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Assessing antenatal visits and skilled birth attendant at birth in the West Gonja District in the Northern Region of Ghana

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ABSTRACT

Antenatal care (ANC visits) utilization and skilled birth attendance during delivery are found to be low in developing countries, more so the rural communities of Ghana. The aim of this study was to determine the proportion of pregnant women (PW) who had prenatal care (ANC visits) with the number who had skilled birth attendance during labour in at the West Gonja District of the Northern region of Ghana. This was a cross-sectional descriptive study involving 110 postpartum women (PPW) from 6 health facilities selected through purposive sampling. Data was entered and analysed using SPSS software version 23 (Chicago). The mean age of the PPW interviewed was 28.9 years (SD=6.0) and all were married. The great majority (83.6%) did not have any formal education and approximately, 41.8% were traders. Majority (86.4%) of the postpartum women initiated ANC for their last delivery in the second trimester and that 94.0% had 3 – 4 visits before labour. The majority (76.4%) of the PPW had their last deliveries in a health facility and were all attended to by skilled birth attendant (100.0%). Only 8 (7.2%) out of the 110 PPW had their deliveries by a traditional birth attendants (TBAs). Of this number, 4 (50.0%) had no reason for delivering at the TBA, 3 (37.5%) said there was no health facility in their community, however, 1 (12.5%) said she did not have complications during her last delivery by a TBA. The study found that ANC care services were well-patronized in the West Gonja District by the women. Approximately 76.4% of the women had their last deliveries in a health facility and were all attended to by skilled birth attendant, only 7.2% were attended to by TBAs.

Keywords: Antenatal care, postpartum women, Skill birth attendant, traditional birth attendant, West Gonja, Ghana.

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INTRODUCTION

Pregnancy may be associated or aggravated by certain health conditions and these may also be influenced by the socio-demographic and economic factors. Identifying and dealing with these health-related risk factors early in pregnancy are key requirements for a healthy pregnancy outcome.^{1,2} Studies have shown that high maternal, neonatal and child mortality rates are associated with inadequate and poor-quality maternal health care, including antenatal care and skilled attendance at birth.^{3,4} There is therefore the need to improve the understanding of pregnant women and their relatives on how to prepare physically, mentally and even logistically for childbirth. Antenatal care during pregnancy has been recognized as a key maternal service in improving a wide range of health outcomes for women and children.^{3,4,5}

There are variations in the socio-demographic factors among studies across regions regarding the issue of prenatal care.^{6,6a,7,8,9,10,11} Prenatal care is defined as the medical attention received from the time of conception up to, but not including, labour and delivery.¹² It involves a set of services provided to improve pregnancy outcomes and engage the expectant mother in the healthcare decisions.^{12,13}

Antenatal care (ANC) utilization or coverage in West Gonja District and parts of Africa is found to range from 65.0% to 69.0% compared to 97.0% in the developed countries.^{9,10,11} Similarly studies have found skilled attendance at delivery to be 53% in developing countries while it is 99% in the developed countries.¹¹ The WHO in 2007 propounded a model called the goal oriented model which recommends 4-5 ANC visits for pregnant women who are not having medical problems.¹¹

The Government of Ghana implemented a number of policies and strategies to achieve an improvement in the health of pregnant women and their babies and a reduction of maternal mortality which include policies on maternal health services.¹⁴ The aim of this study was to determine the proportion of pregnant women who had prenatal care (ANC visits) with the number who had skilled birth attendance during labour in the West Gonja District of the Northern region of Ghana.

MATERIAL AND METHOD

Study Design

The study was a community-based cross sectional descriptive study.

Study site

The study was conducted in all the six sub stations (health centres) within the West Gonja District in the northern region of Ghana.

Study Population

The study population was three months postpartum women.

Sample Size

The sample size of this study was calculated using Cochran's formula for estimation of single population proportion by the assumption of: $p = 32\%$ from proportion of pregnant women who delivered in health facilities in 2015 as reported by the District Health Directorate.

With an assumption of margin error 0.05 at 95% confidence level and 5% non-response rate, the sample size was 110.

$$N = \frac{t^2 \times p(1-p)}{m^2}$$

N= required sample size

t = confidence level at 95% (standard value of 1.96)

p = estimated proportion of women who know danger signs of pregnancy and childbirth

m = margin of error at 5% (standard value of 0.05)

Sampling Techniques/Methods

The study was conducted in 11 communities in the six health facilities in the district. The selection of the individual respondents was done using purposive sampling procedure. The communities were: Kotito, Mempeasem, Mole, Laribanga, Busunu, Achubunyo, Soalepe, Boroto, Kabampe, Nabori and Tailorpe.

Data Collection and analysis

The data was collected by the use of structured questionnaires. The variables include socio-demographic characteristics and maternal knowledge on prenatal care. Data was entered case by case into SPSS software (version 23) and analysed. The results were presented in frequency tables, bar charts and pie charts. P-values are determined using Chi square.

Availability of data and materials

The data used to write this manuscript will be made available on request.

RESULTS AND DISCUSSION

Socio-demographic Characteristics of respondents

A total of 110 postpartum women (PPW) were interviewed, age range of 18 – 44 years with a mean of 28.9 years (SD=6.0) and a modal age group of 25-29years (53.6%), (**Table 1**). All the PPW were married 110 (100.0%). Approximately 60.0% of the PPW belonged to the Muslim religious denomination. Many (46.4%0 of the PPW were Gonjas by tribes (**Table 1**). The great majority had no formal education (83.3%), (**Figure 1**), and many (41.8%) of the PPW were farmers, (**Figure 2**).

Table 1: Demographic characteristics of postpartum women

	Frequency (n)	Percentage (%)
Age group (years)		
15 - 19	4	3.6
20 - 24	13	11.8
25 - 29	59	53.6
30 -34	13	11.8
35 – 39	13	11.8
≥40	8	7.3
Total	110	100.0
Religious denomination		
Islam	73 (73.0)	66 (60.0)
Christianity	27 (27.0)	44 (40.0)
Ethnicity		
Gonjas	32(32.0)	51 (46.4)
Dagombas	20(20.0)	7 (6.4)
Dagaabas	16(16.0)	4 (3.6)
Kamara	18 (18.0)	3 (2.2)
Hanga	7(7.0)	1 (0.9)
Vugla	5(5.0)	4 (3.6)
others	2(2.0)	40 (36.4)

Table 2: Obstetric history of postpartum respondents

	Frequency (n)	Percentage (%)
Number of pregnancies		
1 -2	12	10.0
3 – 4	76	69.1
5 - 6	21	19.1
≥7	1	0.9
Total	110	100.0
Number of deliveries		
0	11	10.0
1 -2	90	81.8
3 – 4	8	7.3
5 - 6	1	0.9
Total	110	100.0
First booking		
First trimester	5	4.5
Second trimester	95	86.4
Third trimester	10	9.1
Number of ANC visits		
1 – 2	0	0.0
3 – 4	94	85.5
5 – 6	16	14.5
≥7	0	0.0
Total	110	100.0
Place of ANC visits		
Health facility	100	100.0
TBA	0	0.0
Others	0	0.0
Place of delivery		
Health facility	84	76.4%

Home	18	16.4
TBA	8	7.2

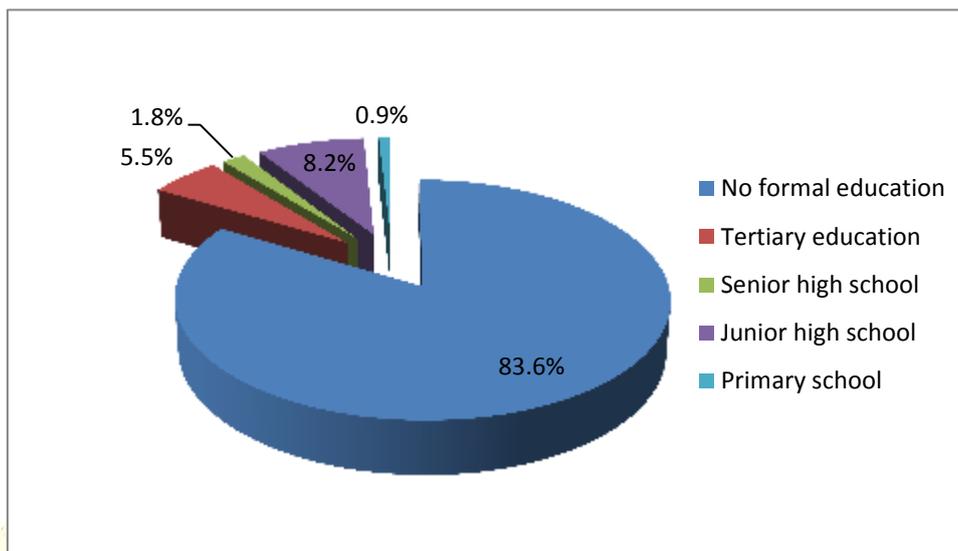


Figure 1: Educational background of respondents

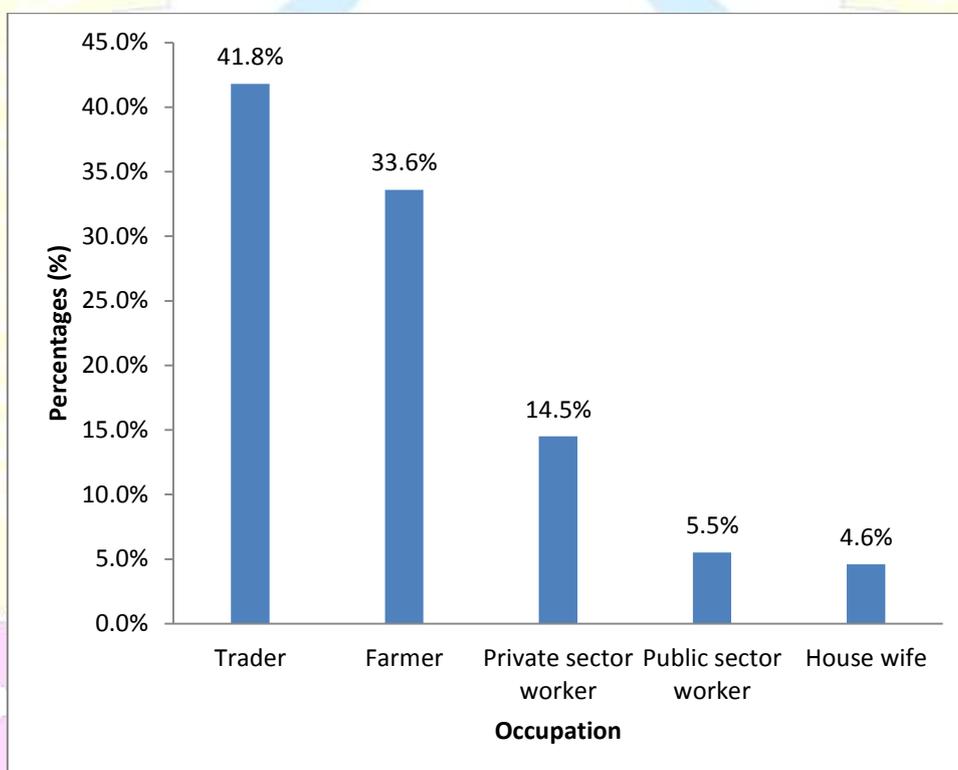


Figure 2: Occupations of the postpartum women interviewed

The mean age of the postpartum women (PPW) in this current study was 28.9 years. This is higher than the mean age of 26.8 years in Kuganab et al⁶ study in the Sissala East District of Ghana, and 26.1 years in Muhammed et al⁷ study in Kano Nigeria among PPW. The great majority of the respondents in this current study were married, similar to a previous study in rural Ghana,⁶ and Ethiopia,⁸ but differs from the 2012 Ghana Statistical service⁹ (GSS) report that found marital status of women to be 48.7% in the West Gonja District. Again the great

majority of the PPW did not have any formal education, similar to previous studies in Africa,^{6,8} but much higher than the 47.7% found in the GSS 2012 report.⁹ The GSS report showed that 60.5% of women in the West Gonja District were involved in agricultural activities.⁸ However, this study found that 48.0% of the pregnant women were farmers. The differences between the current study and the report of the GSS in the West Gonja District of the northern region could be attributed to the larger sample size involved in the Population and Housing Census from which the GSS report was derived, compared to the smaller sample size used in this current study.

Obstetric history: Number of pregnancies/deliveries and the use of Antenatal Care Services

Majority of the PPW had 3 – 4 previous pregnancies 76 (69.1%) and 1 – 2 previous deliveries, (**Table 2**). The great majority of the PPW started booking for the last pregnancy in the second trimester (86.4%). Approximately, 94.0% had 3 – 4 had ANC visits before labour (**Table 3**).

The study found that all the respondents attended antenatal clinic (ANC) during their last pregnancy. This finding is consistent with studies in Tanzania¹⁰ and Ghana,¹⁶ that found higher ANC visits among pregnant women and postpartum women during their last pregnancy. This is so because all the women had on the average two previous deliveries. However, the current findings differ from studies that found higher number of previous pregnancies to be associated with less use of antenatal care.^{17,18} Majority (73.8%) had attended the minimum recommended number of four visits or more. This is within the range of values for developing countries, but lower than those of the developed nations.^{11,12} However, the current finding is a significant positive, for it agrees with the goal oriented model propounded by WHO in 2007,¹² which recommends 4-5 ANC visits for pregnant women who are not having medical problems. The current finding further supports the Ghana Demographic and Health Survey (GDHS) in 2014¹⁹ reports in this same district which found that majority of pregnant women make the minimum of 4 ANC visits in the entire duration of their pregnancy. The great majority (86.4%) started ANC for their last pregnancy in the second trimester of pregnancy. This differs from the 2014 GDHS¹⁹ in the same district, as well as Sissala East District that found that women commonly start ANC booking in the first trimester.⁶ One potential pitfall of the current study is that most women in the study initiated ANC visit late and this may be detrimental to the health of the mother and her child.

Place of delivery of previous child and attendance during last labour (PPW)

Of the 110 women interviewed the majority 84 (76.4%) had their last deliveries in a health facility and were all attended to by skilled birth attendant (100.0%). A total of 18 (16.4%) and 8 (7.2%) were attended by relatives and traditional birth attendants (TBAs) respectively.

Of the 8 women who had deliveries at the TBAs, 4 (50.0%) had planned to have deliveries by the TBAs. Three (37.5%) women said there was no health facility in their community, however, 1 (12.5%) said she did not have complications during her last delivery by a TBA.

It has been suggested by studies that skilled attendance at birth is a key factor in reducing the risk of maternal death, in both industrialized and developing countries.^{20,21,22} This study found that 76.4% of the PPW who had ANC visits during their last pregnancy delivered at health facilities and were all assisted by skilled birth attendants. The findings are similar to the 2014 GDHS¹⁹ report and AbouZahr *et al*²³ study which equally found that majority of the pregnant women interviewed were assisted in labour by skilled birth attendants. The results are however inconsistent with that of Deogratius *et al*¹⁰ study in 2015 in Tanzania and Amoakoh *et al*²⁴ study in Ghana that found 53.0% and 60.5% skill birth attendant rates among postpartum women respectively. The study further found that only 3.6% PPW had their deliveries by the TBAs, and that half of them had no reason for delivering at the TBAs. Approximately, 37.5% admitted that they did so due to lack of health facilities in their communities. This reaffirms the assertion by studies in Ghana that the patronage of TBA services in Ghana is decreasing because of the availability of health facilities in majority of rural communities.^{19,25} Furthermore the TBAs assisted delivery rate of 3.6% in this current study is significantly lower than the 36.0% in the 2014 GDHS report for the northern region of Ghana where the West Gonja is located.¹⁹

Again, this study clearly shows the decline in the utilization of the services provided by TBAs in the West Gonja District; rural Ghana due to the accessibility of health facilities, compared to the Edo State in Nigeria where the services are highly patronized by the rural women.²⁶ Here it was found that the rural women prefer TBAs because of the availability, accessibility and the low cost of the services provided by the TBAs. Also the women have faith in the efficacy of the TBAs services.²⁶

Conclusion: In this study great majority of the postpartum women started booking for the last pregnancy in the second trimester and that 94.0% had the minimum recommended ANC visits before labour. Approximately 76.4% of the women had their last deliveries in a health facility and were all attended to by skilled birth attendant, only 7.2% were attended to by TBAs.

DECLARATIONS

Inform consent/ethical consideration

The ethical Committee of the department of Midwifery, School of Allied Health Sciences of the University of Development Studies approved the proposal. Permission was obtained from the West Gonja District Director of Health Sciences and the women before the questionnaires were administered.

Author's contributions

EMD,ESA and AMK conceptualized the study. ESA and AMK compiled and entered the data. EMD, ESA and AMK analysed the data. EMD, ESA and AMK drafted the manuscript. EMD, ESA, AMK and VY read, edited and approved the final manuscript.

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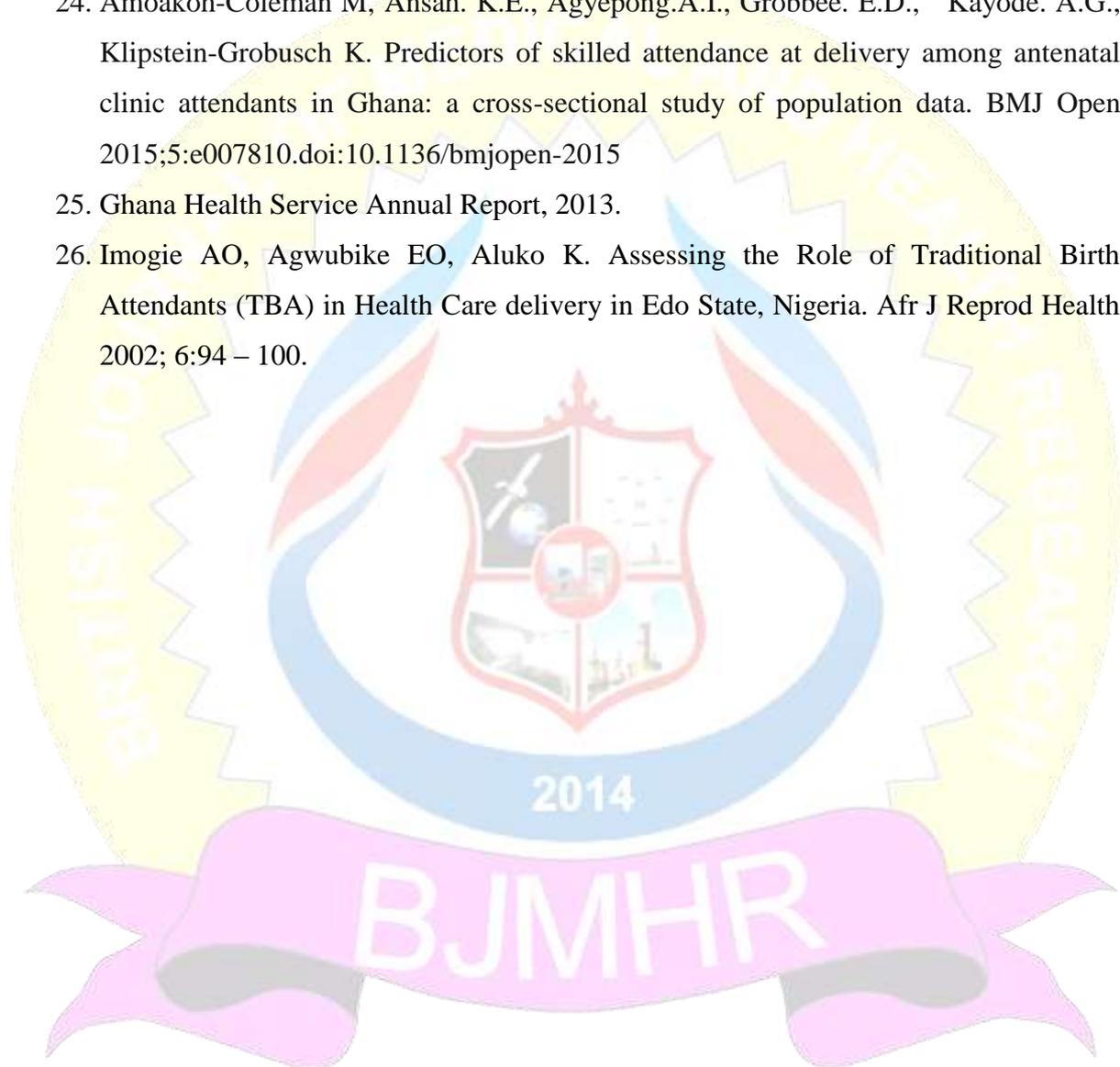
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