

Community Based Essential New Born Care Practices and Associated Factors among Women in the Rural Community of Awabel District, East Gojjam Zone, Amhara, Ethiopia, 2013

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Abstract

Background: Essential newborn care is important for the proper development and healthy life of a baby. Although 70% of infant deaths occur during the first month of life, the policy-makers and health professionals in developing countries, until recently, gave little attention for the new born care. But, the principles of essential newborn care are simple, requiring no expensive high technology equipment.

Objective: the main aim of this study was to assess level of community based essential new born care practices and associated factors among rural women who gave birth in the last 12 months preceding the survey in Awabel District, Amhara, Ethiopia.

Method: A community-based cross-sectional study was conducted in September and October 20013. Data were collected from randomly selected 570 women by interview. The collected data were entered into computer using Epi-Data version 3.1 and analyzed using SPSS version 16. Logistic regression was fitted to assess possible associations and the strength of association was measured using odds ratio with 95% CI.

Results: the study revealed that the level of Essential New born Care practices was 23.1%. Educational status, (OR=7.02, 95%, CI=2.27, 21.74), immediate PNC visit, (OR=3.22, 95% CI = 1.18, 9.48), advise about Essential New born Care practices during monthly pregnant mothers group meeting (OR=4.77, 95%CI=1.11, 19.79) advise about birth preparedness during ANC visits (OR=9.05, 95% CI =2.76, 29.61) and presence of radio in the household (OR=7.91, 95% CI=2.64, 23.67) were found to have statistically significant association with essential new born care practices.

Conclusion: The study identified low comprehensive practices of essential new born care in the study area. Community oriented promotion of essential new born care practices including women empowerment through education, promotion of suitable IEC materials and emphasizing and providing information and education to all pregnant women is recommended.

Keywords: Essential new born care, Awabel district & community

1. Introduction

Newborn care is important for the proper development and healthy life of a baby. Although 70% of infant deaths occur during the first month of life, the policy-makers and health professionals in LMICs, until recently, neglected the newborn care. One reason for little attention relative to the huge number of deaths is the invisibility of those deaths. Most deaths during the neonatal period occur at home and are often unregistered, postnatal services were scarce and traditional practices, such as delayed

breastfeeding, contributed to high newborn mortality rates. The other reasons for this neglect include cultural adaptation (adherence) to high neonatal wastage; poor data collection about perinatal deaths, and a wide spread misconception that neonatal care is expensive and depends on high technology equipment. But ,the principles of essential new born care are simple, requiring no expensive high technology equipment; resuscitation, warmth to avoid hypothermia, early breast feeding, hygiene, support

for the mother infant relationship and early treatment for LBW or sick infants[1][2],[3].

Globally, about 4 million neonatal deaths occur annually. It accounts for 38 percent of U5M. A similar number of babies are still born and 99% of all neonatal deaths occur in low and middle income countries[4][5][6].

In Africa among babies born alive, 290,000 die from child birth complications. Some of these deaths could be prevented by skilled care during pregnancy, child birth, and the immediate postnatal period. For every baby who dies, an unknown number develop long term disabilities. An estimated four million LBW babies are born in Africa each year. These babies are particularly vulnerable and without extra care are more likely to die from avoidable causes, such as hypothermia, hypoglycemia, or infections. In Sub-Saharan Africa, average coverage with skilled care has increased at only 0.2 percent per year in the past decade; without faster progress, coverage of skilled attendance will still be less than 50 percent in 2015 and addressing neonatal mortality is difficult[7].

In Ethiopia about 120,000 newborns die every year in the first weeks of life which accounts for 42% of all deaths of U5M, the risk of death is highest in the first 24 hours of life when more than half of deaths occur and about three-quarters of all neonatal deaths occur within the first week s of life. [8] Infant and under-five mortality rates obtained by these surveys evidence a continuous declining trend in mortality. On the other hand, neonatal mortality rate has remained stable at 37 deaths per 1, 000, as reported in the 2011 EDHS[9].

Addressing NM requires links with in the continuum of care from maternal health through pregnancy, childbirth, and early neonatal care, and into child health programs. Priority should be given to two main gaps in the provision of care. The first is the continuum of care by time. The period through pregnancy and child birth into infancy contains a gap at childbirth and during the first week of life, when most neonatal deaths and also most maternal deaths occur. The second gap is between levels of care particularly with the family-community level[10].

The early postnatal period is the ideal time to deliver interventions to improve the health and survival of both the newborn and the mother. Yet policies and programs have largely overlooked this critical time, hindering efforts to meet the MDGs for maternal and child survival. The large gap in PNC coverage is evident in a recent analysis of DHS in 23 African countries that is, no more than 13 % receive a postnatal care visit within two days of delivery[11].

The level of post natal care coverage is also extremely low in Ethiopia; the great majority of women (92%) with a live birth in the preceding five years did not receive apostnatal checkup. only 7 percent of women received postnatal care within two days, as recommended (9).

Family care of the NB is important for all newborns it includes promoting positive behaviors such as breastfeeding and demand for health care throughout the neonatal period and afterwards; cleanliness and warmth provision reduce neonatal illnesses, especially infection[11].

The role and value of mother are central. A family community package promoting good home care of the newborn particularly cleanliness, warmth provision, and exclusive breastfeeding would have an expected reduction in the NMR of 10 to 40 percent, varying with the baseline NMR and the potential for accessing care. The effect might be greater if the package successfully addressed harmful local practices. Outreach services such as prenatal care alone have an effect of about 10 percent on NMRs, but when they are combined with a family package using community health promoters, an additional 30 percent reduction in the NMR is projected in Ethiopia[11].

New born care is also strongly influenced by home care traditional practices in the community. In this district population, it is observed that when mothers come to attend labor in health institution they bring old and dirty cloth for wrapping of the expected new born. And, there is no local data on the level of community ENBC practices in the study area to the understanding. In this district institutional delivery is low; most of the mothers give birth at home. Although a skilled attendant for every birth is ideal and, even where all women give birth in a facility it may be affected by traditional practices after discharge and some components of maternal and essential newborn care can be practiced at home and the family and community have an important role. Therefore, a systematic approach in the community is critical. Assessment of community based essential new born care practices in the study area is very important that is it helps to improve household practices through BCC strategies and influence the community to adopt good essential new born care practices for further reduction of neonatal morbidity and mortality and achieving MDG4.

Therefore, this study aimed to assess level of community based essential new born care practices and associated factors among rural women in Awabel District, East Gojjam zone Amhara, Ethiopia, 2013. This study will provide relevant information to health

workers, NGOS, policy makers, researchers, and local administrative bodies to design a strategy or to find solutions based on the result of this study.

2. Methods and Materials

2.1. Study setting and period

The study period was from September - October 2013 in Awabel District population, East Gojjam Zone, Amhara region, Ethiopia. The area is located at about 257 Km from Addis Ababa, and 306 Km from Bahirdar, the regional capital of Amhara and 42 Km from Debre Markos the zonal capital city. The district is one of the 18 woredas and it covers area of 1292.98 square meters bounded by Dejen in east; Aneded and Gozamen in west and Basoliben and Oromia region in north directions and the weather condition is Kolla (25%), Dega(15%), and weyna dega (60%). The population of the district was estimated to be 135,315 with an estimated number of women of reproductive age group 27,469 which is 20.3% of the total population. The Woreda had 3 urban Kebeles and 28 rural Kebeles. The number of organizations in the health sector is composed of 6 governmental health centers, 6 private clinics, 4 private pharmacies and 31 governmental health posts.[12]

2.2. Study design and population

A community based cross-sectional study was conducted. The source population was women in the reproductive age group of 15-49 years who are practicing home delivery in Awabel district population 2013 and study population was women of reproductive age groups (15 - 49 years) who gave live birth at home in the last 12 months period preceding the survey. Those mothers who were gave birth at home for the last 12 months preceding the survey were included in the study. Those mothers who delivered in the health institution; those mothers who were seriously sick during data collection and mothers who recently delivered died fetus were excluded from the study.

2.3. Sample size and sampling procedure

The required sample size was determined by using single population proportion formula. The study includes women in the reproductive age groups of 15-49 years who were practicing home delivery in Awabel District population and even though the majority (>80%) of mothers were gave birth at home, the prevalence of ENBC practices on these three composite variables in the study area is unknown. But, according to EDHS 2011 report, initiation of breast feeding within one hour of birth in Amhara region is 38 % therefore; taking this ($p=0.38$), considering the non response rate 5% and multiplying

by design effect of 1.5 the total sample size was 570.[9] Multistage sampling technique was used. First, Awabel District was selected using simple random sampling. Second, ten rural kebeles were selected out of 28 rural kebeles of the District. The total sample size was distributed to the randomly selected kebeles proportional to the size of the study population. Systematic random sampling was used to selected study participants from registration of mothers who gave live birth at home by HEWs.

2.4. Variables and Measurement

Structured interviewer administered questionnaire was prepared and translated in to the local language of the community and used for data collection. The dependent variable of this study was Essential New born Care practices which can measured by early initiation of breast feeding, safe cord cutting and delayed bathing. The independent variables were socio-demographic characteristics, Use of maternal health services, Birth preparedness (awareness about birth preparedness), Mother's knowledge, Mothers knowledge about newborn danger signs , Counseling from a health worker and advice from a CHV, Source of information(Exposure to media), Health system, Traditional practices, Male involvement. Essential Newborn Care practices: A set of practices such as, safe cord cutting, thermal care (delaying of bathing) and initiating of breast feeding with in the first hour of birth are defined as essential new born care practices. In this study those mothers who practice all the three essential new born care practices (delayed bathing, safe cord cutting and early initiation of breast feeding within one hour of birth) are said to be practiced. Delayed bathing: The recommended practice of bathing a new born by delaying for at least the first 24 hours of birth to reduce the risk of hypothermia. Early initiation of breast feeding: The recommended practice of putting a new born to the mother's breast within one hour of birth. Safe cord cutting: In this study, safe cord cutting means the practice of cutting a new born's cord with the help of the instrument from a clean home delivery kit, a new blade or a boiled blade.

2.5. Data collection Methods

Four data collectors BSc health graduate professional (two nurses and to health officers) and two supervisors were recruited for data collection. Training was given to the data collectors and supervisors on the objectives of the study, the content of the questionnaire, issue related to confidentiality of the responses and rights of the respondents during data collection. They were also informed about proper data handling, systematic answers for respondents' questions. Pre-test was

carried out on the 10% of sample size at Aneded District which is one of neighbour District and necessary correction was made prior to the actual data collection. Data were collected through face to face interview by going house to house. The supervisors and principal investigator performed immediate supervision on a daily basis. Each and every completed questionnaire was checked for completeness. Finally, the overall data collection process was controlled by the principal investigator. Data were entered in EPI data 3.1 computer programs to minimize data entry error.

2.6. Data processing and analysis

The entered data were exported to SPSS version 16 for analysis. Then, data were recorded, categorized and sorted to facilitate its analysis. Descriptive analysis was used to describe the percentages and number distributions of the respondents by socio-demographic characteristics and other relevant variables of the study. Logistic regression was used to fit data in order to identify factors associated with essential newborn care practices. All explanatory variables that were associated with the outcome variable in univariate analysis were included in the initial logistic models of multivariable analysis. The crude and adjusted odds ratio together with their corresponding 95% confidence intervals was computed. A P-value < 0.05 was considered to declare a result as statistically significant association in this study.

2.7. Ethical Consideration

Ethical clearance was obtained from Ethical Review Committee of College of Medicine

and Health Sciences of Debre Markos University. Then officials at different levels in the study area were communicated through letters from College of Medicine and Health Sciences. Study participants were told about the purpose of the study and verbal informed consent was secured. In addition they were told that they had the right to discontinue or refuse to participate in the study. In order to protect the confidentiality of the information, names and house numbers were not recorded on the questionnaire and privacy and culture were maintained by independently answering the questionnaire.

3. Results

3.1. Socio-demographic characteristics

A total of 570 women included in this study of which 553 of them were willing and able to participate with over all response rates of 97.01%. About 442 (79.9 %) of the respondents were belong to age group 25-34 years with median age of 28 years. Majority, Five hundred forty nine (99.3%) of the women were married. Five hundred fifty one (99.6%) of the respondents were house wives in their occupation. Majority, 409 (74%) of the respondents were not able to read and write. About 96(17.4%) of the respondents were claimed to have attended formal education. Seventy two (13%) of respondents gave live births for the first time and one hundred seventy nine (32.4 %) gave live births for five times and more. Seventy nine (14.3%) of the respondents had history of neonatal loss. (Table-1)

Table-1: Socio demographic characteristic of the respondents in Awabel district, East Gojjam Zone, Amhara, Ethiopia, 2013G.C (n=553)

Variables		frequency	Percent
Age in years	15 -19	26	4.7%
	20-34	442	79.9%
	35-49	85	15.4%
Marital status	Married	549	99.3%
	Divorced	4	0.7%
Educational status	Not read & write	409	74%
	Read & write	48	8.7%
	Primary & above	96	17.3%
Religion	Orthodox	530	95.8%
	Muslim	23	4.2%
Occupation	House wife	551	99.6%
	Merchant	2	0.4%
Parity	1	72	13%
	2- 4	302	54.6%
	>=5	179	32.4%
History of neonatal loss	Yes	79	14.3%
	No	474	85.7%

3.2. Respondents Experiences related to maternal health services during last pregnancy and delivery

Three hundred fifty two (63.7%) of the respondents have attended antenatal care (ANC) at least once in their last pregnancy of which 190 (52.4%) had ANC visit by a skilled provider and, only 30 (8.5%) of the total respondents had 4 or more visits. Two hundred eighty nine (52.3%) the respondents were advised about Birth Preparedness

and among these 19.9% of the mothers were advised about ENBC during ANC visits. About 284 (51.4%) of respondents were assisted by family members during delivery followed by neighbours, 192 (34.7%). Two hundred six mothers (37.3%) were attend pregnant mothers group monthly meeting in the health post and 146 (26.4%) were discussed about ENBC during mothers group monthly meeting. (Table 2)

Table-2: Maternal health services of the respondents, in Awabel district, East Gojam Zone , Amhara , Ethiopia, 2013 (n=553)

Maternal health services		frequency	Percent
ANC	Yes	352	63.7%
	No	201	36.3%
Number of ANC visits	1	49	14%
	2-3	273	77.5%
	>=4	30	8.5%
Advise about ENBC practices during ANC visits	Yes	110	31.3%
	No	242	68.7%
Immediate PNC visit	Yes	84	15.2%
	No	469	84.8%
Delivery assistance	Family	284	51.4%
	Neighbor	192	34.7%
	Relatives(mother in law)	53	9.6%
	TBA	19	3.4%
	HEWs	5	0.9%
Attending monthly pregnant Mothers group meeting	Yes	206	37.3%
	No	347	63.7%

3.3. Source of information

The majority of mothers, 418 (75.6%) were respond as they ever heard about ENBC and the main

source of information was from HEWS 271 (64.8%), one hundred thirty three (24.1%) respondents were replied as the presence of house hold radio. (Table 3)

Table-3: Source of information of the respondents, in Awabel district, East Gojam Zone , Amhara , Ethiopia, 2013 (n=553)

Variables	frequency	Percent	
Ever heard about ENBC practices	Yes	418	75.6%
	No	135	24.4%
Source of information, ever heard about ENBC	Radio	16	3.8%
	HEWs	271	64.8%
	Other health workers	73	17.5%
	Community Volunteers(HDAs)	19	4.5%
	TBA	4	1%
	Other(Family Health Card)	35	8.4%

3.4. Knowledge of respondents about things to be clean during Labor and delivery and danger signs of the new born

About 303 (54.8%) of the respondents were answered the average and above about knowledge questions concerning clean delivery surface, clean

hands of the attendant, clean towel for wrapping of the New born, clean cord cutting instrument ,clean cord tie and clean cloth for the mother). And, 192 (34.7%) of respondents were answered the average and above knowledge questions about danger signs of the new born concerning poor sucking or not able to

breast feed, fever, fast breathing, lethargic or unconscious, hypothermia, convulsion, umbilical infection/such as redness of the cord, bleeding from the cord.

3.5. Prevalence of Essential Newborn Care practices

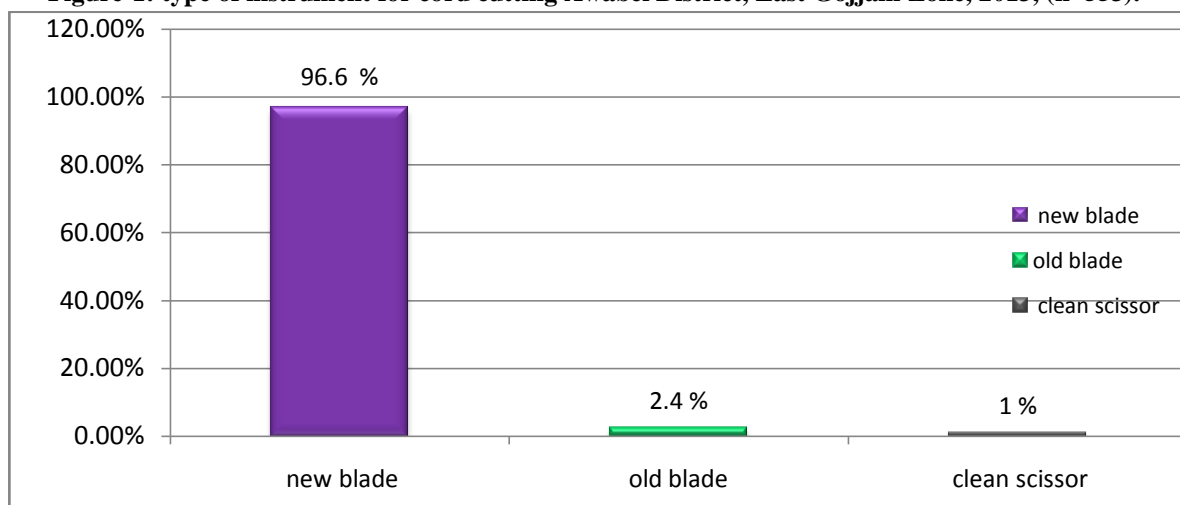
In this study, safe cord cutting, early initiation of breast feeding and delayed bathing practices were studied for 553 women and 540 (97.6%), 230 (41.6%) and 190 (34.4%) of the respondents demonstrated the practices respectively.

Safe cord cutting

Even though institution delivery is ideal most of the deliveries were practiced at home therefore the umbilical cord of a newborn baby

should be cut with a safe instrument such as a new blade or a boiled blade. A new blade was the most common instrument for cord cutting in the study areas used by 96.6% of the women while anon boiled blade was used by 2.4 % of the women and the rest five (1%) respondents which were assisted by HEWs used scissor for cord cutting. Hence, in aggregate 540(97.6%) of the women used a safe instrument for cord cutting. Regarding cord tie the majority, (97.1%) of respondents replied that the cord was not tied. And, 30 (5.4%)of the respondents were reported as they had substance application on the umbilical stamp, the most item of substance that was to be applied on the umbilicus was 24 (80%) butter and Vaseline ointment which was 6(20%).

Figure-1: type of instrument for cord cutting Awabel District, East Gojjam Zone, 2013, (n=553).

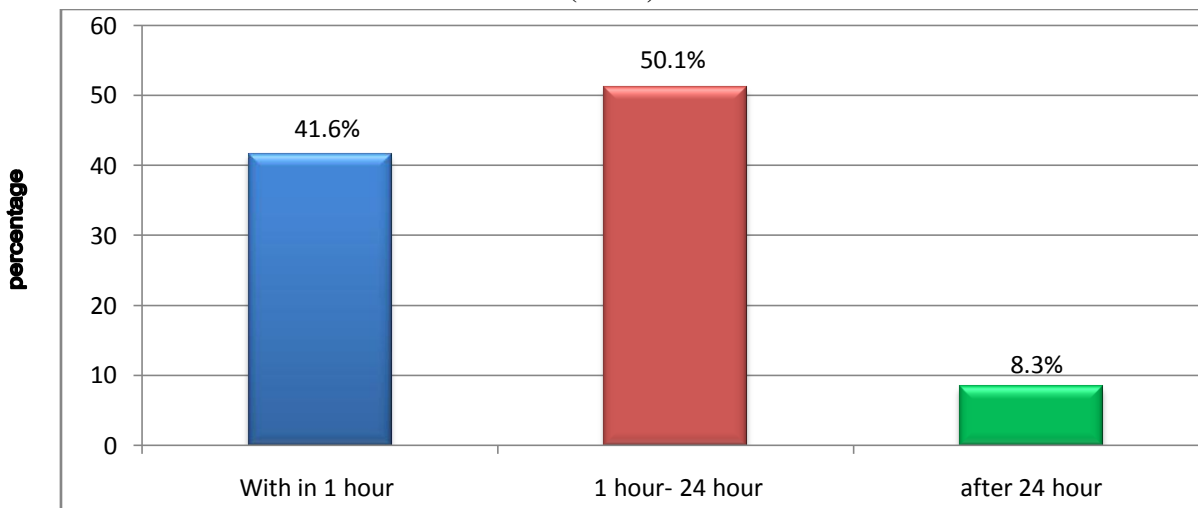


Early initiation of breast feeding

It is recommended that a new born should be put to the mother’s breast for breast feeding within an hour of birth. Compared to safe cord cutting, relatively lower proportion 230, (41.6%) of the women practiced early initiation of breastfeeding and

323,(58.4%) breast fed their new born later than one hour of birth. Sixty two mothers (11.2%) of the mothers were given additional feeding other than breast feeding with in the first three days and the item of additional feeding were (8.1%) butter and (3.7%) water.

Figure-2- Distribution of initiation time of breast feeding in Awabel District , East Gojjam Zone, 2013 (n=553)



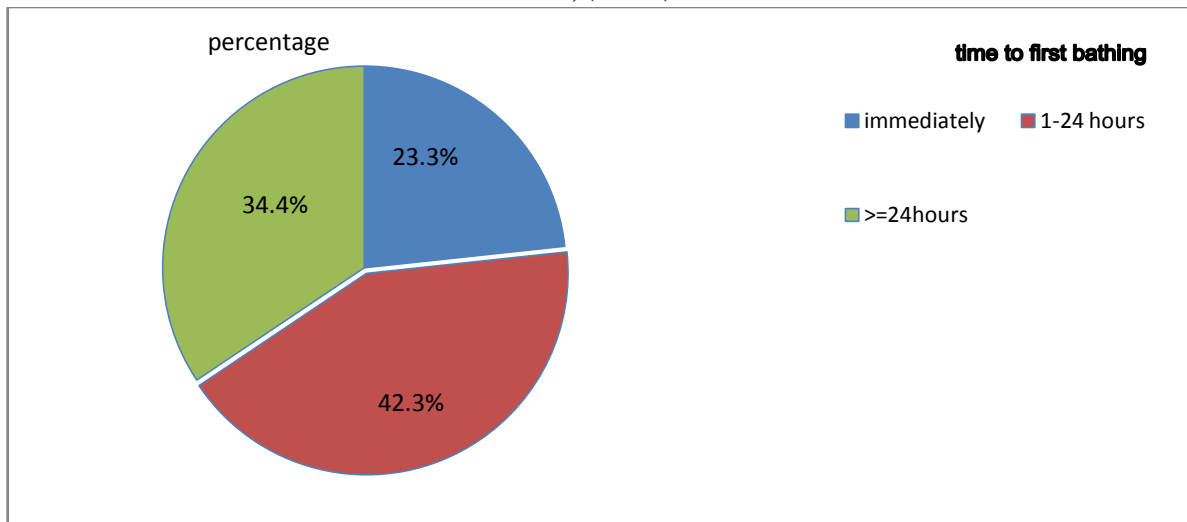
Delayed bathing (time to first bathing)

Bathing of a newborn baby should be delayed until the first 24 hours of birth to prevent the risk of hypothermia. With respect to adopting a good bathing practice, the result shows only 190 (34.4%) of the respondents were bathed their newborn baby at 24 hours and onwards after birth.

A majority, 363 (65.6%) of respondents were bathed their newborn baby before 24 hours of

birth of which two hundred thirty (41.6%) were used to bath immediately after birth. Three hundred eight (55.7%) of respondents were used cold water to wash the new born for the first time after birth and two hundred forty five (44.3%) were used warm water to bath the new born for the first time after birth. The type of cloth used to wrap the new born immediately after birth was (54.4%) new cloth, (21.3 %) clean and dry cloth and 24.2% were used soiled and old cloth.

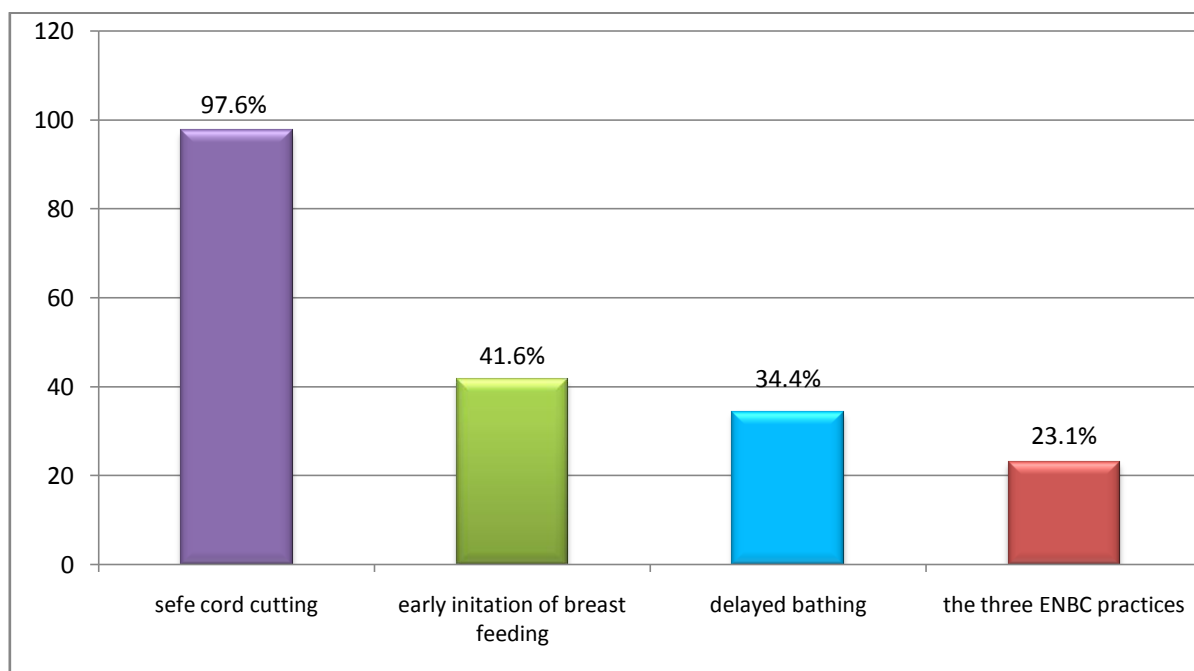
Figure-3: Distributions of time to first bathing of the respondents in Awabel District, East Gojjam Zone, 2013, (n=553).



The distribution of essential new born care practices: Only 128 (23.1%) of the respondents fulfil the three ENB practices and it is lower comparing to

each individual practices that is, safe cord cutting 540 (97.6%), Early initiation of Breast feeding 230 (41.6 %) and delayed bathing 190 (34.4 %).

Figure-4- Distributions of the three essential new born care practices Awabel District, East Gojjam Zone, 2013 (n=553).



3.6. Factors associated with ENBC practices

In order to identify the association of independent variables with ENBC practices both univariate and multivariate analysis were used. Those variables showed association with outcome variables in the bivariate analysis like educational status, ANC, BP advise during ANC visits, Advise about ENBC during ANC, Discussion about BP with the husband, Attending monthly mothers group meeting, Advise about ENBC during monthly pregnant mothers group meeting, Number of ANC visit, Immediate PNC visit, Presence of household radio, Ever heard about ENBC, Knowledge about danger Signs of new born, Knowledge about things to be clean during labour & delivery, Discarding of colusterum, Presence of additional feeding, Temperature of water for first bathing, Cloth for wrapping of the new born immediately after birth were selected as candidate variables for multivariable logistic regression analysis. The multivariable logistic regression analysis was used by taking all the seventeen factors into account simultaneously and only four of the most contributing factors remained to be significantly and independently associated with ENBC practices (educational status, immediate PNC visit, advice about ENBC practices during monthly pregnant mother's group meeting and presence of radio in the household).

Educational status was found to have statistically significant association with ENBC

practice of women. Those women who attend primary and above education 7.0 times were more likely to practice ENBC as compared with those women who are unable to read and write with [AOR=7.02, 95% CI = (2.27, 21.73)].

Immediate PNC visit was showed statistically significant association with ENBC practice of women. Those women who had got immediate PNC visit after delivery were 3.2 more likely to practice ENBC when compared with those who had not go immediate PNC visits after delivery with [AOR=3.22, 95% CI = (1.18, 9.48)].

Advice about ENBC practices was showed statistically significant association with ENBC practice of women. Those women who had got advise about ENBC practices during monthly pregnant mothers group meeting were 4.8 times more likely to practice ENBC as compared with those women who had not got advise about ENBC practices during monthly meeting [AOR=4.78, 95% CI = (1.11, 19.79)].

The presence of radio in the household as Source information was showed statistically significant association with ENBC practice of women. Those women whose household had radio were 7.9 times more likely to be practice ENBC as compared with those who women whose household had not radio with [AOR=7.91, 95% CI = (2.64, 23.67)].(Table 5)

Table-5: Factors associated with the three ENBC practices by multiple logistic regression analysis, Awabel District, East Gojjam Zone, Amhara, 2013. (n= 553)

Variables	ENB Care Practice		COR (95%CI)	AOR (95%CI)	P-value
	Yes (%)	No (%)			
Educational status					
Not read & write	71(55)	338(79.5)	1.00	1.00	
Read & write	10(7.8)	38 (9)	1.25(0.68,2.63)	0.38(0.06,2.40)	0.304
Primry & above	47(36.7)	49(11.5)	4.57(2.84,7.34)	7.02(2.27,21.73)	0.001
Immediate PNC					
Yes	35(27.3)	49(15.1)	4.04(1.79,9.14)	3.22(1.18,9.48)	0.034
No	93(72.7)	379(84.9)	1.00	1.00	
Advise about ENBC During mothers group meeting					
Yes	56(87.5)	90(63.4)	4.04(1.79,9.14)	4.78(1.11,19.79)	0.035
No	8 (12.5)	52(36.6)	1.00	1.00	
BP advised uring ANC visits					
Yes	90(96.8)	199(76.8)	9.05(2.76,29.61)	10.44(0.92,119.2)	0.059
No	3 (3.2)	60 (23.2)	1.00	1.00	
Presence of radio in the household					
Yes	45(35.2)	88(20.7)	2.03(1.44,3.28)	7.91(2.64,23.67)	0.001
No	83(64.8)	377(72.3)	1.00	1.00	

4. Discussion

Care provided during the perinatal and neonatal periods is critical to ensuring the health of mother and baby. Maternal health and newborn

health are inextricably linked; this brief primarily addresses the needs of the newborn infant and some selected maternal issues that influence birth outcome. Essential newborn care (ENC) is a comprehensive strategy designed to improve the health of newborns

through interventions before conception, during pregnancy, at and soon after birth, and in the postnatal period. Therefore; this study was aimed to assess level of community based essential new born care practices and associated factors among rural women in Awabel District.

The present study was found that 97.6% of the women practice safe cord cutting, using a new blade, this is higher than compared to a research done in Nepal, 2010[14] which was 70.7%, higher than research conducted by JSI /L10K base line household survey in 2009 which was 88%[13] and also higher than aresearch done in southern Tanzania in2010[14], which is 95%. This is may be because of awareness or may be because of most people think that using anew sharp blade is feasible easily to cut the cord and is a custom in the community of the study area. Though 97.6% of women are practice safe cord cutting, the majority 97.1 % of respondents reported that the cord was not tied and it is higher compared to the research conducted in southern Tanzania 2010 which was 50% of the cord was not tied and this may be because of awareness in the community. About 5.4% still apply a substance application on the umbilical stamp and, it is lower compared to JSI /L10K base line house hold survey in 2009 which was 27%[13].

The prevalence of timely initiation of breast feeding observed in the study area is 41.6%.This is lower than compared to finding of EDHS,2011 which was 51%[9], finding of a research done in Nepal 2010(14), which was 46.7 % , finding of a research done by JSI /L10K base line house hold survey in 2009(13) which was 45% and finding of a research done Goba Woreda, South East Ethiopia, 2011[15], which was 52.4% but higher than EDHS 2011 Amhara region, which was 38% and also higher than finding of research done in Tanzania, December 2010 which was (18%) and higher than Jimma Arjo Woreda, Southwest Ethiopia, 2012 which was 37% [9][14][16].

The finding of this study was found to be low compared to the national prevalence and other research areas reports even though it is better than the regional. And, it may be because mothers may have low awareness about the advantage of early initiation of breast feeding, most of the women perceive that there is no production of milk immediately after delivery and also cultural adherence that anew born should not be given breast milk before giving pre lacteal feeding, giving breast feed immediately after birth was believed to be causes delay of the expulsion of the placenta.

Although it is recommend that all newborns should start breastfeeding immediately (with in the first hour after delivery) and the feeding of colostrums be promoted, the current study showed that 62.9% of mothers squeezed and discarded the colostrums. This could be the cultural belief that colostrums can cause abdominal cramp in the newborn. The prevalence of pre-lacteal feeding in this study was 37.1% which is higher than the national EDHS, 2011 pre-lacteal feeding report (27.1%)[9]. The reasons for giving pre-lacteal feeds could be colostrums causes abdominal cramp, breast milk insufficiencies and to soften the stomach of the newborn.

Compared to safe cord cutting and early initiation of breast feeding, bathing of the new born at 24 hours and after was practiced by only 34.4% of the women. And this finding is higher compared to research done in Nepal, 2010 which was 16.6%, and finding of a research done by JSI /L10K base line house hold survey in 2009 which was 13% and, it is lower compared to a research done in Jimma,2008 which was, 41.6% [13][14][17].

The finding of the study was found to be unacceptably lower this may be because of awareness about the importance of delayed bathing, because of mothers may not get proper advise. And it may be because most of the women tend to bath their new born immediately after birth with cold water which is culturally adhered, in this study 55.7% of mothers practiced immediate bathing with cold water.

There could be also other cultural beliefs associated with newborn bathing soon after birth and it is widely practiced because the new born body is coated with vernix and blood which is considered dirty and may be fear that if the baby's skin is not cleaned soon after delivery, the baby will get skin infections.

This study attempted to determine the prevalence of the three composite ENBC practices and associated factors. The finding of this study revealed that 23% of the respondents were practice ENBC practices. Educational status, immediate PNC visit, advice about ENBC during monthly pregnant mothers group meeting, advice about BP during ANC and presence of radio in the household were significantly associated factors of the ENBC practices. In this study those women whose educational status is primary and above are more likely to practice ENBC as compared with those mothers who are not able to read and write. Consistent finding was documented in a research done in Nepal in which educational status was one of predictors[14]. This might be related to the fact that

educated mother may have better understanding about the ENBC practices.

Immediate PNC visit was showed statistically significant association with ENBC practice of women in this study. The likelihood of practicing for those mothers who had visited during immediate PNC was high as compared to those who have not immediate PNC visits by the community health workers. This could be the community workers may give advice about the ENB care during immediate PNC visits.

The finding of this study revealed that advice about ENBC practices was showed statistically significant association with ENBC practice of women. The likelihood of practicing the ENBC was high among those women who had got advice as compared to those women who had not got advice about ENBC during monthly mothers' group meeting. This may obvious that there could be discussion about ENBC during monthly meeting and education about ENBC by the community health workers (HEWs).

The finding showed that the presence of radio in the household as Source information was showed statistically significant association with ENBC practice of women. Those women whose household had radio were likely to be practice ENBC as compared with those who women whose household had not radio. This could be those women who have radio in the household may listen and oriented about the ENBC.

The quantitative finding of this study did not support with qualitative data to address qualitative perspectives on the detemrnts of ENBC practices, it would be better if it was mixed type of study. There could be some recall bias since the data were collected from those mothers who deliver 12 months back preceding the survey.

5. Conclusion

This study indicated that level of comprehensive ENB care practices were low even though the majority of respondents practice safe cord cutting. Educational status of the mother, immediate PNC visit by community health workers (HEWs), advice about ENBC practices during monthly pregnant mother's group meeting, presence of radio in the household were found to independent predictors of ENBC practices in the study area. Based on the finding of the study the following recommendations were forwarded:

- Institutions and the stakeholders should promote mainstreaming the ENBC practices to scale up the level of ENBC in the community

- Awabel district health office should promote strong community based behavior change communication on the importance of ENBC practices using Health extension workers and local community's resource people as key actors to change the poor ENBC practices in the community.
- Presence of radio in the household is significant in this study so that providing key behavioral messages about ENBC practices in the mass media and promotion of suitable IEC materials in the health institution is important.
- community oriented promotion of ENBC practices including women empowerment through education is recommended
- ANC is one of the key interventions areas of maternal and neonatal health but, ENBC advice are not being supplemented with BP advice so that health workers should focus and promote the ENBC during ANC utilization.
- Most of ENBC practices are still affected with traditional practices therefore qualitative studies which can address the cultural perspectives are further recommended.

Competing interests

The authors declare that they have no competing interests.

Authors' contributions

Teshome Kokebie wrote the proposal, participated in data collection, analyzed the data and drafted the paper. Mekonen Aychiluhm and Genet Degu approved the proposal with some revisions, participated in data collection and analysis, commented on the analysis and improved the first draft. All authors revised subsequent drafts of the paper.

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