

“IN OR OUT: EXAMINING THE DRIVERS OF SCHOOL DROPOUT AMONG BASIC SCHOOL PUPILS IN THE WA MUNICIPALITY, GHANA”

Abstract

The study examined school dropout among pupils in the Wa Municipality, Ghana. The study adopted a cross-sectional study design to ascertain the pattern and the factors accounting for school dropout among pupils at the basic level. The study population consisted of all pupils in the basic schools within the municipality. 121 pupils were selected for the study using multi process sampling procedure. Questionnaires were used to generate the information from the pupils. Descriptive statistics (simple percentages and frequency tables) and logistics regression model was employed to determine the factors accounting for school dropout using Statistical Package for Social Sciences (SPSS) as the data analytical tool. The study discovered that the factors responsible for pupils’ school dropout are multi-facets to include environmental and non-environmental school’s factors. The study also revealed that school dropout was very prevalent among girls, over aged pupils, pupils with single parent and pupils whose parents or caregivers are farmers or traders. The study recommends a comprehensive and integrated educational policy including parliamentary enactments for the education sector so as to improve and sustain enrolment and retention

Key words: School dropout; Pupils; Basic school; Wa Municipality; Ghana

1.1 Background to the Study

Education is a crucial component of societal growth and process. It is the continuous gradual procedure of consciously gaining knowledge, experiences, skills, ideals and attitudes so as to completely harness distinct aptitudes for the general welfare of the society (United Nations Development Programme, 2011). Education has a perfect positive correlation between human resource development and economic growth of countries, hence nations place premium on educational policies in coming out with plans geared towards poverty reduction, economic growth and development (United Nations Development Programme, 2011). No nation can develop with her citizens being illiterates; hence education is the key to developing and building better and prosperous society (UNESCO 2007).

It is therefore not by coincidence that the erstwhile Millennium Development Goals set by the United Nations had Goal 2 being achieving universal primary education by 2015 (UNDP, 2010). The tracking indicators used for measuring member countries’ progress to achieving the MDG 2 was also based on Net Enrolment Ratio (NER) in primary education and percentage of people starting grade 1 who reach the last grade of primary education (dropout rate) (UNDP, 2010). The belief in education as the catalyst for social welfare and poverty eradication has led to it being one of the three indicators used for measuring the Human Development Index (HDI) (UNDP, 2010).

Comment [AI1]: Two disadvantages of cluster sampling to be discussed
- If the population group selected as the cluster sample has a biased opinion, it is inferred that the entire population has the same opinion. This is a major disadvantage with regard to cluster sampling.
- Other probabilistic methods give fewer errors (Sampling Errors) than cluster sampling. For this reason, cluster sampling is not recommended for beginners.

Comment [AI2]: What societal process?

Comment [AI3]: To clarify and reformulate

Comment [AI4]: Place or have to place?

Comment [AI5]: To place in the top of this paragraph

In an effort to achieve universal primary education by 2015, countries made frantic efforts towards lessening the barriers associated with access to basic education (Merthaugh et al. 2009). This resulted in governments absorbing tuition fees, feeding school pupils, among others for basic education and in some jurisdictions such as in Kenya and Malawi, basic education became free and compulsory (UNESCO, 2006). The efforts made by governments, donors, United Nations' agencies towards the achievement of Universal Basic Education yielded positive results across the globe (UNESCO, 2013). For instance, the total number of pupils of school going age out-of-school globally reduced from 100 million in the year 2000 to 57 million in 2015 (UN, 2015). In developing countries, the net primary school enrollment rate also increased from 83 percent in 2000 to 91 percent in 2015 (UN, 2015). Sub-Saharan African countries had the most impressive record in getting many primary school pupils in school. The region achieved a 20 percentage point increase in the net enrolment rate from 2000 to 2015, compared to a gain of 8 percentage points between 1990 and 2000 (UN, 2015).

Comment [AI6]: Countries!

Comment [AI7]: 59 million children of primary school age in 2018

Ghana has since 1961 being a partner to the idea of free and compulsory basic education and the Education For All (EFA) initiatives (UNESCO 2000; World Bank, 2012). Article 38 of the Constitution also demands that government provide access to Free Compulsory Universal Basic Education (FCUBE) and, based on availability of resource, to Senior Secondary, Technical and Tertiary education and life-long learning (Ministry of Education, 2012). In respect to the constitutional requirement, the Ministry of Education inaugurated FCUBE in September 1995 with the aim to enhancing access to quality basic education over a 10-year period (2005-2010). Also, in 2005 government implemented various policies including the capitation grants and the school feeding programme all in efforts to reduce the barrier to pupils attending school (Owusu-Boateng *et al.*, 2015). Resultantly, access to basic education and net enrollment has increased dramatically over the years (Ministry of Education, 2012). As of 2015, the country was operating 13,505 Kindergartens, 14,360 primary schools, and 8,336 Junior High government owned Schools distributed all over the country (Ministry of Education, 2015). Individuals also operate 5,410 Kindergarten, 5,473 primary and 3,231 junior high schools.

In 2012, government school admissions for Kindergarten children increased to 1,199,967 (64.2%) of total children in the kindergarten age group. Primary school intake also increased to 3,164,830 representing 81.7% of total children in the primary school age group and Junior High School enrollment also shot up to 1,122,621 representing 46.1 % of total children in the Junior High School age group (Ghana Education Service, 2015). These are indications demonstrating that Ghana, Africa and the world at large came closer to achieving universal basic education, even though the year 2015 deadline has elapsed and very few countries were able to achieve up to 97 percent universal basic education (OECD, 2015).

Despite the high success chalked by nations in increasing access and enrollment at the basic education level, various studies show that the right to universal basic education and education for all (EFA) has been under serious threat due to continuous high numbers of school dropout, making school retention hard to sustain over the past several years (UNESCO, 2012; Wils *et al.*, 2006). Recent studies have shown that the problem of school dropout globally has reached an epidemic stage (Owusu-Boateng et al. 2015).

In Ghana, just like with other nations of the world, even though access to basic education has grown over the years and gross enrolment rates stood about 95 percent in 2007, school dropout remains a great challenge (Ministry of Education, 2007). According to United States Agency for International Development (USAID, 2007) only 67 percent of pupils enrolled at the basic school complete the last grade of the educational ladder for that stage. A study by Ampiah and Adu-

Yeboah (2009) showed that more than 20 percent of school going pupils have either dropped out or never enrolled in school at the basic level. According to the Ministry of Education (2000) in 2006, non-completion rates stood at 15 percent and 35 percent for primary and junior high school (JHS1) levels respectively. Dropout rate in 2008/09 academic year stood at 13.7 percent and 25 percent for primary and junior high school respectively. According to the Ministry of Education (2010) there is great disparity and wide gaps in dropout rates between the regions of the country, with the three regions of the North recording the highest dropout rate countrywide.

Comment [AI8]: How come that the ministry gives a stat of 2006 in 2000?! 2010, I think!

The notoriety of the high school dropout in the Upper West Region has attracted the attention of many researchers. For instance, Care International (2003) studied the causes of school dropout among girls in the Lawra District of the Upper West Region while Ampiah and Adu-Yeboah (2009) also looked at incidence of school dropout in Northern Ghana in general. Although these studies were useful, the former centered on one gender only while the latter was too generic. This study therefore seeks to find out the pattern of school dropout rate and the factors facilitating school dropout among pupils in the Wa Municipality.

Comment [AI9]: Plz give more info on the results of these studies and how yours is different

2.0 Review of literature review

2.1 Theoretical and conceptual perspective

Comment [AI10]: A schematic presentation of dropout factors may be a plus

School dropout at the basic education level is a 'process' oriented rather than a consequent of one action or inaction, hence the process follows certain patterns (Hunt, 2008). Various studies on school dropout at the basic level show dropout is always geared towards certain directions, including gender, age cohort, geographic area and socio-economic background of the family of the dropout (Mike *et al.* 2008; Tinab (2014).

Comment [AI11]: The idea is still not clear

Research has shown that dropout rate is extremely high among girls as compared to boys globally (Pilon 2003; Holcamp 2009). Holmes (2003) in his study asserts that females drop out of school earlier than males due to cultural background that forces females to marry at an early stage of their lives. The author contends that the benefit of female completing their studies in rural communities is deemed small as compared to marriage. Kasente (2004) also reiterated dropout at the basic school is very high among females because parents see the marriage of their females as an escape route to poverty, hence completion of school may delay the process of prosperity.

Studies have also shown that pupils' age of enrolment has great influence on the likelihood of dropping out (Molteno *et al.*, 2000). According to a study by Bruneforth (2006) school pupils that are deemed as too old for their class mostly dropout out of school. In his study in Burkina Faso, Ethiopia, Kenya, Mali and Mozambique, the author discovered that nearly 60 percent of dropout at the primary level was as a result of learners being far aged above their classes. Similarly, Lewin (2008) discovered in his study of dropouts in sub-Saharan Africa that age of pupils at the basic level have positive correlation with dropout, hence most dropouts are over mostly aged learners. The author further argued that colleagues and at times teachers make fan of these pupils which makes them uncomfortable and discourages them from continuing with their education. According to Mike *et al.* (2008) the likelihood of girls' 13-17 age bracket dropping out of school at the basic level is 27 percent higher than girls below that age cohort in the same stage. According to study by Ampiah and Adu-Yeboah (2009) on mapping the incidence of school dropouts in Northern Ghana, the authors discovered that more than 80 percent of over age enrolments end up by not completing primary education.

Researchers have also shown there is a great disparity of dropout rate between rural settlers and their urban counterparts (Kemal & Maqsood 2000; Pryor & Ampiah 2003; Bruneforth 2006). According results of Mike *et al.* (2008), the probability of a pupil dropping out of basic school reduces by statistically significant 5 percent as one moves from rural to an urban area. The authors further argued that in rural communities, dropout is on the high due to problems with access and quality of teaching and learning materials. Similarly, Bruneforth (2006) claim dropout rate in rural areas are almost as thrice as what is experienced in urban centers. The author argued that inadequate incentives and motivation of teachers and unattractive teaching and learning environment in rural communities prevent pupils from completing school. Pryor and Ampiah (2003) also discovered that education is not a priority of parents because they consider schools at the rural communities inferior hence it is always time and financial waste to educate wards in rural communities. The authors also argued that parents prevent wards from going to school during farming and harvesting seasons, thereby propelling eventual dropping out.

Contrary to findings from recent studies, Kemal and Maqsood (2000) discovered that harsh treatment melted out to pupils by teachers and the basic level in rural communities help keep pupils in school as compared to the urban centres. However, this finding has not been able to stand the test of time since latter studies such as (Pryor & Ampiah 2003; Bruneforth 2006) have rubbished that claim.

Studies have shown that pattern of school dropout is also determined by the socio-economic status of pupils' family. A study by Holmes (2003) revealed the level of pupil's parent or guidance' education has direct impact on their likelihood to drop out of school or not. According to Lloyd, (2009) pupils' whose parent or guidance have less education or a illiterates mostly do not enroll in schools at all or may enroll without completion. In his study Bruneforth, (2006) discovered that 70 percent of school dropouts in sub-Saharan Africa have uneducated parents or guidance. Educated parents or guidance serve as role models for their wards and also make time to supervise their academic activities, thereby encouraging these pupils to stay at school till completion whereas that may be missing for parents whose parents or guidance are illiterates (Rumberger & Lim 2008). School dropout is very high among pupils whose parents or guidance lack higher education, thus parents' educational level is a major factor directing the pattern of school dropout at the basic level (Rupon-Basumatary, 2012).

The size of one's household, the family structure thus pupil having single parent, separation, divorce, elder siblings completion and dropout rate all have influence on dropout pattern of pupils at the basic education level (Pong & Ju 2000; Mike *et al.* 2008; Akyeampong 2009). The economic situation of families have direct effect on the pupils' enrolment and retention at school (Jamil *et al.* 2010). Akyeampong (2009) discovered that only about 10 percent of pupils' from the lowest poverty quintile families in Northern Ghana have the likelihood of completing basic education without dropping out. The author argues that primary school dropout is more incidence among the poor than the rich. According to Bruneforth (2009) dropout at the basic level is 40 percent less for the rich than the poor. According to Rumberger and Lim (2008) most dropouts come from very poor home, hence poor people are extremely vulnerable to school dropout.

Contrary to assertions that the incidence of dropout is extremely among the poor comparative to the rich, the World Bank (2004) refutes such claims. According to the World Bank (2004) both the rich and the poor have almost the same chance of accessing basic education. The World Bank argued that more pupils from poor homes are enrolled and kept at school as compared to those from more affluent homes. For Sabates *et al.* (2010), combination of various factors from ones school environment, family environment and biological factors lead to dropout among

learners. According to Rumberger and Lim (2008) the factors responsible for basic school dropout seem very obvious, however the factors all have direct link with the dropout's socio-economic background. Silkdar and Mukhargee (2012) categorized the factors responsible for basic school dropout as parents' centeredness and school centeredness. According to the authors the root cause of school dropout at the basic education can only be led to parents or happenings in the schools attended by pupils.

Indeed a report by the Ministry of Education (2009) indicates that about 43 percent of basic school dropout in Ghana occur as a result of happenings at school. The report concluded that most of the dropouts missed a lot of credit hours as a result of prolong absenteeism, hence they could not cope with class work. A study by Sabates *et al.*, (2010) discovered that school factors play key role in pupils' dropping out of school. The authors contend that teacher absenteeism and general lack of quality education delivery discourage most pupils from continuing with their studies. According to Akyeampong *et al.*, (2007) class repetition is one school factor causing a lot of school dropout in Northern and the Upper West Region. Ampiah and Adu-Yeboah (2009) reiterated the earlier stance of Akyeampong *et al.*, (2007). The authors argue that in rural Ghana class repletion and unavailability of qualified teachers pull enrolled pupils out of school.

Evidence through studies by Lewin, (2009) in sub-Saharan Africa, Akyeampong *et al.* (2007) on basic education in Ghana and by Ampiah *et al.* (2010) in Ghana all identified grade repetition as one school factor (variable) associated with dropout. In South Africa a study by Modisaotsile, (2012) revealed that some behaviours of teachers such as sexual harassment of female pupils prevent them from completing school.

According to Chirtes (2010) happenings in school such as high level of racial discrimination, school violence with teachers or colleagues also lead to school dropout in America. Bridgeland *et al.* (2006) also noted five major reasons why students drop out of school. The authors concluded that bored classes, prolonged absenteeism, acquaintance with dropouts, lack of parental control and inability to perform academically are the major reasons for the high school dropout in America, Rani (2011) also observed that lack of privacy and toilet facilities for girls in school and security reasons are some factors pushing young girls out of school in rural India. A study by Mohsin *et al.* (2004) revealed that weak basic education system, non-availability of trained teachers, and parent teacher relationship are the factors propelling school dropout in Pakistan.

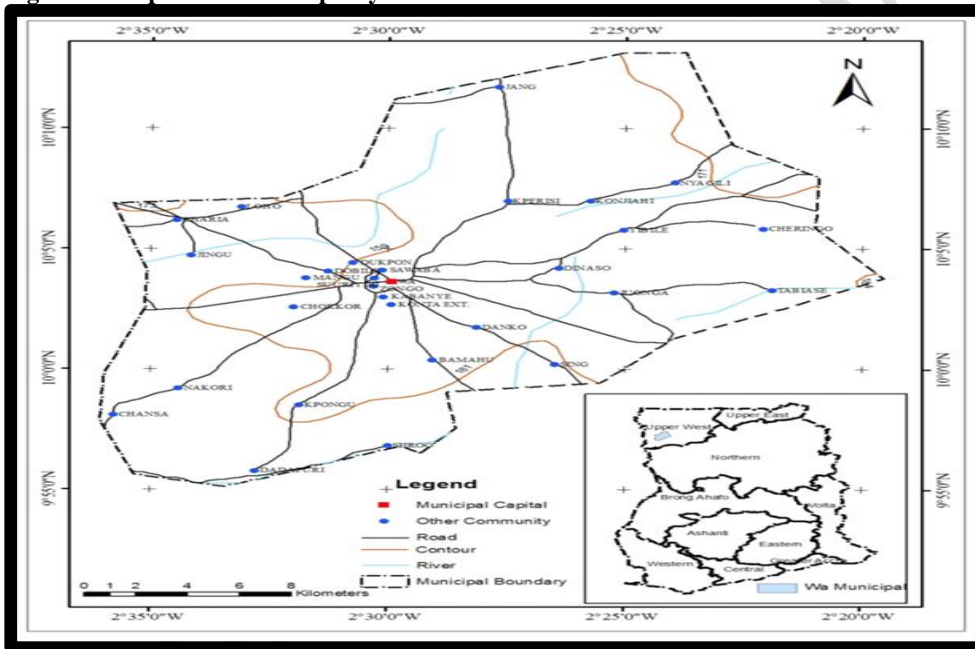
Empirical evidence through research by Rumberger and Lim (2008) show that there are other social factors beyond happenings at school that cause pupils to drop out of school. Frenderberg and Rugils (2007) observed that family issues such as low support for education, conflict between work and education to support the family and poverty resulting in hunger prevent pupils from completing basic education. According to Ajaja (2012) residing in a deprived neighbourhood, associating with people with low educational aspiration and having friends or siblings who are dropouts have the tendency to make one a dropout. A study by Chinyoka (2014) revealed that household poverty, child labour or excess household chores that overburden pupils, broken home, drug abuse and health related issues propel pupils to drop out of school. Jamil *et al.*, (2010) also posit that distance of home to schools and large family size influence pupils to drop out of school. As can be seen from the various literature, dropout is a complex issue that has many factors leading to its occurrence.

3.0 Methods and materials

3.1 Profile of Wa Municipality

The Wa Municipality is one of the eleven District/Municipal Assemblies that makes up the Upper West Region of Ghana. It shares administrative boundaries with the Nadowli District to the North, the Wa East District to the East and South and the Wa West District to the West and South as represented by figure 1. It lies within latitudes 1°40'N to 2°45'N and longitudes 9°32' to 10°20'W. The municipality is predominantly made up of rural communities (GSS, 2010).

Figure 1: Map of Wa Municipality



Source: Ghana Statistical Service (2012).

3.2 Research Design

The study employed a cross-sectional survey. A cross-sectional design involves the study of phenomena or a phenomenon where information or data is collected at one point in time from a sample selected to describe some large population at that time (Saunders et al., 2012)

The reason for the adoption of the cross sectional survey is to help estimate the pattern of school dropout and determine the factors responsible for school dropout among the basic school pupils in the Wa municipality. The study employed a multi-process sampling procedure. In the first stage, purposive sampling technique was used to select 60 basic schools. Thus, the study considered only basic schools that had JHS one to three within the municipality.

Systematic sampling technique was employed at the second stage in selecting 6 schools out of the 60 schools. Thus, the names of the schools obtained during a reconnaissance survey by the investigators were arranged in alphabetical order and 1 in 10 sampling ratio applied to select the six schools. To avoid biases at this stage a simple random sampling method was employed to determine the starting position of the selection of the schools. Again, sampling random sampling method was employed to select 12 basic school pupils in each of the six schools which represented 72 respondents. Finally, snowball sampling was employed to reach out to 49 school dropouts in the selected schools. This now constituted a sample size of 121 respondents for the study. Questionnaires were the instrument employed for data collection. Questionnaires were administered to dropouts in their various homes while the continuous pupils were interviewed during school hours at the schools' premises. Both descriptive and inferential analysis were employed in the data analysis. The descriptive analysis dealt with the socio-demographic characteristics of respondents, trend in school dropout in the municipality and causes of school dropout.

3.2.1 Analysis of factors that influence school dropout in the Wa Municipality

For the factors that cause school dropout, logistic model for used to estimate the likely cause of school dropout among pupils. For the logistic model. The variables such as poverty, teenage pregnancy, peer influence, distance to school, household responsibilities, school facilities, harassment from teachers, and harassment from colleague students were used as the explanatory variables in this regard to estimate their level of influence. The specification and definitions of the model was adopted from Uddin et al. (2014) as shown in table 1 below and the explanatory variables used to estimate the coefficient of the adoption model were also specified. In this study, the dependent variable Zi will be treated as a dichotomy variable which takes the value of one as a factor that influence school dropout and 0 as not a determinant of school dropout. The reason for the adoption of the logit model is because the model guarantees the estimated probability increases and never cross the range of 0 to 1, and are the most commonly and widely applied. The functional form of logit model expressed by Gujrati (Uddin et al., 2014) was used. The form is expressed as:

$$P_i = 1 / (1 + e^{-(\beta_0 + \beta_1 x_i)}) \quad (1)$$

For simplicity equation 1 can be expressed as

$$P_i = 1 / (1 + e^{-z_i}) \quad (2)$$

Where,

P_i: Probability of influence of the ith respondent

e^{z_i}: stands for the irrational number e raised to the power of Z_i

Z_i: is a function of N-explanatory variables and expressed as:

$$Z_i = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_n x_n + \mu_i \quad (3)$$

Where,

β₀ = Constant term

β₁,....., β_n = Regression co-efficient

Therefore,

The estimation model was hypothesized as:

$$Z_i = \beta_0 + \beta_1 (DIS) + \beta_2 (HHR) + \beta_3 (POV) + \beta_4 (TEEP) + \beta_5 (PEEI) + \beta_6 (SCHF) + \beta_7 (HAT) + \beta_8 (HAC) + \mu \dots \dots \dots (4)$$

DIS= Distance from school

Comment [AI12]: There is a great risk of having potential dropout candidate within the 72 non dropout sample's members, which constitute a prominent bias.

The timing of questionnaire administration is determinant. If it was during the school year, there is a potential bias. If in the end, one may not consider it. An ideal thing to do is to question pupils from last or year or years

Comment [AI13]: ??

Comment [AI14]: Why not to use an impact evaluation method?

HHR= Household responsibility
 POV= Poverty
 TEEP= Teenage pregnancy
 PEEI= Peer influence
 SCHF=School facilities
 HAT= Harassment from teachers
 HAC= Harassment from colleagues
 Zi = Dropout = 1 if pupil has dropped out from school, 0 otherwise
 μ= error term capturing observed effect

Table 1: Definition of variables that were used in the logit model

Variable	Variable definition	Sign
Dependent variable		
School dropout	1 if pupil dropout from school, 0 otherwise	+/-
Explanatory variables		
Distance to school	1 if pupil travelled long distance, 0 otherwise	+/-
Household responsibility	1 if pupil has formed HHR, 0 otherwise	+/-
Poverty	Annually income of pupils caretakers	+/-
Teenage pregnancy	1 if pregnant before, 0 otherwise	+/-
Peer influence	1 if ever influenced by peer, 0 otherwise	+/-
School facilities	1 if there are school facilities for pupils, 0 otherwise	+/-
Harassment from teachers	1 if ever harassed by a teacher, 0 otherwise	+/-
Harassment from colleagues	1 if ever harassed by colleague, 0 otherwise	+/-

Comment [AI15]: I do think, review make it possible to pronounce on some of the signs!

Source: Authors compilation, 2017

4.0 Data analysis and Discussion

Comment [AI16]: Use of histograms or other distribution representations would be a plus

4.1 Socio-demographic background of dropouts

Table 2: Socio-demographic Background of Dropouts

Gender	Frequency	Percent
Male	57	47.1
Female	64	52.9
Total	121	100.0

Variables	N	Minimum	Maximum	Mean	Std. Deviation
Age at which pupil dropped out	121	11.0	26.0	16.107	2.4590
Level at which Pupil Dropped out	121	7.0	9.0	7.843	.8166
Household size of respondents	121	2	20	9.06	4.915
Monthly family income of respondents?	121	10.0	1800.0	321.81	349.23

Comment [AI17]: Frequencies by level, since we have 3

Comment [AI18]: Unit?

Source: Field survey (2017).

From table 2 above, it can be seen that majority of respondents (about 53%) are females while 47% of the pupils were male. From Table 2, it can be seen the minimum age of respondents is 11 and the maximum age is 26 with about 16 years being the average.

Again, the survey results distribution in table 2 indicated that the average respondent managed to finish first and probably second terms of J.H.S One and dropped out either in the third term of J.H.S One or when they were about entering into J.H.S Two. This finding suggest dropout is prevalent during the third term of J.H.S One. The study also revealed that the average household size of respondents is 9.06 which is far above the average of the Upper West Region which stands at 6.2 according to the Ghana Statistical Service (2010). Further analysis also show there exist great disparity among the household sizes of respondents with the minimum recording 2 and the maximum recording 20. Evidence from the survey results suggests dropout is very high among pupils who come from families with large household size. And finally, the survey results that the average family monthly income of respondents is about Gh¢321.81, this is slightly above the monthly minimum wage of Gh¢264.0 which makes it quite impressive considering the income poverty of the region. However, further analysis from the survey results show there is great income disparity between the highest income earners and the lowest. This finding suggest majority of the respondents come from low income families.

Comment [AI19]: Can we consider that dropout determinants are the same for different levels?? Also table has to give statistics for each level

Comment [AI20]: What finding? And how this finding is suggesting to predominance of low income families?

4.2 Socio-economic Status of Respondents' Caregivers

The socio-economic situation of people responsible for dropouts were investigated. The survey results indicated that majority of the respondents are cared for by single parents (about 51%) with those studying with mothers only being the highest (about 33%). The survey results also show significant percent of respondents (about 31%) are staying with Guardians. Further analysis revealed most of the Guardians are not blood relatives of respondents. Evidence from the survey results show dropout is very high among pupils who are staying with a single parent or a Guardian. Again, the survey results indicated that only few respondents (13%) have caregivers who are educated to the tertiary level. Majority of the caregivers are either not educated at all (about 22%) or dropped out of primary school (about 31%). Evidence from the survey results show majority of dropouts have caregivers who are non-literates or who themselves are also school drop outs.

Comment [AI21]: Not clear

Comment [AI22]: Reformulate

On the type of occupation of respondents' caregivers, the survey results show majority of caregivers (about 75%) are in the informal sector, only about 12 percent are employed by the government and about 12 percent also not actively engaged in any income generating activity. Within the informal sector, majority of caregivers (about 38%) are farmers, with the rest being private security persons and traders. Evidence from the survey results show majority of respondents caregivers are not salaried workers.

4.3 Level of School Dropout

Using data from class attendance register, the study investigated the admission and dropout rate within a three-year period of the selected schools. The results are presented in Figure 2. From the assessment, the study revealed that the average enrolment for Form One in 2013/2014 academic year was about 37 pupils per class, this dropped to about 31 in 2014/2015 and then increased marginally to about 32 in 2015/2016 academic year. Within the same period, the average dropout

Comment [AI23]: What this changes of enrollment rate do mean in the absence of comparators (national changes for example)? This may be general dropt (or rise) of pupils/class!

per class was about 3 pupils representing about 8 percent of the average Form One enrolment. The dropouts in Form One increased marginally to about 10 percent of average enrolment in 2014/2015 academic year and then fell to about 8 percent of Form One enrolment in 2015/2016 academic year. Further analysis revealed that, the highest Form One enrolment per a class within the three year period was 70 pupils while the least enrolment within the same period was 10 pupils per class. The highest number of dropout recorded within the three year period was 10 pupils per class while some of the classes never recorded any number of dropouts within the period.

Comment [AI24]: are those % significantly diff?

From the figure, it can be seen the average enrolment for Form Two in 2013/2014 academic year was about 25 pupils per class, this increased to about 27 in 2014/2015 and then to about 31 in 2015/2016 academic year. Within the same period, the average dropout per class was about 3 pupils representing about 11 percent of the average Form Two enrolment. The dropouts in Form Two reduced marginally to about 10 percent of average enrolment in 2014/2015 academic year and then rose again to about 11 percent of Form Two enrolment in 2015/2016 academic year.

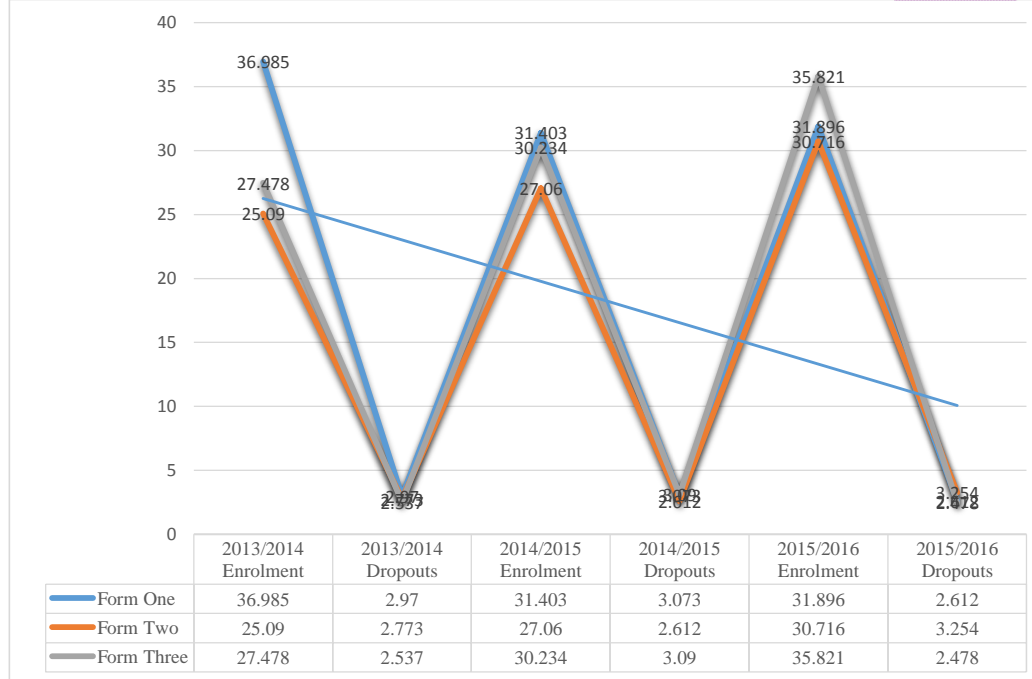
Comment [AI25]: same remark

Further analysis revealed the highest Form Two enrolment per a class within the three year period was 60 pupils while the least enrolment within the same period was 8 pupils per class. The highest number of dropouts recorded in Form Two within the three year period was 15 pupils per class while some of the classes never recorded any number of dropouts within the period. Also, the assessment revealed that the average enrolment for Form Three in 2013/2014 academic year was about 27 pupils per class, this increased to about 30 in 2014/2015 and then to about 36 in 2015/2016 academic year. Within the same period, the average dropout per class was about 3 pupils representing about 9 percent of the average Form Three enrolment. The dropouts in Form Three increased marginally to about 10 percent of average enrolment in 2014/2015 academic year and then fell significantly to about 7 percent of Form Three average enrolment in 2015/2016 academic year. Further analysis revealed the highest Form Three enrolment per a class within the three year period was 78 pupils while the least enrolment within the same period was 8 pupils per class. The highest number of dropouts recorded in Form Two within the three year period was also 15 pupils per class while some of the classes never recorded any number of dropouts within the period.

A detailed analysis of the survey results show majority of the schools in remote communities have large class sizes whereas most privately owned schools have smaller class size. Further analysis from the survey results also showed dropout rate schools in remote communities and government owned schools are much higher than those recorded in privately owned schools.

From the survey results as represented by figure 2, it can be seen the average dropout rate ranges from about 7 to 11 percent, even though the overall average stands at about 9 percent per class. The finding suggests the level of dropout rate in the Municipality is moderate even though it is far from desirable zero percent set by the United Nations (2015).

Figure 2: Average Enrolment and Dropout Rate from 2013/2014 to 2015/2016 Academic Year



Comment [AI26]: inappropriate representation what this line (reg) mean?

Source: Field survey (2017)

UNDER PELL

4.4 Descriptive statistics of factors accounting for school dropout in the Wa municipality

This section categorized the factors in non-environmental and school environmental factors.

Table 3: Factors Fueling Dropout among Pupils

Non-school environmental factors fueling school dropout		
Statement	Frequency (%)	
	Yes	No
School is a very long distance away from home	54	46
I was overburdened by house chores	68	32
My caregiver could not afford stationeries for my academic progress	67	33
I dropped out due to pregnancy related issues	91	9
I was influenced by my peers to stop schooling	49	51
My caregiver asked me to work for money hence I had to quit school	52	48
School factors influencing school dropout		
The school did not have enough facilities for teaching & learning	61	39
I was constantly harassed and embarrassed by my teacher	36	64
I was constantly harassed and embarrassed by my colleagues	41	59

Source: Field survey (2017).

The survey results on non-school environmental factors influencing pupils' dropout represented by table 3 indicated a sharp divergent view on distance from home to school being a factor to pupils' dropout. Majority of respondents (about 54%) reported that long distance away from school was not a factor influencing school dropout while 46% observed that school dropout was influenced by distance away from school. Further analysis show most respondents that schooled in remote communities usually have their homes far from their schools and with walking and cycling being the major means of getting to school, resorted to discontinue with education. However, respondents in urban communities are mostly not affected by distance between school and home. Again, the results revealed that majority of respondents (about 68%) generally agreed excessive house chores occupied their time leading to the dropping out of school whereas about 32% reported that school dropout among pupils was not because of overburdened house chores. Further analysis from the survey results revealed majority of respondents that generally agree to the assertion of dropping out of school due to overburdening of house chores leave with Guidance and single parents, with majority being either farmers or traders.

For the statement "my caregiver could not afford stationeries for my academic progress", majority of respondents (about 67%) reported "yes" while 33% indicated "no". What that means is that majority of the pupils observed that the inability of caregivers to afford stationaries and other materials needed for their academic progression contributed to their dropping out of school. Again, the study observed that majority of respondents (91%) generally agreed that pregnancy

related issues contributed to their dropping out of school, while 36% disagreed with the statement. Further analysis revealed that majority of the respondents that dropped out of school due to pregnancy related issues are females and this is very high among dropouts from rural communities. The survey results also revealed that majority of respondents (49%) disagreed that they dropped out of school due to influence from peers, while majority of the pupils (51) disagreed with the assertion that pupil dropped out school due to peer influence. The survey results show peer influence has a significant tendency to influence pupils to drop out of school. Finally, for non-environmental factors influencing school dropout, the study results indicated that majority of respondents (52%) agreed that caregivers instructed them to engage in income generating activity instead of schooling, while 48% percent agreed. Further analysis from the survey results revealed majority of respondents who were asked to stop schooling and work have caregivers who are either traders or farmers, hence they were asked to join their caregivers in their trade.

For the school factors, the analysis revealed that majority of respondents (61) agreed that inadequate teaching and learning facilities at school contributed to their dropping out, while 39% disagreed. Further analysis revealed lack of basic teaching and learning facilities at schools especially government owned ones located in rural communities demotivate most pupils from continuing with their education. Also, 59% of the pupils agreed with the statement that pupils dropped out from school due to constant harassment and embarrassment form colleagues pupils while 41% held a contrary view. Lastly, 65% of the pupils disagreed that they dropped out of school due to persistent harassment and embarrassment from teachers, while 35% of the pupils agreed that they stopped schooling due to harassment and embarrassment the from school teachers. Further analysis from the results show pupils who are deemed stubborn by teachers and are usually given corporal punishments sometimes dropout of school while some female dropouts claim they have ever been sexually harassed by their class teachers. The findings suggest corporal punishment has a tendency to influence pupils to drop out of school. The finding is consistent with that of Akyeampong (2009) which posit corporal punishment and sexual harassment from teachers contribute to school dropout at the basic level.

4.5 Logistic regression to determine the factors that influence school dropout

The logistic model was estimated to find out the factors that determined pupils' dropout from schools in the Wa municipality. The factors were categorized into school factors and non-school factors as represented by table 4. For school factors variables such as school facilities, harassment from teachers and harassment from colleague students were hypothesized to influence pupils' school dropout. For the non-school environment factors, distance to school (Dist.), household responsibility (Housrep), poverty (Pov), teenage pregnancy and peer influence were estimated to influence school dropout among pupils.

Table 4: Logistic regression to determine the factors that influence school dropout

Environmental factors accounting for pupils dropout						
Variable	Co-eff.	Std. Err	t	Sign.	95% CI	
Schfac	.6393443***	.0995025	6.43	0.00	.4423022	.836863
Harrastec	.1803279***	0.667971	2.70	0.008	0.480515	.3126043
Harascol	3.45e-15	.109187	0.00	0.1200	-.2162035	.21620
Non-environmental factors accounting for pupils dropout						
Dist.	3.69e-15	.0372363	0.00	0.130	-.073751	.737512
Housresp	-6.77e-15	0.484881	-0.00	0.2100	-.0960368	0.960368
Pov	.0909091*	.0477478	1.90	0.059	.0303614	.1854796
Teep	.90909***	.0297598	30.55	0.000	-.8501478	.968034
Peerinf	1.23e-15	.0254194	0.00	0.110	-.0503462	.0503462

R-square = 0.9959, $\text{prof} > f = 0.0009$, Number of observation = 121, CI = Confidence interval.

The results for the school environmental factors indicated that availability of school facilities is highly significant with school dropout. From the model estimation, availability of school facilities is significant at (1%) with coefficient value of 0.6393443*** and r-square (0.9959). What that means is that just an additional pupil in the school or class without facilities will lead to a school dropout of 99%. In other words, an additional pupil in a school or class with facilities will lead to a retention rate of 99%. Again, harassment from teachers by pupils is also highly significant with school dropout. The estimation model revealed that harassment from teachers is significant at 1% with coefficient value of (0.1803279***) and r-square 0.9959. This implies that as the harassment increases in school by teachers, the tendency of high dropout rate. In other words, if there is an increase in harassment, irrespective of the form will lead to 99% dropout rate in schools in the municipality and verse sa.

For the non-school environmental factors, poverty and teenage pregnancy were found to be significant. For poverty, it was found to be significant at 10% with coefficient value of 0.0909091* and r-square 0.995. Teenage pregnancy and school dropout was found to be significant at (1%) with coefficient value of 0.90909*** and R-square (0.9959).

Comment [AI27]: It is impressive that household responsibility does not affect the likelihood of dropout
I think this variable is somehow correlated to Teep

Comment [AI28]: Review your interpretation
Use odds

4.2 Discussions

Undoubtedly, basic education remains the bedrock of the educational leader and has the greatest effect on directing the human capital base of every society (Opoku-Asare and Siaw, 2015). This is because the attainment of basic education is a prerequisite for economic take-off and it helps in bettering citizens chances of making more discerning judgment towards development policies (United Nations, 2015). The problem of school dropout is a global canker that is affecting almost every country in the world (Shahidul & Karim, 2015). This affirmed our results that school dropout is a major development problem that is facing the Wa municipality. The high level of school dropout especially at the basic level is not only observed to be a problem of Wa municipality but social canker of both developed and developing countries (Lloyd *et al.*, 2005). UNESCO (2011) revealed that nearly 31.2 million primary school pupils became school dropout in 2010 globally and may never return to the classroom again. UNESCO (2012) report on global education show that in Sub-Saharan Africa alone about 42 percent of basic school pupils dropout of school before the final stage of completion with a whopping one in every six pupils leaving before reaching primary two. Prior to UNESCO (2010)'s report, Hadley (2010) also revealed that Sub-Saharan Africa has one of the highest dropout rates in the world with dropout in the region rose from 40 percent to 42 percent in a period of 10 years, thus between 1999 and 2009.

First, one of the major contributory factors to school dropout by pupils is school facilities (Hadley, 2010). This was in agreement with our findings as the regression results show a significant relationship between school facilities and school dropout. School facilities have an overriding role in shaping personality and determining the well-being of a child (Jeynes, 2005). They motivate and induce the child to perform activities necessary for meeting social needs. According to Mike *et al.* (2008), the probability of a pupil dropping out of basic school due to problems with access to quality of teaching and learning materials is high. Bruneforth (2006) also observed that inadequate incentives and motivation of teachers and unattractive teaching and learning environment in schools prevent pupils from completing school. What that means is that to build a good future with education our priority, conscious effort needs to be placed on providing the necessary school facilities for this generation and the generations to come.

Second, the economic situation of families have direct effect on the pupils' enrolment and retention at school (Jamil *et al.* 2010). Our study results found that poverty is highly significant with school dropout. This is in conformity with several studies that pupils from poor families have the tendency to drop out from school due to lack of educational funding. For instance, Akyeampong (2009) discovered that only about 10% of pupils' from the lowest poverty quintile families in Northern Ghana have the likelihood of completing basic education without dropping out. The author argues that primary school dropout is more incidence among the poor than the rich. What that means is that poor pupil are more vulnerable to school dropout than those from pupils from rich homes (Bruneforth, 2009; Rumberger and Lim, 2008) and social intervention policies are critical to leverage poor pupils who are unable to meet the primary cost of education. We completely agreed with Owusu-Addo *et al.* (2014) study which recommended that cash transfer be made accessible to the poor who children could not afford the cost of basic needs including education.

In addition, teenage pregnancy is one of the major factors influencing school dropout. Reasons have been documented why girls tend to have lower enrolment rates than boys, higher drop out and less transition to secondary (Ghana Education Service, 2015). School dropout rate among girls are extremely high as compared to boys globally (Holmes 2003; Pilon 2003;

Holcamp 2009). Holmes (2003) in his study asserts that females drop out of school earlier than males due to teenage pregnancy and other cultural reasons. What that means is that the possibility of a girl completing basic education especially in rural Ghana is marginal. Finally, household responsibility contribute to school dropout especially poor household. This result confirms Pryor and Ampiah (2003) study which reported that household responsibility prevents wards from going to school during farming and harvesting seasons, thereby propelling eventual dropping out. This study suggests that Ghana Education Service and the Ministry of Education should map out strategies to monitor activities school children involve in their homes to ensure that school children are not converted in child labour which may eventually lead to school dropout.

5.0 Conclusion and Recommendations

The study result revealed that factors such as lack of school facilities including teaching and learning materials in basic schools, poverty, teenage pregnancy among girls and harassment from teachers were the drivers of school dropout among basic school pupils in the municipality. These factors prevent the municipality from achieving the desirable zero percent dropout rate set out by the United Nations. To achieve this, the study recommends to keep pupils in school, the government through the Ghana Educational Trust Fund (GET Fund) should help government schools with classroom blocks, teaching and learning materials especially in rural communities. This will help ease the congestion in some schools, provide adequate teaching and learning materials thereby helping effective teaching and learning.

In order for the country to fully achieve universal basic education through free compulsory universal basic education (FCUBE), the government through parliament should establish a law that will persecute caregivers that refuse to send children of school going age to school or urge pupil already in school to discontinue schooling in order to help in their field of works. This will compel caregivers to make sure pupil at least complete basic education. Again, poor households should be identified and their children supported either financially or materially to keep them in school.

COMPETING INTERESTS DISCLAIMER:

Authors have declared that no competing interests exist. The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

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