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**FACTORS ASSOCIATED WITH SUPERVISED AND UNSUPERVISED DELIVERY
AMONG POSTNATAL MOTHERS: A STUDY AT OBUASI EAST MUNICIPALITY,
ASHANTI REGION GHANA**

Factors Associated with Supervised and Non-supervised/Unsupervised Maternal Deliveries
among Women of Reproductive Age Attending Postnatal Clinics At Obuasi East Municipality,
Ghana.

ABSTRACT

Background: Pregnancy and childbirth are vital events in the life of a woman so there is the need to pay special attention to mothers from the time of conception to labor and delivery to postnatal care. This study sought to assess the supervised and non-supervised/unsupervised maternal deliveries among postnatal mothers of the reproductive age attending at Obuasi clinics in East Municipality in the Ashanti Region of Ghana specifically **introducing the specific objectives.**

Methods: A facility-based **descriptive** cross-sectional study was conducted at Obuasi East Municipality. A structured questionnaire was used for 352 postnatal mothers accessing health care at the various health facilities used for the study. Nine (9) health facilities in the municipality were used for the study. Descriptive, binary, and multivariate logistics regression analyses were used to estimate the association between the dependent and independent variables. The data were analyzed using SPSS version 23. Statistical significance for all testing was set at 0.05 (95% CI). Descriptive statistics was used to determine the proportion of supervised and unsupervised delivery.

Results: The result revealed that majority of the respondents 190 (54.0%) were within the age range 26-30 while 61 (17.3%) were aged 18-25 years. The findings from the survey revealed that

those who were within the age range of 26-30 were 1.8 times more likely to make the choice to deliver under supervision at a health center as compared to those who were within 18-25 years of age which was statistically significant (OR =1.8; 95% CI: 0.3– 1.9; P-value= 0.000). Among the nine variables assessed, only items of confinement influenced supervised and unsupervised delivery with p-value=0.00.

Conclusion/Recommendations: The study concludes that if pregnant women are given in-depth information regarding supervised delivery and the dangers of unsupervised delivery they will not only be able to notice them but also actions to take to deal with these emergencies by attending health facilities. It is recommended that the Ministry of Health/GHS should sensitize health workers on positive attitudes towards their clients to increase ANC attendants.

Keywords: Maternal mortality, Placenta, Postnatal mothers, Antenatal, Traditional birth attendant

1.1 Introduction and Backgrounds

Given the importance of pregnancy and childbirth in a woman's life, mothers require special attention from the moment of conception through labor and delivery to postpartum care [1]. Maternal mortality, a significant public health issue in Ghana and sub-Saharan Africa overall, where half (50.4%) of all maternal fatalities globally are partially attributable to unsupervised deliveries, can be decreased with access to professional delivery [2]. 99% of maternal deaths are thought to occur in poor nations, making maternal mortality one of the biggest health disparities between industrialized and developing nations [3]. By far the greatest burden of this tragedy is felt in African countries, which account for 40% of the global total pregnancy related mortality [4].

2.1 Material

Maternal mortality is one of the critical global health issues confronting many low-income countries in the world today [5]. Globally, about 139 million births occur every year, and in 2016 alone, approximately 289,000 maternal deaths occurred as a result of unsupervised delivery [6]. Maternal mortality remains high especially in the majority of sub-Saharan African countries, including Ghana [7].

It has been estimated that 88-98% of these deaths invariably are avoidable with about 70% of these being related to five direct obstetric conditions, which are post-partum hemorrhage, puerperal sepsis, pre-eclampsia and eclampsia, obstructed labour and abortion that can be managed during both pregnancy and delivery [8]. Thus acquiring the aid and skills of maternal care to manage these complications to reduce maternal mortality as well as improve maternal health. The risk of maternal death is about 175 times greater in some parts of the developing world than in industrialized countries [9].

In Uganda, concerning pregnant women's knowledge of cultural factors affecting pregnancy and childbirth, it was discovered that 90% of the pregnant women stated that they were aware that cultural factors affect pregnant women's place of choice of birth [10]. In a related development, a survey carried out in Ghana revealed that certain cultural practices were still surrounding pregnancy and childbirth thus, affecting pregnant women's place of choice of birth [11].

The pregnant women opted to deliver at home because their cultures did not allow them be delivered at the health centres with belief that the new born baby was not supposed to be seen by everyone and hence opted to deliver at Traditional Birth Attendants (TBAs') residence [10]. It has been observed that traditional birth attendants are old, mature, respected women within the community, with the necessary experience in dealing with birth cases and in most cases conduct deliveries to women within their community [12].

If a woman has knowledge and a healthy pregnancy and has access to skilled attendants, there are no significant differences in the health outcomes of mothers and babies between settings [13]. When knowledge on home birth services are well integrated into the health care system, as they are in hospital setting, all low-risk women should be given the option to choose either home

or hospital birth [13]. Research shows that home birth is as safe as hospital birth, where there is screening, planning, trained professional midwives and a health care system that supports midwifery and home birth [14].

It is also reported in a study that in sub-Saharan Africa, although women attend antenatal clinics (ANC) but do not seek supervised attendance when they are in labour [15]. But this varies from country to country. This however means that a significant number of those who receive health services during the antenatal period still deliver without adequate obstetric care [16]. The strategies to address the problems of maternal mortality include one proven effective strategy which is the provision of access to basic emergency obstetric services by employing life-saving skills such as supervised deliveries [17]. It is however important to note that, in addressing the issue of expectant mothers having access to skilled attendants, it is important that there is provision of easy-to-reach health facilities with the necessary motivated workforce, equipment, and drugs and enabling environment as well as adequate referral systems [18].

In Ghana several efforts are being made in this direction by training more midwives to replace the large numbers of midwives going on retirement, new midwifery schools are being put up with some existing health assistant schools being upgraded to midwifery schools as well as the placement of non-practicing midwives to maternity units [19]. Both local government and the Ministry of Health (MOH) have collaborated to expand existing health facilities to create space for more maternity units [20]. To bring health services to the doorstep of the communities, the Community-Based Health Planning and Services (CHPS) program is being implemented in both rural and urban settlements although the implementation strategies vary slightly. The National Health Insurance Scheme (NHIS) and the Free Delivery Service concepts are also being implemented in all public health facilities and some accredited private clinics [21].

For numerous reasons, however, many women do not seek supervised care due to the cost of service, the distance to the health facility, and the quality of care thereby bringing about a low coverage of 59% supervised deliveries despite the various strategies being put in place [22]. Both supervised and unsupervised deliveries have their pros and cons. However, the disadvantages of unsupervised delivery far outweigh that of supervised delivery and its effect can be very detrimental to the health of mother and baby [23]. Assessment of the trend of supervised and unsupervised delivery services in the Obuasi East Municipal area compared to antenatal services shows that although antenatal services is at an appreciable level of 89% in 2023, supervised deliveries however is as low as 60% [24].

Free maternal and delivery services were also introduced to break financial barriers to antenatal, skilled delivery and postnatal services in 2016 [25]. Despite this, there is growing concern that many pregnant women still have unsupervised delivery. For example, the most recent Ghana demographic and health survey shows that while the percentage of women making the World Health Organization's (WHO) recommended four antenatal care visits is 87%, skilled attendance at birth is 74% [26]. This implies that 26% of women delivered at home or used the services of traditional birth attendants [27].

Women's decisions about the choice of place of birth are influenced by many factors, from

demographic, socio-economic circumstances, cultural to health system factors [28]. In the context of Ghana more specifically, some studies have examined the factors influencing the utilization of skilled delivery services as well as barriers to uptake of skilled maternal healthcare services [29]. However, many of these studies are qualitative, and therefore do not usually provide quantitative estimates of skilled delivery prevalence and the significant determinants of skilled delivery services at the local district level. It seems no previous studies about supervised and unsupervised delivery among postnatal women in the Obuasi East Municipality. The findings on factors associated with supervised and unsupervised delivery have equipped local policymakers and stakeholders at the facilities with the relevant information to inform policy on their health services for quality improvement in maternal health care.

Broad Objective

Factors Associated with Supervised and Non-supervised Unsupervised Maternal Deliveries among Women of Reproductive Age Attending Postnatal Clinics at Obuasi East Municipality, Ghana

1.2 Specific Objectives of the study

- i. To investigate the sociodemographic characteristics ~~not smart~~ because already covered in section A of the questionnaire as the demographic profile of respondents, Accessibility and utilization of postnatal clinic to influence supervised and unsupervised delivery in Obuasi East Municipality
- ii. To assess the sociocultural norms that influence supervised and unsupervised delivery in Obuasi East Municipality
- iii. To assess the knowledge Attitude and Practice of reproductive age mothers on supervised and unsupervised delivery in the Obuasi East Municipality

2.0 Methodology and Methods

2.1 The study area

The Obuasi East Municipality forms part of the newly created districts in Ghana. The district is located in the southern part of Ashanti Region, bounded to the North by Adansi North District, South by Akrofuom District, East by Adansi Asokwa District and West by Obuasi Municipal. There are three tiers of health care service delivery; the neighborhood level consisting of CHPS compounds, clinics; the sub-district level consisting of health centres, reproductive and

child health units, and private maternity homes; and the district level consisting of private and public government hospitals.

2.2 Study Design and Type

The study employed **descriptive** cross-sectional survey design to assess the supervised and unsupervised delivery among postnatal mothers from January to July, 2024. This helped the researcher to collect data at point in time for analysis without any follow-up. The cross-sectional survey design deals with concerns about what happens in a situation with regard to prevailing factors or circumstances [30]. The type of study was a quantitative research which encouraged and used statistical models and analysis.

2.3 Study Population

The study population consisted postnatal mothers attending postnatal clinics/child welfare clinic at the various health facilities in Obuasi East Municipality. This implied that all biological mothers attending either postnatal or child welfare clinic were sampled for the study.

2.3.1 Inclusion criteria

- i. Postnatal mothers 18 years and above attending postnatal/child welfare clinic in Obuasi East Municipality.
- ii. Biological mothers with single babies attending postnatal/child welfare clinic.
- iii. Eligible mothers who consented to be part of the study

2.3.2 Exclusion criteria **not SMART**

- i. Postnatal mothers attending postnatal clinic within the first 48 hours after birth in Municipality.
- ii. Eligible mothers with postpartum complications.
- iii. Mothers who failed to consent to take part in the study.

2.4 Sampling size determination

To get a suitable sample size for the study, Yamane's (1967) statistical formula was used for the determination of the sample size for this study as follows:

$$n = \frac{N}{1 + N(e)^2}$$

n = the required sample size

N= known population size

l= constant

e= standard error (0.05)

With the known population size of 674 postnatal mothers, the minimum sample size for the study was calculated at 320. The 10% non-response rate was included to the smallest sample size to make it 320. The actual sample size was 352.

3.5 Sampling Methods

Stratified and simple random many pregnancies and Postnata visits??? Purposive and simple census sampling techniques were used. Stratified sampling method was used to determine the number of respondents from each selected health facility. Based on the required sample size of 352, the number of respondents from each stratum (facility) was proportionately calculated using the formula: $A/B * C$, where A' is the total number of mothers in a facility, B' = the total number of postnatal mothers in the nine facilities and C' = the determined sample size. This procedure was used for the various strata as shown in Table 1.

The sampling frame was created by taking the lists of the postnatal mothers from the various facilities. A simple random sampling method was then used to pick respondents by writing the assigned numbers of the elements on slips of paper. The papers were folded, put in a bowl and shuffled. The papers were then picked randomly with a non-replacement method until the sample size of 352 was met. The researcher and her assistants went to the selected health facilities daily to sample participants until the required sample size was met.

Table 3.1: Proportionate Stratified sampling of respondents

No	Health facility	Postnatal population/ study population	Target Population
1	SDA Hospital	60	31
2	Obuasi Ridge Hospital	51	27
3	Bryant Mission Hospital	53	28
4	St Jude Hospital	45	24
5	Central Market Health Center	40	21
6	The Queens Maternity Home	96	50
7	Kunka Health Center	89	46
8	Anglogold Ashanti Hospital	40	21

9	Obuasi Government Hospital	200	104
	Total	674	352

3.6 Data Collection Tools and Techniques

A quantitative data collection method was employed for this study. In this case, a structured questionnaire containing both closed and open-ended questions was used to gather information from the study participants. The entire questionnaire was built in four sections. The first section was made up of questions relating to the socio-demographic characteristics not smart because already covered in section A of the questionnaire as the demographic profile of respondents, Accessibility and utilization of postnatal clinic of the respondent. The second section comprised questions relating to the proportion of supervised and unsupervised delivery in the municipality. The third part contained the factors accounting for supervised and unsupervised delivery while the third section looked at sociodemographic characteristics associated with supervised and unsupervised delivery in the municipality. Data collection was facility-based and the data was collected by three (3) well-trained research assistants.

3.7 Pretesting

In the Obuasi West Municipality, pre-testing of the research data collection instrument took place. The pre-test area was situated outside the study site, but in terms of personnel and facilities has similar characteristics. The pre-testing helped classify certain difficulties that were linked to the understanding of the respondents. The researcher pre-tested the questionnaire on 20 postnatal mothers to check for reliability of the instrument. The Cronbach Alpha co-efficient of 0.827 was calculated for the questionnaire.

3.8 Data Analysis

Data entry management and analyses was done using SPSS version 24.0 software and cross tabulation of descriptive and inferential statistics. Descriptive, binary logistics regression analysis technique was used for the analysis to estimate the association between the dependent and independent variables. The data were presented using statistical tools such as frequencies, tables and charts. Statistical significance for all testing was set at 0.05 (95% CI). Descriptive statistics of demographic variables such as age, level of education, marital status, tribe, employment status, and religion will be reported. Descriptive statistics was used to determine the proportion of supervised and unsupervised delivery. Descriptive statistics was also used to assess

the factors that influence supervised and unsupervised delivery.

3.9 ETHICAL CONSIDERATIONS

The research proposal was approved by the academic institution of study, ethical clearance for institution's ethical committee and Obuasi East Municipal Health Directorate. Ethical considerations are important when it comes to research on human beings to protect their rights and if damages occur they are compensated accordingly. Ethical clearance was sought from the Ghana Health Service Ethics Review Committee as a requirement for the conduct of this study. A letter of introduction was sent to the Obuasi East Municipal Health Directorate for approval to carry out the study and collect data from the mothers. The purpose of the study was made known to the participants. Written consent form was sought from the mothers prior to participating in the study. Each participant was taken through the study purpose and eligible persons made to sign a consent form to indicate their acceptance to be part of the study. All activities concerning the collection of data were carried out with strict adherence to all state protocols that prevent the transmission of the Coronavirus.

4.0 RESULTS

4.1 Respondents' sociodemographic characteristics

From table 2, majority of the respondents 190 (54.0%) were within the age range 26-30 while 61 (17.3%) were aged 18-25 years. Also, most of the respondents 181 (51.4%) were married whereas 2 (0.6%) were divorced. Furthermore, 221 (62.8%) of the respondents were Christians while 131 (37.2%) were Muslims. On educational level of the respondents, 127 (36.1%) had tertiary education as against 27 (7.7%) who had no formal education. Majority of the respondents 189 (53.7%) were Akan while 6 (1.7%) were Ga. Also, 138 (39.2%) of the respondents were traders while 52 (14.8%) were farmers.

Table 4.1.1 Sociodemographic characteristics of respondents

Variables	Frequency	Percent
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Age		
18-25 years	61	17.3
26-30 years	190	54.0
31-36 years	101	28.7
Total	352	100
Marital status		
Single	97	27.6
Married	181	51.4
Co-habiting	72	20.5
Divorced	2	0.6
Total	352	100
Religion		
Christianity	221	62.8
Muslem	131	37.2
Total	352	100
Educational level		
No formal education	27	7.7
Primary	28	8.0
JHS	80	22.7
SHS	90	25.6
Tertiary	127	36.1
Total	352	100
Ethnicity		
Akan	189	53.7not
Ga	6	demographic
Ewe	18	profile
Northerner	139	1.7
Total	352	5.1
		39.5
		100
Occupation		
Salary workers	75	21.3
Artisans	87	24.7
Farmers	52	14.8
Trader	138	39.2
Total	352	100

4.1.2 Sociodemographic characteristics that influence supervised and unsupervised delivery

On assessing the influence of the socio-demographic variables and place of delivery by women (which in this survey is defined as predictors of place of birth), the following findings were made as detailed in Table 3. The findings from the survey revealed that those who were within the age range of 26-30 were 1.8 times more likely to make the choice to deliver under supervision at a

health centre as compared to those who were within 18-25 years of age which was statistically significant (OR =1.8; 95% CI: 0.3– 1.9; P-value= 0.000).

Table 4.1 2: Binary logistic regression on socio-demographic factors and place of delivery

Variables	Place of delivery		Total	Odds ratio	95% CI	P-value
	Supervised f(%)	Unsupervised f(%)				
Age range						
18-25	44(12.5)	17(4.8)	61(17.3)			
26-30	179(50.9)	11(3.1)	190(54.0)	1.801	0.3-1.9	0.000*
31-36	98(27.8)	3(0.9)	101(28.7)			
Total	321(91.2)	31(8.8)	352(100)			
Marital status						
Single	86(24.4)	11(3.1)	97(27.6)			
Married	167(47.4)	14(4.0)	181(51.4)			
Co-habiting	66(18.8)	6(1.7)	72(20.5)	2.920	1.0-2.0	0.402
Divorced	2(0.6)	0(0.0)	2(0.6)			
Total	321(91.2)	31(8.8)	352(100)			
Religion						
Muslims	114(32.4)	17(4.8)	131(37.2)			
Christianity	207(58.8)	14(4.0)	221(62.8)	1.303	0.5-2.9	0.028
Total	321(91.2)	31(8.8)	352(100)			
all OD signify harmful association why??? when we have traditional birth attendants doing recommendable jobs						
Edu. level						
No formal edu	27(7.7)	0(0.0)	27(7.7)			
Primary	25(7.1)	3(0.9)	28(8.0)			
JHS	68(19.3)	12(3.4)	80(22.7)			
SHS	82(23.3)	8(2.3)	90(25.6)	1.593	1.9-2.2	0.753
Tertiary	119(33.8)	8(2.3)	127(36.1)			
Total	321(91.2)	31(8.8)	352(100)			
Ethnicity						
Akan	173(49.1)	16(4.5)	189(53.7)			
GA	4(1.1)	2(0.6)	6(1.7)			
Ewe	17(4.8)	1(0.3)	18(5.1)	1.284	0.0-0.7	0.956
Northerner	127(36.1)	12(3.4)	139(39.5)			
Total	321(91.2)	31(8.8)	352(100)			
Occupation						

Salary workers	68(19.3)	7(2.0)	75(21.3)			
Artisans	75(21.3)	12(3.4)	87(24.7)			
Farmers	47(13.4)	5(1.4)	52(14.8)	3.103	1.7-7.8	0.104
Traders	131(37.2)	7(2.0)	138(39.2)			
Total	321(91.2)	31(8.8)	352(100)			

4.3 Sociocultural norms that influence supervised and non-supervised delivery

Table 4 shows the bivariate analysis of the socio-cultural influence of supervised and unsupervised delivery. Among the nine variables assessed, only items of confinement influenced supervised and unsupervised delivery with $p\text{-value}=0.00$. The rest of the variables were not significantly associated with place of delivery. **Show also association between supervised and non-supervised**

Table 4. 3.1: Bivariate analysis of the socio-cultural influence of supervised and unsupervised delivery

Variables	Frequency	Percent	$\chi(p\text{-value})$
Community norms and beliefs affect place of delivery	296	84.1	
Strongly agree	32	9.1	2.656(0.265)
Agree	24	6.8	
Disagree	352	100	
Total			
Prolong labour requires supervised delivery			
Strongly agree	338	96.0	6.949(0.031)
Agree	9	2.6	
Disagree	5	1.4	
Total	352	100	
Spousal unfaithfulness requires unsupervised delivery			
Strongly agree	10	2.8	2.169(0.538)
Agree	10	2.8	
Disagree	57	16.2	
Strongly disagree	275	78.1	
Total	352	100	
Spouse influence home delivery			
Strongly agree	274	77.8	1.347(0.510)
Agree	46	13.1	
Disagree	32	9.1	
Total	352	100	
Birth position influence place of delivery			
Strongly agree	52	14.8	3.603(0.165)
Agree	251	71.3	

Disagree	49	13.9	
Total	352	100	
Items of confinement affect supervised delivery			
Strongly agree	331	94.0	
Agree	21	6.0	64.967(0.000)
Total	352	100	

4.4 Knowledge level of mothers on supervised and unsupervised delivery

From table 5, majority of the respondents 347 (98.6%) had heard about supervised delivery while few of them 5 (1.4%) had no idea about supervised delivery. Most of them 220 (63.4%) heard about supervised delivery from health workers. However, it was not statistically significant (p -value= 0.688). Majority of the respondents defined supervised delivery as the delivery that occurs at the health facility. An overwhelming majority of the respondents 320 (92.2%) said supervised delivery prevents labour complications. Lastly, more than half of the respondents 316 (91.0%) said it is beneficial to go for supervised delivery.

Table 4.1: Knowledge level of mothers on supervised and unsupervised delivery

Variables	Frequency	Percent	χ (p-value)
Heard of supervised and unsupervised delivery?			
Yes	347	98.6	
No	5	1.4	0.490(0.629)
Total	352	100	
If yes, source of your information			
Mother	29	8.3	
Media	64	18.4	2.260(0.688)
Health workers	220	63.4	
Friends	34	9.7	
Total	347	100	
What is supervised delivery			
Delivery at the health facility	305	87.8	
Delivery with the assistance of the TBA	42	12.1	1.399(0.185)
Total	347	100	
What is unsupervised delivery			
Delivery at the health facility	7	2.0	
Delivery with the assistance of the TBA	345	98.0	0.690(0.521)
Total	347	100	
Supervised delivery prevents labour complication			
Yes	320	92.2	
No	9	2.5	1.545(0.462)
Don't know	18	5.1	
Total	347	100	

Unsupervised delivery prevents complications			
Yes	15	4.9	
No	304	87.6	0.561(0.755)
Don't know	28	8.0	
Total	347	100	
Unsupervised delivery causes mortalities			
Yes	313	90.0	
No	3	0.8	
Don't know	31	8.9	0.809(0.667)
Total	347	100	
It is beneficial to go for supervised delivery			
Yes	316	91.0	
No	20	5.7	
Don't know	11	0.3	1.220(0.543)
Total	347	100	

5.0 DISCUSSIONS

5.1 The sociodemographic characteristics that influence supervised and unsupervised delivery may discuss per paragraph as specific objective

On assessing the influence of the socio-demographic variables and place of delivery by women, the findings revealed that women who were within the age range of 26-30 were 1.8 times more likely to make the choice to deliver under supervision at a health centre as compared to those who were within 18-25 years of age which was statistically significant. This finding from the study is in sharp contrast with the findings presented by a study in Kenya [2] where age of women was not considered significant when it came to where they wanted to deliver their next child. The study could establish the correlation between age and the choice of places of delivery. Older women were more likely to deliver at home especially if they have had previous home deliveries successfully as compared to the younger women who perhaps would be afraid to make the choice to deliver at home [4]. Since some of these older women might have had successful home delivery previously, they may claim they have enough experience in home delivery.

Another reason for this could be because many older women regard themselves as experts in matters concerning childbirth. It may therefore seem ridiculous for them to go to the healthcare facilities to be aided in child delivery by staff they consider far younger and less experienced than themselves. However, one cannot run away from the fact that some of the elderly women may

opt to deliver at the health facility due to the fact that they consider themselves weak and will need assistance from skilled care providers, should complications arise during labour and child delivery [10]. The young women may also consider their exuberance and opt for home delivery. These young ones may think they have enough energy to endure pain and contain any eventuality that may arise.

The findings from the study revealed that women who were married were 1-2 times more likely to make the choice to deliver at a health centre as compared to those who were not married (P-value = 0.402). Though not significant, this might suggest that married women could have been receiving some form of social and financial support from their partners and that could account for their comparative advantage of being more likely to deliver at a health centre over their single counterparts. This finding from the study contrasts the study done by the following researchers [8;12]. These researchers in their separate findings revealed that women who were married and were staying with their husbands were more likely to make the choice to deliver in a health centre as compared with women who were not married but got pregnant.

Again, the analyses revealed no statistical relationship between respondents' occupation and their choice of places of birth. This could be accounted for by the fact that irrespective of the person's occupation place of delivery depends on the individual and family but not the occupation per se, though respondents in the formal sector may have better working conditions and are assured of regular income at the end of the month as compared to those in the informal sector. For example, expectant mothers are usually required to bring specific quantities of items like Dettol, soap, sanitary pads, clothes, pampers, just to mention but a few. This finding from the study disconfirms the findings made [20] where income level of women was considered as the most significant factor associated to where women could deliver their next child.

4.2 The sociocultural norms that influence supervised and unsupervised

Results of the study indicated that most of the respondents said there were community norms and beliefs underpinning pregnancy and where women should go and deliver their babies. The implications of such a huge number of respondents affirming the belief that cultural factors influence choice of places of birth is mind boggling as this may influence women to make their choice of places of delivery based on these cultural beliefs. This finding agrees with a study

stating that certain cultural practices were still underpinning pregnancy and childbirth in Ghana especially in rural communities [10].

It is believed in the study area that pregnancy is considered as a secret between the pregnant woman and her close family [19]. It is not supposed to be disclosed to anybody outside the marital home until it attains a certain stage and rituals performed to outdoor it [29]. This particular belief by the people in the study area affects the time pregnant women commence ANC attendance. Antenatal care is an essential part of pregnancy as should commence as you as a woman is expecting. Early commencement of antenatal care allows for early detection of certain complications such as hypertension and diabetes so they can be properly monitored and treated. Besides, it helps expecting mothers to gain insight and get fact-based information on pregnancy, birthing options, breastfeeding and caring for new born baby so they can make informed choices. However, the late commencement of ANC sometimes paves the way for expecting mothers to suffer complications that could have been avoided. Furthermore, it is believed that during pregnancy, the woman has to stay away from certain foods in order to sustain the pregnancy as well as delivering a child with the desired character.

Despite the fact that this is also a socio-cultural belief, it does not impact negatively on the woman and the baby however, mothers who are unable to acquire these items feel reluctant for going to the health care facilities the midwives would scorn them. It is therefore important to let the midwives who still hold onto to this protocol strictly to understand that, though, they may not be able to do away with these practice completely, it is advisable to practice those that impact positively on the mothers and baby and relegate those that put unnecessary pressure on the mothers to the background.

4.3 The knowledge level of mothers on supervised and unsupervised delivery

The results on knowledge level of mothers on supervised and unsupervised delivery showed that an overwhelming majority of the respondents knew of supervised delivery and defined it as delivery at the health facility. This finding confirms the study that states when a woman has knowledge and a healthy pregnancy and has access to skilled attendants, there are no significant differences in the health outcomes of mothers and babies between settings [15].

Also, when knowledge on home birth services are well integrated into the health care system, as they are in hospital setting, all low-risk women should be given the option to choose either home

or hospital birth. Research shows that home birth is as safe as hospital birth, where there is screening, planning, trained professional midwives and a health care system that supports midwifery and home birth[9].For midwives, mothers' knowledge on safety is the central issue in every birth.Studies concerned with reducing maternal mortality in the world have constantly advocated that every woman in the world needs knowledge and access to antenatal care in pregnancy, skilled care during childbirth, and care and support in the postpartum period [12;19]. This in contrast with a cross sectional study carried out in Ghana, the results showed that most rural women who risked giving birth at home said they had no knowledge on when health workers were at post during the night [26]. Most women preferred to deliver at home as against health facility delivery for fear of being left there alone. All births must be attended by skilled health professionals, as timely management and treatment can make the difference between life and death [30].

4.4 LimitationSend method and methodology

A major limitation was the difficulty in reaching all the respondents since some were widely spread in the Municipality. However, research assistants were given two weeks to take the data. The study did not include the entire postnatal mother's population;however, the sample size was large to give fair representation of the population. Also, there could be potential reporting bias however; the research assistants were trained to reduce errors and bias.

6.1 CONCLUSIONS

The knowledge on supervised delivery was high hence most of the respondents used supervised delivery during labor. Knowing supervised delivery alone was not enough to prevent unsupervised delivery.Sociodemographic factors revealed in the study that had significant, association with the knowledge and supervised delivery was age, others like educational status,occupation and marital status were not significant. Also, the advancement of age prevents mothers from seeking supervised delivery. Furthermore, even though respondents stated that their preferred place of delivery is the health centers,certain social and cultural beliefs underpinning pregnancy and childbirth, socioeconomicand geographic factors still make them deliver at home and spiritual centers. If theseissues are not addressed, they could still have a negative impact of maternal and childhealth in the study area.The study concludes that if

pregnant women are given in-depth information regarding supervised delivery and the dangers of unsupervised delivery they would not only be able to notice them but also actions to take to deal with these emergencies by attending health facilities.

6.2 RECOMMENDATIONS at 3 levels MOH, PPP public private partnership, and further studies

1. Ghana Health Service should organize programs to sensitize health workers on positive behavioral attitudes towards their clients since collection of items of confinement was a major issue that demotivated women to deliver at the health facilities stringent efforts should be put in place to ensure that health care providers at all levels request for the approved items of confinement.
2. Midwives should continue with their education on the benefits of supervised delivery so that pregnant women in the municipality will utilize the available health facilities.
3. The municipal health directorate should intensify education aimed at increasing family involvement in selecting the right place for women to deliver with minimal risk.
4. The district planners for health services should focus on ensuring that all the necessary infrastructure meant to cater for issues of pregnant women should be improved upon to meet their expectations whenever they visit the health care facilities.

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