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SCHOOL OF GRADUATE STUDIES

PREGNANCY OUTCOME IN RURAL ETHIOPIA WITH EMPHASIS TO PERINATAL MORTALITY

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DEDICATION

This work is dedicated to my late mother,

Wolete mariam Ganno and late brothers,

Kotchito W/ Michael and Mengesha W/ Michael.

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ABSTRACT

A prospective community-based study of pregnant women was conducted to assess pregnancy outcome with emphasis to perinatal mortality in rural communities of Meskan and Mareko district in Gurage zone in Southern Ethiopia, between March 22 and August 21, 1997. Pregnant women were identified by trained enumerators through house - to - house visit and were followed monthly till delivery, after which both the neonates and the mothers were visited at 7th and 28th days. Pretested questionnaires were used to obtain information on socio-demographic characteristics, past obstetric history, health problems during the index pregnancy and labour, and the condition of both the neonates and the mothers at the 7th and 28th days. Analysis made on 428 singleton births showed a perinatal mortality rate of 44.4 per 1000 births. The stillbirth and early neonatal mortality rates were 21.0 per 1000 births and 23.9 per 1000 live births, respectively. The rates were found to be relatively low as compared to figures reported for other sub-Saharan Africa. Both bivariate and multivariate analysis showed that maternal height and gestational age were significantly associated with perinatal mortality. The risk of death was significantly higher among neonates born to short statured mothers. Similarly the risk of perinatal death was higher in preterm babies than term babies. Continuation of this study for longer period, training of TBAs and provision of health education to the the community about clean and safe management of delivery and cord treatment and educating mothers on nutrition and appropriate utilization of MCH services are recommended.

I. INTRODUCTION

Reproduction in a socially and economically deprived society is characterized by female ill- health followed by pregnancy and delivery complications, low birth weight, child morbidity, early child death and a new pregnancy (1).

Globally 500,000 women die each year, the vast majority from preventable causes such as unsafe abortion or inadequate health care. Ninety nine percent of these deaths occur in the developing countries where 87% of the world's births take place. Low birth weight, largely a reflection of poor nutritional and health status of mothers before and during pregnancy, continues to be a major problem. Seven million infants die annually because of complications that develop during pregnancy and because of poor management during delivery (2,3,4). Most of these deaths occur during birth or in the first week (4).

Perinatal, neonatal and infant mortality rates are important vital statistics used to indicate the status of maternal and child health care in a country. They are indicators of the level of antenatal care, accessibility to medical services and the general health of mothers and infants of the community (5). The problem of perinatal mortality is seriously underestimated in the developing countries due to poor vital registration systems and inadequate information on stillbirths in most surveys (5-10).

Several biologic, environmental, demographic and social factors have been reported to influence perinatal mortality. Improvements in neonatal and obstetric

care, social conditions, the environment, and the demographic characteristics of mothers had resulted in the decline of perinatal mortality in developed countries (7,11). In developing world, malnutrition, communicable diseases, unregulated fertility, and the complications of pregnancy, childbirth, and early infancy take a high toll of life (12). Cultural beliefs, customs and values also affect health and health care at the time of pregnancy, childbirth and childhood than they do at any other time (12). Lack of new resources, maldistribution of existing resources, and in some cases lack of political will further worsens the condition in the developing world (13).

Death rates in infancy and early childhood are unacceptably high in tropical Africa. To allocate limited resources appropriately and to evaluate the effects of disease specific interventions, it is imperative to understand the magnitude and cause (14).

In developing countries, although the great majority of information on perinatal mortality comes from hospitals and does not necessarily reflect the situation in the community (15,16), problems such as low birth weight, birth trauma, asphyxia, congenital abnormalities and neonatal tetanus are said to be some of the major causes of perinatal morbidity and mortality (7,15).

Ethiopia, like the majority of other developing countries, suffers from lack of vital registration system. Few hospital based studies conducted in some big towns of the country showed the magnitude of perinatal mortality to be high. However, there was no attempt to date to estimate the problem in rural

community where health service is very minimal and unhygienic home deliveries are widely practised. At present, when the health policy emphasizes the government's commitment to improve the health status of the rural population in general and women and children in particular, this study tried to provide a baseline information on pregnancy associated problems and perinatal mortality rate and factors associated with it. It is anticipated that this information will be used by policy makers.

II. LITERATURE REVIEW

1. MAGNITUDE OF THE PROBLEM

According to existing estimates, there are eight million perinatal deaths in the world each year, about 98% of the deaths are occurring in the less developed countries (6).

Definition:

Perinatal mortality is defined as the number of late fetal deaths (also called stillbirths) and early neonatal deaths (or deaths in the first week of life) per 1000 total births. Until 1977, the lower limit of the definition was 28 weeks of gestation. But as babies less than 28 weeks do survive, due to advances in neonatology, it was recommended that all fetuses and newborns with a birth weight of 500 g (gestational age of 22 weeks or crown-heel length of 25 cm, when birth weight is not known), whether alive or dead, should be included in the national perinatal statistics. For international purposes, however, the recommendation is that all newborn infants with 1000 g (or when weight is unknown, gestational age of 28 weeks and crown - heel length of 35 cm) be used for both the numerator and denominator of these rates. Thus birth weight, rather than gestational age, is used to obtain accurate data (17).

Although variations in the definition of perinatal death and incompleteness of registration of such deaths make both interpretation and comparison of rates difficult, the rates range on average from 10/1000 deliveries in the developed world to over 100/1000 in many developing countries (15,18).

Perinatal mortality rates have declined in developed countries, while the levels in the developing world are persistently high. For example, in the U.S., the perinatal mortality rate dropped from 32.5 per 1000 births in 1950 to 20.1 per 1000 in 1973. The overall annual decline for perinatal death was 3.4% and it was faster for early neonatal death (3.5%) than for stillbirth (3.2%) (19). In Sweden it dropped from 29 per 1000 births in 1953-1955 to 13 per 1000 births 20 years later. The perinatal mortality for England and Wales showed a consistent decline since 1970, with a more rapid decline from 1976 to 1983 (20). Similarly, the rate of decline had been faster for Japan, Denmark and Finland . The general pattern revealed in the developed countries was that with reductions in perinatal mortality, the ratios of early neonatal deaths to late fetal deaths tended to approach 1.0. This was attributed to improvements in perinatal care, the social conditions, the environment and the demographic characteristics of mother (4).

In Brazil, the largest country in Latin America, the first population based study of perinatal health conducted in 1982 showed a PMR of 31.9 per 1000 births, the stillbirth rate and the early neonatal death rate being 16.2 and 15.9 per 1000 live births (21), respectively. Early neonatal death constitutes around one third of all infant deaths, the majority of which are potentially amenable to preventive interventions during pregnancy or delivery (22).

The available estimates show that PMR are higher in Africa compared to Asia. In central Sudan, hospital and community based studies conducted during

the period of 1989 and 1990 showed perinatal mortality rates of 84.5/1000 births and 29.4/1000 births, respectively (7). In Gambia, a prospective survey in rural communities in 1982-1983 showed a perinatal mortality rate of 74.5 per 1000 births (23), which is higher than Nigeria's 58.6 per 1000 births (24) and much higher than Machakos, Kenya's 46.4 per 1000 births (25). According to the authors, this low rate which is said to be half of that calculated for the whole Kenya is attributed to the absence of many adverse conditions found in other parts of the developing world as this is an industrial area with modern facilities (roads, schools, health institutions). Perinatal mortality is also very high in India. A hospital - based study reported 79 per 1000 births in the period of 1987-1988 (26). But community based estimates for stillbirth and early neonatal death rates were 28.4 per 1000 births (27) and 22 per 1000 live births (28), respectively, which were much less than the hospital estimates. Bangladesh is another south Asian country which reported a high perinatal mortality rate (75 per 1000 births) (15). According to the authors, perinatal mortality rate declined regularly and significantly in an area covered by an intensive family planning and health services programme, but not in the adjacent control area.

In Ethiopia, hospital - based estimates for perinatal mortality rate vary between 65.3 and 112.7 per 1000 live births (29 - 32). The breakdown of perinatal deaths shows that the majority of the deaths occur in utero. The stillbirth rate ranges from 52.6 to 83 per 1000 live births (29,31), while early neonatal death is between 29 and 51 per 1000 live births (29,33). Although there are

variations in the study methodology, these estimates are much higher than a community based estimate which was reported by Kwast et al in Addis Ababa for the period of 1981-1983 (34). This difference could probably be explained by self referrals of high risk mothers with bad outcomes.

2. MEASUREMENT PROBLEMS

Vital statistics from most developing countries, contrary to the developed world, are considered to be inadequate (8,9). For example a study carried out in Thailand to evaluate the accuracy of official statistics had shown an under registration of 100% and 45% for stillbirths and infant deaths (5), respectively. This was because women were not reporting stillbirths and neonates which die before they were registered. Similarly, as reported in the works of Maccaw-Binns et al.(9), studies conducted in Jamaica had pointed to problems with vital registration system and the urgent need for reform to improve the quality and completeness of registration. The under estimation of the problems in the developing countries can mislead the International Community from giving assistance to these countries. Hospital records are supposed to have more accurate statistics in these countries despite their shortcomings to indicate the true magnitude of the problem in the community, particularly when a significant proportion of deaths occur outside health care facilities (5). Most of the time women who have better socioeconomic status are the ones who utilize the modern health facilities and deliver in health institutions. The rest can be self referrals who are with bad outcomes. This bias can be avoided by using a community

based study. Therefore community based studies are necessary to determine the true magnitude of the problem. However, since community - based statistics are expensive and difficult to collect in many developing countries, such countries may have to depend on hospital- based data till such a time when birth and death registrations are universally practised (16).

3. FACTORS ASSOCIATED WITH PERINATAL MORTALITY

Several risk factors for perinatal mortality have been identified. Some of the major risk factors are discussed as follows.

Maternal age and parity are associated with perinatal mortality (21, 35-38). In relation to maternal age , death rates form either a U - shaped pattern (35) or an inversed J-shaped pattern (38), being highest when the mother is under age 18 or over 35 years and lowest when the mother is in her twenties or having her second child (35). The reasons for the higher rates at the extremes of the reproductive life are that older women may be at higher risk of intercurrent diseases such as hypertension or diabetes, which complicate pregnancy and delivery and might account for greater perinatal mortality while young women are likely to have obstructed labour as the result of their immature and relatively small pelves which are still growing (35,37). Commonly such groups seek and respond to ANC less readily (37).

The distribution of perinatal mortality by parity is to some extent linked with the age of the mother. Fetal mortality rates and Infant mortality rates are generally thought to follow a U- shaped curve in relation to birth order as well.

First births and high birth orders are usually reported to have poor survival chances than intermediate birth orders due to physiological factors (35,36). The higher risk of the first pregnancy includes problems such as the fit of the baby in the pelvis, the higher incidence of pre-eclampsia and less blood supply to the placental bed than in later pregnancies (35,37), which are hazardous to the foetus. However, contrary to the conclusion of the previous study, some authors argued that neither maternal age nor parity was associated with poor pregnancy outcome in terms of fetal and neonatal mortality (39).

Marital status is another identified risk factor for perinatal mortality. The risk to the fetus of the unmarried mother appears to be raised for both stillbirths and early neonatal deaths. There is some evidence that much of the excess is due to lower birth weight in unmarried mothers, especially when associated with preterm delivery (40).

Maternal nutritional status is probably the most important determinant of the birth weight and the probability of the baby's survival through neonatal period. Closely spaced pregnancies coupled with poor diet and hard labour are cumulative drain on nutritional status of the mother. If a woman cannot recover fully from the effects of her last pregnancy and period of breast- feeding before becoming pregnant again, her nutritional status might be expected to deteriorate with each successive pregnancy, and this condition is termed "maternal depletion syndrome". Poor maternal nutritional status increases the risk of delivering premature and low birth weight infants with lower chances of survival (35,40).

Low birth weight is probably the best indicator of foetal malnutrition and is one of the most important determinants of perinatal mortality. Neonatal illness in general is closely related to low birth weight, and low birth weight infants also tend to have higher mortality and malnutrition rates during the first year of life (41).

Poor obstetric history like previous stillbirth and history of more than one child death is also associated with poor perinatal outcome (26). This can be explained by either a recurrent gynaecological and obstetric problems or low socioeconomic status of the mothers which cannot be changed within a short period of time and its influence on health service utilization.

Complications during pregnancy (vaginal bleeding, oedema, pre-eclampsia) and labour(prolonged or difficult labour, birth asphyxia) are among the major factors which are associated with both stillbirths and early neonatal deaths (22,26,36). In the Indian study asphyxia which resulted from abnormal presentation, prolonged labour and placental causes such as antepartum haemorrhage was responsible for 53% of the stillbirths, while low birth weight was the most important underlying or associated cause of death in the first week of life. Fetal asphyxia, birth injuries, neonatal infections and congenital anomalies were some of the causes of early neonatal deaths (26). Amniotic fluid infection, obstructed labour and congenital syphilis are documented to be the leading causes of perinatal mortality in Ethiopia (30). Other diseases like malaria (7) and anemia during pregnancy (26) were also reported as risk.

Low socioeconomic status reflected by lack of education, subsistence farming, and poor environmental conditions, such as lack of safe water and lack of latrines, also contribute to the poor perinatal outcomes (26).

Absence or inadequate ANC is significantly associated with perinatal morbidity and mortality (7,21,22). Absence of health care deprives the pregnant women of timely identification of risk, iron supplementation and dietary advice which are important measures for the health of both the foetus and the mother. It also denies the mothers the chance of having tetanus toxoid vaccine and results in the death of many neonates because of tetanus neonatorum. A tetanus induced neonatal mortality rate of 16/1000 live births was registered in Senegal (42). UNICEF reported that 63% of neonatal deaths in Ethiopia are due to neonatal tetanus (41). Thus failure to have Tetanus toxoid and unhygienic home delivery are documented to be risk factors for perinatal mortality (42).

III. Objectives of the study

General Objective:

To assess pregnancy outcome with emphasis to perinatal mortality in a rural community of Southern Ethiopia.

Specific Objectives:

1. To describe health problems during pregnancy, child birth and puerperium.
2. To identify common practices during pregnancy and delivery.
3. To determine perinatal mortality rate in rural community in Butajira.
4. To assess factors associated with perinatal mortality.

IV. METHODS AND MATERIALS

Study Design:

This is a prospective follow - up study conducted to determine pregnancy outcomes in Meskan and Mareko Wereda.

STUDY AREA:

The study was performed within the Butajira Rural Health Project (BRHP) setting. The study population has been under continuous demographic surveillance since 1987.

Meskan and Mareko is one of the 11 weredas of the Guragie zone in southern Ethiopia. The wereda population is 247,763, as projected from the 1994 census (43), while the population of the study area is estimated to be 31,000 (Surveillance Report from the study base). The major ethnic group is the Guragie with further divisions into minor groups. Islam is the major religion of the wereda. Most people live on subsistence farming growing Enset (Ensete Ventricosum), Tef (Eragrostis Abyssinica), Maize and Wheat and rearing Cattle. The main cash crop is Pepper (44).

One health center and two health stations are located in the study area. There are also six private clinics, one pharmacy, one drug shop, eight rural drug vendor shops. All the health facilities are located in the towns (45). According to the 1994 census report, the Infant Mortality Rate (IMR) was 145 per 1000 live births and Child Mortality Rate (CMR) of 218 per 1000 children. The corresponding rates for the region were 128 and 189 per 1000 live births, respectively (43).

Source Population:

Women in their reproductive age residing in Meskan and Mareko district, Gurage zone, south Ethiopia (SNNPR).

Study Population:

All women who were dwellers in the nine peasant associations which are under demographic surveillance by Butajira Rural Health Project (BRHP) and who reported to be pregnant during March 22 - August 21, 1997 were enrolled into the study.

SAMPLING:

Ten villages (one urban and nine rural) were already selected for the project out of four urban dwellers' associations and eighty two peasants' associations using a proportionate to population size (PPS) sampling technique. The urban village was excluded in this study due to technical problem. Pregnant women in the rural villages were identified through house- to- house visits by trained enumerators.

SAMPLE SIZE:

Assuming the general prevalence of perinatal mortality to be 10% (based on different studies carried out in Ethiopia) with 80% power and 95% confidence interval and the ratio exposed to non-exposed at 1:1, to detect a relative risk of 2, the sample size required for the study was calculated to be 438. Sample size calculation was carried out on Epi-Info version 6 statistical software.

The estimated population of the study area is 31,000. Expecting 5% of this population would be pregnant (46), and about 2/3(1000 women) being

in their second and third trimester, about 500 women were expected to deliver during the 5 months available to complete the study.

DATA COLLECTION:

Data collection began by registration of households and identification of pregnant women. A total of 6379 households were registered and a dynamic cohort of 786 pregnant women identified through reports to the trained enumerators during house to house visits. Women after initial registration were followed on a monthly basis till confinement. Information on birth outcome was obtained within a week of delivery, and then both the neonates and the mothers were visited at their homes at 7th day and at 28th day. Questionnaires for baseline information, monthly follow - up, abortion, delivery and postpartum were prepared separately. Baseline information on socio - demographic characteristics of the mother, past obstetric history, food taboos during pregnancy and puerperal period, traditional practices in case of prolonged labour and retained placenta and information about the index pregnancy were collected using the first format. Follow - up was carried out using a format which contains questions regarding health problems during the index pregnancy, measures taken to alleviate the problems, information about ANC and anti-tetanus immunization. Labour and delivery format contains questions about duration of labour, place of delivery, who attended the delivery and problems encountered during labour and delivery with measures taken to alleviate the problems. Similarly, the conditions of the mothers and neonates in puerperal period is completed using postpartum format. Anthropometric measurements (height and arm circumference) of the women

and incumbent length, weight and arm circumference of the neonates were also taken. Locally made wooden sticks were used for the height measurement of the mothers while salter baby scales and tapes were used for the weight and arm circumference of the neonates, respectively.

The questionnaires were prepared in English and then translated into Amharic, the official language of the country and of the study area. Eleven high school graduates, all females, were recruited and trained for ten days on theoretical and practical matters related to the study. Group discussions and role play sessions were used during the training. Ten were assigned (one in each PA) for data collection and one was assigned for supervision. The selection of the supervisor was based on past performance as data collector in the project. The supervisor coordinated the field activities by making visits, supplying the necessary materials to the enumerators, checking the completed questionnaire and did interviews in 5% of the households to countercheck the initial interview. The questionnaire were pretested in a similar population one month ahead of the actual field work and appropriate adjustments were done before it was finalized. Inclusion of closed ended morbidity questions, questions about abortions and extension of multiple choices to some questions were the main adjustments done on the questionnaires. The completed questionnaire was handed in to the supervisor weekly. The supervisor after checking for consistency and completeness passes the filled questionnaires to the principal investigator. Incorrectly filled ones were sent back to the enumerators for correction. The principal investigator monitored the overall quality and conduct of the study by rechecking the completed questionnaires

before they were submitted to the data entry clerk and making occasional field visits. The investigator also followed the activities of the supervisor through meetings held twice weekly. Meetings of the enumerators and the supervisor with the investigator were held in Butajira Rural Health Project office on weekly basis. These meetings helped to clear out doubts and solve problems encountered during field activities.

VARIABLES:

INDEPENDENT :

Independent variables include socio-demographic characteristics, obstetric history, maternal health and nutritional status during pregnancy. Birth weight and perinatal events were also obtained.

DEPENDENT :

Perinatal mortality (stillbirth and early neonatal death) was the main dependent variable of interest, in addition health problems and common practices during pregnancy were looked.

DATA ANALYSIS:

Data entry, data cleaning and analysis were carried out using EPI INFO version 6 statistical package. Frequencies, percentages and rates were calculated for all variables. Crude rate ratios were calculated for selected factors. Multivariate analysis were done using SPSS statistical software to control for confounding factors.

ETHICAL CONSIDERATIONS:

The proposal was reviewed by the Department and Faculty Ethical committees and granted clearance. Informed consent was obtained from all study participants. Privacy during interviews was ensured. Women who reported ill health and complications were referred to health institutions for appropriate treatment. They were also advised to deliver in health units. All information was kept confidentially.

V. RESULT

A total of 6379 households were surveyed to register 786 pregnant women. During the period from March 22 to August 1997, the outcome of 472 (60.1%) pregnancies was known. Two mothers expired (one in her ninth month of pregnancy and the second in puerperal period), giving a Maternal Mortality Ratio (MMR) of 450.5 per 100,000 live births. In both cases bleeding was the cause of death. Seventeen (2.2%) of the pregnancies ended up in abortions and 13 (1.7%) twin deliveries. Among the singleton births thirteen were lost to follow up and hence, the analysis focused on the remaining 428 singleton births (including both stillbirths and live births). Among these, there were 9 stillbirths, 10 early neonatal deaths and 5 late neonatal deaths, giving a stillbirth rate of 21 per 1000 births, perinatal mortality rate of 44.4 per 1000 births, early neonatal mortality rate of 23.9 per 1000 live births and neonatal mortality rate of 35.8 per 1000 live births.

Table 1 summarizes Socio - demographic characteristics of the study population. The majority of the women were in the age group of 20-29 (52.6%), from Meskan ethnic group (37.6%), illiterate (89.3%), housewives (94.6%) , Islam (75.2%) and almost all of them were in marital union (76.2% in monogamous and 23% in polygamous). The average family size was five for the study population.

Table 2 shows past obstetric history of the study population. 393 (91.8%) of the mothers were married before the age of 20 years. 30 (7%) were married before 15 years of age. 329 (76.9%) were pregnant before the age of twenty years. Overall the mean ages for first marriage and first

pregnancy in this population are 16 and 18 years, respectively. 371 mothers were pregnant in the past. 220 (51.4%) had births between 1-4, while 150 (35.1%) had 5-10 births. The rest were nulliparous (13.6%). The average number of gravidity and parity for this group were 4.20 and 3.95, respectively. History of abortions and stillbirths were reported by 74 (17.3%) and 23(5.4%) women, respectively. Infant deaths varied between 1 and 4. The majority (97.9%) of the births took place at home.

Health seeking behaviour and anthropometric measurements of the mothers during the index pregnancy are shown in tables 3. According to the reports of the mothers, 105 (24.6%) were identified in their second trimester and 322 (75.4%) in their third trimester. 95 (22.2%) reported to have started antenatal care attendance. Only 12 (12.6%) started in first trimester. TT vaccination was reported by 81 (85.3%). Absence of health problems (20.8%), far distance from health unit (20.2), lack of awareness (18.1%), fear of being mishandled by health workers (13.1%) and procrastination (9.4%) were the main reasons reported for non attendance of ANC. The majority of the mothers (98.6%) preferred to deliver either at home or at their parent's home. Similarly, the majority chose to be attended by relatives or neighbours. Need for relative's attention during delivery (73.0%) was the main reason for home preference. 11.5% of the mothers were in the category of short stature. 25.1% had arm circumference measurement below 23 cm.

Table 1. Socio-demographic characteristics of Pregnant women, Butajira, Ethiopia, 1997. (n=428)

Variable	Frequency	Percent
Mother Age		
15-19	47	11.0
20-24	92	21.5
25-29	133	31.1
30-34	89	20.8
35-39	46	10.7
40+	21	4.9
Ethnicity		
Meskan	161	37.6
Silti	100	23.4
Mareko	53	12.4
Sodo	32	7.5
Dobi	21	4.9
Amhara	7	1.6
Wolene	6	1.4
Mixed	48	11.2
Mother occupation		
Housewife	405	94.6
Merchant	15	3.5
Other	8	1.9
Marital status		
Married (Monogamous)	326	76.2
Married (Polygamous)	98	22.9
Widow	3	0.7
Separated	1	0.2
Religion		
Islam	322	75.2
Orthodox Christian	82	19.2
Other Christian	24	5.6
Educational status		
Illiterate	382	89.3
Grade 1-6	41	9.6
Grade 7-12	5	1.1
Family size		
1-4	179	41.8
≥5	249	58.2

Table 3. Selected characteristics of the Pregnant women during the index pregnancy, Butajira, Ethiopia, 1997.

Variable	Frequency	Percent
Reported gestational age in months (n=427)		
3-6	105	24.6
6+	322	75.4
Antenatal care visit (n=95)		
1-2	73	17.1
3-4	19	4.4
4+	3	0.7
Period ANC started (n=95, 95/428= 22.2%)		
First trimester	12	12.6
Second trimester	49	51.6
Third trimester	34	35.8
TT vaccination (n=81, 81/95= 85.3%)		
1	41	50.6
2	27	33.3
3+	13	16.0
Preferred place of delivery		
Home/parent's house	422	98.6
Health unit	6	1.4
Preferred attendance by		
Relative/neighbour	384	89.7
TBA	11	2.6
Trained TBA	9	2.1
Health worker	6	1.4
Other	18	4.2
Mother's height (n=427)		
140-149	49	11.5
150-180	378	88.5
Mother's arm circumference (n=427)		
19.0-22.9	107	25.1
23.0-29.0	320	74.9

Health complaints reported by 166 women during the index pregnancy, measures taken and the outcome achieved are shown in Table 4. Abdominal pain, tiredness, headache, vomiting and fever were the frequent complaints reported by the women for the open ended question. Vaginal bleeding and vaginal discharge were reported by only 2 (1.2%) and 3 (1.8%) women, respectively. The complaints were further ascertained by a closed ended question, to which they had responded in a similar way. Although the complaints were similar, substantial variations in numbers and additional symptoms like convulsion and anorexia were reported. About a quarter had sought the care of health workers.

Applying abdominal massage and taking traditional medicine were frequently reported as measures taken for prolonged labour and retained placenta (see Table 5)

Table 4. Complaints during the index pregnancy(Open & Closed Questions) Action taken and outcome achieved Butajira, Ethiopia. 1997 (n=166)

	Frequency	Percent
Reported Symptoms (Open Question)		
Abdominal pain	90	54.2
Headache	61	36.7
Tiredness	52	31.3
Vomiting	42	25.3
Fever	34	20.5
Rheumatism	17	10.2
Back pain	9	5.4
Body swelling	8	4.8
Vaginal discharge	3	1.8
Vaginal bleeding	2	1.2
Others	18	10.8
Reported Symptoms (Closed Question)		
Weakness	95	57.2
Headache	86	51.8
Abdominal Pain	53	31.9
Fever	46	27.7
Anorexia	42	25.3
Convulsion	19	11.4
Leg swelling	15	9.0
Vaginal bleeding	6	3.6
Vaginal discharge	5	3.0
Action taken		
Nothing	108	65.0
Consulted health workers	39	23.5
Took traditional medicines	19	11.4
Outcome of the action		
Cured	8	4.8
Improved	77	46.4
No improvement	74	44.6
Worse	7	4.2

* Percentage figures do not add up to 100% because of multiple responses by single women.

Table 5. Actions to be taken in case of prolonged labour and retained placenta as reported by mothers. Butajira, Ethiopia. 1997

Action	Frequency	Percent
For prolonged labour		
Take to a health unit	234	52.8
Apply abdominal massage	95	21.4
Pray	41	9.3
Give traditional herbs	34	7.7
Call TBA	9	2.3
Other	8	1.8
Don't know	39	8.8
For retained placenta		
Traditional medicine	130	29.3
Abdominal Massage	119	26.9
Take to health unit	113	25.5
Shaking the abdomen	51	11.5
Call TBA	24	5.4
Apply pressure against a pot	9	2.0
Pray	5	1.1
Don't Know	23	5.2

Forty four percent of the study population reported that milk products (specially milk and cheese) are not recommended during pregnancy. However, there were others (5.4%) who reported that they are recommended. Other nutritious items like meat and eggs were recommended by few. Meat and milk product were reported to be recommended during puerperal period by 20.3% and 28.3%, respectively. There were also few (2-4%) who reported contrary to this.

Term delivery accounted for 77.3% of all births. Prolonged labour was encountered by 11.4% of the women. Eighty eight percent of the delivery was at home and the majority (58.9%) were assisted by neighbours. Delivery in health unit was very minimal (0.9%).(See Table 6).

Forty one percent of the mothers reported problems during delivery. Excessive vaginal bleeding, prolonged labour and retained placenta were the major problems encountered. Only 11% of them consulted health workers. Nearly half of them did not seek any kind of assistance. Fifty five percent reported to have achieved cure and thirty six percent improved.

New blade was used for cutting cord by 78.1%. String and weficho (Enset string) were the cord tie in the majority of cases. Seven mothers (1.6%) left the cord untied. Umbilical stump was painted with butter in 4.3%. Thirty nine percent of the neonates were perceived to be small by their mothers. Three (0.7%) of the neonates were reported abnormal. Breast milk was given to 81.3% of the neonates immediately after birth. Butter and water were given for 10.4 and 2.1 percent, respectively. Abdominal pain, headache, fever and vaginal bleeding were the frequent complaints of the mothers during

puerperal period. Urinary incontinence was reported by 9 women and faecal incontinence by four women. (See Table 8).

Table 6. Information on child birth characteristics. Butajira, Ethiopia. 1997

Variable	Frequency	Percent
Time of Delivery		
At term	331	77.3
After term	84	19.6
Before term	13	3.0
Duration of labour		
< 12 hours	338	79.0
12-24 hours	41	9.6
> 24 hours	49	11.4
Place of delivery		
Home	376	87.9
Parent's home	41	9.6
Neighbour	7	1.7
Health centre	3	0.7
Hospital	1	0.2
Delivery assisted by		
Neighbours	252	58.9
Relatives	123	28.7
TBA	27	6.3
Trained TBA	14	3.3
Health worker	7	1.6
Self	5	1.2
Problem encountered during child birth		
Yes	176	41.1
No	252	58.9
Types of problems during child birth (n=176)		
Retained placenta	63	35.6
Prolonged labour	54	30.5
Excessive vaginal Bleeding	39	22.0
Other	21	11.9
Measures taken to the problem		
none	85	48.0
Traditional medicine	38	21.5
Modern medicine	19	10.7
Other	35	19.8
Result of the Measure		
Cured	97	55.1
Improved	62	35.2
No improvement	15	8.5
Worse	2	1.1

Table 7. Condition of the singleton baby at birth. Butajira, Ethiopia. 1997

Variable	Frequency	Percent
Status of baby at birth (n=428)		
Alive	419	97.9
Still birth	9	2.1
Sex of the baby (n=428)		
Male	225	52.6
Female	203	47.4
Cord was cut with (n=419)		
New blade	328	78.3
Boiled blade or knife	67	16.0
Unboiled blade or knife	24	5.7
Material used to tie the cord (n=419)		
Unboiled string	209	49.9
Weficho	174	41.5
boiled string	10	2.4
Not tied	7	1.7
Other	19	4.5
Umbilical stump painted with (n=419)		
Nothing	398	95.0
Butter	19	4.5
Other	2	0.4
Perceived weight of the baby(mother's report) (n=428)		
Very small	13	3.0
Small	156	36.4
Medium	140	32.7
Big	99	23.1
Very big	20	4.7
Physical condition of the baby at birth (n=428)		
Normal	425	99.3
Handicapped	3	0.7
Type of first feed (n=419)		
Breast milk	341	81.4
Butter	43	10.3
Sugar	14	3.3
Water	8	1.9
Other	13	3.1

Table 8. Complaints of the mothers during puerperal period(Open & Closed questions), Actions taken and outcome achieved Butajira, Ethiopia, 1997. (n=137)

	Frequency	Percent
Complaints (Open Question)		
Abdominal pain	63	46.0
Headache	57	41.6
Fever	48	35.0
Vaginal bleeding	14	10.2
Rheumatism	13	9.5
Breast pain	11	8.0
Weakness	10	7.3
Urinary incontinence	8	5.8
Cough	7	5.1
Vomiting	6	4.4
Malaria	5	3.6
Diarrhoea	5	3.6
Backpain	5	3.6
Leg swelling	5	3.6
Vaginal discharge	5	3.6
Others	14	10.2
Complaints Closed Question)		
Fever	86	62.8
Abdominal pain	79	57.7
Vaginal bleeding	37	27.0
Urinary incontinence	9	6.6
Vaginal discharge	8	5.8
Faecal incontinence	4	2.9
Actions taken during illness		
Nothing	75	54.7
Took traditional medicine	38	27.7
Consulted health workers	16	11.7
Others	8	5.8
Outcome of the actions taken		
Improved	69	50.4
No change	46	33.6
Cured	16	11.7
worsened	5	3.6
Other	1	0.7

* Percentage figures do not add up to 100% because of multiple responses by a single woman.

In the bivariate analysis maternal age, parity and height were found to be significantly associated with perinatal death. The risk of perinatal death was significantly high among mothers who were below twenty years of age, while it decreased with increasing maternal age. Similarly primiparity and short stature were also significant risk factors. Among the intrapartum characteristics studied, gestational age and perceived birth weight of the neonates were significantly associated with perinatal death. The relative risk of perinatal death is higher among female neonates than males, though not statistically significant.

When the factors were entered into logistic regression only maternal height remained significantly associated with perinatal mortality . Among child characteristics entered into logistic regression gestational age and perceived birth weight showed significant association (See Tables 9 & 10).

Table 9. Perinatal mortality and related factors, Butajira, Ethiopia, 1997.

	Popn.	Number (%)	CrudeRR(95% CI)	Adjusted RR(95% CI)
Age of mothers				
15-19	47	5(10.6)	1.00	
20-29	225	11(4.9)	0.46 (0.17,1.26)	0.85(0.28,2.59)
30+	156	3(1.9)	0.18 (0.04,0.73)	0.68(0.31,1.46)
Religion				
Islam	322	18(5.6)	1.00	
Christian	106	1(0.9)	0.17 (0.02,1.25)	0.39(0.14,1.11)
Marital Status (only for couples)				
Monogamous	326	15(4.6)	1.00	
Polygamous	98	4(4.1)	0.89 (0.30,2.61)	1.11(0.60,2.06)
Family size				
1-4	179	13(7.3)	1.00	
5+	249	6(2.4)	0.33(0.13,0.86)	0.55(0.28,1.08)
Parity				
None	58	7(12.1)	1.00	
1-4	220	8(3.6)	0.30 (0.11,0.80)	0.58(0.21,1.62)
5+	150	4(2.7)	0.22 (0.07,0.73)	2.20(0.95,5.10)
History of abortion				
No	354	17(4.8)	1.00	
Yes	74	2(2.7)	0.56 (0.13,2.38)	1.26(0.55,2.92)
ANC attendance during index pregnancy				
No	332	13(3.9)	1.00	
Yes	96	6(6.3)	1.60 (0.62,4.09)	1.01(0.58,1.75)
Complications during index pregnancy				
No	270	13(4.8)	1.00	
Yes	158	6(3.8)	0.79 (0.31,2.03)	0.91(0.91,1.57)
Duration of labour				
<12 hours	338	12(3.6)	1.00	
>12 hours	90	7(7.8)	2.19 (0.89,5.40)	1.52(0.90,2.59)
Complications of labour				
No	252	10(4.0)	1.00	
Yes	176	9(5.1)	1.29 (0.53,3.11)	0.96(0.57,1.60)
Maternal Height				
<150 cm	49	5(10.2)	1.00	
≥150 cm	379	14(3.7)	0.36 (0.14,0.96)	0.49(0.27,0.89)
Mothers arm circumference				
<23 cm	107	6(5.6)	1.00	
≥23 cm	321	13(4.0)	0.72 (0.28,1.85)	0.94(0.55,1.63)

VI. Discussion:

This home - based follow up study which is a part of a big study in reproductive health tried to identify complications during pregnancy, labour and puerperium with major emphasis on perinatal mortality and factors associated with it.

The proportion of pregnant women in this population was much lower than expected. Seven hundred eighty six pregnant women were registered during the study period in communities with an estimated population of 31,000; only 2.5% of the population were found pregnant. This finding is far below the conservative estimate that 5% of the population are pregnant women at any given time. It has to be further explored whether it is an indication of a declining fertility or caused by abortion at early stage, or the 5% could be an over estimation. In this rural community, where having many children is considered as an asset, and contraceptive prevalence is very low, it is difficult to believe that it is due to declined fertility.

Nearly 40% of the mothers reported health problems during the index pregnancy. Abdominal pain, headache, fever and anorexia were among the frequent complaints. These could either be an exaggeration of the physiological minor disorders of pregnancy or a worsening of the symptoms due to anemia and intercurrent infections which are common in poor rural communities. Although major complications like vaginal bleeding were reported by few, the report of the two maternal deaths due to haemorrhage shows the severity of the problem and it is similar with observation made elsewhere (23) and deserves due concern and timely intervention. However,

maternal mortality ratio reported in this study has to be interpreted with reservations as puerperal period was not fully covered and the possibility of maternal deaths during early pregnancy cannot be ruled out. Despite the severity of the problems, mothers either try to self-limit or resorted to traditional medication for their problems. The fact that only 23.5% of the mothers consulted health workers shows a low health seeking behaviour of the mothers or inaccessibility of the services. Similarly, out of 176 (41%) mothers who reported to face labour complications like excessive bleeding, prolonged labour or retained placenta only 10% consulted health workers, which is half of that reported by Jepson et al.(47) in Wobera Awraja. The fact that crippling postpartum complications like urinary incontinence was also reported in this study indicates the high incidence of preventable pregnancy related problems in this community.

Coverage of antenatal attendance is generally low in Ethiopia. It ranges from less than 10% in some rural areas to 60% in some urban areas (48). In this study 22.2% of the mothers attended ANC clinic. Although this is within the range of the estimate for the country, the proportion of the mothers who had their first visits in the first trimester (12.6%) is low in comparison to that reported in Arsi Zone (49), which was 32.5%. Absence of health problems, distance, lack of awareness and fear of being mishandled by the health workers were the main reported reasons for non attendance. Eighty five percent of the mothers who had attended ANC clinic reported to have been vaccinated against tetanus (1-3 times). In the country where 63% of neonatal death is estimated to be due to neonatal tetanus (41) and the great majority of

Although the deleterious effect of this practice is not well studied, there is no doubt that the feeding of the indigestible items can lead to diarrhoea (41) and possibly have an impact on child malnutrition in the future. Maternal education on exclusive breast feeding and colostrum feeding is necessary.

Food taboos and erroneous beliefs are observed in this community. Nutritious food items like Milk, Meat and Egg are recommended during pregnancy only by very few. On the other hand items like Kocho, Injera and Cabbage are more preferred. In this community it is believed that neonates born to mothers who use milk and cheese during pregnancy are covered with whitish material ("dirt") during birth. The prohibition of such nutritious food when the physiologic condition of the pregnant woman demands more in variety and amount can be detrimental both to the foetus and the mother. This observation is similar to a report in Nigeria where meat is avoided during pregnancy because of taboos and beliefs (54). This finding indicates the need for provision of nutritional education during pregnancy. Nutritional education insisting on dispelling of food taboos during pregnancy and post-partum period is essential.

In this study, the perinatal mortality rate (PMR) was 44.4 per 1000 births with Stillbirth Rate of 21.0 per 1000 births and Early Neonatal Mortality Rate of 23.9 per 1000 live births. The fact that it is lower than the different hospital based estimates in Ethiopia (30,31,32), is as expected. The higher levels of perinatal mortality rates in hospitals could be due to a referral bias of high risk mothers and unbooked emergencies resulting in number of deaths. Similarly, this result cannot be compared with the community based

lower for small than for very small babies and risk increased significantly with increasing weight. This paradoxical result casts doubt on the validity of this instrument, as mother's perception can be influenced by her expectation. Sex is the other neonatal characteristic which has association with perinatal mortality. A study in Bangladesh (15) showed the risk of perinatal death to be higher among males. Although not significant, in this study the risk was higher for females than males.

Among maternal characteristics entered into the logistic regression model maternal height was the only factor which showed a significant association with perinatal mortality. Our finding of a significant association of short maternal stature with perinatal mortality is similar to the observation made elsewhere (21, 57), as short stature can result in cephalopelvic disproportion (CPD) and subsequently obstructed labour.

Maternal age below 20 years and above 30, primiparity and grand multiparity which showed significant association with perinatal mortality in the bivariate analysis, and are known risk factors for perinatal loss, lost significance when entered into the logistic model.

Maternal education is considered as one of the determining factors for a better outcome of pregnancy and neonatal survival (18,40,41). However, in this study the effect of education could not be determined as almost all of the study subjects were illiterates. Ninety five percent of the mothers were housewives and there is no doubt that all were engaged in heavy works (fetching water, cutting ensets and woods, carrying goods to markets etc...) through out pregnancy, the negative effect of which on foetus is already

documented (56,58).

Marital status has been found to be associated with perinatal mortality in previous studies. Babies born to single mothers were considered as high risk for neonatal death compared to those babies who are born to married mothers, the explanation being that single mothers are less likely to feed adequate and balanced diet both for themselves and their babies (40). Though not statistically significant a slightly higher risk of perinatal mortality was observed in polygamous union than monogamous in the logistic model. In the polygamous union the competition among the women would lead to production of more children and extension of the family which can result in the sharing of the meagre resources and lead to ill health of both the mothers and the children.

Maternal nutritional status is probably the most important determinant of birth weight and which in turn determine the probability of an infant surviving through perinatal and neonatal periods (40,41). In this study the nutritional status which was determined by measurement of maternal arm circumference as recommended by WHO (57), didn't show a significant association with perinatal mortality.

Poor obstetric history and complications during pregnancy and labour did not show significant association with perinatal mortality in this study, though risk of death was higher for births to mothers who reported to have complications during labour.

This study did not show a significant association between ANC attendance and perinatal mortality, similar to observations reported from

Gambia (23) and Nigeria (24), though other reports (21,22) showed a positive influence of ANC. This could be due to the fact that the service is mainly being utilized by pregnant women who had health problems, as lack of health problem was reported to be one of the reasons for non-attendance by 18.1% of the women. Poor quality of the service might be another underlying cause, as quality is documented to be more important than frequency of ANC visits (18).

The reliability of the data was maintained by prior training of the interviewers and the supervisor, using pretested questionnaire and by regular supervision. This is true particularly in areas similar to ours where a significant proportion of births and deaths occur outside health institutions.

The results are assumed to be valid as all pregnant women residing in the study area were included into the study and information was obtained on pretested formats. Loss to follow up was minimal (3.2%) and chances as possible explanation of the findings were excluded by achieving a desired level of statistical significance.

As to its generalizability, it is generalizable to rural areas where there is no easy access to health facilities.

LIMITATION OF THE STUDY

The small sample size which resulted in a small number of outcome variables (stillbirths and neonatal deaths) and wide confidence intervals of the risk ratios is the major limitation of this study.

The use of perceived birth weight which is a weaker instrument, in place of recorded birth weight is another limitation of the study.

VII. CONCLUSION AND RECOMMENDATION

The study showed high incidence of pregnancy associated complications both pre and postnatally, and the prevalence of harmful practices during pregnancy and delivery. The majority of the mothers in this study tended not to seek medical care. Lack of awareness, accessibility and prevailing traditional methods were observed to hinder the mothers from utilizing maternal health services.

The study also showed a high perinatal mortality rate of 44.4 per 1000 births, though it is relatively lower compared to figures for most sub-Saharan Africa. Maternal short stature (height <150 cm) and gestational age were found to be significantly associated with perinatal deaths.

Based on the above findings the following recommendations are made:

1. IEC has to be effectively implemented to enhance the awareness of the community towards appropriate utilization of maternal health services in areas where they are accessible.
2. Training of TBAs and provision of health education to the community about clean and safe management of delivery and cord treatment is mandatory as almost all the mothers prefer to deliver at home. TBAs should also be made aware to timely identify and refer high risk mothers.
3. Nutritional education with special emphasis on dispelling feeding taboos during pregnancy and puerperium for the mother and newborn is essential.
4. The continuation of this study for longer period is highly recommended.

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Pregnancy Outcome Study In Butajira

Household Identification

1. Peasant Association_____
2. House No._____
3. Name of head of the household_____

Mothers Identification

4.Name of the mother_____
5.ID Number_____
6.Age of the mother in years(what is your age?) _____
7.Relation to the head of the household_____
8.Educational status

0. Illiterate
77. Can read only
88. Can read and write
Attended school, last grade achieved _____

9.Ethnicity of the mother

0. Wolenie 1. Sodo 2. Dobi 3. Meskan
4. Mareko 5. Silti 6. Amhara 7. Oromo
8. Other specify_____

10.Occupation of the mother

1. Agriculture 2. Commerce
3. Cattle rearing 4. Administrative worker
5. Driver 6. Handcrafts
7. Day labourer 8. Housewife
9. Other_____

11.Marital status

1. Married: I am the only wife of my husband
2. Married: my husband has two wives
3. Married: my husband has three wives
4. Married: my husband has four wives
5. Divorced
6. Separated
7. Never married
8. Widowed

12.Religion of the mother

1. Orthodox 2. Muslim
3. Catholic 4.Protestant
5. Other_____

13.Total number of household_____

Past Obstetric History

14. What was your age when you were first married ?_____
15. Have you ever been pregnant ? 1. Yes, _____ times. 2. No
    If the answer is no, go to question no. 24
16. What was your age at your first pregnancy_____
17. Have you ever aborted ? 1. Yes, _____ times. 2. No
18. Have you given birth to a child ?
    1. Yes, Number of children:_____ 2. No
19. How many live births did you have ? _____
20. Did you have stillbirths ? 1. Yes, _____ times. 2. No
21. Have you experienced an infant death ? 1. Yes , _____ 2. No
22. How many home deliveries (live and dead) did you have ? _____
23. How many health institution deliveries(live & dead) did you have?____
24. Are you pregnant now ? 1. Yes. 2. No
25. How long have you been pregnant? _____ months.
26. Are you attending ANC for this pregnancy ? 1. Yes 2. No
27. If yes, how many visits have you made so far ? _____
    Which month did you start the ANC ? _____
28. If you are not attending ANC, what is the reason ?
    1. I don't know there is such a service.
    2. The health unit is far away from my home.
    3. I don't have any health problem.
    4. I don't like the way the health professionals handle clients.
    5. My belief doesn't allow me.
    6. Other, specify_____
29. Have you received tetanus toxoid vaccination during this pregnancy ?
    1. Yes, _____ times. 2. No
30. Where do you want to deliver your baby ?
    1. In my parent's house 2. At my home 3. Health post
    4. Clinic 5. Health center 6. Hospital
    7. Other specify_____
31. Whom do you want to assist your delivery ?
    1. Traditional birth attendant 2. Relative
    3. Neighbour/friend 4. Health professional
    5. Trained TBA 6. Community Health Agent
    7. I will do it myself 8. Other, specify_____

32. If your preference is to deliver at home, what is your reason ?
    1. The charge in the health unit is beyond my capacity.
    2. The health professionals do not handle clients properly.
    3. I want to deliver at the presence of my relatives.
    4. I believe in the TBAs. 5. Other specify_____

33. Have you had any problem related to the current pregnancy so far?
    1. Yes 2. No
    If the answer is no go to question no. 38.

34. Can you tell what problems you faced specifically?_____
35. Have you had any of the following problems?

1. Vaginal bleeding	1. Yes	2. No
2. Foul smelling vaginal discharge	1. Yes	2. No
3. Nausea/ vomiting	1. Yes	2. No
4. Fever	1. Yes	2. No
5. Leg swelling	1. Yes	2. No
6. Headache	1. Yes	2. No
7. Fit	1. Yes	2. No
8. Easy fatigueability	1. Yes	2. No
9. Abdominal pain	1. Yes	2. No

36. What have you done to alleviate the problems you had?
    1. Nothing
    2. Took traditional medicine
    3. Treated by health professional
    4. Other specify_____
37. What was the outcome of the treatment?]
    1. Cured 2. Improved 3. no change 4. worsened
    5. Other(specify) _____
38. What food items are prohibited during pregnancy?_____

39. What food items are good during pregnancy ?_____
40. What traditional measures are taken when labour is prolonged ?

_____
41. What traditional measures are taken when the placenta is retained?

42. The height of the mother (pregnant woman) in centimetres_____
43. Arm circumference measurement: _____cm

Pregnancy Follow - up

Form Number: _____
Enumerator's Name: _____
Signature: _____
Date: _____

Peasant Association: _____
House Number: _____
Name of head of the household: _____
Name of the mother: _____
ID number: _____
Visit number: _____

1. Did you have any illness in the past one month ?
   1. Yes
   2. No (If the answer is no go to question no. 6.)

2. Can you tell what problems you had specifically? _____

3. Have you had any of the following problems ?

1. Vaginal bleeding	1. Yes	2. No
2. Foul smelling vaginal discharge	1. Yes	2. No
3. Nausea/ vomiting	1. Yes	2. No
4. Fever	1. Yes	2. No
5. Leg swelling	1. Yes	2. No
6. Headache	1. Yes	2. No
7. Fit	1. Yes	2. No
8. Easy fatigueability	1. Yes	2. No
9. Abdominal pain	1. Yes	2. No

4. What measures did you take ?
   1. Nothing
   2. Took traditional medicine
   3. Treated by health professional
   4. Other specify _____
5. What was the outcome of the treatment?]
   1. Cured
   2. Improved
   3. no change
   4. worsened
   5. Other(specify) _____
6. Do you feel the movement of the fetus in your womb ?
   1.Yes 2. No 3. I don't know

7. Have you attended antenatal care during the last one month?
   1. Yes 2. No

8. Have you been given tetanus toxoid vaccination in the last one month?
   1.Yes 2. No 3. I don't know

9. Were you given iron tablets in the past one month ?
   1. Yes 2. No 3. I don't know

Pregnancy Follow - up

Form Number: _____
Enumerator's Name: _____
Signature: _____
Date: _____

Peasant Association: _____
House Number: _____
Name of head of the household: _____
Name of the mother: _____
ID number: _____
Visit number: _____

1. Did you have any illness in the past one month ?
   1. Yes
   2. No (If the answer is no go to question no. 6.)

2. Can you tell what problems you had specifically? _____

3. Have you had any of the following problems ?

1. Vaginal bleeding	1. Yes	2. No
2. Foul smelling vaginal discharge	1. Yes	2. No
3. Nausea/ vomiting	1. Yes	2. No
4. Fever	1. Yes	2. No
5. Leg swelling	1. Yes	2. No
6. Headache	1. Yes	2. No
7. Fit	1. Yes	2. No
8. Easy fatigueability	1. Yes	2. No
9. Abdominal pain	1. Yes	2. No

4. What measures did you take ?
   1. Nothing
   2. Took traditional medicine
   3. Treated by health professional
   4. Other specify _____
5. What was the outcome of the treatment?]
   1. Cured
   2. Improved
   3. no change
   4. worsened
   5. Other(specify) _____
6. Do you feel the movement of the fetus in your womb ?
   1.Yes 2. No 3. I don't know

7. Have you attended antenatal care during the last one month?
   1. Yes 2. No

8. Have you been given tetanus toxoid vaccination in the last one month?
   1.Yes 2. No 3. I don't know

9. Were you given iron tablets in the past one month ?
   1. Yes 2. No 3. I don't know

Pregnancy Follow - up

Form Number: _____
Enumerator's Name: _____
Signature: _____
Date: _____

Peasant Association: _____
House Number: _____
Name of head of the household: _____
Name of the mother: _____
ID number: _____
Visit number: _____

1. Did you have any illness in the past one month ?
   1. Yes
   2. No (If the answer is no go to question no. 6.)

2. Can you tell what problems you had specifically? _____

3. Have you had any of the following problems ?

1. Vaginal bleeding	1. Yes	2. No
2. Foul smelling vaginal discharge	1. Yes	2. No
3. Nausea/ vomiting	1. Yes	2. No
4. Fever	1. Yes	2. No
5. Leg swelling	1. Yes	2. No
6. Headache	1. Yes	2. No
7. Fit	1. Yes	2. No
8. Easy fatigueability	1. Yes	2. No
9. Abdominal pain	1. Yes	2. No

4. What measures did you take ?
   1. Nothing
   2. Took traditional medicine
   3. Treated by health professional
   4. Other specify _____
5. What was the outcome of the treatment?]
   1. Cured
   2. Improved
   3. no change
   4. worsened
   5. Other(specify) _____
6. Do you feel the movement of the fetus in your womb ?
   1.Yes 2. No 3. I don't know

7. Have you attended antenatal care during the last one month?
   1. Yes 2. No

8. Have you been given tetanus toxoid vaccination in the last one month?
   1.Yes 2. No 3. I don't know

9. Were you given iron tablets in the past one month ?
   1. Yes 2. No 3. I don't know

Labour and Delivery Record (For mothers who had delivered)

Form Number: _____
Enumerator's Name: _____
Signature: _____
Date: _____

Peasant Association: _____
House Number: _____
Name of head of the household: _____
Name of the mother: _____
ID number: _____

1. Was the delivery at the expected time?
   1. Term 2. Preterm 3. Post term

2. Where did you deliver ?
   1. In parent's house 2. At home
   3. In neighbour's house 4. Health post
   5. Clinic 6. Health center
   7.Hospital 8. Other specify _____

3. What is the age of the newborn ? _____ days.
4. How long did the labour last ?
   1. One day 2. Day and night 3. Two days and one night
   4. Two days and two nights 5. Other specify _____

5. Have you had problem during labour ? 1. Yes 2. No
6. If yes, what was the problem ?
   1. Vaginal bleeding
   2. Prolonged labour (above 24 hours)
   3. Retained placenta (above 30 minutes)
   4. Other specify _____
7. What measures were taken to alleviate the problem ?
   1. Nothing 2. Took traditional medicine.
   3. Treated by health professional 4. Other, specify _____
8. What was the outcome of the treatment?]
   1. Cured 2. Improved
   3. no change 4. worsened
   5. Other(specify) _____
9. Who assisted the delivery ?
   1. Traditional Birth Attendant(TBA) 2. Relative
   3. Neighbour 4. Health professional
   5. Trained TBA 6. Myself
   7. Community Health Agent (CHA) 8. Other specify _____
10. What was used to cut the umbilicus ?
   1. New blade 2. Unboiled blade
   3. Boiled blade 4. New knife
   5. Unboiled knife 6. Boiled knife
   7. Other specify _____

11. What was used to tie the umbilical stump ?
    1. Boiled thread 2. Unboiled thread
    3. String (Fibre) 4. Weficho
    5. Other(specify)_____
12. What did you apply to the umbilical stump ?
    1. Nothing 2. Ash
    3. Soil 4. Dung
    5. Butter 6. Other specify_____

Condition of the neonate during delivery

1. What was the outcome ? 1. Live birth 2. Stillbirth
2. Sex of the baby: 1. Male 2. Female
3. What was the weight of the baby at birth ?
    1. Very small 2. Small
    3. Normal/average 4. Big
    5. Very big
4. Was it twin delivery ?
    1. No 2. Twins
    3. Triples 4. Other specify_____
5. What was the condition of the baby at birth ?
    1. Healthy 2. Abnormal
    If abnormal specify the deformity_____
6. What did you give to the baby right after birth ?
    1. Breast milk 2. Butter
    3. Water 4. Cow's milk
    5. Other specify _____
7. What is the weight of the baby ? _____ grams.
8. What is the height of the baby ? _____ centimetres.
9. What is the arm circumference of the baby? _____ cm.

Postnatal Follow-Up

Form Number: _____
Enumerator's Name: _____
Signature: _____
Date: _____

Peasant Association: _____
House Number: _____
Name of head of the household: _____
Name of the mother: _____
ID number: _____

About the Mother

1. What is the condition of the mother ?
   1. Healthy 2. Sick 3. Dead
   If dead, go to question no. 7
2. Did you have any health problem since the last visit?
   1. Yes 2. No
3. Can you tell what problems you had specifically?_____
4. Have you had any of the following problems ?

1. Excessive vaginal bleeding	1. Yes	2. No
2. Foul smelling vaginal discharge	1. Yes	2. No
3. Leakage of urine which wets the underwear	1. Yes	2. No
4. Leakage of stool through the vagina	1. Yes	2. No
5. Fever	1. Yes	2. No
6. Lower abdominal pain	1. Yes	2. No

5. What measures did you take to alleviate the problem ?
   1. Nothing 2. Used traditional medicine.
   3. Treated by health professional 4. Other specify_____
6. What was the outcome of the treatment?
   1. Cured 2. Improved
   3. no change 4. worsened
   5. Other(specify) _____
7. If dead, when did she die? _____ days after delivery
8. What was the cause of death ?
   1. Excessive vaginal bleeding 2. High fever
   3. Other specify _____
9. What actions were taken to solve the problem?
   1. Nothing 2. Traditional medicine
   3. Treated by health professional 4. Other specify _____
10. What foods are prohibited during postpartum period?_____
11. What food items are good during postpartum period?_____
12. What is the arm circumference of the mother? _____ centimetres.

About the Baby

1. What is the age of the newborn ? _____ days.
2. What is the present condition of the baby ?
   1. Healthy 2. Sick 3. dead(go to question 13)
3. What is the weight of the baby ? _____ grams.
4. What is the arm circumference of the baby ? _____ centimetres.
5. What is the height of the baby ?_____ cm.
6. If he/she is sick, what is the symptom ?
   1. Cough 2. Shortness of breath
   3. Diarrhoea 4. Vomiting
   5. Fever 6. Other specify _____
7. What was the duration of the symptom ? _____ days.
8. What actions did you take ?
   1. Nothing 2. Traditional medicine
   3. Treated by health professional 4. Other specify _____

9. What was the outcome of the treatment?
   1. Cured 2. Improved
   3. no change 4. worsened
   5. Other(specify)_____
10. Did your child receive vaccination ? 1. Yes 2. No
11. If not, what was the reason ?
   1. I didn't know there is such a service
   2. The health unit is far away from my home.
   3. Other specify _____
12. What are you feeding the child ?
   1. Breast milk only 2. Breast milk & Bottle milk
   3. Bottle milk only 4. Other specify_____

End for those who answered the above questions(4-14).

13. At what age did he(she) die? _____ days.
14. What was the cause of death ?
   1. Cough 2. Shortness of breath
   3. Diarrhoea 4. Vomiting
   5. Fever 6. Other specify _____
15. What was the duration of this symptom? _____ days.
16. What action was taken to solve the problem?
   1. Nothing 2. Traditional medicine
   3. Treatment by health professional 4. Other specify _____

Questionnaire on Abortion

Form Number: _____
Enumerator's Name: _____
Signature: _____
Date: _____

Peasant Association: _____
House Number: _____
Name of head of the household: _____
Name of the mother: _____
ID number: _____

1. When did you abort? _____Days.
2. What do you think the cause of abortion is?
   1. Heavy/strenuous work
   2. Malaria
   3. Medicine, specify it_____
   4. Accident
   5. Spontaneous
   6. Induced
   7. Other specify
3. What problem/ complication did you face in association with the abortion?
   1. Heavy vaginal bleeding 2. Foul smelling vaginal discharge
   3. Abdominal pain 4. Fever
   5. Other specify:_____
4. Did you seek any medical treatment?
   1. Yes 2. No
5. Where were you treated?
   1. Traditional healer 2. Health post
   3. Private clinic 4. Clinic
   5. Health center 6. Hospital
   7. Other specify
6. What was the result of the treatment?
   1. Cured 2. Improved
   3. No change 4. Worsened
   5. Other specify
7. Was this pregnancy wanted ?
   1. Yes 2. No

የነፍሰ ጡር እናቶች ጤና ክትትል ጥናት
በቡታጅራ

የመመዝገቢያ ቅጽ_____
የመረጃ ሰብሳቢው ስም_____
ፊርማ _____
ቀን _____

ይህ ጥናት የእናቶችንና የህፃናትን የጤና ችግሮች ለመረዳት የሚያስችልና ወደፊትም ጤናቸውን ለማሻሻል ለሚደረገው ጥረት አጋዥ እንደሚሆን ይታመንበታል። የሚሰበሰበው መረጃ በሙሉ ለጥናቱ ሥራ ብቻ የሚውል ሆኖ በሚስጥር የሚያዝ ነው። ጥያቄዎቻችን 1ኛ. አጠቃላይ ሁኔታን (ዕድሜ፣ ሥራ፣ የትምህርት ደረጃ፣ ሀይማኖት ወዘተ...) 2ኛ. የወሊድ ታሪክን 3ኛ. የአሁኑን እርግዝናና እንዲሁም ወሊድንና የአራስነት ጊዜን የጤና ሁኔታ ይጨምራል። በዚህ ጥናት ለመሳተፍ ፈቃደኛ ከሆኑ ጥያቄውን እንጀምራለን።

_____ ተስማምቻለሁ

_____ አልተስማማሁም

የነፍሰ ጡር እናቶች ጤና ክትትል ጥናት
በቡታጅራ

የቤተሰቡ መረጃ

1	የገበሬ ማህበሩ ስም	
2	የቤት ቁጥር	
3	የቤተሰብ ሓላፊ ስም	
የእናት (የነፍሰ ጡር) መረጃ		
4	የነፍሰ ጡሯዋ ስም	
5	የመለያ ቁጥር	
6	ዕድሜ በአመት	/
7	ከቤተሰብ ሓላፊ ጋር ያላቸው ግንኙነት	
8.	የትምህርት ደረጃ 0. ፈፅሞ አልተማሩም 88. ማንበብና መፃፍ ይችላሉ 77. ማንበብ ብቻ ከተማሩ ያጠናቀቁት ከነኖል ይግለፅ	
9	ብሔረሰብዎ ምንድነው? 0. ወለኔ 1. ሶዶ 2.ዶቢ 3.መሰቃን 4.ግሬቶ 5. ስልጢ 6. አማራ 7. ኦሮሞ 8. ሌላ ይገለፅ (ትልትል ይገለፅ)	
10	የእርስዎ ሥራ ምንድነው? 1.እርሻ 2.ንግድ 3 ከብት እርባታ 4.የአስተዳደር ሠራተኛ 5.ሾፌር 6.እደጥበብ ሠራተኛ 7.የቀን ሠራተኛ 8. የቤት እመቤት 9.ሌላ(ይገለጽ)	
11	የጋብቻ ሁኔታ 1. ያገባ፤ ባለቤትዎ አንድ ሚስት ያለው 2. ያገባ፤ ባለቤትዎ ሁለት ሚስት ያለው 3. ያገባ፤ ባለቤትዎ ሶስት ሚስት ያለው 4. ያገባ፤ ባለቤትዎ አራት ሚስት ያለው 5. ፍቺ 6. የተለያዩ 7. ያላገቡ 8. በሞት የተለየ	
12	የእርስዎ ሀይማኖት ምንድነው? 1. ኦርቶዶክስ 2. እስላም 3. ካቶሊክ 4. ፕሮቴስታንት 5. ሌላ ይገለፅ	
13	ጠቅላላ የቤተሰብ ብዛት	

ስላለፉት የወሊድ ሁኔታዎች መጠየቅ

14	በመጀመሪያ ሲያገቡ ዕድሜዎ ስንት ነበር?	
15	አርግዘው ያውቃሉ? 1. አዎ፤ _____ ጊዜ 2.የለም የለም ከሆነ ወደ ጥያቄ 24 ሂጂ	
16	መጀመሪያ ሲያረግዙ እድሜዎ ስንትነበር?	
17	አስወርደዎት ያውቃል? 1. አዎ፤ _____ጊዜ 2. የለም	
18	ልጅ ወልደው ያውቃሉ? 1.አዎ፤ _____ጊዜ 2. የለም	
19	በህይወት የወለዱዋቸው ልጆች ስንት ናቸው?	
20	ሞቶ የተገላገሉት ልጅ አለ? 1. አዎ፤ _____ ጊዜ 2.የለም	
21	አንድ አመት ያልሞላው ልጅ ሞቶቦት ያውቃል? 1.አዎ፤ ____ 2. የለም	
22	በቤት ውስጥ የተወለዱት (በሕይወትና ሞተው) ስንት ልጅ ነው?	
23	በጤና ድርጅት ውስጥ የተወለዱ (በሕይወትና ሞተው) ልጆች ቁጥር ስንት ነው?	

የአሁኑን እርግዝና የሚመለከት መጠየቅ

24	አሁን እርጉዝ ኖዎት? 1. አዎ 2. የለም	
25	ከአረገዙ ስንት ወር ሆኖት?	
26	የነፍሰ ጡር ጤና ክትትል ያደርጋሉን? 1. አዎ 2 የለም	
27	የጤና ክትትል የሚያደርጉ ከሆነ እስካሁን ስንት ጊዜ አድርገዋል? የጤና ክትትሉን በየትኛው ወር ጀመሩ?	
28	የጤና ክትትል የማያደርጉ ከሆነ ምክንያቱ ምንድነው? 1. ለነፍሰጡሮች የጤና ክትትል እንደሚደረግ ስለማላው 2. የጤና ድርጅቱ ሩት ስለሆነ ነው 3. ምንም ገንዘብ የጤና ችግር ስለሌለብኝ ነው 4.የጤና ባለሙያዎች አያያዝ ጥሩ ስላልሆነ 5. እምነቴ ስለማይፈቅድልኝ 6. ሌላ ምክንያት ካለ ይገለፅ	
29	በዚህ እርግዝና ወቅት የመንጋጋ ቆልጭ ክትባት ተከትበዋልን? 1. አዎ፤ _____ ጊዜ 2. የለም	
30	የት ቦታ ነው መውለድ የሚፈልጉት? 1. ወላጆች ቤት 2.መኖሪያ ቤት 3. ጤና ኬላ 4. ክሊኒክ 5. ጤና ጣቢያ 6. ሆስፒታል 7. ሌላ ይገለፅ:-	
31	በወሊድ ጊዜ ማን እንዲያዋልድዎት ይፈልጋሉ? 1.ያልሰለጠነች የልምድ አዋላጅ 2.ቤተዘመድ 3.ንረቤት/ጉጥደኛ 4.የጤና ባለሙያ 5.የሰለጠነች የልምድ አዋላጅ 6. የጤና ተጠሪ 7.እራሴ እወልዳለሁ/ምንም ረዳት አልፈልግም 8. ሌላ ይገለፅ:-	
32	ቤት ለመውለድ የሚፈልጉ ከሆነ ምክንያቱ ይገለፅ 1. በጤና ድርጅት ክፍያው ከአቅም በላይ ስለሆነ 2. የጤና ባለሙያዎች በደንብ ስለማያስተናግዱ 3. ዘመዶቼ ባሉበት ለመውለድ ስለምፈልግ 4. በልምድ አዋላጆች ላይ እምነት ስላለኝ 5. ሌላ ይገለፅ:-	
33	በእርግዝና ወቅት ያጋጠሞት የጤና ችግር አለ? 1. አዎን 2. የለም፤ የለም ካሉ ወደ ጥያቄ 38 ሂጂ	

የመመዝገቢያ ቁጥር_____
የመረጃ ሰብሳቢው ስም_____
ፊርማ_____
ቀን_____

የገበሬ ማህበሩ ስም _____
የቤት ቁጥር_____
የቤተሰብ ሀላፊ ስም_____
የነፍሰ ጡሩዋ ስም_____
የመለያ ቁጥር_____
የጉብኝት ቁጥር _____

1	ባለፈው አንድ ወር ውስጥ የጤና ችግር ነበረበዎት? 1. አዎን 2. የለም፤ የለም ካሉ ወደ ጥያቄ 6 ሂጂ	
2	ምን አይነት ችግር እንደነበረብዎት ቢገልፁልን?	
3	ከሚከተሉት ውስጥ የትኛው የጤና ችግር ነበረብዎት? 1. ከማህፀን ደም መፍሰስ 1. አዎ 2 የለም 2. መጥፎ ሽታ ያለው ፈሳሽ ከማህፀን መውጣት 1. አዎ 2.የለም 3. ማቅለሽለሽ/ማስታወክ 1. አዎ 2.የለም 4. ትኩሳት 1. አዎ 2.የለም 5. የእግር እብጠት 1. አዎ 2.የለም 6. ራስ ምታት 1. አዎ 2.የለም 7. ማንቀጥቀጥ 1. አዎ 2.የለም 8. የድካም ስሜት 1. አዎ 2.የለም 9. የሆድ ህመም 1. አዎ 2.የለም	
4	ችግሩን ለማስወገድ ምን አይነት እርዳታ ወሰዱ? 1. ምንም 2.የባህል መድሀኒት ወሰድኩ 3.በጤና ባለሙያ ታክሜኩ 4. ሌላ ይገለፅ	
5	ውጤቱ ምን ነበር? 1. ድኛለሁ 2 ተሻሽሏል 3. ምንም ለውጥ የለውም 4. ብሶብኛል 5. ሌላ ይገለፅ	
6	ሽሉ በማህፀንዎ ውስጥ ይንቀሳቀሳል? 1.አዎን 2.የለም 3. አላውቅም	
7	ባለፈው ወር ውስጥ የእርግዝና የጤና ክትትል አድርገዋልን? 1.አዎን 2. የለም	
8	ባለፈው ወር ውስጥ የመንጋጋ ቆልፍ ክትባት ወስደዋልን? 1. አዎን 2.የለም 3 አላውቅም 4 ክትባቱን ጨርሻለሁ	
9	ባለፈው ወር ውስጥ የደም ማነስ መከላከያ (የአይረን እንክብሎች) ወስደዋልን? 1. አዎን 2.የለም 3. አላውቅም	

* ይህ ቅጽ የሚያገለግለው ለወርሐዊ ክትትል ነው።

የመመዝገቢያ ቁጥር _____
የመረጃ ሰብሳቢው ስም _____
ፊርማ _____
ቀን _____

የገበፈ ማህበሩ ስም _____
የቤት ቁጥር _____
የቤተሰብ ኃላፊ ስም _____
የነፍሰጡሩዋ ስም _____
የመለያ ቁጥር _____

ስለምጥና ወሊድ የሚቀርብ መጠይቅ (ለወለዱ እናቶች ብቻ)		
1	የወለዱት ቀኑ ያርሶ ነበር? 1. በቀኑ የተወለደ 2. ከቀኑ በፊት የተወለደ 3. ቀኑ አልፎ የተወለደ	
2	የወለዱት የት ነው? 1.በወላጆች ቤት 2.በመኖሪያ ቤት 3. ጎረቤት 4.ጤና ኬላ 5.ክሊኒክ 6. ጤናጣቢያ 7. ሆስፒታል 8. ሌላ ይገለፅ	
3	ከወለዱ ስንት ቀን ሆነዎት? _____ ቀን	
4	ምጡ ምን ያህል ጊዜ ፈጀቦት? 1.አንድ ቀን 2. አንድ ቀንና ለሊት 3.ሁለት ቀንና አንድ ሌሊት 4.ሁለት ቀንና ሁለት ሌሊት 5. ሌላ ይገለፅ	
5	በወሊድ ጊዜ ችግር አጋጥሞት ነበር? 1. አዎን 2. የለም	
6	ችግር ከነበረብዎት ምን እንደሆነ ቢገልፁልን? 1. ብዙ ደም ከማህፀን መፍሰስ 2. የምጥ መጥናትና ረጂም ጊዜ መፍጀት ከአንድ ቀንና ሌሊት (ከ24 ሰዓት በላይ) 3. የእንግዴ ልጁ ሳይወጣ መቆየት 4. ሌላ(ይገለፅ):-	
7	ችግሩን ለማቃለል ምን እርምጃ ወሰዱ? 1. ምንም 2.የባህል መድሀኒት ወሰድኩ 3.በጤና ባለሙያ ታክሜኩ 4. ሌላ ይገለፅ	
8	ውጤቱ ምን ነበር? 1. ድኛለሁ 2.ተሽሎኛል 3. ምንም ለውጥ የለውም 4. ብሶብኛል 5. ሌላ ይገለፅ	
9	ማነው ያዋለድዎት? 1. የልምድ አዋላጅ 2. ቤተዘመድ 3. ጎረቤት 4. የጤና ባለሙያ 5. የሰለጠነች የልምድ አዋላጅ 6. እናትየዋ ራስዋ 7. የጤና ተጠሪ 8. ሌላ ይገለጽ	
10	የህፃኑ እትብት በምን ተቆረጠ? 1. አዲስ ምላጭ 4. አዲስ ሰንጢ 2. ያልተቀቀለ ምላጭ 5. ያልተቀቀለ ሰንጢ 3. የተቀቀለ ምላጭ 6. የተቀቀለ ሰንጢ 7. ሌላ ይገለፅ	
11	እትብቱ በምን ታሰረ? 1. በተቀቀለ ክር 3. በቃጫ 2. ባልተቀቀለ ክር 4 በወፍ ጥ 5. ሌላ ይገለፅ	
12	እትብቱ ከተቆረጠ በሁዋላ የቀቡት ነገር አለ? 1. ምንም 2. አመድ 3. አፈር እምነት 4. እበት 5. ትቢ 6 ሌላ ይገለፅ -	

በወሊድ ጊዜ የህፃኑ ሁኔታ

1	ህፃኑ ሲወለድ በህይወት ነበር? 1. በሕይወት ተወለደ 2.ሞቶ ተወለደ	
2	የልጁ ፆታ 1. ወንድ 2. ሴት	
3	እንደተወለደ የልጁ ክብደት እንዴት ነበር? 1.በጣም ትንሽ 2. ትንሽ 3.መካከለኛ 4.ትልቅ 5.በጣም ትልቅ ነበር	
4	ህፃኑ መንትያም ነበሩት? 1. የለም 2. መንታ 3. ሦስት 4. ሌላ ይገለፅ	
5	ህፃኑ ሲወለድ የነበረው የሰውነት ሁኔታ 1. ጤነኛ 2. አነሰ ሰንካላ/ያልተሰተካከለ ሰውነት የነበረው (ይገለፅ)	
6	ልጁ እንደተወለደ ምን ሰጣችሁት (መገባችሁት)? 1. የእናት ጡት ወተት 2.ቅቤ 3.ውኃ 4. የላም ወተት 5. (ሌላ ይገለፅ):-	
7	የልጁ ክብደት በግራም ስንት ነው? _____ ግራም	
8	የልጁ ቁመት (ርዝመት) በሳንቲ ሜትር ስንት ነው? _____ ሳንቲ ሜትር	
9	የልጁ ክንድ ስፋት (ዙሪያ) በሳንቲ ሜትር ስንት ነው? _____ ሳንቲ ሜትር	

የመመዝገቢያ ቁጥር_____
የመረጃ ሰብሳቢው_____
ስም ፊርማ_____
ቀን_____

የገበሬ ማህበሩ ስም_____
የቤት ቁጥር_____
የቤተሰብ ኃላፊ ስም_____
የነፍሰጡሩዋ ስም_____
የመለያ ቁጥር_____

ስለእናት ሁኔታ

1	ከወለዱ በኋላ የጤና ችግር ነበረቦት? 1.ጤነኛ 2. ታመዋል 3. ሞተዋል ፤ከሞቱ ወደ ተያቂ 7 ሂጂ	
2	ካለፈው ጉብኝት ወዲህ ያጋጠመዎት የጤና ችግር አለ? 1.አዎ 2. የለም	
3	ምን አይነት ችግር እንደነበረብዎት ቢገልፁልን?	
4	ከሚከተሉት ውስጥ የትኛው የጤና ችግር ነበረብዎት? 1. ብዙ ደም ከማህፀን መፍሰስ 1.አዎ 2.የለም 2. መጥፎ ሽታ ያለው ፈሳሽ ከማህጸን መውጣት 1.አዎ 2.የለም 3. ሽንት መቆጣጠር አለመቻልና የውስጥ ልብስ መርጠብ 1.አዎ 2.የለም 4. በብልት በኩል ሰገራ መውጣት 1.አዎ 2.የለም 5. ትኩሳት 1.አዎ 2.የለም 6. የሆድ ህመም 1.አዎ 2.የለም	
5	ችግሩን ለማቃለል ምን እርምጃ ወሰዱ? 1. ምንም 2.የባህል መድሀኒት ወሰድኩ 3.በጤና ባለሙያ ታክሜአለሁ 4. ሌላ ይገለፅ	
6	ወጪው ምን ነበር? 1. ድኛለሁ 2.ተሸሉኛል 3. ምንም ለውጥ የለውም 4. ብሶብኛል 5. ሌላ ይገለፅ	
7	ከሞቱ መቼ እንደሞቱ ይገለፅ? በወለዱ _____ ቀን	
8	የሞታቸው ምክንያት ምንድነው? 1. ብዙ ደም ፈሱዋቸው 2.ሀይለኛ ትኩሳት 3. ሌላ ይገለፅ	
9	ችግሩን ለማቃለል ምን እርምጃ ተወስዶ ነበር? 1. ምንም 2.የባህል መድሀኒት ወስዳ ነበር 3.በጤና ባለሙያ ታክማ ነበር 4. ሌላ ይገለፅ	
10	ከወሊድ በሁዋላ ለወላድ የሚከለከሉ ምግቦች ምንድናቸው?	
11	ከወሊድ በሁዋላ ጥሩ ናቸው የሚባሉት ምግቦች ምንድናቸው?	
12	የእናት የክንድ ስፋት (ዙሪያ) በሳንቲ ሜትር? _____ ሳንቲ ሜትር	

ስለህጻኑ ሁኔታ

1	የህፃኑ እድሜ ስንት ነው? _____ ቀን	
2	የህፃኑ የጤንነት ሁኔታ ባሁኑ ጊዜ እንደኤት ነው? 1.ጤነኛ ነው 2.ታሞአል 3. ሞቶአል፤ ከሞተ ወደ ጥያቄ13 ሂጂ	
3	የሕፃኑ ክብደት በግራም ? _____ ግራም	
4	የህጻኑ ክንድ ስፋት (ዙሪያ) በሳንቲ ሜትር ? _____ ሳንቲ ሜትር	
5	የሕፃኑ ቁመት በሳንቲ ሜትር ? _____ ሳንቲ ሜትር	
6	ታሞ ከሆነ ምልክቱ ምንድነው? 1. ሳል 2. የትንፋሽ ማጠር 3. ተቅማጥ 4.ትውከት 5. ትኩሳት 6. ሌላ ይገለፅ:-	
7	ይህ ምልክት ለምን ያህል ጊዜ ቆየ?	
8	ይኸንን ችግር ለማስወገድ ምን ዓይነት እርምጃ ተወሰደ? 1. ምንም 2. የባሕል መድሀኒት ተሰጠው 3. በባለሙያ ሕክምና ተደረገለት 4. ሌላ ይገለፅ:-	
9	ውጤቱ ምን ነበር? 1. ድኖአል 2. ተሻሎታል 3.ለውጥ የለውም 4.ብሶበታል 5. ሌላ ይገለጽ	
10	ልጁን ክትባት አስከትበዋል? 1. አዎ 2. የለም	
11	ካልተከተበ ምክንያቱን ቢገልጹልን? 1.ክትባት እንደሚሰጥ አላውቅም 2.ክትባት የሚሰጥበት የጤና ድርጅት ሩቅ በመሆኑ 3. ሌላ ይገለጽ:-	
12	ልጁ ምን ይመገባል? 1.የእናት ጡት ብቻ 2. የእናት ጡት እና ወተት በጡጦ 3.ወተት በጡጦ የእናት ጡት አይጠጣም 4. ሌላ ይገለፅ	
ልጁ በህይወት ካለ ጥያቄው እዚህ ላይ ያበቃል		
13	ከሞተ፣ ከተወለደ በስንተኛው ቀን ነው የሞተው?	
14	ለሞት ያበቃው በሽታ ምልክቱ ምን ነበር? 1.ሳል 2.የትንፋሽ ማጠር 3. ተቅማጥ 4.ትውከት 5. ትኩሳት 6. ሌላ ይገለፅ:-	
15	ይህ ምልክት ለምን ያህል ጊዜ ቆየ?	
16	ችግሩን ለማስወገድ የተወሰደው እርምጃ ምን ነበር? 1.ምንም 2.የባህል መድሀኒት 3. በባለሙያ ሕክምና ተደረገለት 4.ሌላ ይገለፅ	

X. DECLARATION

I, the undersigned, declare that this thesis is my original work and has not been presented for a degree in this or any other university and that all sources of materials used for the thesis have been duly acknowledged.

Name Kifle Wolde Michael

Signiture _____

Place Addis Ababa

Date of submission _____

This thesis has been submitted for examination with our approval as University Advisors.

Yemane Berhane, MD. _____