Child Welfare Clinic Attendance among Children 24-59 Months in Assin North Municipality, Ghana

Addae Boateng Adu-Gyamfi
Department of Population and Health, University of Cape Coast
Cape Coast-Ghana
Email: aadugyamfi@ucc.edu.gh
Corresponding author

Benjamin Adjei Disease Control Unit, Regional Health Directorate Cape Coast-Ghana

Abstract

Child welfare clinics form an important component of the health care system in Ghana and renders invaluable health care services to children under five years. Despite the numerous advantages associated with child welfare clinic attendance, there are reported cases of low attendance among children 24-59 months. It is in line with this that the study examined child welfare attendance among children aged 24-59 months. Employing both qualitative and quantitative methods, the study selected 240 respondents for primary data collection and analysis in the Assin North Municipality of Ghana. It was established that child welfare clinic attendance declines by age of the child due to schooling, completion of immunization schedule and distance to the clinics among other factors. It was also found that the level of education of caregivers and distance travelled to the child welfare clinic have influence on child welfare clinic attendance. On the bases of the findings recommendations were made to capture children 24-59 months for child welfare services in schools. Secondly, health workers should sensitize care givers on the importance of child welfare clinic attendance for children aged 24-59 months.

Key Words: Assin North Municipality, attendance, caregivers, child welfare clinic, 24-59 months,

1 INTRODUCTION

Many nations the world over have placed child health promotion high on their developmental agenda. Ghana, as a developing country, is making conscious efforts to promote child health through active implementation of programmes which could help achieve the UN Millennium Development Goal four which seeks to reduce the under-five mortality rate by two-thirds, between 1990 and 2015. As a result, the physical, mental and social wellbeing of children should not be ignored. There is therefore the need for a holistic approach to child care done in a co-ordinated manner through implementation of child health programmes at child welfare clinics (Ministry of Women and Children's Affairs, undated).

Globally, more than 600 million out of the 7 billion world population are children aged below five years (United Nation, 2011). Ghana has a population of about 24,658,823 and out of this; 3.5 million are children below five years. Central Region also has a population of about 2,201,863 while Assin North Municipality has an estimated population of 161341 of which 12% (19361) are children aged 24-59 months (Ghana Statistical Service, 2012).

In view of the importance attached to the health, growth and development of children in Ghana, child welfare clinics have been set up throughout the country to provide the needed services to children. These clinics are usually sited in health care facilities in both urban and rural areas and are manned by trained health staff. Although child health service delivery is performed at the district level, the bulk of the work is carried out at the

health centres and in the communities Antwi-Dennis and Bam (2002). Children under five years are captured at Child Welfare Clinics for various child welfare and health services. Among the child health activities at CWC are growth monitoring, immunisation against childhood killer diseases, vitamin A supplementation, treatment of minor ailments, referral of complicated illnesses, health talks and counselling of mother and care takers on health issues. The under-five clinic also combines preventive, treatment, health surveillance and education into a system of comprehensive health care. (Ministry of Health, 2007; Centre for Community Child Health, 2008).

Child welfare clinic attendance in the Assin North municipality reduces as the child grows older. In 2009, Child Welfare Clinic attendance for children 0 to 11 months stood at 28,776, this figure dropped to 10,609 for children 12 to 23 months and further dropped to 3,608 for children 24 to 59 months (ANMHD, 2009).

The consistent decline in the Child Welfare Clinic cannot be attributed to one specific reason but to a myriad of factors. Moreover, the expanded programme on immunisation surveys conducted periodically turn to focus on the assessment of immunisation status of children 0-11 months to establish reasons for failure to complete their immunisations schedules. However, CWC attendance among children 24-59 months has not been looked at critically in the Assin North Municipality and Ghana in general. It is in line with this, that the study sought to examine the patronage of CWC services as the child grows.

1.2Child Health Service

According to Popple & Vecchiolla, (2007), child welfare is seen as the wide range of activities related to the well-being of children while child health services are activities aimed at promoting and maintaining the optimal growth and development of children from birth to 19 years. Child welfare can be viewed under various perspectives including health, formal education and care of children at the household level. From the health perspective, people have different perceptions in caring for their children. For various reasons, some people believe in the use of traditional medicine to cure their sick children instead of using orthodox medicine (Ghana Health Service, 2003). In addition, some immunizations may not be accepted by parents due to lack of knowledge and understanding, for example oral polio (Andrews, Kearns, Connors, Parker & Carville, 2009). These forms of perceptions and practices could have serious consequences on the welfare of the child. Therefore parents, families and opinion leaders considered as key stakeholders in the pursuance of programmes that seek to improve the welfare of the child (Olson & DeFrain 2000) must be consulted in order to gain their confidence and persuade them to patronize child welfare clinics (Andrews, Kearns, Connors, Parker & Carville, 2009).

The Integrated Management of Childhood illnesses is one of the key strategies carried out for improving child health and reducing mortality in children less than five years of age (Ghana Health Service, 2007). At the CWC, caregivers are guided and counselled on good infant feeding practices which help to strengthen the immune system and promote the growth and development of children. Similarly, minor health problems are treated as they arise so that they do not deteriorate into more complex conditions (Starr & McMillan, 2003; McMeniman, et al, 2011). Thus, regular supervision of the child at the CWC goes a long way towards maintaining his health and is perhaps one of the central functions of the child welfare clinic.

1.3Factors affecting affect child welfare clinic attendance

Factors including mothers' busy schedules contribute to low CWC attendance in many parts of Africa and Ghana in particular. In addition factors impeding the attendance of the CWC include business activities, forgetfulness and frequent travel of caregivers and lack of knowledge on CWC. Davis (2011) asserts that distance between the residence of a mother and the child welfare clinic is a determining factor in CWC attendance. This is confirmed by Nwaniku, Kabiru and Mbugua (2002) who found in Kenya that mothers living less than five kilometres to a

health care facility utilise CWC services than those who live beyond five kilometres of the a facility. Similarly, Feikin, et al, (2009) found in their research in Kenya also concluded that the rate at which young children access health services decrease by distance. An earlier modeling attempt by Gething et al, (2004) also found that utilization of health care facilities decrease by distance.

2.0 Method and materials

The study was conducted in the Assin North Municipality of Central Region of Ghana which has a population of 161341 as at the year 2010. Out of this, children 24-59 months (2-5 years) constitute 19361 (12%) of the total population with a growth rate of 2.9% (Municipal Health Directorate 2010). Residents of the area are mostly traders and farmers and their major agricultural produce includes cocoa, palm fruit, citrus fruits, cassava, plantain and maize. The study area has one hospital, six health centres, three Community-based Health Planning and Services zones and three private maternity clinics (Municipal Health Directorate, 2009).

The study is descriptive and targeted caregivers who have ever sent their children to CWC and the children are now aged 5-6 years and nurses who provide child welfare services in the Municipality. Two hundred and forty (240) caregivers who have children aged 60-72 months were sampled for the study. Fifteen communities in the municipality were randomly selected and in each community, all households with care-givers who have children aged 60-72 months were numbered and listed. Sixteen of the households were randomly selected through lottery method and in each household one caregiver was selected for questionnaire administration. In a household where there was more than one caregiver, a respondent was selected using simple random sampling technique. However, where there was only one caregiver in a household who fell in the target category, he or she was automatically selected. Moreover, six nurses from each of the six sub-municipalities in the study area were purposively selected and interviewed.

A structured interviewer-administered questionnaire and an unstructured interview guide were designed for the study. It was validated for content by child welfare experts in the Department of Population and Health, University of Cape Coast and pre-tested in a district which has similar characteristics as the study area before administering it to the respondents. The respondents were caregivers of children 60-72 months old who have ever attended child welfare clinic as the children could not fill the questionnaires by themselves and also most of the information needed could only be provided by the parent, as well as community health nurses in charge of child welfare clinics in the municipality who were interviewed. The questionnaire was used to obtain parents' personal data, as well as child welfare clinic attendance information while the interview guide was used to generate data on CWC attendance by caregivers from the nurses.

In each facility the Community Health Nurse in-charge of the Reproductive and Child Health/Family Planning was interviewed. Quantitative data was analysed with Statistical Package for Service Solution (SPSS) version 16 software. Descriptive analysis such as frequency tables and percentages were used to interpret the data while the interviews were categorized and analysed based on themes.

3.0 Result

The study examined Child Welfare Clinic (CWC) attendance among children aged 24-59 months in Assin North Municipality. The analysis focused on socio-demographic characteristics of respondents in the study area, caregivers' awareness of services provided at the CWC; reasons for dropout among children aged 24-59 months.

3.1 Socio-demographic characteristics of respondents

Sex, age, level of education and marital status of respondents were the focus. Both males and females play the role of care-giving and for that matter either can send a child to the child welfare clinic (CWC). Table 1 indicates that the majority of respondents (92%) were females while only 8% were males. This was confirmed by a service provider (nurse) during an interview at a health facility:

"Husbands do not support their wives in sending their children to CWC at all. You will see a pregnant mother carrying another baby at her back to the CWC and sometimes a load to the market while the husband may be seated somewhere doing nothing" (female service provider).

People within certain age groups have similar characteristics which turn to influence their behaviour (Week, 1999). The study therefore sought to find out how age classification of respondents. It was found that the majority of respondents (62%) age group 30-44 years and 30% of respondents were also between 14 and 29 years. The educational level of respondents was found to be low, as high as 50.8% of the respondents had no formal education or had completed primary school, while 45% had completed only up to Junior High School (JHS) only 4.2% of the respondents had Senior High School education or higher. This according to the nurses has great influence on CWC attendance:

"Mothers usually have inadequate understanding on CWC issues largely because most of them have low formal education and this has been a major constraint to us as nurses" (A nurse at one of the health facilities).

Regarding marital status, 89% of respondents said they are married while 11% were single. Similarly, 62.5% of the respondents were farmers while 27.6% were traders. The nature of respondents' occupations can affect CWC attendance as indicated by a service provider during an interview. A community health nurse at one of the child welfare clinics stated it in this way:

"During farming seasons, mothers do not send their children to CWC because they are always busy on their farms. Besides, on market days caregivers cannot carry their babies in addition to their farm produce to the market and subsequently to the CWC, therefore, they forgo CWC attendance. The situation becomes worse when the woman is carrying another pregnancy" (A community health nurse).

Table 1: Socio-demographic characteristics of respondents

Frequency	Percentages (%)
18	7.5
222	92.5
72	30
150	62
14	5.8
4	1.6
30	12.5
92	38.3
108	45.0
10	4.2
	18 222 72 150 14 4 30 92 108

Marital Status		
Single	26	10.8
Married	214	89.2
Occupation		
Farming	150	62.5
Trading	64	26.7
Civil/Public Servant	2	0.8
Hairdressing/Seamstress	12	5.0
Unemployed	12	5.1
Total	240	100

3.2 Time respondents stopped sending their children to child welfare clinic

The more a child continues to attend CWC to age 59 months the greater his/her chances of survival, growth and development. When respondents were asked when a child should stop attending child welfare clinic, 95% was not able to tell.

Table 2 shows that about 70.8% of respondents stopped sending their children to CWC between 12-23 months after birth while, 14.6% stopped within 24-35 months. In all, about 85.4% of respondents stopped sending their children to CWC when the child reached age 35 months (three years). Only 6.6% completed the full CWC attendance schedule (59 months). It is observed from Table 2 that as no child of parents without formal education attended CWC within age 48-59 months, 60% of children whose caregivers had Senior High School (SHS) and above attended CWC up to 59 months.

Analysis of the data from the study indicates that attendance of CWC among children less than 59 months (5 years) reduces by the level of education of the caregiver. Table 2 again reveals that 83.3% of respondents who have no formal education stopped sending their children to child welfare clinics at age 23 months (2 years) as against 81.4% of those with primary education and 58.8% of those with junior secondary education. All respondents with Senior High School education and above sent their children to CWC beyond age 23 months while 60% of respondents with education up to senior secondary school completed CWC attendance.

Place of residence was found to influence time children stop attending CWC. While 56.7% of urban dwellers stopped sending their children to child welfare clinic at age 23 months 85% of their rural counterparts stopped child welfare clinic attendance at age 23 months. Similarly, 10% of urban dwellers completed child welfare clinic at age 59 months as against 1.7% of rural dwellers. The results further indicate that child welfare clinic attendance declines as the child advances in age. For example, only 6.6% of respondents completed CWC attendance at age 59 months (5 years), the majority (60%) stopped attending CWC at age 23 months.

T 11 4 TP	4 1 10	41 * 1 * 1 * 4	1 11 1 10 11 1
Table 7. Time caregivers	stanned sending	their children to	n child weltare clinic
Table 2: Time caregivers	stopped schaing	men emmaren e	o china wenare chine

Period in months					_	
Level of	1					
education	0-11	12-23	24-35	36-47	48-59	Total
N E1	22.20/ (10)	50.00/ (15)	100/ (2)	6.70/ (2)	0	12.70/ (20)
No Edu.	33.3% (10)	50.0% (15)	10% (3)	6.7% (2)	0	12.5% (30)
Primary	9.8% (9)	70.6% (65)	12% (111)	5.4% (5)	2.8 (2)	38.3% (92)
JHS	6.5% (7)	52.3% (64)	18.5% (20)	10.2% (11)	7.4% (8)	45% (108)
SHS of	0	0	10% (1)	30% (3)	60% (6)	4.1% (10)
above						
Age						
14-29	11.1% (8)	55.5% (40)	20.8% (15)	9.7% (7)	2.7% (2)	30 0% (72)
30-44	8.0% (12)	62.6% (94)	11.3% (17)	8.6% (13)	9.3% (14)	63% (150)
45-59	21.4% (3)	50% (7)	21.4% (3)	7.1% (1)	0	5.8% (14)
60+	75.0% (3)	25.0% (1)	0	0	0	1.6% (4)
Place of	1					
residence						
Urban	7.5% (9)	49.2% (59)	20.0% (24)	13.3%(16)	10.0% (12)	50% (120)
Rural	14.2% (17	70.8% (85)	9.2% (11)	4.2% (5)	1.7% (2)	50% (120)
Total	10.8% (26)	60.0% (144)	14.5% (35)	8.5% (21)	6.6% (16)	100% (240)

3.3 Caregivers awareness of services provided at CWC for children 24-59 months

The study sought to establish the level of awareness among caregivers of the services provided for children aged 24-59 months at the Child Welfare Clinic. Ninety-two percent of the respondents said they were aware of the services provided at the CWC. Significantly, 84% of respondents were able to mention at least three services provided to children aged 24-59 months at child welfare clinics. This was confirmed by the nurses, for example, one of the nurses in charge of the child welfare clinics said this:

"Mothers know the services we provide to the children here. At least they can mention them to you. We continuously educate and inform them about the services we provide to the children from birth up to five years (60 months)" (An in-charge of one of the child welfare clinics).

3.4 Need to send children aged 24-59 months to CWC

To establish reasons for the low attendance, the study sought respondents' views on the necessity to send a child aged 24-59 months to Child Welfare Clinic. Eighty percent of the respondents said it was necessary to send children aged 24-59 months to the CWC. Respondents who admitted that it was necessary to send their children to CWC till aged 59 months stated that it is because children are treated on minor ailments (33%); children receive treatment and protection against diseases (27%). Besides, 15% said it can facilitate early detection of inadequate growth while 22% said they acquiring information on how to care for their children.

3.5 Reason for default at Child Welfare Clinic attendance up to 59 months

This study also aimed at identifying reasons why caregivers do not send their children aged 24-59 month to CWC. As shown in Table 3 various reasons including children attending school, (it must be noted that some children start school at age three years) distance to child welfare clinics about 38% of respondents said they travel more than 5 kilometres to the child welfare clinics mostly walking), busy schedules of care-givers as well as babies

completing their immunization schedule assigned by respondents for the default in CWC attendance for children between 24 and 59 months. For example while 70.8% of respondents stated that their children would have started school at that age, 65% said they stopped because their babies had finished their immunisation schedules. This was followed by the claim that mothers were too busy (53.3%) and this was evidenced by their occupations since 62% and 27% of them were farmers and traders respectively (see Table 1).

The health staff interviewed also assigned various reasons to the default by children aged three to five years at child welfare clinics, some of which confirmed what the caregivers said. Prominent among them were completion of immunization by the child, school attendance and the perception of parents that a between the ages of 24 and 59 months is too old for CWC attendance.

"The high default rate of CWC attendance among children between 24 and 59 months in the district is because mothers are of the view that it is not important to bring their children to the clinic when the child completes the immunization schedules. For example, those who travel some distance before reaching the clinic do not see the need to travel from their villages to the clinic and the child will not receive any immunization or drugs." (A community health nurse)

Another respondent stated during the interview that school attendance impedes CWC attendance by children. She remarked thus:

"When a child starts schooling it is obvious that he or she cannot attend CWC. These days, children start school early and this affects their child welfare clinic attendance. Parents prefer sending their children aged 24-59 months to nursery schools to bringing them to the clinic. I will suggest the introduction of mobile child welfare clinic to the schools to capture children aged 24-59 months."

Table 3. Rescons	s for default at	CWC for children	between 24-59 months
TADIE 3: KEASOHS	s ior deixiiii ai	C.WC. for children	Delween 24-59 monins

Reasons	Frequency	Percentage
Distance to CWC	98	40.8
Caregivers too busy	128	53.3
Baby finished immunisation	156	65.0
Poor staff attitude	2	0.8
Child is too old	96	40
Child has started school	170	70.8
Other reasons	14	5.8

4.0 Discussion of findings

The study found that most of the care givers who send children to child welfare clinics are women. This brings to fore the inadequate male involvement in child welfare clinic attendance in Ghana. The finding is in line with Bhatta (2013) conclusion that only 10% of men accompanied their wives to child welfare clinics for child immunization in Nepal. The low male involvement may be due to socio-economic factors such as level of education, income status; health services related factors such as opening hours of services, behaviour of health providers and the lack of space to accommodate male partners; and Sociologic factors such as beliefs, attitudes and communication between men and women (Ditekemena, et al, 2012). It may be argued that in reality it is females who usually send children to the child welfare clinic; few males therefore participate in sending children to CWC.

The study established a low level of formal education among caregivers as 96% of the respondents had education below Senior High School (SHS). This could have effects on respondents' understanding of issues concerning CWC and therefore negatively affecting attendance. This was confirmed by the nurses during the International Educative Research Foundation and Publisher © 2013

interviews. Most of the respondents were married couples. This is a good situation as it has the potential of enhancing CWC attendance since spouses especially husbands will, with intensive education assist and encourage their wives to send their children to health care facilities for child welfare services. This suggestion is corroborated by a study conducted in Kenya by Kwambai et al (2013) which found that marriage is positively related to antenatal care attendance by concluding that men were interested and even forced their wives to attend ante-natal care.

The study again reveals that only 6.6% of respondents said their children completed CWC at age 59 months. This is contrary to Ghana Health Service (2007), expectation that every child should complete the CWC at aged 59 months in order to get the maximum benefit to ensure the child's survival. This implies that most of the children are denied the services which are provided at the CWC such as Vitamin A supplementation, growth monitoring and counselling on appropriate infant feeding practices. However, the data indicates that 29.7% of respondents sent their children to child welfare clinics beyond age 24 months. This finding is significant because it portrays the low CWC attendance among children 24-59 months. Even though the figure for children attending child welfare clinic in the Assin North Municipality is higher than the national figure of 17.3% (Ghana Statistical Service and Macro International Inc, 2007) it is still low and needs to improve. It has been established that respondents with formal education up to Senior High School and above send their children to child welfare clinics after 24 month. This finding demonstrates that formal education of caregivers positively relates to CWC attendance for children aged between 24 and 59 months. It confirms the view of Asirifi (2009) that low levels of formal education influences health care delivery in Ghana.

The occupation and other business activities of caregivers was found to be a major reason for the default rate of CWC attendance among children 24 to 59 months. This finding confirms the findings in MICS, 2008 which states that mothers' involvement in businesses and other work schedules are contributory factors to low CWC attendance in many parts of Africa and Ghana in particular. Distance was also mentioned as a barrier to CWC attendance by 40.8% of respondents thereby confirming the assertion by Gething et al (2004), that utilization of health care facilities is affected by distance. This is also in line with the assertion by Feikin, et al, (2009) that the rate at which young children access health services decreases by distance. This is confirmed by Nwaniku, Kabiru and Mbugua (2002) who found in Kenya that mothers living less than five kilometres to a health care facility utilise CWC services than those who live beyond five kilometres of the a facility. This also suggests that in the study area, physical distance to a child welfare clinic has effect on a child's attendance of CWC.

5.0 Conclusion and recommendations

The study has established that CWC attendance among children aged 3 to 5 years is not low in the Assin North Municipality as only 29.7% of respondents send their children within that age for child welfare services. It also identified reasons why caregivers do not take their children aged 24-59 months to CWC which include child education, caregivers' belief that their children had finished immunisations and so there was no need to continue CWC attendance and caregivers' busy schedules. In addition, service provider's views were also sought on issue of low attendance. From the finding, it has been established that most caregivers do not send their children aged 24-59 months to the Child Welfare Clinic largely because the child's school interferes with CWC attendance (70.8%), they also thought the child had finished his or her immunisations schedule (65%). Moreover, it was realised that caregivers awareness of services provided at the CWC was high (92%) and also have adequate knowledge of the schedule of CWC from 0-59 months. Based on the conclusions of the study, it is recommended that health staff should mobilise community members periodically and give them feedback on the progress of CWC attendance in their communities and educate the community members on the importance of children completing CWC attendance at age 59 months. Secondly, to solve the problem of distance travelled by caregivers to child welfare clinics, it is suggested that mobile child welfare clinics should be introduced in the municipality

to target children aged 24-59 months. Finally it is recommended that the Ghana Health Service and Ghana Education Service should collaborate to look at the feasibility of capturing children from 24-59 months in the school premises for child welfare services.

REFERENCES

- Andrews R, Kearns T, Connors C, Parker C, Carville K (2009). A Regional Initiative to Reduce Skin Infections amongst Aboriginal Children Living in Remote Communities of the Northern Territory, Australia. *Negleted Tropical Diseases* 3(11) e554
- Antwi-Dennis J, Bam V (2002). Practicing Health Education and Health Promotion Ghana: A Health Learning and Manual for Service Providers. Ghana: MOH National Health Learning Material Centre (NHLMC).
- Asirifi Y (2009) Child Health: Past, Present and Future Challenges. *Ghana Medical Journal. Number* 43 Vul. 2. 82-85
- Bhatta DN (2013) Involvement of males in antenatal care, birth preparedness, exclusive breast feeding and immunizations for children in Kathmandu, Nepal *BMC Pregnancy and Childbirth* 2013, 13:14
- Centre for Community Child Health. (2008). *Rethinking school readiness* (Policy Brief no. 10). Retrieved from www.rch.org.au/emplibrary/ccch/PB10_SchoolReadiness_References on 23/01/13
- Davies D (2011). Child development: A practitioner's guide (3rd ed.). New York: Guildford Press.
- Ditekemena J, Koole O, Engmann C, Matendo R, Tshefu A, Ryder R, Colebunders R (2012). Determinants of male involvement in maternal and child health services in sub-Saharan Africa: a review. *Reproductive Health* 2012, 9:32
- Feikin DR, Nguyen LM, Adazu K, Ombok M, Audi L, Slutsker L, Lindblade KA (2009). The impact of distance of residence from a peripheral health facility on pediatric health utilisation in rural western Kenya. *Tropical Medicine & International Health* Volume 14, Issue 1, 54–61,
- Ghana Health Service (2007). Reproductive and Child Health/Family Planning. Annual Reports, GHS.
- Ghana Health Service (2003). Field Guide for the Ghana Immunisation Programmes. Ghana: Combert Impressions Ltd.
- Ghana Statistical Service and Macro International Inc (GSS) (2008). *Ghana Demographic Health Survey Report* (GDHS). USA: ICF Macro Inc.
- Ghana Statistical Service (2012). 2010 Population and Housing Census. Accra, GSS
- Gething PW, Noor AM, Zurovac D, Atkinson PM, Hay SI, Nixon MS Snow R W (2004). Empirical modelling of government health service use by children with fevers in Kenya. *Acta Tropica*. Aug; 91(3):227-37.
- Kwambai TK, Dellicour S, Desai M, Ameh CA, Person B, Achieng F, Mason L, Laserson KF, ter Kuile FO (2013). Perspectives of men on antenatal and delivery care service utilisation in rural western Kenya: a qualitative study. *BMC Pregnancy and Childbirth*, 13:134
- McMeniman E, Holden L, Kearns T, Cluca DB, Carapetis JR (2011) Skin disease in the first two years of life in Aboriginal children in East Arnhem Land. *Australasian Journal of Dermatology* 52: 270–273.
- Ministry of Women and Children's Affairs (Undated). *Ghana's Early Childhood Care and Development (ECCD) Policy Document*. Ghana.
- National Population Council (2010). State of Ghana Population Report: Investing in Young People- the Nation's Precious Assets. NPC: Accra, Ghana.
- Nardi DA, Pomee J (2003). *Community Health and Wellness Needs Assessment: A Step by Step Guide*. USA: Thompson Learning Inc.
- Nwaniku PK, Kabiru EW, Mbugua GG (2002) Utilization of antenatal and maternity services by mothers seeking child welfare services in Mbeere district, Eastern Provence, Kenya. *East African Medical Journal*, Vol 79 No. 4. 184-187
- Opoku JY (2002). A short guide to Research Writing in Social Sciences and Education. Accra: Ghana Universities Press.

Oslon DH, DeFrain J (2000). *Marriage and the Family Diversity and Strengths*. California: Mayfield Publishing Company.

Popple PR, Vecchiolla F (2007) Child Welfare Social Work. Boston: Allyn & Bacon

Starr C, McMillan B (2003). *Human Biology* (5th edn.). USA: Thomson learning Inc.

United Nations, Department of Economic and Social Affairs, Population Division (2011). *World Population Prospects: The 2010 Revision*, CD-ROM Edition Development Research Centre.

Varkevisser MC, Brownlee A, Pathomanathan I (1992). *Designing and Conducting Health Systems Research Projects*. Canada: International