

**QUALITATIVE STUDY ON
MATERNAL AND CHILD HEALTH AND NUTRITION
IN GUEROU AND MBAGNE, MAURITANIA**



*Sociocultural influences on the health
and nutrition of women and children:
the central role of grandmothers*

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Mauritania

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Collecting data from the community:
A rapid participatory approach



Group interview with women of reproductive age using drawings of different family members



Group interview with community leaders and elders



Grandmothers and women after participating in group interviews

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LIST OF ABBREVIATIONS

ADP:	Area Development Program
AIM:	Access to Infant/Child and Maternal Health Care
ARI:	Acute Respiratory Infection
BW:	Breastfeeding Woman
CHW:	Community Health Worker
COMM:	Community Health Committees
CVA:	Citizen Voice and Action
EBF:	Exclusive Breastfeeding
ED:	Everyday
GCPH:	General Census of Population and Housing
GF:	Grandfather
GM:	Grandmother
GML:	Grandmother Leader
GMP:	Grandmother Project- Change Through Culture
HPH:	Household Production of Health
HW:	Housework
MICS :	Multiple Indicator Cluster Surveys
MCHN:	Maternal and Child Health and Nutrition
MIL:	Mother-in-Law
MOD:	Millennium Objectives for Development
MW:	Midwife
NB:	Newborn
PNC:	Prenatal Consultations (visits)
PSHC:	Permanent Survey of Household Living Conditions
PW:	Pregnant Women
WHO:	World Health Organization
ORS:	Oral Rehydration Salts
ORT:	Oral Rehydration
PMTCT:	Prevention of Mother to Child Transmission
PW:	Pregnant Women
TTC:	Time Targeted Counselling
UNICEF:	United Nations Children's Fund
WRA:	Woman of Reproductive Age

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EXECUTIVE SUMMARY

This study was coordinated by the organization *Grandmother Project- Change Through Culture (GMP)* for World Vision Mauritania in the context of the AIM Health project "Access to Maternal and Child Health Care." The objective of this study was to investigate family strategies related to maternal/child health and nutrition issues in order to strengthen community activities implemented by the project.

The AIM project is being implemented for a period of 5 years (2017-2021) in the departments of Guerou (Assaba Region) and Mbagne (Brakna Region) in Mauritania. The choice of these intervention areas is based on the problematic situation in both regions related to the health and nutrition of women and children.

An innovative research methodology entitled *Focus on Families and Culture*, developed by GMP, was used to conduct this study. In the field of Maternal and Child Health and Nutrition (MCHN), most studies focus on the attitudes and practices of women of reproductive age (WRAs), information which is most useful to program planners. However, in the African context, individuals, including WRA, are part of social and cultural systems that influence their attitudes and practices. For this reason, it is important that studies also focus on the analysis of the family and community systems of which WRAs are part.

The conceptual framework for this study is structured around three categories, or factors, that are related to any MCHN issue: 1) **the structure of families and cultural and religious values** that influence maternal and child health and nutrition (MCHN); 2) **roles and influence of family and community actors** on MCHN; and 3) **norms and practices followed in families** in relation to MCHN.

The study was conducted among two ethnic groups in the two study locations (Guerou and M'bagne) where the project is implemented namely, the Moors and the Peul. The methodology of the study was qualitative and was based mainly on group interviews, but also on observations and group exercises using a series of drawings of different family members to elicit dialogue on the roles and relationships between them.

Interviews were conducted with three priority groups: grandmothers (GMs), women of reproductive age (WRA) and men. A total of 143 people were interviewed, including 67 WRAs, 46 GMs and 30 men. In addition to the interviews, observations were also made regarding the role of other community actors, including Midwives, Traditional Healers, Religious Leaders, and Grandmother Leaders (GMLs). The information collected was processed manually and analysed according to the prescribed guidelines for content analysis.

The **structure of families and cultural and religious values** that influence maternal and child health and nutrition (MCHN): In the two cultural contexts where the study was conducted, the extended family predominates and has a quite similar collectivist structure and values. Family members of different generations work together to promote the well-being of their members, including the promotion of MCHN. In both cultural contexts, roles are gender-specific and also age-specific, with older men and women playing counselling roles within the family and with younger family members.

Within the family, the GM embodies authority and is at the centre of all decisions related to pregnancy, breastfeeding, care and feeding of children as well as caring for sick children. She supervises younger women (WRA and young girls), who are expected to follow her advice. The study made it clear that men are not directly involved in the daily supervision and follow-up of women's and children's health, nor of their lives in general. Their fundamental role, as the head of the family, is to ensure that basic family needs, such as food, clothing and health care are provided. The men interviewed all commented that it is the GMs who have more experience on MCHN issues and stated that the role of men is to provide support to these *experts* when needed.

The **roles and influences of family and community actors** on MCHN: Through the study we were able to identify the roles played by different family members at critical times in the life of women and young children including: Women-of-Reproductive Age (WRA), fathers, grandmothers (GM), grandfathers and aunts (paternal or maternal). These are the critical moments related to: pregnancy, newborn care and feeding, feeding young children, protecting and preventing illness in young children, and illness management. Triangulation of responses from WRAs, GMs and men made it very clear that the roles of different family members are culturally-defined and gender-specific and that all aspects of MCHN are the responsibility of older, and therefore more experienced, women. Throughout pregnancy, upon the arrival of

the newborn, and when a young child starts growing up, they are the ones who have collective and shared responsibility to ensure the well-being of newborns based on the knowledge and the resources available to them. During these critical moments in the lives of women and children, men acknowledge the experience of female family advisors, namely the GMs and aunts, and the men are very rarely directly involved at any of those times. In addition to family members, there are other community actors who contribute to MCHN, but to a lesser degree. These are traditional healers, specific GMs who are recognized for their expertise in MCHN, and health workers. Analysis of study results study shows that these other community members are consulted, especially when family members are faced with problems that exceed their skills. However, for all decision-making and actions taken in relation to MCHN, it is women's networks, comprised of several generations and coordinated by GMs, who have the greatest influence. Although health workers and traditional healers may have more technical knowledge than family members, women and children spend most of their time in the family context, have stronger relationships with and are strongly influenced by the GMs, viewed by communities as *cultural authorities on MCHN*.

Norms and practices related to MCHN followed in families

The study found that the behaviours of WRAs and of other family members vis-a-vis MCHN are strongly influenced by the GMs, who interact with other women within and around the family, who supervise, advise and demonstrated practices that should be adopted at different times and in different situations. The GM passes along norms and practices that are rooted in culture and religion, some of which are beneficial from a MCHN point of view, while others are not. However, the interviews with the GMs clearly revealed their interest in and openness to new ideas related to MCHN.

One challenge encountered during the study was that, on several occasions, the interviewers felt that the responses given by WRAs and GMs consisted of merely repeating what the health workers had advised them to do, rather than what they actually do. This is an inherent limitation of interview-based studies, as interviewees always want to please investigators by giving the "right answers". This fact appears to have influenced the responses given by women in both age groups regarding: pregnant women's participation in prenatal consultations (PNC) and their diet and nutrition during pregnancy, childbirth, compliance with rules of exclusive breastfeeding (EB), the timing of the introduction of complementary foods and the composition of the first semi-solid foods, as well as strategies for caring for

sick children, especially concerning fluid administration and feeding of children during and after illness. Depending on the time of the interview and the activity under discussion, most responses from WRAs and GMs suggested efforts to make their practices correspond to those recommended.

However, through the triangulation of information received from different interviewees and at different times in the interviews, it was possible to identify various discrepancies between the statements of some WRAs and GMs regarding recommended practices and their compliance with them. It should be noted, nevertheless, that in studies of this kind, it is impossible to accurately assess the relationship between the answers given and the practices followed in reality.

An overall conclusion drawn from the interviewees' responses is that, for the set of MCHN issues discussed during the study, most WRAs and GMs are aware of best practices for pregnant women, newborns and young children, although not all of them follow them to the letter.

AIM's Health strategies with families and communities should continue to strengthen recommended best practices by focusing on the involvement of those who have the most influence on MCHN strategies within in and around the family. The study clearly showed that these senior women advisors, the GMs, are both motivated to act in synergy for the well-being of WRAs and children, and are interested in strengthening their existing knowledge and practices.

In the past, most MCHN programs in Mauritania did not value GMs' status, recognize their experience, nor involve them in programs on this topic, which clearly falls within their area of responsibility in Mauritanian society. The involvement of GMs in the study was highly appreciated by communities, who expressed a great sense of satisfaction with the recognition of their expertise and responsibility on the issue studied. Most GMs said it was the first time that an event had been organized in their community that explicitly involved GMs and that was interested in listening to them and acknowledged the importance of their experience.

A series of recommendations specific to the various MCHN priority practices covered by the AIM HEALTH project is included in this report. The overall recommendation of this study is that in order to increase the impact of the project, it is important to strengthen the use of

strategies that take into account cultural roles and community values, and that use activities conducted in a spirit of inclusion, respect and participation. Community interviews reveal that community members have a strong commitment to promoting the health and well-being of women and children. To achieve its objectives, the project can strengthen its strategies by building on the roles and influence of different family and community members identified throughout this study. The involvement of community-recognized MCHN actors could increase both their commitment and the impact of project efforts to promote the well-being of women and children.

Introduction

As part of the AIM Health project "Access to Maternal and Child Health Care", this study's objective was to increase knowledge of family strategies related to maternal and child health and nutrition issues in order to strengthen community activities implemented by the project.

Indeed, the overall objective of the "Access to Maternal and Child Health Care" program is to reduce the neonatal mortality rate to 20% and maternal mortality to 15% in the two project intervention zones, Guerou and Mbagne, between 2017 and 2021. To achieve its goal, the program, based on the overall framework of World Vision's 7-11 interventions, aims to:

1. Strengthen partnerships between Communities and Health Structures,
2. Strengthen community awareness of essential and critical family practices for health and nutrition,
3. Strengthen the capacity of Community Health Workers (CHW) and community liaisons for the introduction of a minimum package of community-based maternal and child health services,
4. Strengthen partnerships at the micro, meso and macro levels,
5. Use mobile technology, in other words, digital health.

To promote empowerment, prevention and behaviour change in maternal, newborn and child health practices, the program implements three important models:

- At the individual level, the Time Targeted Counselling (TTC) model in households,
- At the community level, the Community Health Committees (COMMs) model, which aims to strengthen the health system,
- Finally, at the environmental level, the Citizen Voice and Action (CVA) approach, which aims to increase dialogue between ordinary citizens and decision-makers.

In order to fill the gap observed in the implementation of the TTC model and to strengthen or even propose new intervention strategies for the project, this study attempts to provide better knowledge of the roles, influences, norms and practices related to the health and nutrition of pregnant and lactating women, newborns and young children at the family and community level.

This report is organized into the following chapters:

Chapter I: Context and Evidence

Chapter II: Presentation of the project "Access to Maternal And Child Care" (AIM Health PLUS)

Chapter III: Study Methodology

Chapter IV: The Results of the Study

Chapter V: Study Findings and Recommendations

Chapter I- Background and Justification

Mauritania is a country located in the northwestern part of Africa. It has an estimated population of 3,537,368 in 2013, with a population growth rate of 2% per year and a density of 3.4 inhabitants per square kilometre (2015 GCPH, volume 1). According to the 2014 Permanent Survey of Household Living Conditions (PSHC), Mauritania is ranked among the middle-income countries.¹ Agriculture, livestock and trade are the main sectors of economic activity. Located in one of the most restrictive agro-ecological regions, Mauritania's agricultural production is limited, affecting people's quality of life and children's health and nutrition (UNICEF 2017 Annual Report).

1.1 The Health Context in Mauritania

Mauritania is one of 60 developing countries where many children under the age of 5 die from preventable causes. Despite a relatively favourable economic state compared to other countries in the southern Sahara, under-5 mortality was 55 per 1,000 live births in 2015.² In the two regions of the project's intervention, the infant mortality rate remains high at 81 per 1,000 in Assaba and 28 per 1,000 in Brakna, respectively. Several factors are responsible for deaths in children under 5 years of age. (2015 MICS, p. 42)

1.1.1 Low Birth Weight

The World Health Organization (WHO) defines low birth weight (LBW) as less than 2,500g. LBW represents a serious public health problem with several short- and long-term consequences. According to the 2015 Multiple Indicator Cluster Survey (MICS) report in Mauritania, 37% of infants are estimated to weigh less than 2,500g at birth. In Assaba and Brakna, the prevalence of low birth weight is 38.7% and 37.8% respectively. Low birth weight is directly related to both inadequate nutrition and excessive workload of pregnant women. Insufficient weight gain during pregnancy is responsible for a high proportion of foetal growth retardation. Infants who have been undernourished during pregnancy are at higher risk of dying in their first days, months and years. Similarly, diseases such as malaria can hinder the growth of the foetus, if the mother is infected during pregnancy. In

¹Permanent Survey of Household Living Conditions, 2014, page 14.

²Final Assessment Report Access-Health Infant and Kindergarten, World Vision, 2015, P.1.

Mauritania, according to the results of the MICS (2015), 69% of births take place in a health structure.

1-1-2 Malnutrition

In Mauritania, about 25% of children under the age of 5 are moderately or severely underweight, and 8% are classified as severely underweight; 28% are stunted and 15% are moderately emaciated or too skinny for their size. After the first birthday, the percentage of children underweight or stunted is higher compared to infants under 12 months of age (2015 MICS).

1-1-3 Breastfeeding and Feeding of Infants and Young Children

According to the results of MICS (2015), in Mauritania, only 62% of newborns are breastfed for the first time within one hour of birth, while 91% of newborns start breastfeeding on the day they are born. In Assaba and Brakna, the percentage of newborns breastfed during the day is 91% and 96% respectively (MICS 2015).

About 41% of children under 6 months of age are exclusively breastfed. This limited percentage shows that in more than half of all cases, prelacteals supersede breast milk.

1-1-4 Childhood Diseases

According to the 2015 MICS, diarrhoea is one of the leading causes of death among children under 5 years of age in Mauritania. The prevalence of diarrhoea in children 12 to 23 months is 25%. It is particularly high in this age group and corresponds to the weaning period. In 32% of cases, advice or treatment was sought in a health structure. As for drinking practices, about 55% of children suffering from diarrhoea have received less fluids. For the most part, regarding the feeding of these children, in 58% of cases diarrhoea has been slightly diminished or very reduced.

According to MICS (2015), 44% of children with diarrhoea received Oral Rehydration Salts (ORS) or an increased amount of fluids, and 49% received Oral Rehydration Therapy (ORT) (ORS or recommended home liquids or increased amount of liquids). On the other hand, the maternal mortality ratio in Mauritania was estimated in 2012 to be 510 deaths per 100,000

live births. Access to health services remains a major challenge in Mauritania. Prenatal care is of paramount importance. WHO recommends a minimum of 4 antenatal consultations.

According to the results of the MICS (2015), overall 87% of births in Mauritania have benefited from PNC from health professionals. In addition, nearly 7 out of 10 deliveries, or 69%, were assisted by qualified staff (doctors, nurses and midwives). The same percentage of deliveries takes place in a health structure compared to 30% of home births.

1.2 AIM Health Context in Program Implementation Districts

The "Access to Maternal and Child Health Care" programme is implemented in two zones: Mbagne and Guerou. To achieve the desired results in reducing maternal and child mortality, a series of interventions are being implemented. This formative study was conducted to provide in-depth knowledge of community roles, influences, norms and practices related to maternal and infant nutrition in order to help determine how on-going interventions can be strengthened.

Chapter II- Presentation of the "Access to Maternal and Child Health Care" program (AIM Health PLUS)

2-1 Presentation of World Vision Mauritania

World Vision Mauritania operates in the regions of Nouakchott, Brakna and Assaba in 5 clusters including: one (1) in Nouakchott, two (2) in Brakna, and two (2) in Assaba.

2-2 AIM Health Program

In order to achieve the Millennium Development Goals (MDGs) in terms of reducing maternal and child mortality, five countries were selected. These countries had very high mortality rates of maternal, neonatal, and children under the age of 5. Priority was given to effective fact-based opportunities to address the problem.

These interventions focus on prevention, primary health care, community engagement and strengthening health systems overall. Interventions and approaches are contained in World Vision's 7-11 strategy which includes a series of 7 practices during pregnancy (0 to 9 months)

and 11 during the first two years of the child's life (0 to 24 months). These interventions are presented in the following table:

Table 1 : Key Interventions in World Vision's 7-11 Strategy

7 Interventions for Mothers	11 Interventions for Children
1. Adequate diet 2. Iron/folic acid supplements 3. Vaccination - TT 4. Malaria Prevention (LLIN, LSM) 5. Birth preparedness and spacing 6. Deworming 7. Access to Maternal Health Services (PNC, PMTCTs, STIs, Traditional Birth Attendants)	1. Appropriate breastfeeding 2. Appropriate complementary feeding 3. Vitamin A Supplementation 4. Adequate Iron in Diet and Supplements 5. Deworming (up to 12 months) 6. Routine immunizations 7. ARI - prevention and care 8. Fever - prevention and care 9. Diarrhoea- management 10. Hand washing with soap 11. Essential Newborn Care

Source: 2015 AIM Health Evaluation Report

Chapter III - Study Methodology

In this chapter, the purpose and objectives of the study will be presented, along with the conceptual framework and the methodological approach used in the study.

3-1 Purpose and Objectives of Study

3.1.1 Study Purpose

The aim of this study was to identify the roles, influences, norms and practices related to the health and nutrition of pregnant and lactating women, newborns and young children.

3-1.2 General study objectives

Based on the purpose of the study, the following general objectives were defined in relation to the three components of the conceptual framework:

1. Investigate **the structure of families and** religious cultural **values** that influence the care of pregnant and lactating women, and children from 0 to 2 years old.

2. Identify the **roles and influence**, decision-making and communication mechanisms within families related to the health and nutrition field of women and children 0 to 2 years of age.
3. Analyse **family norms and practices** related to the health and nutrition of women and children aged 0 to 2 years of age.

3-1.3 Specific objectives

- 1- Determine whether the structure of the family is nuclear or extended;
- 2- Determine whether different generations of women and men are involved in the counselling and care of pregnant and lactating women, newborns and young children;
- 3- Determine if there is a hierarchy of authority and influence over family decisions regarding the development and education of children;
- 4- Determine if elders transmit values and practices to the youngest family members;
- 5- Determine whether religious and cultural values influence the care of women and children in the context of family and community;
- 6- Identify the roles and influence of different family members, specifically in the health/nutrition issues of women and children;
- 7- Analyse the roles and influence of community actors on the health/nutrition issues of women and children;
- 8- Identify the norms, practices, advice and care provided to the pregnant woman regarding diet, work, PNC, prevention/protection;
- 9- Identify the norms, practices, advice and care related to newborn care and breastfeeding;
- 10- Identify community norms, practices, and advice given to WRA regarding the introduction of complementary foods;
- 11- Identify the norms, practices and advice provided to WRA in relation to the care of sick children;
- 12- Determine the norms and practices related to the hygiene of the child.

3.2 The conceptual framework for the study

Most studies and development programs focus on the attitudes and practices of individuals, especially women, on health-related issues. This conventional approach is strongly influenced by behavioural psychology that focuses on individual behaviour. In African societies, which are essentially collectivist, such a model is not relevant as the individual is an integral part of a larger social and cultural system that influences his/her attitudes and practices.

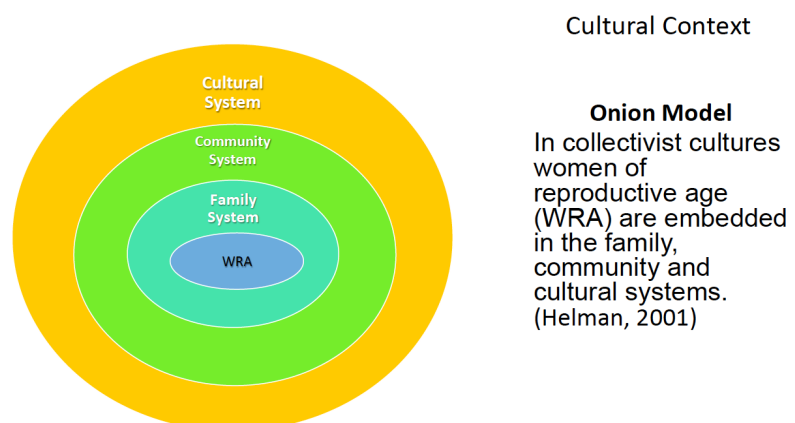
The methodology used in this study is based on several key concepts from anthropology related to collectivist societies, including the structure of families and communities, the influence of traditional cultural values, and finally the norms and practices related to the health and nutrition of women and children.

3.2.1 The social and cultural system

In non-Western societies, an individual's attitudes and behaviour are strongly influenced by pressures from social and cultural factors in the environment. His/her attitudes and practices are dictated by socio-cultural rules and norms, which determine the acceptable and unacceptable attitudes and practices. Nutrition programs tend to pay more attention to cultural norms and practices than to the structure of family and community systems in which WRA and other family members are embedded. However, it is by understanding the structure of families and communities that it is possible to understand the roles and influences of different family and community actors. The onion model (diagram below) developed by anthropologist Cecil Helman, illustrates the position of the individual in relation to the family, community and cultural

systems and that he/she has little opportunity to resist those several layers of influence. Thus, for maternal and child health and nutrition issues, it is difficult for a young woman to evade the influence of those cultural and social forces and/or

Figure 1 Onion model



expectations. For this reason, it is critical for program planners to have a good understanding of the roles and influence of different family and community actors on the young mother and her child.

3.2.2 Roles and Influences

In non-Western societies, the roles of family members are dictated by socio-cultural norms. There are activities specific to the status of man or woman that solidify with time and experience. Women are more focused on the health and care issues of newborns and young children. Seniors, especially grandmothers, are a resource that is not well considered in health and development programs, hence the importance of an in-depth study of their roles and influences on health and nutrition of women and children.

3.2.3 Family Health Production

Another key concept on which this study is based and which is useful for the development of health programs is the *Household Production of Health (HPH)*. In the early 1990s, a group of anthropologists involved in nutrition programs challenged the idea that "health occurs in health centres." They argued that the health and nutritional status of children depends predominantly on what is done within families. It would be interesting to identify the people involved in the care of children and the practices and counselling they provide.

3.3 The Methodological Approach

Given the objectives of this study, and in order to better understand family and cultural systems as well as roles, influences, norms and practices related to health issues and nutrition of women and children, a qualitative method is appropriate. Indeed, this approach makes it possible to understand the perceptions and experiences of different family and community actors on these issues.

3.3.1 Data collection techniques and instruments

The data were collected from community members using several techniques including:

- Group interviews with the use of drawings of family members (father, mother, grandmother, grandfather, girl and aunt) and community (health workers (Midwife

and Community Health Officer), traditional practitioner) and a semi-structured interview guide;

- Direct observations;
- Survey sheets on first baby foods; and
- Simulations with the help of a doll to better understand the feeding practices of young children.

Drawings of different family members were frequently used in the study. Depending on the theme discussed and with the help of drawings of family members, participants were polled to obtain their opinions regarding family members "who have more knowledge" or "who are more involved" in the various situations mentioned vis-à-vis the health and nutrition of women and children. After having voted, participants responded to in-depth questions so that they could explain their answers.

For the collection of information on the first baby foods, a survey sheet was prepared to collect opinions from mothers and GMs on the timing of the introduction of, composition of, and reasons for their choices of baby food.

We also used a variety of documents on project description, evaluation or study reports to supplement and support qualitative data from this study.

3.3.2 The choice of sites and interviewees

This study was performed in two intervention zones of the AIM Health PLUS project -- Guerou and Mbagne. In each location, 3 villages were chosen with the help of the Project Manager, taking into account the accessibility and cultural contexts of the Moors and Peuls. In the department of Mbagne, 2 Peul villages and 1 Moor village were chosen; and in the department of Guerou, 2 Moor villages and 1 Peul village were chosen. In total, the study involved 3 Maure villages and 3 Peul villages in the two intervention locations. The interviewees were selected using the technique of reasoned sampling. The categories of interviewees were selected based on the purpose of the study and with the help of facilitators in both locations. For example, in each zone, three priority groups to be interviewed were selected to include:

- Mothers of children under the age of 2;
- Grandmothers with small children under the age of 2;

- Fathers of children under the age of 2.

In each site, interviews were conducted with 10 to 12 participants for each category. The following table shows the number of interviewees for each category in both sites.

Table 2 interviewees by category and site

	Categories Sites	WRA	GM	Fathers
Peul sites	Woloum Hatar	12	9	9
	Léwe	14	15	05
	Lebteyhatt	7	01	05
Moor sites	Mbeydia	11	9	06
	Wassa Taghada	11	4	05
	Diock	12	8	00
	Total	67	46	30
Total interviewees: 143				

A total of 143 people were interviewed in all categories at the two sites, including 67 mothers of reproductive age, 46 grandmothers and 30 fathers. There are constraints to be considered when conducting interviews. Indeed, it was difficult to interview as many people as planned in each category selected because of domestic activities and crop work. The study took place in April, a time of the year when food is scarce and when most of the men have left to herd their livestock in other areas and for this reason most of the men were not in the villages. In any case, the number of participants required (6 minimum and 12 maximum) for a focus group was met in most interviews. Moreover, the major criterion for the choice of categories of people to be interviewed was diversification, in order to obtain a variety of opinions, rather than statistical representativeness. The triangulation of the mass of information collected from the different categories of interviewees resulted in "empirical saturation" even before the end of data collection in both regions of the study.³

³ Pires A. 1997, S. 67

3.3.3 Investigator Choice and Training



The interviews were conducted with a team of 5 investigators. These were reviewed by World Vision on the basis of the following criteria: mastery of local languages (Pulaar and Hasania) and skills and experiences in community surveying. The fifth investigator is a member of the AIM Project Staff. They have various skills, including sociology, human rights, cultural

promotion, and teaching, all of which have proven beneficial and have enhanced the quality of the study. The study was coordinated by a sociologist recruited by the NGO Grandmother Project – Change through Culture, who has strong experience in research and coordination of qualitative studies and who speaks the Pulaar language fluently. During group interviews in the Moor communities, the study coordinator was always accompanied and supported in interpretation by a member of the team who speaks fluent Hasania. This process did not fail to involve biases, but these were mitigated by a good organization of the interviews, the simplification and precision of the questions, and above all, the cross-referencing of data from these interviews with information collected from other categories of people interviewed simultaneously by other team members. In each area, a facilitator accompanied the team to facilitate the mobilization of interviewees, provide the necessary technical and logistical support, and participate in interviews and information analysis. The investigators' training took place over two days and was conducted by the study leader.

During these two days, investigators were able to familiarize themselves with the conceptual framework and methodological approach of the study. At the end of the training, each investigator had mastered the goals and objectives of the study and the procedure to be used to gather the necessary information and analyse it as they went along. A test was administered on the third day at a site, in order to introduce the team to the recommended collection process.

3.3.4 Data collection and analysis

Following the principles of qualitative research, data collection and analysis were performed simultaneously by the team that conducted the study. Because of the large number of topics

to be addressed, the investigation was split into two parts comprising two days of data collection at each site. During these two days, two teams of three investigators each simultaneously led interviews with mothers, GMs and fathers.

After the collection of data at each site, one day was devoted to synthesising the data at the World Vision office with the whole team. At this stage it was a question of entering the notes manually by cutting out the interviews and coding the parts following a matrix based upon the study themes. This process allowed us to identify gaps in the information gathered and make the necessary adjustments to the subsequent interviews. Thus, in each area, six days of collections were carried out, with an additional three days of synthesis for each site and one day for development of the overall synthesis. In total, the study was conducted over a 20-day period during April 2019.

Chapter IV - Presentation and analysis of results

4.1 Family structure and influence of cultural and religious values on the MCHN

One of the main objectives of this study was to investigate the structure of families and the influence of cultural and religious values on maternal and child health and nutrition.

4-1-1 Family Structure

Interviews with communities provided information on family structure and organization, communication channels, influences and decision-making processes.

The structure and organization of families in the Andshean and Moor villages are almost identical. Everywhere, according to the interviewees, the extended family predominates. Families in nuclear units are very rare and where they exist, they remain "*closely related to the extended family*," as many interviewees have pointed out. Although the nuclear family is geographically distant from the extended family, it remains attached to it and the elders continue to influence practices and decisions regarding the lives of the couple and children.

Everywhere, interviewees highlighted the benefits of life in the extended family, which is defined as a complete family where one finds all the family members (grandfather, grandmother, aunt, WRA, husband, children). Every family actor plays a fundamental role in promoting the well-being of all. There is an interdependence between family members; they are supportive and help each other. The issues of education and health are not the exclusive responsibility of the couple, namely the child's biological parents. Instead, the education and supervision of children is everyone's business, especially women.

Regarding pregnant women, interviewees stressed that "they *are* safer" in an extended family as they benefit from the guidance, advice and assistance of more experienced women - namely GMs and aunts.

In both cultural contexts (Moor and Peul), elders are responsible for mentoring the younger generation on the different aspects of life. They pass on religious and traditional cultural norms, values and practices to the younger generations. According to interviewees, children living in extended families are more aware and better educated thanks to the knowledge transmitted by the elders through traditional tales, legends, stories and games. The teachings of the elders aim to develop in young people (young children, young women) behaviours consistent with the cultural, religious and traditional values of the group. Younger people are required to comply with current cultural norms, values and practices.

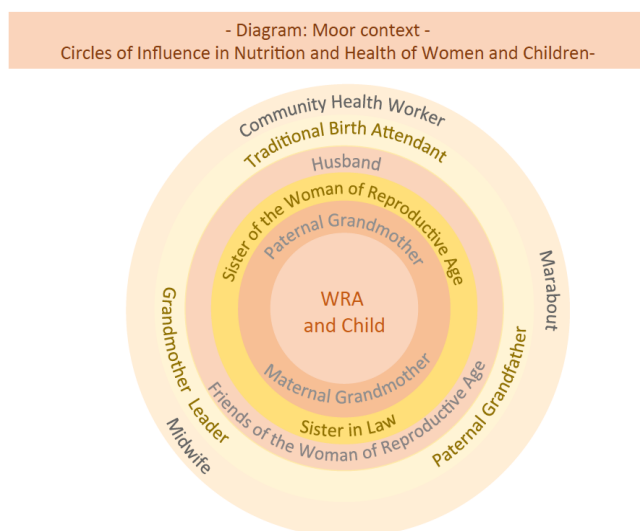
The system in the organization of Moor and Peul families is similar to that of collectivist societies whose members are united by very close ties. The communities are under social and cultural pressure and feel obliged to comply with the group and the decisions taken. From an early age, the individual's basic education and well-being are overseen by older people.

4-1-2 Hierarchy of authority and influence of older people vis-à-vis younger people

Everywhere, for health concerns, children's and women's nutrition, it is the GM that embodies authority and influences all decisions on these issues. All interviewees reported that "*GM is the most experienced person with the most knowledge*" on the issues related to pregnancy, breastfeeding, infant feedings, baby care, and the care of sick children.

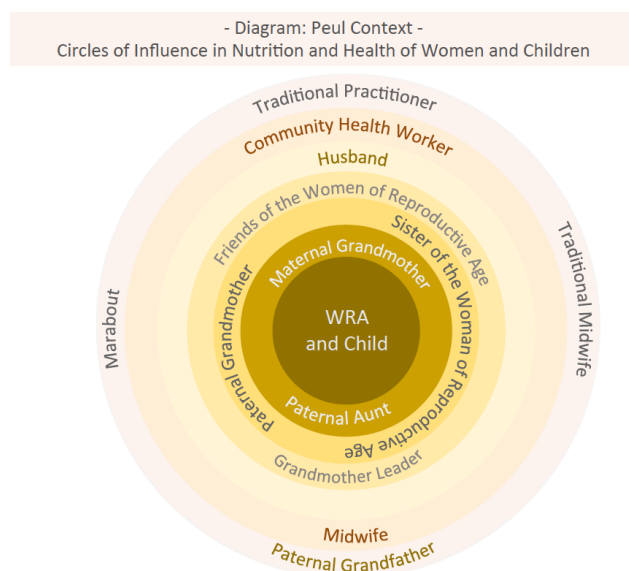
The influence and authority of the paternal GM is even stronger in the Moor sites, where the WRA cannot take any initiative towards her child without the approval of the GM (see below the circle of influence of family and community actors in the Moor context).

Figure 2 Circles of influence of family and community actors on MCHN in the Moor context



According to a Moor GM, "the weaned child remains under the exclusive responsibility of GM." On the other hand, in Peul sites, the paternal GM remains influential, but according to the interviewees, "they work with young women" for decisions related to women's and children's health.

Figure 3 Circles of influence of family and community actors on MCHN in the Peul context



The concentric circles to the left show the influence of different family and community actors in the Peul context. Young girls who are still "learning" are mentored by older women, namely WRA, GMs and paternal and maternal aunts. As for the young WRA, in both cultural contexts, they are the responsibility of the GMs and

follow the direction of these elders regarding issues of education, health and nutrition of young children.

In both cultural contexts, the paternal and maternal aunts play the same role. They act as assistants to all family members and participate in the mentoring, counselling and care of

young children and the WRA. In The Peul sites, the paternal aunt has more influence than the maternal aunt on the woman and her child. According to some interviewees, *"the paternal aunt has decision-making power over the name to be given to the child."*

In the Moor sites, however, interviewees say that it is the maternal aunt who has more influence on the woman and her child because she is very close to her and her child during this time.

Moor communities are essentially matriarchal, so it is customary, according to many GMs, that *"the woman, after childbirth, stays for 40 days under the care of her mother and sisters."*

In both cultural contexts, childcare and health issues are managed primarily by women. The WRA first observe diseases and consult first with GMs or aunts. It is these counsellors who provide first aid to the child. In case of complications, more experienced women may decide to refer the child to other specialists, namely GMLs (known for their knowledge of children's diseases), traditional healers, or health workers.

Everywhere, male and female interviewees say that men are only involved in health issues and women's and children's nutrition to ensure the availability of finances for associated expenses.

4-1-3 Influence of religious and cultural values

In all locales of the study, there are religious and cultural values that influence the care of women and children.

In the Peul communities, traditional and religious practices related to newborns and women are strongly guided by tradition and religion. Indeed, these practices have their roots in the family at the community level and are perpetuated by the elders of the family (GMs, GFs, aunts), religious leaders, Grandmother Leaders and traditional healers.

In Moor communities there are still traditional practices related to the health and nutrition of newborns, women and young children, but compared to the Peul sites, monitoring of these practices is less important.

Only a few interviewees in Diock say that they still follow the tradition of giving dates to the newborn. As one GM put it, this practice aims to make the newborn "*a person of good character.*"

As regards practices for protecting children and pregnant women, some interviewees at the Moor sites pointed out that they still exist, such as making a talisman and tying it around the child's wrists, or talismans for women who frequently miscarry.

We would like to emphasize that religious practices among the Moor and Peul communities, such as the muezzin's reciting the call to prayers in both ears of the newborn, or giving Quranic potions and talismans made with the verses from the Quran for the protection of pregnant woman, are always carried out.

4-2 Roles and influences of different family and community actors

In both cultural contexts, all family members of different generations are involved in the care and advising of pregnant and lactating women and the newborn. Each family member, depending on their status, plays one or more specific role(s). The levels of involvement differ, but the roles are complementary and contribute to the well-being of women and children. Similarly, community specialists are sometimes called upon to address the health problems of women and children.

4-2-1 Family actors

4-2-1-1 The Father: *PROVIDER OF FINANCIAL RESOURCES*

Box 1 Fathers' Roles

- Ensures basic costs (food, health, education)
- Ensures strenuous work (country work, livestock, milk cows, water chores, construction/repair of the house)
- Protects the family
- Supervises and monitors children's education in public and Koranic schools
- Declares/Announces the births of children
- Looks after resource management
- Oversees the discipline of children (authority)

In both cultural contexts, all categories of interviewees say that the primary role of the father of the family is to "*ensure the basic needs of the family are met*", namely food, health care and expenses related to children's education. Similarly, all heavy work is his responsibility (field work, breeding, milking cows, construction and repair of the house). When he is present, which is rare in both contexts of the study, he supervises children in their studies. In the Moor sites, interviewees say that he monitors the religious education of children. In all sites, he also represents the authority to which one refers for the discipline of children. Concerning these different roles, all interviewees report that the father has the status of "*head of household*."

Moreover, in both settings, interviews demonstrated that men have little involvement in the counselling and care of women and children; they are primarily responsible for the cost of health care and maternal and child nutrition. An important finding is that at all of the study sites, men were almost always in migration, looking for grazing fields for livestock, or occupied by field work. Their absence from home makes it logistically impossible for them to be closely involved in the monitoring of women and children. Therefore, as a rule, they delegate this responsibility to their mother or sister.

4-2-1-2 Grandfather: *MORAL AND SPIRITUAL REPRESENTATIVE*

Box 2: Grandfathers' roles

- Bedrocks of the Family
- Family Ombudsmen
- Provide basic education through the transmission of religious values and advice on good behaviour
- Moral leaders who advise all family members
- Protectors of the family
- Family Financial Resource Managers
- Organizers of field work work and livestock

Interviewees describe the GF as slightly less involved in the day-to-day family management; nevertheless, he is the "*anchor of the family*" and "*a moral support for the whole family*." His presence is soothing and a source of security for all. He is consulted on family matters and is a resource for all family members. He also ensures that the behaviours of young people are in line with cultural and religious values.

In the two cultural contexts of the study, there is a small difference regarding the role of GFs in the advice and care of women and children. Among the Peuls, the GF is sometimes involved in the general advice for pregnant women, newborns and young children. Some of the interviewees reported the GF advising the pregnant woman to avoid "strenuous work" or "certain foods."

With the Moors, however, the great respect between the GF and WRA does not allow them to speak directly to each other. Generally, it is the GM or aunt who is the intermediary between the two. It is because of this respect, interviewees say, say that "*the young WRA hides her pregnancy from him.*"

However, in both quarters, even if he is not very involved, the GF is often consulted on major decisions concerning the family.

4-2-1-3 Women of Reproductive Age (WRA): *FAMILY WELFARE MANAGER*

Box 3: Roles of women of reproductive age (WRA)

- Perform household chores (water chores, sweep, pick up wood, prepare food for the whole family)
- Ensure the basic education of children and follow up on their religious education
- Support their husbands in resource management (saving, conducting RMAs (selling curd)
- Replace their husbands in their absence (birth declarations, administrative activities)
- Care for their husbands and family members (her children, husband, GM, GF)
- Supervise children in school (accompanying, follow-up)
- Ensure stability/peace in the family
- Consult GMs on child health and nutritional issues
- Carry out GMs' orders
- Respect and encourage respect for their husbands (listen to his advice)
- Advise their husbands
- Welcome guests

A Fulani GM said "*DEBBO WONI PARASEWAL GALLE*": *The woman is likened to a roof, a shelter for everyone. She's a unifying force, she brings people together.*

The roles of WRAs are practically the same in both cultural contexts of the study. According to interviewees, it is the responsibility of the WRA "to ensure the family's well-being by looking after housekeeping and taking care of all family matters".

From an early age, a WRA is introduced to her roles as a wife, mother and woman by her own mother. Under the guidance of older women in the family, she learns to do small household chores, errands, and to take care of small children. Once she marries, she leaves her parents' house to join her husband's home where she also lives with her in-laws (mother-in-law (MIL) and father-in-law) and sisters-in-law. Under the supervision of the MIL and with the assistance of her sisters-in-law, she assumes her role by taking care of domestic work (sweeping, washing clothes and dishes, preparing meals, picking up wood, doing water chores, etc.). She must also take care of all the family, including her husband, in-laws and children, ensuring that they are well-fed and clean. It is her duty as well to safeguard the stability of the family by cultivating peace, saving her husband's resources, and supervising children in their education and basic studies. In Moor sites, like other family members, the WRA takes care of the religious education of the children. As still inexperienced, the first-time-pregnant WRA is required, according to interviewees, to "*consult with the GM*" for all family matters--in particular, those related to health and child health.

In the Moorish websites the interviewees say that "*the WRA must carry out the orders of the MIL*," which shows the strong influence of the mother-in-law (MIL) on the WRA and all issues related to household operations and the well-being of family members. This includes issues related to pregnancy, breastfeeding, infant care, the feeding of children, and care of diseases which are discussed in consultation with the MIL, whose advice and guidance must be applied. This behaviour is culturally expected of the WRA.

4-2-1-4 Aunt: FAMILY ASSISTANT AND ADVISOR

Box 4 Aunts' Roles

- Assist all family members
- Assist GMs in home management and with the health of children and women
- Assist the WRA in domestic work, education and child care
- Advisors to all family members
- Conflict Mediators
- Coach and supervise children
- Pay attention to everything that happens in the family
- Serve as a communication link between family members
- Make decisions in the absence of GM, the GF and the WRA's husband

In both contexts, interviews showed that paternal and maternal aunts play the same roles in the family and with the WRA and her child. According to interviewees, she assists all family members, especially the WRA and GM. She participates with the WRA in domestic work, education and care of children. She is also an assistant to the GM for managing and coordinating family activities. She plays almost the same roles as the GM as a conflict advisor and mediator, and she is equally involved in the coaching, advising and care of young children and the WRA.

4-2-1-5 GRANDMOTHER: COUNSELLOR AND COORDINATOR OF FAMILY ACTIVITIES

Box 5 GM' roles

- Advisors to all family members
 - . Counsellors to young women on their role as wives and mothers
 - . Counsellors to their sons on their role as husband and eldest in the family
- Caregivers for children: washing them, caring for them, playing with them, feeding them, monitoring them
- Ensure basic education for children
 - . Prepare young girls for their lives as women
 - . Transmit cultural values to children through traditional tales, riddles, legends and games
- Supervise and delegate domestic tasks to WRAs
- Manage domestic resources
- Mediate at the level of couples and other family members
- Plan and organize family ceremonies such as weddings, deaths and baptisms
- Watch over children's religious education
- Support WRA in domestic work
- Guard livestock

In all sites, GM's roles, as described by the different categories of interviewees, are similar. Indeed, they all recognize that she plays a central role in the family and with all its members. Because of their status as experienced women and the vast knowledge they hold, they are essential to family life.

Interviews have shown that the roles of GMs in Moorish and Peul cultural contexts are similar. Everywhere, they act as advisors to all family members, especially young wives and fathers. In both cultural contexts, GMs embody authority and influence all decisions on many aspects of family life, especially on issues of women's and children's health and nutrition. Everywhere, interviewees spoke of "*GMs as the most experienced person with the most*

knowledge" on issues related to pregnancy, breastfeeding, care and feeding of infants, and the care of sick children.

In both cultural contexts, MILs have a lot of influence on their daughters-in-law. However, it appears that the power of the Moorish MIL over family affairs and her daughter-in-law and children is more pronounced. Many of the interviewees at the Moorish sites have said "*it's the GMs who decide everything*," and the WRA cannot take any initiative towards her child without the approval of her mother-in-law. In fact, after weaning the child remains exclusively under the responsibility of his/her GM.

At the Peul sites, all questions related to the health of the woman and the child are decided in consultation between the MILs and the WRAs.

4.2-2 Roles and influence of family members at critical times in women's and children's lives

During critical moments in the lives of a woman and her child, i.e., during pregnancy, during the first weeks of a child's life and in the event of a child's illness, different members of the family play different, but complementary roles.

The tables below summarize, for these different moments, the role played by the different family members in the two cultural contexts of the study.

Table3 Roles of Family Actors in the **Peul Cultural Context** at Critical Moments with Pregnant Women, Newborns and Young Children

Critical moments in child development/ well-being	Woman of reproductive age (WRA)	Grandmother (GM) (paternal or maternal)	Aunt (paternal or maternal)	Child's father	Grandfather
Pregnancy - <i>diet</i> - <i>pregnant woman's work (PW)</i>	<ul style="list-style-type: none"> - WRA is advised and closely monitored everyday by GM. - It is the PW's duty to follow GM's advice. 	<ul style="list-style-type: none"> - Home-based monitoring of the WRA by her own mother or mother-in-law - Gives advice to the PW on her diet, the types of work to do and to avoid 	<ul style="list-style-type: none"> - Assists GM in the home, follow-up of the PW 	<ul style="list-style-type: none"> - Very rarely involved in giving advice - Recommends that the woman follow the advice of GM and Health Workers 	<ul style="list-style-type: none"> - Rarely involved but sometimes counsels the PW to reduce her work load
Prenatal Consultations (PNC)	<ul style="list-style-type: none"> - She attends 3-4 PNC accompanied by the aunt or the GM 	<ul style="list-style-type: none"> - She accompanies PW to PNC, especially if she is a first-time mother. 	<ul style="list-style-type: none"> - GM often delegates to her the responsibility of accompanying the PW to PNC. 	<ul style="list-style-type: none"> - Does not accompany the PW to PNC (the majority of men are absent; and this action is not culturally accepted) 	<ul style="list-style-type: none"> - Not involved
Taking iron tablets during pregnancy	<ul style="list-style-type: none"> - Most interviewees report that the majority of PW take iron tablets. - Some women do not take iron because of side effects. 	<ul style="list-style-type: none"> - Some GMs monitor the taking of tablets. 	<ul style="list-style-type: none"> - Can play the same role as GM 	<ul style="list-style-type: none"> - Rarely involved in tracking iron intake 	<ul style="list-style-type: none"> - Not involved

Care and feeding of the newborn (NB) and the new mother	<ul style="list-style-type: none"> -Breastfeeds the NB -Keeps an eye on NB hygiene -Watches over NB vaccines - Follows the advice of experienced women (GM and aunt) 	<ul style="list-style-type: none"> - Frames and gives advice to the woman (how to hold the NB, how to breastfeed her, umbilical cord care, bath, massages) -Gives traditional medications to the new mother to stop bleeding Monitors the new mother's intake of medication Prepares soup and cereal for the new mother 	<ul style="list-style-type: none"> - Assists GM in care, coaching and advice 	<ul style="list-style-type: none"> - Is responsible for medical expenses related to baptism and the specific needs of the newborn and the birth (diapers, bottle, food for the new mother) - Among the Peuls, the father can choose the first name of his first child. 	<ul style="list-style-type: none"> -Formulate prayers for the NB -Ensure the application of cultural and traditional practices
Administration of colostrum	<ul style="list-style-type: none"> - Follows the advice of health workers and GM 	<ul style="list-style-type: none"> - Recommends the administration of colostrum because of its importance to the health of the NB 	Assists GM	Not involved	Not involved

First things given or done to the child <i>Tobirdam (goat's milk mixed with dates or a Koranic potion) or dates</i>	<ul style="list-style-type: none"> - Among the Peuls, the majority of women give the <i>tobirdam</i>, especially with home births 	<ul style="list-style-type: none"> -Decides what traditional practices to apply - In the majority of Peul villages (Woloum Hatar and Léwé), GMs apply traditional practices, such as <i>tobirdam</i> 	<ul style="list-style-type: none"> - Assists GM 	<ul style="list-style-type: none"> - If he is present, recites the muezzin's call to prayer in both ears of the NB 	<ul style="list-style-type: none"> - Gives the muezzin's call to prayer in both ears of the NB
Breastfeeding	<ul style="list-style-type: none"> -Receives advice from the GM on the exclusive breastfeeding (EBF) -Listens and follows GM's advice -Learns from GM how to breastfeed 	<ul style="list-style-type: none"> -Transmits to the WRA the knowledge and skills related to breastfeeding (about regular feedings, position for breastfeeding, compliance with hygiene measures, warnings not to put baby on his back after feeding, to prevent choking) 	<ul style="list-style-type: none"> - Assists WRA and GM in the transmission of knowledge and skills related to breastfeeding 	<ul style="list-style-type: none"> - Not involved 	<ul style="list-style-type: none"> -Not involved
Water dispensation	<ul style="list-style-type: none"> -Most administer water to NB during periods of intense heat, following GM's advice. 	<ul style="list-style-type: none"> -The majority administers or advises administering water during heat -Gives water to the child when the child cries or in the absence of the WRA 	<ul style="list-style-type: none"> - Transmits the same practices as GM 	<ul style="list-style-type: none"> -Not involved 	<ul style="list-style-type: none"> -Not involved

Feeding the young child <i>- timing of the introduction of first foods</i>	<ul style="list-style-type: none"> -Follows GM's advice - Learns with GM how to prepare for the 1st baby foods -Usually feeds the child because it is her responsibility and she is closer to the child 	<ul style="list-style-type: none"> -Gives advice on how to prepare and what the child needs to know -Shows the time of introduction of the first foods (usually 6 months) -Supervises and instructs the WRA on how to feed the child -Gives the child food when WRA is occupied by housework (HW) 	<ul style="list-style-type: none"> -Follow GM's instructions -Sometimes feeds the child 	-Not involved	-Not involved
<i>Follow-up of the child who "doesn't want to eat"</i>	<ul style="list-style-type: none"> -Encourages the child to eat with patience (singing, smiling, dancing, etc.) -Gives the difficult child who refuses to eat to the GM to make him eat 	<ul style="list-style-type: none"> -More experienced than the WRA, she has more patience and, shows affection and tolerance to encourage the difficult child eat. 	<ul style="list-style-type: none"> -Plays the same role as GM 	-Not involved	-Not involved
Protection and prevention of childhood diseases	<ul style="list-style-type: none"> -Listen to GM's advice on hygiene, nutrition and child care 	<ul style="list-style-type: none"> -Gives advice on food, hygiene measures, care (washing children's hands with soap), making them wear shoes, watching over 	<ul style="list-style-type: none"> -Gives the same advice as GM -Involved sometimes in hand washing and child hygiene 	<ul style="list-style-type: none"> -Makes sure children eat well by bringing food home -Not involved in washing children's 	-Rarely involved

	<ul style="list-style-type: none"> -Usually takes care of washing children's hands before meals, after games and after stool 	<ul style="list-style-type: none"> food hygiene, avoiding sweets and taking the child to the health centre in case of illness. -Involved in hand washing and child hygiene in the absence of WRA 		hands except when women are absent	
Caring for the sick child: Diarrhoea Malnutrition Intestinal worms	<ul style="list-style-type: none"> -Observes sickness or disease - Consults GM for diagnosis -Takes the child to health specialists, usually accompanied by the aunt 	<ul style="list-style-type: none"> - Diagnoses diseases - Offers first aid - Defers to traditional healers in Fulani sites or to the GML and/or to health workers 	<ul style="list-style-type: none"> -Assists GM in the home treatment of the sick child -Most often accompanies WRA to the traditional practitioner and/or health centre -Sometimes, financially supports the father 	<ul style="list-style-type: none"> -Provides financial resources for the treatment of the sick child and transport to health facilities 	<ul style="list-style-type: none"> -Offers GM traditional remedies -Advises referring to specialists

Table 4 Roles of Family Actors in the **Moor Cultural Context** at Critical Moments with Pregnant Women, Newborns and Young Children

Critical moments in child development/ well-being	WRA	GM (paternal or maternal)	Aunt (paternal or maternal)	Child's father	Grandfather
Pregnancy - <i>diet</i> - <i>pregnant woman's work</i>	- WRA is advised and closely monitored every day by GM. - It is the pregnant woman (PW)'s duty to follow GM's advice.	- Monitoring of the WRA ED at home (either her own mother or her mother-in-law) - Gives advice to the PW woman on her diet and on the types of work to do and avoid	- Assists GM in the home follow-up of the PW	- Very rarely involved in advising - Recommends the woman to follow the counsel of GM and health workers	- Not involved (among the Moors, between the GF and the PW there is no direct communication because of respect)
Prenatal Consultations (PNC)	- The majority of women report that they attend 3 or 4 PNC accompanied by an aunt or GM. - Some do not know the recommended amount of PNC.	- Accompanies the PW to the PNC, especially if she is a first-time mother	- GM often delegate to her the responsibility of accompanying the PW to PNC	- Does not accompany the PW to PNC (the majority of men are absent; and culturally, it is not acceptable)	- Not involved

<i>Taking iron tablets during pregnancy</i>	<ul style="list-style-type: none"> -Most interviewees state that they take the iron tablets. - Some women in Diocok do not take iron because of side effects. 	-Some GMs monitor iron tablets intake.	- Can play the same role as GM	- Rarely involved in tracking iron intake	- Not involved
Care and feeding of the newborn and the new birth mother	<ul style="list-style-type: none"> -Breastfeeds the NB -NB hygiene watch -NB vaccine watch -Follows the advice of experienced women (GM and aunt) 	<ul style="list-style-type: none"> -Frames and gives advice to the WRA (how to hold the NB, how to breastfeed, umbilical cord care, baths, massages) -Monitoring the birth mother's intake of medication -Prepares soup for the new mother 	- Helps GM with care, coaching and advice, and assists the WRA	- Finances the medical expenses, baptism and the specific needs of the newborn and the birth (diapers, bottles, food of the NB)	-Recites prayers for the NB
Administration of colostrum	-Follows the advice of MW and GM	- Recommends the administration of colostrum because of its importance to the health of the NB	-Assists the GM	-Not involved	-Not involved
First things given or done to the child	-Among the Moors, almost none of them give <i>tobirdam</i> , but in some sites	-Decides what traditional practices to follow	-Assists the GM	-When he is present, he recites the muezzin call to prayer into both ears of the NB	- Recites the muezzin call to prayer of in both ears of the NB

<i>Dates</i>	like Dioc, the NB tastes dates	-In some Moorish sites such as Dioc, GMs apply traditional practices (make the newborn taste dates to make him a person of good character)			
<i>- Breastfeeding</i>	<ul style="list-style-type: none"> -They receive advice from the MW on EBF. -Listens and follows GM's advice -Learns with GM how to breastfeed 	-Transmits to the WRA the knowledge and skills related to breastfeeding (not to neglect regular feedings, the position for breastfeeding, compliance with hygiene measures, instructs not to put the baby on his/her back after feeding to prevent choking)	-Assists WRA and GM in the transmission of knowledge and skills related to breastfeeding	- Not involved	- Not involved
<i>Giving water to newborns</i>	-The majority give water to NB, especially during periods of intense heat, following GM's advice.	<ul style="list-style-type: none"> -The majority administers or advises the WRA to administer water to NB during periods of intense heat. -Gives water to the child when he cries or in the absence of the WRA 	-Transmits the same practices as GM	- Not involved	- Not involved
Feeding the young child	-Follows GM's advice	-Gives advice on how to prepare baby food and	-Respects GM's instructions	- Not involved	- Not involved

- <i>timing of the introduction of the first foods</i>	<p>-Learns with GM how to prepare the 1st cereal</p> <p>Usually feeds the child because it is her responsibility and she is closer to the child</p>	<p>the introduction of baby to solid foods</p> <p>-Indicates the time for the introduction of the first foods (usually 6 months according to interviewees)</p> <p>-Supervises and instructs the WRA on how to feed the child</p> <p>-Gives food to the child when WRA is occupied by housework</p>	-Sometimes feeds the child		
<i>Follow-up of the child who "doesn't want to eat"</i>	<p>-Encourages the child to eat with patience (singing, smiling, dancing, etc.)</p> <p>-Gives the difficult child who refuses to eat to the GM to make him eat</p>	<p>-More experienced than the WRA. She has more patience, shows affection and tolerance to make the difficult child eat.</p> <p>-Has tips for the child to eat better: rubbing certain parts of the child's body so that he does not vomit and eats well.</p>	-Plays the same role as GM	- Not involved	- Not involved
Protection and prevention of childhood diseases	-Listens to GM's advice on hygiene, nutrition and child care	-Gives advice on food, hygiene measures and care (washing children's hands with soap, making them wear shoes, watching over food	<p>-Gives the same advice as GM</p> <p>-Involved sometimes in hand washing and child hygiene</p>	<p>-Makes sure children eat well by bringing food home</p> <p>-Not involved in washing children's</p>	- Rarely involved

	-Usually takes care of washing children's hands before meals, after games and after bowel movements.	hygiene, avoiding sweets and taking the child to the health centre in case of illness). -Involved in hand washing and child hygiene in the absence of WRA		hands except when women are absent	
Care of the sick child: Diarrhoea Malnutrition Intestinal worms	-Observes the onset of diseases -Consults GM for diagnosis -Brings the child to specialists, usually accompanied by the aunt	-Diagnoses disease -Offers first aid -Defers to the GML and /or to health care workers	-Assists GM in the home treatment of the sick child -Most often accompanies the WRA to the health centre	-Provides financial resources for the treatment of the sick child and transport to health facilities	- Advises referring to health specialists

4-2-2-1 Roles of family actors during pregnancy

All categories of interviewees, male and female, report that *"pregnancy is a woman's business."* Many GM and WRA in almost all sites indicate that *"GM detects pregnancy first and does the follow-up. Because of her vast knowledge and experience, she knows better what to do for a pregnant woman."* According to the majority of interviewees, it is the GM who dictates to the WRA the attitudes and practices necessary for the smooth running of the pregnancy because she *"has already experienced pregnancy."*

From the beginning of the pregnancy and throughout the duration of the pregnancy, the GM, assisted by the aunt, supervises the WRA and gives her daily advice on her diet and the types of work to perform and to avoid.

Regarding PNC, the majority of interviewees in both contexts responded that *"it is the aunt who most often accompanies the pregnant woman during these visits"* because often this responsibility is delegated to her by the GM, especially when she is unavailable or unable to do so. However, other interviewees said that it is the GM's responsibility to accompany the PW, especially *"if she is a first-timer."* The WRA, who does not have a lot of experience during the first pregnancy, must follow the advice and guidance of the experienced aunt and GM.

Regarding the use of iron tablets, interviewees say that there are some GMs who track the intake of medication by pregnant women; they are assisted by aunts who also play the same role with the WRA.

In both cultural contexts, all interviewees state that men, especially the husband, are involved very little in advice related to the diet and the work of the pregnant woman. In Lebteyhatt, men say that they *"don't know anything about pregnancy; it's the GMs and aunts who are more experienced."* According to interviewees, husbands generally advise the WRA to follow the directions of GMs and midwives.

Similarly, in both cultural contexts, all WRAs, GMs and men say that husbands are not involved in monitoring the iron intake by their wives and that they *"hardly ever accompany their wives to PNC"* because, according to them, *"the majority of men are absent"* and also because *"culturally it is unsuitable for a husband to accompany his wife to PNC."*

This lack of involvement of men in counselling, monitoring and, especially, supporting their women at PNC is explained by the fact that in the social organization of the communities in our study areas, the roles of men and women are different. Culturally, there are roles that are expected of men. The supervision and monitoring of pregnant women is not part of their areas of competence.

4-2-2-2 Roles of Family Actors with Newborns (NB)

In both contexts, all categories of interviewees state that the *"GM has more knowledge and experience about newborn care and breastfeeding."*

During this first phase of the child's life, experienced women (GM and aunts) are very involved in newborn care and advice to WRA. GMs, assisted by aunts, pass on the knowledge and skills related to the care of newborns to the recently delivered mother who learns, with the seniors, to hold the newborn, breastfeed, take care of the umbilical cord, and bathe the baby. Experienced women also massage newborns, do laundry, prepare soup or cereal for the birth mother, give traditional medicines to the new birth mother to stop bleeding, and follow up on birthing medication.

In all the sites, the interviewees reported that the GMs recommend the administration of colostrum to the newborn.

Regarding the first things done or given to newborns, interviewees say that it is the GMs who decide which traditional practices to apply to the newborn. In some Peul sites like Woloum Hatarand Léwe, the *"tobirdam"*, consisting of goat's milk mixed with dates or a Koranic potion, is given to the newborn. In some Moor sites such as Diock, newborns are made to taste dates immediately after birth.

With regard to breastfeeding after childbirth, women state that midwives give them advice on Exclusive Breastfeeding (EBF), compliance with the vaccine schedule, hygiene measures and good milk production. However, even if WRAs say they want to follow the advice given by health workers on EB, they cannot go against the advice and practices of GMs.

Indeed, all interviewees, in both contexts, say that it is the GM who gives more advice on breastfeeding. Her usual advice is not to neglect breastfeeding, to follow hygiene measures, to

take a good position for breastfeeding, and not to lay the child on his back after feeding to prevent the child from choking.

Regarding water administration, many interviewees in both contexts say that GMs advise WRAs to administer water during heat. Similarly, GMs give water to infants in the absence of the WRA or when the baby cries a lot.

During these first moments, the WRA follows the advice given to her by experienced women and learns from them to gain experience and skills related to the care of newborns.

As for the husband, he takes care of the medical expenses, baptism and specific needs of the newborn and the mother, namely the purchase of diapers, baby bottles and food. When he is present, he takes care of the newborn's civil papers and performs the call to prayer on the newborn's ears during baptism. Among the Fulani, the father can choose the first name of his first child. However, men in both cultural contexts are not involved in advising and caring for the newborn.

4-2-2-3 Roles of family members in the feeding of the young child

Almost all interviewees stated that the baby begins to take other foods at 6 months. In both cultural contexts, the majority of interviewees revealed that GMs have more knowledge and experience about what first foods and when to give them to the infant. They all remarked that the *"GM is older and she knows better the foods a child should eat."* She is also responsible for mentoring young women by teaching them how to prepare the first cereals.

In many of the study sites, including Woloum Hatar, Mbeydia, Lebteyhatt and Dioc, most interviewees stated that it is the WRAs who usually feed the 6-month-old because *"it's a task that is their responsibility"* and *"they are closer to their child."* In Léwe and Taghada Wassa, the majority of interviewees said that GMs were the ones who fed children more frequently because, according to the respondents, generally the WRA were *"unavailable"* or *"busy with domestic chores."*

But at all sites, many interviewees noted that the WRAs enjoy the considerable support of the GMs in this task. Also, it is the GM who supervises the WRA and gives her directions regarding the feeding of the young child. Men, on the other hand, are not involved in this task because, according to the majority of them, they do not feed the child because culturally, it is

"not part of their responsibilities." In addition, *"the child is too small at 6 months,"* and therefore only his mother or GM can feed him.

In any family there may be children who refuse to eat normally. Interviewees unanimously stated that the GM has more skills to encourage these children to eat properly. WRAs usually entrust the difficult child to the GM because she shows more patience, tolerance and affection towards the infant compared to young women. According to a few interviewees at Mbeydia, *"GMs know which parts of the child's body to massage so that the child does not vomit and eats better."* Because of their wealth of experience, the GMs use techniques that include pressing different parts of the infant's body so that he/she will eat well.

With regards to disease prevention, GMs and aunts counsel WRAs regarding the hygiene and feeding of children. According to interviewees, these individuals generally advise the WRA to monitor the child's diet, avoid giving him/her sweets, and to take care of the baby's personal hygiene. Usually it is the WRA who takes care of the washing of the children's hands, but the GM is also very involved in this task as well.

As for the fathers, all the interviewees reported that *"they are not involved in washing children's hands"* but many of the fathers interviewed said that they *"make sure that the children eat well"* by bringing home food like rice, millet and fruit, if they can afford it.

4-2-2-4 Roles of family members in the care of the sick child

All interviewees say that when the child becomes ill, it is the mother who makes the first observation because she is closet to her child. Everyone stated that when the mother notices a sickness, she consults the GM, who is more experienced to make a diagnosis and offer first aid at home. GMs are often supported in this task by aunts. In Peul sites, if the child does not heal after home care, GMs refer the child to the traditional healers (who exist only in Peul sites). In some Fulani and Moor sites, GM may refer the child to a GML, known for her knowledge of children's diseases, and she will propose a talisman and offer traditional remedies. Should the child not heal, the woman/mother, accompanied by the aunt, takes him or her to the health centre. According to all respondents, the father assumes the medical costs of the sick child and ensures his/her transport to the health centre.

4-2-3 Community Health Workers

Specialists in traditional and modern medicine, namely traditional healers, GMLs and health workers, are consulted in case of problems with the child or the mother. As part of this study, community workers were not interviewed, but interviews with family members evidenced that these people represent resources available to GMs and they are depended upon in cases of women's and children's health problems.

4-2-3-1 Traditional Healers

The study showed that traditional healers exist only in Peul sites and are consulted, according to interviewees, only in cases of childhood illness, such as diarrhoea, to protect pregnant women and their babies from evil spirits, or if there is a problem with the quality of breast milk. According to the majority of the interviewees in these sites, the child suffering from diarrhoea is first referred to a traditional healer who, after diagnosis, proposes traditional remedies, and then refers the infant to health workers only in the event that he is unable to cure the diarrhoea.

4-2-3-2 Grandmother Leaders (GML)

GMLs are an integral part of the social organization of communities and play a significant role in supporting, mentoring and advising less experienced young women, especially during times when these women are pregnant or their children are sick. This study demonstrated that although they were not interviewed on an individual basis, GMLs are part of a larger grandmother social network. They are known and respected by all, and above all, they are very committed to actions aimed at improving the living conditions of members of their communities; their advice is particularly sought after by other grandmothers and young women regarding breast milk quality issues, childhood diarrhoea and intestinal worm problems. At the Peul sites, they are consulted if there is a problem with the quality of breast milk. According to the interviewees, in this case, they do not provide a cure, but instead provide advice and direct the WRA to health facilities. But at almost all sites, GMLs are consulted in case of diarrhoea in children or problems with intestinal worms, and they offer talismans or remedies with *acacia radiana* leaves or with chili.

4-2-3-3 Health Workers

Health workers were not selected as a category of actors to be interviewed due to lack of time, however, the data collected found that midwives, Community Health Officers, and other health workers play a significant role for issues related to nutrition, and women's and children's health. It is important to note that in almost all sites, health facilities are quite accessible geographically; the majority of the sites chosen for the study are at the edge of paved roads. There are only two sites that proved to be somewhat inaccessible due to isolation and road conditions. Facilities in these locations offered services for pregnant women as well as newborns and young children. However, the general consensus of interviewees was that these structures are frequented only in case of complications, and especially in complicated cases of sick children suffering from diarrhoea or intestinal worms. Most cases of diarrhoea or intestinal worms are treated primarily in the family and community setting. It is only in the event of a serious problem or failure of the first treatments that children are taken to health facilities.

Additionally it was noted by interviewees that only in the case of malnourished children does treatment take place at health facilities.

The data revealed that, overall, in the case of children's illnesses such as diarrhoea and intestinal worms, health facilities are poorly attended.

In the case of pregnant women, the study showed that the majority frequent health facilities for PNC and deliveries. However, it is important to note that although these women are most often accompanied to PNC by a GM or an aunt, the majority of interviewees reported that midwives generally communicate with the young women. They give them advice but do not speak with the accompanying family member to share their observations and advice. Such a practice is a hindrance because the study showed that more experienced women, namely GMs and aunts, are very present in the life of the woman and her child.

In critical moments in the life of the woman and her child, i.e., during pregnancy, during the first weeks and months of a child's life and in the event of a child's illness, the WRA is supervised and advised by her own mother or mother-in-law, who is more knowledgeable and experienced in these areas. In Fulani sites, the value of the experience of the elders is often attested by this proverb: *"Mawdo sodani gandal boyi wourdé,"* which means: knowledge is not bought - it is acquired with experience.

Although the majority of women want to apply midwifery advice, it is difficult for them to go against grandmothers' practices and choices.

Thus, it should be noted that the non-involvement of a pregnant woman's GM or aunt attendant is a hindrance to the effective application of midwifery advice and home follow-up. It also poses the fundamental problem of openness, availability and acceptance of midwives by those who consult them.

Furthermore, the study also showed that during these critical moments, the role of men is limited, compared to that of women of different generations. The study found that they are not involved in close monitoring of women and children because, not only are they frequently absent, but it is not within their area of expertise. Generally, interviewees state that men are only called upon when there are significant problems or when financial transactions are required for the care of women and children.

4-3 Norms, practices, advice and care related to the MCHN

This chapter presents the results on norms, practices, advice and care that influence MCHN. These essentially refer to the advice and practices during pregnancy, care and recommendations related to breastfeeding of the newborn, feeding of the young child, caring for the sick child and finally, advice and practices related to protection/prevention of disease in children.

4-3-1 Advice and practices during pregnancy

Pregnancy related practices are influenced mainly by the advice given by family members, especially grandmothers and other experienced women such as aunts, who mentor pregnant women (PW) on a daily basis.

4-3-1-1 Pregnant women's (PW) diet and work

During pregnancy, a woman's nutritional needs increase. Adequate and sufficient maternal nutrition ensures the well-being of the mother and influences the health and nutritional status of the newborn during the first 1,000 days of life. An adequate diet throughout the pregnancy

and reduction of workload should allow the woman to gain a reasonable amount of weight and ensure a normal newborn birth weight.

In both cultural contexts of the study, GMs recommend certain foods to pregnant women. All interviewees said that GMs advise pregnant women to eat "vitamin foods." The foods they recommend most often are: beans, vegetables, potatoes, sweet potatoes, grilled fish, eggs, meat, pasta, milk, millet dishes, wheat, rice, and fruit. Some of this food is considered accessible, such as vegetables from vegetable gardens (see photo) and meat. Fruits are considered *"unreachable and less consumed"* by pregnant women because they are expensive.



Everywhere, GMs advised against spicy, salty, and tart foods such as lemons, fat and "heavy foods" such as wheat or millet couscous, and spaghetti that pregnant women do not have digestion problems. In addition, in some Fulani and eastern sites, GMs advise against certain foods such as eggs, sorghum and millet cereal, potatoes and fresh milk because *"It's too rich and food that can make the baby fat and make it difficult to give birth."*

Regarding quantity, the study showed that at almost all other sites, especially the Peul ones, the majority of WRAs and GMs say that pregnant women *"should eat more than usual until the 7th month and reduce vitamin foods starting with the 7th month."* According to these interviewees, the pregnant woman should eat less to prevent gaining too much weight, to facilitate her own movement and prevent the foetus from being too fat, which makes delivery more difficult.

But in some Moor sites (Mbeydia and Diock), the majority of interviewees state *"the pregnant woman should eat more than usual until the end of her pregnancy."* According to them, the pregnant woman *"must gain weight and have strength to make the delivery go well."*

Thus, these data indicate that in the majority of cases, pregnant women are not encouraged to eat heavily, especially during the last three months of pregnancy. In this vein, the majority of

interviewees state their preference that the baby is not fat for an easier delivery. A GM commented, *"If the baby is too big, the woman will have an operation."* According to many GM and WRA, the baby's weight could be a source of complications for the woman at the time of delivery.

As for advice on pregnant women's work, a few GMs in Fulani sites say that the PW must work as usual in order to facilitate its delivery. A Fulani GM said, *"In our time, we didn't rest, we worked a lot, but today young women, on their own initiative, take a rest time during the day."*

But everywhere else, women are advised to work less than usual and rest for a while during the day, especially during the hours when it is warmer, in order to preserve her health and that of her child. According to many interviewees, *"pregnant women should avoid strenuous work,"* such as carrying heavy loads (water buckets, water basins, wooden bundles), working under the sun, sweeping by bending over, working in the fields, milking cows, and cutting wood.

Even though the majority of interviewees think that the pregnant woman should work less, they almost all argue, that she should not stop working. She must continue to work *"to make childbirthing easier"* and *"to avoid swelling of her feet and weight gain."* According to some, *"too much rest leads to laziness."*

The majority of interviewees seem to have understood that it is important for the pregnant woman to avoid strenuous work and to rest at some point during the day. Nevertheless, there are some GMs, especially among the Peul, who think that working as usual is beneficial to the pregnant woman.

4-3.1.2 Prenatal Consultations (PNC)

The goal of antenatal care is to detect, prevent and manage complications that may affect the health of both mother and child. The majority of interviewees seem to have understood the importance of PNC, since they almost all responded that the purpose of PNCs is to check the health status of the foetus and mother, to obtain medication such as iron and malaria tablets, facilitate the obtaining of civil registration papers, determine the baby's position, be prescribed necessary medications, and know the woman's blood pressure and blood type.

To reduce perinatal mortality and improve the experience of care by women, the WHO and the Ministry of Health in Mauritania recommend a minimum of 4 antenatal visits.

The majority of WRAs and GMs in both contexts stated that the needed number of PNC varies between 3 and 4. According to many respondents, women who discover their pregnancy early have 4 PNC. But it should be noted that in a Moor site (Taghada Wassa), the majority of WRAs are not aware of the number of PNC required. This could be one of the reasons for the low attendance at health facilities by pregnant women in this location in comparison with the required number of PNC.

In both contexts of the study, interviewees report that the majority of pregnant women have PNC. A Moor GM in Diocok says, *"We didn't have PNC, but today's younger generation regularly has 4 PNC."* Since the majority of the study sites are located at places near a main road, most interviewees said they have no problem accessing health facilities.

Only two sites in the study, namely Léwé and Taghada Wassa, are difficult to access because of the condition of the roads, which is a hindrance for women to have PNC. In these two sites, there are some WRAs who do not regularly have PNC. According to some of the GMs in Léwé, *"WRAs who do not have PNC consult with traditional birth attendants."* These GMs recognized that *"it's important to have PNC in health facilities, but accessibility is lacking."*

On the other hand, there are still a few GMs who refuse to let WRAs have PNC. According to some GMs from Léwé, *"there are GMs who refuse to let WRAs go to consultations, because in their time they did not have them. Also, they think it's a way for WRAs to get away from household chores."*

Interviewees identified several factors that contribute to the unpopularity of PNC in some areas. These include the remoteness of health care facilities, road conditions, transportation by carts that are not suitable to carry pregnant women, lack of financial means, lack of the transparency of midwives, and going to health facilities at times when a midwife is absent.

However, it is worth pointing out that, overall, most pregnant women in both contexts of the study report attending health facilities during pregnancy and receiving the care of qualified health workers. This result is confirmed by data from the 2015 MICS that revealed that in Brakna, only 8% of pregnant women did not receive care during pregnancy compared to 83% who were consulted by midwives. In Assaba, the percentage of women who were consulted by midwives was lower (39%) than the previous statistic, compared to 17% who did not

receive care during pregnancy. Pregnant women who do not attend health facilities for care are not very numerous, and this could be explained, as some community members have said, by the inaccessibility of health facilities, financial problems, the state of the roads, the lack of availability and openness of midwives, and the willingness of some GMs to maintain their traditional practices and therefore do not encourage PWs to learn more about their current state and have a PNC

4-3.1.3 Protection/Prevention of Pregnant Women

In almost all sites, the practices that families prioritize to ensure a smooth pregnancy are aimed at the physical and psychological well-being of the pregnant woman. Respondents reported at all sites that it is essential to fortify the woman's diet so that the baby develops well. Similarly, almost all subjects said that the pregnant woman should be given peace of mind by avoiding *"making or saying hurtful words"* or *"stressing"* her, and should be helped with domestic chores so that she does not get too tired. In this regard, a Dioc WRA commented, *"During pregnancy, other family members help the WRA in household chores and cooking, and provide money for care and nutrition so that the pregnancy goes well and the baby develops well."* In all sites, interviewees voiced that there are measures to protect pregnant women against malaria, such as sleeping under treated mosquito nets and taking the three preventative tablets as the midwife gives them at the PNC. Other preventive measures have also been cited by some, such as protecting themselves from the cold, not going out in the rain, taking iron, and respecting PNCs.

Moreover, there are traditional and/or religious practices at the sites that protect pregnant women. Unlike at Moor sites where there are no traditional healers, at the majority of Peul sites, there are long-established practices taken by the traditional healer to protect pregnant women. A GM in Woloum Hatar said, *"When a woman is pregnant, the traditional healer makes her a talisman with a dead scorpion. It's a way to protect the baby; he won't be afraid of anything at birth."*

In almost all of the Moor and Fulani sites, people spoke of religious practices aimed at protecting pregnant women, such as Koranic potions, talismans made with verses from the Quran, and prayers. According to a WRA at one of the Moor sites, *"no practice is made for a pregnant woman who has no problems. But for those who frequently miscarry, there are*

Koranic talismans to protect them when they become pregnant." Generally, it is the marabout who is called upon for religious practices to protect the pregnant women.

4-3.1.4 Anaemia

Anaemia in pregnant women is a real public health problem. A study published in 2017 looking at "the relationship between socio-economic factors and anaemia during pregnancy" in Nouakchott, Mauritania, shows that 49.75% of pregnant women are anaemic.⁴

At the sites involved in the study, respondents did not have a clear idea of the prevalence of anaemia. Some said that there are many pregnant women who suffer from anaemia, while others said that there are not many of them.

However, the majority of respondents have a good knowledge of the symptoms and causes of anaemia. The most frequently cited signs are: paleness (palms of the hands, eyes, skin, tongue), dizziness and fatigue. A few interviewees reported other signs such as: swollen feet, shortness of breath, cramps, dry skin, dry and cracked lips, bone pain, difficult breathing, headaches and blurred vision.

As for the causes, in all sites, respondents opined that the disease is mainly due to *"the lack of an adequate and vitamin fortified diet"* and the lack of consumption of such iron-rich foods as beans, meat, grilled fish, and lentils. Other causes have also been cited by some interviewees, including neglecting to take iron, repeated vomiting, physical exertion and a lack of appetite, and the consumption of tamarin and baobab fruit.

On the other hand, regular tea intake by pregnant women does not appear to be perceived by the majority of interviewees as a factor limiting iron absorption, as none of the interviewees mentioned it among the foods not recommended. According to interviewees, although there are some pregnant women who continue to drink tea normally, the majority stop drinking tea because of pregnancy.

⁴Sass, Setty, Sidi Mohamed Mariem, Zein Ahmed, Elberae Ahmed, Khadouaoui Abderrazak, Khllayoun Soad, Lrhorfi L. Aicha, Bengueddour Rachid, *Relationship between socio-economic factors and anaemia during pregnancy*, Flight 13 No. 36, Nouakchott 2017, S. 96

The WHO recommends daily oral supplementation of iron and folic acid for pregnant women to prevent maternal anaemia, postpartum sepsis, low birth weight and pre-term births.

Most interviewees say that the majority of pregnant women take iron because they know its importance. A WRA in Woloum Hatar states, *"I regularly take iron so as not to bleed during childbirth, and even after childbirth I continue to take the tablets to be healthy."*

On the other hand, in a few of the study sites some respondents reported that there are pregnant women who do not take iron because of several constraints: the unpleasant smell of tablets, and nausea and vomiting caused by iron intake. Some interviewees point out that there are alternatives for pregnant women to fight anaemia, such as returning to the MW for her to prescribe *"more appropriate drugs."*

Some interviewees pointed to the absence of follow-up of pregnant women in their taking of medication. However, there are a few GMs who say they follow-up with and monitor pregnant women taking iron at home.

"I make sure that my beautiful pregnant daughters take the tablets every day. I buy them so I don't accept that they refuse to take them properly. I'm with the young woman at the time she takes her dosage."

This is also the case of another GM in Woloum Hatar who said, *"I live with my daughter-in-law and I do not accept that she takes the tablets behind my back. She always takes them in my presence."*

Thus, the study shows that the signs and causes of anaemia are well perceived by most interviewees. They seem to know the issues associated with the taking of iron tablets by pregnant women. The study showed that the majority of pregnant women in both cultural contexts take iron tablets, but this result is relative to the percentage of pregnant women suffering from anaemia, which amounts to about 50%, according to the 2017 study in Nouakchott. Although many women take iron during pregnancy, a lot also do not take iron properly because of side effects. In some sites, GMs monitor medication intake because they are aware of its importance to a pregnant woman.

4-3-2 Advice and practices related to the care of the newborn

The study showed that in both cultural contexts, after childbirth the GM supervises the mother for all newborn care. At all of the study sites, priority actions are being taken for the newborn in view of ensuring its proper development.

At Fulani and Moor sites, there are traditional and religious practices designed to protect the newborn from evil spirits, from diseases, or to make the baby a good Muslim.

Among the Fulani, it is usual to put a knife, broomsticks and millet seeds under the newborn's pillow. The Moors put a knife next to the newborn to protect him/her from evil spirits, and tie around his/her two wrists pieces of blades crushed in the form of an amulet.

At the Moor and Peul sites, GMs recommended not leaving the child alone in a room so that evil spirits do not come to inhabit the baby. They advised that the child should always be with someone in a room until baptism.

Among the Fulani, there are traditional practices to protect the child from certain diseases, such as keeping the umbilical cord and shaving the baby's hair during baptism, to be used to treat the infant when he has stomach pain.

As far as religious practices are concerned, they exist everywhere. Indeed, according to the interviewees, the call to prayer is recited in the right ear of the newborn and then the second call to introduce prayer in the left ear, to signify the uniqueness of God, and the behaviours required to be a good Muslim.

In addition, the study showed that other traditional practices exist in some Peul and Moor sites. Generally, milk drops or dates are given to the newborn at birth.

In some Fulani sites, such as Woloum Hatar and Léwé, the majority of interviewees say that the "tobirdam", which means a drop of milk or water, is given to the newborn. In this regard, the WRA of Léwé said that *"when it is a home birth, the tobirdam is given to the newborn; but if the birth takes place in a health structure, it is not given to the child."* In these locations, interviewees responded that the majority of women give birth in health facilities and respect the advice of midwives to give only breast milk. However, there are still women who give birth at home and show no sign of discontinuing the practice.

Box 6 Composition and usefulness of "tobirdam" among the Peul

Tobirdam	
<u>Composition</u>	<u>Utility</u>
Goat's milk and crushed dates	Develops the child's intelligence
Goat's milk mixed with a Koranic potion	Prevents tooth pain

According to interviewees in Peul sites, tobirdam is a practice that is done to prevent tooth pain and to develop the baby's intelligence. Tobirdam is composed of goat's milk mixed with dates or goat's milk mixed with a Koranic potion. A GM responded, *"We mix goat's milk with a potion made of verses from the Koran or with dates. We give the child a few drops of this mixture to be intelligent."* According to some, the preference is given to goat's milk because *"it is lighter and it develops newborns' intelligence."*

On the other hand, at the Moor sites, there was a general consensus among the interviewees that "Tobirdam" is not given to the newborn. A WRA at TaghadaWassa explains, *"today, nothing is being given to the newborn at birth. We no longer practice this traditional custom (tobirdam) because we are afraid that the child will catch diseases."* In addition, they all say that they respect the advice given to them by health workers for the care of the newborn. The only things given to newborns, according to some GMs in Diock, *"are pieces of dates that are crushed in the mouth of the newborn in order to make him a person of good character."*

The practice of giving drops of milk and holy water to the newborn at birth is leaning towards abandonment in both settings of the study, even though with the Peuls it has not totally ceased. This trend is confirmed by the timing of the baby's introduction to the breast. Indeed, almost all of the interviewees at both sites say that *"the baby is breastfed immediately"* or a few minutes after delivery because most deliveries are done in health facilities. The results of the 2015 MICS showed 24% of home births compared to 74% in a health facility in Brakna, and 39% of home deliveries compared to 61% in a health facility in Assaba.

The relatively high rate of births in health facilities should be reflected in the introduction of the infant to the breast within the first hour of birth. According to the 2015 MICS, only 67% of newborns in Assaba and 57% in Brakna are breastfed within the first hour after giving

birth. These figures demonstrate that early introduction of the baby to the breast is not systematically respected in all health facilities.

There was also unanimous agreement among interviewees at all the sites that colostrum, "kandi" in Pulaar and "el ben ahmar" in Hassaniya, is given to the child. It seems that both Moor and Peul communities know the benefits of colostrum and often claim *"it is the first vaccine of the child."* According to the respondents, it *"strengthens the baby's health and develops his intelligence."* Some interviewees commented on other benefits of colostrum. Some Woloum Hatar WRAs believed that it *"washes the baby's belly and is also beneficial for the newly delivered mother as it reduces bleeding caused by childbirth."*

4-3-3 Advice and practices related to the feeding of the lactating woman

During breastfeeding, there is a sharp increase in a woman's energy needs as she plays a vital role in the feeding dyad she forms with her child. According to UNICEF, breastfeeding mothers should eat about 500 more calories per day than before pregnancy.

In almost all 6 sites in the study, interlocutors responded that the breastfeeding woman needs to eat better than usual because, according to them, *"she eats for two,"* unlike the pregnant woman who must avoid overeating so as not to make the baby too big in the belly. In addition, they opined that the breastfeeding woman must eat well to produce enough milk to feed her baby. Correspondingly, a Woloum Hatar GM replied, *"The breastfeeding woman has more needs because her child depends on her. Everything she eats is transferred to the infant during breastfeeding. If she eats well, she will be able to breastfeed her child properly and will not lose weight."*

These responses show that interviewees believe that breastfeeding women have higher nutritional needs than pregnant women.

In the context of this study, some interviewees stressed the importance that the breastfeeding woman follows a specific diet for a week after giving birth. According to the majority of the interviewees, the lactating woman's diet during these 7 days is often composed of cereal made from sorghum, wheat, millet or corn, fresh milk, curd, soup with meat or meat soup with dates--a recipe that is more common in Moor sites. The specific diet of the breastfeeding woman seems rich, but in all the sites, interviewees say that breastfeeding women do not continue this diet after a week due to insufficient finances, lack of time due to housework and

the unavailability of cereals during the pre-harvest period. Many interviewees such as Lebteyhatt GMs say that after a week, *"the breastfeeding woman does not have a specific diet," "she eats what others eat,"* such as rice, couscous, peanuts, pasta, cookies. According to these GMs, *"she has to fill her belly to be able to breastfeed her child."*

4-3-4 Exclusive Breastfeeding (EBF)

Interviewees at all sites reported the possibility of practicing EBF for 6 months. Almost all respondents indicated that after 6 months the child starts to take other food and water. Many WRAs said the midwife does not recommend giving water to the child for 6 months -- advice which is not always followed by WRAs. The responses obtained at different times during the interviews also indicated that the adoption of EBF is not widespread in these communities. In both cultural settings, there are several situations in which water or other liquids are given to infants well before 6 months.

In the case of the woman having no milk after childbirth, in all sites the majority of WRAs and GMs reported that usually *"they give the baby heated goat's milk" or "sweet water"* to calm the child down. Less often they give other types of milk such as condensed milk or milk sold in pharmacies.

Few interviewees thought that when the woman does not have milk at birth or if she has little breast milk, she must try to breastfeed regularly to promote the increase of milk. The WRAs and GMs familiar with this procedure are few and far between. Some Taghada Wassas WRAs explained that, *"Before, if the woman didn't have milk after giving birth, we would give the child to another breastfeeding woman around us. Now, with the new information we've received, we know we have to insist on women breastfeeding their own babies, because that's what's going to help increase milk production."*

The most common causes of the lack of milk production, according to WRAs and GMs, are: the lack of a rich diet, the psychological condition of the woman (stress, fatigue), or her state of health (anaemia, insect-infested milk). However, most of the WRAs and GMs interviewed disclosed that there are very few women who do not have enough milk.

Women with young children are sometimes required to be away from the home within the scope of other domestic duties required of them. Many interviewees at the Peul and Moor sites acknowledged that, in their absence, GMs give water to the child who is left with them,

especially if the child cries a lot. The fathers interviewed in Lebteyhatt reported: *"Doctors advise not to give water for 6 months but when WRAs are absent, GMs give water to the baby."*

Another common practice, according to many WRAs and GMs in Moor sites, is to give water to infants well before 6 months during intensely hot periods. A WRA in Taghada Wassa said, *"The water in the milk cannot quench the child's thirst; it is necessary to give him water, especially in times of heat."* A GM in Diocock says, *"When it's hot and the child cries a lot, you take some of the breast milk and you dilute it in a lot of water to give it to the baby."*

Although the majority of WRAs and GMs say that breast milk contains water, their practices indicated a lack of knowledge of breast milk's real composition. In times of heat, they think that water should be given to the child, which suggests that their understanding of the amount of water contained in breast milk is not sufficient.

Regarding the quality of breast milk, the interviewees unanimously stated that it differs from one woman to another. According to WRAs and GMs, there is a *"rich and nutritious milk"* and a *"less rich milk"* (light/heavy). Others say that there is also a difference in taste, with some milk being sweeter and others saltier. Several times, too, interviewees noted a difference in milk based on the woman's health (healthy/not healthy). According to them, certain diseases can affect milk, such as anaemia, abscesses or contagious diseases (hepatitis, AIDS). A GM in Woloum Hatar explains how it was possible to know that milk was not of good quality. *"Before, when a woman gave birth we waited for 3 days for the milk to 'come in.' Once the milk 'came in,' it was tested on an ant. If the ant died on contact with the milk it was concluded that the milk was not of good quality and if the ant survived, the WRA was allowed to breastfeed her child."*

When the GM or WRA deems that breast milk is not of good quality, other types of nutrition are given to the child even in the first few months of life. In Mbeydia, a GM who recognized the poor quality of her daughter's milk after childbirth remarked, *"At two months, I started giving the child a very light cereal."* A WRA in Taghada Wassa said she had the same problem but was giving her child goat's milk.

Thus, the data show that there is often a significant gap between the advice received by WRAs from midwives and their application of EBF. It seems that it is often the opinion of GMs regarding the quality of breast milk or their advice on the need to give water to the child

in certain situations (when the child cries, when it is hot) that prevent WRAs from adopting EBF.

So even if WRAs want to follow the advice given by health workers on EBF, it is difficult, if not impossible, for them to go against the advice and practices of GMs who play an active role in the care of the child. In fact, everywhere, interviewees say that it is the GMs who give more advice on the breastfeeding. They ensure the regularity of the feedings (breastfeeding the baby whenever necessary) and the well-being of the child (hygiene, position for breastfeeding and after feeding). Similarly, to increase breast milk production, GMs encourage women to consume millet or sorghum cereal, peanuts, beans, couscous with milk, meat, vegetables, fresh milk, dates, fish, rice and biscuits.

On the other hand, many WRAs and GMs interviewed did not seem to properly measure the consequences of administering water to infants since they did not see any difference between babies with whom EBF has been applied and others. Only some interviewees, especially women who have applied EBF, say that babies who are given water before 6 months are weak and sickly, while the babies with whom they have applied EBF are healthy, strong, work earlier and are more resistant to disease. One of Lebteyhatt's WRA speaks of her experience: *"I started to apply EBF since we became aware of its importance. I have found that it is beneficial because it promotes the health of the child. The child who receives water cannot be healthy."*

4-3-5 Nutritional Supplements

According to the WHO, it is only after six months that infants should start eating nutritionally appropriate complementary foods while continuing to breastfeed for up to two years or more. The study showed that GMs have a great influence on the timing and first foods to give to the child. Indeed, almost all of the interviewees at all sites say that it is the GM who has more knowledge and experience about when and what to give to the child as first foods. According to interviewees, she's older and *"she knows more about the foods a child needs to eat."* They all recognize that it is the GM who is responsible for mentoring young women by teaching them the preparation of the first cereals and baby foods.

Although almost all WRAs and GMs say that from 6 months on, they feed the child other foods in addition to breast milk, the study revealed that in practice, many WRAs and GMs

introduce other fluids before 6 months. The study also showed that the age of introduction of the first foods varies from 2 months to 14 months. Several factors influence families' choice to introduce other foods and liquids at a certain age. The main factor relates to women's perception of the quantity or quality of milk produced by women. There are also other determining factors in family choice: the perception of the child's nutritional needs, the influence of health workers, the perception of the child's ability to eat other foods more or previous experiences.

The majority of WRAs and GMs say that it is from 6 months that the child begins to eat other foods. Data collected from data sheets administered to 34 WRAs and 21 GMs found that WRAs who introduce cereal at 6 months represent 82%, and 81% for GMs respectively. These two categories of interviewees justify their choice by the fact that after six months, *"milk production drops and is no longer enough to feed the baby."* According to others, *"it is at this age that the child acquires the ability to eat"* and they also want to conform to the consequences of health workers. Others say that *"from 6 months, breast milk can no longer satisfy the baby and he/she needs supplemental foods."*

Moreover, there are 14% of GMs who say that they introduce the first supplemental foods much earlier, between 2 and 5 months, because of the deficiency or quality of breast milk.

There are also a few WRAs and GMs who decide to introduce food a little later, between 7 and 14 months. They represent 18% and 5%, respectively, of the sample. The fundamental reason put forward by the latter is either that their choice is guided by habit or by certain ways of thinking, such as that of this young WRA of Léwe who said, *"With my current child who is 8 months old, I don't plan to feed her for 10 months because I don't want her to have a big belly. It is said that a child who eats early will have a big belly."*

WRAs and GMs were interviewed as to the timing and composition of the first cereal given to the child. The table below shows the synthesis of their answers and shows the composition of the different cereals. The study was unable to reveal the quantities of the different ingredients in the cereal, which makes it difficult to determine the nutritional adequacy of these. It is likely that there are inadequacies at this level.

4-3-5-1: Composition of the first semi-solid complementary foods

Table 5 Composition and Frequency of First Baby foods

Composition and frequency of the first cereal				
First baby foods	Frequency	Basic composition		Other components
		At the WRA's house	At the GM's house	
First Cereals	Very common	Sorghum, millet, cowpea and mixed peanuts	Mil, sorghum, peanut, cowpea, mixed watermelon seeds -water-sugar	Sometimes: Milk Rarely: Oil, butter, ground watermelon seed in WRA, biscuits
Millet or sorghum cereal	Common	Millet flour- water-sugar-salt Sorghum flour- water-sugar-salt		Sometimes: condensed milk or cow's or goat's milk
Vegetable puree	Rarely	Squash-carrot-potato Potato-carrot-water-milk		

The table above shows that the first foods frequently given to the child by the WRA and GM are cooked cereal, which is usually millet or sorghum-based. The composition of the cereal is similar across both demographic categories. According to WRAs and GMs, boiled cereal is more common. The WRA cereal recipe consists mainly of millet, peanut, sorghum, sugared cowpeas, water, salt and milk. GMs reported that their boiled cereals consist mainly of peanuts, millet, sorghum, watermelon seeds, cowpeas, water, sugar and salt.

For millet or sorghum cereal prepared quite often by WRA and GM, it is composed mainly of millet flour or sorghum flour, water, sugar, salt. These different types of cereal are sometimes enriched with milk (concentrated milk, cow's milk, goat's milk) and rarely with oil, butter, ground watermelon seeds or biscuits.

Vegetable puree is also one of the first foods, but is rarely prepared by WRAs and GMs. It consists of squash, carrot or potato and water and milk.

4-3-5-2: Feeding practices with young children

In many sites, including Woloum Hatar, Mbeydia, Lebteyhatt and Diock, almost all of the interviewees reported that the WRA is the person who usually feeds the 6-month-old because it is her responsibility and she is closer to her child.

Many interviewees disclosed, however, that the WRA is often supported by GMs, who feed the child when the mother is unavailable or is occupied with domestic chores. In addition, the GM oversees the WRA and gives instructions on how to feed the child.

According to interviewees, the most used tool to feed the child is the plastic cup. The small spoon and gourd are also often used to feed children. According to interviewees, these are the tools most suitable for the child. A few interviewees mentioned that they use the bottle to give the child cereal.

Observations based on a simulation with a doll revealed that, in all regions, both verbal and non-verbal approaches are used by the WRA and the GM to encourage the child to eat.

The approaches of GMs and WRAs are almost the same. In terms of a verbal approach, at all sites, GM and WRA sing for the child "hayo hayo" among the Peuls, "ya woni woni"«lahila ha ila lah» among the Moors. In both settings, GMs and WRAs also talk to the child to encourage him/her to eat. Regarding a non-verbal approach, GMs and WRAs smile at the infant, clap, dance with the child, play with him/her, and give him/her hugs.

These behaviours, which were noted from direct observation, reveal that in all sites, the strategy most used by WRAs and GMs with a child who refuses to eat is a non-aggressive approach. Both groups demonstrate a lot of patience when feeding the child.

According to interviewees, a few women use a more aggressive approach because of stress and a lack of patience.

WRAs and GMs all recognize that the difficult child is very often entrusted to the GM who has more skills to encourage him/her to eat. According to them, GMs have more patience, tolerance and affection for the child. The GM knows parts of the body that should be massaged in order for the child not to vomit and to eat better.



Interviewees reported that, generally, having not yet acquired the skills to eat alone "the *one-year-old* eats with his mother or his GM". On the other hand, the two-year-old usually eats with the family and sometimes with his father if he is a little boy.

4-3-6 Care of the sick child

Children under the age of 5 are at risk of contracting several types of diseases, such as acute respiratory infections, diarrhoea, malnutrition and malaria. As part of this study, we looked specifically at the norms, practices and attitudes related to the care of children with diarrhoea and those suffering from malnutrition.

The study found that the GM plays a central role in the care of the sick child at home. The interviewees unanimously said that the GM is the first person to be referred to in case of illness in children. Because of her knowledge and experienced status, she is the first responsible for diagnosing diseases, treating the sick child at home and monitoring the sick child.

4-3-6-1: Child with diarrhoea

According to data from the 2015 MICS, in Mauritania, the prevalence of diarrhoea is particularly high in children aged 12 to 23 months and corresponds to the weaning period. Most diarrhoea-related deaths in children are due to dehydration. Data from the 2015 MICS also showed that in 32% of cases of diarrhoea, advice and/or treatment were sought in a health centre.

The study we performed found that the management of diarrhoea is done primarily at the family and community levels and it is only in cases of complications that cases are referred to the level of health care facilities.

Depending on the different categories of interviewees, when the WRA discovers that her child has diarrhoea, she first consults the GM, who has more experience with this issue. The GM is therefore the one who makes the diagnosis and offers first aid at home. If the child's condition does not improve, she refers him/her to the traditional healers who are present in the Peul villages but not in the Moor sites. In some Peul and Moor sites GMs may refer the child to a GML for care and, should the child not improve, to health facilities. All interviewees maintained that the role of the father in such a situation is to insure the child's medical costs and transportation to the health structure.

In all sites, interviewees state that the treatment proposed by the GM is composed of two elements: liquids and home remedies. Although the majority of interviewees say that GMs advise strengthening breastfeeding and the administration of fluids, such as a home-prepared Oral Rehydration Solution, most of the remedies they offer are intended to stop diarrhoea and not to rehydrate the child who has diarrhoea. The home remedies proposed by GMs to stop diarrhoea are: feeding rice water, baobab fruit or "monkey's bread," flour or rice cereal, and an infusion of ash or green tea and cookies; and sprinkling fresh water on the child's belly or having the child sit in a basin of fresh water. The same traditional remedies are proposed by GMLs and traditional healers, in addition to talismans.

The results of the 2015 MICS show that in terms of drinking practices, only 11% of children with diarrhoea received more fluids during this period compared to 55% who received less. These data, combined with the results of our study, suggest that, during an episode of diarrhoea, WRAs and GMs do not give enough importance to the administration of fluids in sufficient amounts, which can worsen the infant's health.

With respect to feeding practices during childhood diarrhoea episodes, almost all interviewees at all sites responded that it is best to encourage the child to eat so that he/she does not weaken. One interviewee said "sac bolo darotako," which means, "an empty bag cannot stand up." Only a few interviewees voiced the opinion that it is best to leave the child until he or she wants to eat. According to one Dioc WRA, *"it's best to leave him until he wants to eat. If he continues to eat, the disease will get worse."*

The results of the MICS demonstrate that it is only in 6% of cases of diarrhoea that feeding is increased, but in 58% of cases, diet is reduced and completely stopped in 8% of cases.

However, almost all of the WRAs and GMs reported that, once the child is better, he/she eats normally, and does not follow a special diet. Only Lebteyhatt's WRAs opined that the infant's diet should be changed to avoid recurrence. Eating practices after an episode of diarrhoea, therefore, do not promote the recovery of strength and fitness in children.

Thus, the results of this study triangulated with MICS data show that the management of childhood diarrhoea in children at the family and community level has limitations in that, during and after the disease, priority is not given to administration of fluids and strengthening of the child's diet, which contribute to the weakening, or possibly lead to the death of the child.

In addition, hand washing with soap is one of seven therapeutic measures to reduce the number of deaths from diarrhoea. According to interviewees, children wash their hands before eating, after passing stool, and after games. Almost all interviewees say that the WRA is most often responsible for washing children's hands. According to many interviewees, *"it is her responsibility to look after her child and her hygiene since she prepares and serves meals."* According to interviewees, GMs also participate in hand washing, especially in the absence of the WRA. Generally, when WRAs are unavailable, the GMs monitor children's hygiene. Similarly, according to interviewees, GMs give WRAs a lot of advice related to child hygiene, such as washing their hands with soap, making them wear shoes, looking after hygiene and taking the child to a health centre in case of illness.

As for men, they are not at all involved in the washing of children's hands because, on the one hand, culturally this task is not their responsibility and, on the other hand, most of the time they are not at home.

4-3-6-2: Malnutrition

Half of all childhood deaths are related to malnutrition. According to the MICS, in Mauritania, nearly 25% of children under the age of 5 are moderately or severely underweight; 28% are stunted and 15% are moderately emaciated or too skinny for their size. After the first birthday the percentage of underweight or stunted children increases, compared to the percentage of infants under 12 months of age. This is indeed the age in which many children stop breastfeeding and are exposed to contaminated water, food and the environment.

According to interviewees, the main cause of malnutrition is poverty, which reduces the ability of families to provide children with a good diet, sufficiently rich in vitamins. Other factors cited by interviewees included poor quality and inadequacy of breast milk, which can have an impact on a child's development and health.

Other factors that may contribute to malnutrition, but rarely cited by interviewees, are frequent diseases, hereditary factors, non-application of EB, and the neglect of WRAs who do not ensure proper feeding of the child.

Intestinal worms, hygiene and environmental conditions were not directly cited by interviewees as having a direct impact on children's nutritional status. But when asked about the cause and effect of intestinal worms on children's health, they were able to perceive the link between malnutrition and these two factors. According to interviewees, the most common

causes of intestinal worms are: sugary foods, eating sand, contaminated food and water and poor hygiene, such as not washing hands before eating. Other causes of intestinal worms also mentioned sometimes are beef and candy.

According to the majority of the interviewees, there are many children who suffer from intestinal worms. The most common signs are: vomiting, nausea, bloated belly, underdevelopment of the child, dry lips, irritated skin (spots), weakness and itching of the anus. Other rarely mentioned signs of intestinal worms are anaemia, swollen face, nervousness and stomach aches.

Regarding the treatment of malnutrition, interviewees at all sites pointed out the lack of traditional Healers or GMLs to treat these cases. According to them, cases of malnutrition are treated at health centres where children sometimes receive fortified flour. This flour is composed of sorghum, corn, beans, rice, peanuts, milk and salt.

However, for intestinal worms, treatments are offered at the family level by GMs and at the community level by GMLs. The remedies they offer are: a bean infusion, acacia radiana leaves, spicy rice or a mixture of gum Arabic with sugar.

Chapter V- CONCLUSIONS AND RECOMMENDATIONS

In this chapter, the findings and recommendations of this study will be presented.

5-1 Conclusions

The conclusions are organized around the three main parameters of this study:

1. The structure of the family and the cultural and religious values that influence MCHN
2. The roles and influences of family and community actors on MCHN
3. Norms and practices related to the health and nutrition of women and children aged 0 to 2

The structure of the family and the cultural and religious values that influence MCHN

The structure and organization of families in both contexts of the study are those of collectivist societies where the individual identifies with the group and is obliged to comply with collective decisions. For MCHN issues, family actors from different generations are

involved in the care and advice of pregnant and lactating women and young children. Roles differ depending on the status of the individual in the family structure. In both cultural contexts of the study, health issues are primarily managed by women; especially those who are older and have more experience, namely paternal or maternal GMs and paternal or maternal aunts. Custodians of cultural and traditional values, norms and practices, the senior women are responsible for passing these on to the younger generation, who, in turn, must respect and perpetuate them.

Within the family, GMs embody authority and are at the centre of all decisions related to pregnancy, breastfeeding, care, feeding and care for sick children. They supervise the youngest (WRAs and young women) who are required to follow their guidance.

The study clearly evinced that men are not directly involved in the day-to-day supervision and monitoring of women and children. They are the "heads of the family" but that does not mean that they are the primary decision-makers on all matters related to the functioning of the family. Their fundamental role as head of the family is to ensure that basic needs of the family are met, namely food, clothing, child-rearing and women's and children's health care. The male interviewees all related that it is the GMs who have more experience than they do on MCHN issues and that their role is to support these experts when needed. They also said that, culturally, MCHN is not their area of responsibility.

At the time of the study, in April, in both cultural contexts, most men were on seasonal migration, in search of pastures for their herds. This is an indicator of their limited involvement, especially at this time of year, in MCHN care and advice.

The roles and influences of family and community actors on the MCHN

The focus of this study was to investigate the roles of the various actors at the family level that directly or indirectly influence MCHN and, to a lesser extent, the roles of community interveners related to critical moments for pregnant and lactating women, newborns and young children. This survey sought to categorize the roles played by these various agents.

GM's centrality in family life and on MCHN issues

The results of the study reveal that in both cultural contexts, GMs play a central role in the family and in the lives of all its members. Their experience and knowledge give them a

special status within the family. Everywhere, they act as advisors to all family members, especially to young couples; they embody authority and have a strong influence on many decisions regarding family life and, in particular, MCHN issues.

The study showed that it is (paternal or maternal) GMs who advise and supervise women at all critical moments related to their health and nutrition and those of their children. With regard to the role of men, the data collected showed that they provide mainly financial and logistical support for the health and nutrition of women and children, but in everyday life they are not directly involved in care and advice and related to MCHN.

During pregnancy, GMs monitor WRAs' attitudes and practices in relation to diet, work, PNC and protection. Although the WRA attends several PNC, as recommended, contact with the midwife is very limited, compared to the on-going contact with the GM who is with her for 9 months, advising and monitoring.

With regard to **newborn care and breastfeeding**, the GM is the main advisor to the WRA. Although the latter receives advice from the midwife, it is GM who teaches the WRA how to care for the newborn and the first things to do to introduce the baby to life. Similarly, the GM oversees the daily actions and practices of breastfeeding.

With regards to **the diet of the young child**, according to all the family actors interviewed, it is the GM that has more knowledge and experience about the timing and which first foods to give to the child. She is also responsible for teaching the WRA about the preparation of the first cereal. Finally, she greatly supervises and supports the WRA in the task of feeding the young child. Sometimes there are situations where children refuse to eat. The study reveals that in these situations, it is the GM who feeds the child because they have more patience and are more tolerant. Again, it is her experience that plays a part, but additionally, she has more time because she has less domestic work to do compared to the WRA.

Finally, **for the care of the sick child**, the GM is the first person consulted by the WRA; being more experienced, she makes the diagnosis and offers first aid at home. If the child's condition does not improve, she decides to refer him/her either to community specialists, i.e., traditional healers, GMLs or health workers.

Influence of community "health specialists"

According to the results of the study, **traditional healers** exist only in the Peul sites. They are consulted in cases of childhood illness such as diarrhoea, to protect pregnant women and newborns from evil spirits, or if there is a problem with the quality of breast milk. Generally, these individuals offer talismans or traditional remedies.

In all communities there are GMLs who have extensive experience in MCHN issues. They are a community resource available to support and advise young women. They are often consulted by GMs, especially in cases of problems with the quality of breast milk, diarrhoea in children, or problems with intestinal worms. They offer traditional remedies and talismans.

Health workers play an important role in MCHN issues. However, the study found that despite the fact that health centres are geographically accessible enough in case of diseases, they are only frequented in case of serious problems. Sick children are sometimes sent to these facilities if the first treatments are not available at home or at the community level.

In the case of **midwives**, however, the study shows that when WRAs do attend PNCs, they are usually accompanied by a GM or an aunt. It is important to note, however, that these health care workers generally only communicate with the pregnant woman during these visits. This lack of recognition of the GM/aunt represents a hindrance to the application of the advice they give to young women, as it is difficult for them to go against the practices and choices of the GM.

Norms and practices related to the health and nutrition of women and children < 2 yrs.

The study found that the behaviours of WRAs and other family members in relation to the MCHN are strongly influenced by the GM, who supervises, advises and demonstrates practices that should be adopted. GMs transmit norms and practices that are rooted in culture and religion, some of which are beneficial from a health perspective, while others are not. However, interviews with GMs show their interest and openness to new ideas about MCHN.

Norms and practices during pregnancy

The study reveals that during pregnancy, the practices related to a pregnant woman's diet and workload are strongly influenced by the GM that supervises her on a daily basis.

Feeding pregnant women

GMs generally advise pregnant women to eat "vitamin foods" and advise against spicy, salty, bitter and heavy foods. In some Fulani and Moor sites, GMs advise pregnant women against certain foods deemed too rich because they make the baby fat in the belly. In the majority of sites, especially in Fulani sites, GMs recommend that pregnant women eat more than usual until the 7th month, but reduce food consumption from 7 months until delivery. There is a concern that if they gain too much weight, it will make the foetus too large and make it difficult to give birth. In general, WRAs and GMS do not understand the importance of women gaining weight to contribute to the optimal development of the baby and to have the strength to give birth without complications.

Pregnant woman's work

Regarding the work of pregnant women, the study shows that GMs generally advise pregnant women to work less than usual and to rest during the day.

Prenatal Consultations (PNC)

In several of the study sites, WRA interviewees report that the majority of women have 3 or 4 PNCs. According to interviewees, WRAs who do not have any PNCs are rare. Although the WRAs say they have PNCs, they also cite constraints related to these visits, namely, the inaccessibility of health facilities in some sites, road conditions, the unavailability of midwives, the lack of transparency of some midwives and the resistance of some GMs to let them attend these visits.

Protecting pregnant women

The study shows that families are aware that pregnancy is a physically, psychologically and spiritually risky period for women and take steps to protect the pregnant woman according to their means. For example, they try to strengthen her diet, advise her to sleep under a treated mosquito net, and follow certain traditional and religious practices. Such protection strategies are coordinated by GMs, based on their experience in this area.

Anaemia

The majority of interviewees in both contexts of the study are aware of symptoms and causes of anaemia. They say that most pregnant women take iron, although this fact was impossible to verify. Some pregnant women do not take iron regularly "*because of the smell*" and "*side*

effects." Some GMs, however, did report that they strictly ensure that pregnant women take iron tablets.

Newborn Care

According to interviewees, traditional practices of giving holy water and/or drops of goat's milk to the newborn are no longer followed, although it is impossible to verify this information. Many births are currently taking place in health facilities where the child should normally be breastfed immediately after birth. However, according to the 2015 MICS, there is still a significant percentage of home births, almost a third in the Assaba region (39%) and a quarter in the Brakna region (26%). Moreover, according to the MICS, breastfeeding after the first hour of birth is only 67% in Assaba and 57% in Brakna, which also means that this practice is not yet systematic or consistent within these communities.

Nutrition of the Breastfeeding Woman

The majority of interviewees said that the nutritional needs of the BW are greater than those of a pregnant woman. However, in practice, the diet of the lactating woman is not too different from that of other women. Usually, the BW has a special diet that can last a week after giving birth. Although she has a rich diet during this period, it does not last very long, because of limited financial means, the lack of time for WRAs to follow the diet (they are busy with domestic work) and the unavailability of cereals during pre-harvest periods.

Exclusive Breastfeeding (EBF) (That is a frequently used abbreviation)

Data from the study showed that there are limits in the application of advice from health workers (midwives and CSAs) in relation to EB. The majority of WRAs at all sites stated they breastfeed exclusively; but at the same time, most WRAs and GMs say they give water to babies on several occasions: when it's hot; when the baby cries, when the WRA is absent and if the GM deems that breast milk is not of good quality. WRAs and GMs do not seem to be familiar with the composition of breast milk, which is comprised mainly of water, and do not measure the risks to infants' health associated with water administration.

Complementary Foods

Almost all WRAs and GMs at all sites say that the child starts eating solid foods beginning at 6 months. According to interviewees, it is mainly the GM who decides when and which first foods are given to the child. Because of her experience and her status as an MCHN

consultant, she teaches WRAs the first soft foods to give; the most frequently prepared is a warm mashed cereal.

All respondents recognized that it is the WRA, in apprenticeship and essentially supervised by GM, who usually feeds the 6-month-old child. In certain cases, the GM takes over feeding the baby, such as with difficult babies who do not want to eat; she intervenes because she has more patience and tricks to make the child eat.

Caring for the sick child

The results of the study show the central role of GMs in the management of children's diseases within families. Generally, they are the ones who make the initial diagnosis, offer home treatments and possibly decide the referral to community specialists or health workers.

For example, during an episode of diarrhoea, GMs manage the disease at the family level and appear to focus on remedies to treat the disease. However, the study also indicates that priority is not given to the administration of fluids to, and nutritional supplemental for, the sick child either during or after healing. According to the 2015 MICS, only a small percentage of children with diarrhoea receive more fluids than usual (14.2% in Assaba and 4.8% in Brakna). And in both areas many children eat "much less than usual" (18% in Assaba and 16.8% in Brakna). Referral to a health centre is usually made only when the disease becomes severe.

Regarding malnourished children, all interviewees say that they are cared for at the level of health facilities, and malnutrition is mainly caused by poverty, which limits the ability of families to provide children with a sufficient, vitamin rich diet. As for the problem of intestinal worms, interviewees responded that there are not many children who suffer from it, and those who do are treated first at the family and community level by GMs and GMLs.

5-2 Recommendations

The table below presents recommendations for strengthening the AIM Health PLUS Community Strategy.

Table 6 the results of formative research and in relation to AIM project objectives

Recommendations for Community Strategy based on the results of formative research and in relation to the objectives of the AIM project		
Priority themes to be developed/strengthened	People to be involved based on the role they play	Key ideas and/or activities to strengthen or develop
The family and cultural and religious values that contribute to the well-being of women and children		
Intergenerational and collective responsibility for women and children within families	GMs and aunts	<ul style="list-style-type: none"> -Strengthen the recognition of the importance of collaboration between young mothers and grandmothers (GM) -Develop little songs about the importance of collaboration between mothers and GMs in MINH (i.e., in Senegal in our Holistic Development of Girls program, we have a song that speaks of solidarity between GMs and mothers to support young girls. This song is sung whenever there are community meetings with them.)
Communication and collaboration between WRAs, GMs and aunts within the family	GMs, aunts and WRA	<ul style="list-style-type: none"> -Organize women's forums to enable them to discuss MCHN issues and to decide together what to do for the well-being of women and children. These are events that aim to strengthen communication and stimulate dialogue between GMs and mothers on the different themes of MIH. There is no one way to organize such meetings; we do not have a recipe to do so. During the forums, the stories without an ending are a helpful tool to use. . See document: Stories-without-an-ending. - Hold sessions under the tree with WRAs and GMs/aunts together so that they all have the same information regarding MINH issues
GMs' central role in families	All community actors (fathers, women, religious and traditional leaders, CHWs)	<ul style="list-style-type: none"> -Recognition and appreciation of the role of GMs. -Organize periodic activities that bring together only GMs to show them respect. -Organize days of tribute to GMs with the participation of all community actors. See pages 32 to 34 in the document: GMP-WV Girls' Holistic Development -Senegal -Initiate discussion sessions with community stakeholders on their preconceptions regarding GMs

Communication is between health workers (midwives and CHWs) and GMs/aunts	MWs and CHWs	<p>-The importance of direct communication between MWs, GMs and aunts</p> <p>- Meetings/discussions with health workers (MW and CHW) to see the possibility of establishing communication between them and GM/aunts for the follow-up of the pregnant woman. Conduct discussions with MW and CHW to: (a) identify the roles played by GMs in families and communities; and b) reflect on the possibilities of involving them in MCHN's activities.</p> <p>During these meetings, the discussion could address, for example, breastfeeding. First, GMs/aunts can share their ideas about breastfeeding, their advice on breastfeeding, water and other fluids and why they do it. Then CHWs can share their ideas/knowledge about EB. These sessions must be in the form of "dialogue" rather than as "message-based directive awareness." Again, it would be interesting to develop and use endless stories on priority themes of MIH in these meetings.</p> <p>-Discussion of this issue with directors at the regional medical level on the possibility that health workers could discuss with GMs following the visit of pregnant women. This should ensure that GMs have the same information as women and that there is agreement and synergy of effort during pregnancy.</p> <p>-Organize a workshop for CHWs to strengthen their communication skills based on listening and dialogue rather than spreading messages.</p>
The importance of cultural and religious values that contribute to the well-being of women and children in general	Everybody Imam	<p>-Encourage imams to talk more about the cultural and religious values and their importance in the family and their role in MCHN. Identify passages of the Quran and other holy texts that are related to MCHN and share them with imams. Organize a day of sharing with them to determine their readiness to act in this direction.</p> <p>-The use of prayers at the beginning and end of all activities to recognize the importance of religion in the community life.</p>
The roles and influences of family and community actors at critical times in the lives of women, newborns and young children		
Role of family members during pregnancy	<p>GMP and Aunts WRA</p> <p>CHW</p>	<p>-Recognize the central role of GMs as advisors who are responsible for the smooth running of their daughters'-in-law and daughters' pregnancies. In any training or discussion on MCHN themes, recognize the importance of the role of GMs.</p> <p>- Discuss with CHWs how they can strengthen their relationships and work with GMs and aunts to promote good practices for pregnant women.</p>

	Husbands	<ul style="list-style-type: none"> - Songs of appreciation of the role of GMs in pregnancy to enhance and encourage GMs in their role accompanying young pregnant women during pregnancy. Support WRA so that she can reduce her work and rest more during the day. - Discussions with husbands on the need for pregnant women to reduce their work throughout the pregnancy, so that husbands can decide who will be able to help them with multiple domestic tasks.
Pregnancy-related practices	GM/Aunt and WRA	-Strengthen awareness of the importance for pregnant women to gain weight to ensure good development and health for the baby. Conduct multiple discussion sessions on this topic because the traditional idea is that the PW should not gain too much weight.
Role of family members vis-a-vis notice of the diet of the pregnant woman	GMs and Aunts Men	<ul style="list-style-type: none"> -The importance for the woman to eat more than usual during the whole pregnancy, especially the last trimester, to gain weight in order to contribute to the development of the foetus and have thee strength to give birth without difficulty. - Reinforce the importance of consuming protein (meat, fish, cowpea) and fruit throughout pregnancy - Discuss with husbands the nutritional needs of pregnant women throughout pregnancy so that they can do their utmost to provide women with recommended foods, including protein (meat/liver, fish, cowpea) and fruit. - Write a story-without-end on this theme that could be used with groups of men and women.
Support for pregnant women's diet	GMs and aunts WRA Fathers	<ul style="list-style-type: none"> -Encourage fathers to buy liver or fish for their pregnant wives as frequently as possible/once a week. - Compose a song about "husbands who take care of their pregnant wives by buying liver or fish for them to have a healthy baby." - Strengthen the vegetable gardens of GMs and WRAs through technical support so that they can produce more nutrient-rich vegetables (beets, carrots, tomatoes, squash, etc.). This is very important, because without access to recommended fruits and vegetables, pregnant women and families would not be able to get them. It would also be beneficial to promote fruit trees to provide fruit.

Practices related to anaemia	GMs and aunts WRAs	<ul style="list-style-type: none"> - Increase awareness of the importance of taking iron tablets during meals to avoid vomiting. -Encourage GMs and aunts to keep watch over the PW for taking folate iron every day before delivery, and three months after. -Discourage the consumption of tea, which reduces iron absorption and contributes to anaemia in PW. -Develop a story-without-end on this theme. (N.B. for the development of several stories without endings on priority topics, a member of the GMP staff could be proposed to support this activity.
The role of family members with the newborn (NN)	GM and aunts	<ul style="list-style-type: none"> -Recognize the important role of GMs/aunts in tracking newborns and mothers. -Promote traditional beneficial practices with NBs passed down by GMs and aunts (massage, lullabies, talismans, etc.). - Involve GMs and aunts in the project's activities to enable them to strengthen their knowledge. - Organize educational activities with GMs and aunts to "share their experience" and "acquire new knowledge."
Newborn (NB) Care Practices	GMs and Aunts WRAs Health Workers (Midwives, CHWs)	<ul style="list-style-type: none"> - Continue to reinforce the importance of breastfeeding in the first hour, which is not yet routine during home births. - Continue to strengthen the administration of colostrum to newborns. -Strengthen their knowledge of the importance of breastfeeding the child to stimulate milk production. - Strengthen the importance of breastfeeding in the first hour with midwives and CSAs. - Strengthen the relationship between GM and CHW
Lactating woman's diet	GMs and aunts Fathers	<ul style="list-style-type: none"> - Reinforce the importance of a better diet for breastfeeding women, especially during the 6 months of EB - Explain to fathers the importance of EB and women's nutritional needs to be able to do so, so that they can try to further support the availability of food, especially liver, meat and fish, vegetables and fruits

The role of family members in breastfeeding	GMs and Aunts WRA	<ul style="list-style-type: none"> - Recognize the role of GMs/aunts as breastfeeding advisors in any material produced and any activity carried out on this topic. -Involve these counsellors in any educational activity related to breastfeeding. -Conduct sessions with GMs/aunts and WRAs to discuss how to support WRAs to help them integrate EB into their everyday lives, given their workload and how other women or men can help give them more time to breastfeed.
Breastfeeding practices	GMS and Aunts WRAs	<ul style="list-style-type: none"> -Strengthen their knowledge of the concept of EB and the justification for not giving water -Strengthen their knowledge of "the significant amount of water in breast milk," which is not sufficiently understood. - Reinforce the idea that the quality of breast milk is no different from one woman to another.
The timing of introduction of complementary foods	GMs and Aunts WRAs	<ul style="list-style-type: none"> - Strengthen the idea of waiting up to 6 months to introduce supplemental foods, especially if the woman has implemented EB.
The composition of the first cereal	GMs and WRAs	<ul style="list-style-type: none"> -AIM should conduct a small additional study, based on observations of the preparation and composition of the first baby foods, in order to be able to make specific recommendations on how to improve them. The methodology used in this study, primarily interviews, was not adequate to determine the proportions of foods used in the preparation of the first cereals.
How to feed the child	WRAs and GMs	<ul style="list-style-type: none"> -The importance of talking with the child while eating to contribute to language development (develop a story-without-end on this topic). -Encourage the use of gentle, traditional techniques to encourage the child to eat. - Value the role of GMs who support women in the child feeding process.
Caring for the sick child	GMs/Aunts WRAs Health workers (Nurses, MW and CHWs)	<ul style="list-style-type: none"> -Recognize the central role played by GMs in home diagnosis and treatment in all cases of childhood illness - Promote the importance of giving a lot of fluids to any sick child and encouraging them to eat in order to fight their disease. - Encourage health workers to contact GMs when treating a sick child to ensure a harmonized treatment

		strategy.
Caring for the child with diarrhoea	GMs/Aunts WRAs	<p>-Focus on the importance of making a child with diarrhoea drink large amounts of water as a first resort, even before going to get ORS.</p> <p>-Strengthen the importance of encouraging children with diarrhoea to eat during illness and to eat more than usual once they recover.</p>

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ANNEX I

Study themes and objectives

The study's overall objectives related to the three components of the conceptual framework:

To investigate **the structure of families and cultural** and religious values that influence the care of pregnant and lactating women, and children aged 0 to 2;

To identify *roles and influences*, decision-making and communication mechanisms within families in the health and nutrition of women and children aged 0 to 2

To analyze *family norms and practices* related to the health and nutrition of women and children aged 0 to 2

Topics to be investigated and specific objectives

Component 1:

The structure and cultural and religious values that have an influence maternal and child health and nutrition (MCHN)

- 1.1 To determine whether **the structure of families** is nuclear/individualistic or extended/collectivist;
- 1.2 To determine whether **different generations of women and men are involved** in the counselling and care of pregnant and lactating women, newborns and young children;
- 1.3 To determine if there is a **hierarchy of authority and influence** over family decisions regarding the development and education of children;
- 1.4 To determine whether **seniors pass on values and practices** to younger family members;
- 1.5 To identify whether **religious and cultural values** influence the care of women and children in the context of family and community.

Component 2:

The roles and influences of different family and community actors on the health and nutrition of women and children aged 0 to 2

Please change 'understand » to « to identify

Theme: Roles and influences at the family level→

2.1 The role of men/husbands in the family: to identify their role in the family and specifically their involvement in women's and children's nutrition/health issues

2.2 The role of grandfathers in the family: to identify their role in the family and specifically their involvement in nutrition/health issues for women and children

2.3 The role of grandmothers: to identify the role of grandmothers (i.e. MILs and mothers of young women) in society and in the family and specifically the role they play

in promoting the nutrition and health of young children and women

2.3a Find out if GMs are in contact with health workers and in what situations

2.3b Find out if GMs are in contact with traditional healers and in what situations

2.3c Know if GMs are interested in learning new ideas/information about MCHN

2.4 The role of young women (women of childbearing age): to identify their role in the family and specifically in issues related to nutritional and health practices during pregnancy, with newborns and young children

2.5 The role of older girls in the family in the health/nutrition of young children

Theme: Role and influence at the community level→

The role and influence of grandmother leaders in the community

2.6 To determine whether there are "GMs leaders" in the community

2.7 To determine if GMs leaders have an influence on MCHN within families

The role of traditional and modern health workers in the MCHN

2.8 Know the role health workers play in The MCHN

2.9 The role of traditional healers on MCHN: know the types of health and nutrition problems of pregnant and lactating women and young children who are brought to traditional healers.

Component 3:

MCHN norms, practices, advice and care proposed/undertaken by family and community stakeholders

Pregnant women: her diet and work

3.1 Know who gives advice on pregnant women's diet and mutual influences (in family, around

the family and community)

3.2 Know the foods recommended to pregnant women

3.3 Know what foods are not recommended for pregnant women

3.4 Find out if there is a difference between the work of the pregnant woman and that of the woman who is not pregnant

3.5 Know if pregnant woman is resting during the day

3.6 Know the amount of food consumed by a woman during pregnancy compared to before pregnancy

Prenatal consultations (PNC)

- 3.7 Find out if there is an ideal number of PNC or if it depends on the woman
- 3.8 Know the goal of PNC
- 3.9 Know who participates in antenatal consultations (PNC)
- 3.10 Know the factors that put PNC at a disadvantage

Prevention/protection of pregnant women

- 3.11 Know the priority actions (practices) taken by families to ensure the smooth running of a pregnancy
- 3.12 Whether anaemia is perceived as a problem in pregnant women
- 3.13 Know the cause of anaemia in pregnant women (depending on the community)
- 3.14 Identify the stresses of taking iron tablets during the pregnancy
- 3.15 Find out if there are strategies to protect pregnant women from malaria

Breastfeeding of the lactating woman

Whether a breastfeeding woman needs a diet differs from that of a woman who does not breastfeed

Know the perception of the breastfeeding woman's food needs compared to the pregnant woman

Feeding/breastfeeding and caring for the newborn

- 5.1 Know the first thing given to the child after childbirth
- 5.2 Know the appreciation of "first milk" (colostrum)
- 5.3 Know when the child starts suckling
- 5.4 Know the composition of breast milk (depending on the community)
- 5.5 Know who gives more advice to the birth attendant on breast milk and breastfeeding
- 5.6 Whether the "milk quality" of all women is the same
- 5.7 Know why some women "don't have enough milk"
- 5.8 Know the appreciation of the idea of giving only breast (exclusive breastfeeding (EB) during the first 6 months
- 5.9 Know a woman's schedule and the relationship between work and breastfeeding
- 5.10 Whether there are strategies or remedies to increase breast milk production
- 5.11 Know midwife's advice for newborn care
- 5.12 Whether traditional healers are consulted when there are problems with breast milk
- 5.13 Knowing the role played by different family actors with newborns

The introduction of complementary foods

- 6.1 Know when the first foods (apart from breast milk) are given to the child
- 6.2 Find out why they are introducing complementary foods at that time
- 6.3 Know if the timing of the introduction of cereal is the same for all children or if it differs

- 6.4 Know the family actor who has more experience on when and how to introduce the first foods to young children
- 6.5 Know the people who advise on supplement allotment (time and content)
- 6.6 Know the composition of the first cereal (what foods?)
- 6.7 Know who gives advice for preparing the child's cereal

Feeding practices

- 6.8 Observe the context in which young children are fed (hygiene, noise and other distractions)
- 6.9 Know who usually feeds young children: mothers, GMs, old children, fathers
- 6.10 Know the tool used to feed the young child (hand, spoon, calabash ladle, etc.)
- 6.11 Know the verbal and non-verbal approach used while the child is being fed
- 6.12 Know the strategies used to feed young children who do not want to eat normally (active, passive or aggressive approach)
- 6.13 Know who feeds the "difficult child" who doesn't want to eat
- 6.14 Find out if it's best for 1-year-olds and 2-year-olds to eat alone or with someone

Care of the sick child (diarrhoea)

- 7.1 Know the factors that explain the fact that some children do not grow up and are often sick
- 7.2 Understand the roles played by family members when a child becomes ill (GM, father, grandmother) in the process of diagnosis, treatment; referral to specialists outside the family
- 7.3 Know the advice of GMs when a child has diarrhoea regarding: fluid administration, breastfeeding and feeding
- 7.4 Know the tips and practices regarding the amount of fluids given to the child who has diarrhoea
- 7.5 Know the situations in which specialists are consulted (traditional healers and health workers)

Malnutrition

- 8.1 Know why some children grow up more slowly than others
- 8.2 Know the cause of intestinal worms

Practices in relation to child hygiene

9.1 Know the priority times for hand washing

9.2 Know who is involved in washing children's hands