Knowledge and Perception of Birth Preparedness and Complication Readiness in Bula Medina Health Centre III, Garissa Township Constituency

Article by Eric.K Gacheru
MPH Student, Texila American University, Department of public health
E-mail: alrashadmedicare@gmail.com

Abstract

Out of every 10 women, 9 of them receive skilled ante-natal care but only 4 receive skilled birth attendance. The objective was to assess the knowledge and perception of birth Preparedness and complication readiness (BP/CR) among mothers attending antenatal clinics (ANC) in medina health center. The specific objectives were to assess the knowledge of antenatal mothers concerning BP/CR, the attitude and perception of antenatal mothers about BP/CR, determine the proportion of pregnant women who have BP/CR plan in Galbet ward. The study population was women at 36 weeks attending ANC. A descriptive study was carried out. Data collection was done using questionnaires and interviews. Every client who attended ANC and consented was included in the study. The sample size was 339 mothers. SPSS 18.0 was used for analysis. The study found out that the BP/CR is low at 18%. The most planned for aspect was the care taker (51%) followed by birth companion (49%) and the least was arrangement of a blood donor (22%). Illiteracy affected levels of preparedness in the area. The research recommends to ministry of health to sensitize women of reproductive age on BP/CR. BP should be improved through quality ANC. The government should encourage education of the girl child.

Introduction

Maternal mortality continues to be a major public health challenge in the 21st century. The World Health Organization (WHO) estimates that 830 women die daily from pregnancy and childbirth related causes. Of the deaths, ninety nine percent occur in developing countries where the burden is grater in rural and poor communities (WHO; 2015). In Kenya, the maternal mortality is currently standing at 488 deaths per 100,000 live births (JHPIEGO; 2004). These figures are very high compared to Kenya's target towards achieving millennium development goal number 5(MDG 5) which is at 147 deaths per 100,000 live births by 2015 (JHPIEGO; 2004).

Antenatal Care/Focused Ante Natal Care is one of the strategies recommended by WHO to reduce maternal mortality, the strategy is actively implemented by the Kenyan government. Birth Preparedness and Complication Readiness (BPCR) is a component of Focused Ante Natal Care (FANC). It is the process of planning for normal birth and anticipating the actions needed in case of an emergency during pregnancy, delivery and post-partum period. It is the initial prerequisite step to seek skilled birth attendance, during delivery and also when there is an obstetric emergency. Therefore, BPCR addresses the delay in deciding to seek care and the delay in reaching healthcare care facility (Thaddeus s; 1994).

A birth plan should be discussed on the first visit, reviewed in subsequent visits and finalized by 32 weeks during Ante Natal Care (Barbara k, 2004). A birth and emergency preparedness plan include identification of the following elements; knowing danger signs of obstetric complications and emergencies, choosing a preferred place of birth, saving money to cater for birth related and other emergency care, making arrangements for transport and identifying a decision maker in case of an emergency. Other aspects of birth preparedness include the knowledge of expected date of delivery, labor signs and importance of postnatal care (Kutevi EA; 2011).

Complications of pregnancy and child birth are among the leading causes of morbidity and mortality among Kenyan women. The maternal mortality ratio is 488 maternal deaths per 100 000 live births. Despite 92% ante natal care attendance by health professionals, only 44% deliver under skilled

assistance and 43% in health facilities. Eastern province where Tharaka sub-county is located has only 43.1% of the women delivering in health facility and 42.8% under skilled attendance (KNBS, 2010).

Maternal mortality occurs from risks attributable to pregnancy and child birth as well as from poor availability and quality of health services. The most common causes of maternal mortality in sub-Saharan Africa include hemorrhage (34%), sepsis/infections (10%), hypertensive disorders (9%), HIV/AIDS (6%), and other direct causes (5%); other indirect causes contribute approximately 17%. Most of the causes are preventable (Ouma, 2010).

Study objectives

Broad objective

1. To assess the knowledge and perception of BP/CR among antenatal mothers in bula medina health center in galbet ward.

Specific objectives

1. To assess the knowledge of antenatal mothers concerning BP/CR.
2. To assess the perception of antenatal mothers about BP/CR.
3. To determine the proportion of pregnant women who have a BP/CR plan.
4. To Assess the attitude of antenatal mothers about BP/CR.

Materials and methods

Study design and study setting

A cross sectional study with both quantitative and qualitative methods was used for the study. The study was carried out in Medina Health Centre iii facility. Medina health Centre is situated within Galbet ward, Garissa constituency, Garissa county. Galbet ward has a population of 42,519 among this 16,003 are between age 15-34 years (women) the approximate age when most women get married off and bear children. Medina Health centers handle mothers without anticipated obstetric risks and are managed by midwives and they all refer the complicated cases to Garissa referral Hospital.

Sample size and sampling

Medina health centre was selected because it has a larger catchment area and the rest are just dispensaries. No health staff member from the health centre was allowed to participate in the filling in the responses. The study targeted all pregnant mothers in galbet ward. The accessible population was mothers attending ANC in Medina health centre III. The study respondents were recruited based on their willingness to participate.

Sample size calculation

Catchment population -16,003
Target population   - 2900
The Fissures' formula was used to obtain the sample size out of the 16,003 as shown below.
Where

$$N = Z^2 PQ/D^2$$

N = desired sample size if target population is more than 10000
Z= standard normal deviation set at the required confidence.
P = Proportion of the target
D = Level of statistical significance
Q= Proportion of the remaining population.

If the target population is less than 10000, the required sample size will be smaller. The sample size is calculated as shown below

$$nf = n/(1 + \frac{n}{N})$$

nf= desired sample size when population is less than 10000.
n= desired sample size if target population is greater than 10000
N= the estimate of the population size.
n= $(1.96)^2(0.5)(0.5)/(0.05)^2$
This gives 384.16
Population target is less than 10000, so this will give;
384/ (1+(384/2900)
Therefore, sample size=339
339 respondents were to fill in the questionnaires.

Inclusion criteria

Antenatal mothers estimated to be at least ≥ 28- 36 weeks (Third trimester) of gestation and above.

Exclusion criteria

Non residence in Galbet ward
Women in their first and second trimester.

Data collection and analysis

Questionnaires that were translated to Somali language were used for data collection. The Questionnaires contained both closed and open-ended questions. The questionnaires contained social demograghic history, History of the current history, Knowledge of the mother and the attitude and the perception of the mother towards BPCR. Data collection was started on the month of September 2019 after acquiring a bonifide letter from TAU university and approval by the deputy public health nurse to collect data from the facility. Every mother volunteered to participate in the study signed an informed consent form. Data gathered was entered in Microsoft excel spread sheet and analysis was done by using SPSS software version 16. Descriptive statistics, correlation analysis, multiple response and cronbach's Alpha were used for analysis.

Results

General characteristics

The age of the study population (N=339) was 15 to 38 years. Mean age was 25.6 years with a standard deviation of 5.37. The majority of the mothers were aged 23 years. Out of the total 339 mothers in the study population, more than 80 % of the population belonged to Islam 277 (81.7%) followed by Anglican 33 (9.7%) then Catholics 20 (5.9%) and the Pentecostal 9 (2.7%). The majority of the mothers in the study population were married 322 (95%), while the single (divorced, separated) 17 (5%) of the study population. Most of the women were not educated a majority 148 (43.7%) never had any basic education, 114 (33.6%) had attended Islam education (Duksi), then 41 (9.1%) had primary education, 31 (9.1%) had secondary education and 6 (1.6%) of the population had tertiary education. Most of the mothers are housewife's/unemployed 292 (86.1%), depend totally on their husband for livelihood, then 22 (6.5%) of the population are self-employed, 19 (5.6%) informal sector and only 6 (1.8%) are civil servant.
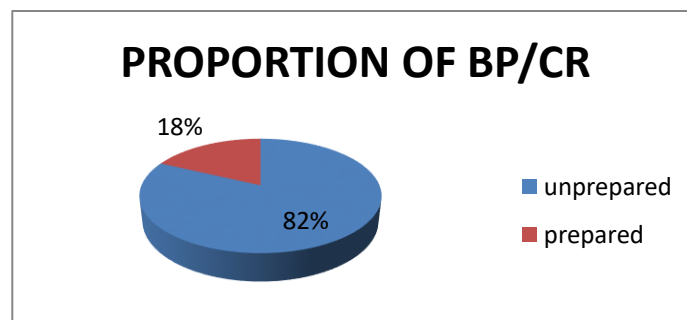
Proportion of women with a BPCR plan

Figure 1. BPCR

Birth preparedness was the dependent variable in the study. The women were grouped as prepared or unprepared. A woman was deemed prepared for birth if they had planned for the six aspects of birth preparedness as recommended by WHO. figure 1 shows the birth preparedness status, only 18 % (61 respondent) were prepared. 82% (278respondents) had no birth preparedness plan. The most planned for aspect was the care taker (51%) followed by birth companion (49%) and the least was arrangement of a blood donor (22%).

Table 1. Relationship between knowledge on BP/CR education and religion

		Knowledge.on.BPCR	Education	Religion
Knowledge.on BPCR	Pearson Correlation	1	.513**	-.023
	Sig. (2-tailed)		.000	.667
	N	339	339	339
Education	Pearson Correlation	.513**	1	-.128*
	Sig. (2-tailed)	.000		.018
	N	339	339	339
Religion	Pearson Correlation	-.023	-.128*	1
	Sig. (2-tailed)	.667	.018	
	N	339	339	339
**. Correlation is significant at the 0.01 level (2-tailed).				

Pearson correlation coefficient was used to show the relationship between Education and knowledge on birth preparedness correlation is significant at the 0.01 level (2 tailed). There was also significance at 0.05 level (2 tailed) between knowledge and religion as shown in TABLE I.

Number of ANC visit

Majority of the women in the study population only attended two ANC visits that's 29.8% of the women then 23.5% of the study population attended once 23.5%, 19.5% attended ANC thrice,16.5% of the women attended four ANC visits and 10.9% of the women attended more than five times. According to WHO publications in November 2016 ANC care model with a minimum of eight contacts are recommended to reduce perinantal mortality and improve women experience of care. As shown in graph Figure 2 below.
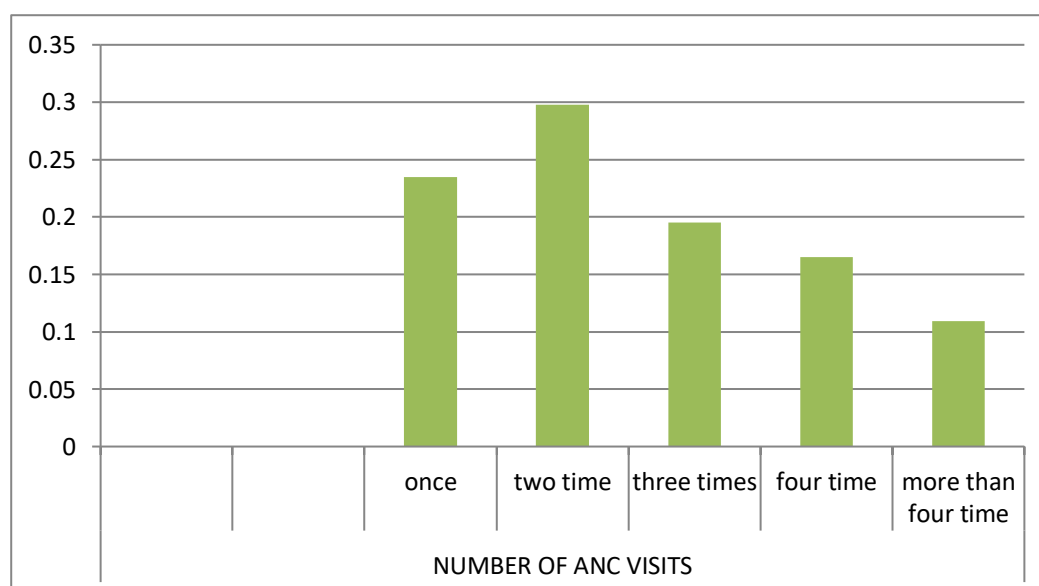

Figure 2. Number of ANC visit

Knowledge on danger signs that may occur during pregnancy and during labour
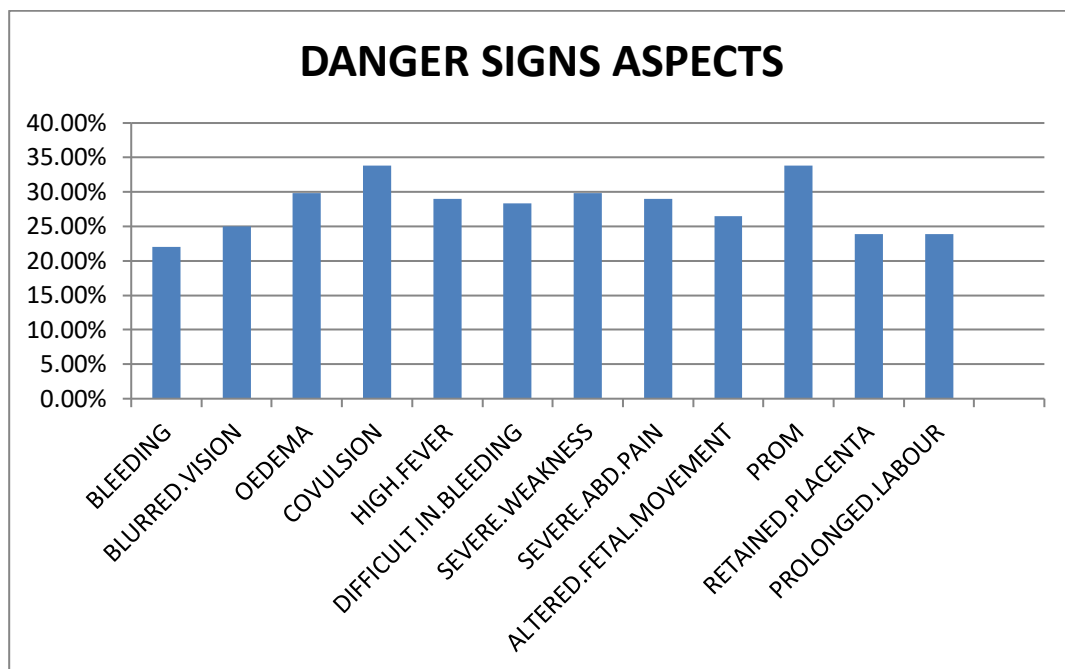
DANGER SIGNS ASPECTS

Figure 3. Knowledge on danger signs that may occur during pregnancy and during labour

Knowledge on danger signs was high as compared to the level of preparedness among women.53.7% of the population (N=339) knew about danger signs during pregnancy. Multiple response analysis was used to compute the knowledge on danger sign, Convulsions was the most selected 33.8%, The least selected was bleeding 22.1% as shown on the graph figure iii above.

Knowledge on newborn care aspects

On the four-aspect used in the study to determine the knowledge on newborn care in mother's Multiple response analysis showed that most selected aspect was eye care at 33%, exclusive breastfeeding 31.3%, dry and wrap 27.7%, cord care 26%. As shown on figure iv below
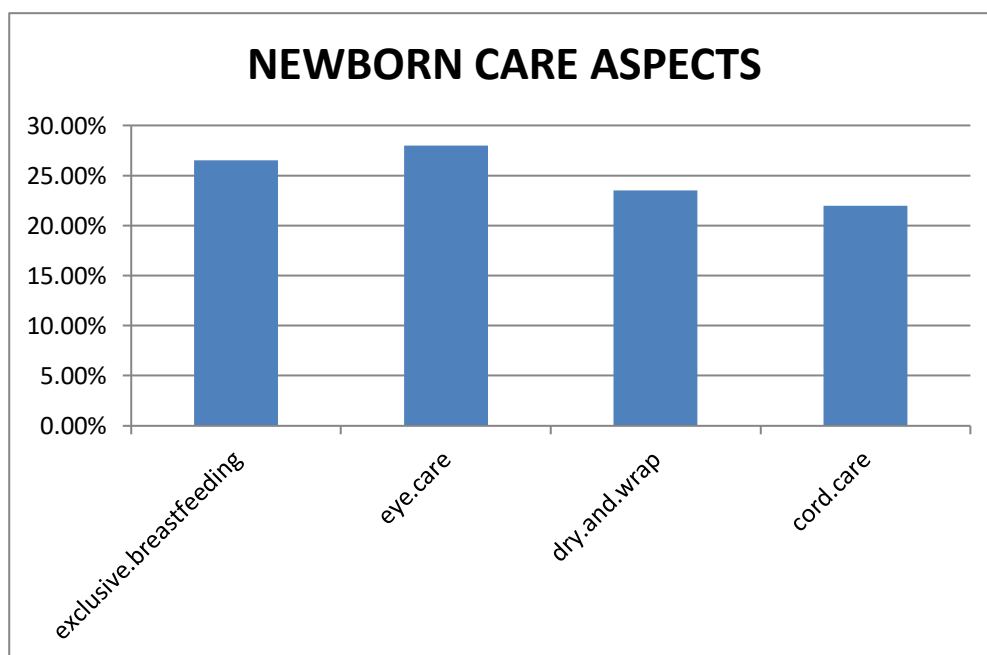
NEWBORN CARE ASPECTS

Figure 4. Knowledge on newborn care aspects

Attitudes and perception of birth preparedness

Table 2.

Reliability Statistics	
Cronbach's Alpha	N of Items
.756	9

Cronbach's alpha was used to determine the reliability on the scores for the attitude and perception on BP. The reliability of the subscale scores for the attitude and perception of BP was .756 (76%). According to cronbach's alpha a reliability coefficient of .70 or higher is acceptable. The correlation of each item with all other items combined should be between .30 and .70, outside this range the item should be deleted as it does not add value to cronbach's alpha. As shown on table 2.

Discussions of results.

This study shows the BPCR among the study population(N=339) in Medina Health centre to be 18%. This is low as compared to other studies done in other regions India and Uganda. A study in Indore city, India by Siddaharth et al. (2010) found BPCR to be at 47.8%, though they had only assessed three instead of the six aspects of birth preparedness. The other reason for the difference could be the setting of the study where Indore is a city with more access to information and the transport network could be better than Galbet ward. Jerome *et al.*, (2012) in Mbarara district in Uganda found a higher level of preparedness (35%) though they studied only four aspects of birth preparedness. Education and Islamic religion seemed to be one reason that the BPCR plan was not achieved, as shown in the study majority of the women never had any basic education 43.7% and the other majority 33.6% only acquired Islamic religion. Person correlation coefficient showed a relation between level of education, religion and BPCR. Most of the Muslim believed that it is God who determine all this hence they never found a reason to plan.

Early initiation of antenatal care, preferably in the first trimester is crucial to allow early detection and management of complications, detection of existing diseases and treatment, promotion of health and prevention of disease and birth preparedness (Barbara, 2004).This study shown that most of the women had they first ANC visit during the 20th -32nd week of gestation.30.1% had they first visit during 20 weeks,39.5% during the 24th week,15.9% during 28th week and 8.3% on 32 weeks. This leads to a reduced number of visits. Majority of the women in the study population only attended two ANC visits that's 29.8% of the women then 23.5% of the study population attended once 23.5%, 19.5% attended ANC thrice,16.5% of the women attended four ANC visits and 10.9% of the women attended more than five times. Convulsions was the most known danger sign during pregnancy at 33.8%, The least known danger sign was bleeding 22.1%. This a verse versa of a study done in Kenyatta national hospital by SM Mutiso, 2008 that shown bleeding as the most known danger sign in pregnancy mentioned by 64.2% of the respondents, in this study most women believed that bleeding is a natural occurrence.

The knowledge on newborn care, eye care was the most known aspect at 33%, exclusive breastfeeding 31.3%, dry and wrap 27.7%, cord care 26%. This value was high as compared to the knowledge on danger sign and BPCR. This explains the lowly position the woman is given in the community; the health of the child is considered regardless of that of the mother. Cronbach's alpha was used to determine the reliability on the scores for the attitude and perception on BP. The reliability of the subscale scores for the attitude and perception of BP was .756 (76%). According to cronbach's alpha a reliability coefficient of .70 or higher is acceptable.

Conclusion

1. BPCR in medina health centre, Garbet ward is 18%. Hence the proportion of women without a BPCR plan is 82%.
2. Low Education level and religion (Islam) contributes to low levels of BPCR.
3. The respondents' knowledge of danger signs was low. Many respondents did not know about birth preparedness.

Recommendations

Based on the results of this study the following recommendations have been made

1. The ministry of health should do a sensitization on birth preparedness among women of reproductive age.
2. The ministry of health should improve the level of birth preparedness through quality ante natal care.
3. The government through all relevant ministries should put in place strategies to increase the level of education among the women in the region.

References

[1]. JHPIEGO (2004). Monitoring birth preparedness and complication readiness. USA: Baltimore.

[2]. JHPIEGO (2004). Monitoring birth preparedness and complication readiness. USA: Baltimore.

[3]. Thaddeus S and Maine D. (1994). Too far to walk: maternal mortality in context. Social Science and Medicine, 1994, 38:1091–1110. UNICEF (2004). Surviving childbirth and pregnancy in south East Asia. South East Asia: UNICEF.

[4]. WWW.knbs (2010). or.ke/download/economic-survey-2010.

[5]. Ouma P. O., (2010). *Ante-natal and delivery care in rural western Kenya: The effect of training health care workers to provide "focused ante-natal care* in Biocentral journal.

[6]. WHO ANC model (2016) www.mcsprogram.org/.../ANC-OverviewBriefer-A4-1.pdf.

[7]. Siddaharth A., Vani S., Karishma S., Prubhat K. J. and Abdullah H. B., (2010). *Birth preparedness and complication readiness among slum women in Indore city, India* in health population nutrition journal; 28(4): 383-391.

[8]. Barbara, K. and G omez, P (2004). Basic maternal and newborn care: A guide for skilled providers. *JPIEGO*.

[9]. S.M. Mutiso, Z. Qureshi and J. Kinuthia, (2008) Birth preparedness among antenatal clients East African Medical Journal Vol. 85 No. 6.