

COMMUNITY INVOLVEMENT IN CHILD BIRTH: THE CASE OF WEST GONJA DISTRICT IN THE NORTHERN REGION OF GHANA

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Abstract

Background: Most obstetric complications are preventable if adequate preparations are made to avoid delays during obstetrics emergencies. The aim of this study was to assess the level of community involvement in preventing complications to mother and new born during pregnancy and labour

Methods: A cross-sectional descriptive study was conducted in 6 health facilities selected through purposive sampling. A sample size of 210 women was obtained through convenience sampling using structured questionnaires. The data was analysed using SPSS software (version 23).

Discussion: The mean age of the respondents was 28.3 (SD=5.7). The great majority of the women have heard of danger signs of pregnancy (91.9%) and labour (76.2%). The common danger signs of pregnancy were Vomiting (26.0%), bleeding per vaginam (24.0%) and severe waist pain (21.1%). The common danger signs of labour were bleeding per vaginam (32.9%), big baby (23.8%) and retained placenta (11.0%). The major

source of information on obstetrics danger signs was health care providers (91.0%) during antenatal visits. The first and second decisions makers during obstetrics emergencies were husbands (85.1%) and mother-in-laws (57.2%), only 2.5% of the respondents can act as the first decision makers. The common support systems available for obstetrics emergencies in descending order were; preparation of items for labour (28.6%), care taker at the hospital (19.4%), transportation to place of labour (14.4%) and choice of the place of labour (13.5%). Blood was commonly organized for women from the community with obstetric complications.

Conclusion: The study found that the respondents had very good knowledge of the danger signs of obstetrics emergencies. They have good community support systems for women in labour, but only very few of them can take their own decision during obstetrics emergencies.

Key Words: Birth preparedness, complications readiness, Decision maker, pregnancy, labour, obstetrics emergencies, West Gonja, District, Ghana

Introduction

Child birth brings joy to the immediate family and the community. This may however, be associated with complications. Studies have shown that every pregnant woman is at risk of obstetric complications and therefore effective planning and adequate preparation for child birth by pregnant women, their families and community members are required to address delays during emergencies and to prevent complications to the mother and the new born^{1,2,3,4}.

Pregnancy related complications cannot be reliably predicted hence, it is necessary to employ strategies to overcome such problems as they arise.

Certain forms of delays have been identified that are responsible for most of the maternal and neonatal

mortalities that occur especially in developing countries⁵ and the West Gonja District is not an exception.

The delays that were identified were delays in deciding to seek care, delays in reaching care and delays in receiving care⁵. The aim of this study was to assess the level of community involvement in preventing delays that will lead to complications to mother and new born during pregnancy and labour.

Methods

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 pregnant women and three months postpartum women.

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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 210.

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

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)

The sample was 210, consisting 100 pregnant and 110 postpartum women

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, maternal knowledge on obstetric danger signs and symptoms and the complications. Data was also collected on community support systems available for obstetrics emergencies. 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

Socio-demographic Characteristics of respondents

A total of 210 respondents were interviewed, of which 100 (47.6%) were pregnant with 110 (52.2%) postpartum women. The age range of the respondents was 17- 46 years with a mean of 28.3 years (SD=5.7) and modal age group of 25 – 29 years (50.0%), figure 1.

Approximately, 65.7% of the respondents had no formal education. The great majority of the women were married (92.4%), table 1.

Approximately 71.2% were Muslims with 33.85 being Christians.

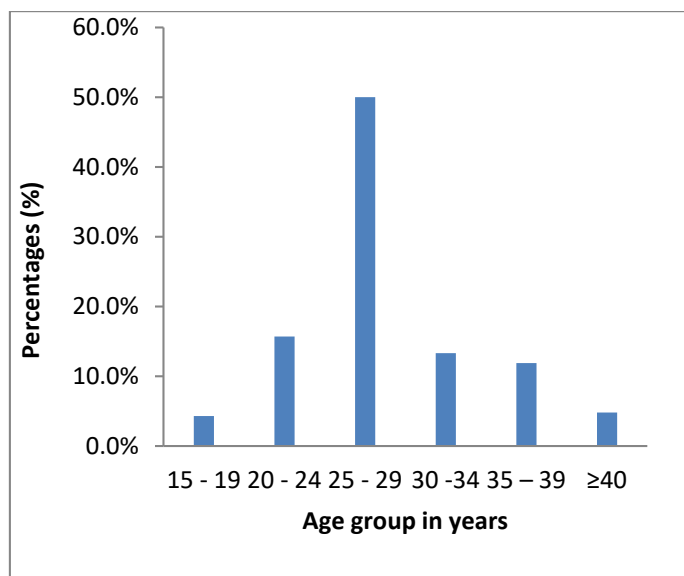


Fig 1: Age distribution of respondents

Table 1: Demographic characteristics of respondents

Variable	Frequency (n)	Percentage (%)
Marital status		
Married	194	92.4
Single	14	6.7
Separated	2	1.0
Ethnicity		
Gonja	83	39.5
Dagomba	27	12.9
Kamara	21	
Dagaaba	20	9.6
Vulgla	9	4.3
Hanga	8	3.8
Others	42	20.0
Total	210	100.0
Education		
No formal education	138	65.7
3	29	13.8
4	14	6.7
1	16	7.6
5	13	6.2
Total		
Occupation		
Farming	88	40.5
Trader	68	32.0
House wife	28	13.3
Public sector	23	11.0
Private sector	6	2.9
Total		

Table 2: Danger signs in pregnancy identified by respondents

Danger signs and symptoms	First	Second	Third	Total
Vomiting	92(46.2)	31(18.9)	4(3.2)	127(26.0)
Bleeding per vaginam	32(16.0)	86(52.4)	0(0.0)	118(24.0)
Severe waist pain	12(6.0)	2(1.2)	89(71.2)	103(11.10)
Severe low abdominal pain	16(8.0)	24(14.6)	17(13.6)	57(11.7)
Severe headache	19(9.5)	16(9.8)	11(8.8)	46(9.4)
Abortion	5(2.5)	2(1.2)	0(0.0)	7(1.40)
Anaemia	7(3.3)	0(0.0)	0(0.0)	7(1.4)
Oedema	5(2.5)	0(0.0)	0(0.0)	5(1.0)
Malaria	3(1.5)	3(1.8)	0(0.0)	6(1.2)
Fever	8(4.0)	0(0.0)	0(0.0)	8(1.6)
Nausea	0 (0.0)	0(0.0)	2(1.6)	2(0.4)
Vaginal discharge	0(0.0)	0(0.0)	2(1.6)	2(0.4)
Total	199(100.0)	164(100.0)	125(100.0)	488(100.0)

Table 3: Danger signs of labour identified by respondents

Danger signs and symptoms chosen	First (n/%)	Second (n/%)	Third (n/%)	Total (n/%)
Bleeding per vaginam	102(62.6)	3(2.2)	0(0.0)	105(32.9)
Big baby	0(0.0)	73(52.5)	3(23.1)	76(23.8)
Retain placenta	19(11.7)	16(11.5)	0(0.0)	35(11.0)
Abdominal pain	19(11.7)	0(0.0)	0(0.0)	19 (6.0)
Prolong labour	17(10.4)	12(8.6)	0(0.0)	29(9.0)
Breech presentation	0(0.0)	14(10.1)	4(23.5)	18(4.7)
Anaemia	3(1.8)	7(5.0)	0(0.0)	10(3.1)
Waist pain	3(1.8)	6(4.3)	0(0.0)	9(2.8)
Malaria	0(0.0)	3(2.2)	0(0.0)	3(0.9)
Skin rash	0(0.0)	3(2.2)	0(0.0)	3(0.9)
Eclampsia	0 (0.0)	2(1.4)	2(11.8)	4(1.3)
Eye discharge(baby)	0(0.0)	0(0.0)	3(17.6)	3(0.9)
Diarrhoea	0(0.0)	0(0.0)	3(17.6)	3(0.9)
Cervical lacerations	0(0.0)	0(0.0)	2(11.8)	2(0.6)
Total	163(100.0)	139(100.0)	17(100.0)	319 (100.0)

Danger signs and symptoms of obstetrics emergencies

The great majority, 193 (91.9%) of the women interviewed have ever heard of danger signs of pregnancy, 17 (8.1%) did not. Respondents were asked to choose three danger signs of pregnancy without repetition (in an order first, second and third). Approximately, 41.0%, 33.0% and 26 respectively knew of one, two and three signs correctly. The common danger signs of pregnancy were Vomiting (26.0%), bleeding per vaginam (24.0%), severe waist pain (21.1%), severe lower abdominal pain (11.7%) and severe headache (9.4%), table 2.

Of the 210 women interviewed, 160 (76.2%) have heard of danger signs of labour, while 50 (23.8) did not. More than half (51.1%) of the respondents knew of one danger sign of labour correctly. There were 43.6% and 5.3% who knew of two and three danger signs of labour correctly. The common danger signs and symptoms of labour were bleeding per vaginam

(32.9%), big baby (23.8%), retained placenta (11.0%), prolong labour (9.0) and severe abdominal pain (6.0%). table 3.

The sources of information on obstetrics danger signs were: health care providers 191(91.0), mother-in-laws 6 (2.9%) and others 13 (6.2%).

Majority 187 (89%) of the respondents had previous live births, while 23 (11.0%) had stillbirths. Of the 187 respondents with live births, the great majority had 1 – 2 births, 27 (14.4%) had 3- 4births with 8 (4.3%) having 5 – 6 live births.

Number of pregnancies and the knowledge of dangers obstetric signs

Respondents were group into three groups based on the number of previous pregnancies and their knowledge on obstetric danger signs assessed. Majority of the women who had 3 – 4 previous pregnancies identified 1-2 danger signs 79 (37.6%), while many of those with 5 or more previous knew all the three signs 105 (50.0%) Figure 2.

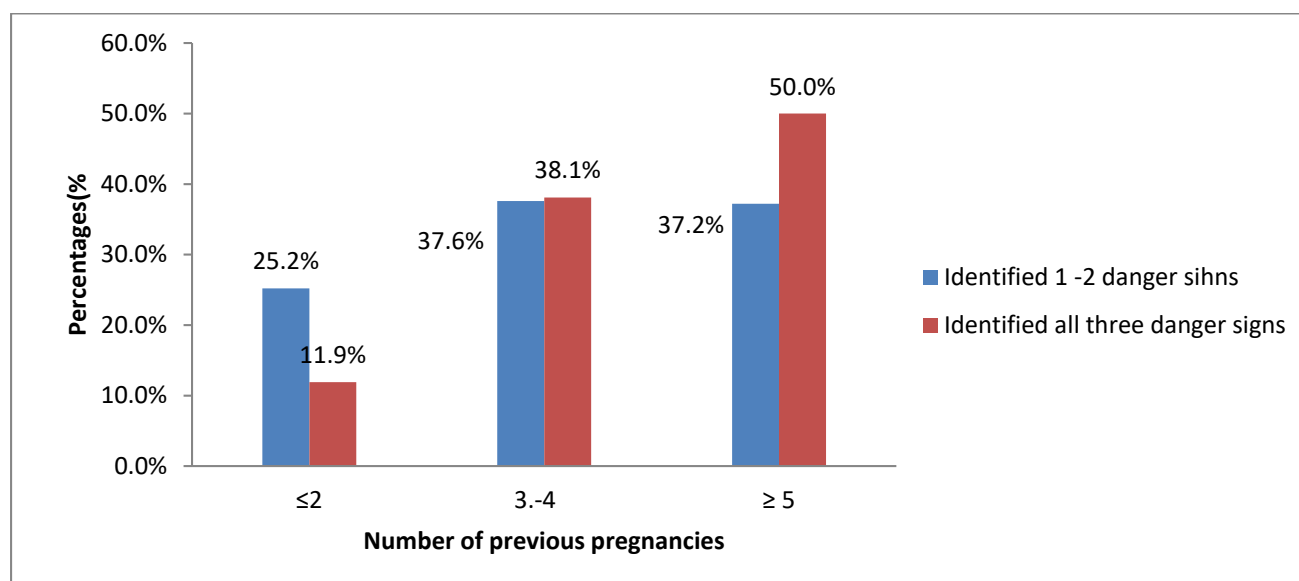


Fig 2: Relationship between parity and the knowledge of obstetric danger signs

Table 4: Decision makers during obstetric emergencies

Decision maker	First (n/%)	Second (n/%)
Husband	172(85.1)	6(3.5)
Mother-in-law	10(5.0)	99(57.2)
Father –in-law	7(3.5)	33(19.1)
Father	5(2.5)	0(0.0)
My self	5(2.5)	13(7.5)
Sister-in-law	3(1.4)	4(2.3)
Mother	0(0.0)	7(4.0)
Grandmother	0(0.0)	3(1.7)
Brother-in-law	0(0.0)	8(4.6)
Total	202	173

Table 5: Available community support systems for women in labour

Support	Support 1 (n/%)	Support 2 (n/%)	Support 3 (n/%)	Support 4 (n/%)	Total (n/%)
Transportation	77(37.4)	32(15.5)	0(0.0)	0(0.0)	109(14.4)
Choose place of delivery	103(50.0)	0(0.0)	0(0.0)	0(0.0)	103(13.5)
Financial support	0(0.0)	110(53.4)	0(0.0)	0(0.0)	110(14.4)
Preparation of items for child birth	5(2.4)	6(2.9)	53(28.3)	154(94.5)	218(28.6)
Provide care taker at the hospital	20(9.7)	47(22.8)	81(43.4)	0(0.0)	148(19.4)
Provide care taker for the home	1(0.5)	11(5.4)	53(28.3)	9(5.5)	74(9.7)
Total	206(100.0)	206(100.0)	187(100.0)	163(100.0)	762(100.0)

Decision maker in obstetric emergencies

Respondents were asked to mention the first and second decision makers during obstetrics emergencies. The great majority (85.1%) said the first decision makers were their husbands, followed by mother-in-laws (5.0%). Many of the respondents said the second decision makers were their mother-in-laws (57.2%) followed by father-in-laws (19.1%), table 4.

Community support systems for child birth

Respondents were asked to select from a list of options four support systems that were provided by their communities to support women in labour in order to prevent complications. The common support systems were; preparation of items for labour (28.6%), care taker at the hospital (19.4%) and transportation to place of labour (14.4%), table 5.

The great majority 206 (98.1%) of the women said community members normally organise blood donation for women after labour with obstetrics complication, while 4(1.9%) had no idea.

Discussion

In this study the great majority (91.9%) of the women were aware of the danger signs in pregnancy. This may be attributed to the fact that 81.3% of the respondents had 1 - 2 previous live births and might have learnt from their previous pregnancies. Our findings are in keeping with studies that found pregnancy and child birth to be risk factors for obstetrics complication and that early recognition of danger signs and symptoms leads to prompt decision to seek appropriate health care in order to avoid complications^{1,2,3,4,5}.

Majority (74.0%) of the pregnant women knew one to two danger signs of pregnancy. The danger signs in descending order were Vomiting, bleeding per vaginam, severe waist pain, severe lower abdominal pain and severe headache. Similarly, 76.2% of the postpartum women have heard of danger signs of labour. The common danger signs and symptoms of labour in descending order were bleeding per vaginam, big baby, retained placenta, prolong labour and severe abdominal pain. Based on the findings of the current study, we conclude that the respondents have adequate knowledge of the signs of obstetric emergencies. This therefore differ from Pembe et al⁶ study in Tanzania, Hiluf et al⁷ study in Ethiopia, Moran et al study⁸ in Burkina faso and Ekanem et al⁹ study in Nigeria that found low levels of awareness of obstetric danger signs during pregnancy, delivery and postpartum, among the study population. The current study is however in accordance with studies that found the knowledge of obstetrics danger signs to be higher among women who have multiple deliveries or high number of children. As the number of children increases the knowledge of danger signs during labour also increases^{10,11}. The major sources of information on obstetrics danger signs were health care providers during antenatal visits (91.0%). This support studies globally that found antenatal clinics as the best grounds for equipping women with in formations particularly, danger signs and symptoms in pregnancy, labour and child birth, leading to reduction in obstetrics complications including maternal and neonatal deaths^{12,13,14}.

According to WHO in 2011, maternal mortality is the single biggest cause of death among women of child-bearing age in developing countries.¹⁵ The overwhelming majority of these deaths are preventable.¹⁶ In most cases it results from delay in decision taken during obstetrics emergency.¹⁷ The current study found that the first major decision maker during obstetrics emergency were husbands (85.1%) with the mother-in-laws as the second decision maker (57.2%). Only 2.5% of the women said they would be the first decision makers in obstetric emergency. The implication of the pregnant or postpartum woman not being able to

decide on her own during obstetrics emergencies in the absence of the husband or the mother-in-law could potentially be associated with delay in reaching a health facility and hence poor outcome for the mother and neonate. Delay in decision making and delay in reaching the place of delivery have been found to be associated with high maternal and neonatal deaths especially in the developing countries.^{5,10,17}

Approximately, 78.5% knew of one to three support systems. The support systems in descending order were: preparation of items for child birth, care taker at the hospital, transportation to place of labour, financial support and in choosing the facility for child birth. The women in this study have good knowledge about the community support systems available for women in labour in their communities in order to prevent complications. This also means child birth in these communities was not for the woman only, but involves the families and community members. Furthermore, the respondents identified blood donation as a key measure that is normally undertaken by community members once complications occurred in labour. This is in keeping with studies that showed that successful pregnancy and child birth involves adequate preparation by the woman, family members and the community as a whole in order to avoid complications.^{17,18}

The adequate knowledge of the respondents in this study on birth preparedness and complication readiness may due to the fact the great majority (92.4%) of them were married and have had one to two previous deliveries. This is similar to Mihret et al¹⁹ study in Ethiopia that found that married women were more likely to be prepared for birth and its complication than non-married. They further argued that married women may have wanted and planned pregnancies which enable them to demand better service and get prepared¹⁹.

The current study found that 65.7% of the women interviewed had no formal education and that 40.5% were farmers, yet had adequate knowledge on how to have a successful child birth. This is in contrast to studies in some developing countries showed found that literate and socio-economic advantage mothers were more likely to be prepared for birth/complication than illiterate and low socioeconomic mothers^{19,20,21}.

Conclusion

The study found that the respondents had very good knowledge of the danger signs of obstetrics emergencies. They have good community support systems for women in labour, but only very few of them can take their own decision during obstetrics emergencies.

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.

Consent for publication.

All the authors agreed for the publication of the manuscript/work

Availability of data and materials

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

Competing interest

The authors declare that they have no competing interests

Funding

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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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