Final Report to the University of California Human Rights Fellowship Program

INVESTIGATING HEALTH AND HUMAN RIGHTS IN THE BURMA

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Contents

1. Objectives of the Fellowship

The purpose of my fellowship was to work with Global Health Access Program (GHAP) and its local partner Karen Department of Health and Welfare (KDHW) to train the local staff on data analysis and assist GHAP in the training of the Backpack Health Worker Team survey. My educational objective was to assess the feasibility of conducting further research on the links between health, human rights and migration dynamics in the area.

2. Background

To better understand the contexts in which I was conducting my fellowship, a brief background on the conflicts in Burma and the displacement and migration situation around the border may be helpful.

2.1. **History of the Conflicts in Burma.**

The civil war in eastern Burma date back to the post-World War II era during Burma's struggle for independence from Great Britain.[12] Initially, the conflicts were rooted in ideological differences between a socialist state and communist resistance. The communists were the first to take up arms against the new state soon after independence in 1948. Since 1988, this ideological conflict has been transformed to that between military rule and democratic opposition.[7] The Burmans are the primary participants in this struggle.

Another layer of conflicts has been those between the Burman controlled state and non-Burman ethnic nationalities. Ethnic tensions between Burmans and non-Burmans have existed for thousands of years. When the British came into Burma, they further polarized the situation by employing non-Burmans into their army as a way to suppress Burman nationalist movements. During World War II, the Burmans joined the Japanese against the British, while the Karen joined the British.[12] After independence, soon after the communists took up arms against the newly independent Burmese government, several ethnic groups also took up arms for various other reasons, including political marginalization, economic oppression, and human rights abuses by the Burmese military.[12]

In 1962, just as a peaceful resolution was about to be reached, the military, led by General Ne Win, staged a coup which put an end to such aspirations. Civil

war continued after the coup, but by the 1970's, the fighting had retreated to the borderlands. [12] Until 1984, the Burmese government never had control of the border areas. The Burmese Army's major offensive in 1984 which broke through the Karen front lines was the first time the Burmese Army took control of the border areas and was also the beginning of the wave of refugees from Burma to Thailand. In the decade to follow, the Burmese Army launched numerous attacks on the border regions, taking control of new territories and increasing the flow of refugees into Thailand.[6]

In 1988, pro-democracy activists staged major protests against the regime which was violently suppressed by the military junta. After the crack down, about 10,000 pro-democracy activists fled the urban areas to the border and joined the ethnic movements, thus creating an alliance between the pro-democracy activists and the ethnic movements.[12, 6]

Bowing to pressures from the international community, the military junta held an election in 1990 which resulted in a landslide victory by the opposition group, the National League for Democracy led by Aung San Suu Kyi. The junta, however, refused to step down[13, 6]. This resulted in another wave of refugees who left Burma to form an exile government.[6]

After the mass demonstrations of 1988, the Burmese government began to make concerted effort to break up the ethnic and pro-democracy alliances. They offered "ceasefire" agreements to ethnic groups. Eventually, 17 ethnic groups signed such

agreements by 1997. These ceasefire agreements allowed the ethnic groups to continue their activities, hold arms, and maintain territory until the new constitution was drafted. Also included in the ceasefire "package" was local development assistance.[12]

These ceasefire agreements resulted in another turning point in the ethnic conflicts in Burma: the fall of the Karen National Union (KNU) headquarters at Manerplaw in 1995. Manerplaw fell to the hands of the Burmese Army with the help of the Democratic Karen Buddhist Association (DKBA), which broke away from the KNU and signed a ceasefire agreement with the Burmese Army. In the next three years, the Burmese Army took control over the entire border through a series of attacks and deals. As the Burmese Army moved in to the border regions formerly controlled by the ethnic groups, the number of refugees to Thailand increased up to 115,000 in 1997. [6]

Despite the signing of cease-fire agreements, political marginalization of the ethnic groups and human rights abuses continue in the region. [7, 10] In ceasefire areas, the offer of development may mean forced relocation and forced labor for the villagers. Non-ceasefire areas are targeted by the SPDC and bear the burden of the repression and human rights abuses. [13, 5]

2.2. **Displacement and Migration.** There are several different types of displacements occurring in and out of Burma. The United Nations defines internally displaced persons as "persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human

rights or natural or human-made disasters, and who have not crossed an internationally recognized State border."[1] In Burma, displacement also occurs as a result of state-sponsored development projects.

The exact figure for the number of internally displaced people in Burma is unknown. In 2007, an estimated 66,000 [8] people in eastern Burma were forced to flee their homes. The UNHCR figure for the whole country is 67,290 for 2007.[14] TBBC also estimates a population of about 451,000 people who are currently displaced in the eastern Burma region. This includes 224,000 in ceasefire areas, 127,000 in relocation sites, and 101,000 in hiding.

Surveys conducted in the eastern conflict zones of Burma showed that approximately 8.9% of the households had experienced forced displacement.[11] These households reported higher odds of experiencing increased child mortality, malnutrition, and land-mine injury than those who had not been displaced.

When people cross international borders to flee from violence or human rights abuses, they would normally be considered refugees. However, Thailand has not signed the 1951 United Nations (UN) Convention relating to the Status of Refugees nor the 1967 Protocol, and therefore does not officially recognize the Burmese as refugees even though it has allowed the camps to exist since 1984. [9] The United Nations High Commission on Refugees reports 124,562 refugees from Burma residing in Thailand in 2007. [14] These do not include the number of unregistered migrants who live in camps.

In the third category are the economic migrants. There are at least two types of economic migrants: the agricultural migrants and the factory migrants. The

[1]The UN Guiding Principles on Internal Displacement, 1988, E/CN.4/1998/53/Add.2

agricultural migrants tend to be in rural areas and migrate with their families in tact. Factory migrants on the other hand, tend to be younger, single men and women, and live in towns. They don't live in a family structure, but often live in factory dorms[1] The Thai Chamber of Commerce estimates more than 1 million Burmese living in Thailand. [2]

While these categories are useful in distinguishing populations for research purposes, in reality, it is difficult to differentiate between the refugees and the economic migrants. Most of the migrants would qualify as refugees if the registration process were open. However, the Thai government has not registered new refugees since 2005 and therefore, the number of migrants who are not registered as refugees have increased since the last registration.

These categories do, however, make a difference when it comes to access to services. Overall, refugees have fairly good access to services. For example, health and social services in refugee camps are quite good. Health care is free and accessible, clean water and basic food rations are provided, and transportation is available to hospitals for serious diseases and the hospitals are not too far away. [3] However, migrants outside of the camps do not have the access to these services. Health care among the internally displaced population is virtually non-existent except for those few that are provided by non-governmental organizations. Clinics are few and far in between in these IDP areas.

3. Project Description and Outcome

The Karen Department of Health and Welfare (KDHW) works inside Burma with internally displaced populations and populations at risk for displacement. Between

September 2007 and January 2008, KDHW conducted a survey of women of reproductive age (15-45 years) in select communities in the Karen regions of eastern Burma. The survey asked questions about the respondent's fertility history and access to reproductive health services, as well as mortality and human rights violations experienced by the respondent's household.

My task was to train the local staff in analyzing the baseline reproductive health survey data using Stata. In order to understand the significance of this, one must first understand that since the Karen have been at war with the Burmese government since 1948, the educational infrastructure in Karen State has been underdeveloped. As a Karen staff at a local NGO who works with the internally displaced populations told me, they can build schools and hospitals but they keep getting destroyed by the SPDC (State Peace and Development Council, the ruling military junta in Burma). Some people were able to go to school in the refugee camps. This means that most people who are skilled in computers and database management are completely self taught. It also means that most people have not had a basic statistics class. English is learned in the same way. Until a few years ago, a volunteer English teacher came to KDHW to hold classes on a regular basis. However, since she left, there has not been any formal English instruction for the staff.

Given this situation, I decided that the best way to train the staff was to work with the staff step-by-step to clean the data and analyze the results. Also, I felt that data analysis was learned best by doing, rather than listening to a lecture. I went to the KDHW office six days a week and spent 2-3 hours a day working with them on the data. The process was very slow. It took us over a month to clean the data. However, by the end of the three months, a few key staff members were

well trained in Stata to be able to write some lines of Stata code. By cleaning the data together, key lessons were learned about the importance of data quality. In addition, the participation of the local staff was critical in the analysis of the data. Their experience and insights were important in identifying what indicators to look at more closely and triangulating with their experiential knowledge. In this way, I was able to accomplish my objective and the final report that I had written for KDHW is attached at the end of this report.

When I was not at KDHW, I was assisting with the training of the Back Pack Health Worker Team survey. I assisted by leading parts of the training, coordinating the translation of the materials, and providing feedback on the survey instrument.

Pursuing my educational goals was a challenge. Between the trainings, I was left with not much time. However, I was able to conduct a few interviews, and through observations and informal conversations, was able to assess the feasibility of pursuing further academic research in the region. Mae Sot is a difficult place to do academic research for several reasons. Mostly, the situation in the border areas between Burma and Thailand is so unstable that it is very difficult to collect good data from the area. The best data are from the refugee camps, however, given the volatile nature of the camp population, it is difficult to know to what population the data are generalizable. Further, UNHCR data are not available to the public on a micro level. The data collected by the NGOs are informative for the NGOs and other groups working for humanitarian and advocacy purposes as needs assessments or evaluations. However, for academic purposes, the data do not provide enough depth to allow for a sufficient level of methodological rigor to be applied to the data. Given the situation around the border and the enormous need for resources, I wonder about the ethical implications

of attempting to do more than the necessary level of data collection among this population. Further, practically speaking, when survey instruments and sampling methods become too complicated for the specific area, it jeopardizes the quality of the data gathered. Moreover, many academic questions tend to be too theoretical in nature and are not appropriate to the populations in the border areas where there is a constant level of emergency. Unless the data being collected are directly useful to the affected population, there are ethical considerations for gathering such data. For these reasons, I concluded with much regret that I will not be able to conduct my dissertation research on border issues.

4. Conclusion

Although I will not be writing my dissertation in the Thai Burma border, the fellowship was an incredible experience where I was able to obtain a much better understanding of data collection in conflict areas, the human rights/humanitarian issues, the complexities of the struggles in Burma, and the dynamics of Burma-Thai border regions.

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Appendix: KDHW Reproductive Health Survey Report

Karen Department of Health and Welfare
Baseline Reproductive Health Survey Results

October 2008

Between September 2007 and January 2008, surveyors from Karen Department of Health and Welfare (KDHW) conducted a survey of women of reproductive age (15-45 years) in select communities in the Karen regions of eastern Burma. The survey asked questions about the respondent's fertility history and access to reproductive health services, as well as mortality and human rights violations experienced by the respondent's household. A village census of the target areas was collected prior to sampling and was used to create a sampling frame. A two-stage cluster sampling scheme proportionate to population size was used. Thirty village-based clusters were selected (See Appendix A). Within each cluster, 30 households were interviewed using proximity sampling. Within each household, one woman of reproductive age (15-45 years) was interviewed. Surveys were returned and entered into a Microsoft Access database at KDHW headquarters in Mae Sot, Thailand. Analysis was conducted using Stata 9.0.

This report contains the results of the survey. It shows the reproductive health status and service utilization in the Karen region of eastern Burma, prior to the initiation of KDHW's reproductive health program.

1. Demographic Characteristics of the Respondents

- A total of 899 surveys were returned. Of these, 880 were completed by women of reproductive age (15-45 years old). Women with children under the age of 5 were prioritized as a respondent.

- About 29.55% of the women were under the age of 25. The largest age group was 30-34 and made up 21.82% of the sampled women. 17.73% were in the oldest age group, 40-45. The mean age of the women was 29.82 with a standard deviation of 0.27.

- 96.12% of the women were currently married, 2.17% were separated or divorced, and 0.91% of the women were widowed.

- 4,422 household members were recorded by the respondents. 21.26% were under the age of five and 67.71% were under the age of 25. The population pyramid shows more men between the ages of 45 to 54. This is probably explained by the fact that the women were only interviewed up to age 45, but they were married to men who were older. There are also many more boy babies under the age of 5 compared to girl babies. The reason for this unbalanced sex ratio is unclear.

Figure 1.1 Age distribution of sampled women

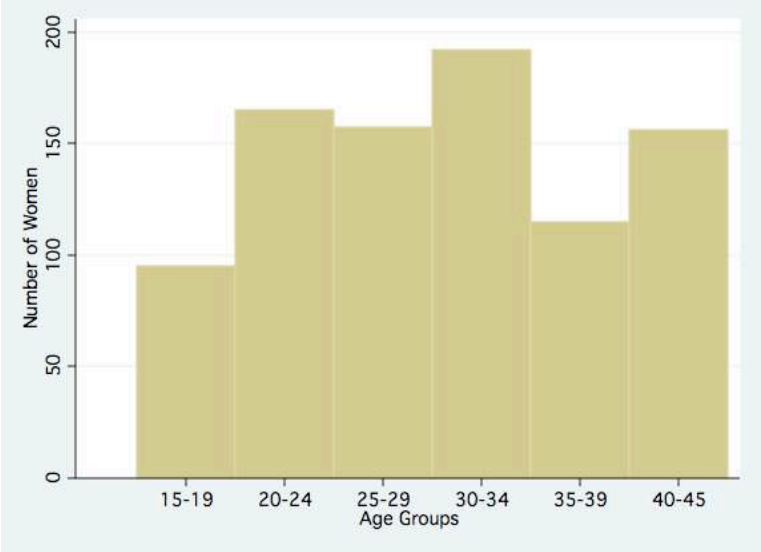
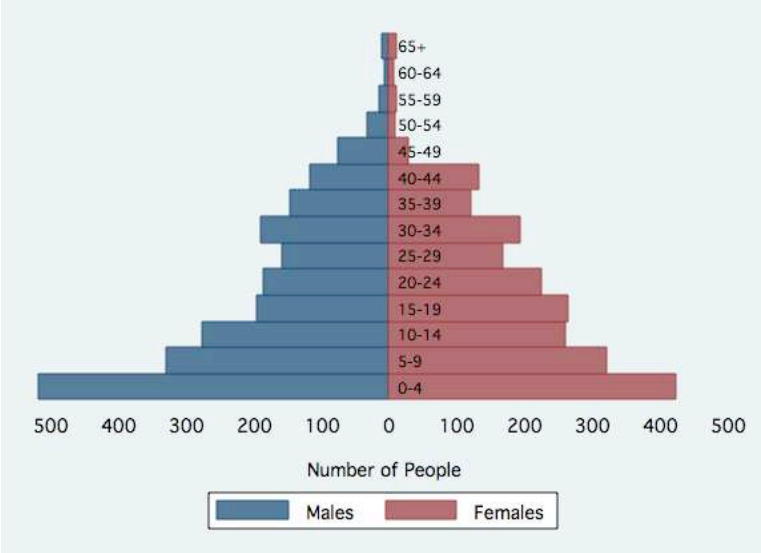


Table 1.1 Marital status of the survey respondents

	Number of women	Percent
Married	842	96.12
Separated or divorced	19	2.17
Widowed	8	0.91
Refused	7	0.80
Total	876	100.00

Figure 1.1 Household population sampled by age and sex



2. Pregnancy and Fertility

- Almost all women (97.16%) had ever been pregnant and 93.97% had ever given live birth. About a fifth (20.64%) of all women were currently pregnant.

- The average number of pregnancies among all women aged 15 to 45[1] surveyed was 3.63 with a standard deviation of 2.37. Among women in the highest age group (40-45), the mean number of pregnancies was 5.85 (SD=2.65).

- About a fifth (20.25%) of the women had been pregnant twice and 19.68% had been pregnant 3 times.

- The average number of live births among all women aged 15 to 45 surveyed was 2.90 with a standard deviation of 1.92. Among women in the highest age group (40-45), the mean number of live births was 4.70 (SD=2.02).

- About a quarter (24.70%) had given birth to a live baby once and 21.63% had given birth twice.

- The number of pregnancies and the number of live births are both dependent on the age distribution of the sample population. When the sampled population is younger, then the number of pregnancies and births tend to be lower because they have not finished giving birth to all the children they want to have.

Table 2.1 Fertility and pregnancy history

	Number of women	Percent	Total
Ever been pregnant	854	97.16	879
Currently pregnant	181	20.64	877
Ever given live birth	826	93.97	879

Table 2.2 Average number of pregnancies by age

Age groups	Average number of pregnancies	Standard deviation
15-19	1.34	0.81
20-24	2.05	1.21
25-29	2.93	1.37
30-34	3.92	1.76
35-39	5.23	2.30
40-45	5.85	2.65
Total (879 observations)	3.63	2.37

[1] "Women of reproductive age" as defined by the World Health Organization.

Table 2.3 Number of pregnancies

Number of pregnancies	Number of women	Percent
0	25	2.84
1	130	14.79
2	178	20.25
3	173	19.68
4	109	12.40
5	88	10.01
6	60	6.83
7	49	5.57
8	33	3.75
9	14	1.59
10	11	1.25
11+	9	1.02
Total	879	100.00

Table 2.4 Average number of live births by age

Age groups	Average number of live births	Standard deviation
15-19	1.07	0.53
20-24	1.54	0.88
25-29	2.32	1.15
30-34	3.06	1.49
35-39	4.23	1.97
40-45	4.70	2.02
Total (846 observations)	2.90	1.92

Table 2.5 Number of live births

Number of live births	Number of women	Percent
0	24	2.84
1	209	24.70
2	183	21.63
3	168	19.86
4	104	12.29
5	75	8.87
6	37	4.37
7	27	3.19
8	7	0.83
9	5	0.59
10	5	0.59
11	2	0.24
Total	846	100.00

3. Perinatal Care and Delivery

3.1. Antenatal Care

- Of the women who had reported ever being pregnant, only 12.53% reported that they received antenatal care for their most recent pregnancy. Coverage differed greatly by clinic areas. In three of the clinic areas, none of the women had received antenatal care during their most recent pregnancy (Hoe Kee, Bu Thaw Plaw, and Htee Pa Htaw). Ta Oo Der had the best coverage with 58.49% of the women receiving antenatal care.

- Only 4.34% of the women had received 4 or more antenatal care visits. 3.86% had only one antenatal care visit.

- Approximately 37.50% of those who received antenatal received care in the first 3 months of their pregnancy.

- Majority of the women (71.15%) who received ANC received it at home. About 22.12% received it at an ethnic clinic.

- Specific interventions during pregnancy

    - **Malaria test and prevention:** 21.07% of the women had a malaria test during their last/current pregnancy. Of those who were tested, 27.91% tested positive. 23.49% received an insecticide treated net or KO tab to treat their net, but the majority (80.34%) did not use an ITN during their last/current pregnancy.

        Malaria prevention measures varied by clinic area. In Tee Thaw Geh Hta 93.33% of the women had received an ITN or KO tab during the last pregnancy and the same number used an ITN. However, in Bu Thaw Plaw, none of the women had received an ITN or KO tab.

        In Lay Taw Koh clinic area, 49.12% of the women were tested for malaria during their last/current pregnancy. But in Hoe Kee and Tee Mu Hta clinic areas, none of the women was tested for malaria.

    - **Blood test:** 30.64% had a blood test at least once during their last/current pregnancy

    - **De-worming treatments:** 8.93% took de-worming treatments during their last/current pregnancy.

    - **Iron supplements:** 66.27% of the women did not take any iron supplements during their last/current pregnancy. 22.89% took them for less than 1 month.

Because iron deficiency can lead to anemia in pregnancy and future childhood development, it is recommended that women receive Ferrous sulphate 200mg OD and Folic Acid 2.5 mg OD for at least total 6 months of pregnancy. As well, women should receive the same dosage for 3 months postpartum to improve their own health as well as neonatal health through breastmilk.

Table 3.1.1 Antenatal care use during last/current pregnancy

	Number of women	Percent
Received ANC	104	12.53
Did not receive ANC	725	87.35
Don't know	1	0.12
Total	830	100

Table 3.1.2 Antenatal care use during last/current pregnancy by clinic area

Area	Clinic Name	Number of women who received ANC	Percent of women who received ANC	Total
2	Hoe Kee	0	0	28
3	Tee Mu Hta	16	53.33	30
4	Bu Thaw Plaw	0	0	30
4	Kasar Doh	9	16.98	53
5	Ta Oo Der	31	58.49	53
6	Azun	8	5.37	149
6	Htee Pa Htaw	0	0	88
6	Klait Tode	1	0.86	116
6	Lay Taw Koh	2	3.51	57
6	Mae Ka Tha	2	3.51	57
6	Tee Thaw Geh Hta	5	16.67	30
7	Lay Wah	7	24.14	29
7	Naw Ter Kee	11	13.75	80
8	Oo Krey Kee	12	40	30

Table 3.1.3 Number of antenatal care visits during last/current pregnancy

Number of ANC visits	Number of women	Percent
0	725	87.35
1	32	3.86
2	14	1.69
3	12	1.45
4 or more	36	4.34
Don't know	11	1.33
Total	830	100

Table 3.1.4 Timing of first antenatal care visit during last/current pregnancy among those who received an ANC visit

Gestation month	Number of women	Percent
1-3 months	39	37.50
4-6 months	30	28.85
7-10 months	23	22.12
Don't know	12	11.54
Total	104	100.00

Table 3.1.5 Place where women received antenatal care during last/current pregnancy among those who received an ANC visit

ANC Place	Number of women	Percent*
Ethnic clinic	23	22.12
Home	74	71.15
Thai hospital/clinic	6	5.77
Burmese hospital/clinic	8	7.69
Other	16	15.38
Don't know	1	0.96
Total	104	

*Note some of the women reported more than one place where they received antenatal care. The percentage reflects the number of times the location was reported out of all women who had received antenatal care.

Table 3.1.6 Specific disease prevention measures and antenatal services received during last/current pregnancy

ANC interventions	Number of women	Percent	Total
Malaria prevention			
Had malaria test	174	21.07	826
- Positive test result	48	27.91	172
Received ITN or KO tabs	195	23.49	830
Used ITN	163	19.66	829
Had blood test	254	30.64	829
Had de-worming treatments	74	8.93	829
Took iron supplements			
0 days	550	66.27	830
1-29 days	190	22.89	830
30-89 days	69	8.31	830
90+ days	17	2.05	830
Don't know	4	0.48	830

Table 3.1.7 Malaria test during last/current pregnancy

Area	Clinic Name	Tested for malaria			Tested Positive for malaria		
		Number of women	Percent	Total	Number of women	Percent	Total
2	Hoe Kee	0	0	28	NA	NA	0
3	Tee Mu Hta	0	0	30	NA	NA	0
4	Bu Thaw Plaw	1	3.33	30	1	100	1
4	Kasar Doh	2	3.77	53	0	0	2
5	Ta Oo Der	6	11.32	53	1	16.67	6
6	Azun	6	4.11	146	6	100	6
6	Htee Pa Htaw	27	30.68	88	3	11.11	27
6	Klait Tode	25	21.74	115	2	8	25
6	Lay Taw Koh	28	49.12	57	8	29.63	27
6	Mae Ka Tha	21	36.84	57	11	52.38	21
6	Tee Thaw Geh Hta	24	80	30	7	29.17	24
7	Lay Wah	8	27.59	29	4	50	8
7	Naw Ter Kee	12	15	79	2	16.67	12
8	Oo Krey Kee	14	46.67	30	3	23.08	13

Table 3.1.8 Malaria prevention measures during last/current pregnancy by clinic area

Area	Clinic Name	Received ITN/KO tab during pregnancy			Used ITN during last pregnancy		
		Number of women	Percent	Total	Number of women	Percent	Total
2	Hoe Kee	1	3.57	28	0	0	28
3	Tee Mu Hta	1	3.33	30	0	0	30
4	Bu Thaw Plaw	0	0	30	0	0	30
4	Kasar Doh	4	7.55	53	1	1.89	53
5	Ta Oo Der	2	3.77	53	5	9.43	53
6	Azun	29	19.46	149	7	4.7	149
6	Htee Pa Htaw	41	46.59	88	38	43.18	88
6	Klait Tode	32	27.59	116	33	28.45	116
6	Lay Taw Koh	17	29.82	57	16	28.07	57
6	Mae Ka Tha	17	29.82	57	14	24.56	57
6	Tee Thaw Geh Hta	28	93.33	30	28	93.33	30
7	Lay Wah	5	17.24	29	5	17.24	29
7	Naw Ter Kee	8	10	80	7	8.86	79
8	Oo Krey Kee	11	36.67	30	9	30	30

3.2 Delivery

- Most mothers (93.50%) delivered their last baby at home and with the involvement of a traditional birth attendant (84.50%). 59.20% delivered with the help of a friend or relative.
    - Often, facility-based care is not an option for women in the target areas of the KDHW RH program. The fact that so many births occur at home with traditional birth attendants (TBA) highlights the need for the KDHW RH program to strengthen home-based health worker training for maternal/child care.

Table 3.2.1 Place of delivery

	Number of women	Percent
Ethnic clinic/mobile health clinic	18	2.21
Home	762	93.50
Jungle	12	1.47
Thai hospital/clinic	6	0.74
Burmese hospital/clinic	13	1.60
Other	3	0.37
Don't know	1	0.12
Total	815	100.00

Table 3.2.2 Person who assisted in the delivery

	Number of women	Percent*
Doctor/nurse at Thai/Burmese/government hospital/clinic	18	2.18
Ethnic health worker	46	5.57
Traditional birth attendant (TBA)	698	84.50
Friend/relative	489	59.20
Other	57	6.90
Don't know	2	0.24

*Note some of the women reported being assisted by more than one person. The percentage reflects the number of women who reported being assisted by someone out of the total number of women who had ever given live birth.

3.3 Postnatal Care

- Only 17.96% received postnatal care visit within the first week after delivery.

- 80.82% of mothers who received a postnatal visit received it at an ethnic clinic or a mobile health clinic.

- Specific postnatal practices:
    - **Breastfeeding:** 70.86% of mothers breastfed their last baby within 6 hours after delivery. About 30.86% of the mothers breastfed their last baby 6-11 months. Over half of the mothers had fed their baby colostrom (57.56%). 29.55% of the mothers started giving their baby anything other than breastmilk during the first 3 months of the baby's life.
    - **Vitamin A:** Only 9.34% of the mothers took a vitamin A pill immediately after the delivery of their last baby.

        It is recommended that women receive a single dose (200,000 IU) of Vitamin A after delivery to positively impact infant health by improving neonatal Vitamin A levels through breast milk.
    - **Skin-to-skin:** Only 8.38% of the mothers tried skin-to-skin with their baby before the baby was 6 month old.

Table 3.3.1 postnatal care use

	Number of women	Percent
Received PNC	146	17.96
Did not receive PNC	667	82.04
Total	813	100.00

Table 3.3.2 Place of postnatal care visit

	Number of women	Percent
Ethnic clinic or a mobile health clinic	118	80.82
Home	16	10.96
Jungle	12	8.22
Total	146	100.00

Table 3.3.3 Breastfeeding practices

	Number of women	Percent	Total
Timing of the start of breastfeeding			
Did not breastfeed	48	5.93	810
Within 6 hours	574	70.86	810
Within 7-24 hours	105	12.96	810
Within 3 days	38	4.69	810
After 3 days	4	0.49	810
Don't know	35	4.32	810
Refused	6	0.74	810
Number of months breastfed last baby			
0-5 months	62	8.50	729
6-11 months	225	30.86	729
12-17 months	18	2.47	729
18-23 months	23	3.16	729
24 or more months	37	5.08	729
Currently breastfeeding	364	49.93	729
Gave baby colostrom(first milk)	438	57.56	761
Started giving last baby anything other than breastmilk			
0-3 months	224	29.55	758
4-6 months	250	32.98	758
7-9 months	119	15.70	758
After 9 months	63	8.31	758
Still exclusively breastfeeding	30	3.96	758
Don't know	59	7.78	758
Refused	13	1.72	758

Table 3.3.4 Specific postnatal care interventions used

	Number of women	Percent	Total
Took Vitamin A pill immediately after delivery of the last baby	76	9.34	814
Tried skin-to-skin	68	8.38	811

4. Family Planning

- Only 18.61% of the women who were not currently pregnant were doing something to prevent or delay a pregnancy.

- Of those who were doing something to prevent or delay pregnancy, 66.67% used Depo Provera injection and 40.48% used oral pills. Nearly half (46.83%) of these women obtained contraceptives at a pharmacy or a shop.

- At the time of their last pregnancy, 70% of the women said that they had wanted to be pregnant then, 13.98% said they had not wanted to be pregnant at all, and 10.72% said they had wanted to be pregnant later.

- About half (50.12%) of the women said they want more children, 42.03% said they did not want more children, and 7.73% did not know. When the desire for more children is viewed by the number of live births that the women have had, most women with 1 or 2 live births want more children (82.78% and 62.64%). Among those with 3 or 4 live births, about half do not want more children (50.60% and 54.81%) and less than half want more children (41.67% and 37.50%). Most women with 5 or more live births do not want more children (81.33% for women with 5 live births, 80.49% for women with 6 or more live births).

- Unmet need for limiting or spacing pregnancy[2] was 55.82%. Women with unmet need for limiting or spacing pregnancy are those who prefer to avoid pregnancy but are not using any form of contraceptives.

Table 4.1 Percent of women who were not currently pregnant and doing something to prevent or delay pregnancy

	Number of women	Percent
Doing something to prevent or delay pregnancy	126	18.61
Not doing anything to prevent or delay pregnancy	549	81.09
Refused	2	0.30
Total	677	100.00

[2] Unmet need for limiting or spacing pregnancy was defined as: 1) non-pregnant married women who were not using a modern contraceptive method to delay conception and who did not want anymore children or wanted to delay conception two or more years and 2) married pregnant women who reported that they desired their current pregnancy to have been either avoided or delayed, divided by the total number of married women.

Table 4.2 Type of family planning methods used

	Number of women	Percent*
Depo Provera injection	84	66.67
Oral pills	51	40.48
Sterilization	19	15.08
Condom	13	10.32
Norplant	1	0.80
Don't Know	1	0.80
Total	126	

*Note some of the women reported using more than one method. The percentage reflects the number of times each method is reported as used out of the total number of women who are doing anything to delay or prevent a pregnancy.

Table 4.3 Where women receive contraceptives

	Number of women	Percent*
Pharmacy/Shop	59	46.83
MHW/HW	30	23.81
Thai hospital/clinic	24	19.05
Burmese hospital/clinic	18	14.29
TBA	17	13.49
Other	24	19.05
Don't know	1	0.80
Total	126	

*Note some of the women reported more than one place where they receive contraceptives. The percentage reflects the number of times each place is reported out of the total number of women who are doing anything to delay or prevent a pregnancy.

Table 4.4 Wanted to be pregnant at the time of last pregnancy

	Number of women	Percent
At that time	581	70.00
Not at all	116	13.98
Later	89	10.72
Don't know	41	4.94
Refused	3	0.36
Total	830	100

Table 4.5 Want any (more) children

	Number of women	Percent
Want more children	415	50.12
Do not want more children	348	42.03
Don't know	64	7.73
Refused	1	0.12
Total	828	100

Table 4.6 Desire for more children by number of live births

	Want more children		Do not want more children		Total	
Number of live births	Number of Women	Percent	Number of Women	Percent	Number of Women	Percent
1	173	82.78	27	12.92	209	100.00
2	114	62.64	50	27.47	182	100.00
3	70	41.67	85	50.60	168	100.00
4	39	37.50	57	54.81	104	100.00
5	7	9.33	61	81.33	75	100.00
6+	7	8.54	66	80.49	82	100.00
Total	410	50.00	346	42.20	820	100.00

5. Health Status

5.1 Women

- 14.00% of the women were malnourished with a Mid-Upper Arm Circumference (MUAC) reading of less than 22.5cm.

- 8.41% were infected with the most dangerous form of malaria, *Plasmodium falciparum.* They tested positive for the Paracheck Pf®, a rapid malaria diagnostic test.
- Malaria prevalence varies by clinic area. Percent of women who tested positive for Paracheck test was highest in Naw Ter Kee with 54.55%. However, only 11 people were tested in this clinic, so this measure may not be reliable. Other areas with prevalence that surpassed 10% were Klait Tode (19.17%), Lay Taw Koh (15.25%), Mae Ka Tha (11.86%), and Htee Pa Htaw (11.11%).

- 2.26% were severely anemic (<8 g/dl) and 35.72% were anemic (<11 g/dl).

Table 5.1.1 Mid-upper arm circumference (MUAC)

MUAC	Number of women	Percent
<22.5cm	112	14.00
≥22.5cm	688	86.00
Total	800	100.00

Table 5.1.2 Malaria prevalence as shown by Paracheck Pf® test

Paracheck malaria test result	Number of women	Percent
Positive	66	8.41
Negative	719	91.59
Total	785	100.00

Table 5.1.3 Malaria prevalence by clinic area

Area	Clinic Name	Paracheck Malaria Test Result		
		Number Positive	Percent Positive	Number Tested
2	Hoe Kee	0	0	12
3	Tee Mu Hta	1	3.33	30
4	Bu Thaw Plaw	3	10	30
4	Kasar Doh	2	3.64	55
5	Ta Oo Der	0	0	54
6	Azun	2	1.13	177
6	Htee Pa Htaw	10	11.11	90
6	Klait Tode	23	19.17	120
6	Lay Taw Koh	9	15.25	59
6	Mae Ka Tha	7	11.86	59
6	Tee Thaw Geh Hta	2	6.67	30
7	Lay Wah	0	0	29
7	Naw Ter Kee	6	54.55	11
8	Oo Krey Kee	1	3.45	29

Table 5.1.4 Hemoglobin levels of women

	Number of women	Percent
Severely anemic (<8g/dl)	18	2.26
Anemic (8-11g/dl)	266	33.46
Not anemic (>=11g/dl)	511	64.28
Total	795	100.00

5.2 Population Sampled

- 3.44% of the population had night blindness. 1.38% of the children under 5 years old had night blindness.

- 12.48% had malaria within the past 2 weeks. Among children under 5 years old, 8.83% had malaria within the past 2 weeks.

- 10.85% had diarrhea in the past 2 weeks and of those, 27.50% took ORS. 10.32% of the children under the age of 5 had diarrhea in the past 2 weeks. 30.93% of the children who had diarrhea received ORS.

Table 5.2.1 Prevalence of select diseases among the household population

	Number of people	Percent	Total
Night blindness	152	3.44	4422
Among <5 year olds	13	1.38	940
Malaria (within the past 2 weeks)	552	12.48	4422
Among <5 year olds	83	8.83	940
Had diarrhea in the past 2 weeks	480	10.85	4422
Took ORS	132	27.50	480
Did not take ORS	345	71.88	480
Among <5 year olds	97	10.32	940
Took ORS	30	30.93	97
Did not take ORS	67	69.07	97

6. Human Rights Violations*

- Eight women reported that someone from their household was forced to work against their will by soldiers or authorities in the past 12 months.

- One person reported that someone from her household was shot at, stabbed, or beaten by soldiers or authorities in the past 12 months.

- 12.23% of the women reported that their household was forced to move because of security reasons at least once in the past 12 months. Forced displacement was concentrated in four clinic areas. Almost every household in Tee Mu Hta and Ta Oo Der had been forced to move in the past 12 months (96.67% and 90.91% respectively). 66.67% of the households in Bu Thaw Plaw and 26.67% of the households in Oo Krey Kee were displaced.

- 12.43% of the women reported that their household had food-security related violations, such as destruction or confiscation of rice or other crop fields, livestock, food stores, or were forced to give food to soldiers. Almost all clinic areas reported at least one household reporting food-security related violations, with the exception of Tee Thaw Geh Hta and Lay Wah. Tee Mu Hta and Naw Ter Kee had the largest percentage of households reporting food security violations with 75.86% and 67.09%.

- Four people reported that someone from their household had ever experienced a landmine injury or injury from an unexploded ordinance (UXO) in their lifetime. Two of the injuries happened during the last 12 months.

*Human rights violations such as these have been directly associated with adverse health outcomes (Mullany et al., *Journal of Epidemiology and Community Health*, 2007). However, we did not find any positive association in this survey. See Appendix C.

Table 6.1 Human rights violations experienced by household within the past 12 months

	Number of households	Percent	Total
Forced to work	8	0.91	875
Shot, stabbed, or beaten	1	0.11	875
Forced to move due to security reasons	107	12.23	875
Food-security related violations*	104	12.43	837
Landmine injury	4	0.47	843
Within the past 12 months	2	0.50	4

*Includes destruction, confiscation, or mining of rice or other crop fields or food stores; killing or confiscation of livestock; and incidences where people were forced to give food to soldiers because of fear

Table 6.2 Human rights violations by clinic area

Area	Clinic Name	Forced to move			Food security violation		
		Number of HH	Percent of HH	Total HH	Number of HH	Percent of HH	Total HH
2	Hoe Kee	0	0	30	5	18.52	27
3	Tee Mu Hta	29	96.67	30	22	75.86	29
4	Bu Thaw Plaw	20	66.67	30	3	10	30
4	Kasar Doh	0	0	55	2	3.7	54
5	Ta Oo Der	50	90.91	55	1	1.82	55
6	Azun	0	0	178	13	7.3	178
6	Htee Pa Htaw	0	0	90	1	1.32	76
6	Klait Tode	0	0	120	1	0.85	117
6	Lay Taw Koh	0	0	59	1	1.75	57
6	Mae Ka Tha	0	0	58	1	1.85	54
6	Tee Thaw Geh Hta	0	0	30	0	0	22
7	Lay Wah	0	0	29	0	0	29
7	Naw Ter Kee	0	0	81	53	67.09	79
8	Oo Krey Kee	8	26.67	30	1	3.33	30

Appendix A: Cluster Population

Table A.1: Clusters Selected for KDHW Baseline Survey

Cluster	Area	Village	Families	Population
1	Ho Kee	He Daw Kaw	25	172
2	Tee Mu Hta	Ler Wah	70	437
3	Ta Oo Der	Tay Mu Der	18	202
4	Ta Oo Der	Tha Dah Der	47	315
5	Lay Wah	Kwee Lah Hay	20	120
6	Naw Ter Kee	Hta Ku Kraw	107	522
7	Naw Ter Kee	Naw Den	49	294
8	Naw Ter Kee	Maw Po Wor	46	321
9	Tee Thaw Geh Hta	Tee Thaw Geh Hta	66	347
10	Mae Ka Tha	Mae Ka Tha	165	644
11	Mae Ka Tha	Lay Ta Waw	47	221
12	Lay Taw Ko	Lay Taw Ko	212	1279
13	Lay Taw Ko	Kyaw Kwa	25	136
14	Klait Tode	Bell La Mut	130	833
15	Klait Tode	Ko Na Wah	107	586
16	Klait Tode	Klait Tode	106	670
17	Klait Tode	Wah Pa That	118	709
18	Htee Pa Htaw	Htee Pa Htaw Toe	138	595
19	Htee Pa Htaw	A'Kya	58	214
20	Htee Pa Htaw	Kyaut Be Lu	165	929
21	Azun	Azun	252	1199
22	Azun	Kot Sine	243	1250
23	Azun	Lan Pah	289	1699
24	Azun	Lan Pah	289	1699
25	Azun	Mi Pa Hlaing	101	1083
26	Azun	Bot Daing	73	390
27	Bu Thaw Plaw	Ku Pa Leh	50	400
28	Ta Mar Ler	K'taw Nee	214	1193
29	Ta Mar Ler	Kaw Tee	120	759
30	Oo Krey Kee	Htee Ka Plar	63	378

Appendix B: Demographic Tables

Table B.1 Age of the survey respondents

Age groups	Number of women	Percent
15-19	95	10.80
20-24	165	18.75
25-29	157	17.84
30-34	192	21.82
35-39	115	13.07
40-45	156	17.73
Total	880	100.00

Table B.2 Sampled population by age and sex

Age groups	Male	Female	Total	Percent
0-4	517	423	940	21.26
5-9	328	321	649	14.68
10-14	276	260	536	12.12
15-19	195	264	459	10.38
20-24	185	225	410	9.27
25-29	157	167	324	7.33
30-34	189	194	383	8.66
35-39	147	120	267	6.04
40-44	116	132	248	5.61
45-49	76	29	105	2.37
50-54	33	8	41	0.93
55-59	15	10	25	0.57
60-64	7	7	14	0.32
65+	11	10	21	0.47

Appendix C: Human Rights Violations and Health Outcomes

C.1 Forced Displacement and Health Outcomes

Table C.1.1 Forced displacement and MUAC readings.

	Forced to move		Not forced to move		Total	
	Number of women	Percent	Number of women	Percent	Number of women	Percent
MUAC						
<22.5	12	11.21	98	14.48	110	14.03
≥22.5	95	88.79	579	85.52	674	85.97
Total	107	100.00	677	100.00	784	100.00

Table C.1.2 Forced displacement and hemoglobin levels.

	Forced to move		Not forced to move		Total	
Hemoglobin levels	Number of women	Percent	Number of women	Percent	Number of women	Percent
Anemic (<11g/dl)	19	17.92	262	38.99	281	36.12
Not anemic (≥11g/dl)	87	82.08	410	61.01	497	63.88
Total	106	100.00	672	100.00	778	100.00

Table C.1.3 Forced displacement and malaria prevalence.

	Forced to move		Not forced to move		Total	
Paracheck malaria test	Number of women	Percent	Number of women	Percent	Number of women	Percent
Positive	4	3.81	62	9.24	66	8.51
Negative	101	96.19	609	90.76	710	91.49
Total	105	100.00	671	100.00	776	100.00

C.2 Forced Labor and Health Outcomes

Table C.2.1 Forced labor and MUAC readings.

	Forced to work		Not forced to work		Total	
MUAC	Number of women	Percent	Number of women	Percent	Number of women	Percent
<22.5	0	0	110	14.08	110	13.94
≥22.5	8	100	671	85.92	679	86.06
Total	8	100	781	100	789	100

Table C.2.2 Forced labor and hemoglobin levels.

	Forced to work		Not forced to work		Total	
Hemoglobin levels	Number of women	Percent	Number of women	Percent	Number of women	Percent
Anemic (<11g/dl)	4	50.00	278	35.87	282	36.02
Not anemic (≥11g/dl)	4	50.00	497	64.13	501	63.98
Total	8	100.00	775	100.00	783	100.00

Table C.2.3 Forced labor and malaria prevalence.

	Forced to work		Not forced to work		Total	
Paracheck malaria test	Number of women	Percent	Number of women	Percent	Number of women	Percent
Positive	0	0.00	65	8.43	65	8.34
Negative	8	100.00	706	91.57	714	91.66
Total	8	100.00	771	100.00	779	100.00

C.3 Food-Security Violations and Health Outcomes

Table C.3.1 Food-security violations and MUAC readings.

	Food-security violation		No food-security violation		Total	
MUAC	Number of women	Percent	Number of women	Percent	Number of women	Percent
<22.5	6	11.11	102	14.49	108	14.25
≥22.5	48	88.89	602	85.51	650	85.75
Total	54	100	704	100	758	100

Table C.3.2 Food-security violations and hemoglobin levels.

	Food-security violation		No food-security violation		Total	
Hemoglobin levels	Number of women	Percent	Number of women	Percent	Number of women	Percent
Anemic (<11g/dl)	9	15.79	259	37.21	268	35.59
Not anemic (≥11g/dl)	48	84.21	437	62.79	485	64.41
Total	57	100.00	696	100.00	753	100.00

Table C.3.3 Food-security violations and malaria prevalence.

	Food-security violation		No food-security violation		Total	
Paracheck malaria test	Number of women	Percent	Number of women	Percent	Number of women	Percent
0	50	89.29	634	91.62	684	91.44
1	6	10.71	58	8.38	64	8.56
Total	56	100.00	692	100.00	748	100.00