AFGHAN NOMADS’ PERCEPTIONS OF DIARRHEA
advices for child health care providers

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Abstract

The foremost focus of this study was to understand perceptions of nomads with regard to childhood diarrhea among children less than five years. The design of this study was fully descriptive and explanatory with focused ethnography. Therefore, fathers, mothers, grandfathers, grandmothers, community elders and wise men of the nomads
were studied to elicit their perceptions with regard to signs and symptoms, causes, treatment and prevention of diarrhea among their less than five years old children. The research method employed included interviews, observation, focused group discussions and photograph.

This study has demonstrated that nomads have their own taxonomy of their diseases which includes diarrhea. They define diarrhea as loose stool and classify it according to various indicators. Loose defecation, vomiting, fever, restlessness, thirst, poor skin elasticity, sunken eyes, drowsiness, pallor and body coldness were considered as signs and symptoms of diarrhea. They knew dehydration but were not able to refer any sign to it. Sunken fontanel was considered as an independent disease. This study found that watery diarrhea with vomiting and blood in stool was considered a severe condition of diarrhea. It found that weakness (under-nutrition) and death were most feared possible consequences of diarrhea.

Factors such as sour and spoiled food, a dirty, hot and cold environment, inadequate handling of the child, emotional and spiritual factors, infections, poverty, behavioral subjects, tiredness and finally some going barefoot and sitting on the wet land found were thought to contribute to childhood diarrhea. These contributing factors confirm the richness and deep understanding of diarrhea among nomads.

This study has further demonstrated that diarrhea treatment is carried out in three broad circles; the family, neighbors and the professional circle. The nomads stayed a long time in the first circle because the next two particularly the third one were considered more troublesome and costly. Severity of the disease, insecurity of roads, low income, big distance, possible discrimination in health facilities, loss of dignity, poor communication at the health centers were the obstacles and indicators for selection of proper treatment at health facilities (see 3.3.10). Herbal treatment was the main intervention though everyone was ambitious to get modern medicine as the most effective intervention for diarrhea. Applying of some procedures and rituals were the next interventions in addition to foods and prohibition from oil and some times all foods except tea and bread.

This study concludes that nomads are destitute and neglected people. Nomads’ deeply understood childhood diarrhea and their rich perceptions could be strong bases for developing of any diagnostic, therapeutic and preventive interventions in order to
reduce the morbidity and mortality of diarrhea among nomads’ children. Factors such as lack of health and veterinary and other social services, poverty, lack of schools and transportation, living in non residential places without essential facilities, disabled nomads to take care of their health and hygiene and confront them and their children to killer disease such as diarrhea.

This study found that nomads can not observe sanitary and hygienic regulations with regard to diarrhea prevention. However they are aware that observation of hygienic interventions prevents or at least reduces diarrhea among their children but their geo-socio-economic conditions and other factors which design their lifestyle don’t allow them to observe certain sanitary and hygienic regulations.

This study recommends that developing of a particular health policy for nomads can solve and reduce nomads’ health problems through intersectorial cooperation and efforts. Dissemination of health education messages with regard to diarrhea based on THERE perceptions through any possible channel might be the immediate intervention to nomads. The existing positive perceptions and practices of nomads such as understating of the causes of diarrhea, initiation of water and foods to ill children, belief on hot and cold imbalance, considering severity as a factor for seeking advance care and so froth, could be foundations for adaptation of remedial measures at home level and designing preventive health education messages. Radio could be the best to use for this purpose during evening times.

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Structure and organization of thesis

This thesis comprises five chapters. The first chapter gives an overview of the background information and literature review regarding study aim, study problem analysis including the study objective, research question, problem statement and problem analysis diagram.

Chapter two describes methodology of this study. It includes information concerning study population, data collection method; interview, focused group discussion, photograph, observation, theoretical base and ethic considerations.
Chapter three presents research findings. These findings are subdivided into the following sections: general on diarrhea, signs and symptoms, classification, causes and treatment & prevention. Both qualitative and quantitative data with regard to research question are presented in here.

Chapter four discusses the research findings, compare nomads’ perceptions and believe as a traditional model with biomedical as scientific mode. The discussion designed according to research finding designation in order to make it ease for reader.

Chapter five summarizes whole thesis and brief it to reader. Recommendation and conclusion of study are subsequent parts of this chapter.

Abbreviations

ASA Academy of Science of Afghanistan
CIRA Constitution of Islamic republic of Afghanistan
Clinic Pule Charkhee primary health center
East group Lineage group of nomads east of Kabul
FGDs Focused group discussions
Group Lineage group of nomads
IFRC International Federation of red crosses and red crescents
MFTA Ministry of Frontiers and Tribes Affairs
MOH Ministry of public health
West group Lineage group of nomads west of Kabul
WHO World Health Organization
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Chapter 1: Background and Literature review

1.1 Introduction
The present chapter describes Afghanistan, with emphasis on nomadic history and life, and situates the problem of childhood diarrhea among nomads in a wider context.

1.2 Background
Afghanistan is an ancient country located in southern Asia, bordered by China, Tajikistan, Uzbekistan, Turkmenistan, Iran and Pakistan. It is characterized by rugged mountains but has plains in the north and southwest. The history and culture of Afghanistan go over 5000 years back. However, due to high emigration and political instability, the exact number of its settled dwellers and mobile nomadic population is not known. Recent World Health Organization (WHO) publications estimate the population at around 23,900,000 (WHO 2005).

The country has a low literacy rate. Among the people aged 15 years and over (36% of the total population), only 51% of the males and 21% of the females can read and write. Severe poverty prevails in the country, and continuous warfare and natural disasters, such as drought, make it worse from time to time. Although Afghanistan has numerous resources, still 23% of the population lives under the poverty line (Central Intelligence Agency 2005).

Afghans can be classified in two groups: settled dwellers and mobile nomads. Three to five of the 24 millions (no exact figure) or 1:6 to 1:5 of the total population are kochees (nomads). Afghan’s social units are based on family and tribal ties. The family plays a dominant role in Afghans’ life but loyalty toward the nation is progressively increasing. Extremely close bonds exist within extended families. Family groups are headed by the eldest male, or patriarch, whose word is law for the whole family. Family honor, pride, and respect toward other members are highly prized qualities. Among both settled dwellers and nomads, the family forms a self-sufficient group. In the villages each
family generally occupies either one mud-brick kor (house) or a kala, (walled compound, containing mud-brick or stonewalled houses). The same pattern prevails among the nomads, except that keg dai (tents) replace the houses. Though consisting of distinct ethnic groups, dominant cultural themes, values and goals in Afghanistan are shared. Islam is the religion of the majority of its inhabitants, and plays a significant role in all aspects of their life. Health and illnesses, life and death are regarded as God’s gifts. As Wilber (1962) says “The paramount importance of being buried in the family graveyard leads Afghans to return home when ill rather than wait for a cure before journeying back”.

Afghan nomads consist of different ethnic groups which are summarized in table 1.2.

Table 1.2: Afghan’s nomadic ethnic groups (ASA 1981:167).

<table>
<thead>
<tr>
<th>Ethnic group</th>
<th>Percentage</th>
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<tr>
<td>Pashton</td>
<td>58.5</td>
<td>Tajik</td>
<td>12.7</td>
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<tr>
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<td>1.3</td>
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<tr>
<td>Char Aymaq</td>
<td>7.0</td>
<td>Gujer</td>
<td>1.6</td>
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<tr>
<td>Jat (gypsies)</td>
<td>0.3</td>
<td>Tatar &amp; Niger</td>
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Kochees rarely have any real estate, but graze their herds and raise crops on public or collective village lands at nominal fees. There are neither health facilities (no clinics, no health policy) nor educational facilities (no contemporary or traditional schools) for them and their children. They live in lineage groups which form part of clans. The clan plays a principal role in structuring a lineage group’s life. Each group, which, on average, consists of 10 to 15 tents, is headed by a “wise man”. Some times two or more groups live beside each other in one area and move together (Mohammad 1974:181). Twice a year groups of nomads may pass through settled villages on their routes from the summer highlands grazing grounds to the warm lowlands where they camp during the winter. “A camel caravan of nomads often looks like a circus parade, with the animals decked out in
woven finery”, according to Wilber (1962). The villagers traditionally permit nomads to graze their animals on the harvested fields, which the flocks fertilize by depositing manure.

The nomads buy supplies such as tea, wheat, and kerosene from the villagers; the villagers buy wool and milk products from the nomads. For food and clothing, the nomads depend on the milk products, meat, wool, and skins of their flocks. Traditionally, they depend for transportation on their camels, but some of them recently have started to use trucks or other motorized vehicles. Nomadic women are freer and less secluded than village women. They actively participate in the socio-economic affairs of their group.

**Kochees** are probably the most destitute, least regarded, and least attended group in the Afghan population (Shroder 2005). Over the last three decades, conflict has imposed many changes on kochees’ life style. Due to numerous problems such as warfare, natural disasters (drought), land mines, kochees are changing their life style, as Khaled (2004), summarizes from a survey:

> When the kochees interviewed were asked about what kind of assistance they wanted from the government or the aid agencies, they largely tended to prefer agricultural land. Most said they needed education for their children and thought that they had suffered enough as they tried to maintain their lifestyle under the harsh drought conditions. A second option for many was to replenish their herds”.

Land mines remaining from the war, lead to disability and death of kochees and their herds. The warfare not only costed human losses among kochees but also, due to unsafety, has imposed numerous limitations and conflicts in their socio-economic relations with the settled dwellers of the country. These limitations have a negative impact on their economy which eventually changed kochee’s outlook and hope for the future.

The duties and daily responsibilities among nomads are well defined. Men and boys herd animals. Children are often responsible for taking care of ill and immature animals and collecting sheep faeces. Women's duties include milking and processing milk products, such as yogurt, butter, clarified butter, curds, and dried curds. They may also be responsible for felt making. The duties of both sexes are indispensable to an independent nomadic life. Settled agricultural groups seldom constitute such autarkic productive units (Refugees International 2004).
According to the new Constitution of the Islamic Republic of Afghanistan (CIRA), the government is responsible for paying special attention to *kochees*’ socio-political life, as is stated in Article 14th. It obliges the government to implement effective programs for "improving the economic, social and living conditions of nomads” (Answers. com 2004).

1.3 Statement of the problem

Up till now nomads are neglected people; their access to public health services is very limited and there exists no distinct health system for them to improve and promote their health condition. Currently, no epidemiological data on the prevalence and incidence nomads’ infectious diseases, their morbidity and mortality is available. Nor does exact information exist concerning nomads’ perceptions and practices with regard to their coping with diseases. Understanding of such health related perceptions and practices is essential for further planning and introduction of interventions with regard to their health problems. In particular child-killer diseases, such as diarrhea, which is a foremost killer among childhood diseases, should receive attention. According to WHO (2002) and the Ministry of Health (MOH, 2004), diarrhea is the second leading cause of child death in Afghanistan. It causes the highest morbidity and mortality in children less than five years old, according to the existing statistical information (MOH 2002).

All studies related to diarrhea diseases in the past have been focused on settled inhabitants. This is the first anthropological study among nomads, according to my search of existing documents in the country. Improper treatment of diarrhea may lead to severe complications such as acute malnutrition, stunted growth and death. Some of the mentioned complications are irreversible and lead to permanent disability. Under-nutrition and irreversible mental retardation are common consequences of diarrhea among children. As there is no health care system for nomads in the country, they suffer from lack of basic medical care. There is also no safe water supply and no sanitation. Considering the mentioned realities, it is therefore likely that nomads confront more health problems than those who are enrolled in the health system. It is sure that nomads have their own traditional health system to meet their health related issues, but little is known about it.
What are Afghan nomads’ cultural perceptions concerning childhood diarrhea diseases and to what extent do these perceptions agree or clash with biomedical perceptions?

Nomads’ perceptions with regard to their diseases and their disease patterns have not been studied yet. Therefore the present study focuses on nomads’ perceptions of childhood diarrhea, its signs and symptoms, causes, and their health care seeking behavior. It investigates the nomads’ explanatory model within nomad’s socio-cultural,
economic, political, etc. contexts. It is hoped the study will reveal some valuable information both for researchers and policymakers in the field of health, including the aspects of water supply and sanitation.

1.4 Literature review

1.4.1 General health

Diseases as “natural phenomena” exist with humans since their creation. Kleinman (1980) states that when there is disease, perceptions have to exist as well. Bentley et al. (1988) state that many societies have their own classification system of diarrhea with many types, each with its own label, symptoms, causes and treatment. Nomads are no exception in this regard. They have particular perceptions concerning illnesses and their own health system. Exploring such a system and explaining it in detail requires a thorough study.

Worldwide, five diseases: acute respiratory infections, diarrhea, measles, malaria and malnutrition, are according to Pelletier et al (1995) responsible for seventy percent of deaths among under five years old children. Significant efforts have been made to control them; yet these conditions will continue to be major contributors to child death in the year 2020 according to Lopez & Murray (1998). In the same vain the Ministry of Health declared that infectious diseases are the fourth main problem in Afghanistan (MOH 2004). The under five year’s child mortality rate of 275/1000 still keeps the country among those with the highest child mortality rate worldwide (WHO 2005). Standard health indexes’ such as the infant mortality rate and the maternal mortality ratio are, like the childhood mortality rate, among the highest in the world (WHO 2002).

Afghanistan's health system is, however, in the process of reconstruction and reform. The reforms are fragile and depend on outside assistance. In November 2002, the Ministry of public health (MOH) developed an Afghanistan Interim Health Strategy. In this document (MOH 2002), it is stated:

The Mission of the Ministry of Health, Transitional Islamic Government of Afghanistan is to lay the foundations for equitable, quality health care for the people of Afghanistan, especially mothers and children. Capacity building will be promoted and the context, direction and scope of work for all stakeholders will be defined. Through strategic planning and coordination and through actions that make the best use of the limited resources, influence will be exercised on the health care system, assisted by the collection and use of information for evidence based decision making.
To cope the most basic health problems, the Ministry of Health developed a national health policy. This policy (MOH 2002) emphasizes equal distribution of health services and introduction of a Basic Package of Health Services (BPHS) country wide to reduce morbidity and mortality. The BPHS consists of seven major elements:

- Maternal and newborn health
- Child health and immunisation
- Public nutrition
- Control of communicable diseases
- Mental health
- Disabilities
- Essential drugs

The National Health Policy 2005-2009 has committed the government to pay equitable attention to all Afghans, as it stated in its section forth, “Every Afghani citizen has the right to achieve optimal health, therefore the government is responsible to secure the conditions, which enable all individuals to attain and enjoy their full potential for a healthy life…” (MOH 2005).

Looking to all existing documents of the ministry of health or its counterparts, however, there is not any word or sentence to point out kochees’ health as a particular focus of interest. All what we could find is stated in general words (not mentioning the Kochees).

Yet, already in 1988, a published document of the Ministry of Frontiers and Tribes Affairs (MFTA) stated that provision of a health system for nomads is vital to nomads (MFTA 1988: 76). Parallel to that, the MFTA suggested that the government should provide medicines, vaccines, health education and training of midwives, and suggested that mobile clinics are established.

1.4.2 Diarrhea

Diarrhea is common among destitute households and relates to low income. As Victora et al (2003) say “these people are more likely to have lower resistance to infectious disease
because of under nutrition”. Diarrhea is common both among the rural and urban population because of lack of safe water and sanitation. First of all I will discuss the few sources mentioning nomads’ perceptions of diarrhea, and then provide biomedical literature to be able to compare it to the nomads’ perceptions found during my fieldwork (see chapter 4).

The Academy of Science in Afghanistan (ASA) states that “Nomads don’t have any interest to go to a doctor and take medicine” (ASA 1981:128). It is added that nomads eat simple but strong foods which are rich in protein and vitamins. They hate prevention programs such as vaccination according to the ASA. Nomads consider wind, evil spirit, evil eyes and the shadow of genii and fairies as causes of child diseases. They believe that there are two types of wind which cause disease: meer (dead) and zhwandai (alive). Tuberculoses (TB), rheumatism and belly diseases are caused by alive wind (ASA 1981:128).

In general, eating of spoiled food, sorrow and grief, foods’ flux and vomiting, TB, liver damage, teeth eruption and very hot weather a.o. are causes of diarrhea, according to Ahmadzai (2001:106). Eating of meat, hard foods and vegetables like peppers are prohibited during diarrhea. Instead, fruit juice and soup should be taken (Ahmadzai 2001:107). Drinking of pomegranate’s skin extract (see 3.3.10) is useful against vomiting and stomach pain. The eating of senzala (elueagnus or Russian olive) prevents bloody diarrhea, according to Moshwanai (2002: 25). Sperkai (a wild plant) and khwaga welenai (peppermint) extracts are others herbs used for diarrhea treatment in Kandahar (Nangyalai 1990).

In the biomedical model, diarrhea is loose stool which passes at least three times or more in twenty four hours for two or three subsequent days according to the Aid Medical International (AMI 1996). It can be caused by infectious and non infectious agents. Infections, especially acute infections, are the main cause of death among adults and children. As Kabul medical university (KMU) states; diarrhea is more fatal in children than in adults and is more common among children less than five years old. It is very hazardous among neonates, infants and toddlers (KMU 2005).
Loose stool and sometimes vomiting, fever and abdominal pain are the preliminary signs and symptoms of diarrhea. It can lead to dehydration, which is the most serious sign of diarrhea. The key signs and symptoms of dehydration are a sunken fontanel and sunken eyes, a dry mouth, impairment of skin fold stability, change in consciousness, thirst or changes in ability to drink, and convulsions (AMI 1996). Presence of only one of the following signs: change in consciousness, inability to drink, convulsions, a deeply sunken fontanel and the very slowly returning of skin folds after a diarrhea patient is pinched, indicate very severe dehydration. Willingly drinking, slowly returning of skin folds and sunken eyes indicate moderate dehydration while the rest of all above mentioned signs and symptoms imply a mild degree of dehydration.

Most diarrhea cases require only a simple intervention such as the replacement of the body fluids lost by loose motion and vomiting, through giving oral rehydration salts (ORS) solution (Ghai 2002). Severe cases of diarrhea with dehydration require prompt admission in a hospital. Home made fluids such as rice water and juice, or any kind of fluids for eating or drinking purposes are effective. The next step taken should be the maintenance of additional fluids until the diarrhea has gone. Continuation of child feeding during the diarrhea episode is another task. In addition to common feeding, one nourishing additional meal should be provided during a diarrhea episode and two weeks after its termination according the WHO (1994). Anti-diarrhea drugs and Antibiotics are rarely required and even not advisable, Behrman et al (2004). The mother should be well taught; she should learn how to take care of her ill baby, and when to return and seek further health care if the child’s condition gets worse. Preventive measures are simple as well. Hand washing before and after eating and after going to the toilet, using and drinking of safe water and eating of safe foods are the essential preventive elements of diarrhea management according to WHO (1998). Keeping clean these five; water, hands, latrines, food, and the environment prevent diarrhea (Maarij et al. 2005).
1.5 Research objectives
1. To identify nomads’ perceptions with regard to signs and symptoms of diarrhea
2. To identify nomads’ perceptions and explanations with regard to the causes of diarrhea
3. To understand nomads’ health seeking behavior in connection to their perceptions of signs, symptoms and causes of diarrhea
4. To determine to what extent the nomads explanatory model about diarrhea agrees or clashes with the biomedical one

1.6 Research themes
1- The nomads’ perception with regard to signs, symptoms, causes and health seeking behavior in case of diarrhea will be studied. Their agreement and clashes with biomedical perceptions will be identified by comparison.
2- The nomads’ perceptions with regards to hygiene practices should be carefully studied, taking into account the lack of safe water and sanitation. Their child feeding and cattle keeping practices will also be studied in relation to childhood diarrhea.

1.7 Main research question: What are Afghan nomads’ cultural perceptions concerning childhood diarrhea diseases and to what extent do these perceptions agree or clash with biomedical perceptions?

(1) Research questions
A- What signs and symptoms of diarrhea do nomads recognize, to what extent are these different from those of the biomedical system?

Sub questions
- What does diarrhea mean to nomads, is there a general term for diarrhea?
- What are the most important signs and symptoms of diarrhea?
- Do they distinguish different types of diarrhea, do they have different terms?
- How do they classify them, according to what criteria?
- What signs and symptoms do they consider as severe or not severe?
- Do they distinguish persistent and acute phases in diarrhea episodes?
- Do they know the concept of dehydration; do they have term(s) for it?
- Do they connect dehydration with diarrhea?
- What are the signs and symptoms of dehydration?
- Do they consider different degrees of seriousness of dehydration?
- When is dehydration dangerous? How they interpret sunken eyes and sunken fontanel?

- Are they aware of the seriousness of both watery and bloody diarrhea?
- What is their interpretation of each, how do they interpret the signs and symptoms?

- What consequences of diarrhea do they know (and did they experience)?
- Do they consider diarrhea as a child killer (especially among less than five years old)?

- To what extent is their classification different from the biomedical one?

B- To what extent do traditional and biomedical explanatory models of diarrhea overlap?

Sub questions
- Do they distinguish different causes according to types or signs/symptoms of diarrhea they recognized? What are they?
- Are certain causes more serious than others? (classification according to seriousness)
- Do they know modes of transmission of diarrhea?
- Are some types of diarrhea matched with a specific age of a child?
- Do they focus only on culturally accepted causes or have they notions of biomedical concepts of infection and hygiene as well?

C- To what extent do nomads use traditional/modern treatment options?

Sub questions
- How is the nomads’ care seeking system designed? Do they have several treatment options? How many levels are included in their system?
Who make the decision for treatment and change in treatment? What determines their choices? (Affordability, beliefs, seriousness, etc.)

Who is the main care taker?

What are their home remedies? Which drugs and herbs they use?

What is their expectation from each of the treatments they practice?

What cultural elements are more harmful or useful than others and why?

Do they focus on rehydration as a component of treatment during diarrhea? If yes, what kind of rehydration solution do they use?

On what components of treatment do they concentrate and how do they value them?

Do they know the major forms of biomedical treatment of diarrhea and how do they value them?

Do they advise a special diet for a patient with diarrhea and dehydration or for their lactating mothers?

What actions are important to prevent diarrhoea?

Are they able to carry out these actions?

Are they aware of biomedical measures to prevent diarrhea (safe water and hygiene)?

What is their opinion about it?
Chapter 2: Methodology and theoretical approach

2.1 Introduction
This study employed a rapid exploratory-multilevel-ethnographic methodology. The purpose of ethnography is to study and explore a particular culture and subculture as deep as possible and in details (Bailey 1987:246). Such a study requires a long period of time. Because the researcher had only six weeks available, from mid May till the 28th of July, this study employed a rapid-ethnographic methodology.

2.2 Data collecting techniques:
The study employed largely qualitative methods. Semi-structured open ended interviews, photography, participant observation and focus group discussions (FGDs) were used for collecting data.

2.2.1 Semi-structured interview
Semi-structured open ended interviews were held with fifteen informants. A uniform questionnaire guide (Appendix A) was applied for this purpose to uniformly guide the interview, avoid or reduce errors and save time. The informants selected purposively from different lineage groups (hereafter group). Parents and grandparents of ill children, elders and wise men were the choice people for my interview. To represent gender, four mothers, three fathers, three grandmothers (one of whom was a “wise woman” at the same time), three grandfathers and two male elders were interviewed. Two different lineage groups, one to the east and another to the west of Kabul, were chosen in order for the study to grasp a wider range of perceptions. To cover as many variant lineage groups of nomads as possible, a clinic in the outskirts of Kabul was also selected which various lineage groups’ of nomads visit. Making use of this opportunity, I selected my interviewees. A sound recorder device was used during interviews, while I also took notes.
2.2.2 Focus group discussions (FGDs)
Taking the time opportunity and local availability of informants, two focus group discussions were conducted in both east and west sites with grandmothers, fathers, grandfathers and leaders. I did what Bernard (1994) calls the echo and leading probe, and optimally used silences. I was guiding, listened to the discussion and noted the points in order to elicit responses from all participants. Besides discussing diarrhoea, some epidemiological data was also collected during the FGDs, (see appendix B).

2.2.3 Observation
Informal observation of diarrhoea management, including parents’ care seeking behaviour and practices, personal and environmental hygiene and practices, cooking, drinking, eating, food keeping, washing, bathing, dressing, caring of ill children and other issues of importance to the study were closely observed.

2.2.4 Photographs
Photographs from some places and life-hood were taken by me and some of my companions (see 2.4), in order to observe more deeply some of the issues which were not possible to observe during discussions and interviews. This also helped to demonstrate the nomads’ life style to readers (see appendix C).

2.3 Ethical considerations and problems during fieldwork
To minimize the risk involved (see 2.4) and remove obstacles during the research, I met regional and nomads’ lineage groups’ elders, local armed groups’ elders, clinic officers and staff prior to conduct the research. Introducing myself, I explained to them the purpose of the study and asked for their cooperation.

A couple of ethical issues arose in the field. Introducing me as being medical student created the problem of having to provide medicine, treatment and as well as other necessities (sugar, matches). Since I stayed overnight in the city, I purchased medicines and could meet some other most urgent needs from town, which both were time consuming. Taking pictures and voice recording were usually refused. Shortage of time was the next problematic issue, because all nomads were busy with their daily programs,
and when they returned to their tents went to rest because of tiredness. Contacting them all the time was therefore not possible. The last issue was daily reciprocity. According to their culture nomads gave me dairy products (cheese, yoghurt) every day; it obliged me to return what I could.

The factors which mainly influenced my research and determined purposive selection of respondents and key informants were as below:

- Limited duration of research time
- The availability of resources
- The working hour schedule of respondents and
- Cultural observations with regard to gender

### 2.4 Field work

My six weeks field work among Afghan nomads in Kabul districts started on 15 May and ended on 28 June 2005. To avoid danger of land mines and in order to have easy access to nomads in the wide desert and prepare the fieldwork, two guides, one in each site were selected. I alternatively worked in both sites on a weekly base. I carried out my field work in Pule Charkhee clinic during the last week of my stay. I stayed in Kabul city, went to nomads during the day time. Some of my colleagues (from Attaturk children hospital), friends and a driver, sometimes accompanied me. They helped me taking pictures and with the distribution of medicines. The medicines were donated by the international federation of red crosses and red crescents. It is worth to mention that nomads helped and facilitated my field work through warm welcoming, active participation and spending time.

### 2.5 Theoretical approach

This is a full descriptive, exploratory and an emic study. Theoretically this study is based on the “Explanatory model” of Kleinman (1980) which was adapted by Varkevisser (2005). The adapted explanatory model of disease is summarized below in diagram. 2.5
Figure 2.5: Diagram of an explanatory model for health seeking behaviour,
(Varkevisser, C. M 2005)

Sociocultural, economic, political, etc context factors

Symptoms

Perceptions on
- Symptoms
- Causes
- Transmission
- Social/physical consequences (stigma)
- Cost-effectiveness of treatment

Health seeking behavior
(Prevention, Cure, promotion of Health)
Chapter 3: Nomads’ perceptions of diarrhea

3.1 Introduction
The first section of this chapter presents background of the studied nomads. The history of pkha and pokht (lineage group) and Tabar (tribal group) is very important to nomads. They are identified according to their tribe, clan, and lineage group in Afghanistan. They live in specific tribal banned areas during their seasonal moving and settling. The second section presents findings with regard to the causes, signs and symptoms, treatment and prevention of diarrhea from the viewpoint of nomads.

3.2 study population
3.2.1. The Edo-khil nomads: Nomads, studied in entry point to Tangee Maheepar, east of Kabul are Edo-khil, according to their group elder Peer Mohammad. The Edo-khil is a branch of the Sahak clan which originated from the Ghaljee tribl group of pashton. They live during the cold season in Sarobee, a district of Kabul province and during the warm season they move to Tangee Maheeper (sometimes to pulee charkhee area close to Ahmadsha mena of Kabul city) and Farza village of Shakar dara district in the north of Kabul. This lineage group lives close to cities and settled people, both in summer and winter. They always camp along the highway to the east approximately five kilometers away from it. This group interacts with surrounding people and can get contemporary health services relatively easy.

The group includes 18 tents in total. The numbers of inhabitants in each family were about 15 members. The total population of this lineage group is 260 people. Out of the total population, 136(54%) are female, 124 (46%) are male, 142 (57%) are children less than 15 years old and 36 (14) of them are less than five years old. There is only one boy who can read and write.

He was the only boy of a family who was scared for his life during the war. In order to keep him alive and away from hazards land mines and obligatory joining armed forces, he was sent abroad. Taking this opportunity he completed primary school.
One elder, one grandmother, one grandfather and two fathers from the same lineage group who were cousins to each other were interviewed. The following tribal tree is quoted from Peer Mohammad Khan:

**Figure 3.2.1: Tribal tree of Peer Mohammad’s lineage group, east of Kabul.**

```
Pashton
    /    \
Ghaljee  Dooranee
    |    |
  Sa-hak Ander Tara khil
    |    |
  Edo Khil Sadat Khil Mer Ali khil
  Peer Mohammad’s lineage group
```

### 3.2.2. The Mer Ali khil nomads:

The second lineage group of nomads, in this study, lived close to Sya-cho village of Lalandr valley in Char Asyab district of Kabul province, 38 Km to the southwest of Kabul city. This cluster was composed of twelve tents, the elder of the lineage group is called Zaheer khan. Their lineage links to the Mer Ali khils’ branch of Sahak clan, according to their elder. During the cold season of year, they move to Sarobee district of Kabul province and during the warm season they come to this place. They have been following the same route of moving for hundreds of years, according to Zaheer Khan. This group lives in isolation, compared to the lineage group of Peer Mohammad. Their interaction with settled people and access to the city and health facilities are limited.

The average number in each extended family is fourteen; the total population of this group is 168. Out of this, 89 (53%) are female and 79 (47%) are male. The number of
children below fourteen years is 94 (55.95%) and 17(18.08) of them are less than five years old. Nobody is literate in this lineage group. One grandmother (was also “wise woman”), one elder, two fathers and one mother have been interviewed from this group. All informants were cousins to each other. Below is the tribal tree of Mer Ali Khil lineage group based on their elders’ information:

Figure 3.2.2: Tribal tree of Zaheer Khna’s lineage group, west of Kabul

3.2.3 Pulee Charkhe basic health center: Pulee Charkhe basic health center is the third place where I have conducted my research. Five parents of kochee’s children suffering from diarrhea have been interviewed. The clinic is located approximately 15 km east of the center of Kabul city. Residents of the eastern districts in Kabul provinces, particularly mobile nomads, evacuate their patients during the summer to this health center. Pulee Charkhe basic health center only provides services during the official day hours (8 am-4 pm). It provides primary health care to its clients. Kochees of different lineage groups can be met in this clinic because of its location on the crossroads to many pastures. Three mothers, one grandfather and one grandmother have been interviewed in this center.
3.3 Diarrhea
This study focused on childhood diarrhea among less than five years old nomads’ children. The research findings have been divided in three parts; signs and symptoms, causes and treatment, and prevention of diarrhea.

3.3.1 Definition, local terms and consequences
Loose stool with frequency of defecation, abdominal pain and vomiting are the characteristics of diarrhea, see table 3.3.1.

Table 3.3.1: Elements of the definition of diarrhea

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Mentioned by</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loose stool</td>
<td>All (15)</td>
<td>100</td>
</tr>
<tr>
<td>Frequency as an element</td>
<td>9</td>
<td>60</td>
</tr>
<tr>
<td>Abdominal pain</td>
<td>3</td>
<td>20</td>
</tr>
<tr>
<td>Vomiting</td>
<td>1</td>
<td>6.6</td>
</tr>
</tbody>
</table>

All nomads’ interviewed defined diarrhea as the passing of loose stool. When I inquired about the frequency, there was no uniform response. The number of loose motions ranged from one to numerous. Zaheer khan the elder of the west group, even said “Liquid form of stool is an important characteristic of diarrhea, while the frequency of its passing is not important. Diarrhea means loose stool and that is all”

Abdominal pain (abdominal cramps) as well as vomiting and fever are other elements of diarrhea’s definition for kochees. Tora a mother in the clinic site, said: “passing of loose stool four to five times a day with abdominal pain is considered as diarrhea to me”. Vomiting was mentioned as a non important element of diarrhea definition. As the question continued, we will see that pain and vomiting gained importance.
In sum, loose stool is considered as the essential characteristic of diarrhea, while for only 60% of nomads the frequency of loose stool passing, ranging from one to numerous times, was important as well. In the beginning of the interview abdominal pain and vomiting were rarely mentioned as elements of the definition of diarrhea.

3.3.2 Common local terms used for diarrhea

Many local terms are used for diarrhea among nomads. The most common terms are: *Le kholee lameni, Is-hal, Peach, Nas nastai, Nas khogai, De kolmo dard, Le nasa* (see table 3.3.2).

<table>
<thead>
<tr>
<th>Term</th>
<th>English</th>
<th>Used by</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Le kholee lameni</em></td>
<td>Flow from mouth and anus</td>
<td>15</td>
<td>100</td>
</tr>
<tr>
<td><em>Is-hal</em></td>
<td>Soft stool</td>
<td>14</td>
<td>93.3</td>
</tr>
<tr>
<td><em>Peach</em></td>
<td>Painfull defication</td>
<td>14</td>
<td>93.3</td>
</tr>
<tr>
<td><em>Nas nastai</em></td>
<td>Stream from anus</td>
<td>10</td>
<td>66.6</td>
</tr>
<tr>
<td><em>Nas khogai</em></td>
<td>Abdominal cramp</td>
<td>4</td>
<td>26.6</td>
</tr>
<tr>
<td><em>De kolmo dard</em></td>
<td>Guts’ pain</td>
<td>4</td>
<td>26.6</td>
</tr>
<tr>
<td><em>Le nasa</em></td>
<td>Stream from belly</td>
<td>2</td>
<td>13.3</td>
</tr>
</tbody>
</table>

“Le kholee lameni” means stream from mouth and anus, *is-hal* and *peach* are also often used by nomads. According to Hossain Khila, a mother of an ill child in the clinic site:

“Le kholee lameni is the only term that is everywhere used and all nomads are well familiar with this term to identify diarrhea. *Is-hal* has newly been introduced to nomads’ list for diarrhea terms but it is also a widely known term to all”.

*Peach* is a synonym, extensively used for bloody diarrhea, particularly when there is painful defecation. In connection with *peach*, Haji Mangal, one of the grandfathers in the east group, explained that:

“We don’t feel any difference between terms of *Is-hal, peach* and *peachesh*. We use all these three terms to represent diarrhea without any limitations. Some people differentiate them and use a particular term for a particular condition; for instance when there is blood in the stool, they call it

1 *Is-hal* is an Arabic word but nomad used to talk their own pure language as I found.
I found that the above mentioned three terms were used interchangeably for any kind of diarrhea. The term *Nas nastai* is the next well known term for diarrhea among all studied nomads. Zarro, a grandmother from the east group, emphasized: “everybody knows what is *nas nastai*, it is better to use this term everywhere. There is no need to use other terms, *nas nastai* is a pure term for diarrhea among us”.

*Nas khoogai* and *de kolmo dard* (gut pain) are terms rarely used for diarrhea. Haleema, a mother in the west group, said with regard to *de kolmo dard*: “we, Meer Ali Khil, know that *de kolmo dard* means diarrhea. This is a well known term for diarrhea among us, our children say *de kolmo dard* instead of *le kholee lamenai*”. *Le nasa* (flow from the belly) is the last used term for diarrhea according to interviewees.

### 3.3.3 Consequences
Weakness, convulsions, fever, weight lose, sunken eyes, prolaps of the anus, pallor and death were commonly perceived consequences of diarrhea. Death was mentioned eleven times, weakness eight times, convulsion twice and the rest, once each. All informants were agreeing that children less than five years old, particularly neonates and infants, are the most common victims of death in diarrhea. Death was mainly mentioned by women, weakness by women as well as men. In fact, mothers were most worried about death while fathers were less attentive to it. The fathers believed that if a boy meets recurrent diarrhea, he remains weak in his remaining life. They thought that this does not hold for girls, because girls are weak from birth and diarrhea affects them less. The term of ‘weakness’ sounds to me as under-nutrition, according to nomads’ explanation. In sum, death and weakness (under-nutrition) are the commonest consequences of diarrhea that nomads experienced; they represent the worse outcome of diarrhea.

### 3.3.4 Signs and symptoms of diarrhea
The following groups of signs and symptoms of diarrhea were found among nomads: 1-

- General signs and symptoms such as loose stool, fever, vomiting and abdominal pain,
which appear in other diseases as well. 2- Diarrhea which expresses itself in dehydration (see 4.2.1). 3- In some cases loose stool was considered as a manifestation of another disease and treated as such, not as diarrhea, as will be described in the next section (see 3.3.5).

(1) Oblan sara nastai (loose stool): This is the first sign of diarrhea. kochees agreed, it was the key diagnostic sign for diarrhea. Loose stool during a certain time, apart from its frequency, is enough to detect diarrhea. Dawlat Zai, one of the fathers in the east group explained it as:

“Loose stool always has yellow color at the beginning and soon turns to greenish and later becomes colorless or watery. Loose motion might be with pain or without it. At the beginning it is always without pain but when diarrhea prolongs, sometimes pain accompanies it. The amount of loose motion is always huge at the beginning while later it decreases.”

Some children have bad hazmee meaning poor digestion. They cannot process food in their stomach and it passes zhwandee (in the same form as it was eaten) without changes. The stomach loses its function during diarrhea, according to Zamman, a father at east setting. The form of faeces is different as Zaheer, elder of the west group nomads said:

“It is not homogenous, even during one hour, it changes color, from white to green happens easily and soon. It is soft at the beginning but then becomes looser and granules-like things appear in it and finally it changes to foam and froth”.

(2) Tebba (fever): Almost all during this study agreed that tebba is the main second manifestation of diarrhea. Two types of tebba were well known during a diarrhea period: sra teeba and mra tebba. Sra tebba means high or hot fever; it was usually seen among children who have sor peach, early stage of watery diarrhea, jal wahel, agheer, zobai and baoo (see 3.3.5). Nomads believed that during diarrhea, fire burns in the belly: the more serious the diarrhea, the higher the fever. Mra tebba (low fever) was manifestation of meer nas (watery diarrhea), balghamee (pus in stool), woch peach (painful defecation) and sheer-dan (see also 3.3.5). It is not difficult to nomads to detect fever. They put the palm of their hand on the forehead of the child, detect fever and evaluate its severity. Jan bebe, a grandmother in the clinic site, was expert in tebba, she well practiced how to detect fever in front of me and said:
“I can detect tebba even without touching the child but only by looking to it. When a child has tebba it is na ram (restless), refuses eating and the white part of its eyes changes to red. When a young infant has fever it gets be hal (torpor) and sometimes becomes be- khoda (unconscious).”

(3) Kangai (vomiting): Le kholai means flux or flowing of water or food through the mouth, it is synonym to kangai. Sometimes, but not always, diarrhea is accompanied by vomiting ranee and shnai ooba, agheer, zobai and sheer-dan is always with kangai. Kangai is never been seen with peach, jal wahel and baoo, according to the experiences of eleven of the 15 interviewees. Kangai is the most important and essential sign of agheer (disgust) while in the other types of diarrheas it is not a diagnostic point. Nomads believed that when vomiting of a less than one year child contains milk, it indicates sheer-dan (see 3.3.5). Agheer usually begins with nausea that finally leads to vomiting and later ends by diarrhea. Diarrhea with vomiting is always considered a serious condition which needs much attention and prompt care.

(4) De nas dard (abdominal pain): Abdominal pain sometimes accompanies diarrhea. Peach is always with pain. Abdominal pain is usually just before or during defecation.

3.3.5 Diarrhea, as manifestation of another disease
There are some conditions that, in addition to loose stool, manifest themselves in combination with other signs and symptoms. Nomads take these conditions into account as another disease. They are: jal wahel, agheer, zobai, sher-dan and baoo which are described below in detail.

(1) Jal wahel (heat stroke)
Jal wahel which means heat or heat stroke is considered as a disease which presents with diarrhea. Almost all studied nomads agreed that jal wahel is caused by excessive heat. Apart from fever as essential sign, excessive sweating, torpor where a child can’t stand or sit, pallor of the face, yellow color of the external ear are other signs and symptoms of this disease, according to Zamman, father of an ill child in the east group. Diarrhea and vomiting are subordinate signs of this condition.

Mea Gul, a grandfather in the east group stated its cause as: “when the weather is warm and the child becomes thirsty, this leads to jal wahel and subsequently to diarrhea”. He believes that during the warm weather if the child is thirsty and doesn’t receive
enough water, it causes jal wahel and diarrhea is only one of the signs of this disease. Hossain Khila, a mother in the same site, confirmed this. In fact if a child doesn’t drink its required and desired amount of water during the warm season, it causes jal wahel and leads to diarrhea.

During treatment of jal wahel, no water is given to the child. Nomads believe that drinking of water increases thirst, if they give as much water as the child wants it can not be tolerated by him and leads to his death. They put green leafs of plants particularly shaftal (a plant, grows in plots and is given to the animals as food) on the child’s head and cover it by a hat. Peer Mohammad, the elder of east group, said; “giving water to the child kills him, its head should be covered with Shaftal. Exposing of the child to odor of Zerna (extract of pine tree) is another useful intervention for treatment of jal wahel”.

(2) Agheer (disgust)
Looking at, touching or eating of a dirty or disgusting thing stimulates nausea. When people realize that they eat dirty things, this can cause agheer. In this disease the emotional feeling plays an essential role. With regard to the causes of agheer, Zamman, a father in the east group, said:

“If the heart (mind) doesn’t accept something by looking, eating, touching and so forth, it causes agheer which manifests itself by vomiting at first and later diarrhea”.

He confirms that the emotional factor is the essential cause of agheer. An infant gets agheer when s/he feels the mother milk (breast milk) is dirty or unpleasant.

The common manifestations of agheer are nausea and chill. Vomiting is essential, fever at the beginning which later leads to coldness of the body, the skin usually turns white (pallor). Diarrhea is a tributary sign to nomads. Zarro, a grandmother in east group, experienced that once diarrhea was serious it led to jerk and fits in a child. With regard to identification of agheer, Zarro said; “when a child with agheer is washed, it smells bad. His smell is sour.” Bad smelling of the body is a diagnostic point in this disease.

Giving of dam shewai salt to an ill child is the first and main part of treatment. Dam is a ritual; a person or religious elder recites the holy Koran and later blow the words to something such as salt or someone (child). Water and soft food are always adviced in order to clean and wash the stomach and keep it soft. In sum, agheer is more an
emotional type of diarrhea directly related to human feelings of disgust. This feeling is different in different people according to its intensity, even infants are included.

**(3) Zobai or uvula (plus sunken fontanel)**

*Zoba* or *zhoba* means tongue. A human has two tongues; the big and the small (uvula). The uvula is called *zobai* in Afghan language. This disease is a very well known condition to all studied nomads. Nomads were able to present a general view of this condition everywhere. It is caused when a mother goes to work and leaves her child alone for three or four hours. Then the child cries and as a consequence of this crying, the palate comes downward and pulls the uvula as well as the fontanel downward with it. A sunken uvula leads to obstruction of the throat and later diarrhea. According to Tura, a mother met in the clinic:

“When a child seeks his/her mother and cries for a long time, the small tongue comes down and pulls the palate and consequently the fontanel with it downward, it obstructs the digestive tract and, finally, causes diarrhea”.

Throat pain, difficulty in swallowing, vomiting, inability of crying, fever, and low tone speech are its manifestations, while diarrhea is a tributary sign. Diarrhea due to *zobai* is green colored and contains mucus.

Treatment of *zobai* requires an intervention that is usually carried out by an expert woman who is always an old woman. It is called *zobai porta kavel*. Pushing of the palate upward is the aim of this intervention. It is usually carried out by inserting of a finger (dipped in salt) into the mouth of the child which will push the uvula upward. They push it until blood comes from the child’s mouth. This practice is repeated once or twice a day. Sometimes it is carried out with a green flexible branch of a tree.

**(4) Sher-dan (milk or water coming from mouth)**

*Sher-dan* is the next well known independent disease among nomads that leads to diarrhea and loose stool as one of its signs. *Sher-dan* is derived from two words; *sheer* means water or milk while *dan* means mouth. This is a particular disease seen among the infants and sometimes in children of one to two years old. The cause of *sher-dan* is totally different from that of the other diseases. When an infant has taken and put on the shoulder in the way that his belly contacts the upper part of the shoulder of the taker and his head and chest hang downward to the back of the taker, it causes this disease. All studied nomads agreed with the mentioned practice as cause of *sheer-dan*. 
Vomiting, torpor, weakness and pallor are the essential signs of this disease. It usually leads to diarrhea. Fever is a rare sign. There is no specific additional treatment for this disease. Peer Mohammad, a group elder in the east group, with regard to this disease added:

“Any position given to an infant, in which the head and chest locate lower than abdomen, carelessly handling of a child and moving it more than normally leads to this disease. The infant’s stomach contains two layers that are in close touch under normal conditions. Normally an infant’s stomach is always full of water and liquid foods such as milk or porridge that are quickly moveable these layers are thus kept close to each others. Through unnecessarily handling and moving of the infant, the stomach’s layers separate from each other which cause diarrhea and vomiting.”

(5) Baghoo or Baoo( neonatal tetanus, meningitis or convulsions)

This is a sacred disease of neonates and young infants, which is characterized by asser, meaning jerk or fit and diarrhea. It is a child killer. Zaheer, the elder of the west group, explained that there are two types of children. Saaf, who donot have any rashes on their skin from birth and Na-saaf, who have. The first group is very resistant to any kind of diseases while the second is prone to get illnesses and never live more than seven years. These children always cry and shout. They have moaning and grief which is the essential signs for its diagnosis, according to informants. Baoo was classified as ja-ree (with diarrhea) and woch (without diarrhea). Zaheer, elder of the west group said:

“Ja-ree baoo kills the infant during 24 hours particularly when is accompanied by fits or jerks. This type of baoo is common during infancy till eleven months of life. After death from woch baoo, the child’s belly gets very prominent, comes outward widely and gets blue or greenish in color soon after releasing of the spirit. In jaree baoo, the abdomen does not get wide and prominent while its color changes and turns greenish or blue soon after death”.

Obstruction of the throat, red rashes and white blisters on the skin can be its other common manifestations. Looking to signs and symptoms mentioned by informants, I think, baoo is either neonatal Tetanus or Meningitis. Seeking help of religious elders is the common intervention additional to what is done for diarrhea (see also 3.3.10).
3.3.6 Causes of diarrhea

The causes of diarrhea are numerous according to nomads. The most commonly mentioned causes might be classified in the following categories.

1- Wrong food: This part contains unpleasant food, sour food and water, raw food (hard food), mixed food, harmful food, overfeeding, dirty or unpleasant mother milk, vegetables, and additional foods to milk.
2- Dirt: dirty environment
3- Hot and cold: This category is composed of; cold or warm weather (changes in climate), exposing the child to wind, heat stroke and too cold or too warm food
4- Unnecessary or wrong handling of a child
5- Emotional & spiritual causes: cry, gham (grief), nazar (evil eyes)
6- Infections: microbe, worms, Malaria, gazak (inflammation), flies
7- Poverty
8- Behavior: eating of soil
9- Tiredness
10- Going barefoot and sitting on wet land

Among the causes of diarrhea or conditions associated with loose stool, jal wahel (heat stroke), bao, zobai, gazak and asppa are considered serious causes and diseases according to nomads.

(1) Wrong foods

a. Unpleasant food: Nomads believe that there are two kinds of food; (1) Ba-raber khware mean pleasant or fit food and (2) Na khalafa khware means unpleasant or non fit food. Some foodstuffs are pleasant or unpleasant forever (naturally from creation). The unpleasant foods are known to everyone and avoided. Their accidentally eating causes diarrhea. Nomads believe that each foodstuff has two specifications; pleasant and unpleasant. Sometimes a food which always was pleasant for a person suddenly changes to unpleasant only for a while time, not forever. Zazro a grandmother in the east group said:

“Pleasant food is the one which is usually harmless, however, it can accidentally change to unpleasant, which is more hazardous for a child. If the child eats this unpleasant food, s/he gets diarrhea. Diarrhea is the consequence of unpleasant food intake”.

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b. Sour food and water: Nomads divide food, according its nature, in two types; sweet and sour. Sweet food is easy to digest, while sour foods are always hard and difficult to digest. Nomads think that children must always take sweet food because their body is still weak and their digestive system is not mature enough. If a child eats sour food, since it is naturally hard, it can not tolerate, digest and process the food, which leads to diarrhea. Nomads usually drink spring water of pastures, some of the springs are sour. Nomads call this *shakhee ooba* meaning hard water, drinking of this water is believed to causes diarrhea. As I found, the water of the same springs were used both by nomads and their flocks, the springs were full of dirt including animal faeces. This contamination might be the cause of diarrhea, not sour (mineral) water.

c. Raw and hard food: The same beliefs and perceptions, as above mentioned, lay behind the raw and hard food. Vegetables, raw fruits and dry meat\(^2\) are considered hardest among others. Zaheer, elder of east nomads’ group explained:

> “When a child stops breast feeding and is exposed to other food, it gets diarrhea. Potatoes and other vegetables are the main causes of diarrhea of young, non breast fed children. It always causes *peach* (dysentery) since these foods are the hardest”.

\(d\). Mixed food: Nomads believe that a child’s stomach should not be exposed to diverse foodstuffs at the same time. Foods are various in nature; one is hard, the other is soft, acidic, alkali, strong, weak and so forth, according to nomads’ belief. Children especially infants and less than five years are not able to digest *arjal khware*, mixed food. Their digestive system is not mature enough.

e. Harmful food: Nomads perceive that foods are two types; safe and harmful. Safe foods never cause illness such as *ferenee* (a mixture of rice flour plus oil and milk after cooking in semisolid form) and *pasta shola* (cooked rice with oil and water in semi solid form). Harmful food always produces illness or exacerbates the already existing health problems. *Tor banjan* (egg-plant), *kharbooza* (melon), bean, peas and fish are examples of harmful food. Nomads believe that some of them are wind producing such as beans; these flatulence producing agents disturb the normal function of bowels and cause diarrhea.

\(^2\) Nomads eat dry meat because they don’t have a refrigerator. To keep meat for some time, they dry it.
Others, such as *tor banjan*, exacerbate bowel’s injuries or wounds and consequently diarrhea. Haleema, a mother from the west group, summarizes harmful food as:

“Wind (flatulence) producing foodstuff such as; kidney-bean, barcuites, maize, *mai* (black bean), *Gandana* (a vegetable) and onion-leaves are the most harmful food which always cause diarrhea in children”.

f. **Over feeding:** Nomads strongly believe that overfeeding is one of the common causes of childhood diarrhea.

g. **Dirty or unpleasant mother milk:** Generally nomads perceive that mother milk is safe food for a child. They initiate breast feeding soon after the child is born. I probed deeply into this topic. Nomads believe that when mother milk is stored in the breast during summer for a long time; it becomes sour as animal milk does, and unsafe. Haleema, a mother from the west group, confirmed this and said:

“When a mother goes to work and gets away from her child for a long time, her milk becomes sour (divides into solid and watery portions) because *Zahryat* (toxins) of the mother’s body add to it. Giving such milk to a thin child causes diarrhea”.

h. **Additional food to milk and vegetables:** Nomads, in a general, think that initiation of additional food to a child in addition to mother milk causes diarrhea. They believe that *Sabe* (green leaves) and solid vegetables such as carrot can not be tolerated by children. Zaheer, elder of the east group believed:

“Child can not tolerate *sabe*, they are much stronger than his/her bowel structure and damage them and finally lead to diarrhea. They always cause bloody diarrhea, they injure guts”.

On the other hand, they believe that weaning foods cause diarrhea. As Zaheer said; “when a child is breast feed s/he don’t get diarrhea. Children get diarrhea soon after exposing to additional foods. Child usually gets diarrhea for the first time when starts eating and exposes to new foods”. It should be mentioned that human and animal fresh defecation are used as fertilizer specifically in vegetable farms in Afghanistan.

(2) **Dirt and poor hygiene**

Nomads perceive dirt as a cause of childhood diarrhea. Their environment is unsafe and dirty which directly or indirectly causes diarrhea. They live on the soil and deal with animals; both of them are not safe. Nomads collect sheep faeces to sell them later as fertilizer or fuel. The latter is the responsibility of the children and sometimes of the women who are close to the children. Because of lack of water they, generally, don’t
wash their hands and their utensils regularly. This was very malpractice among children. The researcher observed several times that before and after the food none of the small children washed their hands. The adults washed their hands but with a small amount of water that was not enough to remove the dirt. Children don’t cut their nails regularly their nails were long with dirt under them. Their hands were always soiled.

(3) Hot and cold

Everything is either hot or cold by nature, according to nomads. Humans and food have the same specifications. When a child of hot nature eats cold natured food or vise versa or when during the warm season a child eats warm foods and vise versa, it gets diarrhea as they do not fit to their nature. Some of them, such as Jan bebe, a grandmother of the clinic site sample, even went further and classified the characteristic of loose stool whether caused by cold or hot natured food, as she says; “when the color of the loose stool is green, it means that it is caused by cold or if it is white (watery) the diarrhea is caused by something hot”.

Change in the climate is another example of hot and cold cause of diarrhea. When a child with cold nature exposes to warm weather or vise versa, s/he gets diarrhea. Exposing to wind is the next example of diarrhea related to hot and cold cause. They perceive when a sweat-full child exposes to wind’s current, it leads to diarrhea. This is a common thinking among Edo khils nomads as a mother, Zarroo said: “when an asleep child in the cradle exposes to wind, s/he gets diarrhea particularly when the cradle is wet”.

(4) Unnecessary handling of a child: This cause of diarrhea has already been discussed; (see sher-dan, 3.3.5).

(5) Emotional & spiritual causes: Gham = zaor or grief is considered a major cause of childhood diarrhea. Persistent cries cause grief which leads to diarrhea (see also zobai, 3.3.5). In reply to my inquiry, Hosain khila, a mother met in the clinic site, said: “the mechanism is not clear, but it is well known that persistent crying and sorrow and grief always lead to diarrhea”. Presence of blood in the stool is the diagnostic point for this diarrhea, according to her. Zaheer looks to this cause of diarrhea from a somewhat broader view, as he says; “leaving the child unaccompanied is not the only cause of the child’s sorrow and diarrhea, but also affliction of a child, even if the mother is close to it, causes grief and subsequent diarrhea”. 
Nazar or evil eye is a spiritual cause of diarrhea among nomads which is not widely accepted (3.3% believed). Nazar is generally seen as the cause for rare diseases of children such as nervous diseases or when the course of a disease is prolonged for weeks and months. They believe that eyes of some people harm the child. These people are jealous, infertile and so forth. Mothers believed it more. Tora, a mother in the clinic, said:

“An attractive and lovely child, who gets the attention of all, is hunted by evil eyes. It gets ill; any illness can be seen including diarrhea”.

(6) **Infections**: Two informants (6.6%) mentioned microbes and worms as causes of diarrhea. They heard it from the professionals and settled people around them. Worms and Malaria are also known as causes of diarrhea.

Gazak is the same as inflammation, but it is explained as a process where an already existing wound gets worse. Gazak of the guts causes diarrhea. Flies are known as dirty creatures and originally the cause. Asppa is the last cause of diarrhea in this group. There is no exact meaning or definition of asppa. In general asppa can occupy all organs. This condition initiates with fever, is accompanied by skin blisters and signs and symptoms of the initially involved organ. Sultana, a mother in the clinic, said: “gut’s asppa is always with bloody diarrhea. Gut’s asppa presents with fever, abdominal pain, and painful, loose defecation with blood in it”. In fact gazak and asppa appear to be inflammations or probably my informants mispronounced the word ‘abscess’. Anyway, asppa is a common term among nomads.

(7) **Poverty**: I found in this study, that poverty was stated as an essential cause of diarrhea. Nomads generally perceive that they are neglected and counted as lower caste of the society. They have no schools and other facilities for education (see1.2). Even if they had schools, their poverty, job distribution and mobile life would not allow them to educate their children. Zaheer, a elder in the west group said: “nomads are obliged to send their children to take care of flocks, doing so, children become ill. Young children get diarrhea and jal wahil, youth gets jal and heat stroke. This is our life”. Poverty and deprivation follow nomads their whole life, according to my observation and findings.

(8) **Behavioral causes**: Eating of soil is a common malpractice of nomads’ children, according to almost all my informants. It is very easy to eat soil because the children are born on the soil and live there till death. This practice is common among children less
than two years old. The general insight is, that soil is dirty (contaminated) and dirt causes diarrhea.

(9) **Tiredness:** Stomanee or tiredness is considered another cause of diarrhea among nomads. Since youth and children are taking care of flocks under the direct sun shine and walk the whole day with their flocks they are tired. Tiredness leads to diarrhea in two ways, according to nomads’ explanations. The first is the same as for hot and cold perceptions (see 3.3.6). Secondly tired and sweaty person easily get thirsty and drink sour water of pastures’ springs which leads to diarrhea (see 3.3.6).

(10) **Barefoot and sitting on wet land:** Poverty from the one side, warm weather and living under the direct sun shine from the other side, leads nomads’ children to be naked and barefooted. According to Zamman, a father of the east group nomads, a barefoot child gets diarrhea because it gets cold or warm which both can cause diarrhea, and it gets microbes through its feet. When the researcher made more inquires in order to know how a child takes microbes in this way, no one explained the issue clearly. The possible answer was that, when a barefoot child walks in stony and thistle-full desert, it gets wounds that facilitate transmission of microbes to the body. One of the mothers, Tora experienced that when a barefooted child sits on wet land it gets diarrhea. According to her, at the beginning a child gets abdominal pain which later leads to diarrhea. With regard to the diagnostic point of this type of diarrhea, she said: “presence of pus or mucus in the stool means the child got diarrhea from sitting on the wet land”.

Some of the above mentioned factors such as (3, 4, 5, 9 and 10) are rather predisposing factors of diarrhea than causes of diarrhea, according to me.

<table>
<thead>
<tr>
<th>Hot</th>
<th>sheer-dan</th>
<th>Jal</th>
<th>Agheer</th>
<th>Zobai</th>
</tr>
</thead>
<tbody>
<tr>
<td>(heat stroke)</td>
<td>(wrong handling child)</td>
<td>(Disgust)</td>
<td>(Uvula)</td>
<td>--------------</td>
</tr>
<tr>
<td>Green stool</td>
<td>white stool</td>
<td>milky vomiting</td>
<td>colorless stool</td>
<td>---</td>
</tr>
<tr>
<td>Pus in stool</td>
<td>blood in stool</td>
<td>watery stool</td>
<td>fever</td>
<td>nausea</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>obstructed throat</td>
</tr>
</tbody>
</table>

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3 He meant anus though he mentioned feet, researcher think.
3.3.7 Transmission of diarrhea

The overall perception of the studied nomads with regard to diarrhea transmission is simple. Each child confronts causative agents independently. They don’t believe that diarrhea transmits through defecation from an ill to a well person.

Figure 3.3.6: This diagram simplifies examples of diarrhea transmission

According to nomads, the causes of diarrhea already exist in the environment. A child becomes ill when the causative agents enter its stomach through its mouth or harm it from outside without entering through the mouth and later damage the guts. In fact, there is a very simple and only one way action. Begins from the cause and ends to the host as: 

**Cause → host**

3.3.8 Classification

Nomads classify diarrhea based on the various indicators such as stool content, signs and symptoms, time and duration, age and causes, see table (3.3.8).

(1). The simplest classification of diarrhea is according to the **stool content**. Based on the stool content diarrhea was classified as *le kholee lamenai* (watery diarrhea) and *peach* (dysentery). Except *sor peach* all remaining terms used for diarrhea reveal watery diarrhea. Haji Mangal, a grandfather from the east lineage group, subdivided diarrhea according to its content as below:
“Diarrhea, generally has four types; (1) watery which in turn is subdivided according to its color
*Ranee ooba* or white diarrhea means pure watery or water colored diarrhea and *shnai ooba* means greenish diarrhea, (2) *Balghamy* or pus (Mucus), (3) *Sor peach* means blood in stool and (4) *woch peach* means dry or tendency for defecation without real stool.”

| Table 3.3.8: Classification and taxonomy of diarrhea of nomads’ children |
|---|---|
| No | Diarrhea classifications based on the : |
| 1 | Stool contents | Watery |
| | | *Ranee ooba* (Pure watery, colorless) |
| | | *Shnai ooba* (Greenish) |
| | | *Balghamee* ( contains pus) |
| | | *Sor peach* ( contains blood) |
| | | *Woch peach* ( no products, sense of defecation) |
| 2 | Signs & symptoms | *Zoor wahel* (painful defecation) |
| | | *Meer Nas* (defecation without any sensation) |
| 3 | Time & duration | Not any |
| 4 | Age | Exposing to additional food (weaning diarrhea) |
| | | Eruption of teeth (teething diarrhea) |
| 5 | As sign of another disease | *Jal wahel* =*Taft wahel* (heat stroke = heat stroke) |
| | | *Agheer* (disgust) |
| | | *Zobai* = uvula (separate disease due to sunken fontanel) |
| | | *Sher-dan* (wrong positioning of the child) |
| | | *Baghoo/Baoo* (neonatal tetanus, meningitis, convulsions) |

(2). Diarrhea is classified according to the **signs and symptoms** of the child as well. Dawlat zai, a father from the east group classified diarrhea with regard to symptoms in the following types: “I have seen that my children always get two types of diarrhea (1) *zoor wahel*, meaning painful diarrhea and (2) *Meer nas*, meaning defecation without any pain and feeling any sensation for defecation”.
(3) during this research, I did not come across any diarrhea classified based on the **time and duration** of the diarrhea episode. After probing, the general outcome of their reply is that they never consider time as an enough important factor during a diarrhea episode (see also 4.2.3).

(4) Informants distinguished two types of diarrhea according to **age** in this study. Exposing of the child to additional food or weaning, and teething age diarrhea. Nomads believe that each infant faces diarrhea in the above mentioned ages (see additional food, section 3.3.6).

(5) See the classification of diarrhea based on **causes** (section 3.3.6).

### 3.3.9 Seriousness of diarrhea

The diarrhea classification was not based on the seriousness of the cases. What has been found, confirms that **watery diarrhea** accompanied by **vomiting** is considered as the most serious type. During recurrent probing the researcher found that frequency of vomiting and defecation in such condition is another complementary point. However, the first two characteristics are enough to classify serious diarrhea according the nomads. The next element, which empowers this point, is the pressure by which a child passes his/her stools. When faeces pass with pressure, it is considered as a most serious case which needs urgent care.

**Blood** in the stool, is the next serious sign of diarrhea. While presence of blood is enough to consider the diarrhea as serious, the amount of blood present and its duration are other equally important characteristics to be kept in mind. If the amount of blood is much and lasts for a long time, the diarrhea is more serious. Presence of pain or painful defecation both in watery and bloody diarrhea, plays a role to determine a serious condition, but, it was not a very prominent finding in this study. Time and duration are other rare determinants for perceived severity {they are not found everywhere except in one case (6.6 %)}. Haji Mangal, a grandfather in the east group said; “when sor peach (bloody diarrhea) lasts more than two days, regardless of the amount of blood in the stool, it is dangerous and is considered as serious diarrhea”.

To summarize, two conditions of diarrhea are considered as serious cases; watery diarrhea with vomiting and blood in the stool. In the first case, high rate of defecation and
recurrent vomiting are determinants. In the second case, the amount of blood and duration of its presence indicate the seriousness of the illness.

3.3.10 Treatment

(1) Health seeking behavior

Nomads’ health seeking behavior, with regard to treatment of a child with diarrhea, is limited to three circumferences; home, neighbors and the biomedical circle. The first health center of an ill child is its tent (home) and the first care taker is its mother. Almost all studied nomads, regardless of any objections, mentioned that the mother is the first care taker and her lap is the first bed of an ill child. Zamman, a father from the east group, with regard to the first step in a child’s treatment, said:

“The first doctor of a child with diarrhea is its Adei (Mama), the next one is its Aneyi (grandmother), when the child gets worse then Plaar (father) and Neka (grandfather) are called. The mother usually doesn’t call the father because she doesn’t want to disturb the whole family in the first stage”.

As the researcher through his inquires and observation found, the nomads’ parents are very attentive to their children. They observe all changes of their children even if they are subtle. When a child becomes ill, the father and the rest of the family members become aware and closely follow and help it. To sum up, early at the beginning when a child becomes ill, a joint effort starts inside the family circumference, involving all family members, in order to treat him/her.

Seeking help of neighbors is the second step of the nomads’ care seeking process. This step is divided by two sub steps; seeking help of neighbors in the same lineage group and seeking help in the surrounding villages. Nomads usually live at least five to ten kilometers away from the residential villages. They first seek help of the neighbors in the same lineage group in the adjacent tents, when they failed to help or if the child needs some specific intervention, they ask help of experts in neighboring villages. They ask help of healers, wise men, religious elders and any well known expert. Zaheer, the elder of the west group, said:
“We are aware of the experiences of each other in our lineage group. We know who can help in which field to treat diseases. We know who is healer in the surrounding villages and who is expert in which disease. For instance, Khorogai is expert to treat Zobai in Ao-balla village here. We take our children to her to treat them when they have Zobai”.

It was found in the present research that Kochees had no traditional healers among them. Women, particularly grandmothers, are usually expected to involve in the treatment but they are not very expert, according to some grandmothers’ explanations because they have never received training and advice since they had no healer in their lineage group. This is confirmed in both sites, in this research, based on separate probing in this regard. The next worthwhile point is that, during this research, half of the informants refused following the second sub phase of this step. They bypassed this sub phase because they argued that its quandaries are the same as for the third step, however, it is still risky and costly.

The third step with respect to the child treatment is seeking of biomedicai help. It is considered as the last and final step to solve a health problem. Taking this step is the most difficult one; it needs to think more about, in comparison to the first two steps. It creates a lot of questions to be answered.

Nomads have some indicators, constrains and rules through which they make or change their decision, selecting a certain step of treatment. Below follow the details.

(2) Decision making: The person who makes the decision what should be given to the ill child or how to treat it or change the interventions, in the first step, is always the grandmother. In her absence or when she is not alive, the mother succeeds her. In fact women, particularly mothers, play an essential role in this phase.

In the second step, in seeking help inside the lineage group, the main role is again played by women. In case some male expert is asked for advice, it changes the gender balance by involving a man in the decision making process. When help of some one in the neighboring villages is required, the grandfather or in his absence the father or some times the grandmother makes the decision to take the child to a healer, religious elder or some one else. The authority of changing the intervention now shifts to the healer who is generally male, while few of them are females. In the second half of this step, key decision makers are grandfathers, grandmothers, fathers and healers. Other main players are religious elders, wise men or some one who has the same experience.
The person who makes the decision to take a child to the health professionals, who are usually far from the nomads’ residence, is always the grandfather. In case there is no grandfather in the family, the fathers or sometimes another elder male member of the family is the next who makes the decision. The role of gender changes in the third step.

In sum, grandfathers and grandmothers are the main decision makers while fathers and mothers are the next who replace them. Parents have less authority when grandparents are available. It is believed that with regard to caring of ill children parent do not have as much experience as grandparents have. I think it also is because of the respect the nomads pay to their elders according to their culture.

(3) Choice of treatment: Nomads use their own indicators for treatment choice, below are some of these indicators, some of which might be called constraints as well.

(1) Poverty and low income: Financial issues are at the top of all others for making a treatment choice. Nomads have a low income which is not stable. Their income is influenced by natural and acquired disasters. Among the natural, drought and flock’s death due to epidemics are the most notable agents that destroy their economy. Both of them have followed the nomads for years.

Warfare and presence of land mines are acquired phenomena which limit their economic activities. Jan be be, a grandmother in the clinic site said with regard to treatment choices: “the first thing, concerning the treatment choice that we think of, is money. Unfortunately, we don’t have enough to select a proper choice. We don’t look for best, but at least for proper and reasonable treatment, even that is not always possible”.

Due to the above mentioned economic problems, they try to treat their children at home, using the herbs and home remedies as much as possible, which always leads to delay in seeking proper treatment.

(2) Distance: The second factor, that influences treatment choice, is distance. Nomads live usually far from cities and districts where health services are easily accessible. Settled people are scared of damage by nomads’ flocks on their farms. It results nomads to live in deserts and non residential valleys. They cannot use fast traffic and almost all nomads live far from the roads, because they consider roads as their animal killer factor. All these keep nomad away from easy access to health services.
(3) **Discrimination:** Nomads are regarded as a lower cast all over the country. They are **discriminated** when asking for help in the health centers, as Peer Mohammad, a elder of the east group said:

“When we seek care in the health facilities, health staff doesn’t hear us. They don’t hospitalize our child even when it is dying. When they provide minimal services, we are at the bottom of the list. The government neglected us from the beginning; we don’t have yet even one clinic. We are citizen of this country; they should enroll us in the health system”.

Due to this reason, nomads try to treat their children at home as much as possible.

(4) **Security:** The increasing number of thieves and other evils, as the consequence of war increases **crimes** everywhere even in deserts which were safe in the past. **Tribe related conflicts** cover the whole country. Moving and walking during the night and non crowded times are not danger-less when taking an ill child by foot or even by a vehicle from the desert to a health center.

(5) **Ezzat** (dignity): According to religious norms, women should be kept away from non **mahram**\(^4\) men. Not mixing of females with unknown males is culturally considered **ezzat** or with **dignity** among Afghans. When a child with its mother is admitted in a hospital or clinic, it will provide opportunity of gender mixing and disgrace, which is not allowed religiously and culturally. Peer Mohammad, elder of the east group nomads, in this regard said:

“We prefer death of our child to be- **ezzate** (disgrace and losing of dignity). When we go to the cities for treatment, we don’t have place for accommodation particularly for women. They will not feel safe even in the hotels”.

(6) **Communication:** **Communication** is another difficulty. Most of the nomads are not able to communicate with settled people and health center staff because of the language barrier. From the other side they live simply and their life is preliminary. They don’t know how to use sophisticated facilities of settled people. Peer Mohammad says; “we, particularly our women, can’t communicate with settled people due to the language barrier. Likewise, we never have had, for example, electricity. We have never had simple beds or latrines and so forth”.

\(^4\) Husband, father, brothers, uncles are Mahram
(7) **Seriousness:** One to the foregoing limitation, *kochees* take **seriousness** of disease in account as an indicator for seeking advance health care. For some two of them it is a factor for seeking advanced care. Some *kochees*, such as Dowlat Zai, a father in the east group nomads said:

“Seriousness of the disease to treat an ill child in serious cases apart from looking to other is an important indicator to decide how and where the ill child should be treated. We loan money constraints”.

As the researcher found, this opinion was brought forward only rarely. The people, who had one or two children and got them with a lot of troubles as they were infertile or old aged parents, looked after their children more seriously than others. These children are called *deir kematee mashom* (very expensive child).

Affordability, accessibility, safety and “expensive child” seem the main factors that affect decision making with regard to selection and choice of the treatment.

(4) **Gender**

The researcher was wondering if nomads consider the gender of children when they seek health care. I probed deeper to evaluate this issue. It was found however that nomads don’t consider child’s gender during care seeking. Contrary to preliminary opinion that they will prefer boys to girls, it becomes clear that they pay more attention to ill girl than ill boy. Almost all believe that more attention should be paid to girls’ health than that of the boys, because they are physically and emotionally *ajjez*, (weak) and can’t express their status as boys do. In this connection Haleema, a mother of west group nomads, said: “attention should be payed first to girls. The best food should be first given to her. It is said so in *Ketab* (holy Koran)”.

(5) **Home Remedy and medicine**

Nomads use a lot of herbs, foods, food based liquids, rituals and drugs as remedies. Below I briefly mention the common of them.

(a) **-Herbs**

Herbal use as home remedies is a very customary practice of nomads during diarrhea. To make it easy, herbs are classified below according to their importance and frequency of use in two groups. The first group, includes the common and important herbs used in diarrhea, the second group includes rarely used herbs.
Common herbs

**Zawel:** This plant grows in the desert; it has a hard stem, thick green leaves and small yellow flowers. Nomads dry and later change it to semi powder, add boiled water and isolate its extract. Some nomads mix powder of dry zawel with yoghurt to decrease its bitterness. It is advised three or four times a day one or half a cup according to the child’s age and eating ability.

I found this plant in the main food market (manda-ee) in Kabul. When inquiring, I found that it was widely used by settled people as well; even it is exported to abroad.

**Pomegranate skin:** Nomads strongly believe that pomegranate skin (hull) terminates diarrhea regardless of its causes. Pomegranate’s dried skin mixed with water and sugar is advised three to four times a day one or half a cup according to the child’s age.

**Kas-nai:** This plant grows in farms plots and along the brooks. It has a hard stem, small but hard leaves and small light blue colored flowers with a bitter taste. Generally it is advised for malaria. Nomads’ advise this plant for diarrhea with fever. Dry or fresh kas-nai boiled or put in water then the extract with some sugar is given to an ill child.

**Khak sher** (London rocker-seed): Its grain and seed are advised for diarrhea. Meanwhile it is considered as a useful herb for abdominal flatulence. Kha-sher grains are put in water for some hours to become soft; it is believed to be effective when diarrhea is due to hot weather.

**Zerna:** It is the oil, extracted from the stem of the pine tree; its odor is advised for diarrhea, particularly of jal origin (see 3.3.5).

**Sfarza or speghool:** Fleawort is considered as a laxative agent and is widely used among nomads during diarrhea. They believe that giving laxatives clears the stomach from the causative agents which they always believe are zahher (toxins).

**Terkha:** This plant is found only in hills and mountains. It widely grows in the highlands of central Afghanistan. It is considered as a worm killer. The majority of nomads believe that diarrhea, sometimes, is caused by worms. When in a long lasting diarrhea other interventions have failed, they advise terkha.
**Sper-kai:** This is a particular plant that grows only in the mountains. It is considered as a stomach wind reducer.

**Badyan (anise):** Anise is commonly used during diarrhea by nomads. They believe that it reduces stomach wind and discomfort. Aniseed or anisette is advised according to the child’s age.

**Zosz:** This is a thistle that grows in the mountains. Nomads advise its bulb.

**Non common herbs**

**Chambar khyal:** The plant is used.

**Are-ra:** seeds of a tree, grows in tropical climates.

**Oman:** a wild plant, grows in the mountains. It has a sour taste.

**Zoof:** seeds of a tree, grows in warm places.

**Sha-tara:** a wild plant, grows in the farm plots and hills.

**Bartang:** the skin of bartang or plantain is advised.

**Mango cover (skin):** This is not widely used by nomads.

**Gotte:** It is a mixture of some herbs. It reduces the wind in the stomach.

(b) -Foods

There are some foods that kochees use as remedies during diarrhea. They think some of them help stop diarrhea while others restore body water and remove signs and symptoms. These foods are listed below.

**Water:** water is the first fluid (food item) to which all studied nomads agree to be given during diarrhea. Zaheer in this regard says:

“*darona* (all covered contents inside in abdomen of a child) is hot during diarrhea. The fire burns inside the belly. Cold water, yoghurt and yoghurt diluted with water are useful”. He believes that there is a conflict inside the belly which results in fire, only water can terminate this conflict and fire. Tepid water is preferred.

**Ko-rat:** *ko-rat* or dried yoghurt (dried black curd) is the next popular food advised to a child with diarrhea among nomads. The preparation of its famous form to the child who can eat solid food is explained by Zaheer. He described it as:

“solid *ko-rat* put in a hearth of brand fire for a short while and later is advised to the ill child. This is more effective than the diluted one because it makes the loose stool hard”.
**Yoghurt**: The common yoghurt or *mastai* is considered as a food that can help stop diarrhea and reduces its symptoms.

**Sholla**: soft rice cooked in oil called *sholla* is also advised during diarrhea. It is considered that it can stop diarrhea and make the stool hard.

**Omach**: This is the same as spaghetti, is advised with yogurt in liquid form.

**Black and green tea**: they advise them widely.

**Khama**: when a sheep or cow’s milk is mixed directly in diluted yoghurt, the mixture of raw milk in yoghurt is called *khama*. They believe that it stops diarrhea.

**Peas**: some nomads believed that fried peas makes the stool hard.

**Black bean**: is the same as peas.

**Tso-krai**: It is a plant that grows in the hills. It is cooked and given to a child.

**Boiled egg**: Some nomads mentioned hard boiled egg. It makes hard the stool.

(c) - Food based liquid

There are some food based liquids that nomads give during diarrhea to children. They believe that these liquids stop diarrhea. They are listed bellow.

- **Boiled water**: It should be cold or tepid. All studied nomads practiced this.
- **Salt water**: solution of salt in water was familiar to some nomads.
- **Wheat flour**: *Arob* or wheat flour in oil and water which is cooked or boiled.
- **Rice water (sar-sar)**: is not widely practiced, probably because of the price of rice.

(d) - Procedures and rituals

There are some procedures and rituals that are carried out during diarrhea. The aim is to stop diarrhea, remove its signs & symptoms and restore the child’s body. The following have been found in this research.

**Fresh animal’s skin (hide)**: Nomads believe that covering the child who has long standing diarrhea, by the *de mal postakai* (fresh skin of an animal) is an effective intervention. They think that fresh skin of sheep (just after its death) is cold. Peer Mohammad said in this regard:

“Fresh skin of sheep is a remedy for hundreds of diseases including diarrhea. In diarrhea one point should be kept in mind that the skin of a male sheep is advised for girls
(because women are hot in nature) and the skin of female goat is advised for boys (boys are cold in nature)"

They cover a naked child for a whole night. This is a common practice that is widely known and applied by nomads.

**Fresh animal stomach:** Perception is the same as above but instead of whole body only abdomen or some times skull of the child is covered in _lerai_, fresh animal stomach.

**Zobai porta kavel:** See under the title of _zobai_ (3.3.5).

**Patai:** A mixture of wheat flour with egg and _khak sher_ (it is the seeds of a plant =London rocker-seed) putting on the skull is called _patai_. Nomads’ believe that it does not let the fontanel go more down. It is commonly used in _jal wahel_. They also believe that it is cold and removes hotness of the child during diarrhea.

**Taweez** (amulet): this is a common practice during illness, however, it has rarely been found in this research. On inquiring in this regard, the researcher found that nomads believe that an amulet is not effective for all diarrheas. If used, the amulet for diarrhea should be covered in a green, white or red cover, according to Haleema, a mother in the west group. This is the most effective intervention for diarrhea caused from evil eyes.

**Tsxakht:** This is a small peace of paper. Religious elders write some words of the holy Koran on it. These papers are put in cold water and later the water is served to the child two or three times a day. It is also a common advice for diarrhea caused from evil eyes and _agheer_.

**Bannd:** this is a weft which is provided by religious elders. They recite some words of the holy Koran and blow to the weft. The weft is then covered by the mother and hung on the child’s neck or is put in his cloths. This is considered as an effective intervention to control diarrhea caused by the evil eye and other spiritual causes.

**Dam:** Reciting of the holy Koran words and blowing toward the ill child.

**Nazar wochawel:** They take handful wheat flour and turn it round three times over the child head and throw it toward the wall.
**(e) -Biomedical drugs**

The researcher only asked if they know and have any contemporary medicine advised in diarrhea. He did not name any drug except ORS when he was studying this part. In general, it is found in this study that nomads believe in biomedical drugs more than any other intervention. Among others, the elder of the east group nomads Peer Mohammad trusted intra venous fluids as he said: “I have experience that if a child is not given *stena*, (meaning intra-veinous fluids), it is difficult to stop diarrhea while *stena* does easily stop it”. Below are medicines found in this research, advised with unsafe dosage for diarrhea.

**Laxatives:** Sean was a drug largely available in nomad houses used for control of diarrhea, found in this research. It was perceived as a belly cleaner agent.

**Furazolidone:** Furazolidone pills containing kaolin and pectin was largely available in nomads’ houses.

**Metronidazole:** flagyl pills were available in some nomads’ houses.

**Tetracycline and Oral Rehydration salt (ORS):** These were the least used drugs. ORS is not perceived as a drug or an effective intervention for treatment of diarrhea.

**(f) -Diets**

There were some foodstuff not given to the child and his mother, found in this research. It is described bellow in two sub-parts.

**Child diet**

Foods, which are useful during diarrhea to a child, have already been discussed in this chapter (see food). Here are some foods prohibited during diarrhea.

**Oil:** oil is the foodstuff at the top of prohibited items. Nomads believed that from one side it is a hot food which contradicted with hot causes of diarrhea and from the other side it smoothes the guts and increases diarrhea. I think an economic reason is behind it as well, because butter oil makes the main income of nomads. Probably they think that during diarrhea the child’s belly cannot process the oil and passes it away, which is a waste of income. Taking of oil is commonly prohibited during other diseases among nomads as well.

**Hard food:** Vegetables, fruits, onion and beans are considered as hard foods (see 3.3.6).
**Hot and cold food:** (See food 3.3.6).

**All foods:** Some nomads restrict foods to bread and tea during diarrhea. Their number is not few, based on the finding of this study, 50% of nomads prohibit all foods during diarrhea. They simply stated that giving any kind of food during diarrhea exacerbates it.

**Sour and bitter:** Nomads think that sour and bitter food increase gut’s sore (see 3.3.6).

*Mother’s diet*

Lactating mothers are put on oil-free regimens, hot foods such as milk and meat and hard foods such as vegetables, dry meat and fruits are also not given to the mothers till the child recovers. Nomads believe that all foods eating by the mother pass to her breast fed baby through breast milk.

In general words, the aims of diarrhea treatment among nomads are to stop diarrhea and reduce the discomfort. These are achieved through applying of interventions that are selected based on diarrhea’s symptoms and causative agents. Nomads realize dehydration is a main focus of diarrhea treatment but the best positive thing found in this study is that they give fluids prior to, during and after the diarrhea.

When I probed which of these: medicine, fluids or food was preferred over the others to a child with diarrhea, it was found that medicine, as contemporary intervention, was preferred more than the others even above fluids which are life saving in diarrhea. It was also noted that when the child is very small (less than one year), nomads give the drug to healthy lactating mothers instead of their child in order for the drug to pass to her child.

**3.3.11 Prevention**

Prevention of diarrhea among nomads also received attention in this study. The data stem from key informants and from observations of the researcher.

Nomads don’t have latrines and specific place for defecation; they defecate openly everywhere around their residence. They collect used utensils such as dishes, pots and cups of the whole day and wash them once a day close to the water source, using soil as detergents. In reply to my inquiry, Haleema, a mother of the west group, said:
“I have no choice to use water of different sources; water of each available source is used to wash dishes and drink. I don’t know which water is dirty, if it is so I don’t have other option”. They put the pots and dishes under the sun shine after washing before they put them in the tents on the ground floor. They used any water around them for drinking, washing and all other purposes. The flocks drink from the same sources. The drinking water collected from the nearby river and in the mashk (bag made of processed sheep skin) once or twice a day is kept inside the tent. To drink the water, they pour it in an aluminum or plastic pot and everybody drinks from the same outlet of that pot, including sick people. Hand washing before and after eating is not a common practice among children, particularly young ones. The adults only pour some water to wet their hands; hand washing with enough water was not practiced. Washing of the hands after eating was not common even among adults. Peer Mohammad, with regard to the role of washing hands in diarrhea protection, said that he knows well that hand washing is effective in diarrhea protection but they don’t have enough water. From the one side they do not have enough utensils to collect water in, from the other side, the sources of water are always far from them and it is difficult to bring. As they are wandering throughout their whole life, it is impossible for them to have many pots, if so; they have to carry them all the time with them, according to him. With regard to personal hygiene; children don’t cut their nails, their hands were fully covered by soil. There was no proper place for bathing. Children more than six or seven years of age and men sometimes during warm weather swim in the river but young children and women couldn’t do. They don’t use soap even during bathing the children. They are poor and can’t buy soaps regularly, according to Zaheer, elder of the west group. In reply to where women bathe, Mea Gul, a grandfather in the east group replied; “they do manage it here close to the tents or river.”

Changing of a child’s clothes is not according to when it is dirty. Looking to children’s clothes, I observed that they were very grimy, and from the other side, it was very difficult to keep them unpolluted because they deal with ground and soil all the day and night. The young children were responsible for collecting sheep faeces every day. In front of each tent tons of sheep faeces were stored. Younger children used to play with it. These hills of stool don’t look to them a source of dirt and disease because their handling was their daily business.
They cooked fresh food for each three meals but there was no proper place to keep the leftover food. Three to four persons shared one pot during eating. Drinking of un-boiled milk of a sheep soon after milking was common among children. Some children directly sucked from the sheep’s breast. They did not consider it unsafe. Nomads knew that some diarrhea is caused by contaminated and spoiled foods but they did not wash some foods such as fruits before taking it. Haleema quoted from Luqman Hakeem, an eminent ancient traditional healer as: “if someone keeps his mouth closed for eating of spoiled foods he will never face diarrhea”. It confirms that they knew the role of hygiene with regard to diarrhea prevention.

In general, nomads perceived that poor hygiene results in diarrhea. They are well aware that hand washing, safe disposal of defecation and so forth, play a great role in protecting of their children from diarrhea, but they claimed that can not put them into practice due to poverty, lack of water, fixed shelter and tens of other reasons.
Chapter 4: Traditional and biomedical explanatory models of diarrhea and dehydration; Conclusions and recommendations

4.1 Introduction
In this chapter, first the traditional and biomedical explanatory models of diarrhea and dehydration will be compared and the major differences and agreement be discussed. Conclusions and recommendations of this study will be followed.

4.2 Traditional and biomedical explanatory models of diarrhea and dehydration

4.2.1 Discussion on signs and symptoms of dehydration:
The general signs and symptoms of diarrhea such as loose stool, fever, vomiting and pain mentioned by nomads are agreeing with biomedical ones. The foremost focus here is on signs and symptoms related to dehydration. Dehydration was not perceived by nomads as a condition developed as a consequence of diarrhea. They recognized dehydration as an independent set of signs and symptoms of diarrhea. They knew de vojod oobo kamekht (ooobo kamekht meaning reduction of body water) but did not make the causal link with diarrhea. The signs and symptoms related to dehydration found in this study are discussed below.

1) Cheghai or restlessness was the commonest symptom mentioned by nomads. In reply to the question what are symptoms of diarrhea, almost every body mentioned this symptom. However they believed that restlessness during diarrhea is related to spiritual factors. The traditional interventions for solution were tawez, dam and nazar wochawel (see rituals, section 3.3.10). Contrary to this, according to the biomedical model, restlessness during diarrhea denotes dehydration and advising of fluids is the only remedy.

2) There was unequally agreement in all three research sites that tenda or thirst reflects the need for body water. Nomads didn’t connect thirst to losing of water in the stool (dehydration) during diarrhea; they perceived thirst as an independent sign developed during diarrhea. Sultana, a mother in the clinic site, summarized thirst symptoms as:
“The child has thirst during diarrhea, wants water and drinks. If you don’t meet the needed water the child dies. During diarrhea the mouth is dry all the time, if it gets the needed amount of water its mouth becomes wet and it is rescued. The mouth should always be kept wet”.

Giving fluids was a traditional intervention which biomedicine agrees with, which is a good base for ORS introduction.

(3) Be-halee or torpor (drowsiness) was also widely experienced as an independent sign during diarrhea but not connected to dehydration. Each of the informants explained it as a consequences of diarrhea, as Mea Gul, a grandfather in the clinic site said:

“At the beginning when ill children stand from a sitting position, they feel darkness in their eyes. When the process gets worse they feel dizziness (vertigo) while changing position and finally become move-less.”

Traditionally there was not any specific intervention in this regard among nomads while from viewpoint of biomedicine torpor as a key sign represents severe dehydration (shock) which requires urgent intravenous fluid replacement.

(4) Nomads’ perceptions with regard to skin integrity; change of skin color to yellow or pale (zeer rang and rang allotai) and losing of elasticity did not differ from the above mentioned signs. They considered all these changes as independent signs and didn’t connect them to dehydration. There was not any specific traditional intervention in this regard, while in biomedicine, change in skin elasticity as a key sign, expresses severity of dehydration which requires urgent rehydration.

(5) Ghaw-chai stergai or sunken eyes, particularly when the eyes are dry and deeply sunken, is always considered as the bad stage of a disease. Nomads did not connect it to dehydration and believed that was caused by an evil spirit (ghost or fairy). Amulet and dam (see rituals, 3.3.10) were traditional interventions while from viewpoint of biomedicine; sunken eyes are considered the key sign to distinguish moderate and severe dehydration which requires urgent rehydration.

(6) Yakh-walai or coldness of the body is recognized during diarrhea while not connected to dehydration among nomads. Looking to bodily coldness as an independent sign, they accused contribution of evil spirit as its cause. Bodily coldness was considered as the last stage of life and beginning of the death process. Stopping treatment and
seeking help of religious elders were traditional interventions among nomads. From the viewpoint of biomedicine bodily coldness indicates severe dehydration (shock) which requires quick action for applying very urgent intravenous rehydration.

In sum, therefore, the key signs and symptoms of dehydration which indicate severity and urge biomedical doctors to start the rehydration and select its route are all recognized as independent signs (even disease) but their causes are regarded as supernatural. Therefore nomads look for supernatural interventions.

4.2.2 Discussion on causes of diarrhea

Some causes mentioned by nomads could be in agreement with the biomedical model such as infections (malaria), contaminated and spoiled foods (e.g. food left over from the previous day), and dirt. However some causes of diarrhea mentioned don’t match with biomedical thought. Hot and cold; wind, going barefoot and wetness, grief, the evil eye, inadequate handling of the child, flies and tiredness are considered causes that don’t match (or not completely) with medical literature. Doctors would consider some as contributing factors. Flies are transmitters of diarrhea while they themselves are not a cause. Grief and sorrow are only mentioned by Ahmadzai (2002) as a cause but these could be predisposing factors. What is mentioned by nomads as causes could, however, be a starting point for preventive interventions.

4.2.3 Discussion on Classifications

Some of the nomads’ diarrhea classifications are in agreement with biomedicine, such as heat stroke and baoō (neonatal tetanus, meningitis or convulsions, see 3.3.5) which nomads considered as independent diseases that included diarrhea. Also the nomads recognition of weaning and teething diarrhea connected with age are recognized by biomedical doctors as contaminated food or children putting dirty thing in the mouth are predisposing factors. Discontinuation of giving additional food to the child was the only traditional action taken, which according to biomedical doctors has harmful consequences such as malnutrition and anemia. Instead, hygienic advices such as giving of safe food to a child and hand washing are biomedical interventions.
Traditional classification of the **sunken fontanel** caused by downward pushing of uvula and palate as Mull et al (1988:59) also confirm, does not agree with biomedicine. Nomads’ intervention of pushing upward of the uvula (see *zobai*, 3.3.5) is by doctors associated with harmful consequences. According to biomedical knowledge, a sunken fontanel denotes dehydration of infants and improves by replacement of fluids. The **duration** of diarrhea did not seem to take a prominent place in nomads’ classification. Biomedicine emphasizes duration because diarrhea is the leading cause of under-nutrition. As long as diarrhea persists, the risk of acute malnutrition increases which makes a vicious cycle with diarrhea.

### 4.2.4 Discussion of treatment

Nomads’ health seeking behavior takes place in three circles; within the family, among neighbors (subdivided in two parts; same lineage group and surrounding villages) and professionals. The main players in the first phase were females, mainly grandmothers. In the second females’ were dominant again though sometimes males contributed. The decision makers competent for the third phase were only males, particularly grandfathers. Grandparents were the main over lookers of the whole illness process, because in their perception young parents are not enough expert for taking this responsibility and scared of unexpected bad consequences. The majority of nomads bypassed the second part of the second phase because they believed that its troubles and cost are the same as those of the third phase, while the last one is less risky (see 3.3.10).

Factors such as severity of the disease, insecurity of roads, low income, big distance, possible discrimination in health facilities, loss of dignity (*ezzat*), and poor communication at the health centers were considerations and constraints during decision making for treatment. Except the severity, observing the remaining factors led to long period of treatment at home and delays in asking help from health centers.

Numerous herbs were used for diarrhea treatment. The vast majority of informants perceived them as effective, though everyone was ambitious to get contemporary medical services. Financial issues were the most essential obstacle for this ambition. Biomedicine is agreeing with fruits or their extracts and juices used during diarrhea but not with all herbs used by nomads (see 3.3.10).
Giving of water and fluid to ill child particularly food-based fluids such as wheat flour boiled in water and rice water was practiced during diarrhea. This intervention is totally in agreement with biomedicine. ORS use was less common and not well known. ORS was not perceived as a drug and as an effective intervention. Laxatives as gut cleaner, to their perception, as well as irrational use of anti-diarrhea medicine such as furazolidone, metronidazole and tetracycline was common because from the one hand they perceived theses medicine as effective for diarrhea and on the other hand there was no inhibition for dispensing of antibiotics at the pharmacy (all drugs are available over the counter). Biomedicine, to the contrary, widely advises ORS and restricts anti-diarrhea medicines particularly laxatives, which were commonly used by nomads but strongly prohibited by biomedicine.

Advising food such as yoghurt and continuation of breast milk advised by nomads, evaluated as positive perceptions in agreement with biomedicine. Keeping diet, both child and mother and prohibition of essential food such as oil, meat and milk or restriction of food to tea and bread were common nomads’ interventions. Nomads believed that giving any kind of food in general and some such as oil or meat in particular, exacerbates diarrhea. Contrary to nomad practice, advising of additional food during and after diarrhea helps to stop diarrhea and restores the child according to biomedicine (see 1.4.2). Covering of ill children in animal skins doesn’t match with biomedicine. Instead of those, biomedicine advice cereals and continuation of common food and breast milk to stop or reduce diarrhea. Some procedures such as Zobai porta kawel (see zobai, 3.3.5) are extremely life threatening and don’t match with biomedicine at all.

4.2.5 Discussion on severity
Watery diarrhea with vomiting and blood in stool were considered severe conditions. According to grandparents, frequent loose stools, vomiting and blood in the stools for more than two days were their indicators for determination of the severity of diarrhea. Both above mentioned conditions are in agreement with biomedical thought in this regard.
4.2.6 Discussion on prevention

Nomads had understood that observing personal and environmental hygiene can prevent their children from getting diarrhea; they claimed however that doing this was impossible. Their life was designed in such a way that they couldn’t protect themselves from diarrhea (see 3.3.11). Still there are simple interventions such as hand washing prior to eating and after defecation that can prevent or at least reduce diarrhea attacks which according to biomedicine are cheap and easy to apply (see 1.4.2).

4.3 Conclusion

This study concludes that nomads are destitute people and totally neglected. They are hardly covered by Afghan’s public health system nor by other social services while they are about one fifth of the total population widely take part in many socio-cultural activities. They are moreover responsible for a large part of the country economic production. They positively influence the health of the total population by their mobility; selling or bartering their dairy products in isolated areas but can also disseminate infection diseases due to lack of health facilities.

Nomads’ thoroughly experience childhood diarrhea, and perceive it as the main killer of their children (see appendix B). They witness weakness (under-nutrition) and death as terrible and regretful consequences of diarrhea. They perceive the key signs and symptoms of dehydration, which should be a good foundation for selection and application of proper interventions, but missed the necessary link between dangerous signs and symptoms of diarrhea and dehydration as its cause; for biomedicine this link is crucial. Instead nomads attribute these signs and symptoms to spiritual causes which lead to various, sometimes hazardous forms of treatment and delays asking of necessary professional help.

Study of their diarrhea classification reveals that beside diarrhea, morbidity and mortality of heat stroke and bao (neonatal tetanus or meningitis and convulsions) is common and leads to the same consequences.

Understanding of the cause of diarrhea such as infection, contaminated food and dirt and their perception with regard to hot and cold imbalance could a be base for designing of preventive messages for diarrhea. At the same time mentioning some factors
such as sitting on wet land, going barefoot and tiredness could be another conclusion of this study, which confirms poverty and improper hygiene among nomads that predispose children to diarrhea. However, having of mistaken beliefs such as unpleasant mother milk and stopping or late initiation of food during weaning time, leads to child’s under-nutrition and improper development.

It has been concluded in this study that grandmothers and mothers play a main role in the first and second phases of care seeking behavior in diarrhea management. Due to various reasons and obstacles, nomads treat ill children for a long time in the family circle. Waiting for grandfathers, as competent decision makers for the second (partly) and third phase of care seeking, as well as their criteria delay proper treatment. The above mentioned evidences require adaptation of all local remedial interventions based on nomads’ useful perceptions to biomedical ones in order to proper manage a child with diarrhea at home.

This study concludes that initiation of water; food and food-based fluids were useful practices of nomads during diarrhea which can be also the base for proper rehydration of the children. However, advising of ORS was not common and ORS was not perceived as an effective intervention during diarrhea whereas improvement of this practice could be a life savior. Prohibition of ill children and lactating mothers from eating foods or certain foodstuff such as oil, milk, meat, cereals and water, which are vital, was a common malpractice. Taking of anti-diarrhea medicine, laxatives and the exposing of ill children to dangerous or irrational procedures such as pushing upward the uvula (3.3.5) and covering the ill child in a skin which complicate course of diarrhea were common hazardous interventions.

Nomads perceived that observing personal and environmental hygienic rules prevent diarrhea. However lack of health and veterinary services, schools, transportation, their overall poverty and mobile lifestyle, an unhygienic environment etc. all these factors together prevent nomads to take care of their health and hygiene and confronted them and their children to killer disease such as diarrhea.
4.4 Recommendations

Decreasing of diarrhea morbidity and mortality among nomads’ children requires changes in their care takers perceptions with regard to this disease as an essential cost-effective intervention.

4.4.1 Recommendations to health educators and health care providers: This study recommends health staff to provide the following health education to nomads, whenever they meet them, with regard to childhood diarrhea management.

Nomads recognized the general sings and symptoms of diarrhea which make it easy to identify their ill child on time. They also recognized the key sings and symptoms of dehydration. Based on these perceptions, nomads could be encouraged to begin proper treatment early. Since nomads couldn’t connect the perceived dangerous signs and symptoms of diarrhea and dehydration, it requires health education. This study recommends to health educators and health care providers to put emphasis on the relation of these signs and symptoms to dehydration instead of spiritual causes. Release of water from a water-full plastic doll could well demonstrate shrinking skin, sunken eyes and fontanel. Exploring of thirst, restlessness and particularly torpor (drowsiness), convulsion, body coldness (shock), sunken fontanel and very dry and sunken eyes should be more stressed as signs of severe dehydration which require quick action, asking professional help rather than stopping of treatment or asking for irrelevant care.

Nomads well recognize some causes of diarrhea (though some might be predisposing factors). This perception might provide groundwork for designing health messages with regard to the prevention and early treatment of diarrhea. Causes such as weaning and teething diarrhea need explanation during health education and nomads should be encouraged to continue to give additional food to their ill children. The role of contaminated water as important cause of diarrhea was not mentioned by nomads (except sour water). Their perceptions with regard to sour water should be adapted to contaminated water in general as cause of diarrhea. It should be included in health education messages.
Consideration of frequent watery diarrhea with vomiting and blood in the stool are good indicators used for recognition of severity of the diarrhea among nomads. This perception should be integrated with signs and symptoms for severe dehydration which have been mentioned in the first paragraph of this section. Persistent diarrhea (more than two weeks) should also be included in the health education program for nomads, because persistent diarrhea requires special management by professionals without which it leads to under-nutrition and its related complications.

Grandparents and parents particularly females, are the main care takers of ill children during the whole diarrhea period; therefore they should be the main focus group during health education programs for diarrhea among nomads. Considering the seriousness of the disease as indicator for making decision is a good foundation for seeking proper treatment. This perception is essential to identify signs of severity and it should help during health education to avoid delay at the first circle of seeking treatment. Bypassing the second circle is another positive perception to be more strengthened during health education to promote the seeking of professional treatment particularly in severe cases.

Nomads’ perception with regard to the initiation of water and fluid particularly food-based fluids is the best foundation for easy introduction of ORS as a choice fluid and safe treatment of dehydration. Meanwhile health care providers should be recommended to provide enough ORS to meet the needs of ill children in case of delay for asking help. The nomads’ enthusiasm for contemporary medical treatment should also widely be used to make them accept ORS as medicine and up to date medical intervention during diarrhea. Giving of food especially yoghurt and cruds to ill children is a useful practice of nomads during diarrhea. The hot and cold imbalance perception of nomads should be widely used to adapt their locally available food for health education during diarrhea. Nomads’ perceptions and beliefs concerning rice, wheat and fried peas (see 3.3.10); should be promoted for designing of health education messages in order to replace all herbs traditionally used by treatment with cereals. Replacement of herbs by cereals such as wheat-flour, rice, peas, lentil and beans based food is recommended to be included in health educations messages.
Prohibition of oil, meat, milk and other useful food has negative consequences on children and their lactating mothers. The concept of hard and soft foods might be positively used by health education during advising on food and fluids to ill children. Nomads should be encouraged to not put lactating mothers and children on a diet and prohibit certain foods. Health education should emphasize the giving of one extra meal which includes oil (to provide more energy) to ill children during and after a diarrhea attack. Explaining the hazards of non-prescribed drugs, particularly laxatives, or use of animal skin and stomach (as sources of infections) and carrying out of dangerous procedures such as pushing upward of the uvula should be included in health education.

The health educator should disseminate messages with regard to prevention of diarrhea. These should be based on nomads’ perceptions with regard to causes of diarrhea and its prevention. The health educator is recommended to disseminate the following five key elements of diarrhea prevention: keeping clean water particularly drinking water, hands washing prior to eating and after defecation, safe disposal of faeces, eating of safe food, and avoiding dirt from their close environment.

4.4.2 Recommendations to policy makers
Promotion of nomads’ health requires inter-sectorial cooperation. This study recommends to all involved institutions to provide a clear policy with regard to nomads, particularly the ministries of health, agriculture (to prepare veterinary services), education and rural rehabilitation and development. The ministry of frontiers and tribes affairs, as the main responsible for nomads’ issues, recommended to identify, plan, coordinate and integrate these efforts. Reduction of poverty, as the main cause of disease morbidity and mortality, should be at the top of these efforts.

This study recommends to the ministry of public health to develop a particular policy with regard to nomad’s health. This policy must be applicable and sustainable. Community participation, I think, will facilitate its application. A special recommendation both to the ministry of health and private pharmacists is to develop a regulation prohibiting the unlimited dispensing of antibiotics and hazardous drugs at the counters.
Training of health volunteers for nomads is the next recommendation. Youth must be selected among nomads for this purpose. It might be one option for urgent solution of nomads’ health problems (it again first of all requires a policy). Erection of mobile clinics from time to time for nomads could be another solution.

The most effective way of health messages transmission is the radio (since nomads used to listen to it, as I found). The study recommends therefore to all concerned institutions to transmit their health message through radios as the best channel for the nomads.
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Appendix A

Questionnaire form

Date: 
Place: 
Time: 
Tribe: 
Clan name: 
Name of interviewee

1-Education; can write & read: Elementary: Medium: High: (School)
2-Number of family members: male: female: Children:
Children less five year: Age of the child with diarrhea: 3-attacks/year:
4-Average duration: 5-accompanying disease:

Number your questions!!

The following open ended question should be asked each interviewee to understand their perceptions with regard to childhood diarrhea.

Symptoms and signs

6-When do you consider your child to have diarrhea? (What signs and symptoms)
7-How many terms do you use for same condition?
8-How many different types of diarrhea do you know?
9-Which different names do you use for these different types of diarrhea?
10-What signs and symptoms (type) do you consider severe or not so severe? (what criteria do they use to classify)
11-How many types of diarrhea do you know according to the time during a diarrhea episode?
12-When a ill child loss his body water due to diarrhea, what you call that condition and what terms do you use for it and which signs appear?
13-Is there any relation between dehydration [local name] and diarrhea?

13-Which signs of dehydration consider serious and which not?
14-Which signs of dehydration are very dangerous?
15-How do you describe sunken eyes and sunken fontanel?

16-Which diarrhea is more serious? (watery, bloody,...according their classification)
17-What are their differences?( to know the causes)

18-What are the common consequences of diarrhea?
19-Does diarrhea sometimes kill children? (Especially if they are less than five years old)?

Next concerning the causes
20- What causes of diarrhea do you know, think and view (according to type or signs/symptoms)? What are they?
21- Which causes are more serious than others? (classification according to criteria’s of seriousness)
22- Do you know how diarrhea is passing on from one child to another? Are all types infectious??
23- Which types of diarrhea occur with a specific age of a child?
24- Have you heard some new causes of diarrhea that you did not know yet? What are those causes? From whom did you hear them?

Treatment and prevention

25- When your child has diarrhea how do you start to treat him/ what is you first, second and so forth steps?
26- Who makes the decision for treatment and change in treatment? Why do you select this or that treatment? (Affordability, beliefs, seriousness, etc.)
27- Who is the main care taker when your child has diarrhea?
28- What home remedies do you advice? Which drugs and herbs do you use?
29- What is your expectation from each of the treatments you practice?
30- Which interventions do you consider help to stop diarrhea and which worse it?
31- Are there special foods you give the child to eat during diarrhea? What is that?
32- Can a child use liquids when it has diarrhea? Which liquids do you give?
33- What is the most important part of diarrhea treatment to you and why? (Medicine, fluids, food…)
34- How do you evaluate the contemporary treatment of diarrhea?
35- Which special diets do you advice for a child with diarrhea and dehydration?
36- Do the nursing mothers have to eat certain foods when their child has diarrhea? Or omit certain foods? What are they?

37- Can you take some actions to prevent diarrhoea? What are they and which are important?

38- Are you always able to carry out these actions? If no, why not?
39- What advices did you get from health staff and others whom contact health staff concerning the care of a child with diarrhea and it prevention? (Safe water and hygiene)?
40- What is your opinion about it?

Appendix B

Common diseases and the causes of death among nomads’ children
During of two focused group discussion, nomads were asking for the ten common diseases they suffer from and five common causes of their children death. Below is the result of both in two research site. It should be mentioned that all participants agreed upon them. The word are directly translated without modification.

1-Lander site

**Ten top common diseases**

1. Cough  
2. Diarrhea and abdominal pains  
3. Fevers (typhoid, *Jal*)  
4. Breath shortness  
5. Skin pustules  
6. Urinary problems  
7. Pains (body)  
8. Jaundice  
9. Disability  
10. Eyes problems

**Five top child killer causes**

1. Pneumonia  
2. Diarrhea  
3. *Baoo* (convulsions)  
4. Fevers (*Jal*)  
5. Jaundice

2- Tangee site

**Ten top common diseases**

1. Fevers  
2. Cough  
3. Diarrheas  
4. Disability  
5. Breath shortness  
6. Blood deficiency (anemia)  
7. Pains (back)  
8. Sore throat  
9. Painful urination  
10. Skin pustules

**Five top child killer causes**

1. Fever  
2. Pneumonia  
3. *Peach* (dysentery)  
4. *Baoo* (convulsions)  
5. *Jal*

**Diarrhea attacks**

It has found that each child less than five years, annually confronts diarrhea in average five (four to six) times and each episode lasts ten (seven to fourteen) days.

Appendix C

Pictures of nomads’ Practices
Utensil put under sun after washing

Reminded food and drinking water keeping

Water collection pot and *mashk* (sheep skin)
Inside tent, life with ill goat

Children stored sheep faeces

Tsakhat, pieces of paper written by religious elder put in water advise to ill child