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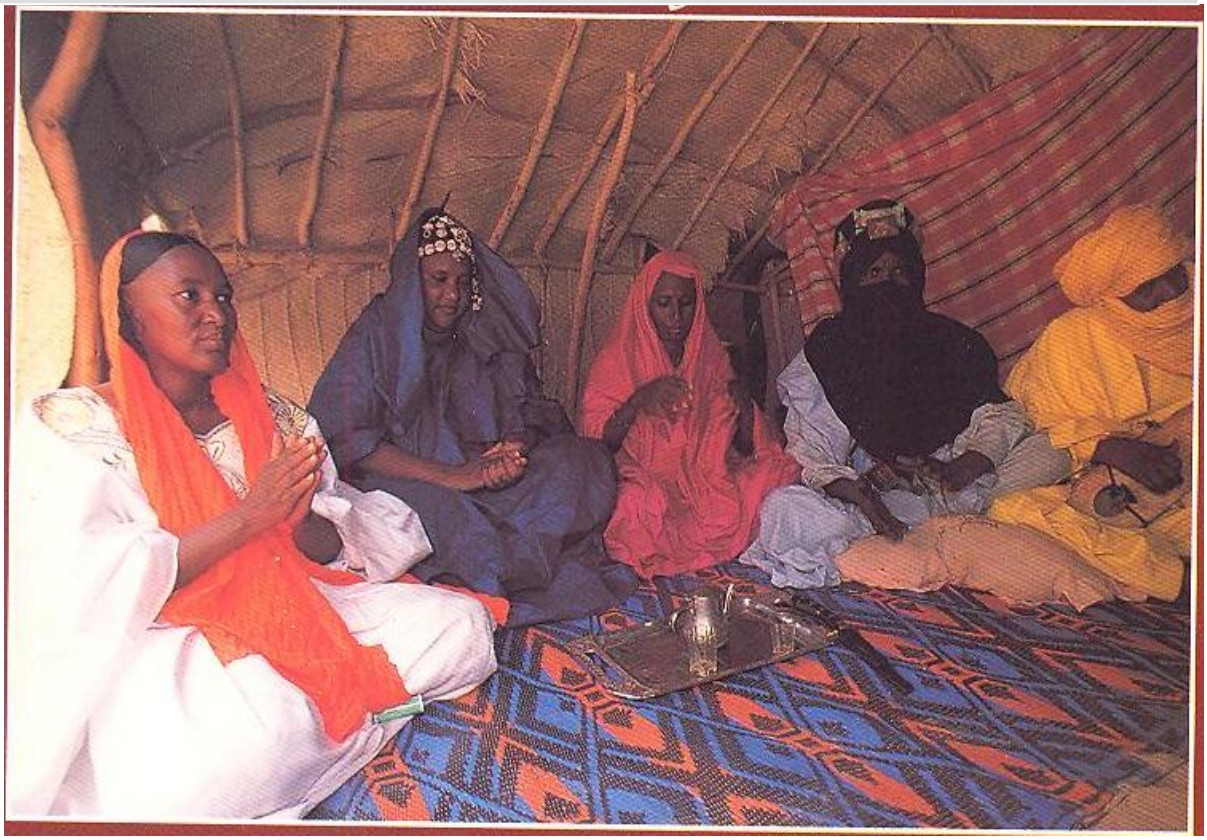

STUDY ON EARLY MARRIAGE, REPRODUCTIVE HEALTH AND HUMAN RIGHTS

TIMBUKTU REGION

-JULY 2008-

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September 2008

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Acknowledgements

We would like to thank the following for their invaluable contribution to carrying out this study :

- Norwegian Church Aid staff in Bamako;
- Central administrative authorities and Territorial Collectivities of the communes of Saraféré, Kondi, Gari, Gourma Rharous, and Haribomo;
  The staff of the regional hospital of Timbuktu ; ;
- The staff of the health centers Niafunké, Diré, and Gourma Rharous ;
- The staff of the health community centers of Kondi, Gari, and Haribomo;
- Health agents of health centers of all categories ; ;
- The staff of the Regional Office for the Promotion of Women, Family and Children of Timbuktu;
- Partners of the civil society of Timbuktu, and
- The people in villages and fractions of Guédié and M'Bétou in the cercle of Niafunké, Kondi and Gari in the cercle of Diré, and finally the people in Gourma Rharous and Ahel Badi in the cercle of Gourma Rharous.

The Consultants.

SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

The present study, initiated by NCA in prospect for the development of a new strategic plan over the period 2010 -2014,aims to collect basic information on early marriage /early pregnancies and reproductive health in the region of Timbuctou and more specifically in its interventions zones namely the cercle of Dire, Gourma Rharous, and Niafunke. The main objective is to promote action that puts a particular emphasis on the rights of girls and women for their well being and that of their families.

More specifically the objectives in these cercles are :

- To assess early marriage practice (frequency, motivation/attitudes) in NCA and its partners' target zones ;
- Determine the status of issues of reproductive health in the target zones ;
- Clarify the relationships between early marriage and reproductive health issues and their consequences on affected people (theoritical relationships and the real situation in the target zones).

Data collection in the field which was carried out from July 20 to August 2 was mainly based on a survey through sampling of different categories of population (girls and women from 9 years old and above in villages and nomadic settlements, community and communal leaders, medical staff, NGO or associations) and through of different types of data collection tools in the field (questionnaires, interview manuals and survey forms).

The overall sample in the three surveyed cercles included:

- 338 girls and women from 6 villages/nomadic settlements and 5 health areas and communes;
- 13 community leaders,
- 11 health agents, and
- 4 NGOs or associations working in the field of reproductive health and the fight against early marriage.

The sociological profile of the women surveyed shows a representation of the main ethnic groups in the region: Songhoi, Tamashek, Fulani, Arab, and Bambara. Age group distribution is 74% of girls and women aged 18 and above, 15% between 9 and 14 years old and 11% between 15 and 17 years old. Almost all of them have no education.

The proportion of married women is 59% against 25 % of single women, 12 % of widows and 4 % of divorced. For married women their husbands' marital status indicates that 78 % of them are in a monogamous household against 22 % in a polygamous one. Kinship marriages such as endogamic marriages represent 85 % of marital unions against 15 % for exogamic ones. 97 % of marriages are arranged by parents against 3 % based on girls's choice.
Fertility rate shows that a woman gives birth to an average of 7 children; 3 of whom survive and the same number dies at an early age. On an average every woman experiences the death of one child at birth.
Surveyed community leaders include (mayors, communal advisers, village chiefs and village advisers) as well as religious leaders (imams, marabouts).

The survey among the medical staff targeted physicians- surgeons and midwives in the Health Reference Centers (CSERF) on the one hand, traditional midwives in the Community Health Centers (CSCOM) on the other hand.

Finally, the NGO and associations surveyed are the one which are regularly registered at the regional coordination in Timbuctou, but operate in several fields and in different communes of the cercles in the region.

The findings of the study show high frequency levels of early marriage; 58 % of the women surveyed got married under 18; 39 % between 15 and 17 years old and 19 % under 15. However, early marriage in general is less frequent in Timbuktu than in the regions of Gao and Mopti where they represent almost 75 % of marital marital unions.
Ethnic background, marital status and endogamy are the main defining factors of early marriage in this region. In fact early marriage practice is less common among the Bambara than among the other ethnic groups of the region, Songhoi, Tamashek, Arab and Fulani, less than 8 % among the Bambara and between 17 and 20 % among other groups. This difference beween the Bambara and other groups has been also found in Mopti and Gao.

Marital practice based on promise of marriage/arranged by parents is more dominant and contributes to perpetuate early marriage. About one third of marriages based on a girl's free choice are early marriage compare to almost half of marriages based on parents' choice. Moreabove, none of the marriages based on girls's choice are very early (in other words

marriage contracted under 15 years old) against 39 % of marriages based on parents' promise.

Concerning polygamous households, early marriage practice prevails, 65 % of polygamous households against 55 % of monogamous households. The reasons are generally social and demographic: social prestige related to polygamy or yearning for numerous offsprings.

Finally, early marriage is more common among younger generations (married women aged under 30),than among previous generations (more than 30 years old and specifically more than 50 years old), obviously due to an early physical maturity and the importance of such criterion in the marriage decision making process.

Other differentiating factors such as women's level of education – which is very low in this zone – as well as the lifestyle, (the tendency being the settling down of all categories of the population) does not seem to have a significant impact on marriage age in the region.

In terms of people's perceptions, notably mothers and community leaders, the ideal marriage age of girls for all ethnic groups is between 14 and 17 years old, and more precisely above 15 years old, which corresponds to girls's physical maturity. However, the great majority of these people admit that a significant proportion of parents get their daughters' married before they are this age.

In fact, in addition to girls's real age, the main indicators influencing marriage decision are some physical signs of puberty or height and morphology of girls. The reasons which impel some parents to get their daughters' married before they reach physical maturity are mainly socio-cultural (either to avoid illegitimate pregnancy or to give a good education to girls), economic (to reduce family burden) or religious (to respect some precepts of Islam).

The negative consequences of early marriage on women's reproductive health are clearly perceived by the great majority of mothers 90 % and all surveyed community and communal leaders. The most dreaded consequences are difficulties related to delivery and their effects such as medical evacuation, complicated and costly surgery, risks of maternal and child mortality.

Other social consequences that parents fear most are the difficulties related to the new household responsibilities which girls has to face, mainly household chores.

The great majority of these people do not know the legal marriage age of girls and the young man in Mali, which is 15 years old for the former and 18 years old for the latter.

In fact among all the ethnic groups it is the responsibility of the father or all the men in the household to make the decision to marry girls based mainly on physical transformation. Nonetheless, in most cases the mother or other women's opinion is requested beforehand.

According to women and community leaders, early marriage practice should be drastically reduced to prevent the risks on women's reproductive health, consequences of the heavy domestic work load on girls and the frequency of divorce related to this practice.

Therefore, the abovewhelming majority of these people suggest parents' sensitisation, girls and women's information and education and communal authorities involvement in the prevention of early marriage.

Regarding reproductive health issues and their consequences on marriage, the abovewhelming majority of married women of all ethnic groups, nearly 98 %, have experienced the death of at least one child. Arabs, Fulani and Tamashek have recorded the highest mortality rate, wheras the Bambara who marry their daughters at an older age have recorded the lowest child mortality rate.

Concerning women in parturition (parturient), 29 % have experienced issues related to early marriage with 27.6 % of child death at birth as consequence. However, caesarean operation has been mentioned in only 1.2 % of all cases.
According to surveyed medical staff, obstetrical fistulas are considered as the first consequence of early marriage in the region, followed by maternal and infant mortality.

A maternal Health Program initiated in 2006 by a consortium of 6 NGOs among which Doctors Without Borders has helped support the medical care expenses of 32 women in the region of Timbuctu. In the fight against early marriage the section of the program which deals with the reduction of the exclusion of women victim of fistula intends to install the

necessary surgical equipment to train doctors to allow a transfer of competence to hospitals and self sufficiency in taking care of women suffering from fistula all above the country.

Several actors work in the field of reproductive health and the defence of child and women's rights. These actors include on the one hand local and international NGOs – Tahanint M'Massinag, Doctors Without Borders, Malian Association for Development and Malian Association For Survival in the Sahel – and on the other hand one Clinique Juridique (Legal Clinic). Their activities deal more or less with the fight against early marriage and/or against various forms of violence done to women in general. However, their interventions are generally limited to and geared to prevention actions through Information Education Communication (IEC) activities in medical and legal domains.

Doctors Without Borders stands out in the support of all the medical care cost of women suffering from fistula through its maternal health program in northern Mali. These interventions are part of a regional system taking caring of this pathology and that of a national system which is being structured.
In Timbuctu and Gao regions, this scheme involves both regional hospitals and the technical and financial assistance of international and local NGOs through a strategy including: 1) the training of surgeons and gynaecologist 2) the monitoring and evaluation of medical staff, 3) the information and sensitisation of communities for the identification of women suffering from fistula, 4) the provision of appropriate medical care.

The average care cost per women (not including investments) is estimated at 2,626,050 FCFA, and 5,977,629 FCFA including investments such as (equipments, training and follow up). Considering only pre-surgical check up, surgery, prescription and hospitalisation, the average care cost was estimated at 67,500 FCFA in 2007.

Moreabove, most of the medical staff of CSREF and CSCOM have received several trainings related to reproductive health. However; they found their training as well as the equipment available in CSCOM and CSREF insufficient for the treatment of the main pathologies related to reproductive health.

Therefore, recommendations for the prevention of early marriage and the reduction of their consequences on reproductive health and for better care of affected people are the following:

- **Prevention of early marriage**

Prevention of early marriage necessarily entails actions targeting the social groups concerned through:

- An efficient and dynamic communication for parental behavior change leading to an awareness of the real consequences of early marriage practice,
- Greater involvement of men and communal authorities in both the prevention and the fight against this practice;
- Taking advantage of the celebration of the national health day to sensitise people on the harmful consequences of early marriage through national NGOs network;
- Involving media and traditional communicators to ensure a greater caboveage of advocacy messages in favor of the adoption of the new family code and fighting early marriage practice ;
- Promoting parents functional literacy, girls education and sex education at school and within the community through radion talk shows and debates in neighborhoods ;
- Promoting strategies aiming at reducing girls' school drop out rate and ensuring them opportunities for higher studies through food in canteens and scholarships;
- Finding a balance between family social pressure and girls' social emancipation through the sensitisation of parents and community leaders, the promotion of income generating activities and or the alleviation of mothers' chores,
- Undertaking parental behavior change against early marriage through a long process of lasting social transformation within the family above several generations,
- Promoting for people and community leaders appropriate messages on the risk of early marriage and on the flaws of traditional indicators of marriage age,
- Preventing the risk of radicalisation of stand of some parents and community and religious leaders who were at first hostile to the fight against early marriage,

- **Strategies for the fight against early marriage and the mechanism for supporting fistula care cost**

Recommendations pertaining to this domain would be :

- Intensify sensitisation activities for early screening of fistula cases to ensure their socio-medical care ;
- Continue funding free care of fistula cases;
- Intensify information and sensitisation at the level of community to reduce the incidence of these harmful practices
- Follow up the training of the medical staff in providing proper medical care to women suffering from obstetrical fistula through a training geared to surgical techniques, close monitoring and evaluation through peer assistance.

- **Reducing reproductive health consequences and providing subsequent medical care in the region ofTimbuktu.**

The recommendations would be:

- Harmonize the code of marriage with the international conventions and agreements related to the child's right ;
- Disseminate the results of studies available on early marriage in order to serve as advocacy tools to fight against the practice of early marriage ;
- Set up an information and data collection system on early marriage and other practices harmful to the child's health;
- Strengthen the transfer of competences to local and regional health centers for the provision of proper medical care to women victims of fistula and other consequences of early marriage.

- **Capacity building of the medical staff in CSREF and CSCOM**

The recommendations in this domain would be:

- Train the medical staff to take care of the medical and psycho-social consequences related to early marriage;
- Ensure the coordination and the monitoring of activities related to the care of affected people ;

- Raise more funds from technical and financial partners in favor of decentralised communities and local NGOs to help them fight early marriage ;
- Provide health centers of cercles with equipments necessary to take care of women victims of the consequences of early marriage;

Lastly, workshops for sharing the findings of this study should be held in the region of Timbuctu. The aim of these workshops would be, on the one hand to sensitise community representatives, political administrative and religious leaders on the frequency of early marriage and its consequences on reproductive health, on the other hand, to lobby for the passing of a bill of law in this regard.

FIRST PART :

METHODOLOGICAL FRAMEWORK

1. Context and justification of the study

NCA is a non Gabovenmental, non political, and non profit organisation, which works in the field of development in general and more specifically in the fight against violence done to women. It has been operating in the northern regions of Mali for more than (20) years to contribute to the improvement of the living conditions of the most vulnerable segment of the population in several areas such as schooling, local gabovenance, and capacity building of the social society etc…

In the prospect of designing a new strategic plan for the period 2010- 2014 NCA wishes to put a particular emphasis on the right of girls and women for their well being and that of their families.

To this end, in 2007 NCA carried out a study on early marriage, reproductive health, and human rights in the regions of Mopti and Gao. The findings of this study have been widely disseminated among the surveyed communities, health centers, and civil society of both regions.

The present study targets the region of Timbuctu where NCA, like in its other intervention regions, wishes to have quantitative and qualitative field data that will contribute to guide its actions to fight early marriage. It is worth noting that NCA has just started a close partnership with both the regional hospital of Mopti and GREFFA NGO to help women victims of fistula, which is one of the consequences of early marriage on reproductive health. For many years NCA has been providing support to the regional hospital of Mopti and the NGO (WORLD DOCTORS) for their taking care of obstetrical fistula. This partnership helped gather the opinion of the medical staff regarding the harmful consequences of early marriage on the health of women who have been operated on.

An in-depth field study will help abovecome major challenges facing the region of Timbuctu such as:

- The lack of quantitative and qualitative data in the rural area of the region and the ignorance of the links between early marriage and reproductive health by parents, community leaders and health agents (such as rural midwives).
- The lack of information on the links between early marriage, reproductive health and the non implementation of the law regarding human rights; the issue is lightly caboveed by health agents and women and child's rights organisations; and very often data are diluted in studies on the fight against practices harmful to the health of girls and the woman ; in the region of Timbuctu a compelling study on early marriage and its consequences on reproductive health has never been carried out and these practices are tolerated and not even punished in Mali;
- To provide strategic support to development actors such as NCA and its partners, because very few development actors are involved in the fight against early marriage and its consequences;

- To better equip NCA and other development partners to face difficulties related to the implementation of laws regarding early marriage practice and its consequences ; texts on marriage as well as conventions signed and ratified by Mali set the legal marriage age at 18 ; however, these texts are ignored and or not enforced mainly in the rural communities ;

- To better inform communities targeted by the study that Mali is a secular country and that legislation on marriage is not based on Islamic law even though 90 % claim to be Moslems.

Therefore, there is a need for an in-depth quantitative as well as qualitative field study for the adoption of a suitable strategy and an appropriate approach to fight against girls early marriage and its consequences.

This is why this study is carried out in NCA intervention zones in the sixth administrative region of Mali.

2. Study Objectives

2.1. Overall Objective

The overall objective of the study is to design a strategic plan to fight against gender based violence drawing from both quantitative and qualitative data on early marriage/pregnancy and reproductive health in different areas sedentary as well as nomadic and Arabic in the region of Timbuktu.

2.2. Specific Objectives

- Assess early marriage practice (frequency, motivation /attitudes) in areas targeted by NCA and its partners, namely Niafunke, Dire, and Gourma Rharous
- Make an inventory of reproductive health issues in target zones ;
- Clarify the links between early marriage and reproductive health issues as well as their consequences on affected people (theoretical links and situation in target zones).

3. Expected Results

The following results are expected at the end of the study:

- a study report showing on the one hand the frequency, motivations and attitudes of the people related to the practice of early marriage in NCA target zones (Niafunke, Dire, Gourma Rharous), and on the other hand establishing the links between early marriage and reproductive health issues and their consequences on affected people (theory and situation in target zones) ;
- an analysis document which provides statistics and other quantitative data on vesico vaginal fistula cases, infant and maternal mortality, caesarean cases, etc… related to early marriage and pregnancies and first deliveries;
- Recommendations which take into account the law and its implementation in making strategic decisions to fight against early marriage

4. Methodological Approach

The methodological approach of the study was mainly based on a sampling survey among several categories of the population and by using different data collection tools on the field.

4.1 Area of study

In conformity with the terms of reference the study was carried out in three cercles of the administrative region of Timbuktu - Niafunke, Dire, and Gourma Rharous- It deal with girls and married and non-married women aged 9 and above, a category of medical staff of the CSCOM and CSREF (physicians-surgeons, midwives and rural midwives), community and commune leaders, the representatives of NGOs and associations operating in the field of reproductive health and human rights as well as the fight against early marriage and its harmful practices in general.

4.2. Review of the literature

- the review mainly focused on :
- the assessment of the body of knowledge related to the links between early marriage and reproductive health
- the reference documents on this practice in Mali,
- the reports on actions carried out in the zone; and
- the information available at the level of the regional hospital of Timbuktu, the health reference centers of the three circles, and at the level of community health centers of these circles.

4.3 Sampling

The study targeted several sub-samples of populations of different size as shown in the charts below:

Table 1 : distribution of population sub-samples

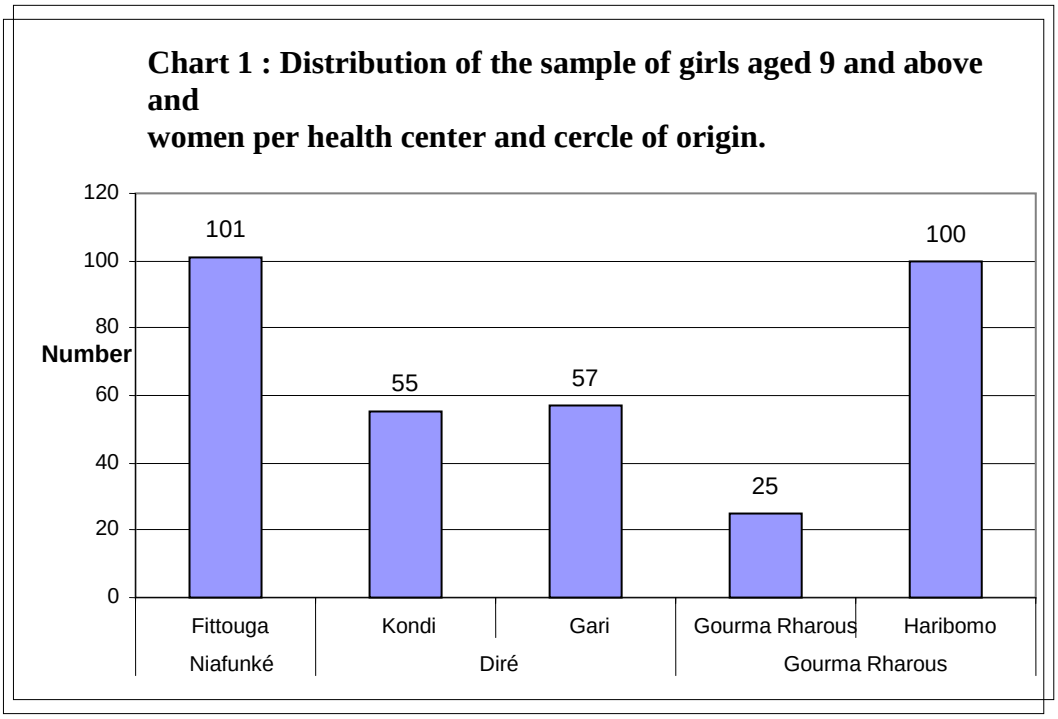
Catgegory	Girls and women 9 years old and above	Medical staff	Community and commune leaders	Representatives of NGOs and associations
Total	338	11	13	4

Tabe 2 : distribution of girls and women surveyed per health centers

CSREF	CSCOM	Total women and girls 9 years old and above	%
Niafunké	Fittouga	101	29,9
Sub/total Niafunké		**101**	**29,9**
Diré	Kondi	55	16,3
	Gari	57	16,9
Sub/ total Diré		**102**	**33,2**
Gourma Rharous	Gourma Rharous	25	7,4
	Haribomo	100	29,6
Sub /total Gourma Rharous		**125**	**37,0**
Total Timbuktu		338	100

In each of the three cercles, the selection of health areas and villages to be surveyed was made in collaboration with health centers and administrative officials and the leaders of community leaders (namely communes) in compliance with the specifications of the terms of reference (diversity, lifestyle, ethnic groups, etc…). It is worth noting that only the CESCOM of Fittouga was the only one surveyed in the CSREF of Niafunke. Due to heavy rain the other CSCOMs in the Gourma were not accessible.

Chart 1 :Distribution of the sample of girls aged 9 and above and women per health center



The identification of NGOs and associations operating in the field of reproductive health, human rights, and the fight against early marriage and its harmful practices was made at the level of the regional coordination of NGOs and at the regional head office for the promotion of the woman, the family; and the child (DRPFFE). Data gathered from these two institutions made it possible to draw from the repertoire of NGOs in the region a list and contacts of NGOs and associations working in the field of reproductive health, the promotion of women, and or the fight against violence done to women.

In the selected villages and nomadic settlements, women and girls surveyed were randomly selected in accordance with a pre-determined number in each area.

In each of the three selected CSREF and CSCOM the physician-surgeon, the midwife, and or the rural midwife were systematically surveyed.

Finally, community and communal leaders were selected in communes, villages and nomadic settlements surveyed depending on their availability. The same procedure was used to select the representatives of NGOs and associations at the regional level.

4.4 Data collection tools in the field

- *Data collection forms*

Three information forms were designed to collect secondary data :the first form was used at the regional hospital of Timbuktu, the reference health centers of Gourma Rharous and Niafunke, and at the level of community health centers to be surveyed., the second was used at the level of the regional coordination of NGOs, and the third one by Doctors Without Borders.

The data to be collected at the level of the hospital and the health centers mainly focused on the last five year inventory of obstetrical fistula cases, infant and maternal mortality in relationship with the age and ethnic background of the women concerned. The objective is to help make a statistical analysis of this data.

At the regional coordination of NGOs, on the contrary, the emphasis was on making an inventory of organisations operating in the field of reproductive health, human rights, and the fight against practices harmful in general according to their level of involvement. The objective is to carry out an in-depth interview with these organisations.

Concerning the NGO Doctors Without Borders the focus was on assessing the cost of the medical care of fistula enrolled in its programs in the regions of Gao and Timbuktu.

- *Questionnaires*

Data collection in the field was mostly carried out on the basis of questionnaires including:

- a socio-demographic census of women and girls aged 9 years and above
- an opinion poll targeting on the one hand women, girls aged 9 and above, and community and communal leaders, on the other hand a category of the medical staff of CSREF and CSCOM ;
- A quick survey /evaluation of the intervention of NGOs and associations operating in the fields of health, the fight against early marriage, and the defense of human rights.

The questionnaire on demographic census dealt with parameters permitting to measure the frequency of early marriage and its consequences on reproductive health. As far as girls, women, community leaders, and medical staff were concerned, the questionnaires were used to collect information that would help make an inventory and analysis of their knowledge and attitudes on the consequences of early marriage on reproductive health.

The opinion poll aims at on the one hand assessing the level of knowledge and attitudes of the main actors, in particular, that of one category of medical staff, on the other hand, identifying factors that would promote or reduce the practice of early marriage as well as its latest evolution in the region of Timbuktu.

Finally, surveyed local associations /and or NGOs and para-juridical institutions aims at identifying and analysing actions undertaken to eliminate the practice of early marriage and to assess the cost of the medical care of sick women including psycho-social assistance, social rehabilitation, and other costs incurred.
A copy of each of the different data collection tools mentioned is attached to this report.

4.5 Recruiting and Training of Women Survey Agents

Two women survey agents were recruited and trained to carry out surveys among girls and women of the sample.

- *Criteria for seclecting women survey agents*

The two women survey agents were recruited according to the following criteria:

- availability for the whole survey period
- mastery of at least languages widely spoken in the region of Timbuktu ;
- team work skills
- demonstrated experience in this type of survey

In total two women survey agents, FLASH graduates holding socio-anthropology degrees were recruited ; one of the women survey agents already participated in a survey on early marriage in the regions of Mopti and Gao in 2007, whereas the other one carried out surveys on women an girls' health in different regions in Mali.

Consultants supervised the surveys, filled out data collection forms and interviewed partners.

- *Training of survey agents*

Two (2) consultants trained survey agents for a day in Bamako. The training focused on the following:

- Objective and methodology of the study ;
- directions for filling out questionnaires and examining of other tools ;
- Questionnaires testing in some households in Bamako

4.6. Data Collection in the field

Data collection in the field lasted two weeks, from July 20 to August 2, 2008. The schedule for the data collection in the field is attached to this report.

4.7. Processing the information collected

Cette phase a porté sur la conception d'un programme de saisie et d'exploitation des données. This step was about designing a word and data processing software.

- *Checking*

It was meant to check the sub-samples against the questionnaires dully completed coming from the field and to briefly check data coherence. This activity was carried out by supervisors during and after the process of data collection in the field.

- *Codification of variables not codified before data collection.*

It deals with answers not codified before the survey.

- *Data processing*

An SPSS software was used to process the data. A data processing agent has been recruited and trained for this purpose. In order to fully carry out her duty the agent was trained by the supervisors. The training and data processing took ten (10) days, from August 04 to August 13, 2008.

- *Tabulating and analysing data processed*

In order to draft a preliminary report, an SPSS software was used to analyse and tabulate data according to a pre-established plan of analysis.

4.8. Producing a preliminary report

Processing data collected led to the drafting of a preliminary report. Taking into account observation drawn from this debriefing session would help produce a provisional report which will be presented at a validation workshop in order to stimulate discussion and to collect different observations and suggestions.

Suggestions and corrections made at the debriefing session will be included in the final report.

4.9. Difficulties

Qualitative data collected on reproductive health are generally partial. They only deal with cases refered to the regional hospital of Timbuktu, to the CSREF of Niafunke, Dire, and Gourma Rharous whereas it is widely admitted that most women give birth at home without any medical assistance.

For referred cases, CSCOM and CSREF do not have any feedback information from the referring center. Moreabove, logbooks for recording medical treatments and operations in health centers do not have the same information. While age, reason for medical check up, and the residence of the woman are always recorded, ethnic background and lifestyle of the patient are never recorded by the medical staff.

Surveying women in the field caused no major difficulty due to their availability and that of all the actors (community and communal leaders, medical staff). However, it is worth pointing out that in many cases, the age of surveyed women, the duration of their marriage, etc… were approximately determined due to the lack of birth certificates. Besides, the migration of nomadic people during the rainy season and the inaccessibility of certain areas because of heavy rainfalls mainly in the Gourma have somewhat prevented to strictly follow the pre-established survey schedule.

PART TWO :

RESULTS

2. 1.Characteristics of the population surveyed

The sample of girls aged 9 years and above and women surveyed totals 338 individuals distributed between the three target cercles of the region of Timbuktu as follows: 125 in Gourma Rharous, 112 in Diré, and 101 in Niafunké. Socio-demographic characteristics of the population sample are the following:

2.1.1 Lifestyle

The lifestyle greatly influences marriage practice, mainly the age at the first marriage which in general would be celebrated at an earlier age among nomadic people than sedentary ones (see the findings of the study on early marriage in the regions of Mopti and Gao in Mali in 2007).
Sedentary lifestyle is dominant in the region of Timbuktu even if a segment of the population, particularly big cattle breeders, rather practice transhumance part of the year – in the high grounds of Gourma and Haoussa during the rainy season in the Niger river valley and in many ponds and lakes in the dry season.
However, transhumance is practiced by a smaller and smaller number of this population (a few herders and a few families of some groups of cattle breeders) whose cattle room free in the vast grazing grounds as soon as the rainy season starts.
The majority of the traditional big cattle breeders of the region – Kel Tamashek, Fulani and Arabs- became sedentary or about to be sedentary due to the lasting effect of long periods of drought, the impact of "development projects" particularly the extension and the development of irrigated lands by these populations.
Therefore, the overall sample population surveyed is considered as sedentary including traditional big cattle breeders, Tamashek, Fulani, and Arabs.

2.1.2 Ethnic background

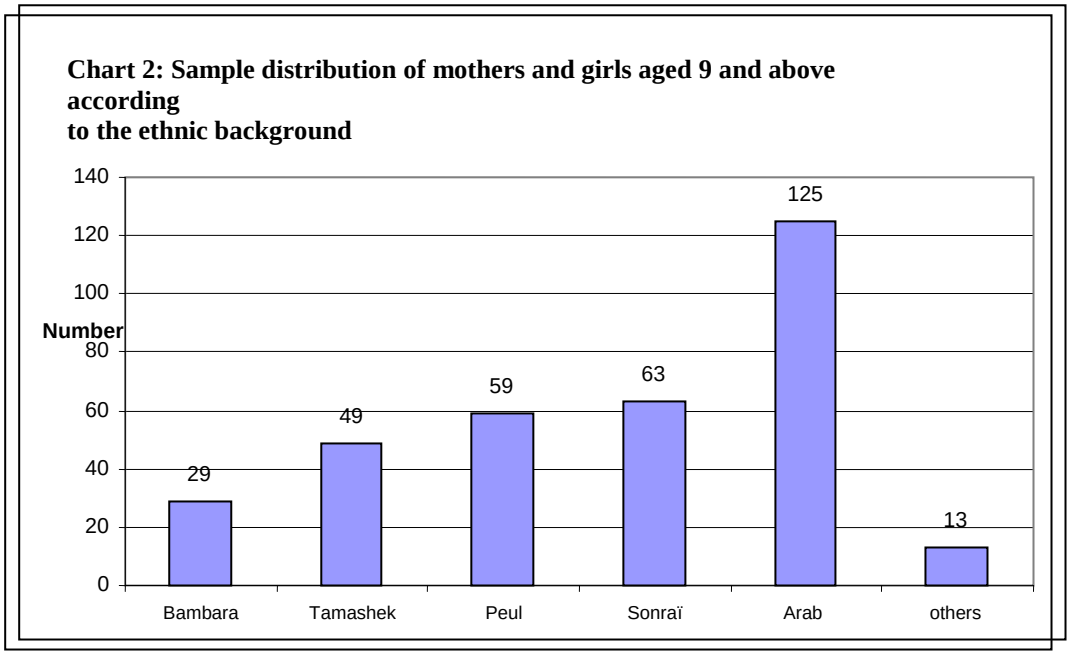
The ethnic background is a very important variable for the analysis of socio-demographic phenomena. In principle, this information is easy to collect, even if its integration in the sociological analysis entails some precautions related to the complexity of the social make up, the differences in status, socio-professional activities etc…

Table 3 :Sample distribution according to the ethnic background of girls and women

	Frequency	Percentage
Peul	59	17,5
Sonraï	63	18,6
Tamashek	49	14,5
Arab	125	37,0
Bambara	29	8,6
others	13	3,8
Total	**338**	**100,0**

The sample of girls and women surveyed includes the main ethnic groups of the region : Peul, Bambara, Sonraï, Tamashek and Arab. Considering the sample, Arabs, particularly Kounta Arabs are the most represented followed far behind by the Sonrai, Fulani, Tamashek, and lastly Bambara.

Chart 2 : Sample distribution of mothers and girls according to the ethnic background



This distribution does not claim to be representative of the ethnic distribution of the region of Timbuktu. It aims at taking into account a certain number of instructions of the terms of reference of the study which stipulate (1) the inclusion in the study of all the ethnic groups of the region, (2) particularly the Arab population, purposefully above represented in the sample. Except for the Bambara who are mainly located in Niafunké, the other ethnic groups are significantly represented in all the target cercles of the study.

Nonetheless, in the context of this study, for a representation of the main ethnic groups of the region in the sample, the population surveyed has been distributed among the three cercles caboveed by the NGO as follows:

Table 4 : Distribution of ethnic groups according to surveyed areas

Cercle	**Ethnic Groups surveyed**
Niafunké	Fulani, Bambara
Diré	Sonraï ; Tamashek
Gourma Rharous	Arab

2.1.4 Level of education

Like the ethnic background, the level of education is an important variable for the analysis of behavior and attitudes, namely in the analysis of social change. In principle, this variable too is easy to collect.

Table 5 : Distribution of the sample according to women's level of education

Level of education	Frequency	Percentage
None	304	90,2
First cycle of the fundamental school	33	9,5
Second cycle of the Fundamental school	1	0,3
Total	**338**	**100,0**

The sample shows that a great majority of girls aged 9 and above and women surveyed have (90%) have no education.

The proportion of women and girls having attended the first cycle of the fundamental school represents about 10% against an average of 25% in the other northern regions of Mali as shown by the findings of the 2007 study on early marriage.

The level of education of women and girls is particularly law among Gourma Rharous Kounta Arabs (94.4% have no education). It is higher in Diré (among Sonrai and Tamashek) where about (14%) of women have the level of education of the first cycle of the fundamental school.

It is worth noting that none of the women and girls surveyed in the three cercles has the level of education of the second cycle of the fundamental school or higher.

2.1.5 Age group

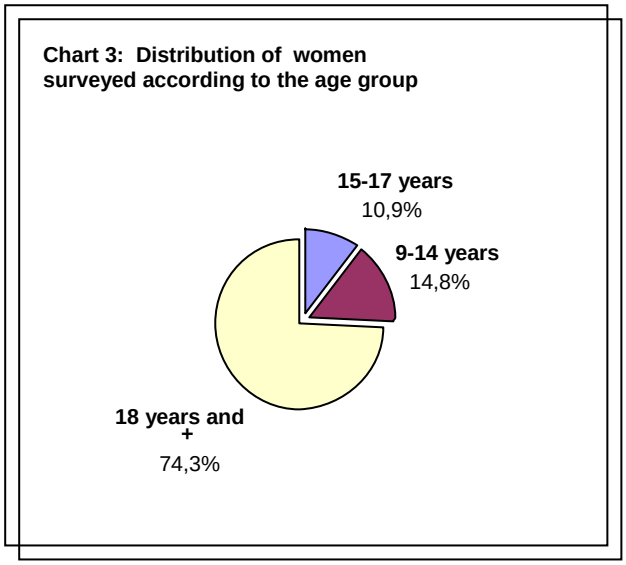
An essential variable is the analysis of socio-demographic phenomena and marriage in particular; age is one of the most difficult information to collect in an accurate way mainly in the rural area due to the lack of birth certificate. Considering the sample surveyed, the proportion of girls and women aged 18 and above represent about ¾ of the population while those in the age bracket of 9—14 and 15-17 respectively represent around 15% and 11%.

Table 6 : Distribution of the population surveyed according to age group

The above representation of the age group of girls 18 and above is related to the nature of the study which targets the category of girls and women likely to get married.

Age group	Frequency	Percentage
9-14 years	50	14.8
15-17 years	37	10.9
18 years and above	251	74.3
Total	338	100.0

Chart 3 : Distribution of mothers and girls according to age group



The proportion per age group of the population surveyed is quasi identical in the three cercles caboveed by the study..

2.1.6 Marital Status

The marital status and the age at the first marriage are the two essential variables for the determination of the precocity or non precocity of a marriage. The marital status of girls and women surveyed is in principle easy to determine since marriage has been defined here in its sociological sense, that is, *a traditional practice which legitimate a union between a man and a woman, most of the time preceded by a religious ceremony establishing the act from which sexual intercourse between the spouses is authorized and ensuing pregnancies are considered legitimate.*

Among the 338 women surveyed, the proportion of married women is by far the highest with 59% , followed by single women 25% ; as to divorced and widows they respectively represent about 4% and 12% as shown in the table below.

Table 7 : Distribution of the sample according to women's marital status

Marital status	Number	Percentage
Single	86	25,4
Divorced	12	3,6
Widow	40	11,8
Married	200	59,2
Total	**338**	**100,0**

The proportion of married women is higher among the Tamashek and the Bambara of the region, about 76% of women, than among Arab and Fulani respectively 46% and 56% of women..

In general, the population surveyed in Gourma Rharous (Kounta Arabs) highly distinguishes itself from the population surveyed in the other cercles. The proportion of girls and married women is lower in Gourma Rharous, less than 46%, against 72% in Diré and 61% in Niafunké. On the contrary, the proportion of single, divorced, and widows is much higher in Gourma Rharous, respectively 30%, 8%, and 17%. The proportions of single women are 27%, in Niafunké, and 20% in Diré; the proportion of divorced is 1% in each of the two cercles; as for widows it is 11% in Niafunké, and 7% in Diré.

The peculiarities in Gourma Rharous could be explained by the strong endogamic matrimonial traditions for women within Kounta Arab ethnic group. These traditions, while authorising exogamy for men, forbid them for women who could only be married to a member of a Kounta ethnic group.

2.1.7 Kinship relations with the spouse

The practice of endogamic type of marriage, uniting spouses from the same family is considered as a potential factor for early marriage. It plays a double role: (1) strengthening family ties and (2) preserving individual social rank, particularly in very hierarchical societies. Among the 254 non single women (married, widows, and divorced) of the sample, the proportion of endogamic type of marriages is particularly high 85% against 15% for exogamic type of marriages.

Table 11: Distribution of married women according to kinship relations with the spouse

Kinship relations with the spouse	Frequency	Percentage
Same family	216	85,0
Different family	38	15,0
Total	254	100

Per ethnic group the frequency of endogamic marriages is particularly high among Arabs in Gourma Rharous where endogamic practice for women is a rule.

Table 8: Distribution of married women per ethnic group and according to kinship relations with the spouse

	Kinship relations with the spouse		Total
	Same family	Different family	
Peul	72,7%	27,3%	100%
Sonraï	82,4%	17,6%	100%
Tamashek	84,8%	15,2%	100%
Arab	93,0%	7,0%	100%
Bambara	85,7%	14,3%	100%

It is equally important among the Bambara, Tamashek and Sonrai of the zone and less important among the Fulani in Niafunké where the proportion of endogamic type of household is much higher.

2.1.8. Status of the spouse

Like endogamy the practice of polygamy is considered as a determining factor of early marriage. From people's perception this practice plays two major roles: (1) the extension of the family and (2) the high social ranking of the polygamic spouse.

Table 12: Distribution of married women according to the status of the spouse

	Number	Percentage
Monogamous	195	77,7
Polygamous	56	22,3
Total	251	100,0

In the sample, the proportion of married women surveyed whose spouse is polygamous represents around 22% against 78% whose spouse is monogamous.

Table 9 : Distribution of married women per ethnic group and according to the status of the spouse

	Statuts of the Spouse		Total
	Monogamous	Polygamous	
Fulani	61,9%	38,1%	100%
Sonraï	72,5%	27,5%	100%
Tamashek	82,6%	17,4%	100%
Arab	86,9%	13,1%	100%
Bambara	75,0%	25,0%	100%

Per ethnic group the proportions of polygamous households are higher among Fulani and Bambara in Niafunké and Sonrai in Diré than among Tamashek and Arab in Diré and in Gourma Rharous as shown in the table..

2.1.9 Rank in marriage

Le rang dans le marriage au sein des ménages polygames aurait une relation avec le marriage précoce pour le conjoint, qui après un premier marriage rechercherait soit un héritier ou une reproduction élargie de sa famille en épousant une seconde femme. Pour d'autres hommes, le nombre d'épouse est un indicateur de réussite sociale.

A woman's rank within polygamous households could have a relation with the spouse's early marriage, who will marry a second wife with the purpose of either to have an heir or a bigger family. For other men, the number of wives is a sign of social success.

Table 10 : Distribution of married women according to rank in marriage

	Frequency	Percentage
First spouse	29	49,2
Second spouse	24	40,7
Third and fourth spouse	6	10,1
Total	59	100,0

Among the 59 women surveyed in polygamous households nearly half of them are first spouses against 41% of those who are second spouses and 10% for the other ranks.

2.1.10. Type of Marriage

Matrimonial strategies – promise / parents' choice, young man's family proposal to girls, free choice of girls – in part determine the marriage age of girls.

In the sample surveyed the proportion of women married through proposal from the future spouse's family is dominant. It represents 79% against 18% for marriages based on parents' promise, and only 3% of marriages based on girl's free choice.

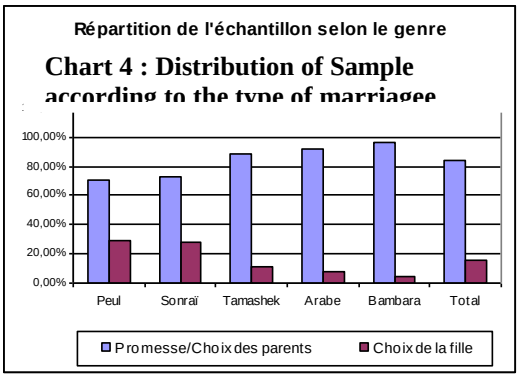
Table 11 : Distribution of the sample according to type of marriage

	Frequency	Percentage
Promise/parents' choice	44	17,5
The future spouse's family proposes to girls	200	79,4
Free (individual)choice	8	3,1
Total	252	100

The matrimonial strategy based on parents' promise or choice is virtually the tradition among the Bambara, the Arab, and the Tamashek. Whereas the strategy based on girls's free choice is fairly important among Fulani and Sonrai as shown in the table below.

Table 12: Distribution of the sample according to the type of marriage and the ethnic group

	Type of Marriage		Total
	Promise /Parents' choice	Girl's choice	
Fulani	70,5%	29,5%	100%
Sonraï	72,5%	27,5%	100%
Tamashek	89,1%	10,9%	100%
Arab	91,9%	8,1%	100%
Bambara	96,0%	4,0%	100%
Total	**84,3%**	**15,7%**	**100%**



2.1.11. Average number of children per woman

The average number of children per woman in the sample surveyed indicates a high level of fecondity, about 7 children. However, this high demographic growth is naturally limited by a high infant mortality and mortinatality rate. As shown in the table below, out of 7 children born alive to a woman, only 3 children survive and about the same number dies at an early age

Table 13 : Data on births

	Number of children who are alive	Number of children who died	Number of children who died at birth
Number of women who delivered	205	156	62
Average number of children alive per woman	3 children	2,5 children	1 child

Also, on an average each woman experienced the death of one child at birth. Taking into account the ethnic background, the frequency of child death at birth is particularly high among the Fulani and the Bambara in the CSREF of Niafunké where above 70% of women surveyed have experienced on an average the death at birth of two children or more.
In conclusion the sociological profile of the women surveyed indicates : a sedentary woman aged 18 or above, representing each of the main ethnic groups of the region : (Sonrai, Tamashek, Fulani, Arab, and Bambara) with no education, married to a member of her family following a family decision, and living in a monogamous household.

2.2. Evaluation of early marriage practice and its defining factors

The 1962 Malian code of marriage defines marriage as the union between two people (man and woman) before the required age, that is before girls is above 15 years old and the man is above 18. However, a new code is being drafted which will take into account new norms that are more in compliance with international, biological, as well as psycho-social norms related to reproductive health. This new code advocates that the legal marriage age be 18 for both the man and the woman according to the norms of the Inter African Committee which is in charge of traditional practices affecting child health. This committee defines early marriage as "a marriage when girls is under 18 years old and is not physically, physiologically and psychologically ready to be fully in charge of her marital and maternal responsibilities"

2.2.1. Frequency of early marriage

The frequency of early age of marriage is calculated here only for the (254) non married women of the sample. For the sake of analysis we will distinguish three types of marriage: (1) *very early marriage*, which concerns girls under 15 years old and which is in compliance with the norms of early marriage as defined by the law in Mali; (2) *less early marriage*, which deals with girls between 15 and 17 years old and (3) *non early marriage*, which concerns girls from 18 years old. The term early marriage will be used to define the first two types of marriage.

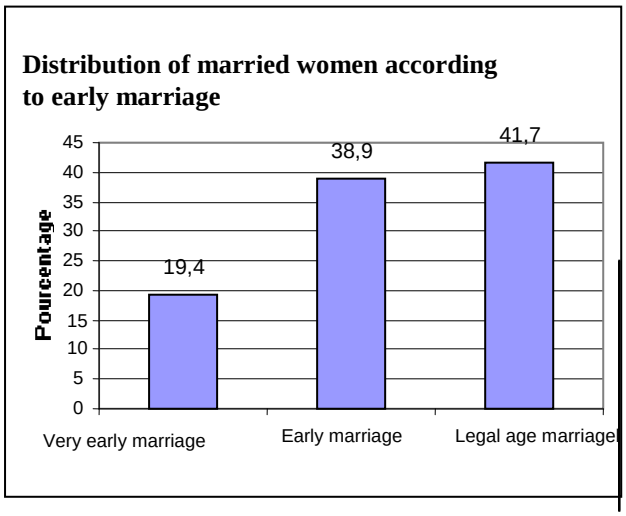
The findings of the study show that the practice of early marriage is high in the region of Timbuktu. The proportion of very early marriage is 19% against 39% for less early marriage. The total of early marriage represents 58% of all marriages against 42% for legal age marriages.

This proportion is far below that of the other northern regions surveyed (Gao and Mopti) where it represents more than three quarters of the marriages.

Table 14 : Distribution of the sample according to early marriage

	Number	Percentage
Very early marriage (8-14 years)	49	19,4
Early marriage (15 - 17 years)	98	38,9
Legal marriage	105	41,7
Total	252	100,0

Chart 5 : Distribution of married women according to early marriage



The mean of marriage age of the sample studied is 17 years. It is relatively high compared to the national average which is 16.2 years according to EDSM III, and even higher than those of the other northern regions which are 15.5 years in Gao, against 16.2 years in Mopti. It is comparable to the mean of marriage age of the northern cities of Mali which is 17.2 years and lower than that of Bamako which is 18.4 according to EDSM III.

Table 15 : Distribution of the average age at first marriage

Average age of marriage	19 years
Mean of marriage age	17 years
Minimum age of marriage	8 years

The average age of marriage is 18 years while the minimum age of marriage is 8 years, close to that of Gao and Mopti where cases of marriage at 9 and 10 years had been recorded.

2.2.2. Factors determining early marriage in the region

To analyse factors influencing the practice of early marriage within the population surveyed, we have studied the relationship between this practice and socio-demographic parameters such as generations, the ethnic background of the woman, kinship with the spouse, his social status, rank in marriage for polygamous households and type of marriage. Other important parameters like the lifestyle (sedentary or nomadic), the level of women's education, social

status (traditional social stratification) have not been emphasized due to their non discriminating character in the context of this city.

- **Relation with generation**

Marriage age being mostly determined by socio-cultural values, it is important to assess the evolution of mentalities in relation to these values based on the evolution of the age of marriage throughout generations. From the population surveyed we have distinguished three "generations" of women: (1) the younger generation, that is married women between 9 and 29 years old, (2) the intermediate generation, for married women between 30 and 39 years old, finally, (2) the older generation, married women aged 50 and above.

It results from the analysis of the findings of the study that, in general, there is a relationship between the age of marriage and women's age. In fact, the younger generation tends to get married earlier that the intermediate generation, which in its turn got married much earlier than the older generation.

Table 16 : Evolution of the marriage age according to ethnic group and generation

	Generation of married women			
	Younger generation (9 – 29 years)	Intermediate generation (30-49 years)	Older generation (50 years and above)	Total
Fulani	18,6%	37,2%	44,2%	100%
Sonraï	42,9%	38,8%	18,4%	100%
Tamashek	43,5%	39,1%	17,4%	100%
Arab	39,5%	34,9%	25,6%	100%
Bambara	46,2%	26,9%	26,9%	100%
Total	**38,5%**	**35,7%**	**25,8%**	**100%**

This relationship is particularly strong among Bambara, Sonrai, and Tamashek. Whereas the contrary is true for the Fulani of Niafunké where early marriage seems to be more frequent among older generations.

The reasons stated by the populations are:

- Girls reaching physical maturity at an earlier age due better health and nutrition conditions;
- Non compliance of some parents with marriage age norms.

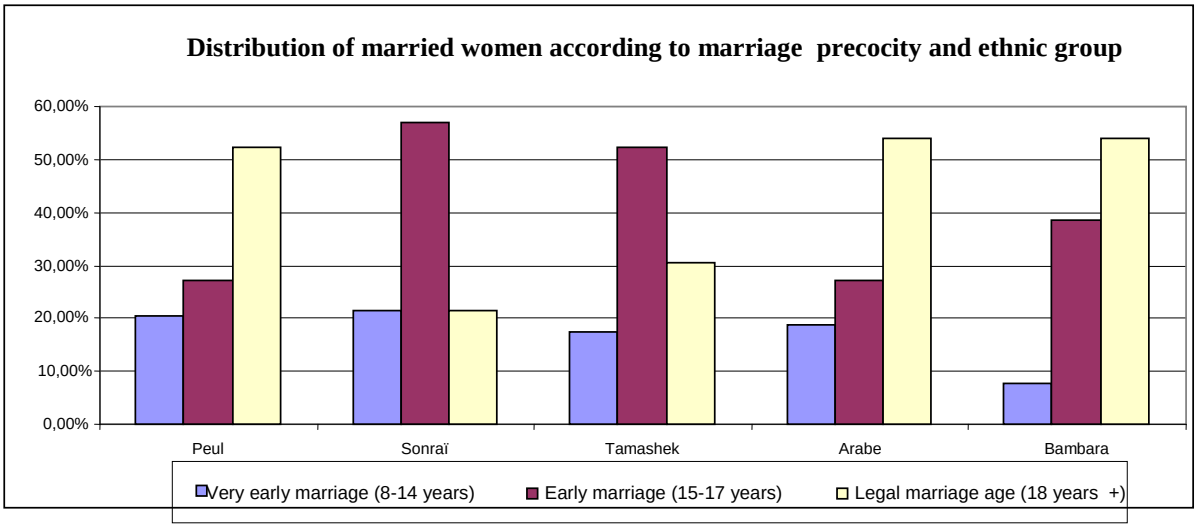
- **Relation with ethnic background**

The highest rates of early marriage have been recorded among the Sonrai and the Tamashek. On the contrary, very early marriage, that is, lesss than 15 years old, its frequency is almost identical among all the ethnic groups (between 21 and 17% of women), except for the Bambara in Niafunké whose rate is low (about 7%), like the Bambara in Mopti according to the findings of the 2007 study.

Table 17 : Distribution of married women according to the ethnic background and the marriage age precocity

	Marriage age group			Total
	Very ealy marriage (8-14 years)	Early marriage (15-17 years)	Legal/normal marriage (18 years and above)	
Fulani	20,5%	27,3%	52,3%	100%
Sonraï	21,6%	56,9%	21,6%	100%
Tamashek	17,4%	52,2%	30,4%	100%
Arab	18,8%	27,1%	54,1%	100%
Bambara	7,7%	38,5%	53,8%	100%

Chart 6 : Distribution of married women according to early marriage and ethnic group



- **Relation with marriage types/strategies**

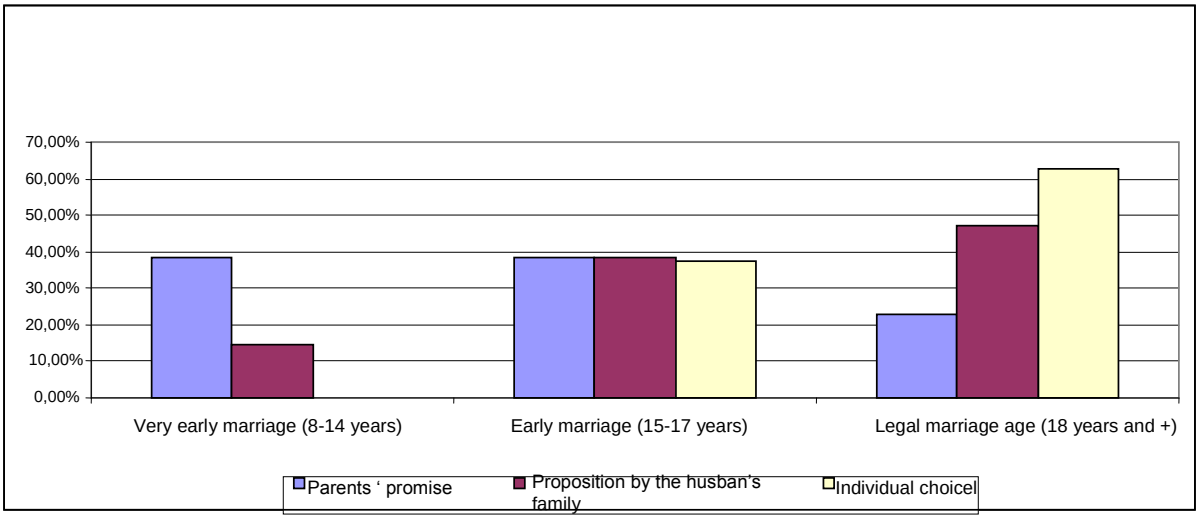
Marriage strategies vary according to ethnic groups but they are very often based on family relationships.

On the whole there are three strategies: (1) the promise of marriage which is an agreement between parents to marry their children; this agreement is most of the time made when the children were very young or sometimes were not even born, (2) the future spouse's family proposes to girls's most of the time at the beginning of adolescence, (3) the free choice of girls which is more or less tolerated, but which generally happens after the early adolescence.

Table 18 : Distribution of strategies of marriage according to early marriage

	Marriage age group			
	Very early marriage (8-14 years)	Early marriage (15-17 years)	Legal age of marriage (18 years and +)	Total
Parents' promise	38,6%	38,6%	22,7%	100%
Proposition by spouse's family	14,6%	38,2%	47,2%	100%
Individual choice	,0%	37,5%	62,5%	100%
Total	18,3%	38,2%	43,4%	100%

Chart 7 : Distribution of married women according to the precocity and the strategy of marriage



From the analysis of the table below there seems to be a relationship between the strategy and the age of marriage. In fact, the distribution of marriage strategies according to marriage age

precocity indicates a higher frequency of early marriage for cases of marriage based on parents' promise. On the contrary, marriage age is higher for marriage strategies based on the proposal of the spouse's family or even on the free choice of girls. In fact, two thirds of marriages based on girls's free choice were celebrated at the age of 18 years and above, none of them was celebrated at a very early age, that is, less than 15 years old.

- **Kinship relations between spouses**

Endogamy type of marriage, uniting descendants of the same family or same lineage are frequent among all the ethnic groups in the region.

Survey findings indicate that early marriage is almost as frequent in endogamic types of marriage as exogamic ones, showing that, for many households endogamic type of marriage is deeply rooted in the culture with the risk of passing on blood pathologies.

Table 19 : Distribution of early early marriage according to kinship relations between spouses

	Marriage age group			Total
	Very early marriage (8-14 years)	Early marriage (15-17 years)	Legal marriage age (18 years and et +)	
Same family	18,6%	37,7%	43,7%	100%
Different family	18,4%	44,7%	36,8%	100%
Total	**18,6%**	**38,7%**	**42,7%**	**100%**

- **Relation with household status**

According to its make up or its status a household practices two types of marriage in the region: *monogamy* and *polygamy*. These two types of marriage are more practiced among certain ethnic groups (Fulani and Sonrai) than others (Arab and Tamashek).

Early marriage would be more frequent in polygamic type of households than in monogamic ones for various demographic and or sociological reasons. The analyses of these findings support this assertion. In fact, early marriage frequency is slightly higher among women whose husbands are polygamous than among women whose husbands are monogamous.

Table 20 : Distribution of marriage age precocity according to spouse's status

	Marriage age group			Total
	Very early marriage (8-14 years)	Early marriage (15-17 years)	Legal marriage age (18 years and +)	
Monogamous	18,8%	36,5%	**44,8%**	100%
Polygamous	18,2%	**47,3%**	34,5%	100%
Total	18,6%	38,9%	42,5%	100%

The reasons would be:

- The yearning for a male descendant for polygamous housesholds or
- The yearning for numerous descendants.

- **Relation with the woman's rank**

A woman's rank in polygamic households would be in relation with her marriage age for several reasons related to the sterility of the first wife, misunderstanding between spouses or the quest for a male heir.

In the context of this study, survey findings do not show any relation between age and a woman's ranking. The proportion of first spouse (nearly 40% of polygamic households) in the category of married at legal age is almost as high as that of first spouses in the category of early marriage. On the contrary, the frequency of second spouse is much higher in early marriage while the contrary is true for third spouses and more.

Table 21 : Distribution of early marriage according to the woman's rank in marriage

	Marriage age group			Total
	Very early marriage (8-14 years)	Early marriage (15-17 years)	Legal marriage age (18 years and +)	
First spouse	13,8%	41,4%	44,8%	100%
Second spouse	16,7%	54,2%	29,2%	100%
Third spouse	40,0%	,0%	60,0%	100%

In conclusion, study findings indicate that the deciding factors of marriage in the region of Timbuktu are in general, the woman's generation or the tendency of girls to get married at an

early age, ethnic background and marriage strategy based on parents' promise. Concerning polygamic households, the frequent practice of endogamy seems also to be a deciding factor of very early marriage.

On the contrary, the level of women's education which is very low in the zone and the lifestyle almost identical of these populations who are in general sedentary does not seem to have any significant impact on marriage age.

2.3. Perceptions and attitudes of actors

The perceptions and attitude of the main actors were gathered from a sample of mothers and community and communal leaders in the different health areas surveyed. The analysis of the findings include various parameters such as "legal" age of marriage, the practice of early marriage and its reasons, marriage decision makers, knowledge of the consequences of early marriage and legal age of marriage.

2.3.1. Mothers and girls

The sample of mothers surveyed include 292 individuals almost evenly distributed in the three target cercles as indicated in the table below

Table 22 : Distritbution of the sample according to the cercles surveyed

	Number	Percentage
Diré	95	32,5
Niafunké	99	33,9
Rharous	98	33,6
Total	292	100,0

. Table 23 : Distribution of the sample according to their ethnic group

	Number	Percentage
Fulani	64	22,1
Sonraï	59	20,3
Tamashek	50	16,6
Arabe	94	32,4
Bambara	25	8,6
Total	292	100,0

The distribution of the sample according to the main ethnic groups in the region as shown in the table below indicates a high proportion of the arab population.

- **Perception of other signs of marriage age**

To the question « At which age can a young girl get married », the great majority of mothers (59%) have given an age bracket between 14 and 17 years old as shown in the following table. In fact, they think that 15 years old is the ideal age for a young girl who has had a normal physical development to get married.

Table 24 : Distribution of surveyed people according to their perception of marriage age

	Number	Percentage
Less than 14 years	52	17,8
Between 14 and 17 years	171	58,6
From 18 years	21	7,2
Do not know	48	16,4
Total	292	100,0

A significant proportion of mothers (18%) namely Tamashek and Sonrai women think marriage age should be 15 whereas the proportion of those who think it should be 18 or above is low about 7%. It includes Arab and Tamashek women.

It is worth noting that about 16% of women surveyed, mainly young Sonrai, Arab, and Bambara girls admit not having any idea of marriage age.

- **Perception of other signs of marriage age**

Mothers think that age is an important factor for making decisions about their daughters' marriage whereas the approximative knowledge of the accurate age of girls is approximative due to the lack of birth certificates. Therefore, the populations resort to other observable physical and psysiological criteria for makind decisions about their daughter's marriage

Besides age, the criteria mothers and girls refer to are physical maturity and other signs of puberty.

Physical maturity includes morphological changes particularly the development of breast, waist, and height of girls which generally occurs at mid adolescence, from 15 years old. Taking into these signs is particularly important for making a decision about first marriage.

Puberty signs most cited by Arabs and Tamashek, in particular, are menstruations which show that girls is ready for fasting.

Table 25 : Distribution of people surveyed according to their knowledge of the signs of marriage age

	Number	Percentage
Physical morphology	120	41,1
Puberty	124	42,5
Do no know	17	5,8
Others	31	10,6
Total	292	100,0

Morphological changes and puberty signs are cited in an almost even frequency in general per women surveyed showing a complementary of these physical criteria for making decisions about girls's marriage.

Other criteria such the beginning of fasting and girls's ability to do household chores have also been cited.

- **Perception of the frequency of early marriage**

Despite the accuracy of these criteria for determining marriage age, an important proportion of mothers and girls think that numerous marriages are nonetheless celebrated at a very early age, that is, regardless of local norms.

Mothers' opinion of the frequency of early marriage "under age" is shown in the table below.

Table 26: Distribution of people surveyed according to their opinion on the frequency of early marriage

	Number	Percentage
Never	112	38,4
Often	71	24,3
Very often	53	18,2
Do not know	56	19,2
Total	292	100,0

In fact this practice is frequent in the region, if we consider that about 43% of mothers surveyed think that it is sometimes or very often done against 19% of those who have no opinion.

- **Perception of the reasons of early marriage**

The reasons stated for the practice of the early marriage of girls are indicated in order of frequency in the table below.

Distribution of people surveyed according to the reasons stated for early marriage

	Number	Percentage
Avoid illegitimate pregnancy	62	51,7
Educate girls	25	20,0
Alleviate family burden	2	1,7
Safeguard girls's virginityt	9	7,5
Respect for Islamic precepts	9	7,5
Honor family social rank	3	2,5
Others	11	9,2
Total	**120**	**100,0**

The most frequently cited reasons are:

- ✓ *Avoid illegitimate pregnancies*: this reason cited by more than 50% of mothers and girls shows on the one hand the still negative perception people have of a child born out of wedlock, on the other hand parents of illegitimate children dread to be outcasts. In addition to the marginilisation of girls this act is seen as a "shame" on the family.
- ✓ *Educate girls:* before reaching womanhood status girls is regarded as immature and her education must be completed within her household by her husband and her in-laws. The objective of early marriage for parents would be to train girls to take up her new household responsibilities, but more importantly to be more submissive to her husband and in-laws.
- ✓ *Reduce family burden:* mainly for big families or families with modest living conditions for whom expenses incurred for the care of girls increase as she grows older.
- ✓ *Safeguard girls' virginity:* virginity before marriage is highly regarded by both girls's family and by her husband's. It is made public during the wedding ceremony and credit is given to girls through some celebrations.
- ✓ *Respect Islamic precepts:* people in this zone are predominantly Moslem and according to some interpretations of Islamic law, "girls should be married as soon as she has her menstruation…or if she finds a suitor". Therefore, in conformity with this precept some parents get their daughters married at their prime adolescence.
- ✓ *Honor family social rank:* for a great number of families marrying girls at an early age is an acknowledgement of their higher social class. On the contrary, girls who marry late are perceived as having a loose morality or are from a lower social class.

- **Perception of the negative consequences of early marriage**

A great number of girls and mothers (about 90%) are aware of the risks related to early marriage even though a high proportion of women think that its practice is more or less common in the region.

Among these risks the most dreaded are shown in order of frequency in the table below.

Table 27 : Distribution of people surveyed according to their knowledge of the consequences of early marriage

	Number	Percentage
No consequence	29	10,2
Delivery difficulty	115	40,6
Maternal mortality risk	17	6,0
Infant mortality risk	16	5,7
Others	106	37,5
Total	283	100,0

- ✓ *Difficulties during delivery :* cited by 41% of girls and women they point out both the long and painful labor as well as obstetrical risks like dystocy, lacerations, trauma, and vesico-vaginal fistula;
- ✓ *Maternal mortality risks :* having the same causes as the preceding consequence, from the point of view of mothers and girls they are, however, cited in the same proportion as those related to infant mortality;
- ✓ *Infant mortality risks* : from the perception of the people surveyed a mother too young to deliver will have a long labor, putting at risk the life of her child if she does not have medical assistance.

Other negative consequences of early marriage cited are among others :

- difficulties for girls, too young and ill prepared to take up her new household chores (fetch dry wood, pound millet, draw water, and cook meals etc….),
- injuries subsequent to difficulties experienced by girls during sexual intercourse which lead to lacerations and physical as well as psychological trauma
- Girls dropping out of school

- **Responsibilities in the marriage decision making**

According to mothers and girls, the decision to marry a young girl is made in most cases by men, the father and the other adult men of the family, whereas in Tamashek and Arab communities the decision is made by the father alone.

Table 28 : Distribution of people surveyed according to those who make the marriage decision

	Number	Percentage
Father alone	78	26,7
Father and other men	152	52,1
Fathers and mothers	55	18,8
Do not know	3	1,0
Other	4	1,4
Total	292	100,0

For about 19% of people surveyed the decision to marry girls is collectively made by men and women of the family. In fact, most of the time the final decision is made by men but oftentimes after consulting mothers and sometimes girls.

- **Knowledge of the legal marriage age in Mali**

Mothers and girls not knowing the legal age of marriage can be a factor favoring the practice of early marriage in the rural area.

In general, girls and her mother do not know the legal age for marrying a girl as shown in the table below.

Table 29 : Distribution of people surveyed according to their knowledge of the official age of marriage

	Number	percentage
Less than 15 years	3	1,0
From 15 years	68	23,3
Above 18 years	14	4,8
Do not know	207	70,9
Total	292	100,0

Only 85 women out of 292 that is 29% of women surveyed admit knowing the legal age of marriage of girls in Mali. Among those who assume knowing it, the great majority 80% set girls's marriage at 15 while 20% set it either at an older age (above18 years) or at a younger age (less than 15 years).

The various reasons why people do not know the legislation about marriage (which is under revision) are among others: lack of information, lack of consideration for the official regulation, none implementation of the law, lack of sanction for parents and or authorities who celebrate early marriage etc….

- **Recommendations for the prevention of early marriage**

Mothers and girls' suggestions recommendations for the prevention of early marriage are shown in the table below:

Table 30 : Distribution of people surveyed according to recommendations made for the prevention of early marriage

Recommandations	Number	Percentage
Girls' education	43	14,7
Implementation of the law	4	1,4
Family planning	2	0,7
Sensitisation of parents	165	56,5
Involvement of communal authorities	12	4,1
Do not know	63	21,6
Others	3	1,0
Total	292	100,0

They mainly focus on the information and sensitisation of parents who do not abide by local norms on the age of marriage (above 15 years, physical development, puberty signs, etc…). Other suggestions such as girls' education, the involvement of communal authorities and the implementation of the law are seldom mentioned.

2.3.2. Communal and Community Leaders

A questionnaire was designed for the community and communal leaders in the health areas caboveed by the study to collect their perceptions and attitudes regarding early marriage. In total 20 leaders were surveyed in the 5 health areas caboveed by the study.

- **Perception of the "legal" age of marriage**

Community leaders' perception of the "legal" age of marriage is important due to their moral authority and their involvement in marriage decision making .

When asked « from which age a young girl can be married » almost all the leaders surveyed give the age bracket 14 and 17 and more precisely 15 years old, « because at this age a girl who has normally developed should be mature enough to get married » according to most of the community leaders surveyed.
A small proportion of the population (25%) set this age at 18 years.

- **Perception of other signs of marriage age**

In fact, in addition to age, which is approximatively known by people, the main indicators which help make decisions on marriage are some external signs such as physical maturity and or girls' puberty. For community leaders these external indicators are mainly:

- The development of girls's breast and hight/waist which generally corresponds to mid adolescence from 14-15 years;
- Menstruations which indicate that girls can bear a child.

However, for the first marriage, the observation of the first physical maturity signs seems to influence the decision of communal and community leaders, unlike mothers, are closer to their daughters, who put more emphasis on menstruations.

- **Perception of the frequency of early marriage**

The majority of community leaders think that early marriage (marriage before the age of 15 or before girls is physically mature) is often practiced by some people for various personal or social reasons. This practice of early marriage seems to be more common among Tamashek and Arabs.

- **Perception of the reasons of early marriage**

For community leaders, the reasons for early marriage are generally two fold:

- Prevent illegitimate pregnancies: it is the main reason stated by most of the community leaders who think that pregnancy out of wedlock is an act of "dishonor" for the family.
- Provide girls with a good education: which is considered as the in-law's obligation, particularly the mother in law's who, according to some traditions can welcome her

in-law to her household as early as mid-adolescence to train her for her future family responsibilities.

Some community leaders give other reasons for early marriage such as the respect for the teachings of Islam ("marry a young girl as soon as she finds a suitor"), the need for more women to help do the chores of the in-law's family, the alleviation of the family burden (particularly for the extended family), the preservation of the family honor by marrying girls at an early age.

- **Perception of the negative consequences of early marriage**

According to most of the community leaders the negative consequences of early marriage are mainly, in order of frequency: difficulties related to delivery and difficulties for girls to discharge her domestic responsibilities.

Difficulties related to delivery can lead to medical evacuation and or serious medical interventions (caesarean, haemorrage/bleeding, fistula, etc…), wich may cause maternal and or infant mortality.

Difficulties related to family chores which the leaders of Niafunké and Diré stated are the risks of divorce which can be caused by girls's physical inability to do her household chores.

- **Knowledge of the legal age of marriage**

The great majority of community leaders surveyed do not know the legal age of marriage in Mali which is 15 for girls and 18 for the young man, Only a quarter of the people can accurately tell the legal age of marriage whereas (about 10%) "tell that there are no other conditions but the age the parents tell the mayor".

- **Family responsibilities in marriage decision making**

The decision to marry a girl is generally the decision of the father and the other men in the family. In fact, very often the mother's opinion is requested even if the final decision lies in the hands of the adult men in the family.

- **Recommendations for the prevention of early marriage**

The suggestions and recommendations for the prevention of early marriage most frequently made by community leaders are :

- Girls' education to prevent illegitimate pregnancies; and
- Parents' sensitisation for the respect of girls's physical maturity.
- The implementation of the law through support to communal authorities.

2.4. State of Reproductive Health in the Region of Timbuktu

2.4.1. Frequency of fistula, infant and maternal mortality, and caesareans

To assess the consequences of early marriage on reproductive health, we interviewed the medical staff working in reproductive health in the areas surveyed, which totals 11 medical staff including 3 doctors, 3 midwives, 2 obstetrician nurses, and 3 rural midwives. .

Table 31 : Consequences of early marriage on reproductive health according to the medical staff

	Frequency	Percentage
Obstetrical Fistula	7	63,6
Infant mortality risk	2	18,2
Maternal mortality risk	1	9,1
None	1	9,1
Total	**11**	**100,0**

Obstetrical fistulas are cited as the first consequence of early marriage by 7 medical staff out of 11 which amounts to 63.6%. Infant and maternal mortalities immediately follow with 18.2 % and 9.1% . It is worth noting, however, that one member of the medical staff states that early marriage has no consequences.

Table 32 : Evolution of the main consequences of early marriage on reproductive health by year and areas

AREA		2007				2006				2005				2004				2003			
		Mother's age				Mother's age				Mother's age				Mother's age				Mother's age			
		- 15 years	15-18 years	+ 18 years	Total	- 15 years	15-18 years	+ 18 years	Total	- 15 years	15-18 years	+ 18 years	**Total**	- 15 years	15-18 years	+ 18 years	**Total**	- 15 years	15-18 yers	+ 18 years	**Total**
Niafounké	Number of Caesarean	1	15	30	**45**		14	32	**46**		4	11	**15**		3	4	**7**		4	9	**13**
	Number neo-natal mortality		9	21	**30**				**0**				**0**				**0**				**0**
	Number of maternal mortality		1	1	**2**				**0**		2	2	**4**				**0**				**0**
	Others				**0**		2	4	**6**		1	2	**3 0**		2	3	**5**			1	**1**
Diré	Number of caesarean	2	26	36	**62**		17	26	**43**		5	13	**18**	1	5	19	**24**		3	11	**14**
	Number of neo-natal mortality	2	8	23	**31**		11	24	**35**		17	26	**43**		17	23	**40**		8	13	**21**
	Number of maternal mortality		1	2	**3**		1	1	**2**		1	2	**3**			3	**3**			3	**3**
	Others				**0**				**0**				**0**				**0**				**0**
Gourma Rharous	Number of caesarean		6	7	**13**		1	1	**2**		2	1	**3**		2	3	**5**				**0**
	Number of neo-natal mortality		1	2	**3**		1		**1**		1	2	**3**			2	**2**				**0**
	Number of maternal mortality				**0**				**0**				**0**				**0**				**0**
	Others				**0**				**0**				**0**				**0**				**0**
Regional Hospitl Timbuktu	Number of caesarean	1	24	48	**72**		11	44	**55**		6	22	**28**		2	12	**14**		4	9	**13**
	Number of nei-natal mortality	1	13	21	**34**		3	22	**25**			7	**7**		1	2	**3**		5	6	**11**
	Number of maternal mortality				**0**				**0**		2	5	**7**		1		**1**			6	**6**
	Others				**0**				**0**				**0**				**0**		2	2	**4**
Total		7	104	191	295	0	61	154	215	0	41	93	134	1	33	71	104	0	26	60	86

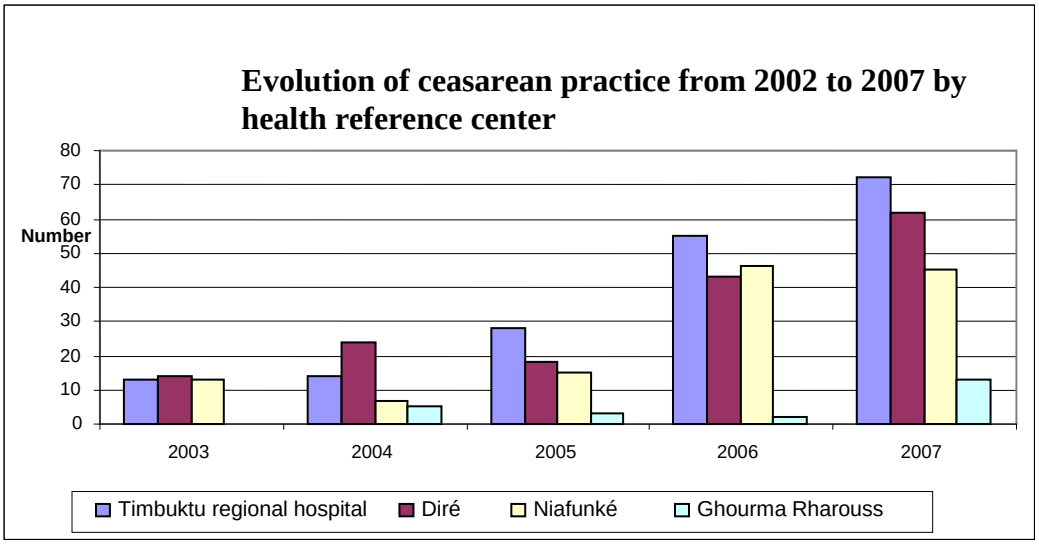
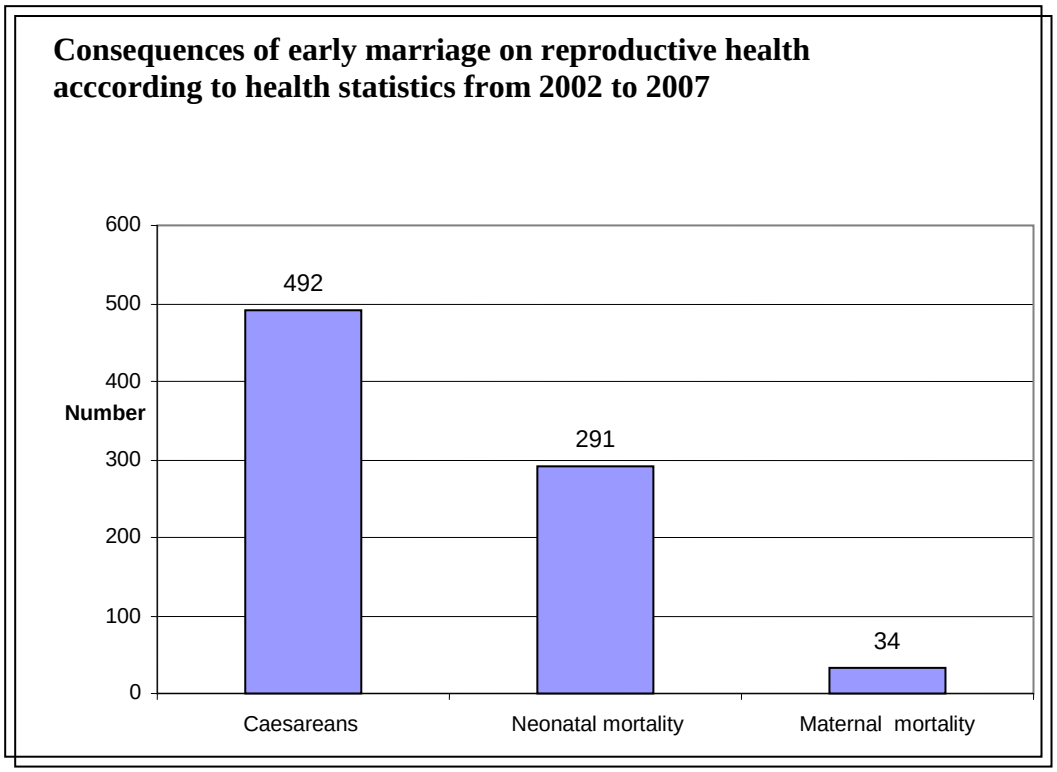


Chart 8 : Evolution of ceasarean practice from 2002 to 2007 by health reference center

We notice an evolution of the number of caesarean cases by year from 2003 to 2007 in the different health districts. Gourma Rharous and Diré record the highest number of caesarean cases per year. Unlike other districts Niafunké records the lowest rate of caesarean for the whole period under study. This situation is not due to the absence of caesarean cases but to the fact that the surgery unit has not been functioning for several years.

Chart 9 : Distributipon of the consequences of early marriage on reproductive health



According to married women the main consequences of early marriage are caesarean and neonatal mortality. Maternal mortality is seldom mentioned as a consequence of this practice.

2.4.2. Actors and strategies in reproductive health

From a list of ONGs and associations operating in Timbuktu and from directions provided by the regional Coordination, five (5) organisations were identified as intervening more or less directly in reproductive health or in the fight against early marriage:

- *Tahanint N'Massinag TINBUKTY (TNT), which operates in the communes of the cercles of Timbuktu, Diré and Niafunké,*
- *Doctors Without Borders/ Médecins Sans Frontières (MSF), operating in all the communes of the region*
- *Malian Association for Development/ Association Malienne pour le développement (AMADE),* operates in certain communes of Timbuktu
- *Malian Association for the Survival in the Sahel/Association Malienne pour la Survie au Sahel (AMSS), in the cercles of Timbuktu, Diré, Goundam and Gourma Rharous*
- *Woïyo Kondey,* in the cercle of Niafunké.

A legal clinic for support and counselling of women victims of violence, namely domestic violence has been operating in Timbuktu since March 2008. The contacts and geographical areas caboveed by these organisations are in appendix 4 of this report.

The activities in reproductive health and the fight against early marriage of the five NGOs mainly focus on:

- IEC activities targeting girls and women and vocational training in a center provided by TNT in Timbuktu ;
- support for girl's schooling and retention at school (provision of school books and tools, and remedial courses) and the setting up of students' mothers Associations by AMSS
- sensitisation of parents to lobby the administration to take steps to prevent girls' dropping out of school because of early marriage by Woyo Kondoy ;

- sensitisation of community leaders, medical staff and women on the causes and consequences of fistula by MSF in collaboration with AMSS;
- Information and sensitisation of the medical staff and women on reproductive health and on the legislation (family code) by AMADE.

At the same time these NGOs operate most of the time in different fields such as the fight against violence done to women, either through preaching in churches (TNT), conferences or training on the right of the woman and the child, on citizenship and on reproductive health targeting women and leaders (Woiyo Kondey, AMADE and AMSS) or the provision of medical and psycho-social care for women sick of fistula

In conclusion, we notice that most of the actions taken in the fight against early marriage are geared to prevention activities through IEC in medical and legal fields. When "solicited" Woiyo Kondey actively provides assistance to parents of girls and administrative authorities in the prevention of early marriage. MSF through its maternal health program in northern Mali supports the overall cost incurred for the medical as well as the psycho-social and nutritional care provided to women sick of fistula. Finally, the legal clinic provides free support and counselling for women victims of all forms of violence.

2.4.3. Mechanism for taking care of women sick of Fistula

Obstetrical fistula are one of the most awful and silent consequences of early marriage.
The mechanism to take care of this pathology starts with setting up a focal point at the national level including PG hospital which plays the role of a reference and training center for surgeons treating fistula. Mopti hospital and since 2007 the regional hospitals of Gao and Timbuktu have been part of the mechanism for taking care of obstetrical fistula.

The two regional hospitals of Gao and Timbuktu are part of the mechanism for taking care offistula. Technical and financial support has been provided by a consortium of six (6) international NGOs which have set up a maternal health program. They are: ACTION CONTRE La Fain, ACF, (Action Against Hunger), Handicap International, HI, (Handicap International),
Association de Volontariat et Cooperation Internationale, LVIA, (Association for Voluntary Services and International Cooperation), Medecins du Monde, MDM, (World Doctors),

Medecins Sans Frontières, MSF, (Doctors Without Borders), Santé Mali Rhone Alpes, SMARA, (Health Mali Rhone Alples).

This program aim to improve women's reproductive health in the three northern regions of Mali by fighting against morbidity and maternal mortality. One of the specific objectives of the program is to reduce the exclusion of women victims of obstetrical fistula in the 3 regions targeted.

Among the program's strategies there are the following;

- the training of surgeons and gynecologist in fistula surgery technics in the different public hospitals in Gao and Timbuktu ;
- the follow up and evaluation of trained medical staff by their trainers in the field through a peer program
- Information and sensitisation of people on the fistula pathology to identify women victim of fistula and take care of them ; this aspect of the program includes the designing and broadcasting of radio programs on fistula through 18 community radios; the programs were presented by doctors fluent in the local languages; listening sessions of the broadcasts were held in villages through committees; these committees have been trained on fistula;

Local NGOs working in the field of health, and socio-sanitary services contributed to the success of this program.

Other activities undertaken through this program dealt with medical care, which includes the following:

- the diagnosis of fistula in peripheral medical centers (CSCOM and CSREF) ;
- the regrouping of women diagnosed with fistula for their transportation to the regional hospital ;
- providing accommodations to women in the regional hospital ;
- free medical care (medication, surgery, and stay at the hospital) ;
- feeding women 3 times a day ;
- Providing free transportation to and from hospital

2.4.4. Estimation of fistula care cost

Table 33 : Estimation of the cost incurred by MSF in the medical care of fistula

Activities	Costs	Observations
1. Pre-consultation		
- IECin CSREF	pm	2-3 hours spent in each CSREF, for regrouping in the CSREF : the medical staff of the center and the CSCOM, elected officials and the administrative representatives; the IEC activities deal with the symptom and the diagnosis of the sickness, requirements for enrolment in MSF medical care program, and the reporting to the center of patients' identification forms/regritration forms.
- Animation/ information through local radios	pm	About one hour animation program simultaneously broadcasted by all local radios. This animation done by a doctor deals with the sympton and the diagnosis of the sickness, the requirements for enrolment in MSF care program and urging people to reportfistula to the nearest health center.
- IEC for NGOs working in the field of health	pm	A 2-3 hour radio program targeting all the NGOs working in the field of health. This radio program done by a doctor deals with the sympton and the diagnosis of the sickness, the requirements for enrolment in MSF care program and urging interested NGOs to apply for socio-cultural animation in villages and urban centers for the identification and medical evacuation of sick women to the regional hospital of Timbuktu
- IECin all the villages by health area	pm	The animation done by NGOs selected for this purpose in each health area and in all the villages. The animation deals the symptoms and the diagnosis of the sickness, the requirement for enrolment in MSF care program and urging sick women or their relatives to report to the nearest health center; in each village Imams are requested to talk about fistula in their respective mosques.
- visit to sick women identified after the IEC	pm	Animators visit identified sick women at their home to sensitise them and to clarify the medical care. requirements.
- Transportation to Timbuktu of sick women and the relatives who accompany them	pm	The transportation of the consenting sick woman and the relative accommpanying her is provided either by CSREF or by the woman's family who will be reimbursed by the NGO.
- Accommodation at the regional hospital of Timbuktu	pm	At her arrival at the hospital the sick woman and the relative accompanying her are welcomed by an MSF animator, called « mummy village », a former fistula sick woman who gives them a welcome kit and accomodates them in the « village » ; each kit includes a blanket, a sheet, a loin cloth, kettle, and a mattress, etc…
2. Medical check up/ test	6000 F per sick woman	Paid to the hospital in compliance with a collaboration agreement between the center and MSF.
3. Surgery	7500 per sick woman	Paid to the hospital in compliance with the same collaboration agreement for the medical care provided by the medical staff including a surgeon and a gynaecologist
4. Medications and other products	Kit supplied by MSF	The content of the kit is detailed in the appendix
5. Care	5000 F per sick woman	Paid to the hospital in compliance with the same collaboration agreement for the medical care provided by the medical staff.
6. Accommodation	10000 F per sick woman	Flat rate paid for the sick woman's stay at the hospital in compliance with the collaboration agreement between MSF and the regional hospital of Timbuktu.
7.Food	5000 f a day per sick woman for 21 days	Flat rate paid for feeding the sick woman and the relative accompanying her in compliance with the collaboration agreement between MSF and the regional hospital of Timbuktu.
8. Transportation	pm	MSF provides the sick woman and the relative accompanying her

forthe return trip and quaterly medical monitoring		transportation back home after treatment and for her quarterly medical monitoring.

The types of medical care costs forfistula can be summarized as follows :

Table 34 : Medical care costs for fistula pathology

	Approximate daily cost per woman
Technical equipment of the surgical unit (flat rate for paying off the equipment above a 3 year period calculated on the basis of the initial value of 1 367 490 f)2	1 266
Training in fistula surgery (daily flat rate for 6 month training at PG National Hospital estimated at 15 000 000 F CFA per physician)	83 333
Peer assistance during training	75 000
Information and sensitisation campaign in villages and CSREF and animation through local media.	30 000
Visits to sick women in villages	25 000
Transportation (round trip from the village to the Hospital and trip to the hospital for medical monitoring)	15 000
Accommodation at the Hospital	15 000
Medico-surgical care cost (consultation, surgery, medication, post surgery care.)	40 040
Estimated daily care cost per woman excluding equipment and training cost.	**125 050**
Estimated cost per woman all costs included.	**284 649**

The average direct care costs, not including investments, of a fistula amount to **2 626 050 F CFA**. When we include investment (material, equipment, training and monitoring) the cost amounts to **5 977 629 F CFA**. When the number of women suffering from fistula is high and the number of trained medical staff is sufficient, and the necessary equipments are available, the average care cost of a fistula will evolve around **2 500 000 F CFA**. It is then necessary to

put forward preventive actions to reduce the prevalence of complications and consequently reduce the care cost of this pathology.

The evaluation done in April 2007 by the consortium of the 6 NGOs working in the North estimates at 67 500 F CFA the average care cost of a woman suffering from fistula. However, this cost only includes the pre-surgery check up (7 500 F), surgery (10 000 F), prescription for surgery (42 500 F) and hospitalisation (7 500 F). The cost we estimated is closer to reality, because it includes most of the costs involved in fistula care.

2.5. Relationships between early marriage, reproductive health and their consequences

2.5.1. Literature review

Early marriage happens all above the world, but it is a common practice in some parts of Africa and South Asia. UNICEF notes that in 1993 in Rafasthan (India), 56% of women were married before they were 15 and 17% before they were 10. Worst of all, in the same State of the Indian Union children aged 2 to 3 years are offered in marriage by their parents. "A practice approved, according to the report, to organise the transmission of property and wealth within families."

UNICEF report gives some figures : the percentage of girls in the age bracket 15 to 19 and who are already married are respectively : 74% in the Democratic Republic of the Congo, 70% in Niger, 54% in Afghanistan, 51% in Bangladesh, 30% in Honduras, and 28% in Iraq. In Niger women in the age bracket 20 to 24 got married before they were 15. The report gives two main reasons to explain this phenomenon: "reinforce the links in one community or among communities, and protect girl against pregnancies out of wedlock."

The report indicates that in general early marriage is practiced more in Central and West Africa (40% to 49% of girls are married before they are 19) than in East Africa (27%), North or South Africa (20%). A great number of girls become second or third spouse of monogamous household and are at a high risk of becoming sex slaves.

In industrialised countries women rarely marry before they are 18 (4% in the United States and 1% in Germany), except for some Eastern European countries with fragile economy (Albania or Macedonia), or **in tsiganes** communities. UNICEF would stake out this remark

to convince States to stop these practices considered "as a major barrier to the fulfilment of human rights."

2.5.2. Early marriage and reproductive health in the region of Timbuktu

A Maternal Health program initiated by the consortium of 6 international NGOs in the Northern regions made it possible to correctly ensure the care of 32 women in the region of Timbuktu. In this region 9 women out of the 32 have not been involved in the peer program. They are distributed as follows: 2 in Goundam, 4 in Niafunké, and 3 in the cercle of Timbuktu. The distribution of women involved in the care program in the region of Timbuktu is the following:

- 12 in the cercle of Diré
- 8 in the cercle of Timbuktu
- 7 in the cercle of Niafunké
- 4 in the cercle of Goundam
- 1 woman in the cercle of Gourma Rharous.

The fight against early marriage, mainly in its aspect which strives to reduce the exclusion of women victims of obstetrical fistula, has been implemented through the provision of the necessary equipment to ensure surgical care as well as the training of the physicians of the hospital in fistula surgery. It has also been implemented through the provision of peer assistance necessary for the transfer of competence to allow physicians' autonomy and to ensure the decentralisation of fistula care throughout the country.

Other information and sensitisation activities are led among populations to identify all women victims of this pathology to ensure their care. The care is entirely done by the consortium of NGOs to reduce not only the sociological handicap, but also the financial and economic ones.

2.5.3. Early marriage and its consequences for affected people

Table 35 : Distribution of women according to the number of deceased children

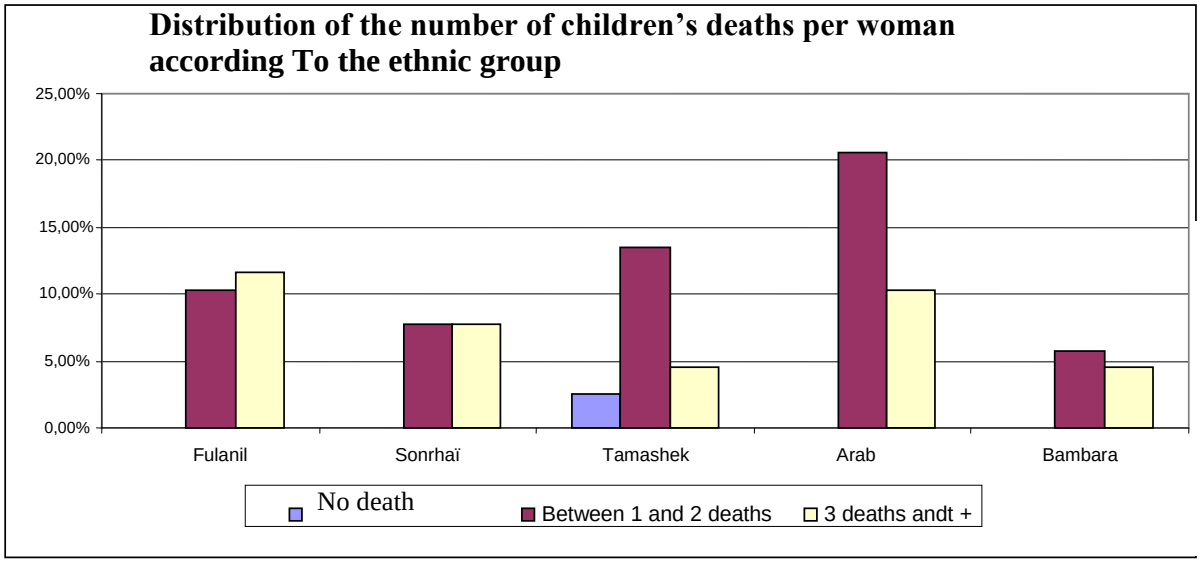
	Number	Percentage
None deceased	4	2,6
Between 1 and 2 deceased	91	58,7
3 deaths and above	60	38,7
Total	155	100,0

Among all women surveyed, only 2.6% have not experienced child death, however, more than half (58.7%) have experienced one or two children's deaths and 38.7% have experienced more than two children's deaths.

Table 36 : Distribution of children's deaths according to the woman's ethinc group and the number of deceased children

	Percentage of children deceased			Total
	No death	Between 1 and 2 deaths	3 deaths and above	
Fulani	0,0%	10,3%	11,6%	21,9%
Sonrhaï	0,0%	7,7%	7,7%	15,5%
Tamashek	2,6%	13,5%	4,5%	20,6%
Arab	0,0%	20,6%	10,3%	31,6%
Bambara	0,0%	5,8%	4,5%	10,3%
Total	2,6%	58,7%	38,7%	100,0%

Chart 10 : Distribution of the number of children's deaths per women according to the ethnic group



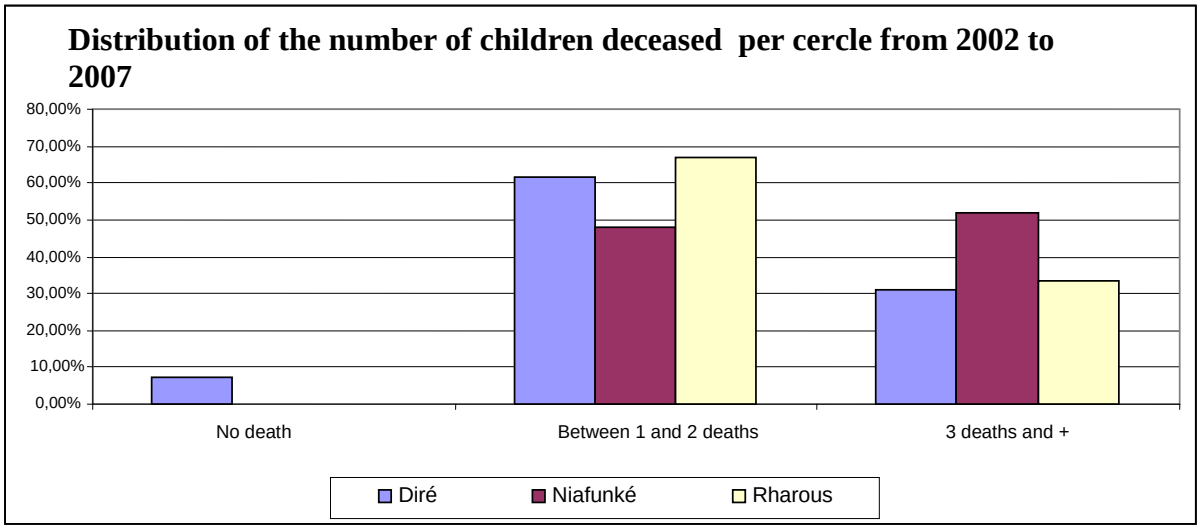
All the ethinic groups have experienced children deaths in their households except the Tamashek among whom 12.5% have never experienced children deaths, Arab, Fulani and Tamashek ethnic groups record the highest mortality with respectively 31%, 21.9%, and 20.6%. The Bambara, however, record the lowest children mortality rate. This situation is in accordance with the marriage age of girls, because the Bambara are the ones whose daughters marry at a relatively advanced age.

At the intra ethnic level, mortality is more important among Fulani and Sonrai with respectively 52.9% and 50% of deaths of 3 children and above. The Tamashek record the lowest number of mothers who lost more than 2 children with close to 22%. Among Arabs and Tamashek, however, children's mortality is higher between 1 to 2 children with respectively 66.7% and 65.6%.

Table 37 : Distribution of mothers according to the number of children deceased and per cercle

	Percentage of deceased children			Total
	None	Between 1 and 2	3 and above	
Diré	7,3%	61,8%	30,9%	100,0%
Niafunké	0,0%	48,1%	51,9%	100,0%
Rharous	0,0%	66,7%	33,3%	100,0%
Total	**2,6%**	**58,7%**	**38,7%**	**100,0%**

Chart 11 : Distribution of the number of children deceased per cercle from 2002 to 2007



In the cercle of Niafunké the rate of mothers whose 3 children and above deceased is the highest with 52% whereas this rate is the lowest in Rharous with 33%. Except Diré where only 7.3% of mothers have not experienced any children deaths all the mothers in the other two cercles have experienced at least one child death. However, the rate of children deaths is about the same in the 3 cercles with 33.5% in Diré, 33.5% in Niafunké and 31% in Rharous.

Table 38 : Disttribution of parturient according to difficulties during labor

n =156	Number	Percentage
Caesarean	2	1,2
Child death at birth and other difficulties	43	27,6
Total	45	28,8

Of the 156 parturient surveyed, 45 that is 29% have experienced difficulties related to early marriage. The main consequences cited is mortinatality in 27.6% of cases. Caesarean has been only mentioned in 1.2% of cases.

2.5.4. Perceptions and attitudes of the medical staff

Table 39 : Medical staff's opinion on the age of early marriage

	Frequency	Percentage
Between 10 and 14	7	63,6

years		
Between 15 and 18 years	3	27,3
Others	1	9,1
Total	11	100,0

Of the 11 medical staff surveyed in the 3 health reference centers and different health areas visited, 63.6% of staff think that early marriage is frequent. As to their opinion on marriage age, 63.6% think that it is practiced between 10- 14 years and only 27.3% of staff think that it is practiced between 15 and 18 years.

Table 40 : Perception of the medical staff on the consequences of early marriage

	Frequency	Percentage
Obstetrical fistula	7	63,6
Infant mortality risk	2	18,2
None	1	9,1
Maternal mortality risk	1	9,1
Total	11	100,0

According to the medical staff surveyed obstetrical fistula represent 63.6% of the first consequences of early marriage whereas infant mortality risk represents 18.2%.

- **Recommendations of the medical staff for the prevention of early marriage**

Table 41 : Main recommendations made by the medical staff to fight against early marriage

n = 11	Frequency	Percentage
Sensitisation of parents	4	38,4
Vesical probing before delivery	3	27,3
In-service training of the medical staff	2	18,2
CCC for early marriage and early pregnancy	1	9,1
Girls' education	1	9,1
Availability of first aid medicines	1	9,1
Compliance with legal marriage age	1	9,1
Training of physicians on scanning and SOU	1	9,1

The main recommendations made by the11 medical agents surveyed to prevent early marriage are : the sensitisation of parents through communication to give up the practice of early marriage, behavior change, the training of the medical staff, and the availability of medication for quickly taking care of pregnancies.

The medical agents expressed the need for more training although they have been trained through the last three years on themes such as: handling delivery, perinatality, emergency obstetrical care, obstetrical fistula surgery. The requested training will be on scanning, perinatality, fistula surgery and the handling of the consequences of early marriage.
They also expressed the need for more support for hospitals and medical centers in the following areas: funding supervision activities, scanning equipment, data base for an information health system in the field of reproductive health, funding a running water system for the improvement of working conditions.

THIRD PART :

CONCLUSION AND RECOMMENDATIONS

The analysis of the findings of this study help make the following remarks and recommendations :

3.1. Evaluation of the frequency of early marriage

Remarks

The frequency rate of early marriage is high in the cercles targeted by NCA in the region of Timbuktu even if they are lower than those recorded in the other northern regions of Mali. The rate of women married early in Timbuktu is 58% against about 75% in the other northern regions surveyed (Mopti and Gao).

The main deciding factors of the precocity of marriage in the region are ethnic background, matrimonial strategy and endogamy.
In fact the practice of early marriage is more frequent among the Sonrai, Tamashek, Arab, and Fulani. It is by far less frequent among the Bambara in Niafunké, where the proportion of very early marriage, under 15 years, represents only 7% against an average of 20% for the other ethnic groups.

Matrimonial strategy based on parents' promise is dominant and contributes to the perpetuation of early marriage. Among polygamous households (25% of married women surveyed), the practice of endogamy (86% of women) seems also to be a deciding factor of very early marriage among this type of household. Finally, the practice of early marriage is more frequent among the younger generation than among the generation of women aged 50 and above, probably because of early physical maturity and the importance of this criteria in marriage decision making.
On the contrary, the level of education of women, which is very low in this zone, as well as the lifestyle which tends to be more sedentary, do not seem to have a significant impact on the age of marriage in the region.

In terms of the perceptions of people (particularly mothers) and community leaders the ideal age to marry a girl would be between 14 and 17 years and above and more precisely at 15 for all the ethnic groups. However, the practice of marrying a girl under age is frequent among the Arab, Tamashek, Fulani, and Sonrai for various reasons. In fact, besides the real age of

girls, the main indicators influencing the marriage decision are some physical signs of puberty or the hight/waist and the morphology of girls. A significant number of parents marry their daughters well before puberty signs appear mainly for socio-cultural reasons (to avoid an illegitimate pregnancy and or to better educate girls) or for economic reasons (to reduce family burden).

The negative consequences of early marriage on the woman's reproductive health are clearly perceived by an abovewhelming majority of mothers (90%) and by all community and communal leaders surveyed most of whom do not know the legal age of marriage in Mali and its medical, psychological and social basis.

In fact, in most of the ethnic groups the responsibility for the decision to marry girls lies in the hands of the father or all the men of the family with however taking beforehand the opinions of the mother and the women of the household. In their opinion the practice of early marriage should be limited to prevent the risks on the woman's reproductive health, the consequences of the heavy domestic workload on girls as well as early divorce.
The great majority of mothers and community leaders suggest the sensitisation of parents, the information and education of girls and women, and the involvement of communal leaders in the fight against early marriage.

- **Suggestions for the prevention of early marriage**

Prevention of early marriage necessarily entails actions targeting the social groups concerned through:

- An efficient and dynamic communication for parental behavior change leading to an awareness of the real consequences of early marriage practice,
- Greater involvement of men and communal authorities in both the prevention and the fight against this practice;
- Taking advantage of the celebration of the national health day to sensitise people on the harmful consequences of early marriage through national NGOs network;

- Involving media and traditional communicators to ensure a greater caboveage of advocacy messages in favor of the adoption of the new family code and fighting early marriage practice ;
- Promoting parents functional literacy, girls education and sex education at school and within the community through radio talk shows and debates in neighborhoods ;
- Promoting strategies aiming at reducing girls' school drop out rate and ensuring them opportunities for higher studies through food in canteens and scholarships;
- Finding a balance between family social pressure and girls' social emancipation through the sensitisation of parents and community leaders, the promotion of income generating activities and or the alleviation of mothers' chores,
- Undertaking parental behavior change against early marriage through a long process of lasting social transformation within the family above several generations,
- Promoting for people and community leaders appropriate messages on the risk of early marriage and on the flaws of traditional indicators of marriage age,
- Preventing the risk of radicalisation of stand of some parents and community and religious leaders who were at first hostile to the fight against early marriage,

3.2. Strategies to fight against early marriage and mechanism for supporting fistula care cost

Remarks

Several actors in the region work in the field of reproductive health among whom are local and international NGOs – Tahanint M'Massinag, Doctors Without Borders, Malian Association for Development and Malian Association For Survival in the Sahel – and one Clinique Juridique (Legal Clinic). Their activities deal with the fight against early marriage and/or against various forms of violence done to women in general. However, their interventions are generally and geared to prevention actions through Information Education Communication (IEC) activities in medical and legal domains.

Doctors Without Borders, particularly stand out for the support of all the medical care cost of women suffering from fistula through its maternal health program in northern Mali. These

interventions are part of a regional system for taking caring of this pathology and that of a national system which is being structured.
In Timbuktu and Gao regions, this scheme involves both regional hospitals and the technical and financial assistance of international and local NGOs through a strategy including: 1) the training of surgeons and gynaecologist 2) the monitoring and evaluation of medical staff, 3) the information and sensitisation of communities for the identification of women suffering from fistula, 4) the provision of appropriate medical care.

The average care cost per woman (not including investments) is estimated at 2,626,050 FCFA, and 5,977,629 FCFA including investments such as (medical supplies, equipments, training and follow up). Considering only pre-surgical check up, surgery, prescription and hospitalisation, the average care cost was estimated at 67,500 FCFA in 2007.

Recommendations pertaining to this domain would be :

- Intensify sensitisation activities for early screening of fistula cases to ensure their socio-medical care ;
- Continue funding free care of fistula cases;
- Intensify information and sensitisation at the level of community to reduce the incidence of these harmful practices
- Follow up the training of the medical staff in providing proper medical care to women suffering from obstetrical fistula through a training geared to surgical techniques, close monitoring and evaluation through peer assistance.

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- Intensify information and sensitisation at the level of community to reduce the incidence of these harmful practices

- Follow up the training of the medical staff in providing proper medical care to women suffering from obstetrical fistula through a training geared to surgical techniques, close monitoring and evaluation through peer assistance.

3.3. Consequences of early marriage and the provision of medical care in the region of Timbuktu

The abovewhelming majority of married women of all ethnic groups, nearly 98 %, have experienced the death of at least one child. Arabs, Fulani and Tamashek have recorded the highest mortality rate, whereas the Bambara who marry their daughters at an older age have recorded the lowest child mortality rate.

Concerning women in parturition (parturient), 29 % have experienced issues related to early marriage with 27.6 % of child death at birth as consequence. However, caesarean operation has been mentioned in only 1.2 % of all cases.

A maternal Health Program initiated in 2006 by a consortium of 6 NGOs among which Doctors Without Borders has helped support the medical care expenses of 32 women in the region of Timbuktu. In the fight against early marriage the section of the program which deals with the reduction of the exclusion of women victims of fistula intends to install the necessary surgical equipment to train doctors and to provide peer assistance with the aim to allow a transfer of competence to hospitals and self sufficiency in taking care of women suffering from fistula all above the country. Moreabove, activities undertaken by local NGOs would help identify all the victims of this pathology.

- **Suggestions for reducing reproductive health consequences and providing subsequent medical care in the region of Timbuktu.**

- Harmonize the code of marriage with the international conventions and agreements related to the child's right ;
- Disseminate the results of studies available on early marriage to serve as advocacy tools to fight against the practice of early marriage ;
- Set up an information and data collection system on early marriage and other practices harmful to the child's health;

- Strengthen the transfer of competences to local and regional health centers for the provision of proper medical care to women victims of fistula and other consequences of early marriage.

3.4. Perception and attitudes of the medical staff

Remarks

According to the medical staff surveyed in the region obstetrical fistulas are the first consequence of early marriage, followed by maternal and infant mortality. There is a sharp increase of caesarean cases between 2003 and 2007.

The medical staff of CSREF and CSCOM (physician surgeons, midwives, rural midwives) think that the practice of early marriage is frequent in the zone with as main consequences obstetrical fistula, high risks of infant and maternal mortality.

Most of the medical agents have received several trainings related to reproductive health. However; they found their training, the supplies, as well as the equipment available in CSREF insufficient for the treatment of the main pathologies related to reproductive health.

- **Suggestions for a capacity building of the medical staff in CSREF and CSCOM**

- Train the medical staff to take care of the medical and psycho-social consequences related to early marriage;
- Ensure the coordination and the monitoring of activities related to the care of affected people ;
- Raise more funds from technical and financial partners in favor of decentralised communities and local NGOs to help them fight early marriage ;
- Provide health centers of cercles with supplies and equipments necessary to take care of women victims of the consequences of early marriage;

Lastly, workshops for sharing the findings of this study should be held in the region of Timbuktu. The aim of these workshops is, on the one hand to sensitise community representatives, political administrative and religious leaders on the frequency of early

marriage and its consequences on reproductive health, on the other hand, to lobby for the passing of a bill of law in this regard.

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APPENDIX

Appendix 1 : Terms of Reference

Study on Early Marriage, Reproductive Health and Human Rights in the Region of Timbuktu

May 2008

1. Context and justification of the study

NCA is a non Gabovenmental, non political, and non profit organisation, which works in the field of development in general and more specifically in the fight against violence done to women. In its a new strategic plan NCA wishes to put a particular emphasis on the right of girls and women for their well being and that of their families.

In 2007 NCA carried out a study on early marriage, reproductive health, and human rights in the regions of Mopti and Gao. The present study will target the region of Timbuctu where NCA, wishes to have quantitative and qualitative field data that will contribute to guide its actions to fight early marriage in the region. It is worth noting that NCA has just started a close partnership with both the regional hospital of Mopti and GREFFA NGO to help women victims of fistula, which is one of the consequences of early marriage on reproductive health.
Goal: .
To help NCA tackle violence done to women particularly early marriage, to promote women and girls' health as well as their human rights. This study has been conducted to remedy:

- 1. The lack of quantitative and qualitative data in the rural area and the ignorance of the links between early marriage and reproductive health by parents, community leaders and health agents (such as rural midwives).
- 2. The lack of information on the links between early marriage, reproductive health and the non reinforcement of human rights; the issue has been lightly dealt with by health agents and women and child's rights organisations; and data have been diluted in studies on the fight against practices harmful to the health of girls and the woman ; in the region of Timbuktu a compelling study on early marriage and its consequences on reproductive health has never been carried out and these practices are tolerated and not even punished;

- 3. To provide development actors such as NCA and its partners, with tools on the strategic plan because very few development actors are involved in the fight against early marriage and its consequences;

- 4. To equip NCA and other development partners with tools to face difficulties related to the implementation of laws regarding early marriage practice and its consequences ; texts on marriage as well as conventions signed and ratified by Mali set the legal marriage age at 18 ; however, they are not enforced, mainly in our communities ;

- 5. To inform communities targeted by the study that Mali is a secular country and that legislation on marriage is not based on Islamic law even though 90 % claim to be Moslems.

Objectives of the Study:

Main Objective:

To design a strategic plan to fight against gender based violence drawing from both quantitative and qualitative data on early marriage/pregnancy and reproductive health (infant and maternal mortality, fistula and caesarean cases as well as socio-sanitary consequences) in Timbuktu (cercles of Rharous, Niafunké, and Diré), in sedentary as well as nomadic and Arabic areas.

Specific Objectives

- Assess early marriage practice (frequency, motivation /attitudes) in areas targeted by NCA and its partners, and or areas not yet caboveed in Niafunke, Dire, and or Rharous
- Make an inventory of reproductive health issues in target zones ;
- Clarify the links between early marriage and reproductive health issues as well as their consequences on affected people (theoretical links and situation in target zones).

Methodology : Organise social, medical, and juridical survey on the implications of early marriage, health, and human rights based on :

Opinion poll:

Characteristic of the sample age groups of girls (9to 13 years and 15 ti 17 years old). Polling method (individual interviews of the medical staff, traditional leaders, Imams, parents of women/girls victims of fistula etc… focus groups), interviews of some NGOs/Women associations, UN organisations and judicial institutions.

Study Site: nomadic, sedentary and Arab areas in the region of Timbuktu particularly in Rharous, Diré, Niafunké.

Designing of data collection tools: tools will be designed 1 – according to age group, and health complications; 2 – parents' social status (well off, less well off, destitute) and villages/regions of origin; 3 – medical staff (rural midwives, doctors etc.), their knowledge of fistula, links between early marriage and fistula etc…4 - traditional leaders, imams, mayors etc. ibidem as number 3; 5 – knowledge of laws, conventions signed by Mali and lack of their enforcement.

Study target: parents, girls of marriage age, women married at an early age, rural midwives, surgeons, doctors, traditional leaders, imams, mayors, local associations and or N**GOs** working for women's health and rights and child rights, as well as legal institutions.

Data analysis: will be done according to ethnic groups (if relevant), social status, estimated care cost per woman (including psycho-social follow up and social rehabilitation), and others. Inform NCA of actions to be taken so the future project / program and the national plan could be complementary.

The Study must take into account the specific objectives and answer the following questions on:

Early marriage (practices, perceptions, attitudes)

- What is the situation of early marriage (frequency, magnitude, age) ?
  - What are early marriage practices (frequency, practice) ? and what are the determining factors (cultural, religious, social, economic, knowledge, attitude)?
  - Who are involved (affected people and other actors)?

Situation of reproductive health issues in the targeted zones;

What is the situation of the present reproductive health? and what are the determining factors (cultural, religious, social, economic, knowledge, attitude)

- What are the present practices (prevention, delivery, treatment), psycho-social assistance (traditional and modern in CSCOM, CSREF, Hospitals)?
- Who are involved (affected people and other actors)?

Links between early marriage and fistula /reproductive health issues and consequences

- What are the risks of early marriage on reproductive health in the targeted zones (theory, secondary source collection) ?
- What is the link between early marriage and reproductive health in the targeted zone? Frequency, quantification of health issues related to early marriage, to be specified according to age group, locality, ethnicity, (statistics of CSCOM, CSREF, hospitals, rural midwives etc.)
- Which factors (geographic, social, cultural, economic, etc..) have an influence on the link?
- What are the consequences (physical, mental, social, cultural, economic, etc…) on people affected by reproductive health issues caused by early marriage in the targeted zone.

Strategies and Organisation of the Study

The study should be carried out by two independent consultants: a sociologist or an expert in social science or in qualitative research and a specialist in quantitative health research. These consultants will work with the collaboration of NCA and its partners in the field. In case there are no NCA partners in these areas, consultants will rely on data gathered /interviews carried out by other development partners existing in this area.

Responsibilities of Consultants

- Develop a technical proposal which takes into account the methodology of different qualitative and quantitative studies, the goal and objective of this study, the justification of the sampling and the selection of study site, the limits of the study,
- Make a budget proposal in agreement with the technical proposal,

- Carry out the study according to the terms of reference of the study and consultants' responsibilities toward NCA,
- Meet the deadline set for the study
- Submit within the deadline reports (draft and final) of the study,
- Include in the final report of the study recommendations and observations made by NCA,
- Give a feedback to NCA and its partners on the results of the study
-

Responsibilities of NCA

- Develop terms of reference appropriate to the study
- Analyse and approve technical and budget proposals submitted by consultants
- Negotiate contracts with consultants
- Provide consultants with the financial and material resources necessary for the study,
- Provide accommodation and transportation for consultants in the field,
- Ensure follow up and supervision of the study via internet wherever available,
- Take part in the study and coordinate consultants' activities whenever possible
- Ensure the execution of the study in compliance with the terms of reference and report to NCA,
- Organize and facilitate feedback on the findings of the study to NCA and its partners.

Time and site of the study

Starting early June and ending July 2008.
Feedback on report end of August 2008

Sites
Region of Timbuktu (Rharous, Niafunké and Diré)

Activity Schedule

Planned Activities	Period	Persons in charge
1 .Elaboration/finalisation of the Terms of Reference	1st week of June or mid June 2008	Coordinator VBG/ NCA Representative
2. Selection of consultants and signature of contracts and payment of the first instalment	End of June, beginning of July 2008	Coordinator VBG/Representative/finance /Administration NCA
3. Carrying out the field phase of the study	2nd week of July 2008	Consultant(s)
4 .submitting a preliminary report	3rd week of August 2008	Consultant(s)
5 .Amendment and finalisation of the final report	Last week of August 2008	Consultant(s) and Coordinator VBG and NCA/ Representative
6. feedback on the study to NCA and its partners and payment of the last instalment.	Beginning of September 2008	Consultant (s) Representative/Coordinator VBG/Finance NCA

Expected results

- A study report showing the links between early marriage and reproductive health;
- An analysis document which provides statistics quantitative as well as qualitative data on vesico-vaginal fistula cases, infant and maternal mortality, caesarean cases for first delivery etc.as a result of early marriage, early pregnancies and early deliveries;
- Recommendations taking into account law enforcement applicability in the development of a Strategic Orientation document for NCA and its partners.

Financial implications

The budget must take into account the following expenses :

- Fees for consultants and survey agents (per diem for consultants and survey agents)
- Accommodation and transportation of consultants in the field
- Consultants' field trip transportation cost

Finalised on Monday, May 26, 2008
By Ahna Soumano Burke.

Appendix 2: Data collection tools

Form 1 : DATA COLLETION IN THE REGIONAL HOSPITAL

Regional hospital of : Name of survey agent :

First and Last names and position of respondent: Survey date:

1. How many cases have been recorded in the regional hospital of Timbuktu for the last 5 years?

	2007	**2006**	**2005**	**2004**	**2003**
Obstetrical Fistula					
Caesareans					
Infant mortality					
Maternal mortality					
Others (specify)					

2. Classify by order of frequency of these cases, reference centers of cercle in Timbuktu :

Reference Centers with "high" frequency	**Reference Centers with "average" frequency**	**Reference Centers with "low" frequency**

3. Number of fistula cases taken care of for the last five years in the regional hospital of Timbuktu.

	2007	**2006**	**2005**	**2004**	**2003**
Obstetrical fistula					

4. Description of the existing mechanism for taking care of fistula cases in the hospital:

a. Infrastructures and equipments:
b. Medical staff :
c. Social staff:
d. Other staff :
e. organisation and operation of the care mechanism (availability of a specialised unit , etc…) :
f. medical care procedures :
g. social care procedures :

5. Estimation of the medical care costs of the sick woman :

- share of the cost paid by the hospital (medical examination, test, medications and supplies, surgery, care, psycho-social care etc…):

  ……

- share of the cost paid by the sick woman(medical examination, test, medications and supplies, surgery, care, psycho-social care, transportation, room and board, others, etc…):
- other costs :

  ……

6. Identification of other partners and their roles (NGOs, Associations,etc…)

……

……

Form 2 : DATA IN REFERENCE HEALTH CENTERS OF THE CERCLE.

Region of : Survey Date :

Reference Health Center: Name of survey agent :

First and Last names and position of respondent:

1. Which of the following cases have been recorded in your reference health center of the cercle for the last 5 years?

	2007	**2006**	**2005**	**2004**	**2003**
Obstetrical Fistula					
Caesareans					
Infant mortality					
Maternal mortality					
Others (specify)					

2. Classify by order of frequency of these cases, area health centers these women come from:

Area health Centers with "high" frequency	**Area health Centers with "average" frequency**	**Area health Centers with "low" frequency**

3. Mechanim and modalities of medical and or psycho-social care forfistula.

Form 3: DATA IN COMMUNITY HEALTH CENTERS.

Region of :

Cercle of: Survey Date :

Community Health Center of: Name of survey agent :

First and Last names and position of respondent:

1. Which of the following cases have been recorded in your community health center for the last 5 years?

	2007	**2006**	**2005**	**2004**	**2003**
Obstetrical Fistula					
Caesareans					
Infant mortality					
Maternal mortality					
Others (specify)					

2. Mechanim and modalities of medical and or psycho-social care forfistula.

……

FORM 4

REGIONAL COORDINATION NGOs AND ASSOCIATIONS IN TIMBUKTU

Inventory of Ngos and Associations operating in the field of reproductive health, the fight against harmful practices, the renunciation of early marriage and the defence of human rights

1. Name	**2. Contact**	**3. Field of intervention**	**4. Zone of intervention**	**5. Partners**

FORM 5 :CARE COST COMPONENTS FOR A FISTULA SICK WOMAN

Date : …../ / 2008 FORM N° ___ ___

1. Identification of the respondent

Region of : Survey date:

Cercle of : Name of survey agent:

Commune of : Health area :

Village/nomad settlement : First and last names of respondent:

Lifestyle : sedentary /___/ nomad /___/ Profession :

Age : /___ / years Level of Education : /___/ Ethnic group : /___/

Date and place of delivery:

2. Cost component and amount

N°	Medical examination costs	Medical test costs	Surgery cost	Costs for medication and other supplies	Care cost	Room and care Cost.	Other cost (transportation etc.)
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							

QUESTIONNAIRE 1: CENSUS OF WOMEN AND GIRLS AGED 9 YEARS AND ABOVE

Date : …../ / 2008 FORM N° ___ ___

3. Identification of the respondent

Cercle of: Name of survey agent:

Commune of: First and last names of the head of family

Village/nomad settlement of: Ethnic background (2)

Health area of Social status (0)

Dominant lifestyle:

sedentary /-----/ nomad /-----/

4. Census of women

N°	First and last name (1)	Ethnic group (2)	Level of education. (3)	Age (4)	Marital status (5)	Number of years of marriage. (6)	Family relationship with husband (7)	Husband's status (8)	If Answer 2, rank in marriage (9)	Type of marriage choice (10)	Type of marriage (11)	Num of chil aliv (12

(0) **social status** of the head of the household: (1) noble; (2) servant class; (3) craftsmen/griots; (4) others;

(1) deals with :girls aged 9 and above, and married women of the family .

(2**) code « ethnic groups »**: 1= Fulani ; 2 = Sonrhaï ; 3= Tamashek ; 4 =Arab ; 5 =Bambara ; 6=Bozo ; 7=Soninké ; 66= Others

(3) **Code « level of education »** : 1= none ; 2= 1st cycle fundamental ; 3= second cycle fundamental ; 4=secondary ; 5=higher ; 66=others

(4) deals with the young woman's legal age of marriage ;

(5) **Code «marital status** » : 1=single ; 2=divorced ; 3=widow ; 4= married ; 98=other status

(6) if answer **2, 3 or 4,** specify the number of years of marriage starting from the first relationship ;

(7) **Code « family relationship with the husband »** : 1=from the same family as the husband ; 2= from two different families ; 66=others

(8) **Code « status of the husband »** : 1=monogamous ; 2=polygamous

(9) **Code « rank in marriage »** : 1=first wife ; 2= second wife ; 3=third wife ; 4= fourth wife; etc.…

(10) **Code « type of marriage choice »** : 1=choice by parents ; 2= choice by girls ; 66= others

(11) **Code « type of marriage »** : 1=parents promise ; 2=proposal by husband's family ; 3=individual choice ; 66=others

(12) deals with the accurate number of the woman's children who are alive.

(13) deals with the accurate number of the woman's children who are dead.

(14)) deals with the accurate number of the woman's children who died at birth.

(15) **Code « difficulties during delivery »** : 0= none 1=fistula ; 2=caesarean ; 3=child death at birth; 66=others; many answers are possible.

QUESTIONNAIRE 2 : TO MOTHERS AND GIRLS AGED 9 AND ABOVE

Date : …../ / 2008 FORM N° ___ ___

5. Identification of the respondent

Region of : Date of survey:

Cercle of: Name of survey agent:

Commune of: Health area :

Village/nomad settlement: First and last names of the person surveyed:

Lifestyle: sedentary /___/ nomad /___/

Age : /___ / years Level of education : /___/ Ethnic group: /___/

6. Knowledge and attitudes related to early marriage

N°	QUESTIONS	CODES
1	From which age could girls be married?	- under 14 years ……. 1 - between 14 and 17 years ……2 - from 18 years…… 3 - do not know …… 98
2	Besides age what are the other signs which help one know that a girl is ready for marriage?	- the physical morphology ……1 specify ?..... ..... - puberty signs ……..2 specify ?..... ..... - other signs (specify) ……..... 99
3	Do some parents in villages / nomad settlements marry their daughters before they are of marriage age?	- no, never ……1 - yes, sometimes ……2 - yes, very often……..3 - do not know ……. 98

4	If yes, what are the reasons for early marriage?	- to better educate girls 1 - to prevent girls from having illegitimate pregnancies 2 - to perpetuate family lineage…..3 - to alleviate girls's family burden 5 - to safeguard girls's virginity 6 -to respect religious teachings 7 - to honour family social rank 8 - others (specify) ……..... 99
5	In your family, who makes the decision for girls's marriage?	- the mother alone…….1 - the mother and the other women of the family……2 - the father alone….3 - the father and the other men of the family ……...4 - fathers and mothers together…….5 - others (specify) ……..... 99
6	What is the legal marriage age of girls in Mali?	- under 15 years 1 - 15 years 2 - between 15 and 18 3 - above 18 …. 4 - do not know ..98 - others (specify) …… …… ……..99
7	What can be the consequences of early marriage?	- no particular consequences……1 - delivery related difficulties ..…. … 2

		specify : …… …….. - infant mortality risk ……..... 3 - maternal mortality risk ……4 - others (specify) ……..…… …… …… ……..99
8	What recommendations would you make to prevent early marriage in your village / nomad settlement?	- Girls' Education ……1 - enforcement of the law 2 - family planning ……... 3 - revision of the marriage code 4 - sensitisation of parents ……5 - involvement of communal authorities ……. 6 - Do not know ……. 98 - others (specify) …… …… …… …… …… ……99
End	**Thank you for taking time to answer these questions**.	

QUESTIONNAIRE 3 : COMMUNITY AND COMMUNAL LEADERS

Date : …../ / 2008 FORM N° ___ ___

7. Identification of the respondent

Region of : Date of survey:

Cercle of: Name of survey agent:

Commune of: Health area :

First and last names and position of the person surveyed:

8. Knowledge and attitudes related to the consequences of early marriage / pregnancy

N°	QUESTIONS	CODES
1	From which age could girls be married in your zone?	- under 14 years ……. 1 - between 14 and 17 years ……2 - from 18 years…… 3 - do not know …… 98
2	Besides age what are the other signs which help one know that a girl is ready for marriage?	- the physical morphology ……1 specify ?..... ..... - puberty signs ……..2 specify ?..... ..... - other signs (specify) ……..... 99
3	Do some parents marry their daughters before they are of marriage age in your zone?	- no, never ……1 - yes, sometimes ……2 - yes, very often……..3 - do not know ……. 98
4	If yes, what are the reasons for early	- to better educate girls 1

	marriage?	- to prevent girls from having illegitimate pregnancies 2 - to perpetuate family lineage…..3 - to alleviate girls's family burden 5 - to safeguard girls's virginity 6 -to respect religious teachings 7 - to honour family social rank 8 - others (specify) ……..... 99
5	In general, who makes the decision for girls's marriage in your zone?	- the mother alone…….1 - the mother and the other women of the family……2 - the father alone….3 - the father and the other men of the family ……...4 - fathers and mothers together…….5 - others (specify) ……..... 99
6	What is the legal marriage age of girls in Mali?	- under 15 years 1 - 15 years 2 - between 15 and 18 years …….3 - above 18 years ……4 - do not know ..98 - others (specify) …… …… ……..99
	What are the consequences of early marriage?	- no particular consequence……. 1 - delivery related difficulties ..….. … 2

7		specify : …… …….. - infant mortality risk ……..... 3 - maternal mortality risk ……4 - others (specify) ……..…… …… …… ……..99
8	What recommendations would you make to prevent early marriage in your health area?	- Girls' Education ……1 - enforcement of the law 2 - family planning ……... 3 - revision of the marriage code 4 - sensitisation of parents ……5 - involvement of communal authorities ……. 6 - Do not know ……. 98 - others (specify) …… …… …… …… …… ……99
End	**Thank you for taking time to answer these questions**.	

QUESTIONNAIRE 4 : Knowledge and Attitudes of the Medical staff (surgeons, physicians, rural midwives, and midwives) on the consequences of early marriage

Date : …../ / 2008 Form N° ___ ___

I. Identification of the respondent

Region of : Date of survey :

Cercle of : Name of survey agent :

Commune of : Health area :

First and last names and position of the person surveyed:

II Knowledge and Attitudes related to the consequences of early marriage/pregnancy

N°	QUESTIONS	CODES
1	Which age can be considered early for marriage/pregnancy?	- less than 10 years ……. 1 - between 10 and 14 years……... 2 - between 15 and 18 years 3 - other (specify) ……...4 - do not know ……... 98
2	Justify your answer :	
3	Are early marriage/pregnancy common in your heath center ?	Yes ……..….1 No …….…….2 Do not know 98
4	What are the common consequences of early marriage/pregnancy in your health center?	- no particular consequence ……..1 - obstetrical fistula …….. 2 - infant mortality risk ……..…….. 3 - maternal mortality risk ……4 - do not know ……98 - others (specify) ……..…… ……99

5	Have you had any training for taking care of these consequences ?	- No, no particular training ……1 - Yes, once (theme and year ?) …… 2 - Yes, several trainings (specify) 3
6	What are your present training needs for efficiently taking care of these consequences ?	1…….. …… 2…… …… 3. …… ……
7	What are the capacity building needs of the health center to efficiently take care of these consequences ?	1…….. …… 2…… …… 3. …… ……
8	What are the reecommendation for the prevention and the improvement of medical and social care capacities of these consequences ?	

Thanks for taking time to answer these questions

QUESTIONNAIRE 5

NGO/ASSOCIATIONS AND JURIDICAL INSTITUTIONS

Region of : Date of survey :

Cercle of : Name of survey agent :

Commune caboveed: ……

Name of the organisation : Name and profession of the respondent:

1. In your opinion what are the different forms of violence done to women in the zone :
……

2. Activities undertaken in the fight against early marriage/pregnancy in the region :
……
……

3. Other activities undertaken by the organisation in the fight against violence done to women:
……
……

4. What are the main reasons of early marriage in the region ?
……
……

5. What are the evolution trends of the practice of early marriage and what are the determining factors of this (non) evolution ?
……
……

6. What must be done to prevent or reduce the practice of early marriage in the region?
……
……

7. What must be done to reduce the risks related to early marriage ?
……

Thanks for taking time to answer these questions

Appendix 3 : Field trip schedule

Date	Place	Activity
20/07	Bamako	Departure Abovenight stay in Mopti
21/07	Saraféré (Niafunké)	• Arrival in Saraféré • Courtesy visit to communal and administrative authorities of Fittouga • Work sessions with CSCOM officials and with the head doctor of the medical center
22/07	Village of Guédié (commune of Fittouga)	• Census of girls and women • Opinion polls
23/07	Village of M'Bétou (commune of Fittouga)	• Census of girls and women • Opinion polls
24/07	Niafunké	• Arrival in Niafunké • Work session with the officials of CSREF and with a category of the medical staff
25/07	Diré	• Arrival in Diré • Work session with the officials of CSREF and with a category of the medical staff
26/07	Village of Kondi (Commune of Kondi)	• Census of girls and women • Opinion polls
27/07	Village of Gari (commune of Gari)	• Census of girls and women • Opinion polls
28/07	Timbuktu	• Arrival in Timbuktu
29/07	Timbuktu	• Work sessions with the officials of the regional hospital of Timbuktu and with the staff of MSF (Doctors Without Borders) • Work session with the staff of the coordination and the representatives of some NGOs
30/07	Gourma Rharous	• Arrival in Gourma Rharous • Work session with the officials of CSREF and with a category of the medical staff
31/07	Neighborhood of Gourma Rharous	• Census of girls and women • Opinion polls
01/08	Nomad Settlement Ahel Badi (commune Haribomo)	• Census of girls and women • Opinion polls
02/08	Return to Bamako	Trip to Bamako (via Mopti) End of survey

Appendix 4 : Contacts and zones covered by the associations, NGOs and clinique juridique

N°	Name of the NGO	Contact	Intervention Zone
1	**MSF** Doctors Without Borders	**Elmouzer Ag Jiddou** Coordinator	Timbuktu Goundam Diré Niafunké Gourma Rharous
2	**AMSS** Malian Association for Survival in the Sahel	**Elmédi Ag Wakina** Director Tel. 292 10 48 E-mail : amss@afribone.net.ml	Timbuktu Goundam Diré Gourma Rharous
3	**TNT** Tahanint N'Massinag Timbukty	**Pastor Nock Ag Infa** YATTARA, Chairman/President	Timbuktu, Diré et Niafunké
4	**AMADE** Malian Association for Developpement	**Baba Mama** Coordinator AMADE branch Timbuktu	Timbuktu Goundam Diré Niafunké
5	**WOIYO KONDEY**	**Oumou TOURE** General Secretary Tél. 671 53 98 E-mail : toda5984@yahoo.fr	Niafunké
6	**Clinique Juridique**	**Djénéba TOURE** Regional Office for the Promotion of women, children and family of Timbuktu Tel. 630 91 22	Timbuktu Goundam Diré Niafunké

Appendix 5 : Content of MSF's obstetrical fistula kit

N°	Description of the supply	Quantity
Supplies for the surgeon		
1	Surgical gloves 7/2, Latex, Sterilized	3
2	Iodized Polyvidon, 10%, solution, 200ml, fl. pourer	1
3	Sterilized pad 10*10 cm, 10 in a box	5
4	N° 15 Sterilized bistouri blade	1
5	Non resorbable thread 3/0	2
6	Synthetic platted resorbable thread 2/0	3
7	Sterilized Foley urinary tube ch 18	1
8	2 liter urine pouch	1
Supplies for anaesthesia		
9	Sterilized Catheter IV 20 g	1
10	Perfusion tool + sterilized air intake	1
11	Perforated band aid ¼ R	1
12	1 liter Ringer lactate	1
13	1 liter Glucosed serum 5%	1
14	Ampicillin inj 1g IV/IM	2
15	Bupivacain 4ml injection, 5mg/ml	1
16	Epinephrin 1mg/ml, injection, 5mg/ml	1
17	10 ml Syringe	6
18	Rachi anaesthesia needle	1
19	1 liter Salt serum 0,9%	1
Post surgery Kit		
20	1 liter glucosed serum 5%	2
21	1 liter salt serum 0,9%	2
22	Ampicillin inj 1g IV/IM	6
23	Amoxillin tablet 500mg	40
24	Paracetamol tablet 500mg	20
25	Syringe 10ml	6
26	Distilled water 10ml	**6**