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Family and community practices of newborn care in Pyay District

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The study aims to assess the level of and barriers to key family and community practices concerning newborn care in Pyay District. The study was done from January to June 2005 in five townships of Pyay District. A total of 1090 mothers with under five years old children were interviewed using a pre-tested face-to-face interview questionnaire. For the qualitative assessment, a total of 20 Focus Group Discussions were carried out with 157 mothers. In-depth Interviews were also carried out with 15 health care providers of child care and 7 mothers with neonates. Observations were also done on some of the family and community practices in relation to newborn care. Eighty percent of the mothers in the study had home deliveries. Sixty-two percent of the mothers were delivered by a trained birth attendant. Although most of the deliveries used clean sterilized instruments, there is still practice of using un-sterilized bamboo slab for cutting the umbilical cord by traditional birth attendants. Fifty-four percent of the babies in the study were immediately bathed after birth. Nearly seventy percent of the babies in the study were also wrapped with clothes from head to toe immediately after delivery. All the newborn children in the study were breastfed immediately after birth. But only one third of the breastfed children received exclusive breastfeeding. The reasons underlying the key family and community practices concerning newborn care were also explored. The study highlights that newborn care from a family and community perspective is an important input for the programmes.

INTRODUCTION

Children are highly vulnerable to poor health outcomes and fatality for various reasons and child health development plays the integral and vital role in improving the health status of populations. More than 10 million children die each year, most from preventable causes [1]. Among them, neonates bear the brunt of under five years mortality. In 2003, 73% of under-five deaths occurred during infancy and 34% of infant deaths occurred during the neonatal period [2]. Almost all neonatal deaths arise in low income and middle income countries and about half occurred at home [3]. Globally the main direct causes of neonatal deaths are estimated to be pre-term birth (28%), severe infection (26%) and asphyxia (23%). Neonatal tetanus accounts for a smaller proportion of deaths (7%), but is easily preventable. Low birth weight is also an important indirect cause of death [4].

WHO and UNICEF have developed the Integrated Management of Childhood Illness (IMCI) strategy to reduce childhood illness and deaths and improve growth and development of children [5]. Within the framework of that five-year strategic plan (2005-2009) for child health development, the IMCI strategy will be implemented in 4 model districts including Pyay District with more emphasis on improving family and community practices, especially about neonatal care. Before implementing the initiative in these districts, there is a need to assess the family and community practices

about neonatal care, and the barriers to these practices to provide baseline information for later evaluation and inputs for improved program design.

Objectives

The study aims at assessing the level of and barriers to key family and community practices concerning newborn care in Pyay District.

Specifically the study aims:

- to determine the level of the existing family and community practices concerning essential newborn care
- to identify barriers to the family and comm.unity practices concerning essential newborn care
- to provide baseline information and recommendations for improving the family and community practices of essential newborn care

MATERIALS AND METHODS

Study design

The study comprises 2 components:

1. Quantitative assessment and
2. Qualitative assessment.

Study area

The study was done in Pyay District including the following 5 townships:

1. Pyay Township
2. Pauk-khaung Township
3. The-gone Township
4. Shwe-taung Township
5. Paung-de Township

Study period

January to June 2005

Sample selection and sample size

In this study, for the proportion of mothers knowing danger signs of acute respiratory infection and diarrhoea is conservatively estimated at 50 percent (0.5). The z statistics is 1.96. Accuracy level is put at 0.03 level. The sample size is then calculated as:

$n = (z^2 pq) / d^2$

$n = \{(1.96)^2 \times (0.50) \times (0.50)\} / (0.03^2)$

$= 1067$

≈ 1100

A total of **1100 mothers with children under 5 years** were selected for the whole Pyay District.

Cluster sampling method was used for participant selection. Each cluster composes 11 mothers and 100 clusters were chosen to meet the sample size requirements.

11 Mothers (households) x10 Villages (clusters)x 2 RHCsx5 Townships = 1,100 Mothers

For qualitative data collection, the following methods and dimensions were used in each township.

a. Focus Group Discussions (FGDs),

2 sessions of FGDs (each session comprising 8-12 mothers of children between 1 year and 5 years)

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b. Key Informant Interviews (KIIs)

3 KIIs (with a midwife, an auxiliary midwife and a traditional birth attendant)

c. In-depth Interview (IDIs) with mothers of neonates

d. Observations were done on selected family practices relating to neonatal care.

Data collection

A pre-tested structured questionnaire was developed to assess the level of the family and community practices of newborn care. For qualitative data collection, pre-tested guides for IDIs and FGDs with mothers and for KIIs with health care providers were used for data collection.

Ethical consideration

After thorough explanation of the purpose of the study, informed consent was obtained from local authorities and all interviewees.

Data management and analysis

For quantitative assessment

Interviewers performed daily checks on the questionnaires for missing, inconsistent or illogical data and took action immediately. Field supervisors rechecked the forms and if any unclear or inconsistent findings observed they immediately called the interviewers for clarification and action. Then the field supervisor signed the questionnaires and sent it to the data manager. Data manager cleaned the data while entering data into the computer using Epi Info program and the data were analyzed using the Stata version 7 software.

For qualitative assessment

For FGD sessions, the note-takers jotted down the conversations as well as recorded them by tape recorders. For KIIs and IDIs the investigators themselves recorded the conversations manually. In the same evening of the day FGDs, KIIs and IDIs were conducted, the investigators and the note-takers completed their transcripts. Transcripts were checked against the tape recorder. The team leader coded the findings of interviews according to the main themes together with all the team members. While coding, any unclear phrase or sentence was clarified immediately. All team members sat together and matrix analysis was done manually. Comparisons were made between different groups of mothers, and recurring patterns and themes were noted down. Plausibility to draw any conclusion was observed. Then the team leader combined the information using the rapid group thematic analysis approach. The barriers to key family and community practices were particularly explored with more emphasis on information of programmatic implication than that of mere ethnographical interest.

RESULTS

Characteristics of the respondents

The quantitative assessment was performed on 1100 mothers with at least one child under five years but the analysis was done only on 1090 mothers because 10 questionnaires had incomplete and inconsistent data. The age of the mothers in the quantitative study ranged from 18 to 52 years and the mean age was 31years.

Table 1. Characteristics of the respondents in the qualitative assessment of the study

Data collection methods	Study population	Number of participants
FGD (10sessions)	Mothers with child under one year	80
FGD (10 sessions)	Mothers with child of one to five years	77
KII	Midwives (MWs)	5
	Auxiliary Midwives (AMWs)	5
	Traditional Birth Attendant (TBA)	5
IDI	Mothers with newborn babies	7
Observation	Mothers with newborn baby or sick child	8

Age of mothers in the FGDs ranged from 17 to 46 years. Age of marriage was as young as 13 and as old as 35 years old. Total number of children ranged from 1 to 7 with a mean of 2.3.

Place of Delivery

Table 2. Place of delivery of the youngest child

Place	Frequency	Percent
Government health facilities	170	15.6
Private hospital/clinic	34	3.12
Home	881	80.83
Others	5	0.46
Total	1090	100

Most of the respondents (81%) had their youngest baby delivered at their home. The reasons for having a home delivery was due to strong family and social support, less financial cost and no need for transportation to hospitals and health centers. There were also few deliveries that took place at a hospital, especially those that were considered at risk. Only when MWs were not available TBAs were called for or, in villages where AMWs existed, their services were taken. Some of the mothers referred the delivery room as a "*chay-yin-kan*" (ဆေးခြင်းခန်း) (meaning back room).

The room was swept and cleaned, and very few mothers washed the room with water. Some mothers made sure that this room would be well protected from wind.

"The wind can cause "*mee-yat-thway-sann"* (မီးယပ်သွေးစမ်း)… it means having a fever with rigors ….. it may even cause death."

(a 46- year-old mother of 7 children, Pyay Township).

On observing the delivery rooms for the mothers who had delivered recently (less than 11 days), the delivery rooms were found to have one entrance and without windows. Lighting was found to be poor (Photo 1).

Photo 1. A delivery room inside the house

Accoucheur for birth

Table 3. Accoucheur of the youngest children of the respondents

Accoucheur	Frequency	Percent
Doctor	117	10.73
Nurse	82	7.52
Lady health visitor	42	3.85
Midwife	328	30.09
Health assistant	2	0.18
Auxiliary midwife	113	10.37
Traditional birth attendant	404	37.06
Others	2	0.18
Total	1090	100

Over sixty percent of the respondents had their youngest baby delivered by a trained attendant. Traditional birth attendants delivered about one third of the youngest babies of the respondents. The practice reported was that even in the presence of a MW, a TBA was also called for providing supportive care like preparation of traditional medicine used during puerperal period, washing clothes, preparing food for mother, etc.

During delivery, relatives and neighbors stayed near the mother and gave support.

"…neighbors came into the delivery room …sometimes the delivery room was full of them ….that encouraged me and gave me the strength for delivery ..."

(a 38- year-old mother of 5 children, Pyay Township)

Hygienic practices at delivery

During the quantitative assessment, over twenty percent of the mothers had experienced of using the delivery kit. In the qualitative assessment in Pyay Township, all the interviewees with under one-year- old child said that they were provided with a clean delivery kit by the MW during the ANC period. The mothers expressed their pleasure for receiving these kits and knew well of the contents.

"Receiving the little bag was good. It is clean and convenient for my delivery. I really appreciated it".

(a 23-year-old mother of two children, Pyay Township)

In other townships, although clean delivery kits had not been distributed to expectant mothers, some of the interviewees with under one year old child had experiences of being delivered using the delivery kits.

Both MWs and TBAs washed their hands with water and soap before handling the delivery. Both MWs and TBAs brought scissors (or blades) and threads for cutting and tying umbilical cord. Mothers had to provide boiled water for sterilizing the instruments.

The qualitative findings also pointed out that one mother in Pauk-khaung Township informed that the TBA used a sharp bamboo slab to cut the umbilical cord, and put

turmeric powder on the umbilical stump. Two mothers from Shwe-taung Township reported that the TBAs used razar blades to cut the umbilical cord; however, turmeric powder was also applied on the umbilical stump.

The quantitative assessment showed that different methods of sterilization were used for the instruments of umbilical cutting. About half (52%) of deliveries where home instruments were used, these instruments were not sterilized at all. Over ninety percent of the children whose umbilical stump was applied something on, 38% used various kinds of indigenous medicine including turmeric power. The majority of mothers interviewed said that their babies were not weighed at birth.

The majority of the mothers reported no experiences of incision and stitching of their birth canals except for few mothers. Mothers stayed most of the time in the delivery room by the fire place for seven days regarded as the puerperial period. Common practices known as *"oak-pu-tike"* (အုတ်ပူတိုက်) and *"chway-aung"* (ချွေးအောင်း) which facilitate healing of the uterus and latter promotes sweating was done by majority of mothers in the study.

Newborn care

Clearing of airway

Almost all the babies cried spontaneously after delivery. Only a few babies did not cry immediately after delivery. A traditional practice by TBAs in Pauk-khaung Township, when a child does not cry immediately after birth was to wash the baby's placenta called *"ah-chin-shaw"*(အချင်းလျှော်) meaning pressing and hitting the placenta. This practice is based on the belief that the life of the baby may be left behind in the placenta. Another local practice among several mothers in the study was applying a small amount of chewed pepper seed into the baby's mouth and keeping the baby on side to get rid of mucous from the baby's mouth.

Thermal control

In the quantitative study, over fifty percent of the respondents reported their youngest babies were bathed immediately after birth. Positive change in practice of bathing was observed in the qualitative study, some mothers with children of 1-5 years reported bathing their babies immediately after birth. They considered that by doing so, it would clean away all the dirt's from their babies' bodies. Only a few mothers with children under 1 year reported this practice.

"I used to bathe the babies soon after delivery … but, after I attended a 7- day training given by the health staff …. I no longer practiced it."

(a 61- year old TBA of 30 years experience, Paung-de Township).

Over ninety percent of the babies were wrapped with a cloth within half an hour after delivery, among which two thirds were wrapped immediately after birth. Babies were usually wrapped with a cloth all over the body including their heads.

Most mothers kept their babies close to them while a few kept their babies in a *"sakaw"* (စကော) which is a circular tray woven with bamboo (Photo 2). A few mothers expressed the following beliefs relating to this practice:

- putting in a *"sakaw"* (စကော) prevents dumbness and blindness;
- it is easy to carry and move the baby with the *"sakaw"* (စကော);
- *"sakaw"* (စကော) provides the warmth comparable to that of a mother's womb.

Infection control

Infection control for clean delivery and cord care during delivery has been described in the hygienic practices of delivery section of the findings. No mothers (except 2) reported giving special care to the eyes of their new born babies in the qualitative study. Shaving of babies' hairs was done at the end of "meetween" traditionally defined puerperium, i.e. 7 days after birth, either by

Photo 2. A baby in a "*sakaw*" (paum)

a TBA or a relative. This was in accordance with local traditional practice to get rid of birth hair.

Care of special children

Only a very few reported experiences of delivering small size babies in the quailtative study.

"My child was only 4 pounds at birth and was delivered by breech. I thought she couldn't survive long ….she didn't cry at birth …The midwife gave resuscitation and told me to give the baby morning sunlight for 3 days to prevent yellow coloration of skin …at the age of about one month she gained weight…."

(a 24-year-old mother with one child, Thegone Township).

Illness during newborn period

Only few of the respondents (15% of all the respondents) said that their youngest baby had been ill during one month after birth. The common complaints were fever and cough. About 70% of the ill newborns got treatment outside home. Mothers with infants stated that they dared not treat a very young child by themselves. Therefore they consulted a health care provider when the child was very young.

"The child is very young and delicate…..I am afraid something might happen. I go straight to *Sayama* (referring to a midwife)".

(a 38-year-old mother of an infant, Pyay Township)

Breast feeding

Majority (65%) of the mothers started breast feeding their newborn within half an hour after birth. Quantitative assessment showed that ninety-two percent of the respondents breastfed their youngest babies and 82% of the respondents fed colostrum to their babies.

In the qualitative assessment, almost all interviewees reported that babies were fed with breast milk immediately after birth as advised by health staff. Compared to the mothers with older children, mothers with infants expressed more about the specific reasons for colostrums feeding, such as colostrums possessed nutritional values as well as disease preventing values.

Table 4. Exclusive breast feeding to the youngest child

Type of feeding	Frequency	Percent
Only breast milk	356	35.49
Breast milk+water	527	52.54
Breast milk+honey	39	3.89
Breast milk+porridge	19	1.89
Breast milk+commercial milk	28	2.79
Breast milk+other liquid	34	3.39
Total	1003	100

Only one third of the breastfed children received exclusive breast feeding. The commonest type of additional liquid fed to their babies was water (53%). The majority of the interviewees practiced feeding water to their new born babies from the age of days. They prepared boiled and cooled water for this purpose. The reason for giving water was to relieve the baby from thirst and to make the baby's stomach cool.

Demand feeding was practiced by all mothers. The majority of mothers interviewed did not mention about proper positioning for breast feeding. They said they had not been taught by any health staff on this particular positioning practice. Even in this situation, the sitting position was generally practiced for younger babies (less than 3 months) to prevent the babies' nostrils being blocked by breasts. Some

mothers said that they kept a pillow underneath the baby's head while breast-feeding to prevent baby's head from becoming flat. For older children, various positions were adopted.

DISCUSSION

Eighty percent of the women in the study gave birth to their baby at home. The mother and the baby were usually confined to the delivery room for the whole puerperial period of seven days. The findings highlight that the room was protected from wind with a belief that a mother must be kept away from wind. Observations had confirmed that the ventilation and lighting were found to be poor in the delivery rooms.

Over sixty percent of the mothers gave birth to their youngest baby with trained birth attendants. Among them over thirty percent of the mothers delivered with midwives. One third of the deliveries were done by TBAs in the townships under the study. Therefore the role of TBAs in rural areas is still important where MWs are not available. Community and social support during delivery was found to be very high. This finding showed that community support during delivery would be of help for the mother and the child in case of emergency.

The pre-distribution of clean delivery kit to mothers was found to be very much appreciated by the mothers in Pyay Township. The pre-distribution of the kit ensures the clean delivery kit for anyone who delivered in the absence of a trained attendance. Although most of the deliveries used clean sterilized instruments either from the clean delivery kits or brought by the birth attendance, there is still practice of using un-sterilized bamboo slab for cutting the umbilical cord by TBAs. The practice of putting *"Hsa-nwin"* (ဆန္ဒင်း) into the umbilicus was also found in few mothers. Therefore this practice may hinder the infection control for newborn care. Puerperial period is locally defined as the period from the birth of the child up to the seventh day. This period was considered very important both for the mother and the child. A lot of traditional beliefs and customs surround this period. Common practices known as *"oak-pu-tike"* (အုတ်ပူတိုက်) and *"chway-aung"* (ချွေးအောင်း) which facilitate healing of the uterus and latter promotes sweating, respectively, need more exploration. Since these practices involve heating the bricks in a fire near them in a closed room may make the babies more vulnerable to acute respiratory tract infection of the newborn.

Although some of mothers of 1-5 years old children mentioned that some of their children were bathed immediately after birth, all the mothers with infants stated that their newborn babies were not bathed immediately after birth. This changing trend of the bathing practice has been a positive indicator for better thermal control of newborn babies. Nearly seventy percent of the babies in the study were also wrapped with clothes from head to toe immediately after delivery. In the townships under study, most of the mothers kept their newborn babies near them or in a *sakaw* which is a tray woven with bamboo. Even though the child was put in a *sakaw*, when observation was made on the practice, good thermal control was seen.

A practice which needs to be strengthened for all trained birth attendants was to weigh the child at birth, because the majority of the mothers in the qualitative study stated that their babies were not weighed at birth. Shaving of the babies' hair at the end of puerperium was also seen as a common practice in the study. Although the majority of the mothers stated that a disposable knife or a razor blade was used, promotion of sterilization for this practice should be ensured. All the children in the study were breastfed immediately after birth. The importance of colostrums was well known by the majority of mothers interviewed. But only one third of the breastfed children received exclusive breast feeding. Along with breastfeeding the majority of the

mothers in the study fed water to their new born babies starting from the age of days. This showed that feeding water to the new-born child was a normal process and they did not consider that this was an interruption to the exclusive breast feeding practice. Thus enhancing education on exclusive breast feeding is still needed.

Recommendation

- Standard cleaning procedure for preparing delivery room at home should be educated to the community.
- Clean delivery kit should be made available for all expectant mothers.
- Community support during delivery should be sustained.
- Weighing of newborn immediately after delivery should be encouraged to all the birth attendants.
- Education of mothers on proper exclusive breast feeding method should be strengthened**.**

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