul-Rahaman et al., (2018). The free senior high school policy (introduced in 2017) replaced the progressive free senior high school policy implemented in 2015 (Abdul-Rahaman et al., 2018). This progressive free senior high school policy was a form of partial funding to senior high education for Ghanaian children where parents were exempted from paying some of the costs of education such as examination fees, entertainment, culture and library fees, students Representative Council (SRC) dues, sports fees, science development and mathematics quiz fees, Information and Communication Technology (ICT) fees and co-curricular fees. The aim of both policies is to increase enrollment, improve quality through academic performance

and most importantly to reduce the burden on parents from paying their children's school fees (Abdul-Rahaman et al., 2018).

2.3 Parent-Child Living Arrangements and Children's Education

A study by Zimiles and Lee (1991) and Thiessen (1997) found that even when children have equal academic abilities, children living with only one of their parents were more likely to drop out of school than children from two-parent families. But Milne et al. (1986), Mulkey et al. (1992), Thomson, Hanson and McLanahan (1994), Knox (1996) and Battle (1998) found that the factor that had the greatest impact on student academic outcome was income rather than parent-child living arrangements. Tartari (2008) found that children of divorced parents obtained lower educational scores and that single parents are less likely to invest in their children.

Lessing, Zagorin, and Nelson (1970) found that children in father-absent households had lower intelligent quotient (IQ) than children in father-present households. Hetherington, Camara, and Featherman, (1983) reported that boys' academic performance is affected by father's absence. Shinn (1978) reviewed some studies and found that father's absence had a negative effect on indicators of cognitive functioning of children. According to Mott (1994), girls are more likely to be assisted in their academic work if their fathers are absent from the house than when the father is present. However, Atkinson and Ogston (1974) found that children performed equally well in school and both participate in many activities at home and at school whether the father is present or not.

Similarly, Mulkey et al. (1992) indicated that, among children who live in homes with only one parent, those from households where mothers are not present obtained lower grades than

children from households where mothers are present and that, children generally find it more difficult to do well in school when there is only one parent present in the household compared to children who live with both parents. Liu (2007); Wallerstein and Corbin (1986) as well as Hetherington et al. (1982) stated that when there is disruption of marriage, boys and girls are affected differently; as each of the sexes have different developmental needs. For example, if parents perceive that the boys need a male-role model in the home; then the emotional stress of not having a father living in the house may have greater impact on boys. As a result, father's time may constitute one of the greatest inputs in the care of boys than girls. In the situation where the father is not present in the house will affect the availability of mother's time devoted for childcare. The custodial mother has to spread her time and energy beyond the pre-and post-marriage tasks. Even though the mother no longer needs to devote time to her husband, her time for childcare is reduced because she may have to perform all the tasks similar to homes where both mother and father live together with their children.

Baraja (2011) found that by age 15 years, almost half of all the children in the United States of America will have had experience of living in a single parent home. Liu (2007) also found that children from single parent households attain fewer years of schooling, on average, compared to their counterparts who stayed in double parent households. Further analysis by Liu (2007) revealed that when children are very young when their parents divorced, do experience negative educational outcomes, with the effect being slightly larger for boys than girls. Liu's (2007) findings suggest that when parents stay married for long, the effect is more positive for the educational development of boys than girls.

Meanwhile, Fronstin et al. (2001) reported that parents who divorce before the child attains age 16 may lead to a substantial reduction in the child's educational attainment. Liu's (2007) finding

was consistent with Fronstin et al.'s (2001) when it was indicated that marital dissolution might cause greater emotional harm when children are younger because young children are less resilient to the effects of parental separation due to their relative immature social and cognitive development and their greater dependence on parents. The lack of family resources associated with divorce may affect children's educational attainment differently by the timing of divorce occurrence (Liu, 2007). Liu (2007) then concluded however, that, young children may be more likely to experience a recovery of these resources through the remarriage of their custodial parents. Duncan and Hoffman, (1985); Krein and Beller (1988) as well as Page and Stevens (2002) examined the effects of years that children spend with single mothers and child schooling and found that the effect is greatest during the pre-school years, and is greater for boys than girls.

2.4 Other Demographic and Socio-Economic Factors that Affect Children's Education

Sigle-Rushton and Maclanaham (2004) discovered that 27 percent of all U.S. children were living in single-parent families whilst among African-American children, 53 percent were living with only one parent. Amato (1993) found that children who live with only one of their parents find it difficult to socialize because they normally receive less financial and emotional support, practical assistance, information, guidance, supervision and less role modeling for adult interpersonal interaction than children in two-parent families. Liu (2007) indicated that children who go through parental divorce or separation are likely to experience emotional stress that may negatively affect their educational outcomes in later years. Emotional stress can be caused directly by the divorce or separation and also from the lifestyle changes such as residential moves and transfers to new schools (Liu 2007).

The Ghana Maternal Health Survey of 2007 reported that the sex of the household head, mean household size and place of residence are some of the important household characteristics that are often associated with differences in household socio-economic levels. For example, the report indicated that female-headed households were frequently poorer than male-headed households. In addition, the size and composition of households affect the allocation of financial and other resources among household members, which in turn influence the overall well-being of these individuals (Deslandes et al., 1997). However, Donahoo (2003) indicated that single-parenting is not the sole predictor of academic failure for children; there are many risk and protective factors that interplay to militate against children's academic success or contribute to children's poor school performance. Donahoo (2003) continued that personality, availability of social supports, and family cohesion are often identified as categories of factors that can impact a child positively or negatively. Risk factors can lead to negative results, but the presence of risk factors does not guarantee poor outcomes. In these families, parent support acts as a protective factor countering some of the risk factors these children encounter. Even though economic pressures often associated with single-parent households may limit or prevent single parents' involvement in children's welfare if single parents make the effort to support their children's education, their effort acts as a protective factor.

Rouse and Barrow (2006) indicated that family socio-economic status affects educational outcomes of children such as test scores, grade retention, and high school graduation. They reported that greater psychological costs, the cost of continuing in school instead of getting a job, among others contribute to the explanations of why low-income households attain less education than children from high-income households. Similarly, Boggess (1998) found that household income acts as a significant determinant of educational outcomes of children and that living with a single parent has a negative effect on high school graduation. However, Mulkey

et al. (1992) and Kim (2004) both reported that while household income was important, other factors such as parental expectations, family size, and the quality of the parent-child relationship were stronger predictors of future academic success than income. Another study by Kim and Sherraden (2011) compared children from households with low and high income and found that children from households with high incomes were more likely to complete high school but less likely to graduate from college because they do not have the ideal family structure to serve as a proper role model. Also, in that same study, Kim and Sherraden (2011) indicated that while parents' economic status is evidently crucial, that alone cannot explain total variations in children's educational outcomes. Children's attitudes and behaviours are important factors in determining educational outcomes, and these may be largely formed by parental influence. Children with a higher level of expectations and aspirations invest more time and effort in their academic development which may lead to better educational outcomes (Reynolds and Pemberton, 2001; Elliott, 2009; Cook et al., 1996; Mickelson, 1990). To buttress this, a study conducted by Sterbin & Rakow, (1996) and Liu, Kaplan, & Risser, (1992) reported that children's self-esteem may have a positive effect on educational achievement because it promotes greater academic engagement and self-control.

Moreover, Haveman et al., (1991) study on household income, income sources, food and housing expenditures for the last married year and for five years after marital dissolution found that income drops sharply after marital dissolution and remained nearly at its new low level during the period of observation. According to U.S.A. Bureau of the Census (1979), the major issue facing single parents and their children in the United States today is poverty. The Census had indicated that female-headed single-parent families comprise 50 percent of all families in poverty and that children raised by both parents grew up with more financial and educational advantages than children who are raised in homes with only one of their parents present. Milla

and Ridge (2001) also found that single-parent households are at a higher risk of poverty than couple families.

Case and Ardington (2005) analyzed longitudinal data from a demographic surveillance area (DSA) in KwaZulu-Natal, to examine the impact of parental death on children's outcomes. The findings revealed that, the loss of a child's mother is a strong predictor of poor schooling outcomes. Maternal orphans are significantly less likely to be enrolled in school, and have completed significantly fewer years of schooling than children whose mothers are alive and less money is spent on their educations on average. Moreover, children whose mothers have died appear to be at an educational disadvantage when compared to non-orphaned children with whom they live. They also used the timing of mothers' deaths relative to children's educational shortfalls to argue that mothers' deaths have a causal effect on children's education. The loss of a child's father is a significant predictor of household socioeconomic status. Children whose fathers have died live in significantly poorer households, measured on a number of dimensions. The death of a father between waves of the survey has no significant effect on subsequent household economic status. While the loss of a father is correlated with poorer educational outcomes, this correlation arises because a father's death is a marker that the household is poor.

Moreover, Chae (2016) investigated how living arrangements, gender of the household head, parental death, and paternal migration are related to schooling. Chae (2016) used three waves of data from the Malawi Longitudinal Study of Families and Health (MLSFH) to investigate the effect of parental divorce on children's schooling and the possible mechanisms driving this relationship. It was indicated in the study that, although many sub-Saharan African countries have high divorce rates, very few studies have explored the impact of parental divorce on children's schooling. Results show that parental divorce is associated with lower grade attainment and a larger schooling gap, defined as the number of years a child is behind in school

(among children currently attending school). Although no association existed between parental divorce and current school attendance, girls affected by divorce are significantly less likely to be attending school. Differences in economic resources, maternal co-residence, or maternal psychological well-being do not explain the relationship between parental divorce and children's schooling.

In a similar study, Evans and Miguei (2004) estimated the impact of parent death on primary school participation using five-year panel data set of over 18,000 children in rural Kenya. They found that parent death leads to a moderate decrease in school participation, with larger effects for children from poor households. Impacts are not significantly different by child gender. There is a moderate and highly statistically significant negative impact of a parent death on primary school participation: school participation rates declined on average by three percentage points following a parent death, whereas impacts are nearly identical for deaths of mothers versus fathers. Child age and gender are not associated with differential parent death impacts on school participation. The proportion of orphan children in the community similarly does not differentially affect school participation after a parent death, providing some evidence against the view that family and community networks are rapidly disintegrating in African areas hardest-hit by HIV/AIDS. One policy implication of this finding is that assistance programs should be channeled to support the efforts of poor orphans in rural African settings.

Another study by Amoateng, Heaton and Mcalmont (2017) examined the effect of family structure on children's schooling in sub-Saharan Africa. They employed Multi-level Modeling to analyse data from recent Demographic and Health Surveys (DHS) in 26 African Countries. In general, both polygyny and presence of a husband in the home reduce children's education.

After controlling for maternal education, children of single, never married mothers and those who are divorced or separated have educational disadvantage, suggesting the importance of maternal education for children's educational outcomes. Males are more likely than females to have higher educational attainment, especially those in polygynous families. It is recommended that female education in general and the education of the girl-child in particular, be encouraged as a way of discouraging such negative cultural attitudes and practices as polygyny and bias in favour of boys' education.

Chant (2007) on the other hand, investigated a popular stereotype that female-headed households are the 'poorest of the poor', it is often assumed that women and children suffer greater poverty than in households which conform with a more common (and idealized) male-headed arrangement. However, a mounting body of evidence suggests that household headship is not necessarily a good predictor of the start that children have in life, nor of their trajectories into adolescence and adulthood. On the basis of such evidence, Chant's (2007) paper seeks to interrogate and challenge some (mis)conceptions about female household headship and poverty among children. It finds that while risks to children's well-being may arise through discriminatory or hostile attitudes towards female-headed households in society at large, gender dynamics within male-headed units can be just as prejudicial in this regard. Given frequent stereotyping of female-headed households as the 'poorest of the poor', it is often assumed that both women and children suffer greater poverty than in households which conform to a more common (and idealized) male-headed arrangement. It is critically important when considering that female-headed households (most of which are headed by lone mothers), are rising in number and proportion in most developing regions, constituting an estimated 13 percent of all households in the Middle East and North Africa, 16 percent in Asia, 22 percent in sub-Saharan Africa, and 24 percent in Latin America (Bongaarts, 2001).

Bongaarts (2001), in order to illuminate the argument of popular notions about female household headship and poverty conducted his study to interrogate and challenge some of these popular notions. He recounted the mounting body of evidence from different parts of the Global South suggesting that household headship is not a good predictor of the start that children have in life, nor of their path into adolescence and adulthood. While risks to children's well-being may arise through discriminatory or hostile attitudes towards female-headed households in society at large, gender dynamics within male-headed units can be just as prejudicial in this regard. Bongaarts (2001) concluded that, although poverty can be exacerbated by household headship, this is not exclusive to children who live only with their mothers.

Literature on child fostering was also reviewed for this study to assess the relationship between child fostering and education of children. Monasch and Boerma (2004) provided evidence which indicates that, almost nine percent of all children in sub-Saharan Africa were fostered non-orphans who had two living parents but lived apart from both of them, whereas only slightly more than three percent were fostered orphans. Isiugo-Abanihe (1985) and Akresh (2009) reported that child fostering is a widespread practice across sub-Saharan Africa and that in West Africa, child fostering was predominantly used as a mechanism for families to strengthen social connections and kinship ties, as well as to share the costs of childbearing. Also, Mason (1997), Akresh (2009) and Grant and Yeatman (2013) studies revealed that child fostering is recognized as a coping mechanism used by African households to respond to adult mortality, offset economic hardships, take advantage of resources available through kin networks, and redistribute the costs and benefits of childbearing across the extended family. In contrast, in southern Africa, it is likely that fostering emerged as a response to patterns of seasonal labour migration and family division that began during the colonial period (Madhavan, 2004 and van

Blerk and Ansell, 2006). While high endemic adult mortality in sub-Saharan Africa meant that orphanhood was common even before the dramatic increase in mortality that accompanied the HIV/AIDS epidemic, the majority of child fostering was not due to the mortality of parents (Monasch and Boerma 2004).

McDaniel & Zulu (1996) as well as Madhavan (2004) provided two main reasons for child fostering on the basis of either 'non-crisis' or 'crisis' situations. Non-crisis child fostering is used to smooth socioeconomic inequalities and to lessen demographic imbalances in a region marked by high fertility and sterility, that is, where some families have many children while others have none. In these situations, the relocation of children shares resources across the extended family and strengthens kinship networks. For older children, non-crisis fostering can open up opportunities for education or vocational training that would not have been available otherwise, through placement with more affluent relatives or with those who live near better quality schools (Zimmerman, 2003 and Akresh, 2009). However, Lloyd and Desai (1992), McDaniel and Zulu (1996) and Vandemeersch (2002) reported that crisis fostering is a strategy that families use to cope with sudden shocks and ongoing hardships. Temporary and longer-term migration often prompt parents to foster out their children, and fostering is often the only way that some African women are able to combine labour force participation with motherhood. Children of divorced or separated parents, or those who were born out of wedlock, are more likely to live apart from their parents, and some children who remain with a parent after divorce are subsequently fostered out when that parent remarries (Isiugo-Abanihe, 1985; Page, 1989; Lloyd and Desai, 1992; McDaniel and Zulu, 1996; Vandermeersch, 2002; Grant and Yeatman, 2008). Finally, many children are fostered following the deaths of one or both of their parents.

Through the review of literature, it has been revealed that several studies have been conducted in the past to assess the relationship between parents living arrangements with children and children's demographic and socio-economic development. Nonetheless, some research gaps still exist. Firstly, most of the studies have been conducted over two to three decades ago. Also, most of the previous studies were conducted in developed countries with different context from that of the developing countries including Ghana. Additionally, all the previous studies did not analyse the influence of parents living arrangements with children using the four categorizations that have been used in this study as well as the three categorizations of children's educational attainment. The above constitute some of the reasons why this study on parent-child living arrangement and children's attainment of the required level of education in Ghana is considered to be very important to provide information to fill the identified gaps in the previous studies.

2.5 Theoretical Framework

The link between parent-child living arrangements and required highest level of educational attainment involves complex human relationships, behaviours and development. Literature related to the study area has helped to classify the study analysis into two viewpoints. These are the Family Deficit Model and the Family Risk and Protective Factor Model. The two contrasting models illustrate the complexity clearly when the concept was adapted to guide the construction of the algorithm used in this study (see Figure 2.2).

2.5.1 Family Deficit Model

The Family Deficit Model views the nuclear or two-parent households as the ideal home. According to the model, single-parent families have a negative impact on children simply because they do not have a nuclear family structure (Marsh, 1990; Thiessen, 1997). The Model is based on the premise that children raised in households with only one parent in the house is

more likely to experience a variety of problems compared to children raised in households with both father and mother in the house. The assumption is that, children who live in single-parent families lack the community resources that children who live with both parents frequently have. For instance, they are more likely to live in disadvantaged neighbourhoods and to associate with peers who have negative attitudes towards social developmental issues such as schooling. They are also more likely to change residence, which disrupts their lives even further. They continued that, in single-parent families, children tend to experience short and long-term economic and psychological disadvantages; higher absentee rates which tend to affect boys more negatively than girls and that force them into more delinquent activity, including alcohol and drug addiction. The debate goes on that children in single-parent homes are more likely to experience health-related problems as a result of the decline in their living standards, including lack of good nutrition and health insurance, among others. Example from the United States indicates that the custodial mother's and children's standard of living reduced by 30 percent on average while the noncustodial father's standard of living increased by 15 percent (Hoffman and Duncan 1988).

The major factors likely to be behind the disadvantages faced by children in single-parent families are inadequate attention and guidance. Children need more than just economic security to thrive. They require parents who have the time to help children for instance with their homework and listen to how their day went in school as well as parents who can supervise their activities outside of school (Thiessen, 1997). It is an undeniable fact that parenthood is very challenging even under the best of conditions and so with only one parent, the challenges become multiplied as childrearing by single parents' lead to responsibility overload. When one parent makes all the decisions and provides for all of the family needs, there is always task overload especially as the demands for work, household chores, and parenting become overwhelming for one person.

Some of the problems associated with single-parenting affect not only the children involved but also the larger society, which must pay the costs for increased crime, disease, poverty, and other forms of societal breakdown. Because most single-parent families are headed by women, society is particularly threatened by the presence of large numbers of adolescents especially males who have been raised without the guidance and discipline that is typically provided by a father Thiessen (1997). A study by Mandara and Murray (2006) concluded that boys raised in homes where the father is not present were much more likely to use drugs than their counterparts from homes where the father is present. As a direct consequence of the rising divorce rates the world over, many children spend part of their lives in single-parent families where single parents invest less time in their children and coupled with fewer and weaker social networks, this tends to be economically disadvantaged for the children (Duncan and Hoffman, 1985; Manski et al., 1992). Consequently, children raised in such conditions tend to enjoy lower investments in human capital (McLanahan, 1983; Blau and Duncan, 1967).

Being a single parent and struggling for money often coincide so much that children of one-parent households are generally less supervised, their actions are less monitored and there is usually less communication between children and their parents. Mothers and fathers in these homes are more stressed due to having even greater responsibilities put on their shoulders. It then appears that being a part of a single-parent household indicates a negative family environment. It is therefore not surprising that much of the debate over single-parent families focuses on how these trends affect children and also the remaining spouse. It is therefore possible that when there is only one parent, the family is often less well-off financially compared to double parent families (Kim and Sherraden, 2010 and Boggess, 1998) and this may be the main reason for so many family challenges. The effects of coming from a low-income

family can also include things like lower education levels, lower economic achievement which can result in leaving the child feeling isolated and lonely.

From the above, there is no doubt that one of the important ways in which changes in parent-child living arrangements may impact the well-being of children is by affecting children's access to or success in school. The literature reviewed have uncovered a clear association between parent-child living arrangements and educational attainment of children. By this, children raised by both biological parents do better than their counterparts in single-parent households. Based on the above, it is apparent that single-parent households whether through marriage dissolution or death of a spouse and whether the household is headed by a male or female, has more socio-economic as well as demographic issues to deal with than two-parent households.

2.5.2 Risk and Protective Factor Model

Donahoo (2003) was first to use the family risk and protective factor model. Contrary to the Family Deficit Model used by Marsh (1990) and Theiessen (1997) is the Risk and Protective Factor Model which does not regard single-parent families as irregular because the foundation for the model is that, all families (single or double-parent households) have both strengths and weaknesses. Rather than viewing single-parenting as the cause of negative outcomes for children in these families, the Model describes any family structure as one of many factors. Risk factors are the weaknesses and protective factors are the strengths of any given family. According to this model, single-parenting can be both a risk factor and a protective factor for children in this type of family (Donahoo, 2003).

Based on the Risk and Protective Factor Model, a child raised under a single-parent household is not responsible for problems associated with the child but rather the factors or circumstances that are associated with single-parenthood. The challenges found in single-parent households may not be because of the parent who raised these children, but can be linked to other things that are also related to single-parenting. For instance, single-parenthood may be correlated with many problems affecting children, but the causes may lie elsewhere such as the possible economic and emotional problems affecting parents that lead to difficulties associated with raising children (Donahoo, 2003).

Children might be better off in families with two parents (as long as both parents are non-abusive). McLanahan (1983) however argued that the adverse impact of single-parent families on children has been exaggerated. According to McLanahan (1983), if all children lived in two-parent families, teen motherhood and idleness would be less common, but the bulk of such problems would remain. McLanahan (1983) argued that children who are raised by only one biological parent may be worse off, on average, than children who grow up with both parents in the household. McLanahan (1983) continued, however that, problems often associated with children who grow up in single-parent households such as poverty, failure in school, and juvenile delinquency among others cannot be attributed to single-parenthood alone. According to McLanahan and Sandefur (1994), being raised by only one's mother or father is but one of several things that can undermine children's chances of future success. Schuyler (2001) stated that many negative predictions for children raised by a single parent have more to do with economic hardships than the lack of one parent as a number of single parents have raised many well-rounded, successful people. Mackey (2005) then indicated that there are effects of single-parenting on children, however, the weight of the evidence does not appear to support a view that single-parenting is a major cause of societal ills and are doing irreparable damage to their

children. Spending quality one-on-one time with one's kids as is the case of many single-parent families, allows one to develop a unique bond that may actually be stronger than it would have been if one was not living in a single parent household (Mackey, 2005).

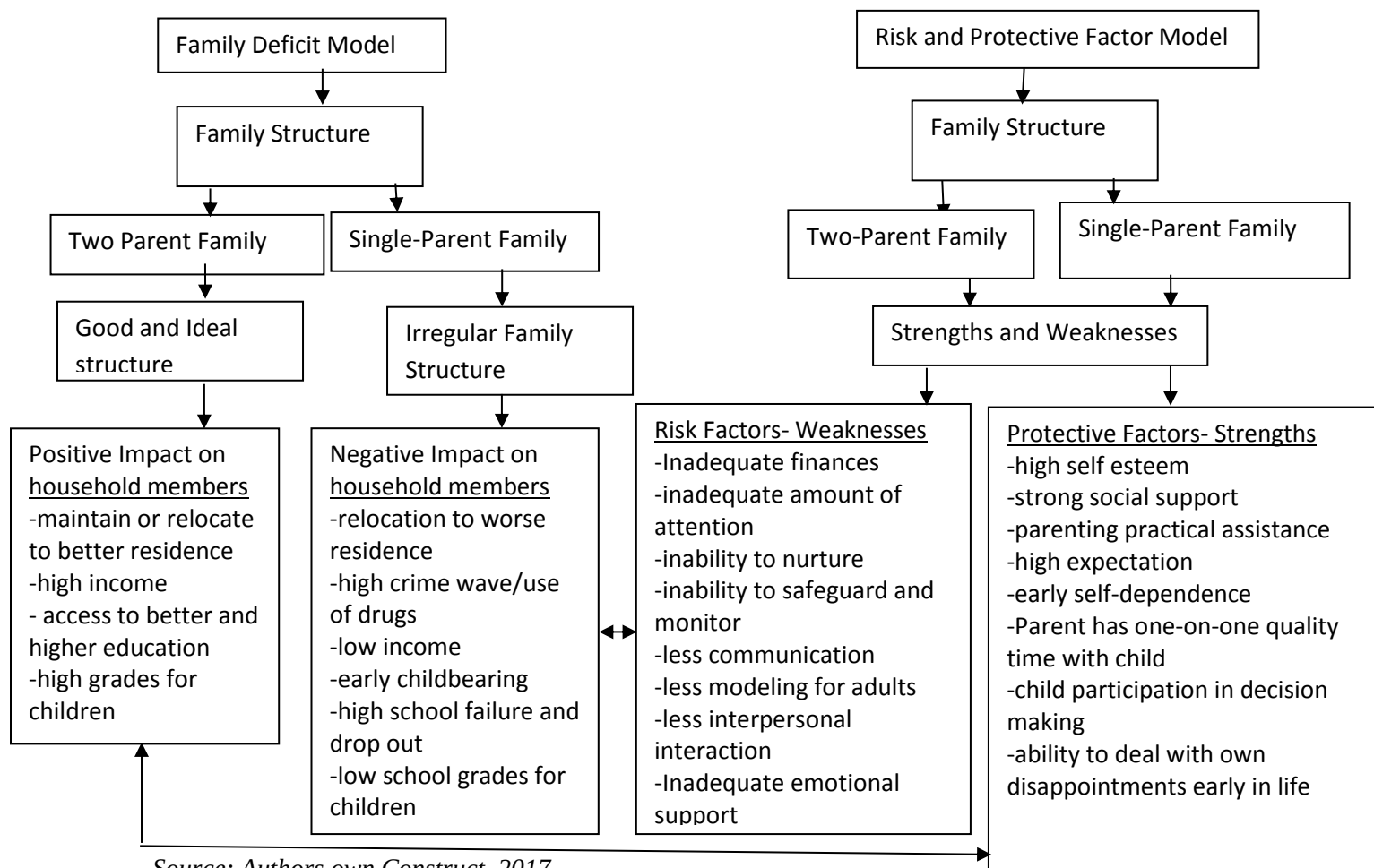
The Risk and Protective Factor Model again describes the single family structure based on its strengths for children in that type of family. The Model has it that being raised in a single family helps the child to develop early in life because children raised in single-parent families are often raised by a "village" of supporters. In many cases, members of the extended family will step in and play a significant role in the children's life. There is therefore no doubt that, children who live in single-parent households are more likely to receive external support than children who live in double-parent households.

Some demographic and socio-economic factors influence how children develop in single-parent as well as double-parent families such as the parent's age, educational level, religious affiliation, occupation, level of household wealth and place of residence. However, disadvantages in these factors that often accompany single-parenting appear to cause most of the negative associations rather than single-parenting itself (Richard M., 2008; Mackay, R. 2005). Whether family structure has a causal influence on a child's developmental outcomes such as educational attainment, is hotly debated (Frisco, Muller, and Frank, 2007). At the heart of the debate is the contention that family structure itself is not a factor responsible for children's school performance but rather that society fails to support alternative family forms, rendering them fraught with instability (Glenn 1993; Popenoe, 1993; Stacey, 1993; Frisco, Muller, and Frank, 2007; Vicinie, 2010).

Generally, children raised in single-parent families do have huge responsibilities in order to earn a living hence making their contribution to the entire family system very necessary. The authentic need for their assistance helps the children recognize the value of their contribution and develop pride in their own work and self-confidence. Again, in many instances, children in single-parent families are left to deal with their own disappointments early in life and so are likely to live a successful life in future. It is also a fact that children who are successfully raised in single-parent families know that they are the main priority in their custodian parents' lives. This healthy approach helps to prepare such children for the "real world".

2.6 Algorithm for Predicting the Impact of Family Structure on Children

Figure 2.1 presents the algorithm for predicting the impact of family structure on children. From the figure, the factors that the Family Deficit Model considers under irregular family structure are related exclusively to the single-parent families whereas factors considered under good and ideal structures are those that have positive impact on household members and which is associated with double or two-parent family structure. The Risk and Protective Model on the other hand, uses factors considered as weaknesses and strengths of the family system which are common to single as well as double-parent households. Again, the factors that Family Deficit Model considers as good and ideal are found with only double-parent households whereas the Risk and Protective Model considers those variables as strengths of the family and which can also be common to both single and double-parent households.

Figure 2. 1 Algorithm for predicting the impact of Family Structure on Children

Source: Authors own Construct, 2017

As has been mentioned earlier, Marsh (1990) and Thiessen (1997) assumption is that children who live in single-parent families lack the community resources that children from double-parent families frequently have. Based on this assumption, from Figure 2.1, the family deficit model tries to isolate attributes of double-parent families from that of single-parent families and it does so by considering double-parent families to be good and ideal structure that brings about positive impact on household members. For instance, in the double-parent households, members maintain decent residences and even if they will relocate at all, they are more likely to move to better residence because, those families are more likelihood to have higher household income. The new environment is likely to have better educational infrastructure where children will have

access to vast range of quality schools which will enable the children to obtain better grades that will keep them in school further and/or longer to complete their expected grades.

The family deficit model considers single-parent households as having irregular structure that brings about negative impact on household members. As such, if the need arises for the single-parent households to relocate, they are more likely to move to an environment that will be worse than their previous residence because of lower income. The new community is likely to be associated with possible high crime wave as well as high teenage pregnancies, less desirable and low quality educational infrastructure which may not be conducive for effective teaching and learning. There will be low enrolment rates because of the possibility of low grades and high failure with its associated high drop-out rates among children at every level of the education.

With regards to the risk and protective factor model, Donahoo (2003) identified availability of social support systems and family cohesion as categories of factors that can impact a child positively or negatively. The risk factors can lead to negative results, but the presence of risk factors does not guarantee poor outcomes. Indeed, protective factors mediate and limit the impact the risk factors will have on academic achievement and other aspects of child development. From Figure 2.1, the family risk and protective factor model does not disassociate single-parent households from double-parent households and so the model considers households to have both strengths and weakness. The strength may come about as a result of strong social support systems with strengthening practical assistance, high expectation, early self-confidence among household members. In addition, parents are likely to have one-on-one quality time with children, children participating in decision making as well as child having the ability to deal with their own disappointments early in their life. This can be possible in both

single as well as double-parent households. Both single and double-parent households may also have weakness with respect to inadequate household income, inadequate attention to nurture, safeguard and monitor children. There can be less communication, less modeling from adults, less interpersonal interactions as well as inadequate household financial support for household members which can exist in both single as well as double-parent households.

In this study however, the focus is tilted or skewed towards the side of the Family Deficit Model. This is because parent-child living arrangements have demographic, social as well as economic influence that affect the child who does not live with both biological parents more than the child who lives with both parents. The parent-child living arrangements will therefore have some effects on children's required highest level of education attended.

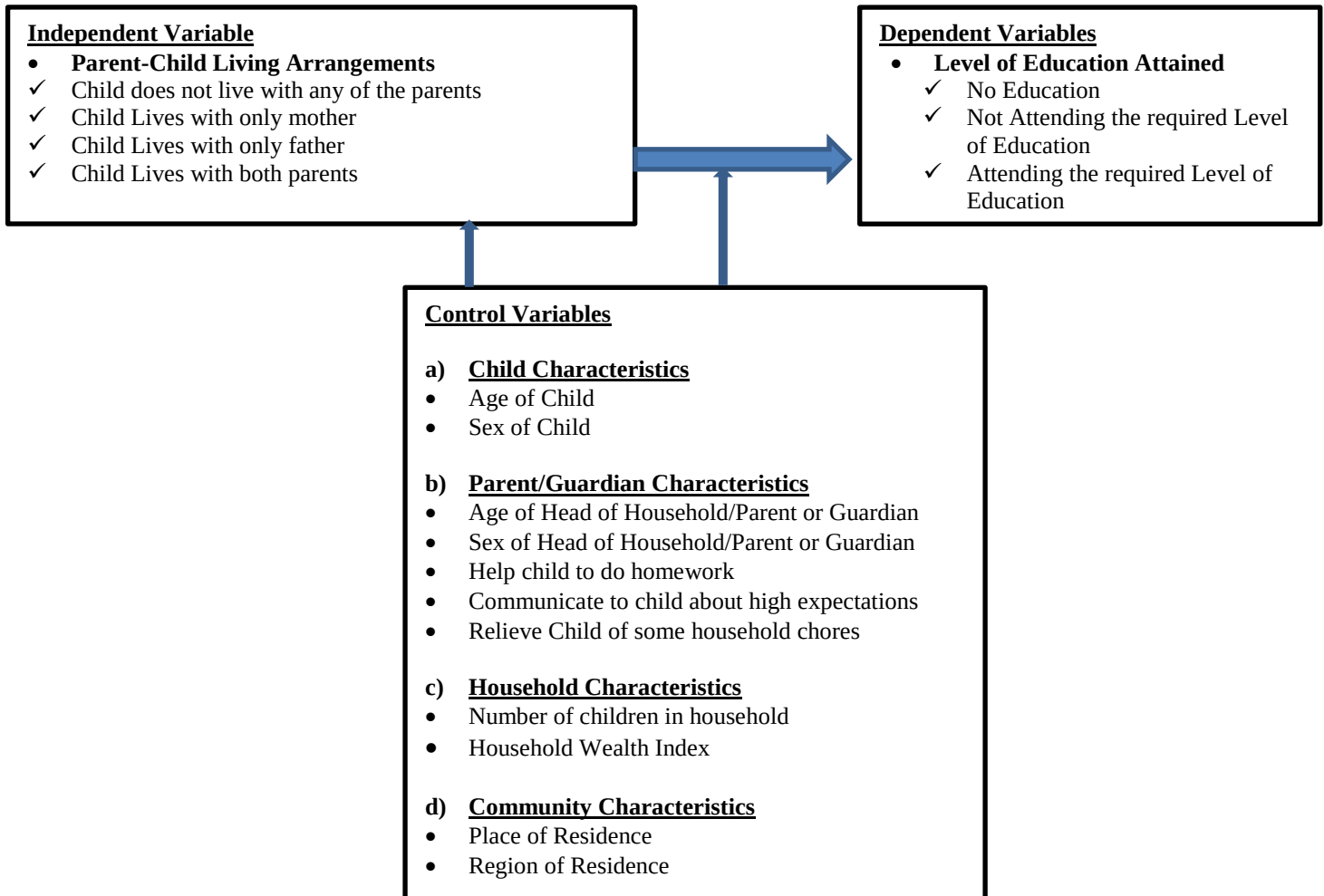
2.7 The Conceptual Framework

The objectives of this study and literature related to the study have helped to conceptualize the framework for the study. The Conceptual Framework (Figure 2.2) seeks to explore the effect of parent-child living arrangements on the required level of education of children directly and by controlling for selected demographic and socio-economic background characteristics of children, parents as well as household and community.

Parent-child living arrangement is an important variable that can influence a child's level of education attained. It is anticipated that children who live with both parents are more likely to attend school and remain in school than children who live with only one parent or those who do not live with any of their parents. It is also anticipated that the level of education attained will be different for the children who live with only their mothers from the children who live with only their fathers. The explanation of the framework is that, children's required level of

education attained is likely to be affected by the selected demographic and socio-economic variables through parent-child living arrangements.

Figure 2. 2 Conceptual Framework Showing Parent-Child Living Arrangements and Children's Required Level of Education Attained with Controlled Variables



Source: Authors own Construct, 2017

Age of child is a strong determinant of children's required level of education attained. In Ghana, generally, stages of education have been classified according to the age of the child. Among a cohort of young children who start their educational career together, a number of them will drop out or be repeated as they move on from one level to the next higher level of their education. Sex of the child is a good determinant of level of education attained especially in settings where

male education is highly encouraged than female education. In Ghana even at this current stage of development, one cannot deny the fact that when there is a constraint in household resource for children's education, it is the female child that suffers from either not being sent to school or dropping out of school for the male child to go or continue his education.

In the Ghanaian settings, guardians who are mostly the parents or heads of household are generally persons who have economic and social responsibilities towards the rest of the household members. It is because of these responsibilities that it has been assumed that the presence of guardian in the house could have implications for the welfare of the members of the household. Information on household composition such as the age and sex of parent/head of household or guardian for instance, will help to understand family size, implementation of population-based policies, determination of health status and wellbeing (GSS, 2015). Sex of guardian is likely to change with changes in parent-child living arrangements. The sex of guardian becomes an influencing factor in deciding whether to send a child to school (sex preference) and or for a particular sex to remain longer in school than the other. For instance, Boadu's (1999) study in Ghana found that female heads of household are more likely to keep male children in school longer compared to female children. Parenting or childcare is the process of promoting and supporting the physical, emotional, social, financial and intellectual development of a child. Parenting refers to the aspects of raising a child aside from the biological relationship (Davis 2000). It is therefore anticipated that when the child is assisted by either the parent or guardian to do home assignments, the child will gain more understanding of the subjects being taught and all things being equal, the child will pass his or her exams easier and progress to the next higher level. As Deslandes, Royer & Turcottle (1997) have found, parents who get involved in their children's education earned better grades than their classmates with uninvolved parents. If the child is communicated to about higher expectations in the future,

the child will grow and have confidence in whatever he or she aspires to do. Also when the child is relieved of some of the household chores, the child will have more time to study and also have more time to rest that will help the child to make more progress in his or her educational career than his or her counterparts who did not get all these privileges.

Number of children in a household is one of the important variables affecting children's educational attainment. The assumption is that the more the number of children in the household, the more difficult it becomes to take adequate care of the children as the limited household resources are distributed among the household members. As such, there is the possibility of some of the children dropping out from school than when the number of children in the household is smaller so that the household resources can adequately and conveniently take care of the few household members. Household wealth status is also a potential determinant of parent-child living arrangements as well as children's required level of education attended. Household wealth status differs greatly between and within urban and rural settings. The Ghana Statistical Service (GSS, 2015) report indicated that there is clear difference in household wealth status among urban/rural places of residence as well as among the ten regions of Ghana. When household wealth status is higher, then the possibility that more children in the household will be sent to school and kept in school for longer period, all things being equal, will be higher than when household wealth status is low or less.

Place and region of residence are also likely to change when parent-child living arrangement changes which will in turn affect children's educational attainment. Change of place and region of residence of children is likely to affect education separately because of the differences in educational resources and endowment (access and information) in urban and rural settings as well as the differences across the ten regions of Ghana. Some of the regions in Ghana are highly

endowed with more and quality schools than others. Household members in urban areas in most cases are more likely to be gainfully employed, and earn higher incomes than their counterparts in a rural area. As a result, children in urban households will have adequate resources to go to school and remain in school longer than when the household is located in rural areas. In the urban settings, a school-going child who is not in school is highly frowned upon by neighbours than children in rural areas, thereby making it possible for higher proportions of children in the urban areas to be sent to school and also remain in school longer than their counterparts in the rural areas.

2.8 Hypotheses

Based on related literature that has been reviewed and also from the conceptual framework for the study, the following hypotheses have been propounded:

- i. Children who live with both of their biological parents are more likely to attain the required level of education compared to children who do not live with any of their parents
- ii. Children who live with both of their biological parents are more likely to attain the required level of education compared to children who live with only one of their parents
- iii. Male children are more likely to attain the required level of education compared to female children
- iv. Children who live in urban areas are more likely to attain the required level of education compared to children who live in rural areas

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Study Design

3.1.1 Sources of Data

This study aims at assessing parent-child living arrangements and children's required highest level of education attended and uses the Household Data Files of the Ghana Demographic and Health Surveys (GDHS) of 2008 and 2014. The two sets of data are the fifth and sixth (which are the most recent) Demographic and Health Surveys respectively conducted in Ghana to among other things, provide demographic and socio-economic information to policy-makers, planners and researchers. The data sets have demographic and health information on women, men and children and also provides estimates for rural and urban areas and on household members from all the ten regions in Ghana. The 2008 and 2014 data sets were used in order to provide two-period trend analysis for this study. It will also help to reveal if there has been any change of educational attainment between the two periods and also to confirm the consistency of the findings. In Ghana, six of such surveys have so far been conducted in the years, 1988, 1993, 1998, 2003, 2008 and 2014.

The GDHS data of 2008 and 2014 surveys like all other DHS surveys are based on nationally representative samples as part of the worldwide demographic and health survey programme by MEASURE DHS Project. The GDHS generally has seven common types of recode data files that were associated with the core questionnaires. However, the household member data files were used for this analysis because they provide data that suit the kind of analytical study that has to be carried out. The household member data was collected in a manner that there is separate record for each and every household member captured in the survey. It also includes the characteristics of the household where the individual lives. The unit of analysis in this file

is the household member which helps to make analysis on individual household members possible. In this regard, we recoded the required level of education attained by children six to 17 years, representing the dependent variable and recomputed the original variables to get the parent-child living arrangements as the independent variable. Other selected demographic, social and economic variables were used as control variables.

3.1.2 Response Rate of the 2008 and 2014 GDHSs

A total of 12,323 households were selected in the 2008 sample and 11,913 of the households were occupied at the time of the fieldwork. The number of occupied households that were successfully interviewed was 11,778 and this yielded a household response rate of 99 percent. The total number of children (6 to 17 years) from the above households based on which this study was conducted numbered 14,491. In the 2014 survey, 12,831 households were selected for the sample, of which 12,010 were occupied. 11,835 of the occupied households were successfully interviewed also yielding a response rate of 99 percent. The total number of children in these households was 13,339.

3.2 Definition of Concepts and Description of Variables

In this section, variables used in the study are defined and/or modeled as follows:

Single-Parenting: This study uses the term single parenting which has been defined variously to include a parent with one or more children but not with any of the children's other parents. By extension, a single-parent household is seen as a family where a parent lives with dependent children, either alone or in a larger household, without a spouse or partner. A single-parent household is also defined as one in which children are maintained by one person as a result of a birth outside marriage, divorce, adoption, surrogate motherhood/fatherhood, child neglect or abandonment by the absentee biological parent. Single-parenting may also arise due to the

incidence of births to mothers outside wedlock as a consequence of unplanned, accidental pregnancy and the woman and/or man taking a decision not to marry each other. This may involve teenage mothers who are less likely to marry as well as adult women who delay marriage while pursuing educational and career opportunities. Single-parenting is also caused by "natural circumstances" where either the father or mother dies, leaving the child or children with the other surviving parent.

Parent-Child Living Arrangements: The GDHS of 2008 and 2014 asked questions related to parent living arrangements with children. The original variable sought to find out about the survivorship and residence of biological parents. The question was therefore asked as follows: Does (name's) natural mother usually live in this household or was she a guest last night? The same question was asked about the (name's) natural father. The response was either "Yes" or "No". This question was asked to household members up to 17 years only.

From the responses, four categories of parent-child living arrangements were computed for this study for children between age six and seventeen years as follows:

- i. Child does not live with any of his/her parents
- ii. Child lives with only mother
- iii. Child lives with only father
- iv. Child lives with both parents (or double parents)

It is to be noted that in this study, children who live with only one of their biological parents (with mother alone or father alone) are considered to be in single-parent households.

Required level of education attained: The Question on educational level was asked as follows: What is the highest level of school you attended with the following five levels of responses: No Education/Pre-school, Primary, Middle/Junior High School (JHS), Secondary/Senior High

School (SHS), and Higher? The level of education attained is affected by age of the child as children whose ages do not permit them to be at certain levels of education are not expected to be there. It was found that the number of children between the ages of six and seventeen years who have attended school above SHS level (higher education) was small (less than eight in both 2008 and 2014) and as a result, they were added to the children who are attending SHS in this analysis.

Based on the officially expected school-going age of children between the ages of six and seventeen years in Ghana, in this study, this variable was recomputed into three categories such as: “children who have no formal education and those in pre-school” (No education), those who “are not attending the required level of education” based on their expected school-going age and then children who “are attending the required level of education” also based on their expected school-going age. In Ghana, children who are between the ages of six and 11 years are expected to be attending Primary School. Children between 12 and 14 years are expected to be attending Junior High School (JHS) whereas children between 15 and 17 years are expected to be attending Senior High School (SHS).

These age groupings were used in this study to determine whether the child has no education, the child is not attending the required level of education and also whether the child is attending the required level of education. These three categories of educational levels are discussed together under the variable name, children’s required level of education attained. The level of education attending was then re-computed based on the school going age of the child and grouped into three categories by adopting the following procedure:

- a) All children (6 to 17 years) who have no education as well as those in pre-school were put together and were coded as zero (0). This group of children is referred to in this study as “children who have no education”
- b) All children who are of junior high school (JHS) going age and are in primary school and all children who are of senior high school (SHS) going age but are in either JHS or primary school were all added together and coded as one (1). This group of children is referred to as “children who are not attending the required level of education” in this study.
- c) All children who are of primary school going age and are in primary school and above, all children who are of JHS going age but are in JHS and above as well as all children who are of SHS going age and are in SHS and above are all added together and coded two (2). This group of children is referred to as “children who are attending the required level of education”.

The response variable for children’s level of education attained which originally has five levels of responses (No Education, Primary School, Junior High School, Senior High School and Higher) were therefore recomputed into three groups of children based on the required level of education attained as follows:

- 1) children who have no education
- 2) children who are not attending the required level of education and
- 3) children who are attending the required level of education.

Household and Household Head: The key variables used for this analysis were taken from the household member data file of the GDHS of 2008 and 2014. In both surveys, a household was defined as a person or a group of persons related or unrelated, who live together in the same house or compound, share the same housekeeping arrangements, and eat together or catered for

as a unit. Similarly, Jacobson et al. (2012), in their study of Household Change in the United States of America defined a household as comprising all the people who occupy a single housing unit, regardless of their relationship to one another. They indicated that household may be a family, or it may be a group of roommates or two unmarried partners. Haup and Kane (1998), however, defined household as a group of two or more persons residing together or staying apart and related by birth, marriage or adoption.

Based on the above definitions of a household, members of a household need not necessarily be related by blood or marriage so that house helps may form part of a household. On the other hand, not all relations in the same house or compound are necessarily members of the same household. For instance, an example was provided in the 2000 Population and Housing Census of Ghana (GSS, 2005) such as “two brothers who live in the same house with their wives and children, may or may not form separate households depending on their catering arrangements”. In this study, we adopt Jacobson et al.’s (2012) definition of household. The head of household can therefore be a male or female member of the household recognized as such by the other household members. The head of household is generally the person who has economic and social responsibility for the rest of the members of the household. All relationships are defined with reference to the head. The role of the head of household can also be said of parents and or guardians and their children.

Sex of Child: Sex of child (household member) was verified as: Is (name) male or female? This was done to know about the sex composition in each of the households.

Age of child: With regard to age, the question was assessed based on the number of completed years in relation to the last birth date. The question was asked as follows: How old is (name)?

The age was recorded in whole numbers/completed years. In this study age was regrouped as follows: 6-11 years, 12-14 years and 15-17 years.

Age of Parent or Guardian: The age of parent or guardian which was originally captured in whole/completed years was also regrouped into ≤ 30 years, 30-39 years, 40-49 years, 50-59 years and 60+ years.

Household Wealth Index: Household wealth index (status) variable has one record for every household. Standard variables were introduced to the recode definition for both the household and individual questionnaires for households, for women and for men. Ownership of some household items and equipment were assessed. Respondents were asked about a range of questions on household characteristics such as access to electricity, source of drinking water, sanitation facilities, type of toilet facility, number of rooms used for sleeping, types of cooking fuel used in the household and type of main material used for flooring of their house. Wealth quintile was constructed using information on household ownership of a number of consumer items, ranging from a bicycle to a television or car, etc. Each asset was assigned a weight (factor score) generated through principal components analysis. Each household earned a score for each asset, and the scores were summed for each household. Individuals were then ranked according to the total score of the household in which they reside. The sample is divided into quintiles from one (lowest) to five (highest).

Sex of head of Household/Parent or Guardian: Sex of head of household/parent or guardian was captured as being a male or female.

Place of Residence: Place of residence was indicated as Urban or Rural.

Region of residence: Information on region was indicated using the ten regions of Ghana.

The number of children in household: Total number of persons in the household was captured as absolute whole numbers. In this study, number of children six to 17 years were counted as 1, 2, 3, 4, 5, 6, 7 and 8+.

Parent or household member supports child: The responses below were asked in the following ways: Ask mother/father or caretaker the following questions: During the past seven days, did you or someone in your household help/deal with child in the following ways:

- i. Help child with homework: 1) Does not provide support, 2) Provide support, 3) Don't Know
- ii. Communicate to child about high expectations for him/her: 1) Does not Communicate High Expectations, 2) Communicate High Expectations, 3) Don't Know
- iii. Relieve child of some household chores: 1) Does not relieve child, 2) Relieve Child, 3) Don't Know

All Don't Know responses were excluded from the analysis because the Don't Know responses are seen as inconsistent with the questions asked. Table 3.1 shows the variables used for the analyses with the various labels or categories and the reference categories which are mostly the last category of each variable and symbol ® is attached to it.

Table 3.1 Definitions and Measurements of Variables Used in the Multinomial Logistic Regression Analysis

No.	Variable Definition	Label
1	Region	10 categories: 1= Western, 2 = Central, 3 = Greater Accra, 4 = Volta, 5 = Eastern, 6 = Ashanti, 7 = Brong Ahafo, 8 = Northern, 9 = Upper East, 10 = Upper West ®
2	Type of Place of Residence	2 categories: 1 = Urban, 2 = Rural ®
3	Sex of Parent, Guardian	2 categories: 1 = Male, 2 = Female ®
4	Household Wealth Index	5 categories: 1 = Poorest, 2 = Poorer, 3 = Middle, 4 = Richer, 5 = Richest ®
5	Sex of Child	2 categories: 1 = Male, 2 = Female ®
6	Age of Parent or Guardian	5 categories: 1= <30 years, 2 =30-39 years, 3 =40-49 years, 4 = 50-59 years, 5 = 60+ years®
7	Number of Children in the Household	8 categories: 1 = 1=1, 2=2, 3=3, 4=4, 5=5, 6=6, 7=7, 8=8+®
8	Parent-Child Living Arrangements	4 categories: 0 = Child does not live with any of parents, 1 = Child lives with only mother, 2 = Child lives with only father, 3 = Child lives with both parents ®
9	Age of Child	3 categories: 1 = 6-11 years, 2 = 12-14 years, 3 = 15-17 years ®
10	Required Level of Education Attained	3 categories: 0 = No education, 1 = not attending the required level of education, 2 = Attending the required level of education ®
11	Parent or household member help child to do homework	3 categories: 1= Did not provide help, 2 = Provided Help ®
12	Parent or household member tell child about high expectations	3 categories: 1= No- Did not tell child of high expectations, 2 = Yes – told child of high expectations ®
13	Parent or household member relieve child from some of the household chores	3 categories: 1= No – Did not relieve child of household chores, 2 = Yes –Relieved child of household chores®

Note: ® = Reference Category

3.3 Techniques of Analyses

Analysis has been based on children who are aged between six and seventeen years to understand how well parent living arrangements with children as well as selected demographic social and economic variables correlate with children's required level of education attained. Data has been analysed in different stages as follows:

The first stage of analysis was the univariate analysis using demographic and socio-economic characteristics of children aged between six and 17 years, the parent/guardian, household as well as community characteristics. The analysis consisted of frequency of occurrence and percentage distribution of respondents. The univariate analysis was followed by bi-variate analysis where parent-child living arrangements were cross-tabulated separately with selected demographic, social and economic characteristics of the child. Another bi-variate analysis was done involving parent-child living arrangements and children's required level of education attained. Parent-child living arrangements present a complex relationship and its influence on children's required level of educational attainment can be as a result of the interplay of a lot of factors which can be direct or indirect. In this study, efforts are made to control or minimize confounding factors that may affect children's educational attainment. By so doing, the study will help to bring out the other contributors to parents living arrangements of children's educational attainments when other variables are controlled. The analyses were carried out using parent-child living arrangements by controlling for selected demographic and socio-economic variables and children's highest level of education attended for the trivariate level of analysis.

Test of significance was done to ascertain whether there is a statistically significant difference between two or more variables by examining the p-values obtained. The p-value is a number between 0 and 1 and interpreted in the following ways:

- A small p-value (typically ≤ 0.05) indicates strong evidence against the null hypothesis which states that an effect is absent so you reject the null hypothesis and accept the alternative or experimental hypothesis that says that an effect will be present.
- A large p-value (>0.05) indicates weak evidence against the null hypothesis, so you fail to reject the null hypothesis
- P-value very close to the cutoff (0.05) are considered to be marginal (could go either way).

In this study, the multivariate model was tested and analysed at both 99% and 95% significant levels.

Multinomial logistic regression (often called multinomial regression) is suitable to predict a nominal dependent variable with one or more independent variables. It is sometimes considered to be an extension of binomial logistic regression because it allows for a dependent variable with more than two categories (Schwab, 2002; Tabachnik & Fidell, 2001). Multinomial logistic regression can have nominal and or continuous independent variables and can have interactions between independent variables to predict the dependent variable. The dependent variable (which in this case is required level of education attained) is treated as a categorical variable with three categories with one or more nominal and/or continuous independent variables which is allowed by the model.

The Multinomial Logistic Regression Model presents a table of parameter estimates (also known as the coefficients of the model). An important feature of the multinomial logistic model

is that it estimates $k-1$ models, where k is the number of levels of the outcome variable. Each dummy variable has a coefficient for each of the independent variables representing the comparison categories to the reference category (Aldrich & Nelson, 1984). This made the multinomial logistic regression model a suitable one for the analysis of this study. NOMREG command was used to run the multinomial logistic regression which assumes that there is no ranking or ordering in the categorical dependent variable. The Statistical Package for Social Sciences (SPSS) was used to run the coefficients in the multinomial logistic regression analysis. However, in selecting the variables to be used in the multinomial logistic regression model, thorough examination was done by correlating variables with each other. Variables that are highly correlated and at the same time are highly significant at level 0.01 with the dependent variables were first selected. Among those variables selected, if there are two that are highly correlated, only one was taken so as to avoid the effect of multicollinearity that might affect the reliability of the estimates of regression coefficients. In all the selected variables, the last category was used as reference category.

3.3.1 Assumptions about the Multinomial Logistic Regression Analysis

When choosing multinomial logistic regression to do statistical analysis, part of the process involves checking to be sure that the data can actually be analysed using multinomial logistics regression. This can be done by making sure that the data fulfil six assumptions that are required for multinomial logistic regression to give valid results (Fox, 1984; Hosmer & Lemeshow, 1989; Menard, 1995). The multinomial logistic regression model therefore seems to be more appropriate than other regression models for the analysis of this study as both dependent and independent variables meet the following assumptions that the model is based on:

Assumption 1: that the dependent variable should be measured at the nominal level.

Assumption 2: that there must be one or more independent variables that are continuous, ordinal or nominal (including dichotomous variables)

Assumption 3: to have independence of observations and the dependent variable should have mutually exclusive and exhaustive categories

Assumption 4: there should not be multicollinearity which occurs when there are two or more independent variables that are highly correlated with each other. This leads to problems with understanding which variable contributes to the explanation of the dependent variable

Assumption 5: there is the need to have a linear relationship between any continuous independent variables and the logit transformation of the dependent variable

Assumption 6: there should be no outliers (high leverage values or highly influential points)

Relevance of Multinomial Logistic Regression Analysis

The relevance of applying the multinomial logistic regression is that, after the trivariate level analysis, in order to gain insights on the effect of the parent-child living arrangements and controlling for child, parent, household and community background characteristics on required level of education attained, the multinomial logit model is to be fitted to examine whether some of the observed relationships at the bi-variate as well as trivariate levels persist.

3.3.2 Model Parameter Estimates in Multinomial Logistic Regression

Multinomial Logistic Regression Model presents a table of parameter estimates. As there were three categories of the dependent variable (i.e., children who have no education, children who are not attending the required level of education and children who are attending the required level of education), there are two sets of logistic regression coefficients. “Children who are attending the required level of education” is used as the referent group. Each dummy variable has a coefficient for each of the independent variables.

The first set of coefficients is found in the “child has no education” row (representing the comparison of child has no education to the reference category; child is attending the required level of education). The second set of coefficients is found in the “child is not attending the required level of education” row (representing the comparison of the child is not attending the required level of education to the reference category; child is attending the required level of education). The intercept is the multinomial logit estimates for children who have no education and children who are not attending the required level of education when the predictor variables in the model are evaluated at zero.

The $\text{Exp}(B)$ in Multinomial Logistic Regression are the odds ratios for the predictors. They are the exponentiation of the coefficients. The odds ratio of a coefficient indicates how the risk of the outcome falling in the comparison group compared to the risk of the outcome falling in the reference group changes with the variables in question. An odds ratio > 1 indicates that the risk of the outcome falling in the comparison group relative to the risk of the outcome falling in the reference group increases as the variable increases. In other words, the comparison outcome is more likely. An odds ratio < 1 indicates that the risk of the outcome falling in the comparing group relative to the risk of the outcome falling in the reference group decreases as the variable increases. In general, if the odds ratio is < 1 , the outcome is more likely to be in the reference group.

3.4 Limitations of Study

Because the study is based on secondary data, i.e., the Ghana Demographic and Health Surveys (GDHS) of 2008 and 2014, there are some limitations with regard to the availability of some key variables the researcher would have used. The surveys have limited information on certain social and economic indicators as compared to demographic indicators. This study initially had

a question concerning the causes leading to the changes in parent-child living arrangements. This question is considered critical in the analysis to know the potential causes of marriage dissolution. Because the surveys have no question on the above, no analysis could be carried out on the causes of marriage dissolution. The surveys also have no information about duration of all the parent-child living arrangements. As a result, there was no analysis to ascertain the duration of parent-child living arrangements and how it may correlate with children's required level of education attained. Other variables that were considered to be important in this study but were not available included educational level and occupation of parents or guardians. Children's required level of educational attainment was recomputed using the expected school going age, in a situation whereby there are biases in age, this will affect the educational attainment. The biological parent used to re-compute parent-child living arrangement may be biased when one intends to avoid embarrassment or not to be seen as ungrateful to foster parents. The GDHS data reported children (6-17 years) who have "No education" with "Pre-school education" as such all pre-school children will appear to have no education instead of "children who are not attending the required level of education". The analysis was limited to children between the ages of six and seventeen (that is the age bracket which have data related to parent-child living arrangements).

CHAPTER FOUR

PARENT-CHILD LIVING ARRANGEMENTS AND CHILD, PARENT, HOUSEHOLD AND COMMUNITY CHARACTERISTICS

4.1 Introduction

This chapter presents univariate analyses involving parent-child living arrangements, child, parent, household as well as community characteristics and required level of education attained. Variables have been analysed in frequencies and percentages and presented in tables and figures. The variables have been grouped into parent-child living arrangements, child characteristics, head of household/parent or guardian characteristics, household characteristics, community characteristics and required level of education attained by children within 6-17 years.

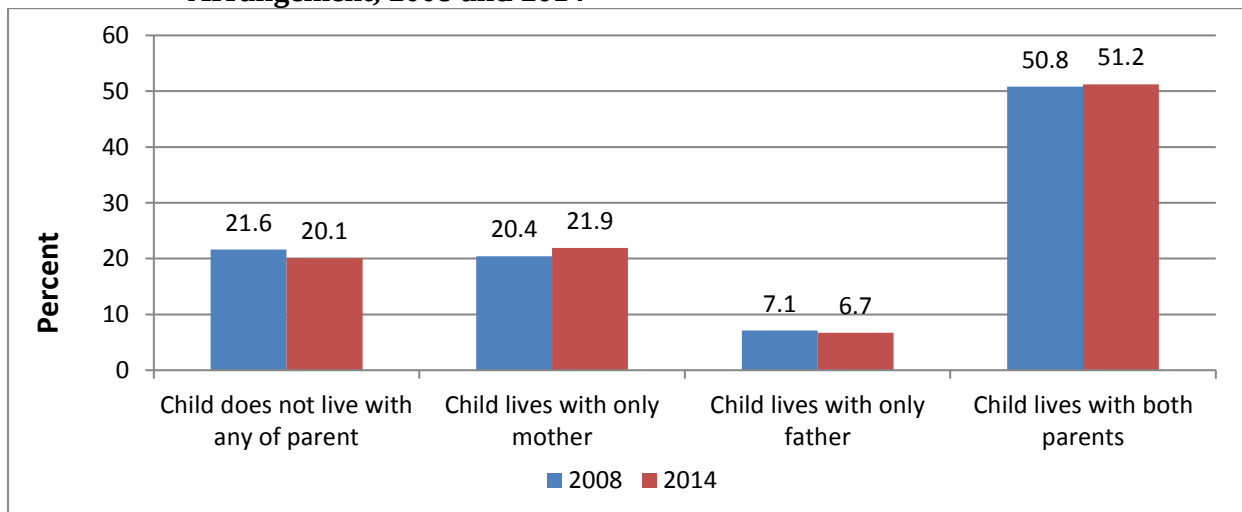
4.2 Parent-Child Living Arrangements

Parent-child living arrangements are considered to be an important variable that will help predict children's required level of education attained. Parents serve as the most single important care takers of children. Parents make critical decisions in the lives of children and their education and so it is hypothesized that the presence of parents in the house is an important determining factor of children's educational attainment.

Figure 4.1 shows the percent distribution of children by their parent-child living arrangements for 2008 and 2014. Analysis of both 2008 and 2014 data showed that over half of the children (50.8% in 2008 and 51.2% in 2014) live with both parents. A fifth (20.4% in 2008 and 21.9%

in 2014) of the children live with only their mothers, and 21.6 percent in 2008 and 20.1 percent in 2014 do not live with any of their biological parents. The figures further show that 7.1 percent in 2008 and 6.7 percent in 2014 of children live with only their fathers. Even though GSS (2015) report provides estimation of children below 18 years who have both parents alive to be over 90 percent, it is found in this study that only a little over 50 percent of children 6-17 years live with both parents. This is an indication that some of the children who have both parents alive are either living with only one of the parents or may be living with other relatives or friends possibly due to divorce, separation or fostered parents. It can also be as a result of education or work that made some of these children leave the homes of their biological parents to live elsewhere.

Figure 4. 1 Percentage Distribution of Children by type of Parent-Child Living Arrangement, 2008 and 2014



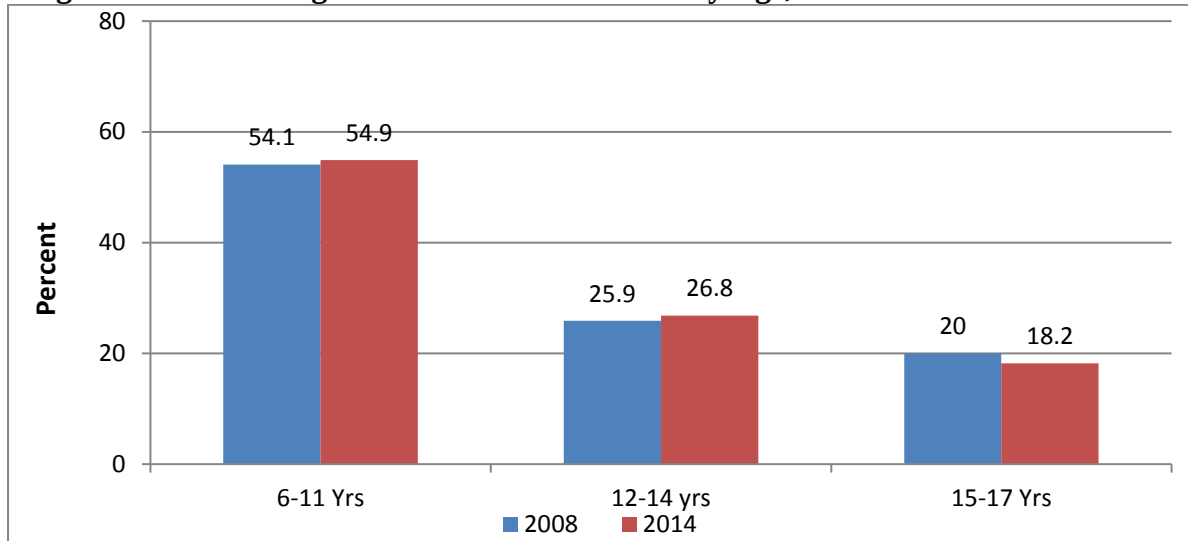
Source: GDHS 2008 and 2014, Computed from Household Member Data File

4.3 Child Characteristics

4.3.1 Age of Child

Child characteristics are considered to be important variables in determining parent-child living arrangements and also assessing the required level of education attained. Age is one of the most important demographic variables that help to categorize children according to their school going age. Age is combined with the educational level attained to determine whether the child is attending the required level of education or not. In most cases, it is the age of the child that is used to take a decision as to which of the parents should take the custody of the child when there is marital dissolution or separation. It is argued that marital dissolution, which is one of the leading causes of children not living with both parents might be more harmful for younger children than older children. Liu (2007) indicated that young children might be less resilient to the effects of parental separation due to their relative immature social, economic and cognitive development and their greater dependence on parents as their primary caregivers especially the mothers.

Figure 4.2 presents data on children classified into three age groups (in accordance with the official school going age ranges). Among the children six to 17 years, 54.1 percent in 2008 and 54.9 percent in 2014 were age group 6-11 years, 25.9 percent in 2008 and 26.8 percent in 2014 were within the age group 12-14 years whereas 20 percent in 2008 and 18.2 percent 2014 were within the age group of 15-17 years. The observed pattern of distribution of children population by age groups is a true reflection of the young population we have in Ghana.

Figure 4. 2 Percentage Distribution of Children by Age, 2008 and 2014

Source: GDHS 2008 and 2014, Computed from Household Member Data File

4.3.2 Sex of Child

Sex is another demographic variable that helps to categorize children into their biological make-up as being a male or a female. Sex serves as an important variable in this study to determine the required level of education attained based on the male/female dichotomy. This will help to establish whether there is sex preference when it comes to education as well as parent-child living arrangements in Ghana. Figure 4.3 shows the distribution of children according to sex. The distribution has slightly higher proportion of males than females in 2008 (50.9% males and 49.1% females) as well as in 2014 (51% males and 49% females).

Figure 4. 3 Percentage Distribution of Children by Sex, 2008 and 2014

Source: GDHS 2008 and 2014, Computed from Household Member Data File

4.4 Head of Household/Parent or Guardian Characteristics

Head of household/Parent or guardian characteristics are considered as important variables that help to explain parent-child living arrangements and required level of education attained. Variables considered under the head of household/parent or guardian characteristics include; age and sex of head of household/parent or guardian, parent or household member who helps child to do homework, parent or household member who communicates to child about high expectation and parent or household member who relieves child from some of the household chores. It is to be noted that data on variables such as; whether child receives help from parents or household members to do homework, whether parents or household members communicate high expectations to child or not as well as whether parent or household members relieve child from some of the household chores were present in 2014 but not 2008.

4.4.1 Age of Head of Household/Parent or Guardian

The age distribution of head of household/parent or guardian has been presented in Table 4.1. From the table, less than ten percent (7.8% in 2008 and 6.0% in 2014) of the children have their heads of household/parents or guardians aged below 30 years. More than fifty-five percent of the children (55.8% in 2008 and 56.1% in 2014) have their heads of household/parents or guardians aged between 30 and 49 years. The rest of the children (36.3% in 2008 and 37.9% in 2014) have their parents or guardians aged 50 years and above.

Table 4. 1 Percentage Distribution of Children by Age of Head of Household/Parent or Guardian, 2008 and 2014

Age of head of Household/Parent or Guardian	GDHS 2008		GDHS 2014	
	Frequency	Percent	Frequency	Percent
<30	1137	7.8	795	6.0
30-39	3771	26.0	3420	25.6
40-49	4321	29.8	4066	30.5
50-59	2708	18.7	2683	20.1
60+	2554	17.6	2375	17.8
Total	14491	100.0	13339	100.0

Source: GDHS 2008 and 2014, Computed from Household Member Data File

NB: Head of household can be the child's parent or guardian

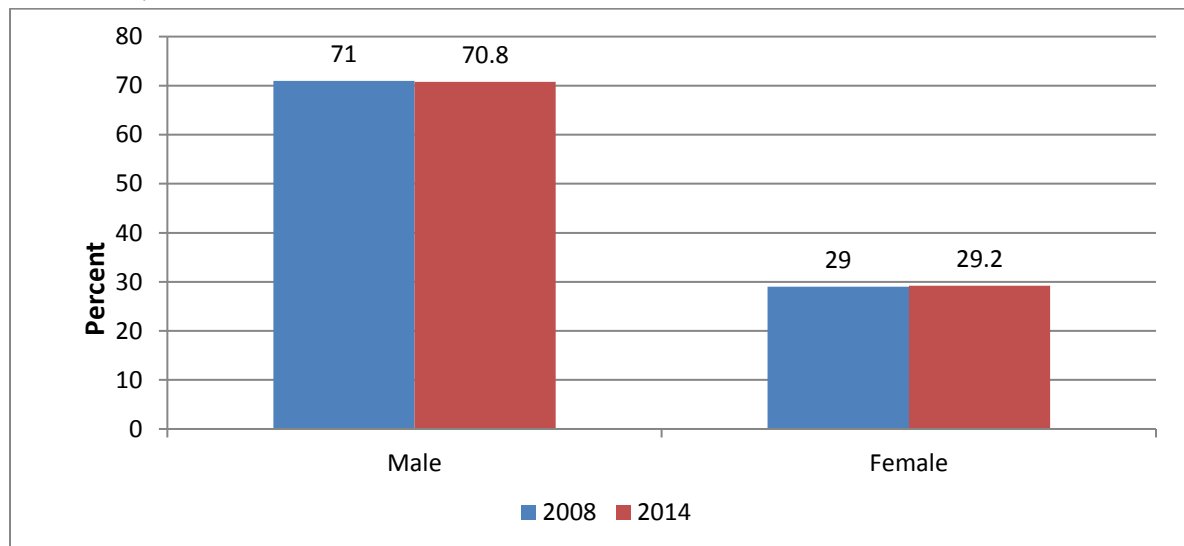
4.4.2 Sex of Head of Household/Parent or Guardian

Sex of head of household/parent or guardian is another demographic variable that was analysed in this study and presented in Figure 4.4. Sex of head of household/parent or guardian is relevant in this study to help analyse whether a particular sex of a head of household/parent or guardian prefers sending children to school and allow the children to remain in school than the other. It is anticipated that when the head of household/parent or guardian has resource constraints, then children that live in such households will be denied a host of social opportunities that might be available to children belonging to other households. Ghana's Maternal Health Survey (2007) reported on the distribution of households by sex of head of the household as well as one of the important household characteristics mostly associated with differences in household socio-

economic levels. The report indicated that female-headed households were frequently poorer than male-headed households. The finding was consistent with the United States of America Bureau of the Census (1979) statistics which indicated that female single parents comprise 50 percent of all families in poverty.

From Figure 4.4, higher proportion of the children have the males as their heads of household/parents or guardians (about 71% in both 2008 and 2014) whilst 29.0 percent had the female guardians or parents. This finding is consistent with Oparinde's (2010) study which indicated that globally, one-fourth to one-third of all families is headed by single mothers. It is assumed that children who mentioned the female as their heads of household/parents or guardians are likely to have come from single-parent households than children who come from double-parent households.

Figure 4. 4 Percentage Distribution of Children by Sex of Head of Household/Parent or Guardian, 2008 and 2014



Source: GDHS 2008 and 2014, Computed from Household Member Data File
NB: Head of household can be the Child's Parent or Guardian

4.4.3 Parent or Household Member Help Child to do Homework

All young school children need parental support to do their homework and also need to be supervised with respect to activities concerning their schooling. A variable asking for parent or household member providing assistance to school children to do their homework is therefore relevant in assessing children's required level of educational attainment. It is anticipated that when a child is helped to do his/her homework, the child will develop interest in his or her studies which will ultimately make the child pass his or her exams faster and easier than their counterparts who do not receive support. Table 4.2 presents proportion of children whose parents or household members assist them to do homework. From the table, 61percent of children do not receive any assistance from either their parents or other household members when doing their homework whereas 39.0% indicated that they receive support to do their homework. This can be attributed to the fact that there are several of the parents or household members in Ghana who are illiterate especially in English and as a result might not be in a position to support their children to do their homework. The other reason could also be that, parents are so busy working all day in order to earn incomes/wages to take care of their homes, hence may not have enough free time to assist their children to do their homework.

4.4.4 Parent or Household Member Communicates High Expectation to Child

Children need encouragement in order to build on their high self-esteem. Children's self-esteem serves as strength to perform optimally in all their endeavours. Table 4.2 presents proportion of children whose parents or household members communicate with them about the parents' high expectations for the children. From the table, 71.4 percent of the children have their parents or household members communicating high expectation for them whereas 28.6 percent do not have such opportunity.

Table 4.2 Percentage Distribution of Children by Parent or Household Member Support to Child, GDHS, 2014

Type of Parent or Household Member Support to Child	Frequency	Percent
Does child Receive Help from Parent of Household Member to do Home Work?		
Yes	3122	39.0
No	4882	61.0
Does Parent of Household member Communicate High Expectation for Child?		
Yes	6717	71.4
No	2691	28.6
Does Parent of Household Member Relive Child from some of the Household Chores?		
Yes	3312	35.2
No	6096	64.8

Source: GDHS 2014, Computed from Household Member Data File

NB: Variable not available in 2008, Don't Know (DK) responses were omitted from the analysis

4.4.5 Parent or Household Member Relieves Child of Some Household Chores

When school children are relieved of some of the household chores, they gain more time to study and to do their homework. It also enables the children have ample time to rest and to gain enough strength to carry on with their school activities whereas children who are overburdened with household chores may not have enough time to focus on their school activities. Table 4.2 presents proportion of children whose parents or household members relieve them of some of the household chores. From the table, nearly 65 percent of children are not relieved of some of the household chores whereas 35.2 percent are relieved.

4.5 Household Characteristics

4.5.1 Number of Children in the Household

Number of children in the household is considered to be one of the important demographic variables in this analysis. It is assumed that children in a household will be competing for the household scarce resources committed to children's education. As such, when the number of children in a household increases, all things being equal, the household resources have to be rationed and so it is not all the children that may benefit from formal education and or attend the required level of education as some might drop along the way. Ghana's Maternal Health Survey (2007) has indicated that the size and composition of the household affect the allocation of financial and other resources among household members which will eventually affect or influence the overall well-being of the individuals involved.

From Table 4.3, as the number of children in the households increases, their proportion also increases till when the children in the household is 5 then the proportion starts to decrease (from 6 children in the households) in both 2008 and 2014.

Table 4. 3 Percentage Distribution of Children by Number of Children in Household, 2008 and 2014

Number of children in the Household	GDHS, 2008		GDHS, 2014	
	Frequency	Percent	Frequency	Percent
1	42	0.3	18	0.1
2	479	3.3	490	3.7
3	1103	7.6	1132	8.5
4	1841	12.7	1783	13.4
5	2499	17.2	2411	18.1
6	2457	17.0	2391	17.9
7	1988	13.7	1784	13.4
8+	4082	28.1	1330	25.0
Total	14491	100.0	11339	100.0

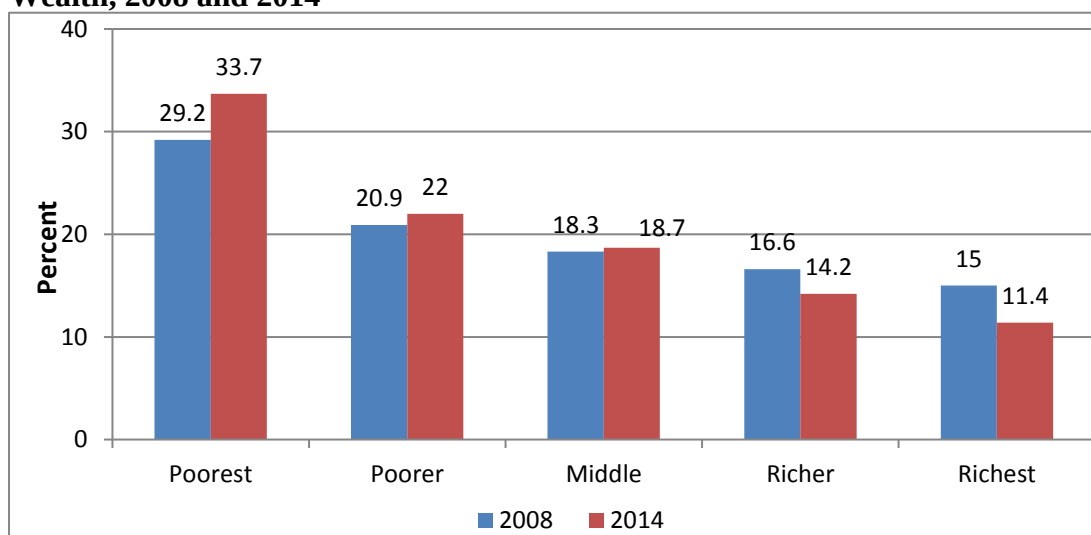
Source: GDHS 2008 and 2014, Computed from Household Member Data File

4.5.2 Household Wealth Status

Household wealth status is a very important economic variable in the analysis of parent-child living arrangements as well as required level of education attained within the Ghanaian settings. Household wealth status has been classified into five (quintiles) according to the measure of household wealth index developed by the Ghana Statistical Service and used for the 2008 and 2014 Ghana Demographic and Health Surveys. The analysis examined characteristics of household's ownership of certain basic tools and equipment which distinguished between poor and non-poor households in Ghana.

From Figure 4.5, more than half of the children (50.1% in 2008 and 55.7% in 2014) came from households classified as poorer and poorest (worse). It can also be seen from Figure 4.5 that 31.6 percent in 2008 and 25.6 percent in 2014 of the children came from households classified as richer and richest (better). The proportion of children living in households classified as richer or richest (better) is lower in 2014 compared to 2008.

Figure 4.5 Percentage Distribution of Children by Level of Household Wealth, 2008 and 2014



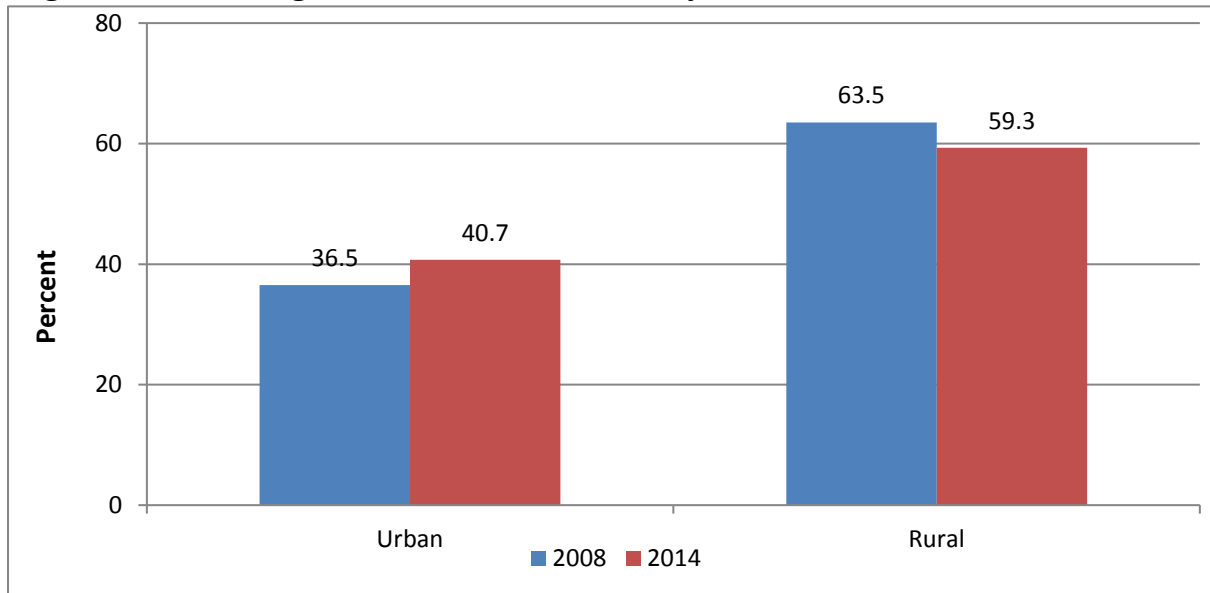
Source: GDHS 2008 and 2014, Computed from Household Member Data File

4.6 Community Characteristics

4.6.1 Place of Residence

Place of residence is a demographic variable which helps to categorize children into their urban-rural places of residence. This urban-rural categorization is crucial in this analysis to help us know the differences in parent-child living arrangements and also assess whether there are differences in the educational attainments of children by virtue of their places of residence. It is possible that urban-rural residence will present variations in educational opportunities, resources, access and costs. Generally, cost of education in urban areas is more expensive than cost of education in rural areas. As Schramm's (2006) study has indicated, almost all divorces result in at least one geographic move. Relocation, either from urban to rural or vice versa will have a direct effect on parent-child living arrangements and also on educational attainment.

From Figure 4.6, majority of the children in the survey live in rural areas (63.5% in 2008 and 59.3 in 2014) compared to the proportion of children who are resident in urban areas (36.5% in 2008 and 40.7% in 2014). Also, among the children living in urban areas, the proportion is higher in 2014 than in 2008 whereas the reverse is true for children in rural areas.

Figure 4. 6 Percentage Distribution of Children by Place of Residence, 2008 and 2014

Source: GDHS 2008 and 2014, Computed from Household Member Data File

4.6.2 Region of Residence

There are ten (10) regions in Ghana with varied levels of development including educational endowments and opportunities within and even across regions. Resource and information flow also differs between and within regions. It is therefore assumed that region of residence will present another important determinant of children's educational attainment in Ghana. Percentage distribution of children 6-17 years of age according to region of residence has been presented in Table 4.4. The 2008 data show that the highest proportion of children was found in the Ashanti Region (13.7%), followed by Northern Region (12.8%) whereas the least proportion was recorded in the Central Region (7.7%). In 2014, the highest proportion of the children were counted in the Northern Region (13.2%), followed by the Brong Ahafo Region (10.8%) whereas the least was counted from the Greater Accra Region (8.3%).

Table 4. 4 Percentage Distribution of Children by Region 2008 and 2014

Region	GDHS, 2008		GDHS, 2014	
	Frequency	Percent	Frequency	Percent
Western	1272	8.8	1196	9.0
Central	1116	7.7	1344	10.1
Greater Accra	1448	10.0	1112	8.3
Volta	1271	8.8	1173	8.8
Eastern	1405	9.7	1280	9.6
Ashanti	1983	13.7	1333	10.0
Brong Ahafo	1273	8.8	1446	10.8
Northern	1856	12.8	1756	13.2
Upper East	1331	9.2	1395	10.5
Upper West	1536	10.6	1304	9.8
Total	12955	100.0	12035	100.0

Source: GDHS 2008 and 2014, Computed from Household Member Data File

4.7 Required Level of Education Attained

The required level of education attained by children was analysed and presented in Table 4.5.

The proportion of children who had no education in 2008 constitutes nearly a quarter (24.8%) whereas in 2014 the proportion of children who had no education was one-fifth (20.2%). The proportion of children who are not attending the required level of education remained nearly the same in both 2008 (35.2%) and 2014 (35.1%). There has been a higher proportion of children who are attending the required level of education in 2014 (i.e., 44.6%) than in 2008 (i.e., 40.0%).

Table 4. 5 Percentage Distribution of Children by the Required Level of Education Attained, 2008 and 2014

Educational Level Attained	GDHS 2008		GDHS 2014	
	Frequency	Percent	Frequency	Percent
No Education/Pre-School	3591	24.8	2700	20.2
Not Attending the Required Level of Education	5095	35.2	4684	35.1
Attending the Required Level of Education	5792	40.0	5952	44.6
Total	14478	100.0	13336	100.0

Source: GDHS 2008 and 2014, Computed from Household Member Data File

4.8 Summary

Chapter Four examined variables related to parent-child living arrangements, child, parent, household and community characteristics as well as required level of education attained by children six to seventeen years. Fifty percent (50%) of the children live with both parents, more than half of the children (54.1% in 2008 and 54.9% in 2014) were within the ages of six to eleven years. A little over one-quarter (25.9% in 2008 and 26.8% in 2014) were within twelve to fourteen years old whereas about one-fifth were within fifteen and seventeen years of age. The proportion of children were almost the same for males and for females in both 2008 and 2014. The proportion of children living in rural areas was more than those in urban areas. With regard to household wealth status, 50.1 percent in 2008 and 55.7 percent in 2014 of children came from households categorized as poorer or worse whilst 31.6 percent in 2008 and 25.6 percent in 2014 were richer or better. The proportion of children who have no education constituted nearly a quarter (24.8%) in 2008 but one-fifth (20.2%) in 2014. The proportion of children who are not attending the required level of education remained nearly the same (35%) in 2008 and in 2014. However, the proportion of children who are attending the required level of education was higher in 2014 (44.6%) than in 2008 (40.0%).

CHAPTER FIVE

ASSOCIATION BETWEEN CHILD, PARENT, HOUSEHOLD AND COMMUNITY CHARACTERISTICS AND PARENT-CHILD LIVING ARRANGEMENTS

5.1 Characteristics of Child and Parent-Child Living Arrangements

5.1.1 Age of Child and Parent-Child Living Arrangements

The analysis of age of child and parent-child living arrangements has been presented in Table 5.1. From the table, it can be found that more than half of the children live with both parents in both 2008 (50.8%) and in 2014 (51.2%) whereas one-fifth of the children (20.4% in 2008 and 21.9% in 2014) live with only their mothers and a similar proportions (i.e., 21.7% in 2008 and 20.1% in 2014) also do not live with any of their parents. Seven percent (7.1% in 2008 and 6.7% in 2014) of the children live with only their fathers. The proportions of children who live with both parents as well as those who live with only their mothers are slightly higher in 2014 than in 2008 whereas the proportions of children who live with only their fathers and those who do not live with any of their parents are slightly lower in 2014 than in 2008.

The proportion of children who live with both parents decreases from a lower age group to a higher age group in both 2008 and 2014. Meanwhile, the proportion of children who live with only one of their parents (either father or mother alone) as well as those who do not live with any of their parents decreases from a lower age group to a higher age group in both 2008 and 2014. The link between the observed reducing proportions of children living with both parents and the increase in age group of children can be attributed to either the death of a parent or

divorce because of the higher likelihood of older children to have older parents than younger children and also because of the higher probability of older parents than younger parents dying. The probability of an older child having a parent or both dying all things being equal, is higher than it is for a younger child. It could also be that the older children feel that they are grown and leave home to reside elsewhere on their own or leaving home to stay with other relatives in order to go to school or seek for jobs. This can be as a result of child fostering which is a widespread traditional practice in many of sub-Saharan African countries (Grant and Yeatman, 2013; Akresh, 2009; Monasch and Boerma, 2004; Mason, 1997 and Isiugo-Abanihe, 1985).

The above finding is in line with Popenoe's (1996) study which suggested that there was a rapid increase in the number of children who will live without both of their parents in the latter half of the Twentieth Century. Norton and Glick (1986) projected that nearly 60% of American children will spend part of their childhood in the absence of one of their parents. Generally, the pattern of age group of children and parent-child living arrangements is similar in 2008 and 2014. The p-value (<0.001) is an indication that age has a significant association with parent-child living arrangements.

Table 5. 1 Percentage Distribution of Children by Age of Child and Parent-Child Living Arrangements, 2008 and 2014

Age Group of Child	Parent-Child Living Arrangements GDHS 2008				Parent-Child Living Arrangements GDHS 2014			
	Child does not live with any of Parents	Child lives with Only Mother	Child lives with Only Father	Child lives with Both Parents	Child does not Live with any of Parents	Child lives with Only Mother	Child lives with Only Father	Child lives with Both Parents
6-11 years	18.4	20.0	6.6	55.0	17.7	21.4	6.0	55.0
12-14 years	24.2	20.5	7.7	47.6	23.6	21.6	7.1	47.8
15-17 years	26.7	21.6	7.8	43.9	22.4	24.3	8.5	44.9
Total	21.7	20.4	7.1	50.8	20.1	21.9	6.7	51.2
	Pearson's Chi-square Test = 153.132 P-Value = 0.000 Df = 6				Pearson's Chi-square Test = 122.234 P-Value = 0.000 Df = 6			

Source: GDHS 2008 and 2014, Computed from Household Member Data File

5.1.2 Sex of Child and Parent-Child Living Arrangements

Another important variable of interest in this study is the sex of the child and parent-child living arrangements. Results from Table 5.2 have revealed that more female children are living without any of their parents and also with only their mothers than male children whereas more male children are living with both parents and also with only their fathers than their female counterparts in 2008. In 2014, the proportion of females living without any of their parents is higher than their male counterparts whereas more males live with only their mothers, only their fathers as well as with both parents than their female counterparts. The data have also shown that the proportion of females who live with only their mothers as well as those who live with both parents are slightly higher in 2014 than in 2008. The proportion of females who lived with only their fathers as well as the proportion who lived without any of their parents were lower in 2014 than in 2008. Among the male children, the proportion that lived with only their mothers and the proportion who lived with both parents is higher in 2014 than in 2008 whereas the proportion who do not live with any of their parents as well as those who live with only their fathers was slightly lower in 2014 than in 2008. Another finding is that in 2008, among the female children, the proportion who live with only their mothers was higher than the proportion of male children living with only their mothers. The reverse scenario was observed in 2014 even though the difference was very small. As expected, the proportion of males who live with only their fathers is higher than the proportion of females who live with only their fathers. The p-value (<0.001) gives indications that the sex of the child has a strong association with parent-child living arrangements.

Table 5. 2 Percentage Distribution of Children by Sex of Child and Parent-Child Living Arrangements, 2008 and 2014

	Parent-Child Living Arrangements GDHS 2008				Parent-Child Living Arrangements GDHS 2014			
Sex of Child	Child does not Live with any of Parents	Child lives with Only Mother	Child lives with Only Father	Child lives with Both Parents	Child does not Live with any of Parents	Child lives with Only Mother	Child lives with Only Father	Child lives with Both Parents
Male	19.4	19.4	8.3	52.8	17.5	22.0	7.4	53.2
Female	23.9	21.4	5.9	48.8	22.9	21.9	6.0	49.1
Total	21.7	20.4	7.1	50.8	20.1	21.9	6.7	51.2
	Pearson's Chi-square Test = 81.329 P-Value = 0.000 Df = 3				Pearson's Chi-square Test = 69.082 P-Value = 0.000 Df = 3			

Source: GDHS 2008 and 2014, Computed from Household Member Data File

5.2 Characteristics of Head of Household/Parent or Guardian and Parent-Child Living Arrangements

5.2.1 Age of Head of Household/Parent or Guardian and Parent-Child Living Arrangements

Table 5.3 presents parent-child living arrangements by age of head of household/parent or guardian. It can be seen from the table that the relationship between the age of head of household/parent or guardian and the proportion of children who do not live with any of their biological parents was higher at the beginning, decreases and then increases (assumes a U-shaped structure) whereas the relationship between age of head of household/parent or guardian and the proportion of children who live with both parents as well as those who live with only their fathers was lower at the beginning, increases and starts to decrease (assumes conical-shaped structure) as age increases in both 2008 and 2014. The proportion of children who live with only their mothers decreases as the age of head of household/parent or guardian increases. It can be found that the proportion of children who do not live with any of their parents is higher when the age of head of household/parent or guardian is lower (<30 years) and also when the age of head household/parent or guardian is higher (≥ 60 years). One of the possible reasons

could be that younger as well as older heads of household/parents or guardians are more likely to receive children from other households to supporting them in their homes to do their household chores as their own children in the case of younger heads of household/parents or guardians will be too young to provide such help to them whereas in the case of the older heads of household/parents or guardians, their own children might be old enough to have left home to either working elsewhere or may be in school and will not be staying with their parents. Again, in the case of the older heads of household/parents or guardians, it is possible that most of them might be living with their grandchildren in their homes. This might have been the reason why the proportion of children who are not living with any of their parents is higher when head of household/parent or guardian is below 30 years (40.4% in 2008 and 33.8% in 2014) and also higher among those 60+ years (42.5% in 2008 and 43.4% in 2014) than the other age groups of heads of household/parents or guardians. The p-value (<0.001) shows a strong association between age of heads of household/parents or guardians and parent-child living arrangements.

Table 5.3 Percentage Distribution of Children by Age of Head of Household/Parent or Guardian and Parent-Child Living Arrangements, 2008 and 2014

Age of Head of Household/Parent or Guardian	Parent-Child Living Arrangements GDHS 2008				Parent-Child Living Arrangements GDHS 2014			
	Child does not Live with any of Parents	Child lives with Only Mother	Child lives with Only Father	Child lives with Both Parents	Child does not Live with any of Parents	Child lives with Only Mother	Child lives with Only Father	Child lives with Both Parents
<30	40.4	30.5	4.0	25.1	33.8	37.6	5.2	23.4
30-39	11.7	27.6	7.5	53.3	10.4	31.0	7.2	51.4
40-49	11.7	20.6	7.8	59.9	10.3	21.2	7.9	60.6
50-59	23.6	14.5	7.9	54.0	22.8	17.7	6.6	52.8
60+	42.5	11.2	6.2	40.1	43.4	9.7	4.6	42.3
Total	21.7	20.4	7.1	50.8	20.1	21.9	6.7	51.2
	Pearson's Chi-square Test = 1690.083 P-Value = 0.000 Df = 12				Pearson's Chi-square Test = 1732.538 P-Value = 0.000 Df = 12			

Source: GDHS 2008 and 2014, Computed from Household Member Data File

NB: Parent/Guardian can also be the head of household

5.2.2 Sex of Head of Household/Parent or Guardian and Parent-Child Living Arrangements

Information on sex of head of household/parent or guardian and parent-child living arrangements is presented in Table 5.4. Among children who have female heads of household/parents or guardians, the proportion who do not live with any of their parents is higher as compared to children who indicated male heads of households/parents or guardians in both 2008 and 2014 (i.e., more than twice). The data have also revealed that when the parent or guardian is a male, majority of the children (seven out of ten children) live with both parents. This type of household might be households with both father and mother living together. The data also revealed that when the head of household/parent or guardian is a female, majority of the children (six out of ten) live with only their mothers. These households are likely to be a single-mother households as in Ghana, males or fathers are mostly the household heads.

Anecdotal evidence has it that, in Ghana, whenever there is separation of marriage or divorce where father and mother are living apart, it is common to find majority of the children following their mothers in order to live with them rather than their fathers. In some other situations, the decision as to which of the parents takes custody of the children will be based on criteria such as age and sex of the child. When the child is a female and also when the child is young, he or she is more likely to follow the mother. When the head of household/parent or guardian is a female, there is the high likelihood that the household will be female single-parent household. If living with both parents is an incentive for children to be attending the required level of education as it is often made to believe, then children who live in households with a male as the head of the household/parent or guardian will have an advantage of living with both parents over children who live in households with a female as the head of the household/parent or

guardian. The p-value (<0.001) is an indication that there is a strong association between sex of head of household/parent or guardian and parent-child living arrangements.

Table 5. 4 Percentage Distribution of Children by Sex of Head of Household/Parent or Guardian and Parent-Child Living Arrangements, 2008 and 2014

	Parent-Child Living Arrangements GDHS 2008				Parent-Child Living Arrangements GDHS 2014			
Sex of Head of Household/Parent or Guardian	Child does not Live with any of Parents	Child lives with Only Mother	Child lives with Only Father	Child lives with Both Parents	Child does not Live with any of Parents	Child lives with Only Mother	Child lives with Only Father	Child lives with Both Parents
Male	16.4	0.2*	13.9	69.4	14.4	0.0	14.3	71.2
Female	34.2	59.8	0.1*	5.5	34.0	62.9	0.0	2.7
Total	21.7	19.9	7.6	50.8	20.1	20.9	76.8	51.2
	Pearson's Chi-square Test = 7715.125 P-Value = 0.000 Df = 3				Pearson's Chi-square Test = 7549.822 P-Value = 0.000 Df = 3			

Source: GDHS 2008 and 2014, Computed from Household Member Data File

NB: Parent/Guardian can also be the head of household, * can be wrong classification

5.2.3 Parent of Household Member Help Child to do Homework and Parent-Child Living Arrangements

Analysis of children whose parents or other household members help them to do homework or otherwise and parent-child living arrangements have been presented in Table 5.5. From the table, among children whose parents or other household members help them to do homework, a little over half of them (50.6%) live with both parents. Surprisingly, among children whose parents or any member of the household do not help them to do their homework, a higher percentage of them i.e., 52.3 percent also live with both parents. The data have shown that living with both parents does not guarantee that a child will always be helped to do their homework. The p-value (0.224) is an indication of statistically non-significant relationship between parents or household members providing help to children to do their homework and parent-child living arrangements.

Table 5. 5 Percentage Distribution of Children by Whether Parents or Household Member Provided Help to Child when doing Homework and Parent-Child Living Arrangements, 2014

Parent or Household Member Help Child with Homework	Parent-Child Living Arrangements GDHS 2014			
	Child does not Live with any of Parents	Child lives with Only Mother	Child lives with Only Father	Child lives with Both Parents
Child not Helped	19.4	21.9	6.5	52.3
Child Helped	19.5	23.0	7.0	50.6
Total	19.4	22.3	6.7	51.6
	Pearson's Chi-square Test = 4.372 P-Value = 0.224 Df = 3			

Source: GDHS 2014, Computed from Household Member Data File

NB: Variable not available in 2008

5.2.4 Parent or Household Member Expresses High Expectation for Children and Parent-Child Living Arrangements

Analysis of parents or household members who express high expectations for child and parent-child living arrangements is shown in Table 5.6. The proportion of children whose parents express high expectation and those whose parents do not is almost the same (51%). The p-value (0.025) is an indication of significant relationship between parents who express their high expectations or not for their children and parent-child living arrangements.

Table 5. 6 Percentage Distribution of Children by Whether Parent or Household Member Expresses High Expectation for Child and Parent-Child Living Arrangements, 2014

Parent or Household Member Expressing Expectation to the Child	Parent-Child Living Arrangements GDHS 2014			
	Child does not Live with any of Parents	Child lives with Only Mother	Child lives with Only Father	Child lives with Both Parents
Does not Express High Expectation	19.8	21.8	7.4	51.0
Express High Expectation	19.6	22.5	6.5	51.4
Total	19.7	22.3	6.7	51.3
	Pearson's Chi-square Test = 4.047 P-Value = 0.025 Df = 3			

Source: GDHS 2014, Computed from Household Member Data File

NB: Variable not available in 2008

5.2.5 Parent or Household Member Relieves Child of Some Household Chores and Parent-Child Living Arrangements

Table 5.7 displays information about parents or household members who relieve their children of some of the household chores as well as parents who do not and parent-child living arrangements. It can be seen from the table that 52.3 percent of children whose parents or household members relieve them of some of the household chores live with both parents compared to the 50.6 percent of children whose parents do not relieve them of some of the household chores. This may be so because, in the house where children live with both parents, there will be less work for the children to do as both mother and father support each other in carrying out most of the household chores. In single parent households, the custodial parent of children which is mostly the mothers may have to spend more time and energy to do household tasks during post-divorce or post-widowed time than when they were married. This is because mothers need to perform tasks done by fathers in two-parent families (and vice versa) and in most cases they require their children who live with them to support them to carry out most of the household chores. The p-value (0.302) however, shows a statistically non-significant relationship between parents or household members who relieve children or otherwise of some of the household chores and parent-child living arrangements.

Table 5. 7 Percentage Distribution of Children by Whether Parent or Household Member Relieve Child of Some Household Chores and Parent-Child Living Arrangements, 2014

Parent or Household Member who Relieve Child of Some Household Chores	Parent-Child Living Arrangements GDHS 2014			
	Child does not Live with any of Parents	Child lives with Only Mother	Child lives with Only Father	Child lives with Both Parents
Child Not Relieved	19.9	22.7	6.8	50.6
Child Relieved	19.1	21.7	6.8	52.3
Total	19.6	22.4	6.8	51.2
	Pearson's Chi-square Test = 3.650 P-Value = 0.302 Df = 3			

Source: GDHS 2014, Computed from Household Member Data File

NB: Variable not available in 2008

5.3 Household Characteristics and Parent-Child Living Arrangements

5.3.1 Number of Children in the household and Parent-Child Living Arrangements

Table 5.8 presents the number of children in the household and parent-child living arrangements. The table has revealed that number of children in the household and the proportion of children who live with both parents is higher at the beginning, decreases and then increases (takes a U-shape structure) as the number of children in the house increases in both 2008 and 2014. The proportions of children who live without any of their parents, those who live with only their mothers as well as children who live with only their fathers decrease with increasing number of children especially from three children and above. The number of children in the household has a statistical significant association with parent-child living arrangements with a p-value of <0.001 .

Table 5. 8 Percentage Distribution of Children by Number of Children in the household and Parent-Child Living Arrangements, 2008 and 2014

Number of Children in Household	Parent-Child Living Arrangements GDHS 2008				Parent-Child Living Arrangements GDHS 2014			
	Child does not Live with any of Parents	Child lives with Only Mother	Child lives with Only Father	Child lives with Both Parents	Child does not Live with any of Parents	Child lives with Only Mother	Child lives with Only Father	Child lives with Both Parents
1	19.8	31.1	13.0	36.1	18.1	30.0	12.6	39.8
2	17.2	32.2	18.6	32.0	16.8	31.3	12.2	39.7
3	35.8	36.2	13.3	14.7	32.2	42.0	11.7	14.1
4	24.1	31.8	9.5	34.7	25.7	33.9	7.3	33.0
5	21.1	25.0	5.9	47.9	18.9	23.9	5.8	51.3
6	17.2	18.8	4.5	59.5	15.6	20.2	4.8	59.3
7	16.0	13.4	4.9	65.7	15.4	13.7	5.3	65.6
8+	18.5	11.2	6.6	63.8	15.3	10.3	6.8	67.7
Total	21.7	20.4	7.1	50.8	20.1	21.9	6.7	51.2
	Pearson's Chi-square Test = 2106.628 P-Value = 0.000 Df = 21				Pearson's Chi-square Test = 2149.544 P-Value = 0.000 Df = 21			

Source: GDHS 2008 and 2014, Computed from Household Member Data File

5.3.2 Household Wealth Status and Parent-Child Living Arrangements

Analysis of household wealth status and parent-child living arrangements has been presented in Table 5.9. From the table, household wealth status and the proportion of children who live with both parents is higher at the beginning but decreases as household wealth status increases and then starts to increase (assumes a U-shaped structure) in both 2008 and 2014. This means that higher proportion of children from poorest and richest households live with both parents than the proportion of children whose household wealth ranges from poorer to richer. For instance, six out of ten children (63.6% in 2008 and 65.6% in 2014) who belong to the poorest household wealth live with both parents and nearly half (49.6% in 2008 and 47.0% in 2014) of their counterparts who are in the richest quintile of household wealth also live with both parents compared to about four out of 10 children (i.e., 38.1% in 2008 and 39.1% in 2014) among children who are in the middle household wealth category. The data have also revealed that the proportion of children who live without any of their parents increases as household wealth increases for both 2008 and 2014. This means that when household wealth is poorer or poorest, the proportion of children who live without any of their parents is less than the proportion of children when the household wealth is middle or better. One of the possible reasons could be that poor households are not likely to receive children from other families to live with them because of their poor background as compared to households that are in the middle or better household wealth status categories. “Poor” households will rather send out their children to live with households that are “rich” and so the children who will remain with them (poorer household) are likely to be the parent’s own biological children. Rich households are also able to take care or maintain their own children hence higher proportion of their children will live with them and they are also able to receive children from other households hence the U-shaped structure for the relationship between household wealth status and parents-child living arrangements. The relationship between the proportion of children who live with only their

mothers and household wealth status is lower at the beginning and increases then starts to decrease (assumes a Conical-shape structure) as household wealth status increases. The p-value (<0.001) indicates a strong and significant association between household wealth status and parent-child living arrangements.

Table 5. 9 Percentage Distribution of Children by Household Wealth and Parent-Child Living Arrangements, 2008 and 2014

	Parent-Child Living Arrangement GDHS 2008				Parent Living Arrangement GDHS 2014			
Household Wealth Status	Child does not Live with any of Parents	Child lives with Only Mother	Child lives with Only Father	Child lives with Both Parents	Child does not Live with any of Parents	Child lives with Only Mother	Child lives with Only Father	Child lives with Both Parents
Poorest	14.5	13.8	8.1	63.6	14.5	12.1	7.8	65.6
Poorer	22.3	22.3	6.0	49.5	21.1	25.6	5.7	47.7
Middle	26.2	28.7	7.0	38.1	23.2	31.8	5.9	39.1
Richer	24.5	23.5	6.8	45.2	25.7	26.2	6.5	41.7
Richest	25.7	17.3	7.4	49.6	23.1	22.7	7.2	47.0
Total	21.7	20.4	7.1	50.8	20.1	21.9	6.7	51.2
	Pearson's Chi-square Test = 607.081 P-Value = 0.000 Df = 12				Pearson's Chi-square Test = 779.526 P-Value = 0.000 Df = 12			

Source: GDHS 2008 and 2014, Computed from Household Member Data File

5.4 Community Characteristics with Parent-Child Living Arrangements

5.4.1 Place of Residence and Parent-Child Living Arrangements

Table 5.10 displays the distribution of children by place of residence and parent-child living arrangements. Among children who reside in urban areas, the proportions who do not live with any of their parents (i.e., 25.1% in 2008 and 24.4% in 2014) as well as those who live with only their mothers (24.1% in 2008 and 26.4% in 2014) are higher than their counterparts who reside in rural areas i.e., 19.6 percent in 2008 and 17.2 percent in 2014 among children who do not live with any of their parents and 18.3 percent in 2008 and 18.9 percent in 2014 among children who live with only their mothers. However, the proportion of children who live with only their

fathers and those who live with both parents are lower in urban areas than their counterparts in the rural areas in both 2008 and 2014. In the rural areas, the proportion of children who live with only their mothers as well as children who live with both parents are higher in 2014 than in 2008 whereas the proportion of children who do not live with any of their parents as well as those who live with only their fathers are lower in 2014 than in 2008. In the case of urban areas the proportion of children who live with both parents is lower in 2014 (42.8%) than in 2008 (44.1%). In the same urban areas, the proportion of children who live with only their mothers is higher in 2014 (26.4%) than. The p-value (<0.001) is an indication of statistically significant association between place of residence and parent-child living arrangements.

Table 5. 10 Percentage Distribution of Children by Place of Residence and Parent-Child Living Arrangements, 2008 and 2014

Place of Residence	Parent-Child Living Arrangements GDHS 2008				Parent-Child Living Arrangements GDHS 2014			
	Child does not Live with any of Parents	Child lives with Only Mother	Child lives with Only Father	Child lives with Both Parents	Child does not Live with any of Parents	Child lives with Only Mother	Child lives with Only Father	Child lives with Both Parents
Urban	25.1	24.1	6.6	44.1	24.4	26.4	6.4	42.8
Rural	19.6	18.3	7.4	54.7	17.2	18.9	6.9	57.0
Total	21.7	20.4	7.1	50.8	20.1	21.9	6.7	51.2
	Pearson's Chi-square Test = 182.943 P-Value = 0.000 Df = 3				Pearson's Chi-square Test = 293.913 P-Value = 0.000 Df = 3			

Source: GDHS 2008 and 2014, Computed from Household Member Data File

5.4.2 Region of Residence and Parent-Child Living Arrangements

The distribution of children by region of residence and parent-child living arrangements can be found in Table 5.11. From the table, in 2008, the proportions of children from Northern, Upper East, Western and Upper West regions who live with both parents are higher than 50 percent whereas the rest of the regions recorded less than 50 percent. However, in 2014, regions that recorded higher than 50 percent of children living with both parents included Northern, Upper West, Upper East and Brong Ahafo regions. The above regions are dominant farming regions

and so parents are more likely to keep their children around them to help them in their farm work. In 2008, the regions that recorded over a quarter of children who do not live with any of their parents were found in the Volta Region (27.1%), followed by Ashanti (25.6%) and then Central (25.2%) regions whereas in 2014 the only region which recorded more than one-quarter is the Eastern Region (26.0%). The above is possible since these regions are seen as receiving regions for children who are engaged to work in farms or to assist in fishing activities. The three regions of the north namely; Northern, Upper West and Upper East regions recorded the three highest number of children living with both parents in 2014, recording 72.6 percent, 60.2 percent and 57 percent respectively whereas in 2008, the three highest regions were Northern (71.4%), Upper East (59.1%), Western (57.4%) with Upper West Region coming fourth with 54.3 percent. Three regions namely, Central, Ashanti and Upper East recorded a lower proportion of children who live with both parents between 2008 and 2014 whereas the rest recorded higher proportion of children who live with both parents between the two periods. The p-value of <0.001 indicates that the association between region and parent-child living arrangements is statistically significant.

Table 5. 11 Percentage Distribution of Children by Region of Residence and Parent-Child Living Arrangements, 2008 and 2014

	Parent-Child Living Arrangements GDHS 2008				Parent-Child Living Arrangements GDHS 2014			
Region	Child does not Live with any of Parents	Child lives with Only Mother	Child lives with Only Father	Child lives with Both Parents	Child does not Live with any of Parents	Child lives with Only Mother	Child lives with Only Father	Child lives with Both Parents
Western	19.8	15.7	7.1	57.4	22.6	27.5	5.3	44.6
Central	25.2	29.0	7.1	38.7	20.6	31.8	6.6	41.0
Greater Accra	23.8	24.0	7.3	45.0	21.6	28.4	6.5	43.5
Volta	27.1	22.9	4.7	45.0	23.9	24.3	7.5	44.3
Eastern	21.7	21.7	9.7	46.9	26.0	26.0	7.2	40.8
Ashanti	25.6	28.2	7.1	39.2	19.8	28.9	4.8	46.5
Brong Ahafo	22.3	24.4	6.3	47.0	23.4	18.8	6.4	51.5
Northern	14.5	7.2	6.8	71.4	10.9	9.2	7.3	72.6
Upper East	15.4	17.4	8.2	59.1	17.5	16.7	8.8	57.0
Upper West	22.0	16.6	7.1	54.3	19.1	14.2	6.5	60.2
Total	21.7	20.4	7.1	50.8	20.1	21.9	6.7	51.2
	Pearson's Chi-square Test = 748.846 P-Value = 0.000 Df = 27				Pearson's Chi-square Test = 754.242 P-Value = 0.000 Df = 27			

Source: GDHS 2008 and 2014, Computed from Household Member Data File

5.5 Summary

Chapter Five examined the association between child, parent, household and community characteristics by parent-child living arrangements. The test of significance proved that all but two of the variables (i.e., parents or household members who help child with homework and parents or household members who relieve child of some of household chores) have statistical significant association with parent-child living arrangements.

The proportion of children who live without any of their parents as well as those who live with only their fathers are slightly lower whereas the proportion who live with only their mothers and those who live with both parents are slightly higher between 2008 and 2014. Younger children are more likely to live with both parents than older children. As age increases, the proportion of children who live with only one parent increased. Male children are more likely to live with both parents than female children.

Household wealth status and the proportion of children that live with both parents assume a U-shaped structure in both 2008 and 2014. Children from households categorized as poorer or poorest were more likely to live with both parents and less likely to live without any of their parents than children who come from households wealth status categorized as richer or richest in both 2008 and 2014.

CHAPTER SIX

RELATIONSHIP BETWEEN PARENT-CHILD LIVING ARRANGEMENTS, SELECTED BACKGROUND CHARACTERISTICS AND REQUIRED LEVEL OF EDUCATION ATTAINED

6.1 Introduction

Chapter Six provides analysis of parent-child living arrangements and children's attainment of the required highest level of education attended. The analysis has been expanded by controlling for selected child, parent, household and community characteristics. This is done by employing trivariate analysis which will help minimize the effect of confounding factors that may influence the effect of parent-child living arrangements on children's educational attainment.

6.2 Parent-Child Living Arrangements and Required Level of Education Attained

Analysis of parent-child living arrangements and required level of education attained has been presented in Table 6.1. From the table, generally, the proportion of children who are attending the required level of education is about five (5) percentage points higher in 2014 (44.0%) than in 2008 (39.1%) which signifies an increase in educational enrollment and retention. This is an evidence of improvement in educational attainment in Ghana in recent times which can be attributed partly to the educational reforms in Ghana as indicated by World Bank (2010) report that stated that "...during the last decade (between 2002/03 and 2009/10), access to education has radically improved, enrollment and completion have increased at basic levels and is a testimony to Ghana's deep commitment to a policy aimed at achieving universal education". The proportion of children who are not attending the required level of education remained

almost the same (37.4% in 2008 and 37.3% in 2014) whereas the proportion of children who have no education is higher in 2008 (23.5%) than in 2014 (18.7%) representing 4.8 percentage points difference (lower).

From Table 6.1, the relationships amongst the four categories of parent-child living arrangements and required level of education attained is consistent in both 2008 and 2014. The results show that the proportion of children who have attended the required level of education is highest among children who live with only their mothers (41.8% in 2008 and 46.7% in 2014), followed by children who live with both parents (41.5% in 2008 and 45.6 in 2014), followed by children who live with only their fathers (37.6% in 2008 and 43.3% in 2014), and lastly by children who do not live with any of their parents (35.4% and 40.4% in 2014) in both 2008 and 2014. This can be linked to the findings from Case and Ardington (2005) study which revealed that the loss of a child's mother is a strong predictor of poor schooling outcomes and where maternal orphans are significantly less likely to be enrolled in school were also found to have completed significantly fewer years of schooling than children whose mothers are alive. The explanation to this findings could be linked to child fostering which is a widespread practice across sub-Saharan Africa. Evidence from West Africa suggests that child fostering is predominantly used as a mechanism for families to strengthen social connections and kinship ties, as well as to share the costs of childbearing (Isiugo-Abanihe, 1985; Akresh, 2009). Amoateng, Heaton and Mcalmon (2017) examined the effect of family structure on children's schooling in sub-Saharan Africa and reported among other things that the presence of a husband in the home reduce children's education and after controlling for maternal education, children of single, never married mothers and those who are divorced or separated have educational disadvantage, suggesting the importance of maternal education for children's educational outcomes.

The findings are not consistent with Sigle-Rushton and McLanahan's (2004) study which indicated that children who have been raised in a home where a father is present graduate from high school and attend college at much higher rates than children raised in fatherless homes. Similarly, the study findings do not agree with Atkinson and Ogston's (1974) study findings which indicated that father-absent and father-present children performed equally well in school and were involved in many activities at home and at school. The p-value (<0.001) indicates a significant association between parent-child living arrangements and children's required level of education attained.

Table 6. 1 Percentage Distribution of Children by Parent-Child Living Arrangements and Required Level of Education Attained, 2008 and 2014

Parent-Child Living Arrangements	Educational Level Attained GDHS 2008			Educational Level Attained GDHS 2014		
	No Educ ation	Not Attending Required Level	Attending the Required Level	No Educ ation	Not Attending Required Level	Attending the Required Level
Child does not Live with any of Parents	22.1	42.4	35.4	18.2	41.4	40.4
Child Lives with only Mother	21.4	36.7	41.8	17.0	36.3	46.7
Child Lives with only Father	22.8	39.6	37.6	16.8	39.9	43.3
Child Lives with Both Parent	27.7	30.8	41.5	22.9	31.5	45.6
Total	23.5	37.4	39.1	18.7	37.3	44.0
	Pearson's Chi-square Test = 167.465 P-Value = 0.000 Df = 6			Pearson's Chi-square Test = 126.410 P-Value = 0.000 Df = 6		

Source: GDHSs 2008 and 2014 Computed from Household Member Data File of Children between ages 6 to 17 years

6.3 Child Characteristics, Parent-Child Living Arrangements and Required Level of Education Attained

6.3.1 Age of Child, Parent-Child Living Arrangements and Required Level of Education Attained

Table 6.2 presents analysis of children by age, parent-child living arrangements and required level of education attained. It is observed from the table that the proportion of children who are attending the required level of education is higher among the younger children than the older children. For instance, 59.0 percent in 2008 and 60.1 percent in 2014 of children aged between 6-11 years are attending the required highest level of education (primary school level). Among children between the ages of 12 and 14 years (who are expected to be in Junior High School), 40.6 percent in 2008 and 43.1 percent in 2014 are attending the required highest level of education whereas among children aged between 15 and 17 years (who are expected to be in Senior High School), 33.8 percent in 2008 and 37.3 percent in 2014 are attending the required highest level of education. One of the possible reasons for the pattern of the proportions of children who are attending the required highest level of education from lower age group to higher age group (where the proportion attending the required level of education reduces with an increasing age group) could be that some of the children are likely to repeat and/or drop out of school as they progress from a lower level of education to the next higher level of education. From the table, the 37.3 percent of the 15-17 years who are attending senior high school in 2014 is closer to the 40 percent that was reported by World Bank as the proportion of junior high school graduates that enroll into senior high school (World Bank, 2013).

The proportion of children 6 to 11 years old who are attending the required level of education is highest among children who live with only their mothers (61.0% in 2008 and 62.2% in 2014).

This is followed by children who live with only their fathers, then children who live with both parents and lastly, children who do not live with any of their parents in both 2008 and 2014. Among the 12-14 years of children, the proportion who are attending the required level of education is highest among children who live with only their mothers which is 43.6 percent in 2008, followed by children who live with both parents but the proportion is highest among children who live with both parents in 2014 (45.6%), followed by those who live with only their mothers. Also, the proportion of children who have no education is highest among children who live with both parents which is nearly 29 percent in both 2008 and 2014. The situation however, changes among the older children when in 2008, the proportion of the 15 to 17 years who are attending the required level of education is highest among children who live with both parents (36.9%), before children who live with only their mothers (35.1%). In 2014, the highest proportion of children who are attending the required level of education among children aged between 15 and 17 years are among children who live with only their fathers (39.8%) before children who live with only their mothers (39.2%). Among children aged between 15-17 years, the proportion of children who have no education is highest among children who do not live with any of their parents (30.6% in 2008 and 26.5% in 2014). The P-Value (<0.001) indicates a strong association between age of a child and the required level of education attained.

Table 6.2 Percentage Distribution of Children by Age of Child, Parent-Child Living Arrangements and Required Level Attained, 2008 and 2014

Age of Child	Parent-child Living Arrangements	Educational Level Attained GDHS 2008			Educational Level Attained GDHS 2014		
		No Education	Not Attending Required Level	Attending the Required Level	No Education	Not Attending Required Level	Attending the Required Level
6-11 years	Does not live with any parent	12.5	34.2	53.3	11.0	30.3	58.7
	Lives with only mother	9.4	29.6	61.0	11.2	26.5	62.1
	Lives with only father	11.2	27.9	60.9	9.8	31.3	60.0
	Lives with Both parents	12.5	26.9	60.6	12.6	27.5	59.9
	Average	11.4	29.6	59.0	10.9	29.1	60.1
12-14 years	Does not live with any parent	27.6	35.5	36.8	27.7	35.6	36.7
	Lives with only mother	26.9	30.2	43.6	23.8	31.7	44.5
	Lives with only father	25.9	36.3	40.1	25.6	34.5	39.9
	Lives with Both parents	28.5	29.2	42.3	28.8	25.6	45.6
	Average	27.1	32.3	40.6	26.5	32.4	43.1
15-17 years	Does not live with any parent	30.6	40.1	29.3	26.5	30.8	32.5
	Lives with only mother	25.7	39.2	35.1	20.5	40.7	39.2
	Lives with only father	27.6	38.0	33.7	24.5	35.9	39.8
	Lives with Both parents	28.3	35.0	36.9	24.7	36.6	37.7
	Average	28.8	37.4	33.8	24.2	38.5	37.3
Total		24.9	35.2	40.0	20.2	35.1	44.6
		Pearson's Chi-square Test = 9327.027 P-Value = 0.000 Df = 4			Pearson's Chi-square Test = 8992.426 P-Value = 0.000 Df = 4		

Source: GDHSs 2008 and 2014 Computed from Household Member Data File of Children between ages 6 to 17 years

6.3.2 Sex of Child, Parent-Child Living Arrangements and Required Level of Education Attained

Table 6.3 shows analysis of sex of child, parent-child living arrangements and required level of education attained. It can be seen from the table that higher proportion of female children are attending the required level of education (40.3% in 2008 and 45.5% in 2014) than their male counterparts (39.7% in 2008 and 43.8% in 2014). This finding is not consistent with that of Amoateng, Heaton and Mcalmon (2017) who examined the effect of family structure on children's schooling in sub-Saharan Africa using Multi-level Modeling to analyse data from recent Demographic and Health Surveys (DHS) in 26 African Countries and found that males are more likely than females to have higher educational attainment.

In 2008, among the male children the proportion who are attending the required level of education is highest among those who live with both parents (41.5%), followed by those who live with only their mothers (41.0%). These two groups are above the average for males who are attending the required level of education (39.7%). The proportions who are attending the required level of education is the same for children who live with only their fathers and also for children who do not live with any of their parents (i.e., 35.4% each). Among the female children, the proportion who are attending the required level of education is highest among children who live with only their mothers (42.6%), followed by those who live with both parents (41.5%) and also followed by the proportions of children who live with only their fathers (40.9%). The proportions among these three groups are above the average for female children (40.3%) whereas the proportion among children who do not live with any of their parents and are attending the required level of education (i.e., 35.5%) is less than the average for female children.

Table 6.3 Percentage Distribution of Children by Sex of Child, Parent-Child Living Arrangements and Required Level of Education Attained, 2008 and 2014

Sex of Child	Parent-Child Living Arrangements	Educational Level Attained GDHS 2008			Educational Level Attained GDHS 2014		
		No Education	Not Attending Required Level	Attending the Required Level	No Education	Not Attending Required Level	Attending the Required Level
Male	Does not live with any parent	22.3	42.3	35.4	20.0	41.0	39.0
	Lives with only mother	22.4	36.6	41.0	17.5	36.5	45.9
	Lives with only father	21.1	43.4	35.4	16.9	41.2	41.9
	Lives with Both parents	28.1	30.4	41.5	22.7	32.6	44.7
	Average	25.3	35.0	39.7	20.6	35.6	43.8
Female	Does not live with any parent	22.0	42.5	35.5	16.9	41.7	41.5
	Lives with only mother	20.6	36.8	42.6	16.4	36.0	47.6
	Lives with only father	25.2	34.0	40.9	16.8	38.3	44.9
	Lives with Both parents	27.2	31.3	41.5	23.1	30.3	46.6
	Average	24.4	35.3	40.3	19.8	34.6	45.5
Total		24.9	35.2	40.0	20.2	35.1	44.6
		Pearson's Chi-square Test = 1.555 P-Value = 0.460 Df = 2			Pearson's Chi-square Test = 4.212 P-Value = 0.122 Df = 2		

Source: GDHSs 2008 and 2014 Computed from Household Member Data File of Children between ages 6 to 17 years

From Table 6.3, similarly, in 2014, the proportion of children who are attending the required level of education is highest among children who live with only their mothers (45.9% among males and 47.6% among females), followed by children who live with both parents (44.7% for males and 46.6% for females) and then the proportion of children who live with only their fathers (41.9% among males and 44.9% among females). The proportions of children who do not live with any of their parents and are attending the required level of education is the least (39.0% for males and 41.5% among females). Similarly, the proportion of female children who are attending the required level of education is highest among children who live with only their mothers and it is consistent in both 2008 and 2014. Liu's (2007) findings indicating that the presence of father in the house is an incentive for education of the male-child was not fully supported by the finding of this study except in a situation where both parents are present because the highest proportion of children who are attending the required level of education was found among children (either male or female) who live with only their mothers. However, the P-Value ($>.05$) is an indication of statistically non-significant association between sex of child and attainment of required level of education.

6.4 Parental Characteristics, Parent-Child Living Arrangements and Required Level of Education Attained

6.4.1 Age of Head of Household/Parent or Guardian, Parent-Child Living Arrangements and Required Level of Education Attained

Table 6.4 presents analysis of age of head of household/parent or guardian, parent-child living arrangements and required level of education attained. The average proportions for each of the age groups of the heads of household/parents or guardians among children who are attending the required level of education is consistent in both 2008 and 2014 where the proportion of

children who are attending the required highest level of education was lower at the beginning, increase and begins to decrease with increase in age (conical shape). The highest proportion of children who are attending the required level of education occurred among children whose heads of household/parents or guardians are aged 30-39 years (43.2% in 2008 and 48.4% in 2014).

Table 6. 4 Percentage Distribution of Children by Age of Head of Household/Parent or Guardian, Parent-Child Living Arrangements and Required Level of Education Attained, 2008 and 2014

Age of Parent or Guardian	Parent-Child Living Arrangement	Educational Level Attained GDHS 2008			Educational Level Attained GDHS 2014		
		No Education	Not Attending Required Level	Attending the Required Level	No Education	Not Attending Required Level	Attending the Required Level
<30 years	Does not live with any parent	21.6	48.1	30.3	14.1	51.3	34.6
	Lives with only mother	40.9	17.0	42.1	33.1	18.7	48.2
	Lives with only father	41.3	15.2	43.5	36.6	4.9	58.5
	Lives with Both parents	49.8	9.5	40.7	53.2	5.9	40.9
	Average	35.4	27.6	37.0	31.6	26.0	42.4
30-39 years	Does not live with any parent	18.4	51.0	30.6	17.5	46.8	35.8
	Lives with only mother	19.2	34.9	45.9	17.4	33.6	49.0
	Lives with only father	27.8	29.9	42.3	19.4	31.2	49.4
	Lives with Both parents	32.1	23.2	44.6	29.7	19.9	50.5
	Average	26.6	30.2	43.2	23.9	27.7	48.4
40-49 years	Does not live with any parent	20.2	41.8	38.0	18.6	43.2	38.2
	Lives with only mother	16.3	43.1	40.6	13.3	39.9	46.8
	Lives with only father	20.2	46.7	33.0	13.7	42.1	44.2
	Lives with Both parents	24.3	31.6	44.1	19.4	32.5	48.1
	Average	21.9	36.3	41.8	17.6	36.0	46.5
50-59 years	Does not live with any parent	22.1	38.2	39.7	22.1	33.3	44.6
	Lives with only mother	16.8	44.9	38.3	10.3	47.8	41.9
	Lives with only father	20.6	39.3	40.2	13.5	48.9	37.6
	Lives with Both parents	22.3	39.4	38.3	18.0	37.9	44.1
	Average	21.3	39.9	38.8	17.3	39.3	43.4
60+ years	Does not live with any parent	24.9	39.3	35.8	17.2	41.0	41.8
	Lives with only mother	28.4	36.1	35.4	21.7	33.9	44.3
	Lives with only father	17.0	49.1	34.0	18.2	51.8	30.0
	Lives with Both parents	29.1	37.6	33.3	20.8	45.3	33.9
	Average	26.5	38.9	34.7	19.2	42.6	38.2
Total		24.9	35.2	40.0	20.2	35.1	44.6
		Pearson's Chi-square Test = 195.429 P-Value = 0.000 Df = 8			Pearson's Chi-square Test = 262.503 P-Value = 0.000 Df = 8		

Source: GDHSs 2008 and 2014 Computed from Household Member Data File of Children between ages 6 to 17 years

NB: Head of household can also be the Parent or Guardian

When age of head of household/parent or guardian is below 30 years, the proportion of children who are attending the required level of education is highest among children who live with only their fathers in both 2008 and 2014 (i.e., 43.5% and 58.5% respectively). When the age of head

of household/parent or guardian is 30-39 years, the proportion of children who are attending the required level of education in 2008 is highest among children who live with only their mothers (45.9%), followed by children who live with both parents (44.6%), then followed by children who live with only their fathers (42.3%) and lastly by children who do not live with any of their parents (30.6%). In 2014, for children whose heads of household/parents or guardians are aged 30-39 years, the proportion of children who are attending the required level of education is highest among children who live with both parents (50.5%), followed by children who live with only their fathers (49.4%), followed by children who live with only their mothers (49.0%) and lastly by children who do not live with any of their parents (35.8%). When the age of head of household/parent or guardian is 40-49 years, the proportion of children who are attending the required level of education is highest among children who live with both parents in both 2008 (44.1%) and 2014 (48.1%). When age of head of household is 50-59 years, the proportion of children who are attending the required level of education is highest among children who live with only their fathers (40.2%) followed by children who do not live with any of their parents (39.7%) in 2008. In 2014, the proportion of children who are attending the required level of education is highest among children who do not live with any of their parents (44.6%) followed by children who live with only their mothers ((41.9%). When the age of head of household/parent or guardian is 60+ years, the proportion of children who are attending the required level of education is highest among those who do not live with any of their parents in 2008 (35.8%), followed by children who do not live with only their mothers (35.4%). In 2014 the proportion of children who are attending the required level of education is highest among children who live with only their mothers (44.3%), followed by children who do not live with any of their parents (41.8%).

One of the possible reasons for the above findings could be that when heads of household/parents or guardians are young, majority of their children are likely to live with both parents and be attending school because the children may also be young. However, as the age of heads of household/parents or guardians increase, then some of their children might also be old enough to stay elsewhere (i.e outside the parents' home) and be attending to school. The p-value ($<.001$) is an indication of statistically significant association between age of guardian and attainment of required level of education.

6.4.2 Sex of Head of Household/Parent or Guardian, Parent-Child Living Arrangements and Required Level of Education Attained

Analysis of sex of heads of household/parents or guardians, parent-child living arrangements and required level of education attained has been presented in Table 6.5. The analysis has shown that the average proportion for children who indicated female as their heads of household/parents or guardians and who are attending the required level of education is higher (41.5% in 2008 and 45.4% in 2014) than the average for children who indicated male as their heads of household/parents or guardians (39.4% in 2008 and 44.1% in 2014). The data have revealed that in households where children indicated males as their heads of household/parents or guardians, the proportion of children who have attended the required level of education is highest among children who live with both parents than the other parent-child living arrangements whereas the proportion is highest among children who live with only their mothers in households where children indicated females as their heads of household/parents or guardians. In the above two households, women are present and it is believed that the presence of women in those households might have some role to play in decision making concerning education of children in those households and that might have translated in some positive influence in children's education. This finding agrees with Case and Ardington (2005)

findings that revealed that, the loss of a child's mother is a strong predictor of poor schooling outcomes and that maternal orphans are significantly less likely to be enrolled in school, and have completed significantly fewer years of schooling than children whose mothers are alive.

This finding is not consistent with that of Sigle-Rushton and McLanahan's (2004) which indicated that children who have been raised in a homes where a father is present graduate from high school and attend college at much higher rates than children raised in fatherless homes.

Table 6.5 Percentage Distribution of Children by Sex of Parent/Guardian, Parent-Child Living Arrangements and Required Level of Education Attained, 2008 and 2014

Sex of Head of Household/ Parent or Guardian	Parent-Child Living Arrangement	Educational Level Attained GDHS 2008			Educational Level Attained GDHS 2014		
		No Education	Not Attending Required Level	Attending the Required Level	No Education	Not Attending Required Level	Attending the Required Level
Male	Does not live with any parent	24.0	42.5	33.4	19.1	42.2	41.6
	Lives with only mother	30.4	33.8	35.8	18.8	37.9	43.3
	Lives with only father	22.8	39.9	37.3	16.9	40.1	43.1
	Lives with Both parents	28.0	30.7	41.3	22.9	31.5	45.6
	Average	26.9	33.7	39.4	21.6	34.2	44.1
Female	Does not live with any parent	19.9	37.2	32.9	17.3	40.5	42.2
	Lives with only mother	22.2	22.2	55.6	16.6	36.0	47.4
	Lives with only father	18.9	33.5	47.6	15.8	31.6	52.6
	Lives with Both parents	19.8	38.7	41.5	23.8	31.4	44.8
	Average	19.8	35.5	41.5	17.1	36.4	45.4
Total		24.9	35.2	40.0	20.2	35.1	44.6
		Pearson's Chi-square Test = 84.503 P-Value = 0.000 Df = 2			Pearson's Chi-square Test = 36.246 P-Value = 0.000 Df = 2		

Source: GDHSs 2008 and 2014 Computed from Household Member Data File of Children between ages 6 to 17 years

NB: Parent/Guardian can also be the head of household

From Table 6.5, among children who indicated male heads of household/parents or guardians, the proportion of children who are attending the required level of education is highest when children live with both parents (41.3% in 2008 and 45.6% in 2014) than among children who live in the other parent-child living arrangements. Among children who indicated females as their heads of household/parents or guardians, the proportion of children who are attending the required level of education is highest among children who live with only their mothers (55.6%)

in 2008 whereas in 2014, the highest proportion was among children who live with only their fathers (52.6%) than children from the other types of parent-child living arrangements.

Among children who indicated the male as their heads of household/parents or guardians, the proportion of children who are attending the required level of education is highest for the children who live with both parents (41.3% in 2008 and 45.6% in 2014) than the proportions for children in the other parent-child living arrangements. The proportion who are attending the required level of education among children who live with both parents is also higher than the average for children who indicated male heads of household/parents or guardians (39.4% in 2008 and 42.2% in 2014). However, for children who indicated female as their heads of household/parents or guardians, the proportion of children who are attending the required level of education is highest among children who live with only their mothers (55.6% in 2008 and 47.4% in 2014), followed by children who live with only their fathers (47.6% in 2008 and 52.6% in 2014), than the average for children who indicated female heads of household/parents or guardians (41.5% in 2008 and 45.4% in 2014). The p-value (<0.001) indicates a significant association between sex of head of household/parent or guardian and children's required level of education attained.

6.4.3 A Parent or a Household Member Help Child to do Homework, Parent-Child Living Arrangements and Required Level of Education Attained

Analysis of parents or household members who help children with homework or otherwise, parent-child living arrangements and required level of education attained is presented in Table 6.6. The assumption here is that children whose parents or any of their household members help them to do their homework may be highly motivated to study and so will pass their exams and be promoted much more easily than their counterparts whose parents or any of their household

do not help them do their homework. For instance, Kim and Sherraden's (2011) indicated in their study that, children's attitude and behaviours are important factors in determining educational outcomes, and these may be largely formed by parents' influence. Deslandes, Royer and Turcotte, (1997) also reported that parents who get involved in their children's education help the children to earn better grades than their classmates with uninvolved parents. From Table 6.6, among children whose parents or household members help them to do homework, the average proportion of the children who are attending the required level of education is 61.0 percent compared to 55.2 percent among children whose parents or household members do not help them.

Again, we can see from Table 6.6 that, the proportion of children who are attending the required level of education is highest among children who live with both parents i.e., 58.0 percent among children whose parents or household members do not help them and 63.2 percent among children whose parents or household members help them to do their homework which are above the averages for their respective groups. This may be so because, when both parents are present, it is believed that parents will have more resources including ample time to supervise children to do their homework than when only one parent or none of the parents is available. The second highest proportion of children who are attending the required level of education after children who live with both parents is children who live with only their mothers i.e., 55.6 percent and 61.5 percent respectively among children whose parents or household members do not help them to do their homework and children who are helped. The proportions of children who are attending the required level of education among children who live with both parents and also those who live with only their mothers are higher than their respective averages. The p-value (<0.001) indicates a strong association between parents or household members who help children to do their homework or not and children's required level of education attained.

Table 6.6 Percentage Distribution of Children by Whether a Parent or a Household Member Helped Child to do Home Work, Parent-Child Living Arrangements and Required Level of Education Attained, 2014

Parent or Household Member who Help Child to do Home Work	Parent-Child Living Arrangements	Educational Level Attained GDHS 2014		
		No Education	Not Attending Required Level	Attending the Required Level
Did Not Receive Help	Does not live with any parent	-	50.4	49.5
	Lives with only mother	-	44.4	55.6
	Lives with only father	-	49.7	50.3
	Live with Both parents	-	42.0	58.0
	Average	-	44.8	55.2
Received Help	Does not live with any parent	-	43.9	56.1
	Lives with only mother	-	38.5	61.5
	Lives with only father	-	42.5	57.5
	Lives with Both parents	-	36.8	63.2
	Average	-	39.0	61.0
Total		-	41.9	58.1
		Pearson's Chi-square Test = 119.002 P-Value = 000 Df = 2		

Source: GDHS 2014 Computed from Household Member Data File

NB: Variable not available in 2008, Don't Know responses were excluded from the analysis, (-) = Not Applicable

6.4.4 A Parent or a Household Member Express High Expectation for Child, Parent-Child Living Arrangements and Required Level of Education Attained

Analysis of parents or household members who tell their children about their high expectation for them, parent-child living arrangements and required level of education attained can be found in Table 6.7. It is believed that children whose parents express their high expectation for them will be challenged and/or motivated to work harder to meet the high expectations reposed in them. From Table 6.7, the average proportion of children whose parents or household members express their expectations for them and are attending the required level of education is higher (48.2%) than the average proportion among children whose parents do not express their high expectation for them (42.1%). Whether a parent or a household member expresses high expectation or not, the proportion of children who are attending the required level of education is highest among children who live with only their mothers (50.2% among children whose parents express high expectation for them and 42.9% among children whose parents do not

express their high expectation for them), followed by those who live with both parents (49.3% and 42.9% for children whose parents express high expectation for them and those whose parents do not express high expectations for them respectively). These two are the categories of children whose proportions are above the average proportions for their respective groups. Anecdotal evidence has it that women are well known to be doing better when it comes to expressing words of encouragement for their children because women are more dependent on children and so they try to express words of encouragement for their children when they are still in school with the hope that the children will complete their education, find good work to do so the children will remit to them in times of need.

Children's self-esteem may be positively boosted by parents' high expectations for them. This finding is consistent with Kim (2004) and Mulkey et al.'s (1992) findings when they indicated that among other things, parental expectation was one of the strongest predictors of future academic success of children. Elliott (2009); Reynolds and Pemberton (2001); Sterbin and Rakow's (1996); Cook et al. (1996); Mulkey et al. (1992), Liu, Kaplan and Risser (1992) as well as Mickelson (1990) also indicated that children's self-esteem may have a positive effect on educational achievement because it promotes greater academic engagements. The p-value (<0.001) is an indication that there is an association between parents or household members who express high expectations for their children and children's attainment of the required level of education.

Table 6.7 Percentage Distribution of Children by Whether Parent or Household Express High Expectation for Child, Parent-Child Living Arrangements and Required Level of Education Attained, 2014

Parent or Household Member Expressed High Expectation for Child	Parent-Child Living Arrangement	Educational Level Attained GDHS 2014		
		No Education	Not Attending Required Level	Attending the Required Level
No Expectation	Does not live with any parent	22.0	38.4	39.6
	Lives with only mother	22.1	34.9	42.9
	Lives with only father	20.2	39.2	40.7
	Lives with Both parents	25.8	31.3	42.9
	Average	23.8	34.1	42.1
High Expectation	Does not live with any parent	16.5	39.8	43.7
	Lives with only mother	14.8	35.0	50.2
	Lives with only father	14.8	39.2	46.0
	Lives with Both parents	19.1	31.6	49.3
	Average	17.3	34.5	48.2
Total		19.2	34.4	46.4
		Pearson's Chi-square Test = 76.301 P-Value = 000 Df = 2		

Source: GDHS 2014 Computed from Household Member Data File

NB: Variable not available in 2008, Don't Know response were removed from the analysis

6.4.5 A Parent of a Household Member Relieve Child of some Household Chores, Parent-Child Living Arrangements and Required Level of Education Attained

Table 6.8 shows the analysis of parents or household members who relieve their children of some of the household chores or otherwise, parent-child living arrangements and required level of education attained. It is anticipated that children who are relieved of some of the household chores will have more time to study and all things being equal pass most of their exams. Such children will not easily drop-out of school or will not repeat their class as compared to children whose parents or household members do not relieve them of some of their household chores. From Table 6.8, the average proportion of children whose parents or household members relieve them of some of the household chores and are attending the required level of education is slightly higher (46.8%) than the average for their counterparts who are not relieved (45.8%).

Again, from Table 6.8, among children whose parents do not relieve them of some of the household chores, the proportion of children who live with both of their parents and are

attending the required level of education is highest (47.6%), followed by children who live with only their mothers (46.9%). These two proportions are above the average for their group (i.e., average for children who are not relieved of some of the household chores). Among children whose parents relieve them of some of the household chores, the proportion who are attending the required level of education is highest among children who live with only their mothers (49.0%), followed by children who live with only their fathers (47.0%). The proportions among these two groups of children are above the average for their group (i.e., average for children who are relieved of some of the household chores). The p-value (<0.017) is an indication that there is an association between parents or household members who relieve their children of some of their household chores and children's attainment of the required level of education.

Table 6.8 Percentage Distribution of Children by Whether a Parent or a Household Member Relieves Child of some Household Chores, Parent-Child Living Arrangements and Required Level of Education Attained, 2014

Parent or Household Member Relieve Child of some Household Chores	Parent-Child Living Arrangement	Educational Level Attending GDHS 2014		
		No Education	Not Attending Required Level	Attending the Required Level
Child not Relieved	Does not live with any parent	18.1	40.9	41.0
	Lives with only mother	17.8	35.3	46.9
	Lives with only father	17.5	39.8	42.7
	Lives with Both parents	21.1	31.3	47.6
	Average	19.5	34.7	45.8
Child is Relieved	Does not live with any parent	15.5	38.7	45.7
	Lives with only mother	14.1	36.9	49.0
	Lives with only father	13.5	39.5	47.0
	Lives with Both parents	19.9	33.8	46.4
	Average	17.4	35.8	46.8
Total		18.8	35.1	46.2
		Pearson's Chi-square Test = 8.180 P-Value = .017 Df = 2		

Source: GDHS 2014 Computed from Household Member Data File, NB: Variable not available in 2008

6.5 Household Characteristics, Parent-Child Living Arrangements and Required Level of Education Attained

Household characteristics and required level of education attained has also been analysed under this section of the study. Rouse and Barrow (2006) did similar analysis by investigating the link between family background and education. They showed that family socio-economic status affect such educational outcomes as high school graduation. Baraja (2011) and Rouse and Barrow (2006) did similar analysis by investigating the link between family background and education. They showed that family socio-economic status affects educational outcomes including retention and high school graduation.

6.5.1 Number of Children in the House, Parent-Child Living Arrangements and Required Level of Education Attained

The analysis of the number of children in the household, parent-child living arrangements and children's required level of education attained can be found in Table 6.9. It can be seen from the table that the average proportion of children who are attending the required level of education is highest when the number of children is two in 2008 (i.e., 45.5%) but peaks when the number of children in the household is four in 2014 (50.0%). It has revealed by the data that as the number of children in the household increases, the proportion of children who are attending the required highest level of education reduces and it is consistent in both 2008 and 2014 which also agrees with Kim (2004) and Mulkey et al. (1992) when they reported that family size among others is a stronger predictor of future academic success.

Table 6.9 Percentage Distribution of Children by Number of Children in Household, Parent-Child Living Arrangements and Required Level of Education Attained, 2008 and 2014

Number of Children in the Household	Parent-Child Living Arrangements	Educational Level Attained GDHS 2008			Educational Level Attained GDHS 2014		
		No Education	Not Attending Required Level	Attending the Required Level	No Education	Not Attending Required Level	Attending the Required Level
1	Does not live with any parent	19.0	69.0	11.9	18.1	70.8	11.1
	Lives with only mother	-	-	-	-	-	-
	Lives with only father	-	-	-	-	-	-
	Lives with Both parents	-	-	-	-	-	-
	Average	19.0	69.0	11.9	18.1	70.8	11.1
2	Does not live with any parent	12.4	46.0	41.6	15.5	48.7	35.8
	Lives with only mother	15.9	30.5	53.7	14.6	33.3	52.0
	Lives with only father	22.5	39.3	38.2	6.7	41.7	51.7
	Lives with Both parents	-	-	-	-	-	-
	Average	15.4	39.5	45.1	14.1	41.6	44.3
3	Does not live with any parent	19.2	48.9	31.9	14.8	45.1	40.1
	Lives with only mother	18.0	39.1	42.9	14.7	34.9	50.3
	Lives with only father	26.5	40.8	32.7	12.8	35.3	51.9
	Lives with Both parents	22.8	32.7	44.4	16.2	35.0	48.8
	Average	20.3	41.9	37.8	14.8	38.3	47.0
4	Does not live with any parent	18.7	43.8	37.5	16.6	34.9	48.6
	Lives with only mother	23.4	36.8	39.8	15.0	34.5	50.4
	Lives with only father	18.9	42.9	38.3	19.2	26.9	53.8
	Lives with Both parents	22.3	29.5	48.3	22.2	28.0	49.7
	Average	21.5	36.5	42.0	18.1	31.9	50.0
5	Does not live with any parent	24.1	40.2	35.8	17.8	40.6	41.7
	Lives with only mother	19.4	35.4	45.3	16.8	39.2	44.0
	Lives with only father	26.4	35.8	37.8	20.0	36.4	43.6
	Lives with Both parents	25.8	27.0	47.2	22.1	26.6	51.4
	Average	23.8	32.4	43.8	19.9	32.8	47.3
6	Does not live with any parent	21.5	40.2	38.3	19.0	45.2	35.8
	Lives with only mother	23.4	36.6	40.0	19.0	38.4	42.6
	Lives with only father	19.8	43.2	36.9	17.4	47.8	34.8
	Lives with Both parents	24.6	29.9	45.4	21.0	30.9	48.1
	Average	23.6	33.5	42.8	20.1	35.5	44.4
7	Does not live with any parent	22.3	40.3	37.4	24.5	33.6	42.0
	Lives with only mother	20.3	39.8	39.8	20.1	34.8	45.1
	Lives with only father	21.4	39.8	38.3	12.8	48.9	38.3
	Lives with Both parents	26.3	32.2	41.5	19.7	35.1	45.2
	Average	24.6	34.9	40.5	20.1	35.6	44.3
8+	Does not live with any parent	27.7	39.5	32.8	20.7	41.7	37.6
	Lives with only mother	25.4	37.1	37.5	20.2	36.0	43.9
	Lives with only father	23.1	37.3	39.6	20.0	44.0	36.0
	Lives with Both parents	32.6	32.7	34.7	26.8	33.5	39.7
	Average	30.3	34.7	35.0	24.7	35.7	39.6
Total		24.9	35.2	40.0	20.2	35.1	44.6
		Pearson's Chi-square Test = 179.152 P-Value = 0.000 Df = 14			Pearson's Chi-square Test = 140.249 P-Value = 0.000 Df = 14		

Source: GDHSs 2008 and 2014 Computed from Household Member Data File of Children between ages 6 to 17 year
Dash (-) Means no data available

From Table 6.9, generally, when the number of children increases to five and above, then the proportion of children who are attending the required level of education is highest among children who live with both parents than the rest of the categories of the parent-child living arrangements. The p-value (<0.001) confirms that there is strong association between number of children in the household and the required level of education attained.

6.5.2 Household Wealth Status, Parent-Child Living Arrangements and Required Level of Education Attained

Table 6.10 presents analysis of household wealth status, parent-child living arrangements and required level of education attained. From the table, there is a positive relationship between household wealth status and the average proportion of children who are attending the required level of education in both 2008 and 2014. This means that as household wealth status increases, then the proportion of children who were attending the required level of education increases. For instance, in 2008, the average proportion of children who are attending the required level of education among children from household wealth status categorized as poorest was 30.5 percent and increased steadily to 57.8 percent among children from households categorized as richest. In 2014, the average proportion ranged from the lowest of 35.9 percent among children from households categorized as poorest to the highest of 63.7 percent among children from households categorized as richest. The analysis also showed an inverse relationship between household wealth status and the average proportion of children who have no education. The finding from this study agrees with Evans and Miguel (2004) who reported that parent death leads to a moderate decrease in school participation, but with larger effects for children from poor households.

Table 6.10 Percentage Distribution of Children by Household Wealth, Parent-Child Living Arrangements and Required Level of Education Attained, 2008 and 2014

Household Wealth Index	Parent-Child Living Arrangements	Educational Level Attained GDHS 2008			Educational Level Attained GDHS 2014		
		No Education	Not Attended Required Level	Attending the Required Level	No Education	Not Attending Required Level	Attending the Required Level
Poorest	Does not live with any parent	37.8	34.1	28.1	28.3	37.4	34.3
	Lives with only mother	31.0	38.9	30.1	23.0	44.8	32.2
	Lives with only father	33.2	34.7	32.1	20.7	42.6	36.6
	Lives with Both parents	40.1	28.9	30.9	28.3	34.9	36.8
	Average	38.0	31.5	30.5	27.1	37.0	35.8
Poorer	Does not live with any parent	25.9	39.7	34.5	19.7	44.2	36.1
	Lives with only mother	23.9	37.7	38.3	22.7	38.3	39.0
	Lives with only father	22.8	40.6	36.7	18.7	41.0	40.0
	Lives with Both parents	27.7	35.9	36.4	23.4	36.0	40.6
	Average	26.2	37.4	36.4	22.2	38.6	39.2
Middle	Does not live with any parent	22.0	44.5	33.5	14.5	43.4	42.0
	Lives with only mother	22.5	39.4	38.1	15.9	36.5	47.6
	Lives with only father	19.3	43.9	36.9	16.4	41.1	42.5
	Lives with Both parents	23.5	34.0	42.5	20.7	30.4	48.9
	Average	22.5	39.0	38.5	17.5	36.0	46.5
Richer	Does not live with any parent	13.6	46.0	40.4	13.7	36.1	50.2
	Lives with only mother	14.0	36.9	49.0	9.1	31.8	59.2
	Lives with only father	15.2	45.7	39.0	13.0	38.2	48.8
	Lives with Both parents	18.1	32.1	49.8	15.5	26.1	58.3
	Average	15.8	37.6	46.6	13.2	30.9	55.8
Richest	Does not live with any parent	9.6	48.6	41.8	9.4	47.9	42.7
	Lives with only mother	11.2	25.8	63.0	9.0	24.6	66.5
	Lives with only father	12.3	37.7	50.0	6.4	30.0	63.6
	Lives with Both parents	10.3	24.3	65.5	10.7	16.6	72.7
	Average	10.4	31.8	57.8	9.7	26.6	63.7
Total		24.9	35.2	40.0	20.2	35.1	44.6
		Pearson's Chi-square Test = 910.514 P-Value = 0.000 Df = 8			Pearson's Chi-square Test = 581.417 P-Value = 0.000 Df = 8		

Source: GDHSs 2008 and 2014 Computed from Household Member Data File of Children between ages 6 to 17 years

In both 2008 and 2014, the proportions of children who are attending the required level of education is generally highest in households where children live with both parents than in households where children live with only one of their parents or where children do not live with any of their biological parents except children in poorer households in 2008 and children in richer households in 2014 where the proportion of children who are attending the required level of education is highest among children who live with only their mothers. Evidences abound from literature (Kim and Sherraden, 2010; Fronstin et al. 2001; Boggess, 1998; Hanson and McLanahan, 1994; Mulkey et al. 1992; Bane and Ellwood, 1983), that the difference in the cost of education which is better explained by the level of household wealth put children who live in households where both mother and father are present at a more advantageous position to be

attending the required level of education than their counterparts where only one of the parents is present or where none of the parents is present. The p-value (<0.001) is an indication that there is a strong association between household wealth and children's required level of education attained.

6.6 Community Characteristics, Parent-Child Living Arrangements and Required Level of Education Attained

6.6.1 Place of Residence, Parent-Child Living Arrangements and Required Level of Educational Attained

The analysis of place of residence, parent-child living arrangements and required level of education attained can be found in Table 6.11. From the table, the average proportion of children who live in urban areas and are attending the required level of education is higher (47.9% in 2008 and 52.7% in 2014) than children who live in rural areas (35.4% in 2008 and 39.1% in 2014). It has also revealed that the average proportion of children who are not attending the required level of education as well as the average proportion of children who have no education is lower in urban areas than in rural areas which is to be expected as there are more educational institutions in the urban areas than it is in the rural areas thereby making access to education in urban areas much more easier than in rural areas.

It has also been revealed that, in urban areas, the proportion of children who are attending the required level of education is highest among children who live with both parents (53.8% in 2008 and 57.3% in 2014) which is above the average proportion for all children who live in urban areas (47.9% in 2008 and 52.7% in 2014). However, in rural areas, the highest proportion of children who are attending the required level of education is highest among children who live

with only their mothers (37.5% in 2008 and 39.8% in 2014) which is also above the average for all children who live in rural areas for 2008 and 2014 (i.e., 35.4 and 39.1% respectively). The p-value (<0.001) indicates a statistically significant association between place of residence and required level of education attained.

Table 6.11 Percentage Distribution of Children by Place of Residence, Parent-Child Living Arrangements and Required Level of Education Attained, 2008 and 2014

Place of Residence	Parent-Child Living Arrangement	Educational Level Attained GDHS 2008			Educational Level Attained GDHS 2014		
		No Education	Not Attended Required Level	Attending the Required Level	No Education	Not Attending Required Level	Attending the Required Level
Urban	Does not live with any parent	16.4	44.2	39.4	14.6	41.8	43.6
	Lives with only mother	16.9	35.6	47.5	13.0	33.0	53.9
	Lives with only father	17.9	40.5	41.6	11.5	37.2	51.3
	Lives with Both parents	17.1	29.0	53.8	16.5	26.2	57.3
	Average	16.9	35.2	47.9	14.8	32.5	52.7
Rural	Does not live with any parent	26.4	41.1	32.5	21.8	41.0	37.2
	Lives with only mother	24.9	37.6	37.5	20.8	39.4	39.8
	Lives with only father	25.3	39.1	35.6	20.2	41.6	38.2
	Lives with Both parents	32.6	31.6	35.8	26.2	34.3	39.5
	Average	29.4	35.1	35.4	24.0	36.9	39.1
Total		24.9	35.2	40.0	20.2	35.1	44.6
		Pearson's Chi-square Test = 339.448 P-Value = 0.000 Df = 2			Pearson's Chi-square Test = 285.788 P-Value = 0.000 Df = 2		

Source: GDHSs 2008 and 2014 Computed from Household Member Data File of Children between ages 6 to 17 years

6.6.2 Region of Residence, Parent-Child Living Arrangements and Required Level of Education Attained

Table 6.12 presents analysis of region of residence, parent-child living arrangements and required level of education attained. Among the 10 regions in Ghana, Greater Accra Region recorded the highest proportion of children who are attending the required level of education. This is consistent in both 2008 (53.2%) and 2014 (60.3%). This is followed by the Ashanti Region (51.4% in 2008 and 50.0% in 2014). Greater Accra and Ashanti regions recorded over 50 percent of the average proportion of children who are attending the required level of education compared to the rest of the regions (which recorded less than 50%) in both 2008 and

2014. In 2008, Northern Region recorded the least average proportion of children who are attending the required level of education (32.5%) among the 10 regions whereas in 2014, the Upper West Region had the least average proportion (37.0%). The proportions of children attending the required level of education according to the regional averages are higher in 2014 than the proportions in 2008 except in Ashanti Region that experienced a decrease during the period (51.4% in 2008 and reduced to 50.0% in 2014).

From Table 6.12, in 2008, six regions namely; Western, Central, Greater Accra, Volta, Ashanti and Upper West Regions have the highest proportion of children who are attending the required level of education among children who live with both parents. Eastern and Brong Ahafo regions have the highest proportion of children who are attending the required level of education among children who live with only their mothers. In the Northern Region, the proportion of children who are attending the required level of education is highest among children who live with only their fathers whereas in Upper East Region, the highest proportion of children were found among children who do not live with any of their parents. In 2014, the proportion of children who are attending the required level of education across the ten regions is highest among children who live with both parents in the following regions, Central, Greater Accra, Volta, Ashanti, Northern and Upper East. The highest proportion of children who are attending the required highest level of education were found in Eastern, Brong Ahafo and Upper West regions among children who live with only their mothers whereas the highest (above 50%) in Western Region is among children who live with only their fathers.

Table 6.12 Percentage Distribution of Children by Region of Residence, Parent-Child Living Arrangements and Required Level of Education Attained, 2008 and 2014

Region of Residence	Parent-Child Living Arrangements	Educational Level Attained GDHS 2008			Educational Level Attained GDHS 2014		
		No Education	Not Attended Required Level	Attending the Required Level	No Education	Not Attending Required Level	Attending the Required Level
Western Region	Does not live with any parent	23.8	45.2	31.0	20.0	41.1	38.9
	Lives with only mother	22.5	36.0	41.5	13.4	36.8	49.8
	Lives with only father	14.4	45.6	40.0	6.3	39.7	54.0
	Lives with Both parents	23.3	32.6	44.1	22.3	30.3	47.4
	Average	22.6	36.6	40.8	18.5	35.0	46.5
Central Region	Does not live with any parent	17.1	44.5	38.4	14.1	47.7	38.3
	Lives with only mother	21.9	41.4	36.7	19.0	34.7	46.2
	Lives with only father	16.5	44.3	39.2	13.5	41.6	44.9
	Lives with Both parents	23.1	33.6	43.3	17.6	29.4	53.0
	Average	20.8	39.3	39.9	17.1	35.7	47.3
Greater Accra Region	Does not live with any parent	14.0	47.1	39.0	15.8	37.1	47.1
	Lives with only mother	14.4	33.1	52.4	10.8	29.7	59.5
	Lives with only father	14.2	41.5	44.3	16.7	25.0	58.3
	Lives with Both parents	13.5	24.0	62.5	11.4	21.1	67.6
	Average	13.9	32.9	53.2	12.5	37.2	60.3
Volta Region	Does not live with any parent	20.0	50.7	29.3	19.6	38.6	41.8
	Lives with only mother	23.7	39.9	36.4	16.5	40.7	42.8
	Lives with only father	20.0	50.0	30.0	18.2	42.0	39.8
	Lives with Both parents	28.0	35.1	36.9	24.8	31.0	44.2
	Average	24.5	41.1	34.4	21.1	36.0	43.0
Eastern Region	Does not live with any parent	25.9	41.6	32.5	18.3	45.3	36.3
	Lives with only mother	23.6	36.1	40.3	18.0	32.7	49.2
	Lives with only father	27.2	41.2	31.6	12.0	47.8	40.2
	Lives with Both parents	22.6	37.6	39.8	25.5	32.4	42.1
	Average	24.0	38.5	37.5	20.7	37.0	42.3
Ashanti Region	Does not live with any parent	14.8	40.6	44.6	12.2	41.4	46.4
	Lives with only mother	15.7	30.6	53.7	16.1	35.1	48.8
	Lives with only father	14.3	41.4	44.3	15.6	37.5	46.9
	Lives with Both parents	15.3	29.2	55.5	15.0	32.4	52.6
	Average	15.2	33.4	51.4	14.8	35.2	50.0
Brong Ahafo Region	Does not live with any parent	21.1	45.1	33.8	16.6	45.9	37.6
	Lives with only mother	22.8	40.2	37.0	19.9	34.9	45.2
	Lives with only father	22.5	42.5	35.0	16.3	42.4	41.3
	Lives with Both parents	31.1	32.6	36.3	24.1	37.8	38.2
	Average	26.3	37.9	35.8	21.0	39.4	39.6
Northern Region	Does not live with any parent	42.4	27.9	29.7	25.1	32.5	42.4
	Lives with only mother	32.8	29.9	37.3	24.2	35.4	40.4
	Lives with only father	37.0	17.3	45.7	28.7	31.8	39.5
	Lives with Both parents	46.2	22.4	31.4	29.8	26.6	43.6
	Average	44.1	23.4	32.5	28.7	28.4	42.8
Upper East Region	Does not live with any parent	21.0	41.0	38.0	17.6	43.0	39.3
	Lives with only mother	26.4	42.0	31.6	16.7	49.8	33.5
	Lives with only father	27.5	42.2	30.3	13.8	48.0	38.2
	Lives with Both parents	31.0	33.0	36.0	15.7	40.0	44.3
	Average	28.4	36.5	35.1	16.1	42.9	41.1
Upper West Region	Does not live with any parent	28.7	39.1	32.2	25.7	35.7	38.6
	Lives with only mother	24.7	41.6	33.7	20.0	37.8	42.2
	Lives with only father	28.4	40.4	31.2	20.0	40.0	40.0
	Lives with Both parents	25.3	36.5	38.2	32.1	33.0	34.9
	Average	26.2	38.2	35.7	28.4	34.7	37.0
Total		24.9	35.2	40.0	20.2	35.1	44.6
		Pearson's Chi-square Test = 733.123 P-Value = 0.000 Df = 18			Pearson's Chi-square Test = 359.423 P-Value = 0.000 Df = 18		

Source: GDHSs 2008 and 2014 Computed from Household Member Data File of Children between ages 6 to 17 years

Generally, it has shown that the proportion of children who are attending the required level of education by parent-child living arrangements is higher (above the average) in each of the regions among children who live with both parents than the other categories of parent-child living arrangements. However, in 2008 in Upper East Region, the proportion of children who are attending the required level of education is highest among children who do not live with any of their parents (38%) which is higher than the proportion of children who live with both parents ((36.0%). In 2014, in the Upper East Region, the proportion of children who are attending the required level of education is highest among children who live with both parents (44.5%), this was followed by children who do not live with any of their parents (39.3%). The p-value (<0.001) indicates a significant association between region of residence and required highest level of education attended.

6.7 Summary

Chapter Six examined the association of selected child, parent, household and community characteristics on one hand, parent-child living arrangements and children's attainment of the required level of education on the other. The relationships amongst the four categories of parent-child living arrangements and required level of education attained has revealed that generally, the proportion of children who are attending the required level of education is highest among children who live with only their mothers, followed by those who live with both parents, then by children who live with only their fathers and lastly children who do not live with any of their parents. The presence of the mother in the house is therefore very crucial in children's attainment of the required level of education. As age of child increases, the proportion of children who are attending the required level of education reduces. Higher proportion of female children are attending the required level of education than their male counterparts. The proportion of children who have females as their heads of household/parents or guardians, the

highest proportion of them are attending the required level of education than children who indicated males as their heads of household/parents or guardians. As the household wealth status increases, then the proportion of children who are attending the required level of education increases. The proportion of children who live in urban areas and who are attending the required level of education is higher than children who are resident in rural areas. The above findings are consistent in both 2008 and 2014.

CHAPTER SEVEN

DETERMINANTS OF REQUIRED LEVEL OF EDUCATION ATTAINED

7.1 Introduction

This chapter discusses the determinants of the required level of education attained using parent-child living arrangements, selected demographic, social and economic variables which can be grouped under child, parent, household as well as community characteristics. Having looked at the data and analysed some of the background characteristics of children using frequency distribution, cross tabulations as well as trivariate analysis, the next step is to fit a statistical model to the data. Correlation analysis was first applied to determine relationships among the selected variables and to select variables that correlates highly with the dependent variable. If there are two independent variables that correlates highly with each other, one of them is selected and the other dropped to minimize auto-correlation. It is after this, that the multinomial logistic regression was used to determine the factors that influence the required level of education attained.

In 2008, when the variables were subjected to correlation analysis, six out of the nine variables showed high significance level of 99 percent with required level of education attained. With the 2014 data, nine out of 12 variables showed high significance level of 99 percent of relationship with the required level of education attained and these were the variables that were used in the multivariate analysis.

7.2 Multinomial Logistic Statistical Analysis

7.2.1 Model Goodness of Fit

The model goodness of fit gave a p-value of 1.000 for both 2008 and 2014 which is not statistically significant. Based on this measure, our sample matches with the population proportions meaning that there is no difference between the observed and the theoretical frequencies. The model fitting information for the chi-square statistics for this model was significant at 0.001 levels for both the 2008 and 2014 data indicating that our predictors significantly increase the log-likelihood of the model and useful for prediction. Significance level for the analysis was set at a p-value less than 0.05.

7.2.2 The Pseudo R-Square

In multinomial logistic regression analysis, one can consider measures that are similar to R^2 . The Pseudo R-Square is similar to multiple regression contexts for a logistic regression model as in ordinary least-squares linear regression which is the proportion of variance that can be explained by the model. In multinomial logistic regression, however, these are Pseudo R^2 measures. This is the proportion of variance that can be explained by the model. The measures are the Cox & Snell R^2 and Nagelkerke R^2 which are approximations and rescaled approximation respectively of R^2 in linear regression models (and constrained to fall between 0 and 1) but are not reported as the same thing. There is yet a third measure called McFadden R^2 .

From Table 7.1, Cox & Snell R^2 was 0.602 in 2008 and 0.613 in 2014 suggesting that about 60.2% in 2008 and 61.3% in 2014 of the difference between the required level of education attained (outcome or response variable) was explained by the independent (predictor) variables used (which is very good). The Nagelkerke R^2 was 0.680 (i.e., 68%) in 2008 and 0.702 (i.e., 70.2%) in 2014 which is even better. The McFadden R^2 was 0.426 in 2008 and 0.459 in 2014.

Table 7. 1 Pseudo R-Square, GDHS, 2008 and 2014

	GDHS, 2008	GDHS, 2014
Cox and Snell	0.602	0.613
Nagelkerke	0.680	0.702
McFadden	0.426	0.459

Source: GDHS 2008 and 2014, Computed from Household Member Data Files

7.3 Model Parameter Estimates (Determinants) for the Attainment of Required Level of Education

7.3.1 Parent-Child Living Arrangements and Attainment of Required Level of Education

The results of the model parameter estimates for the attainment of the required level of education for 2008 and 2014 have been presented in Tables 7.2 and 7.3 respectively. In 2008, children who do not live with any of their parents are more likely [odds ratio (OR) is 1.259, p-value <.001] than children who live with both parents to have no education than to be attending the required level of education. Children who do not live with any of their parents as well as children who live with only their fathers are more likely (OR 1.319, and 1.335 respectively and p-values < .05 each) than children who live with both parents not to be attending the required level of education than to be attending the required level of education. In 2014, children who do not live with any of their parents are more likely (OR is 1.094 even though p-value >0.05) than children who live with both parents to have no education than to be attending the required level of education. Also, children who do not live with any of their parents are more likely (OR is 1.639, p-value <.001) than children who live with both parents not to be attending the required level of education than to be attending the required level of education. The results from the multivariate analysis agree with the first and second hypotheses of this study which states that

children who live with both parents are more likely to be attending the required level of education than children who do not live with any of their parents or children who live with only one of their parents. The result supports Sigle-Rushton and McLanahan's (2004) study which indicated that children who have been raised in homes where a father is present (possibly father and mother) graduate from high school and attend college at much higher rates than children raised in a fatherless homes.

Table 7. 2 Results of Multinomial Logistics Regression Analysis Showing the Odds of Children on Required Level of Education Attained, GDHS, 2008

Variable	No Education Verses Attending the Required Level of Education	Not Attending the Required Level of Education Verses Attending the Required Level of Education
Intercept	1.371***	1.637***
Parent-Child Living Arrangements		
Child not living with any parent	1.259***	1.319**
Child Lives with only Mother	1.077	0.867
Child Lives with only Father	0.980	1.335*
Child lives with both Parent	1.000	1.000
Age of Child		
6-11yrs	0.535***	0.001
12-14yrs	0.406***	0.375***
15-17yrs	1.000	1.000
Sex of Child		
Male	0.990	1.009
Female	1.000	1.000
Age of Head of Household/Parent or Guardian		
<30yrs	1.653***	1.205
30-39yrs	1.104	1.433***
40-49yrs	0.984	0.944
50-59yrs	0.859*	0.935
60+yrs	1.000	1.000
Sex of Head of Household/Parent or Guardian		
Male	1.251**	0.872
Female	1.000	1.000
Number of Children in Household		
1	0.555	0.296**
2	0.521***	0.499***
3	0.877	0.943
4	0.827*	0.924
5	0.883	0.884
6	0.815**	0.845
7	0.867*	1.104
8+	1.000	1.000
Household Wealth Status		
Poorest	5.987***	3.479***
Poorer	3.722***	4.852***
Middle	3.096***	4.220***
Richer	1.838***	2.359***
Richest	1.000	1.000
Place of Residence		
Urban	1.029	0.878
Rural	1.000	1.000
Region		
Western	1.284**	0.981**
Central	1.354**	1.236
Greater Accra	1.193	0.660***
Volta	1.451***	1.251
Eastern	1.446***	1.223
Ashanti	0.818*	0.504***
Brong Ahafo	1.398***	1.379
Northern	1.839***	0.382***
Upper East	1.102	0.991*
Upper West	1.000	1.000

Source: GDHS 2008. Computed from Household Member Data File. Note: *p<0.05; **p<0.01; ***p<0.00
The reference category is children attending the required level of education

Table 7. 3 Results of Multinomial Logistics Regression Analysis Showing the Odds of Children on Required Level of Education Attained, GDHS, 2014

Variable	No Education Verses Attending the Required Level of Education	Not Attending the Required Level of Education Verses Attending the Required Level of Education
Intercept	1.477***	0.965***
Parent-Child Living Arrangements		
Child not living with any parent	1.094	1.639***
Child Lives with only Mother	0.862	1.226
Child Lives with only Father	0.909	0.914
Child lives with both Parent	1.000	1.000
Age of Child		
6-11yrs	0.865	0.001
12-14yrs	0.309***	0.253***
15-17yrs	1.000	1.000
Sex of Child		
Male	1.041	1.150
Female	1.000	1.000
Age of Head of Household/Parent or Guardian		
<30yrs	1.957***	1.365
30-39yrs	1.278**	1.241
40-49yrs	0.957	0.814
50-59yrs	0.969	0.808
60+yrs	1.000	1.000
Sex of Head of Household/Parent or Guardian		
Male	0.996	1.280
Female	1.000	1.000
Child Helped with Homework		
Child not Helped	-	0.963
Child Helped	-	1.000
Child Communicated to of High Expectation		
Child Not Communicated to	1.272***	0.957
Child Communicated to	1.000	1.000
Child Relieved of some Household Chores		
Child not Relieved	1.026	1.166
Child Relieved	1.000	1.000
Number of Children in Household		
1	0.001	0.002
2	0.680*	1.303
3	0.698**	1.138
4	0.857	0.949
5	0.850	1.287*
6	0.920	1.211
7	0.824*	1.237
8+	1.000	1.000
Household Wealth Status		
Poorest	3.347***	6.592***
Poorer	2.870***	6.249***
Middle	2.043***	3.030***
Richer	1.462***	1.706***
Richest	1.000	1.000
Place of Residence		
Urban	1.013	0.842
Rural	1.000	1.000
Region		
Western	0.825	1.026
Central	0.712**	1.143
Greater Accra	0.608***	0.701
Volta	0.833	0.931
Eastern	0.811	1.126

Ashanti	0.655***	1.000
Brong Ahafo	0.892	1.347***
Northern	0.589***	0.452
Upper East	0.442***	1.465
Upper West	1.000	1.000

Source: GDHS 2014. Computed from Household Member Data File. Note: *p<0.05; **p<0.01; ***p<0.001
The Model reference category is children attending the required level of education, (-) variable not available in 2008

7.3.2 Age of Child and Attainment of Required Level of Education

Age of a child is a significant determinant of the required level of education attained in both 2008 and 2014. In 2008, children aged 6-11 years (OR 0.535, p-value <.001) as well children 12-14 years (OR 0.406, p-values <.001) and in 2014, children 12-14 years (OR 0.309, p-value < 0.001) are less likely than children aged 15-17 years to have no education than to be attending the required level of education. Again, in both 2008 and 2014 children 12-14 years are less likely (OR 0.375 for 2008 and 0.253 for 2014 with p-values <0.001 each) than children 15-17 years not to be attending the required level of education than to be attending the required level of education. The finding from the multivariate analysis confirms that of the trivariate analysis where age is found to be significantly associated with required level of education attained when the data showed that a higher proportion of younger children are attending the required level of education than older children.

7.3.3 Age of head of Household/Parent or Guardian and Attainment of Required Level of Education

In 2008 children whose heads of household/parent or guardians are aged <30 years are more likely (OR 1.653, p-value <.001) than those whose heads of household/parents guardians are aged 60+ years to have no education than to be attending the required level of education. Children whose heads of household/parents or guardians are aged 50-59 years are less likely (OR 0.859, p-value <0.05) than those whose heads of household/parents or guardians are aged 60+ years to have no education than to be attending the required level of education. Children

whose heads of household/parents or guardians are aged 30-39 years are more likely (OR 1.433, p-value <.001) than children whose heads of household/parents or guardians are aged 60+ years not to be attending the required level of education than to be attending the required level of education. In 2014, children whose heads of household/parents or guardians are less than 40 years (i.e., heads of household/parents or guardians aged < 30 years as well as those aged 30-39 years) are more likely (OR 1.957 and 1.278 respectively with p-values <.001 each) than children whose heads of household/parents or guardians are aged 60+ years to have no education than to be attending the required level of education. The findings from the multivariate analysis support that of the trivariate analysis where a higher proportion of children whose parents are aged <30 years have no education than children whose heads of household/parents or guardians are older than 30 years.

7.3.4 Sex of Head of Household/Parent or Guardian and Attainment of Required Level of Education

In 2008, children who indicated males as their heads of household/parents or guardians were more likely (OR 1.251, p-value <.005) than children who indicated females as their heads of household/parents or guardians to have no education than to be attending the required level of education. The finding from the multivariate analyses had confirmed that of the trivariate analyses that indicated that higher proportion of children who indicated female as their heads of household/parents or guardians are attending the required level of education than children who indicated males as their heads of household/parents or guardians. This finding supports Boadu's (1999) study which indicated a significant association between female heads of household and educational attainment of the male child.

7.3.5 Communicate High Expectations to Child and Attainment of Required Level of Education

From Table 7.3 and in 2014, children whose parents or whose household members do not communicate high expectation for them are more likely (OR .1.272, p-Value <0.001) than children whose parents or household members communicate high expectations for them to have no education than to be attending the required level of education.

7.3.6 Number of Children in the Household and Attainment Required Level of Education

Number of children in the household has shown a reverse relationship with educational attainment. For instance, in 2008, when the number of children in the household was fewer than 8, children were less likely than when the number of children in the household was 8+ to have no education than to be attending the required level of education. The ORs range between 0.521 and 0.883 and p-values were statistically significant at level <.05) especially when the children in the household are 2, 4, 6 and 7. Again, in 2008, when the number of children is below 8, children in the household were less likely than when the number of children in household is 8 and above not to be attending the required level of education than to be attending the required level of education. The ORs range between 0.296 and 0.943 and are statistically significant at level <0.01 when the number of children in the household is either one or two. Similar to what was observed with the 2008 data, in 2014, when the number of children in the household is below 8, children in the household are less likely than when the number of children in the household is 8+ to have no education than to be attending the required level of education. The ORs range from 0.680 to 0.920 and it is statistically significant at p-value <0.05 especially when the number of children in the household is 2, 3 or 7. However, in households with 5 children, they are 1.287 times more likely than when the children are 8+ not to be attending the required

level of education than to be attending the required level of education. The P-value is statistically significant at $p\text{-value} < 0.05$.

The findings from the multivariate analysis have confirmed that from the trivariate analysis that showed that as the number of children in the household increases then less proportion of the children were found to be attending the required level of education. This finding can be explained from one of the reasons provided in Ghana's Maternal Health Survey (2007) report which indicated that the size and composition of the household members affect the allocation of financial and other resources among household members.

7.3.7 Household Wealth Status and Attainment of Required Level of Education

In 2008 and 2014, it has been consistent that when household wealth status is below richest (i.e., poorest, poorer, middle or richer categories), children in the household are more likely than when the household wealth status is richest to have no education than to be attending the required level of education. It is also clear that when household wealth status increases or improves, then the odds of children having no education decrease. For instance, in 2008, the odds ratio for children in households categorized as poorest was 5.987 times, the poorer household was 3.722 times, the middle household was 3.096 times and the richer household was 1.838 times more likelihood or higher than children from households categorized as richest to have no education than to be attending the required level of education. The finding from this study agrees with Evans and Miguel (2004) who reported that parent death leads to a moderate decrease in school participation, but with larger effects for children from poor households. The p-values are statistically significant at level $< .001$ for all the categories of the household wealth status.

With regard to children not attending the required level of education, in 2008, when household wealth status is below richest children in the household were more likely than when the household wealth status is richest, not to be attending the required level of education than to be attending the required level of education. For instance, children in households categorized as poorest were 3.479 times, children in households categorized as poorer were 4.852 times, children from middle households wealth status were 4.220 times whereas children from richer households were 2.359 times more likelihood than children in households categorized as richest not to be attending the required level of education than to be attending the required level of education. The p-values are all statistically significant at level < 0.001 .

The 2014 multivariate analysis has also revealed a reverse relationship between household wealth status and children's required level of education attained. This means that as the household wealth status improves, then the likelihood of children who have no education or who are not attending the required level of education reduces. For instance, the odds ratio of children from households categorized as poorest is 3.347 times, children from poorer households is 2.870 times, children from middle household wealth category is 2.043 times whereas children from richer households are 1.462 times more than children in richest households to have no education than to be attending the required level of education. All the categories have p-values < 0.001 . Again, the 2014 data have revealed that children in households categorized as poorest are 6.592 times, poorer households are 5.249 times, middle wealth households are 3.030 times whilst children in richer households are 1.706 times more likelihood than children in households categorized as richest not to be attending the required level of education than to be attending the required level of education. All the p-values are statistically significant at level < 0.001 . The findings from the multivariate analyses in both 2008 and 2014 are consistent with the results from the trivariate analysis that indicated that as the household

wealth status increases, then the proportion of children that have no education decreases whereas the proportion that are attending the required level of education increases. This findings agrees with Evans and Miguei (2004) study that estimated the impact of parent death on primary school participation in rural Kenya and found that parents death lead to a moderate decrease in school participation but the larger effects is for children from poor households.

7.3.8 Place of Residence and Attainment of Required Level of Education

Children who reside in urban areas are more likely (OR 1.029, p-value $>.05$ for 2008 and OR 1.013, p-value $>.05$ for 2014) than children who reside in rural areas to have no education than to be attending the required level of education. This findings do not agree with the findings from the trivariate analysis. However, children who reside in urban areas are less likely (OR 0.878, p-value >0.05 for 2008 and OR 0.842, p-value $>.05$) than children who reside in rural areas not to be attending the required level of education than to be attending the required level of education. This findings agrees with the 4th hypothesis of this study but the odds ratio for the multivariate analysis are not statistically significant.

7.3.9 Region of Residence and Attainment of Required Level of Education

From the 2008 data, children in Western, Central, Volta, Eastern, Brong Ahafo and Northern regions are more likely (OR range from 1.284 to 1.839, p-values < 0.01 each) whereas children in Ashanti Region are less likely (OR 0.818 P-value $<.05$) than children in the Upper West Region to have no education than to be attending the required level of education. Children from five regions namely; Western, Greater Accra, Ashanti, Northern and Upper East regions are less likely (OR range from 0.382 to 0.981, p-values <0.05 each) than children from Upper West Region not to be attending the required level of education than to be attending the required level of education.

In 2014, children in Central, Greater Accra, Ashanti, Northern and Upper East regions are less likely (OR range from 0.442 to 0.712, p-value <0.01 each) than children from Upper West Region to have no education than to be attending the required level of education. Also, children from the Brong Ahafo Region is 1.347 times more likely (p-value <0.001) than children in Upper West Region not to be attending the required level of education than to be attending the required level of education.

7.4 Summary

In 2008, children who do not live with any of their parents are more likely than children who lived with both parents to have no education than to be attending the required level of education. Children who do not live with any of their parents as well as children who lived with only their fathers are more likely than children who live with both parents not to be attending the required highest level of education than to be attending the required level of education. In 2008, children who indicated male heads of household/parents or guardians were more likely than children who indicated female heads of household/parents or guardians to have no education than to be attending the required level of education. In 2014, children who do not live with any of their parents are 1.6 times more likely than children who live with both parents not to be attending the required level of education than to be attending the required level of education. Children 6-11 years as well as children 12-14 years are less likely than children 15-17 years to have no education than to be attending the required level of education. Also, children 12-14 years are less likely than children 15-17 years not to be attending the required level of education than to be attending the required level of education.

In 2008 and 2014 when household wealth status is below richest, children are more likely than when the household wealth is richest to have no education or not to be attending the required

level of education than to be attending the required level of education. From the 2008 data, children in Western, Central, Volta, Eastern, Brong Ahafo and Northern regions were more likely whereas children in Ashanti Region were less likely than children in the Upper West Region to have no education than to be attending the required level of education. In 2014, children in Central, Greater Accra, Ashanti, Northern and Upper East regions were less likely than children in the Upper West Region to have no education than to be attending the required level of education.

CHAPTER EIGHT

DISCUSSION OF KEY FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

8.1 Introduction

An education is something that one can keep for a lifetime. However, educational attainment comes about as interplay of a number of factors that require a lot more than the end point which is the level attained. One of the factors that may affect educational attainment is the parent-child living arrangement. Normally, parenting is centred around the children's biological fathers and mothers, but often with emphasis on the role of fathers in most cultures. As more single-parent households appear in societies, interests grow as to the effect of these households on children's wellbeing. Most of the arguments suggest that children are likely to suffer (having fewer resources) when they grow up in households where either only father or only mother are present rather than when both parents are present and even worse when both parents are not present. It is also true that many single-parent households find a balance and successfully thrive in today's world.

There is a common belief that single-parenting whether through separation, divorce or death of a spouse adversely affects among other things, children's educational attainment. For instance, Evans and Miguei (2004) reported that while the loss of a father is correlated with poorer educational outcomes, this correlation arises because a father's death is a marker that the household is poor. However, the fundamental question is whether these correlations have a causal interpretation. In Ghana, unlike some of the developed countries where nuclear families are predominant, almost all societies practice some form of extended family system. In this

situation, parents or guardians receive some form of support from the extended family members or even from neighbours towards children's upkeep including children's education and so in such a situation, the effect of single-parenting on children's educational development becomes unclear.

Based on the above arguments, one could say that public opinion about the impact of parents' living arrangements with children on education of the children is mixed. Assessing the risks and impacts of changes in family structures on children is, therefore, essential in planning programmes and policies to promote healthy children and families. This study therefore was said to be important for the policy maker especially the economists because of the effect of education on productivity. Gaining a better understanding of the relationship between parent-child living arrangements and children's required level of education attained will allow for progress in advancing productivity. Therefore, whether children are more likely to suffer demographic, social and economic problems when raised by none of the children's biological parents or one parent rather than both parents is a central theme in this study which has been explored. The study adopted hypotheses that stated that, children who live with both parents are more likely to attain the required level of education compared to children who do not live with any of their parents or children who live with one of their parents, that, male children are more likely to attain the required level of education compared to female children and also, children who live in urban areas are more likely to attain the required level of education compared to children who live in rural areas. The research questions were as follows:

- i. What is the situation of parent-child living arrangements in Ghana and how does each situation differs across segments of the Ghanaian population?
- ii. What are the required levels of educational attainment that commensurate with the official school going ages of children 6-17 years in Ghana?

- iii. What are the determinants of children's required level of educational attainment in Ghana?

The study investigated the demographic, social and economic characteristics of children who are aged between six and seventeen years and linked to parent-child living arrangements to understand how parents' living arrangements with children correlate with the children's level of education attained. These demographic, social and economic variables were grouped into child, parent or guardian, household as well as community characteristics.

Data were analysed at four stages separately. The univariate analysis consisted of percentage distribution of children. The univariate analysis was followed by bi-variate analysis where selected demographic, social and economic background of children were cross-tabulated with parent-child living arrangements. Parent-child living arrangement was also cross-tabulated with required level of education attained with the selected child, parent, household and community characteristics used as control or intermediate variables through the use of trivariate analysis. The trivariate analysis was carried out to help minimize any confounding factors that will affect educational attainment. The last stage of the analysis was the application of multinomial logistic regression to determine factors that predict children's required level of education attained. The multinomial logistic regression model was used because the dependent variable was treated as categorical variable with three categories.

8.2 Discussion of Key Findings

8.2.1 Parent-Child Living Arrangements with Child, Parent, Household and Community Characteristics

Popenoe's (1996) study indicated a rapid and drastic increase in the number of single-parent households in the latter half of the Twentieth Century. Norton and Glick (1986) projected that nearly 60 percent of American children will live part of their childhood in single-parent families. The GSS (2015) reported eight percent of children less than 18 years of age to have one parent or both parents dead. Analysis of the GDHS 2014 data showed that 90 percent of children 6-17 years have both parents alive but 50 percent live with both parents. The difference of the proportion of children who have both parents alive and those who live with both parents (which is 40 percentage points) may have to either live with one or none of their parents. Some of the reasons for the occurrence of the above situation could be due to divorce, separation, spousal death, child abandonment or possibly migration of one of the parents among others. It has also been found in this study that one-fifth of children live with only their mothers, another one-fifth do not live with any of their parents whereas seven percent live with only their fathers in 2008 and also in 2014. The above findings are in complete agreement with the GSS (2015) report which found that 55 percent of children under 18 years lived with both parents, 21 percent lived with their mothers although their fathers are alive, 4% lived with their fathers even though their mothers are alive whilst 13 percent lived with neither of their natural or biological parents even though both parents are alive. The bi-variate analysis of this study for parent-child living arrangements and some selected demographic and socio-economic variables showed that the proportion of children who live with both parents decreases as the age of the child increases from about 55 percent among children 6-11 years to about 44 percent among children 15-17 years. One of the reasons for the inverse relationship between the proportion of children who live with both parents and age of children could be that children leave their biological parents'

homes to live in other relatives' homes for the purpose of pursuing further education or to seek for work (GSS, 2015). The study has revealed that, there are also a higher proportion of males (53%) than females (49%) living with both parents. The proportion of children who reside in rural areas and who lived with both parents was higher (55% in 2008 and 57% in 2014) than children who reside in urban areas (44% in 2014 and 43% in 2014).

There are more male children than female children living with both parents. However, more females than males live without any of their parents. One of the reasons might be that, some parents give their children out to go and live with other families as housekeepers (domestic house helps) especially females who are not in school either for a pay or for the female children to be supported by their masters to learn a trade after serving for a certain agreed number of years in their masters' house (Levison and Langer, 2010). It could also be because males tend to depend more on parents than their female counterparts when it comes to provision of food and to perform other household chores. As a result, more male children may want to live with their own parents so that their parents will perform those tasks for them than their female counterparts. The lower the age of a head of household/parent or guardian, the lower the proportion of children that lived with both parents and the higher the proportion that do not live with any of their parents. The proportion of children who live with only their mothers decreases as the age of their heads of household/parents or guardians increases. The age of a head of household/parent or guardian and the proportion of children who do not live with any of their parents is higher at the beginning but reduces and then rise again with an increase in age of the head of household/parent or guardian (assume a U-shaped structure) whereas the proportion among children who live with only their fathers as well as children who live with both parents is low at the beginning, rises and starts to reduce (assume a conical-shaped structure). The proportion of children who live with only their mothers, however, decreases as age of the head

of household/parent or guardian increases. This finding can be attributed to the possibility of young heads of household/parents or guardians (less than 30 years) bringing in other children into their homes to assist them in their housekeeping activities as their own children might be too young to assist them in their household chores. In that case, the proportion of children who do not live with any of their parents will be higher among heads of household/parents or guardians who are young. Again, older heads of household/parents or guardians (50 years and above) might be having their own children who are old enough to support them to take care of their homes and so may not find it necessary to bring in children from other homes to support them. Some of the biological children might also be old enough to stay elsewhere in order to pursue education or to work (GSS, 2015). In such situations, the proportion of children who do not live with any of their parents will be less among older heads of household/parents or guardians.

It has been revealed from this study that over half (50.1% in 2008 and 55.7% in 2014) of children came from household wealth status categorized as poorer or poorest whereas 31.6 percent in 2008 and 25.6 percent in 2014 came from households categorized as richer or richest. More children from household wealth status categorized as poorer live with both parents (64%) than the proportion that live without any of their parents (14%). The proportion of the children who come from households categorized as richer or richest (better) and who live with both parents is a little less than 50 percent whereas nearly twenty six percent (25.7%) did not live with any of their parents in both 2008 and 2014. One of the possible reasons could be that households categorized as poorer or worse are not able to bring in other children who are not their biological children to live with them as compared to richer households who will be able to cater for additional children besides their own biological children to live with them. In addition, poor households are more likely to send out their children to live in other households that are

richer and so the rest of the children who will remain with them in the same household are likely to be their own biological children.

8.2.2 Parent-Child Living Arrangements and Children's Educational Attainment

In assessing the effect of single-parenting and children's development, McLanahan and Sandefur (1994) argued that, children who are raised by only one biological parent are worse off in areas of household poverty, failing and or dropping out of school among other things on average than children who were raised in double-parent households. Milla and Tidge (2001) as well as Bane and Ellwood's (1983) indicated that single-parent households mostly have fewer resources available to invest in their children than households with both parents present. It is obvious that when both parents are alive, they are more likely to have adequate resources (when the two parents add their resources such as time and/or income together) that will help the parents take good care of their children's education than when only one parent is solely responsible for the children's upkeep which may also affect the educational progression of their children.

Parental guidance is very crucial in child schooling and educational attainment which is likely to be more effective when children live with both parents than when they live with only one of their parents or when they do not live with any of their parents. From the bi-variate analysis, it has shown that higher proportion of children who lived with only their mothers are attending the required level of education than the proportion from the other categories of the parent-child living arrangements. The findings from this study is in agreement with the findings by Case and Ardington (2005) that reported that, the loss of a child's mother is a strong predictor of poor schooling outcomes for children and that maternal orphans are significantly less likely to be enrolled in school, and have completed significantly fewer years of schooling than children

whose mothers are alive. They went ahead to use the timing of mothers' deaths relative to children's educational shortfalls to argue that mothers' deaths have a causal effect on children's educational attainment. Evans and Miguei (2004) also found a moderate and highly statistically significant negative impact of a parent death on primary school participation: school participation rates declined on average by three (3) percentage points following a parent death, and impacts are nearly identical for deaths of mothers versus fathers.

The finding from the bi-variate analysis however, did not support Sigle-Rushton and McLanahan's (2004) study finding which indicated that children who are raised in households where fathers are present graduate from high school and attend college at much higher rate than children who are raised in households where the father is absent. Again, the finding did not support that of Jacobson et al. (2012); Tartari (2008) and Mulkey et al. (1992) which indicated that children from divorced families have significantly lower probability of completing each grade of schooling relative to their counterparts with married parents as well as Atkinson and Ogston's (1974) study findings which revealed that father-absent and father-present children performed equally well in school. The findings from the bi-variate analysis also did not agree with Bogess's (1998) finding which suggested that living with a widowed, divorced or separated mother has negative effect on high school graduation and also not consistent with Baraja's (2011) findings that children who grow up in households with only one biological parent are worse off, on average than children who grew up in households with both of their biological parents. One of the possible explanations for the highest proportion of children who are attending the required level of education being found among children who live with only their mothers could be as a result of the high prevalence of child fostering as reported by Mason (1997); Akresh (2009) and Grant & Yeatman (2013). They reported that fostering has long been recognized as a coping mechanism used by African households to respond to adult mortality, offset economic hardships, take advantage of resources available through kin networks, and redistribute the costs and benefits of childbearing across the extended family members.

The findings from the multivariate analysis showed that children who do not live with any of their parents are more likely than children who live in households with both parents present to have no education and also, more likely not to be attending the required level of education than to be attending the required level of education. This is consistent with Bernstein's (2008) findings which indicated that children's educational enrolments are better taken care of when both biological parents are present than when only one parent or none is present although other relations may be ready to provide some support.

Even though from the bi-variate analysis, it was found that the proportion of children who are attending the required level of education was higher among children who live with only their mothers followed by children who live with both parents, the difference is not much and it is because in the two living arrangements, the mother is present. It is possible that children who live with only their mothers recognize the value of their contribution to their households and by so doing, develop pride in their own work and self-confidence. It is also possible that children in single parent families are left to deal with their own challenges early in life and so are likely to live a successful life in future. It is mostly the case that children who are successfully raised in single parent families know that they are the main priorities in their parents' lives. This healthy approach helps to prepare such children for the "real world"

8.2.3 Child Characteristics and Educational Attainment

The finding from this study has shown that more than half of children 6-17 years in both 2008 and 2014 are within the ages of six to eleven years, a little over one-quarter were within 12 and 14 years old, whilst about one-fifth were between 15 and 17 years of age. This age pattern presents the true reflection of the population structure in Ghana which takes the form of a population pyramid with a broader base and thins as age increases. The structure of the age

distribution can be attributed to the relatively high fertility rates among the Ghanaian population.

Age of a child was a significant determinant of the required level of education attained in both 2008 and 2014 where higher proportion of younger children are attending the required level of education than older children. For instance, over six out of ten (about 61.0% in both 2008 and 2014) of children of ages of 6-11 years are attending the required level of education compared to 34.8 percent in 2008 and 39.3 percent in 2014 of the children between 15-17 years of age. This can be as a result of older children being repeated as they moved from one level to the next higher level of education. This has reflected in the situation where, lower proportion of younger children (6-11 years) with no education (11.4% in 2008 and 10.9% in 2014) compared to older children (15-17 years) who recorded 28.8 percent in 2008 and 24.2 percent in 2014. Meanwhile, over 36 percent of the 15-17 years old are not attending the required level of education compared to 28 percent of the 6-11 year olds in both 2008 and 2014. The finding from the multivariate analysis confirmed that of the bi-variate analysis where younger children are less likely than older children to have no education or not to be attending the required level of education. The finding agrees with Liu's (2007) study which indicated significant statistical association between educational attainments with age of child at divorce.

The analysis of sex distribution of children showed a little more male children of age 6-17 years (i.e., 52.8% in 2008 and 53.2% in 2014) than female children of the same ages (47.2% in 2008 and 46.8% in 2014). More female children are attending the required level of education (40.3% in 2008 and 45.5% in 2014) than male children (39.7% in 2008 and 43.8% in 2014). One of the reasons could be that female children are less likely to play truant when attending school compared to their male counterparts which could lead to higher likelihood of male children being repeated in their class than female children even though some of the women can also be disturbed by unwanted pregnancies. The finding from this study is consistent with study

by Jacobson et al. (2012) and Liu (2007) which shows that parental burden on educational attainments of children is slightly higher for males than females.

8.2.4 Head of Household/Parent or Guardian Characteristics and Educational Attainment

Over seven out of ten of the children in the study indicated males as their heads of household/parents or guardians and only three out of ten indicated females as the heads of household/parents or guardians. This might be so because in Ghana, traditionally, men are considered to be the heads of household especially in most of the double-parent households. The proportion of children who indicated males as their heads of household/parents or guardians and who live with both parents are higher (over 69% in 2008 and 71% in 2014) than children who reported females as their heads of household/parents or guardians (5.5% in 2008 and 2.7% in 2014). It is assumed that children who mentioned females as their heads of household/parents or guardians are more likely to have come from single-parent households than to have come from double-parent households. Slightly higher proportion of children who indicated females as their heads of household/parents or guardians are attending the required level of education (41.5% in 2008 and 45.6% in 2014) than children who indicated male heads of household/parents or guardians (39.4% in 2008 and 44.2% in 2014). Similarly, from the multivariate analysis in 2008, children who indicated the male as their heads of household/parents or guardians are more likely than children who indicated the female as their heads of household/parents or guardians to have no education than to be attending the required level of education. The finding from the 2008 multivariate analyses has confirmed the results from the bi-variate analyses.

Female heads of household/parents or guardians may be much more concerned about the education of children than their male counterparts as reported by Boadu (1990). Female heads

of household/parents or guardians consider children's education as important investment for the future of the children as well as for the family and so are in most cases concerned about their children's education and are ever ready to provide the needed resources that will enable the children remain in school than their male counterparts. This is consistent with Kabore and Pilon's (2006) study that reported that even though females are likely to face economic hardships relative to male heads of household/parents or guardians, females as a rule, invest more in their children particularly in matters of education. Women do so because they are more aware of the rewards of education in their children's future and expect a return on their investments in future. Kabore and Pilon (2006) further suggested that children and in particular girls are more likely to go to school if the head of household is a female. The findings from the 2008 multivariate analyses of this study have confirmed the findings from the bivariate analyses that children who indicated that their heads of household/parents or guardians are female are less likely than children who indicated that male heads of household/parents guardians are males to have no education than to be attending the required level of education. This finding supports Boadu's (1999) findings that a significant association exists between sex of head of household and children's educational attainment where female household heads rather than male household heads supported children's education especially the education of male children. Similarly, Case and Ardington (2005) analyzed longitudinal data from a demographic surveillance area (DSA) in KwaZulu-Natal, to examine the impact of parental death on children's outcomes. The findings revealed that, the loss of a child's mother is a strong predictor of poor schooling outcomes.

However, the finding from this study is not in agreement with Mclanahan and Sandefur's (1994) and Beller and Chung's (1992) findings indicated that children who lived with female-headed households have negative educational outcomes and are more likely than those who lived in households where the father is the head to be twice as likely to drop out of

high school. The finding does not also support that of the Ghana Maternal Health Survey (2007) findings that reported that female heads of household were frequently poorer than male heads of household which tend to influence the well-being (which may include education) of individuals in the households. This finding might have a basis on household financial status that favours households with both parents present relative to households with only one parent. It also favours households with fathers present than households with only mothers or none of the parents present. For instance, in their study, Case and Ardington (2005) reported that the loss of a child's father is a significant predictor of household socioeconomic status. As such, children whose fathers have died live in significantly poorer households and that while the loss of a father is correlated with poorer educational outcomes, this correlation arises because a father's death is a marker that the household is poor (Case and Ardington, 2005).

When there is dissolution of marriage, the custodial parent may be saddled with time and financial constraints that must be dedicated to children. That is why Forry et al. (2010) reported that with higher conflict after separation, the father and mother become less involved in their children's education. In 2014, over sixty percent (61%) of children did not receive any assistance from either their parents or other household members when doing their homework whereas 31 percent received assistance. Fifty-five percent of children who did not receive help are attending the required level of education compared to the over sixty percent (61%) of children who received help. It is therefore expected that in situations where parents are required to spend time with children to do their homework to improve on educational outcomes, single-parents who have to combine the work of both mother and father will become the worst offenders and so all things being equal, children in those households are likely to have their education affected. As Deslandes et al. (1997) have found, children whose parents get involved in their education earn better grades than their classmates with uninvolved parents.

Over seventy percent (71.4%) of children had their parents express their high expectation for them whereas 28.6 percent of children do not have their parents express their high expectations for them. The multivariate analysis has shown that children whose parents do not express high expectation for them were more likely than children whose parents expressed high expectations for them to have no education but were less likely not to be attending the required level of education than to be attending the required level of education. In Day's (2013) study, it was reported that, parents in more communal cultures, such as in West Africa, spend more time with children and do express their high expectations for their children than parents from other cultures. This finding supports Kim (2004) and Mulkey et al.'s (1992) studies that indicated that, parental expectation was one of the strongest predictors of future academic successes of children. Reynolds and Pemberton (2001); Elliott, (2009); Cook et al. (1996); Sterbin and Rakow, (1996); Liu, Kaplan, and Risser (1992) as well as Mickelson (1990) have all shown that children's self-esteem may have a positive effect on educational achievement because it promotes greater academic engagement and that self-esteem and may be positively boosted by parents' expression of high expectations that will motivate children to perform well and achieve better results to attain the required level of education.

8.2.5 Household Characteristics and Educational Attainment

Analysis of number of children in a household and children's educational attainment has revealed that the lower the number of children in the household, the higher the proportion of children who are attending the required level of education. This might be so because, it becomes easier for parents with fewer number of children in the household to provide the needed resources that will help the children to go through their education than parents with large number of children. The findings from the multivariate analysis have confirmed the findings from the bi-variate analysis about the inverse relationship between the number of children in

the household and the proportion of children attending the required level of education especially after 5 children in 2008 and after 4 children in 2014. This finding is similar to Kim's (2004) and Mulkey et al.'s (1992) findings indicating that family size is one of the important factors that strongly predict future academic success of children.

Household wealth status showed a positive association with children's attainment of the required level of education. For instance, 57.8 percent of children in 2008 and 63.7 percent in 2014 who came from household wealth status categorized as richest are attending the required level of education compared to a lower of 30.5 percent in 2008 and 35.9 percent in 2014 among children who came from households wealth status categorized as poorest. Household wealth status was calculated based on household ownership of resources and expenditure (GSS, 2008 and 2015). It is therefore expected that households classified as richer or richest (better) will have more resources to spend on household members including children's education than children who come from households categorized as poorer. From the multivariate analysis, the required level of education attained differs significantly and positively by differences in household wealth status. In both 2008 and 2014 when household wealth status was below richest, children in the household were found to be more likely than when the household wealth was richest to have no education or not to be attending the required level of education than to be attending the required level of education. The finding from the multivariate analyses is consistent with the results from the bi-variate analysis that, a statistically significant positive association exists between household wealth status and children's required level of education attained. The finding from this study agrees with Hanson and McLanahan (1994), Mulkey et al. (1992) and Milne et al. (1986) who found that the factor that had the greatest impact on student achievement was not family structure but income. Boggess (1998) found that family income acts as a significant determinant of educational attainment and Fronstin et al.'s (2001) study also recorded that limited family income may affect child educational attainment by reducing

financial support for further schooling, fewer out-of-school lessons or living in less desirable neighbourhoods with lower quality schools. In their study, Kim and Sherraden (2010) reported that children from households with lower assets are likely to complete high school but are less likely to graduate from college compared to children who come from households with relatively better household assets. Moreover, Mulkey et al. (1992) and Kim (2004) both reported that family income is one important stronger predictor of future academic success. Moreover, Evans and Miguel (2004) reported of a larger effects on education for children who come from poor household wealth than those from households with better household wealth.

8.2.6 Community Characteristics and Educational Attainment

The analysis from this study has shown that there are more children in rural areas (63.5% in 2008 and 59.3% in 2014) than in urban areas (36.5% in 2008 and 40.7% in 2014). This finding is not consistent with the general rural-urban population structure of Ghana which indicate more urban population (54%) than rural population (46%) (Population Reference Bureau, 2017).

In Ghana, it is common to find the entire family or part of the family members moving from urban areas to rural areas after the death of a spouse, divorce or separation. This is common with women after the death of their husbands who are mostly the main bread winners of most families. Schramm's (2006) study revealed that all divorces result in at least one geographic move. The study further suggested that, the average American child in a double-parent family experiences 1.5 residential moves before age 15 years while the average child from a divorced family moves 2.5 times. Most of the women who migrate from urban to rural areas after the death or divorce of their partners do this in order to avoid some of the financial difficulties that single mothers in urban areas normally face when they live in urban areas. The change of residence in most cases affects children's education as children in such families who might be

still in school are either made to repeat a class or may drop out altogether especially if the movement from the urban to the rural areas occurred when the academic term has not ended. In Liu's (2007) study, it was explained that residential moves bring about emotional stress that can be caused by divorce or from lifestyle changes and transfer of schools that might affect educational attainment negatively. The movement can also disrupt peer and student-teacher relationships for youth which will result in poor educational outcomes (Liu, 2007). When this is the case, then the children in single-parent families who have experienced this kind of movement will suffer more than children who are in double-parent family situation and who has not changed residence.

The study has also revealed that higher proportion of children who are resident in urban areas are attending the required level of education (47.9% in 2008 and 52.7% in 2014) compared to the proportion of children resident in rural areas (35.4% in 2008 and 39.1% in 2014). It is obvious that there are more and better schools in urban than in rural areas and so that could be a possible reason why more children in the urban areas are attending the required level of education than children in rural areas. The multivariate analysis however, did not show any significant relationship between rural-urban place of residence and required level of education attained.

8.3 Conclusions

This study investigated the influence of parent-child living arrangements on children's attainment of the required level of education in Ghana. It has been reported that one of the efforts that led to the improvement in admission and enrollment rates to basic education in Ghana during the past decade, apart from the efforts of successive governments was because many parents were willing to send their wards to school at the officially recommended age

(MoE, 2010). This might be so because in a household where father and mother are present, decisions are jointly taken, roles are shared and resources (such as time and money) pooled together from both parents to take care of the household members and their needs. In such double-parent households, it is expected that children will have adequate resources and be attending the required level of education than where there is only one parent who has to take all the decisions, provide all the needed household resources and at the same time take care of the household chores. Based on the remarkable achievements in educational enrollments in the past, UNICEF (2013), after praising Ghana for some success in increasing its educational enrolment rates, called for efforts to search for other possible solutions that will help reduce barriers to children's educational attainment besides the role the respective governments of Ghana have played.

In Ghana, the Demographic and Health Surveys (GDHSs) data for 2008 and 2014 which were used for this study, collect data on parents' living arrangements and children's education among others but the reports do not provide detailed and comprehensive analysis of the relationship between the two variables. Moreover, the 2007 Ghana Maternal and Health Survey report for instance indicated that "the characteristics of households, including the type of parents' living arrangements with their children, may have demographic, social and economic implications and well-being of individuals that live in them" (GSS, 2008).

Meanwhile, changes in parent-child living arrangements has the potential to arouse social concerns because of the belief that single-parent families typically have fewer resources, particularly time and income, than two-parent families (Kim and Sherraden, 2010; Boggess, 1998). In the USA, it was estimated that 42 percent of children in female-headed families were poor in 1999, compared with eight percent of children in married-couple families (Kim and

Sherraden, 2010). This change has been used by some to argue that the world is witnessing the breakdown of the family with negative effects for children, families, and society (Marsh, 1990; Thiessen, 1997).

In Ghana almost 74 percent of primary school going age children attend school, less than a half (i.e., 43%) of secondary school going age group attends secondary school and many of the children attending primary and secondary school are outside of their official age range (GSS, 2015). Being over-age in a class is a prime factor contributing to repetition and drop out as many over-aged children do not complete the cycle (MoE, 2010; Thiessen 1997, Zimiles and Lee, 1991) because they find it difficult to connect to school (Mulkey et al. 1992). This trend can have greater impact on educational infrastructure development, teaching and learning experience in the classroom, student-to-student relationship or interactions and educational planning in general (MoE, 2010).

The primary aim of this study was therefore to assess the effect of parent-child living arrangements on children's attainment of the required level of education. Parent-child living arrangements have been discussed based on four different categories i.e., children who do not live with any of their parents, children who live with only their mothers, children who live with only their fathers and children who live with both parents. Required level of education attained was also discussed based on three categories such as; children who have no education, children who are not attending the required level of education and children who are attending the required level of education. Other demographic, social and economic variables were also discussed as contributory or controlled variables to both parent-child living arrangements as well as the attainment of children's required level of education.

From the bi-variate analysis, children living in a household with a mother present (it can be households with only the mother or both mother and father) is associated with a higher proportion of them attending the required level of education than children living in households where mothers are absent. This goes to buttress the important role that mothers play in child-upbringing especially children's education as well as mothers' high expectation of rewards (remittances) in the future when their children complete their education and start working. From the multivariate analysis, parent-child living arrangements did not appear to have a statistical significance in determining children's required level of education attained except the category of children who do not live with any of their parents. This might be so because of the various contributions by the extended family members (at times churches and neighbours) in Ghana especially in the upbringing of children where single parents receive financial (remittances) as well as non-financial support from members of the extended family. In all these variables, it was clear that the proportion of children who are attending the required level of education is highest for children who live with only their mothers followed by children who live with both parents, followed by children who live with only their fathers and lastly by children who do not live with any of their parents. These findings is also consistent in 2008 and 2014. However, the two variables that emerged statistically significant in their contributions to children's attainment of the required level of education through the multinomial analysis were household wealth status and age of child. In the multinomial logistics analysis, it did not show that parent-child living arrangements was consistent and statistically significant determinant of the required highest level of educational attainment but rather the household wealth status.

8.4 Recommendations

From what has been found in this study, the following recommendations have been suggested:

Considering the fact that household wealth status consistently emerged as statistically significant in both the bi-variate, trivariate as well as in the multivariate analysis with its effect on children's required level of education attained, it is therefore recommended that adult household members who are not working must find work to do to become economically active and to contribute to their household income. Those who are already working can add additional income earning activities to improve on their household wealth status. Policy makers as well as economic planners must do well to increase or enhance the economic benefits of heads of household/parents or guardians which will improve on their income as well as expenditure which will also include expenditure on the education of their children.

It is also recommended that as much as possible, mothers must endeavour and insist to live in the same household with their children (take custody of children) whenever there is separation, divorce or death of a male spouse as the study has revealed that the presence of mothers in the household encourages more children to attend the required level of education than in households where mothers are absent.

Future studies should pay attention to other factors that might also affect children's required level of education attained such as education and the employment status of heads of household/parents or guardians as well as the duration that children have stayed in single-parents households because, these variables were in different data sets and the researcher had some difficulties trying to link and also merge different data sets in order to access the above variables.

There is also the need to combine quantitative with qualitative data and analyse so as to obtain more explanations to complement the result from the quantitative analysis.

In order to bridge enrolment gaps between the rich and the poor, the government of Ghana introduced the free compulsory basic education which is also a constitutional right. With the implementation of the free senior high secondary education policy in Ghana in September 2017, this study comes in a good time as a baseline for future studies to measure the effect of the free senior high school educational policy in Ghana.

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- <http://www.census.gov/aprd/techdoc/cps/cpsmar06.pdf> (pdf)
- http://www.census.gov/newsroom/releases/archives/families_households/cb07-46.html.
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