Chapter 2

WE ARE THE FIRST DOCTORS HERE AT HOME:
WOMEN’S PERSPECTIVES ON SANITARY CONDITIONS IN MOZAMBIQUE

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ABSTRACT

Lack of sanitation is an important public health issue in low-income countries. Globally, the lack of sanitation affects some 2.8 billion people, mainly the poor, women and children. The people affected are deprived of their dignity and at risk for several severe diarrheal diseases. However, improvements are often hindered by the fact that human excrement is a sensitive issue, and feasible solutions fail to consider cultural and gender issues.

With this background, this chapter focuses on women’s sanitary conditions in a rural African village (Mozambique). An ethnographic approach was used to investigate the everyday sanitary conditions, understood through a theoretical framework of equity in health, and gender was used for understanding. During a two-month stay in the village, women in three households were followed and observed in their everyday work to explore the sanitary prerequisites. Furthermore, official and traditional leaders in the village were interviewed about their perceptions of the women’s sanitary situation.

The findings show that every woman and her family members are obligated to deal with their human waste on an individual basis, creating solutions mostly from what could be obtained free within the confines of their yard. This unhygienic situation rendered the women fearful of disease and accidents, especially for their children, resulting in both psychological and physiological discomfort. Maintaining sanitation was female work. However, only men were allowed to build new latrines, causing difficulties for the many women without husbands. Several positive forces also existed: openness, interest, knowledge and an already existing net of community development. Improvements are instead held back by poverty and gender disparities, depriving women of control over their own home and health.
Keywords: determinants of health, ethnography, Mozambique, poverty, rural, sanitation, women

INTRODUCTION

Today some 2.8 billion people globally lack adequate sanitation. It is mainly a problem of the poor, women and children in low-income countries, causing deadly diseases in the form of diarrhoea and intestinal worms. Too many die from this preventable cause. In Africa, two out of three individuals lack an acceptable sanitary situation (Vlugman, 2006). As this chapter is written, a new cholera epidemic raging in Zimbabwe has gained the world’s attention. The neighbouring country, Mozambique, where this chapter is set, is also at risk of the spreading epidemic (World Health Organization [WHO], 2008).

Sanitation is a governmental public health issue, but it often tends to fall behind when governments and organisations work for improved living conditions for the poorest. This has been suggested to partly depend on a lack of recognition for how culture and gender affects this often awkward subject. Sanitation is not merely a public health problem due to lifestyle or personal habits; it is a complex subject, affected by emotions, taboos and obvious equality problems. Few people are comfortable in a discussion of human faeces and urine.

Lack of sanitation affects women in a special way: they carry the main responsibility for maintaining hygienic standards. They often adhere to stricter privacy demands, while at the same time having less power to improve their situation. This chapter will focus on women’s sanitary conditions in a rural African village (Mozambique), their perceptions of and preferences for what creates a sanitary home. That knowledge can be of general interest to public health workers and others who want to understand rural low-income families’ sanitary prerequisites.

BACKGROUND

The Setting

Mozambique

Mozambique, officially the Republic of Mozambique, is a country in southeast Africa bordering the Indian Ocean to the east, Tanzania to the north, Malawi and Zambia to the northwest, Zimbabwe to the west and Swaziland and South Africa to the southwest. Within an area of 801,590 km² the population is estimated at 21,284,701 (2008). The official language is Portuguese. There are about 13 other national languages (Embassy of the Republic of Mozambique, 2008). After World War II, while many European nations were granting independence to their colonies, Portugal’s dictator António de Oliveira Salazar clung to the concept that Mozambique and other Portuguese possessions were overseas provinces of the mother country, and emigration to the colonies soared (Mozambique’s Portuguese population was about 250,000 in 1975). The drive for Mozambican independence developed apace, and in 1962 several anti-colonial political groups formed the Front for the Liberation
of Mozambique (FRELIMO), which initiated an armed campaign against Portuguese colonial rule in September 1964. After 10 years of sporadic warfare and Portugal’s return to democracy, Mozambique became independent on June 25, 1975. Portugal’s policy of under-developing its colonies, combined with the rapid exodus of Portuguese people, left Mozambique with few internal human resources. FRELIMO established a one-party Socialist state, and quickly received substantial international aid from Cuba and the Soviet bloc nations (Embassy of the Republic of Mozambique, 2008).

In 1982, Renamo, an anti-Communist group sponsored by the Rhodesian Intelligence Service in the mid-1970s, and sponsored by the apartheid government in South Africa as well as the United States after Zimbabwe’s independence, launched a series of attacks on transport routes, schools and health clinics. The country descended into civil war. In 1990, with apartheid crumbling in South Africa, and support for Renamo drying up in South Africa as well as the United States, the first direct talks between the Frelimo government and Renamo were held. In November 1990 a new constitution was adopted. Mozambique was now a multiparty state, with periodic elections and guaranteed democratic rights. The General Peace Accords were signed in Rome in October, 1992. A UN Peacekeeping Force (ONUMOZ) oversaw a two-year transition to democracy (Embassy of the Republic of Mozambique, 2008).

When the civil war ended, the country’s infrastructure was devastated. People had lost social security from their extended families. Schools and hospitals were destroyed and the state was virtually bankrupt (Alberts & Hirvonen, 1993; Ferrell, 2002). During the last decades the economic situation and the infrastructure has improved (Van den Bergh-Collier, 2000), but the national incidence of poverty was in 2006 still 54 percent, according to Mozambique’s PARPA1. The poverty incidence in the Gaza region—where Maciene, the village in which this chapter is set—is just above the average, while the neighbouring Inhabame region reaches up to 81 percent (Republic of Mozambique, 2005).

After the liberation from the colonial power, women’s emancipation was important on the political agenda and equal rights were included in the constitution (Ferrell, 2002). However, the political and legislative power is still favours men, who occupy most of the parliament seats, senior government and civil servant positions. In everyday reality, men are often seen as the main breadwinners, further complicating women’s entrance in the labour market, who are given lower salaries and uncertain employment forms. The absence of income makes it difficult for women to invest when they are denied bank loans, despite being more likely to meet their payments. Poverty is especially common among female-headed households and families in which women are discriminated against (Van den Bergh-Collier, 2000).

The Mozambican women carry the responsibility of caring for most of the nation’s food production, child care and household maintenance. They make up just over half of the labour force, and 90 percent of the economically active women work in farming. Peasant farming is, however, not visible in national economical statistics, as it is simply seen as an extension of women’s natural responsibilities. Sanitation, water and waste are often women’s responsibilities in Mozambique (Van den Bergh-Collier, 2000).

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1 Plan for the Reduction of Absolute Poverty) are documents written by the of world’s poorest countries on The PARPAs (Action how they will tackle poverty, to be eligible for cooperation with the World Bank (Republic Mozambique, 2005).
Lack of potable water and sanitation has been a serious problem in Mozambique for a long time. The majority of the population still uses onsite solutions such as latrines or septic tanks. Children below five who suffered from malnutrition totaled 41% in 2005, with diarrhoea as the main risk factor (United Nations Development Program [UNDP], 2005). Latrine and sanitation programs have been promoted several times since independence, but many advances were lost during the civil war. Both expanded sanitation and improved gender equality are PARPA goals aiming to improve the nation’s human capital (Republic of Mozambique, 2005).

**Life Conditions in Maciene**

Maciene, the rural village focused on in this chapter, has about 1,000 inhabitants in the centre, while 6,500 inhabitants in the surrounding settlements are connected to the school, health centre and the Anglican Church (“Mälardalen Encounters Mozambique”, n.d.). The health centre aids about 3,500 persons per month. The village hosts a school for grades one through eight. However, many children, especially girls, drop out early. Most inhabitants live of peasant farming, cattle breeding and small-scale fishing. Many men work outside the village in the capital Maputo, or in South Africa, leaving the village with a high percentage of women, children and elderly. The houses in the village are made of bricks or sand and branches. Running water and electricity is unusual outside the main road. The setting is Christian, and the majority of the villagers belong to the Anglican Church (Anglican Church, 1999; 2001).

Earlier studies show that the households consist of extended families, not limited to the closest blood relatives. There is a clear hierarchy in the households, with seniority and men in favour as the as the main decision makers. Women carry the main responsibilities of the households, while boys can help out as an additional chore. The boys describe themselves as being in a fortunate position (Gidlund, 2006; Wiltfalk, 2008).

To fetch water, some households use the community well, others use wells or open waterholes or the nearby lake. However, Holtmar and Wretling (2004) describe that the nearby lake is contaminated, as it is used to wash clothes that release detergents, and when cattle are led there to drink. Lindén (2005) found that for the villagers the contaminated water was a problem. The hospital has many patients with sanitation-related diseases like diarrhoea, malnutrition and urinary tract infections.

**Sanitation and Public Health**

Sanitation is a public health issue that mainly affects low-income settings, especially rural communities and women and children. The meaning of sanitation is the separation of people from human and animal faeces; urine does not pose the same risks. For people to uphold the criteria of separation, they need hygienic ways of disposing of human excrement, together with good waste disposal of solid and liquid waste. Sanitation and pure water are closely connected, because it can become a bearer of pathogens in many ways. Animals drinking from the same sources as humans and flies flying from exposed faeces to a family’s water container are such examples. When faeces enters the body it brings bacteria, virus or parasites, causing a number of diseases. Typhoid fever, cholera and intestinal worms are
common examples with diarrhoea as the most prominent problem, causing dehydration, malnourishment and anaemia (Avvannavar & Mani, 2008; Cairncross, 2003; Landon, 2006; Vlugman, 2006).

A user-friendly and a medically-correct sanitary system are dependent upon a range of factors, including technical, cultural, political, social, environmental and economic factors.

Open defecation in canals, roads or fields is an inadequate solution. Pit latrines, where faeces is dropped and stored on site, have less effect on the environment, but instead pose a bigger risk of leaking pathogens into the groundwater. In practical terms, good sanitation and the avoidance of diseases is obtained through a septic tank or by connecting to a public sewage net (Cairncross, 2003; Vlugman, 2006).

Avvannavar and Mani (2008) mean that the social function of toilets is often forgotten in sanitation promotion. One such example is how organisations often favour ecologically sound latrines in rural development programs, but what people really want is water closets like in the cities resulting in failure of the projects. A study of rural Benin families showed that for the families a toilet represent safety, health, wealth and prestige. It could become something to leave behind as a proof of achievement during one’s lifetime (Jenkins & Curtis, 2005).

However, Cairncross (2003) states that hygiene practices in fact might play an even more important role for people’s health, than having a sanitary latrine. Equally important is washing of hands after performing ones needs, and not performing them in the field that can contaminate crops. To keep good hygiene people need good water for cleaning In areas without sewage the only water available is often the drinking water, that often ends up as the place where people have to throw their solid and liquid waste. The connections between families who have toilets and their lower diseases risk is more confounded by the fact that they often are more educated, and thus more likely to keep good hygiene. (Avvannavar & Mani, 2008; Landon, 2006).

The need to defecate and urinate is a primal need that ideally should be performed in a safe, private and comfortable place. What this means can differ among ages, sexes and whether one has any disabilities. If people lack a latrine, or have a deteriorated version, they can be at risk for accidents, insect bites or sexual assaults. A good latrine or toilet can thus be physiologically important if it can generate a feeling of safety. People can then perform their needs regardless of weather, if others are present and after dark. On the other hand, some individuals prefer to relieve themselves in the open; men especially can choose to perform their needs in the open even if there is a latrine or toilet nearby (Avvannavar & Mani, 2008; Jenkins & Curtis, 2005; Water Supply and Sanitation Collaborative Council [WSSCC], 2006).

Culture and religion are presets for how people view their excrement and how it should be cared for. Human excreta are tied in to sexual morality and personal hygiene. Faeces and discussions about it are taboo to some extent, while people generally have a more relaxed attitude towards urine. Fear of faeces is somewhat rational, but can become an obstacle if it causes avoidance behaviour. Children’s faeces are considered more harmless. The taboo nature of the excreta can diminish the efforts put towards improving sanitation from private actors, organisations and governments (Avvannavar & Mani, 2008; Vlugman, 2006).
Gender Issues

All over the world women can be observed as responsible for producing household goods and services and caring for children (Kulick, 1987), while at the same time having minimal access to power over politics, civil society and labour markets (Van den Bergh-Collier, 2000). This division is often defended from a biological point of view, saying that men and women have different destinies depending on their reproductive roles. In this chapter that view is discarded, claiming that what appears to be biology is in fact constructed in individual minds and culture (Kulick, 1987; West & Zimmerman, 1987). The theory of social construction is based on the assumption that gender differences are created and sustained over time simply by applying them. A key factor is that children learn as they are very young what it means to be male or female (West & Zimmerman, 1987).

However, most gender theories are based on the experiences of white western women (West & Fenstermaker, 1995). From the African woman’s point of view gender theory can be seen as not applicable; saying gender oppression is primarily a European invention. But it can also be valid, seeing for example old costumes testifying of disparities, like lack of inheritance rights and arranged marriages (Aina, 1998; Ata Aidoo, 1998).

Views on women’s bodies and their waste products are a culturally loaded factor. Security, dignity, comfort and privacy are all issues that have been shown to be especially important in order for women to be pleased with their sanitation (Jenkins & Curtis, 2005; WSSCC, 2006). Women are expected to be more private about their primal needs than men, and that becomes difficult if sanitary facilities are missing or inadequately equipped for women’s needs (WSSCC, 2006).

If a latrine is missing women are sometimes forced to wait to relieve themselves until they can seek shelter in the darkness (Avvannavar & Mani, 2008). Waiting can become a health problem when it sets constraints on liquid intake and thus causes dehydration as well as urinary tract infections and constipation (Vlugman, 2006). Washing haphazardly after menstruation is a risk factor that can arise when women are ashamed of their bodies and their waste products (WSSCC, 2006).

Women’s empowerment is thus inextricably linked to sanitation (WSSCC, 2006). Women’s work in the households is very time consuming, limiting their opportunities to do other productive activities or resting, and exposes them to pathogens. However, the producing of household goods and services also give women a vast amount of knowledge and vested their own interests of the families’ sanitary conditions (Vlugman, 2006). Development and maintenance of technical solutions related to water and sanitation have been shown to be more sustainable if handled by women, but women are often seen as biologically unfit for technical work (WSSCC, 2006). In reality women’s involvement in development work are often hindered by gender structures. Loosening social constraint on women’s say and decision making is thus an important factor for sanitation development (Mello Souza, 2006).

Equity and the Determinants of Health

The majority of the sanitation related literature claims that poverty is the main underlying cause of bad sanitation, rather than individual hygiene behaviours. Since the Alma Ata declaration in 1978 the World Health Organisation (WHO) and the United Nation have equity
in health as a prime objective of the public health policy (Scott, Stern, Sanders, Reagon, & Mathews, 2008; WHO, 1978). ‘Determinants of health’ are used to describe personal, social, economic and environmental factors that determine the health statues of individuals or populations (WHO, 1998). Dahlgren and Whitehead (2007) state that equity oriented health policies is aiming to reduce the health hazards for less privileged, and make the healthy choice as easy for them as for the most affluent groups.

Dahlgren and Whitehead (2007) ecological model contains four different ‘policy levels’ with determinants that can threaten, protect, or promote health and can be affected by different types of political actions (see Figure 1). Such a holistic perspective takes in to account that one determinant can be affected by all levels in society; different determinants can interact with each other and they can have different effects on different people. The core of the model represents individual factors like age, sex and the genes. These factors must be included for understanding, but can hardly be seen as open for change. The first adjustable layer is instead lifestyle behaviours, like diet, smoking and exercise. For people to be able to change their lifestyle public health efforts should focus on giving the individual information and tools for change. Layer two represents the people that surround and give support to the individual, such as family, friends and the local community. For change to happen on this level, efforts should focus on helping the local community, and to give social support to individuals and families. The aim should be to help people find their intrinsic strength to reduce their health hazards (Dahlgren & Whitehead, 2007).

Layer three consists of the material and social conditions people live in. Sanitation is represented there, together with other similar services like water, education and health care. Improvements on that level should focus on policies and strategies. In the uttermost level are the major structures of the nation, the region and the world. At the highest level interventions require changes cutting across all sectors, and aim at long-term structural efforts.

The fact that the model is layered does not mean that different issues are only attributed to one level. Smoking for example is not only an individual lifestyle question; it is also a question of laws and taxes belonging to level four (Dahlgren & Whitehead, 2007).
METHODOLOGY

Ethnographic Approach

The aim of this chapter is to describe women’s sanitary household conditions in a Mozambican rural village (Maciene) with focus on the impact of inequity and gender relations. The overall design for the research is built on an ethnographic approach for international public health research (Crang and Cook, 2007; Dahlgren, Emmelin and Winkvist, 2004; Pilhammar Andersson, 2008). The ethnographic way of working and the Mozambican conditions is well known by the first author (Söderbäck, 1999; Söderbäck & Christensson, 2007). For this chapter the fieldwork was made by the second author.

An ethnographic approach suits to understand the local conditions as it strives to “understand parts of the world more or less as they are experienced and understood in the everyday lives of people who ‘live them out’” (Crang & Cook, 2007, p. 1). No setting can be expected to be a homogenous society. It is important to search for diverging views, to expose different manners and experiences. To understand others one must get to know them and their surroundings. The ethnographer participates in social relations going on in the setting. The knowledge from the field-research is therefore neither objective nor subjective, but inter-subjectively created within the relationships. It is therefore important to get as close as possible to everyday sanitary dealings in the setting from the women’s perspective, while at the same time trying to stand aside and see actions that they might not always even acknowledge themselves. To gain a holistic view the fieldwork in the setting was done for a prolonged period of time.

The Informants

The key-informants in the village are women. Six women were contacted via a gatekeeper, the rest through snowball sampling. The final sample contained women between 16 to 78 years of age, who all cared for their households. The daily life in three households were observed. One household consisted of a married couple, living in a large household with several separate houses, running water and electricity. That made it possible for them to own things like a refrigerator and a TV. They could enjoy these relative comforts because they had employments before retiring.

The two other households were run by women whose husbands had left them and their children to find work elsewhere. One woman lived in a family with two other grown women, of whom one had an employment that made it possible for them to afford a stable house of bricks and concrete. The other woman lived alone with her five children in a small house made of sticks and zinc. Her only income was the field.

The household’s incomes reflected their sanitary conditions: the couple had a septic tank with a flush toilet (see Picture 3), the larger family had a concrete latrine (See Picture 2) and the third woman had a plastic cover for her pit latrine (see Picture 1).

To fully understand sanitation and hygiene on a community level, the local systems of political, community and religious leaders are also important. Four such leaders were included, representing the church, the hospital, the political and the traditional leadership. The traditional leader is a part of Mozambique’s heritage from before the national state (Cipire,
1992). The political leader has the official political power, but the two work together for a balanced community.

Picture 1.

Picture 2.
Data Collection

The interviews always focused on women and sanitation, but the questions were somewhat different with the women and with the leaders. The main themes for the women were caring for sanitation and what they thought of their situation. The village leaders were interviewed about cooperation above household level, their view on the villages’ situation, development needs and possibilities. The interviews were kept semi-structured to facilitate the translation process. The informants spoke either Portuguese or the local language Shangana. Two translators were helpful in the process.

Participant observations were made in the three households. During the observations activities at the field and at home were followed by the fieldworker. No special schedule was constructed before the observations. Instead the observations included all personal hygiene practices that could be observed, and housework like washing, cleaning and showering with regards to how it was done and by who (and who did nothing). During the observations field notes and pictures were taken. Burgess (1984) might call that “observer-as-participant” rather than the ideal participant observer that fits seamlessly in to the lives of the informants.
The ethical considerations were performed to fulfil the Swedish Scientific Academy’s ethical requirements for social science and humanistic research (The Governing Board of the Swedish Research Council, 2002). The informants were notified of everything that might affect their will to participate in the interviews and observations, such as the aim of the study, its purpose, promise of confidentiality and the freedom to abort at any moment. When cameras and audio records were used, consent was sought. For the village officials a letter of approval was written by the gatekeeper, to inform them about the field researcher’s status as an official guest of the church.

Analysis of Data

The interviews and observations were continuously transcribed. The women have been given confidential names, and the leaders have been given codes. The quotes used in the findings section are also modified by removing repeated words and cleared up grammatically (Kvale, 1996), the latter probably a shortcoming of the translation rather than the informants. The observation records are written according to an analysis schedule containing six headings: descriptions of the setting, the people’s interaction with the setting, the observers own participation in the setting, reflexions on the setting, methodological reflexions and personal reflexions.

The diary and the transcripts are analysed by using qualitative content analysis, following Lundman and Häggren Granheim (2008). Meaning-units, sentences or words, in the transcriptions were concentrated to construct categories and themes for the findings. This method is suitable for ethnographical work because the form of the text for the ‘units of analysis’ does not matter. The method is also holistic, because all fragments like sentences or words can be traced back to the full text from which they were derived.

Writing Ethnography

The findings in this chapter are written in a narrative style to tell the story of the informants and their surroundings and capture the everyday life of the women’s mastering of their sanitary conditions. The findings section is descriptive, that is staying close to the informants own words. Interview and observation records are mixed. The focus has been to highlight diverging views of the informants, to show that not even a small community like Maciene is a single unity (Sandelowski, 1998).

FINDINGS

Caring for Sanitation

Personal Hygiene

The households in Maciene cared for their excrements in different ways depending on their economic situation. Most households needed to create solutions to take care of their needs within the confines of their own land. A few families had an income that allowed
them to install a septic tank, running water and a flush toilet. These toilets were appreciated, but often flushed poorly why faeces stayed in the bottom of the bowl.

The basic construction of a latrine was based on a ‘drop-and-store’ method starting with a deep hole that was stabilized at the top with thick branches. To give the users privacy and avoid smells and flies spreading to the yard, the latrines placed to be hidden by other structures or at the outskirts of the yards. On top of the holes the families’ constructed different seating or squatting arrangements made from wood or pots. For example one woman had taken a clay pot, pierced a big hole in the bottom and then fastened it in the sand upside-down (see Picture 1).

If the family could afford it they had improved their latrines by buying a plastic or concrete plate to place above the hole to stabilize the structure. Most latrines had bought or makeshift lids, like pieces of palm trees, to reduce the number of flies. The lids were however rarely used, and some families lacked covers all together. Old magazines were sometimes used as toilet paper.

Because the latrines were moved once the holes filled up, maintenance and construction were of secondary importance. The construction of the latrine walls was often unstably made of palm leaves or bamboo sticks, the latter sturdier but had to be bought. The latrines almost always lacked roofs, and because of this one woman said she could not perform her needs during rain. It was not uncommon for a family to have at least two latrines, in varying conditions to make it easier for visitors to find a free latrine. If a family employed contractors or maids they were confined to the household’s oldest latrine.

The families cleaned their latrines and toilets with water, coal and detergents to remove germs and bad smells. They did not keep any water basins for washing their hands at the latrine, but the women mentioned washing with water as an important practice. When the latrines filled up they were covered in sand and a new hole was dug. The time to fill a latrine differed. For one family it took two years; another woman said that heavy rains could fill up or cause their latrines to collapse within three months.

There were occasions when people performed their needs outside of the latrine, and a few households still lacked latrines altogether according to a leader. One option observed was to urinate in the shower. This was explained by not having to feel the smell of the latrine unless it was absolutely necessary. Sometimes the women had seen villagers defecating at the field, which was seen as unhygienic and dangerous.

The shower construction reminded of the latrines, but because they were rarely moved the households could invest in sturdier constructions (see picture 4). The showers were considered less private than the latrines, and were often placed closer to the yard, with an open door. The women disliked having to stand on the sand and put stones or old bags to stand on, or bought a concrete floor if they could afford. An alternative to the outside shower, used by some households, was a shower or bathtub with running water. Children showered and changed clothes before school, while the women cleaned after finishing the day’s fieldwork and cooking. Showering used about 20 litres of water and they used rags from old food sacks and stones to scrub body and feet. The young often took care of their own showering, which could be less than thoroughly performed.
To care for their menstruation the women used either cotton, disposable or reusable pads and cleaned themselves in the latrine or in the shower. The menstruation articles were kept private; one woman who cleaned her menstruation pads hung them to dry in her room where no one else could see them.

**Food Hygiene**

Preparing food took the largest parts of the women’s days. First at the fields, then preparing meals and lastly doing dishes. Food and water was mostly stored in large quantities in sacks or buckets inside to shield it from flies, thieves and birds. However sometimes food was just left on the ground with the animals, for example when the maize was dried in the sun. Water was gathered at different places depending on where the families lived and their economic situation. One family that had installed tap water kept backups in the form of rain water in a cistern for when the tap water lost pressure, which often happened. The other two observed families had five minutes’ walk to a hand pump and a shallow well in a swamp area.

The buckets for storing water could be used for other things like washing dishes. The families were more careful with the cups for scooping up water that were always kept clean, and used solely for that reason. The water was either boiled or drunk as it was; none of the families used any special purifiers in their water. The water accompanying meals was often in the form of tea, but when drunk between meals it was not cooked. To cook the food and water, firewood had to be gathered at the fields. The women walked between two to twenty-five minutes to gather the amount of wood required for about one family meal.

Most families lacked an indoor kitchen and prepared their food sitting close to the dusty ground and the animals, in the shadow of a tree in the yard. The kitchens and their utensils could sometimes be shared with friends and family. When preparing food it was mostly
cleaned in some way, either mechanically by peeling it or picking out dirt, or by soaking it with water. It did happen that people ate food that was not cleaned. One woman was for example observed crushing maize full of dirt and bird feathers and especially children picked fruits directly from the ground to eat.

The observed women often washed their hands after they got visibly dirty but they did not to any great extent wash their hands before preparing or eating food. One of the families did however wash their hands before meals, but only if the boy working for them was around. He then brought water, a basin and a towel to allow everyone to rinse.

The women in this study worked hard to live in a household that looked and felt clean. Everything that was used in the daily work was often cleaned both before and after using it, like dishes, water basins and the dish rack. Getting rid of visible dirt was especially important and therefore they scrubbed long and hard to make things look like new. This could for example be seen with the pans where food was cooked. Every day the metal got blackened by the soot, and after every meal they were scrubbed hard to shine again. Soap, coal to kill germs, something to scrub with and cold water were the basic items for washing most items in the household. If they could afford it special detergents and washing up liquids were used. The water was always conserved, for example lightly dirty water from showering could be reused to wash the shower floor.

In all the observed families the dishes were done outside in the shadow on a construction of branches and tin roof (see picture 5). The dishes were done in big plastic or tin basins, which could be the same ones as for showering and carrying water. Dishes were done to be hygienic and to make things look nice. When having tea for example, the outside of the thermos was always washed as well as the inside. Some items were never washed and rarely even rinsed; this was often the larger awkward items like the big wooden mortars.
House Hygiene and Waste—Activities in the Yard

From a sanitation perspective, the yards became littered when people threw dirty water or old food into the yards, and when animals were allowed to run free. The observed households took their sweeping of the yard with different levels of seriousness. In one household the yard was swept spotless first thing every morning, for several hours, by the father and their employees. The two other observed families could go several days without sweeping. Food and water could sometimes become dirty of coal and sand dust from the cleaning of the outdoor kitchens.

Much like the human excrements, waste created at the yards during cleaning and cooking had to be removed under the condition that it had to be deposited on their own land. The solid waste was gathered in big piles or holes and burned and covered to lessen in size. This practice also avoided rodents, insects, mosquitoes and snakes. Dirty water from washing the latrine, showering or washing clothes could be poured out at all places in the yard, so that the sand could absorb it. Water from cleaning and showering could be canalized away a few meters by digging a ditch or installing a pipe. One family reused this water, and it from the shower to a tree for watering.

Exceptions from those solutions were the dirty water from washing babies’ nappies, or from the menstruation cleaning process. This was either poured in the latrine or far away in the bush. Disposable pads from menstruation were left in the latrine. The water from menstruation was considered very dirty; one woman said that in her youth they believed that women could spread the menstruation-pain to each other, and therefore kept private basins for washing.

All the visited households kept animals, including chickens, pigs and ducks. The chickens could be allowed to stay in the house or the kitchen if they were sitting on eggs, otherwise the animals ran free in the village during the days, trying to stay as close to food as possible. The chickens were especially prone to walk on the dishes and ran over the plates when people sat down to have a meal, leaving their droppings where they walked. Most of the time the chickens went unnoticed when walking on dishes or food, but if they approached while cooking or eating the families tried to chase them away with sticks.

When the young children played they used whatever had been left at the yard, like a water basin and kitchen utensils, subsequently attracting their parents’ anger and worry. The smaller children liked to roll around in the sand and go scavenging on the waste heaps where they could find things to put in their mouths.

The Informants Perceptions and Preferences of the Sanitary Conditions

The Everyday Sanitary Conditions

Most of the women were afraid of falling ill in their households because they judged their sanitary conditions to be inadequate. Their fears included diseases like cholera, malaria, worsened HIV and tuberculosis, and accidents, insects, snakes and rats. Sometimes people’s health was described as governed by forces outside of the individual, why there was hardly
any point in being afraid. Most of the time they however tried to control it by cleaning their house, themselves and their food as thoroughly as they could:

“Because we need to care about our homes before we go and see the doctor in the hospital. Because we are the first doctors here at home, we have to care about our environment. And after that we can go and see the doctor if we get ill.”

—Translation of Sofia

Even though most women were afraid of falling ill, only one woman thought that her family had actually suffered from lack of sanitation when everyone got diarrhoea. Within the households some saw equal risks for all in the family, while others perceived women and children as the most exposed. Those that saw women being at risk connected it to their household work:

“2 although in this community women are the ones who spend most time at home, when men are working outside. And that is why we have more women exposed to the waste and sanitary bacteria.”

—Translation of village leader 3

A third way of looking at risk was given by a woman who felt that everyone in the household would fall ill if a woman was reckless when cooking or cleaning, regardless of age and sex. For children it was their reckless play that was seen as causing increased risks. When one girl was asked why she disliked field defecation she explained that children ran around everywhere and could get in contact with that “mess”.

The informants’ views on their present sanitary conditions differed, partly depending on what they had to begin with. The women with toilets and running water were generally satisfied with their sanitary conditions. They viewed their homes as sanitary, even though they felt their interiors could be improved.

The women who had latrines felt that they wanted to improve them in some way regarding its stability, comfort, hygiene or the way they constantly had to move them. The latrines were hard to clean, could collapse during heavy rains and the walls often deteriorated before the latrine was filled. One woman expressed a worry about the hygiene of having a yard full of filled holes. The concrete latrine was a good option from a stability and hygienic point of view, but what the women really dreamt of was a bathroom with a tub, flush toilet and a septic tank like in the city:

“although it is latrina melhorada [concrete latrine] she does not feel comfortable… So as to give us one example of the toilets we have in the flat and in some houses in Maputo... She says that after finishing this house they would like to build something like those kinds of toilets. Although those toilets are beautiful she would like to have one like that because of the hygiene.”

—translation of sofia

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2 Quotations key:  … = a few words has been left out.
--- = an entire sentence or more has been left out.
[ ] = word inserted by author for understanding.
Sofia knew that she did not have the best there was to offer. When she was asked further questions whether she ever felt ashamed, because the answer was ‘no’, it was because she shared this reality with everyone else in the village. A leader said that the latrines could in all their simplicity still be said to be a kind of improvement. In the older days and in other villages open defecation was still practiced, and the village had come far in that sense and thereby avoided many diseases. One woman did express some gratitude, and said that the latrine construction was comfortable.

Regarding showers, the women wished for construction improvements for the purpose of cleaning and stability. The younger girls in particular dreamed of bath tubs and tap water. One girl said that sometimes snakes entered through the stick walls and she would be protected from that if she could afford brick walls. Improved canalization of the water was another issue for the women who were afraid that it would provide breeding grounds for germs and mosquitoes. By having a better shower a girl said that it would improve her menstruation procedures and that she would feel cleaner when washing. Otherwise the women were mostly pleased or had no comments about how they could improve their ways of maintaining hygiene during menstruation.

Some things were simply not questioned; upon asking why the women always washed their underwear in the shower no one knew the reason for this tradition. It was what they had been taught and was just a custom. Sometimes the women did not explicitly wish for improvements but at the same time did not say that they were satisfied. This feeling was expressed typically by a woman when she was asked about what she felt about her latrine:

“There is the way that God has given her. The only way.”

—Translation of Rosana

Sanitation Related Responsibilities

Responsibility for the household sanitation was in about half of the cases described as a shared workload among all of the household members. This could either be expressed as work division with men caring for the outside while women cleaned the inside, or simply as a freedom of choice:

“She is saying that the work division varies. Sometimes it is her that cleans the toilet while the boys are wiping the floors and caring about the waste, and it happens the other way around.”

—Translation of Maria

Other informants said that according to cultural values women were the main household carers, meaning they were the ones who had daily dealings with sanitation, cared for their family’s health and taught their children to care for the house. One woman perceived gender equality as an important matter and had taught all of her children and her husband to cook and clean. But a man performing a woman’s work could also become embarrassing, breaking the traditional rules of behaviour:
“if a man wakes up and takes a basin and puts clothes with detergents… people around will think that this man is crazy. Yeah because the work he is doing is women’s work.”

—Translation of village leader 1

With women’s responsibilities over the household followed problems and opportunities. One problem was the time it consumed and simply locked them to their households:

“If women could they would [change]. --- Since the beginning women are the ones who care about their kids, who care about their homes, this is an obstacle… since women are the ones who stay at home.”

—Translation of Vitória

This view was nuanced by a woman who said that women in the rural areas could not stay home enough. In the cities the women could afford to be real housewives because they did not have to work in the fields and therefore had time to really clean their homes. Women’s family responsibilities made it difficult to hold official positions, as was pointed out by a female leader. Women in such positions were overall unusual and their decision making power within the household was limited, why it became difficult to improve sanitation even if they wanted to:

“She is saying that women depend on men, and if they want to change something in the sanitary situation they have to ask men for permission. --- She is saying that it should change, it should change.”

—Translation of Theresa

Even if all other chores were described as divided, construction work were always to be done by men. This could put women without grown men in their households in difficult positions because they had to pay an outsider whenever they wanted to move the latrine. The overall reason for the work division was explained either through women’s weaker bodies, culture or personal interests. A few informants mentioned that they could very well perform the duties of the other sex; they simply followed the common rules of behaviour.

Regardless whether it was culture or interest that made it so, developing one’s household could be said to be a part of being a woman. One woman, for example, had made significant changes by building a latrine instead of continuing to practice open defecation as her household had in the past. One informant expressed the subject this way: Even if women lack the knowledge of how to build a latrine they were still the ones who were going to get it done, because men lacked initiative on the matter.

Responsibilities for sanitation were also related to the role of being a good Christian. The church had a responsibility to be involved in the village’s public health because of the bible’s description of Jesus as a man that cared for others. Helping your neighbour is seen as a part of being Christian, and based on the thought that what happens to another might happen to me. A common perception by the women was that there was a connection to Christianity simply because the priest talked about sanitation during service.

A fuller explanation was that God had put the humans on Earth to live a long and healthy life; therefore, things that could threaten it, like dirty homes, should be avoided:
“She is saying that the Cord, the Lord of the creation says that we have to clean the house. So this is part of these laws, of the commandments.”

—Translation of Maria

Support and change of the sanitary conditions

Poverty was the main obstacle against all improvements of sanitary-related constructions mentioned by women and by village leaders. Therefore, many of the wishes expressed earlier were not seen as realistic, because they knew they lacked the necessary funding and infrastructure:

“She is saying that she would like to change her sanitary situation but since she does not work or her husband does not work also they do not have this possibility to improve their sanitary situation if they had they would.”

—Translation of Alice

The leaders could be a bit more optimistic and had already been part of improvements like the communal water pump, but questions about possible projects or interventions were often followed by statements like ‘If there were a donor…’. The younger girls were among the more optimistic, because they thought they might be able to find work when they got older. Another aspect of lacking money was lacking control over it. One girl said that her family had money, but she could not access it because the decisions were made by the most senior man. Other priorities were another issue. An old woman who lived alone without income was very unhappy about her situation, but did not think that her problems were of high priority:

“If the church had money she believes that they would do that [help her]… Yeah and she is saying that the church does not help them because they have children to help. I think that they have identified a group of children, HIV parents’ orphans, to help…”

—Translation of Amélia

But lack of money was sometimes expressed as a possibility by forcing people to be creative and help each other. A leader took an example from the hospital. They could not afford to clean their buildings but once in a while they called up the village to help them free of charge instead.

Support could be received in the form of teaching and knowledge. The practical help and coordination that the women could receive was limited. Developed infrastructure with safe tap water was available but limited due to the monthly fee. By coming together, many informants felt that improvements could be made to the sanitary situation, but none had any visions about what could be done. Some informants said that the households used to gather to clean and care for the common grounds in the village, like clearing a road or remove breeding grounds for mosquitoes. Others thought it would be impossible to cooperate over sanitation because of the sensitivity of the matter and lack of spirit:
“They don’t support each other… Each household cares about each house. … She is saying that since the beginning there was no spirit of cooperation and each person cares about his life or his household.”
—Translation of Rosana

When the women were asked if they ever affected anyone else’s sanitary situation the answer was always that they had made a friend aware of a problem in her household. This could be said directly, but if the women felt that it would embarrass their friends; the traditional leader could act as a medium and call up a general meeting. One woman was concerned about young mothers and tried to teach them what she knew:

“She influenced someone, a friend of hers… She said that once she arrived in her friend’s house and she found everything spread, and the babies’ nappies were dirty. Then she said please wash your babies’ nappies and clean the house, otherwise you are going to get ill.”
—Translation of Camila

People were not always susceptible to advice; one woman said that jealousy could be in the way. No one wanted to listen to her because she already had a nice house with running water and flush toilet.

Support for change could be received from the village institutions, mainly in the form of information and practical teaching. At the hospital the women received individual advice, while the church and the leaders held community meetings. Their advice could be very specific and sometimes contained an element of shame for those who had a dirty household. Different volunteer groups were also engaged in sanitation, especially aimed at HIV-affected families, and one informant suggested that those groups could be seen as a way that the households were actually helping each other more than they thought.

The village institutions could be perceived as easily accessible and as closed by different women, in regards to their possibilities to affect their sanitary situation through them. Some felt that it was easy to contact the leaders about suggestions:

“She is saying that it is not difficult to talk to the community leader. And the only thing she can say is to give the information about what is wrong. The leader has got power, with her power she can influence the rest of the population.”
—Translation of Vera

The women who on the other hand felt that the institutions were inaccessible said that the leaders would be offended or afraid to be overthrown if ordinary people came with suggestions. In fact very few villagers approached the leaders to talk about sanitation:

“People do not approach; it is the church that approaches people… If the church says that today we are going to rake the ground at the cemetery, everyone has to go there and clean. So it is part of the church that convinces people, not the people who convinces the church.”
—Translation of village leader 1
The information from the village institutions and volunteer groups often targeted women, who were overrepresented at the village meetings. The explanation was different factors related to their household responsibilities which made them the most common visitors at the hospital and most likely to care for their children while men worked elsewhere. The leaders of the village felt that there were gender disparities, but did not take any active measures against it. One leader said that there was a general world development promoting gender equality; another meant that they do address the entire village when talking about sanitation, but then the households makes the division.

Regarding knowledge one informant meant that the village as a whole needed more education on construction and prevention, for example learn how to build a proper concrete latrine and how to then spread that information in an effective way. Otherwise many of the women and the leaders were satisfied with the overall knowledge on sanitation related diseases and hygiene practice. There were however exceptions, young women were a few times said to be lacking in effort and knowledge. Some families were said to still not understand the concepts of bacteria and therefore rely solely on witch doctors.

According to the hospital those families were diminishing and that the knowledge level had increased significantly in recent years, partly due to the schools good education of young women. Before when they provided mosquito nets and water purifiers few were interested, but today they never had enough to meet the demand. This was by a few described as a result of the villages relatively good infrastructure, with a school, a care centre and an active church that gathered almost everyone in the village. The church had provided a link between the people and modern medicine, explaining diseases from the bible and making people trust the nurses’ advices:

“…they have been aware for a long time. ... Because you see the church … is the school, everything the infrastructure that we have they date from a long time. And from this moment people opened this awareness.”

—Translation of village leader 4

To conclude the description of the sanitary conditions different views on the future are shown, to express how differently the situation can be perceived by an old woman, a young girl and a leader (bold style implies question):

“This is the only way. And they might bring disease but nothing can be done.”

—Translation of Paula

“… is it possible now, a year from now or when you grow up? ... She does not know.”

—Translation of Vitória

“Do you see any obstacles against improving the waste and sanitary situation? There is no obstacle.”

—Translation of Village leader 2

**Conclusion According to the Ecological Model of the Determinants of Health**

In this section the findings are concluded by summarizing them according to Dahlgren and Whitehead’s (2007) ecological model of the layers of ‘determinants of health’. 
Layer one—lifestyle factors:

- The women placed great value on, and were described as very interested in, keeping their households clean to keep hygiene and feel comfortable in a beautiful home. Even though they were afraid, very few thought that they had actually been affected by their sanitary situation.
- Many households tried to improve their sanitary conditions if they could, like buying a concrete latrine or facilitate water drainage. Some informants expressed an indifference to the situation, or had simply chosen to accept their inability to change.
- Upholding a sanitary life for the family were in some families described as women’s responsibility, while in others it was everyone’s business.
- Attitude and habit-problems that the informants mentioned were people that still did not believe in modern medicine young women being less careful with cleaning and men not bothering to maintain what they created.

Layer two—social and community networks:

- In the village there were many possibilities to be educated about sanitation through the community networks. Some informants felt shut out from this system, and perceived the village institutions as closed for suggestions.
- The community networks yielded less of practical help and cooperation. Many women wished for more support, but had trouble seeing how, or if, that could happen.
- The most important network was the social net of the family. Here most women had learnt how to care for sanitation, and their children could sometimes help them with construction work.

Layer three—living and working conditions:

- There was no infrastructure that could support sanitation, why all waste entering the household had to stay there. The women with latrines saw their sanitary situation as unhygienic, while those with toilets were more pleased with their situation.
- Because most informants worked at their own yards and in the fields they were constantly exposed to their lack of sanitation. This exposure was in some cases higher for women, because they were responsible for cleaning.
- A leader proposed that the situation could still be seen as a kind of achievement, as open defecation was becoming less common.

Layer four—general socioeconomic, cultural and environmental conditions:

- Most informants’ perceived poverty as the main obstacle against improvements of the sanitary situation.
- Gender disparities were the reality some informants lived within, which affected who did what and who was in charge. Women were often responsible for producing food,
caring for the children and maintaining their households, while men were the main decision makers and responsible for construction-work.

**DISCUSSION**

**Discussion of Findings**

**Lifestyle and Community Networks**

Analysing this setting’s sanitary conditions from a lifestyle perspective includes attitudes, knowledge and habits relating to what people are in control over (Dahlgren & Whitehead, 2007). When comparing the findings this chapter with previous research it seems that even though some attitudes and habits can be questioned, several problems in Maciene are less tangible than have been reported from elsewhere. The women took their duties to uphold sanitation seriously. The demand for improved sanitation was closely related to a wish for a healthier household, as they saw a connection between their personal behaviour, their responsibilities and their family’s health. Hence the title ‘we are the first doctors here at home’ as delightfully expressed by one woman, is relevant. There is a common foundation of knowledge and interest where health professionals and the villagers can meet, as opposed to Cairncross’ (2003) observations in the Pacific,

Sanitation was among the women to some extent an embarrassing subject, but not so that it caused avoidance behaviour, otherwise common in sub Saharan Africa (Avvannavar & Mani, 2008). The women were surprisingly open, and often used words that the gatekeeper had advised the translators to avoid, so not to insult the informants. Another indicator of relative openness was how the showers mostly lacked doors; nudity did not seem as shameful as latrine visits might be. Menstruation was to some extent an embarrassing and private matter, especially menstruation pads, but was not identified by the women as a health problem as Jenkins and Curtis (2005), Vlugman (2006) and WSSCC (2006) have described.

Embarrassments can also cause positive behaviours when it encourages people to uphold hygiene in the process of keeping appearances. A clean household could show that the families were good Christians. Religion can be positive key factor defining people’s sanitary behaviour (Avvannavar & Mani, 2008).

There were also habits and attitudes among the women that can be improved. The sanitary situation could improve if the families would wash their hands before cooking and eating, use the lids on their latrine, always cover their water and keep animals away from food, water and kitchen items. Children’s reckless behaviour might be the most troubling. Their carelessness can easily spread diseases as they forget to wash, or play at the waste heaps.

Some attitudes among the women were difficult to interpret. Considering how Lindén (2005) has shown that cholera is a common disease in Maciene it was surprising how few of the women thought that lack of sanitation had actually affected them. This discrepancy might have been created by chance, or the women denied or failed to see the connection. In the same way one might ask if the groups who seemed to have accepted their situation were in
need of being motivated, or if acceptance is a good thing when ones possibilities for change are small.

It is through the social and community networks that the village can take control over their health (Level two in Dahlgren & Whitehead, 2007). Social networks related to sanitation took different shapes at various degrees between institutions, friends and volunteer groups; always with a focus on information and teaching. The different paths of information-sharing fill different needs. The hospital give targeted adjusted advice to special groups like young mothers. The church and the leaders give general information to the entire population, and advices between friends are made on site in accordance with what was observed as wrong. Still family-connections played the most important part in learning.

The women and the leaders had different views on how well cooperation worked. One possible explanation as to why some women saw no cooperation is that the top-down governing style does not really meet the definition of cooperation. Gidlund (2006) has suggested that people in Maciene often are full of ideas, but sometimes does not believe in themselves and their own voices. Applying a more grassroots-oriented perspective could perhaps loosen these constraints. This is also what is meant by the vision for Maciene written by the Anglican Church (1999; 2001)

**Living Conditions, Poverty and Sanitation**

The living and working conditions set the prerequisites from which the women could create their health (Level three in Dahlgren & Whitehead, 2007). Sanitation is a part of that foundation and should be adjusted to what people want regarding safety, privacy and comfort. For the majority of women that was not the case in this setting, either for the latrines or for the showers. The constant moving of latrines, risk of bites and diseases, deteriorating walls and lack of running water were all factors risking the women’s physiological health, and the subsequently by worry lowering their psychologically well-being (Avvannavar & Mani, 2008; Jenkins & Curtis, 2005).

The simple latrines were a health risk in some households as they could contaminate water and soil, but still an improvement in comparisons with open defecation. From a female perspective they were positive as they offered relative privacy, and could be visited during the day. Much space is the sanitary advantage of living in rural areas as Avvannavare & Mani (2008) state, but causes problems when it makes expanding infrastructure more expensive (Mwanza, 2003; WSSCC, 2006).

Cairncross (2003) and Jenkins and Curtis (2005) have described the importance of cultural understanding. Many of the hygiene customs practiced in Maciene setting seemed logical, expected and recognisable, but there were surprises that confirmed the relevance of local adjustments. Such an example was how important it was for the women to keep their feet clean while showering. Seeing how they got dirty as soon as they stepped outside again it was complicated to understand why. Nevertheless that was the way they most definitely wanted their showers to be constructed.

If level three set the conditions for health, the living conditions must in turn be based on the general terms of life (Level four in Dahlgren & Whitehead, 2007). On a larger scale the nation’s poverty set the tone for what can be achieved infrastructure-wise in a rural village. With lack of roads, sewage systems and few work opportunities the households’ options are limited, and left to care for their own needs. For an individual household lack of cash meant
an inability to have a hygienic toilet or good water drainage. This situation was observed and identified in Maciene by the women. The lack of money means that if the village institutions want to improve the sanitary situation they need donors. In light of Vlugman’s (2006) claim that organisations and governments often fail to acknowledge the importance of sanitation that might become an obstacle. But by installing piped water in Maciene the church has also come to show that they can improve the infrastructure despite low resources (The Anglican Church, 1999, 2001).

**Gender and Sanitation**

The gender situation focused on in this chapter can be related to the general level four of Dahlgren and Whitehead (2007). Crang and Cook (2007) argue that simply because a single setting is studied, the researcher should not expect a coherent culture with a single set of beliefs. This statement was highly relevant when trying to understand what gender meant in the village. Some informants felt that household work was equally divided between men and women, while others perceived women as the main family careers who were tied down by their responsibilities. The latter was also confirmed in other fieldwork done in the village by Gidlund (2006), Schwarts and Widefjäll (2006) and Wiltfalk (2008), and on a national Mozambican level by Ferrell (2002) and Van den Bergh-Collier (2003).

The informants’ different experiences can be examined from different angles, the first being to take their different experiences at face value. Mozambique has a legacy of an active women’s rights movement that played an important part during the independence war, and this could have affected some households in the setting (Ferrell, 2002). Another option is that the women were never even oppressed to begin with, for example Ata Aidoo (1998) suggests that gender inequality is primarily a western way of organising society. However because the Maciene setting is influenced by Christianity, that explanation seems less plausible.

The women claiming that gender equality existed in the setting can be questioned. One building block of the gender theory applied in this chapter is that disparities are hidden behind the veil of social construction (West & Zimmerman, 1987). The women were more inclined to answer that they had the main responsibility if asked indirectly, like through questions about diseases risks. A counter argument against that notion is that the researchers with a western background, do not understand the African woman’s view on equality. West and Zimmerman (1987) might on the other hand claim that this is exactly the accomplishment of gender, making unfair arrangements seem equal. In the Maciene setting there were statements such as ‘if a man goes outside and starts washing up he will be the laughing stock of the surroundings’. No man is an island, and even if some families have made their way out of an unequal living situation, they still live in a society whose overall picture is different.

West and Zimmerman (1987) offer an explanation to why gender inequalities appear through the construction of power structures hidden beneath biology. Some statements from the interviews strengthen this view, like when men were explained to be the main constructors of latrines because of their superior physique. To the fieldworkers as visitors from another culture that statement seems strange, as the physique of the women in the setting would more than suffice for heavy and straining employment in Europe. As Kulick (1987) has shown what is clearly impossible for men or women in some cultures might very well be their best feature in others. But not all women and leaders explained their different work tasks as attributable to biology. Male and female informants said that they knew that they could do
what the other sex did, but that it would be wrong in accordance with their culture. In that
case their system of gender inequality, or the doing of difference, is upheld by some unknown
force that could not be identified in this chapter. Further, the women are of greater risk of
infection because of their household work and concerned with keeping a high level of
sanitation. Development work should thus include their knowledge. However, female leaders
are rare and their voices are worth less than those of men, also in the Maciene setting (Van
den Bergh-Collier, 2000; Wiltfalk, 2008).

Ferrell (2002), Mayanja (2006) provide examples of case studies showing the benefits of
combining gender equality work with sanitation and water development. However, for
women to have time to improve their situation they must be freed of some of their
responsibilities (Vlugman, 2006). For example the traditional leader in this chapter witnessed
of troubles when trying to combine her official position with caring for her family, a problem
facing women all over the world (West & Zimmerman, 1987). Levelling out responsibilities
is for some families however impossible, when the national poverty forces men to leave their
families as migrant workers. This comes to show what Dahlgren and Whitehead (2007) have
already stated: there is a limit to what the individual and their community can do to tackle
issues belonging to the highest level.

**Equity in Health**

This chapter demonstrates that equity in health is not a reality in a rural setting as
Maciene. Money, rather than needs, guides the distribution of opportunities for well being, as
achievement of good sanitation. The skewness this creates can be illustrated in the connection
between Dahlgren and Whitehead’s (2007) levels one and three: that different living
conditions create different demands on lifestyle.

A family with a pit latrine that gathers their water in a well and stores it in buckets are
more often at risk of diseases, because the system is ‘open’. They must always remember to
put the lid on their latrine and cover the water, otherwise for example flies can spread
diseases between the two (Landon, 2006). For a family with a flush toilet and tap water that
risk is smaller, because water and faeces is sealed off in a tube or septic tank until needed.
Thus for a family who cannot afford the better option the demands on them to uphold a
perfect lifestyle are higher. It might be difficult but doable for adults, however impossible for
children.

Accordingly the family with a septic tank have a higher probability of being able to
uphold that perfect lifestyle. With higher income the probability of them being both husband
and wife increases and probably has the possibility of hiring maids (Republic of
Mozambique, 2005). This injustice is further enhanced by the fact that women without
husbands also are those that has to pay for a new latrine pit.
Discussion of the Ethnographic Approach

Ethics and Objectivity

Performing an ethically accepted study in an unfamiliar setting is complicated. For this chapter the traditional ethics policy (The Governing Board of the Swedish Research Council, 2002) was challenged and personal dilemmas often appeared for the fieldworker. It was difficult to uphold confidentiality of the informants. When the fieldworker needed to rely on help to identify them their identities were revealed to powerful villagers and other informants. It is not by default something compromising, but could result in conflicts of interest. It can also be questioned if the ‘informed consent requirement’ was upheld, considering that many informants were illiterate. They might not have understood that their actions could come in to question. The illiteracy of the informants and the language barriers means that in its current form this chapter is inaccessible to those who made it possible.

Perhaps the most complicated ethical problems are not covered by ethical principles. The principles protect the individual’s rights, but give fewer guidelines for a white researcher from a rich country in an African low-income setting, and all of the power issues that follow (Crang & Cook, 2007). For the fieldworker, this conflict became clearest when looking at the balance of exchange. A few informants wanted something back after the interview, but were met with a ‘no’. The answer was given, but it was more difficult to shake the uneasy feeling that arose when asking people who have so little to open up about personal issues to someone who has so much, without being able to give anything back.

“Indeed, in the end of a process... you are likely feel that, despite your best efforts, your ethics have been compromised; that they are, in fact, quite grubby, and that, if you had been a better person (or at least got more sleep), you would have been able to do a better job. We have all certainly felt all of this. And this is surely normal”

(Crang & Cook, 2007, p. 32).

Close to the issue of ethics is objectivity in research. According to Kapborg and Berterö (2002), it becomes more difficult to be fair and objective in studies of unfamiliar cultures. When the researcher cannot see the entire picture, things can appear simpler and more polarised than they actually are. That risk was in this chapter most obvious for the gender analysis. Many writers have pointed out Western researchers’ inability to correctly portray African gender relations at the risk of describing African men as the only ‘villain’ in development work and forgetting the importance of global politics. That is partly a shortcoming of this chapter as well. To minimize this risk, the researchers constantly tried to account for alternate takes, and clearly display all of the arguments about the gender situation in the findings discussion.

Implementation of the Ethnographic Design

Solidity is the criterion used to measure the consistency of qualitative research, or whether it was performed in a logic way (Crang & Cook, 2007). Good solidity means to be able to step outside of the theory and into reality (Dahlgren et al., 2004). The thread, or solidity, of this chapter was the poverty focus with a holistic, or cultural, approach. That
theme can be traced through the description of sanitation and the theoretical framework via the ethnographic approach to the results in the findings and discussions.

In an unfamiliar setting like Maciene, the research design always has to be discarded at some point, because one is forced to accept some loss of control to others. According to Crang and Cook (2007), this might be the very essence of ethnographic research. Some of the deviations from the original plan were successful. The interviews were altered to include some observations, which became a good tool for both informant and fieldworker. Other adjustments were more difficult, like trying to get the women to open up more during interviews. The fieldworker changed the order of the questions, the place for the interviews and what kind of questions to ask, but ultimately could not overcome whatever bridge needed to be crossed.

The observations and the interviews complemented each other in a way that strengthens the credibility of this chapter. Together they triangulated the issue of practice and perceptions of sanitation (Dahlgren et al., 2004). But how well did the methods manage to measure the conditions? The informants’ answers probably came to depend as much on their personalities as the factual situation (if such a measure exists). Some saw no possibilities at all, while others did not even see lack of money as an obstacle. Seen separately, the interviews might thus not have answered the aim, but when combined a more diverse picture appeared that came closer to the truth.

For the performance of the observations, one notable problem was how the household members adjusted their behaviours in the presence of the field researcher. Cleaning up for guests is probably a common courtesy all over the world, and maybe (probably) especially when that guest has already interviewed the host about her hygiene practices. The solution to this problem is normally to stay in the field for several months until people start to relax (Burgess, 1984; Pilhammar Andersson, 2008), but that was not an option in this case. As the women’s dedication to caring for their households was confirmed in the interviews with the village leaders, it seems that the observation records are still valid.

The performance of interviews rendered more questions than the observations, because they involved spoken communication. This caused, or showed, cultural clashes and translation problems that made the plan of deep interviews into a mixture of surveys, observations and conversation. The presence of the translation process made the conversations stilted and interrupted. It was probably one of the reasons that the interviews remained too shallow (Kapborg & Berterö, 2002). The translation disturbed the non-spoken communication (Crang & Cook, 2007). Laughter was, for example, difficult to interpret—did the informant perceive it as a fun or funny question?

Regarding the sampling of informants, diversity was the strength of this chapter (Burgess, 1984; Dahlgren et al., 2004). Interviewing both women and leaders triangulated the aim from their different positions. This raised the credibility of the study, as it showed both issues of unity (Dahlgren et al., 2004), and exposed contradictions, untruths and confusions (Crang & Cook, 2007). One such example is the large number of women who seemed to be keen to talk about sanitation with the leaders, while the subsequent leader interviews showed that in fact very few did so.

Good sampling should be replicable (Burgess, 1984), but because the sampling in this chapter was based on local knowledge and snowball method that criteria could not be met. There were also limitations to the spread within the group of women. Career women and disabled or sick women were unconsciously excluded, probably because the field researcher
had asked for informants who were responsible for handling the household. Jama (2008), who conducted fieldwork in the same village, has shown, for example, how difficult it becomes for HIV-affected families in the setting to manage everyday life, of which sanitation plays one part.

The translation process was problematic in the findings analysis because the method’s credibility is built on being able to show that themes are derived from the informants’ own words (i.e., the transcripts). One problem was that the translators summarised the informants’ answers; another that they sometimes changed the questions by adding their own examples. These problems were foreseen, and measures were taken to lessen their effect, like agreeing on the translation of important words. Random mistranslations were more difficult to control, which comes down to everyone’s language skills. Using the same translators throughout the study, one would hope, decreased these problems over time (Kapborg & Berterö, 2002).

In this case, the transcripts became a hybrid of the feelings, assumptions and values of not only the informants, but also of the translators and the field researchers (Crang & Cook, 2007). To highlight this ambiguity, the quotes in the findings section were kept as they are, expressed by a third person. Despite this, the researchers maintain that the main findings are credible. Words like ‘poverty’, ‘cleaning’ and ‘not satisfied’ are not abstract descriptions of complicated relationships; the message came through even if it was wrapped in grammatical mistakes. The credibility of the analysis was strengthened by having the material coded by both authors (Lundman & Hägggren Granheim, 2008).

Because ethnographic research is descriptive, demographic comparisons of transferability are not entirely puritanical (Dahlgren et al., 2004). As the data was available it can still be highlighted that many of the female informants were rather typical, in the sense that most of them were unemployed farmers, lived in an average poverty region (Republic of Mozambique, 2005) and lacked acceptable sanitation, defined as a septic tank (UNDP, 2005). Thus, many women in Mozambique probably face at least similar prerequisites as described in this chapter.

**CONCLUSION**

The findings in this chapter demonstrate that the basis of all sanitation work means caring for one’s own waste, in one’s own yard, constructing latrines and showers out of free items. The simplest latrines put the villagers at risk for infections and accidents, as well as causing physiological discomfort. Those who could afford it instead bought materials to build sturdier constructions and, if possible, also installed a septic tank.

Some women in the Maciene setting chose to accept their sanitary conditions, but many wanted improvements to decrease the health risks and increase comfort. The main obstacles against improvements were poverty, lack of motivation for practical cooperation, low self-confidence and the perceived discrimination against women. The women perceived themselves as the maintainers of their household’s sanitation and hygiene, while men cared for construction work and were the main decision makers.

Several positive forces also exist that could help women take control over their own and their families’ health. The women are open about this often awkward subject, and motivated to improve whenever a chance arises. Community development work is already in place in
the Maciene setting. Together the school, the hospital, the church, volunteers, friends and family work to spread information (Anglican Church, 1999). This also helps the women gain knowledge about the importance of sanitation from a health perspective.

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REFERENCES


APPENDIX 1

Definitions

**Low-income country:** According to the World Bank a country with a gross national income per capita of $935 or less. In 2007 the world had 49 such countries, including Mozambique (World Bank, n.d.).

**Household:** A group of people living together who are usually economically interdependent. The household often includes multiple generations and extends over a wide geographical area and is based upon reciprocal rights and duties (Foster, 2002). The physical structure of the home is referred to as housing. Sanitation is a part of housing but it also includes, amongst others, ventilation, drainage, crowding and insulation (McMichael, Kjellström, & Smith, 2006).

**Hygiene:** “…cleanliness, removing of dirt and pathogenic substances [own translation]” (Janlert, 2000, p. 135). In the findings hygiene is used in this generic sense including all chores associated with sanitation, such as cooking, waste handling and cleaning. In this thesis
hygiene is mentioned in reference to human actions, while sanitation are the physical structures that enables the separation of faeces from humans (Avvannavar & Mani, 2008).

**Socio-economic group:** “Individuals that because of their social (i.e. employment) and economical (i.e., income) situations are viewed as one group [own translation]” (Janlert, 2000, p. 306). The term is used to express a group’s position within the social structure (Janlert, 2000).

**REFERENCES**


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