How nurses support self-care in patients diagnosed with malaria

A field study at a district hospital in Kenya

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Abstract
Malaria is a big problem and a major cause of death and illness among children and adults in tropical countries (World Health Organization, 2010). It is the biggest threat for children in Kenya and leads to death in approximately 36,000 children (<5 yrs) every year. When infected with malaria; the patient ends up with some kind of self-care deficit and need access to health care.

Research about how nurses can support self-care in patients with malaria is lacking. If no plan for how to take care of a patient with malaria exits, treatment can differ, which in turn can result in poorer outcome for the patient. The aim of the study was to investigate how the nurses at Moi District Hospital in Voi support self-care in patients diagnosed with malaria. The study was carried out with five qualitative semi-structured interviews. Data was analyzed with a deductive content analysis. The result showed that nurses taught and encouraged patients to perform self-care; they identified patient status, they acted for the patient, guided him or her and tried to provide a developmental environment. Teaching was the most common way to support self-care, probably because of lack of recourses.

Key words: Self-care, malaria, teaching, Minor Field Study, Kenya.
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Asante sana!

Sara Olsson & Malin Oskarsson

Voi, Kenya 2010
BACKGROUND

Kenya as a country

Kenya is situated in East Africa. It is a republic with 38.6 million inhabitants in an area of 582 646 km², compared to Sweden, which got 9.2 million inhabitants in an area of 449 964 km² (Nationalencyklopedin, 2010). The official languages in Kenya are English and Kiswahili, but there are about 30 other local languages in the country (Sida, 2010). Kenya is a low-income country; according to Landguiden (2010) BNP in 2009 were 841 USD per citizen. In 2005 the average lifetime was 52.1 years, and 50% of the Kenyans were less than 18 years. In 2005, death rate among infants were high; 79/1000 died before they reached the age of five and only one third of the population in the countryside had access to health care (Landguiden, 2010). In addition, only 61% of the citizens had access to clean water (Sida, 2010).

Voi town

Voi town is located along the main road between Mombasa and Nairobi, approximately 150 km from Mombasa and 300 kilometers from Nairobi. The population in and around Voi is about 35 000. It is difficult to get correct numbers of inhabitants since there is no population statistics and a large area of Voi is in the countryside.

Moi District Hospital in Voi

The District Hospital in Voi is located in the center of town and serves districts around Voi as it is the only governmental hospital in the area. There is one doctor in the staff and the hospital consists two surgeons, one gynecologist, one pediatrician and one general physician.

The hospital also includes five general clinical officers, a profession not found in the Swedish health care system. A clinical officer has four years of education plus one year of internship (University of Nairobi, 2010) and he or she is able to diagnose and treat easier cases of diseases.

Nurses in Kenya are educated for three and a half years and after finish one year of internship they receive a Diploma in Nursing. If the student wishes to acquire a Bachelor of Nursing Science, which is not mandatory, the education is extended to four years (University of Nairobi, 2010).

When a patient arrives at Moi District Hospital, a clinical officer at the Outpatient Department examines him/her. The clinical officer then decides whether the patient needs to be admitted to the hospital or not. The hospital has a general female surgical/medical ward, a general male surgical/medical ward, a pediatric ward and a maternity ward which also includes delivery and neonatal care. There is also a unit for minor surgery. The hospital can make x-ray examinations; it has a laboratory section, physiotherapy and occupational therapy sections and a department for maintenance that includes for example technical service. Within the hospital area, there is a maternity-child-health department located, which provides maternity care and care for children under the age of five.

The hospital also has two ambulances, which are used for transportation to the hospital from outside clinics.
Each ward has two nurses posted during mornings and afternoons and one nurse during nights. The ward will host as many patients as needed and according to the staff, a normal patient rate is 25, but can be higher. The doctor and clinical officers works daytime from Monday to Friday, but are on duty calls in case of emergency.

**Malaria**

In 2006, approximately 247 million people had malaria and nearly one million people died from it. The most affected group is children under the age of five. Within the African region, 45 countries were endemic for malaria in 2008. The World Health Assembly has set up a goal in which they state that 80% of all malaria cases should be followed up and treated. However, National Malaria Control Programmes, NMCPs showed that this goal was not fulfilled in 2006 (WHO, 2008).

Malaria is spread through an infected anopheline mosquito, who inoculates the blood with protozoan parasites of the Plasmodium genus. This will, after a development cycle in the human liver, cause an infection of the red blood cells. When the red blood cells erode, symptoms typical for malaria, like fever and shivering occurs (Iwarson & Norrby, 2007). There are four plasmodium species that generally infect humans; P. falciparum, P. vivax, P. ovale and P. malariae, but another parasite, the monkey parasite, P. knowlesi has been found to infect people in South East Asia (WHO, 2010). P. falciparum causes encephalitis and unconsciousness and causes majority of deaths from malaria (Iwarson & Norrby, 2007).

The symptoms are similar to those of a viral disease and can in the beginning be difficult to separate from a minor viral illness. At start of the disease, symptoms such as headache, abdominal pain or discomfort, muscle or joint ache, and fatigue appears. If no treatment is given, fever and convulsions, chills, perspiration, vomiting or diarrhea and worsening malaise will follow (WHO, 2010).

To reduce malaria incidence, several preventive methods are used. Prophylactic treatment and intermittent treatment during pregnancy are two preventive methods that are used. Primary vector control such as increased use of long-lasting insecticidal nets, indoor residual spraying, and reducing mosquito habitats are other methods (WHO, 2010).

If treatment is given at an early stage of malaria with no vital organs affected, prognosis is good. However, if treatment is delayed or incorrect; disease can progress to severe malaria. This can be the case in infections caused of parasite P. falciparum in which the patient’s condition can change from mild symptoms to life-threatening symptoms within a few hours (WHO, 2010). In 2010 the WHO released the second edition of Guidelines for the Treatment of Malaria. This guideline include importance of preventive actions and prompt treatment with antimalarials. Recommended treatments are an artemisin-based therapy, which is found to be efficient for malaria caused by P. falciparum. Medication can be given in different ways depending on the patient’s condition; if the patient does not tolerate oral treatment, it can be administrated parenteral or rectal (WHO, 2010).

**Nursing-care for malaria**

The Guidelines for the Treatment of malaria (WHO, 2008) recommends several treatments. The health staff should give antipyretics if temperature rises over 38,5 °C – and they should sponge the body with tepid water or fan the body, which are good complements to
antipyretics. If patients are vomiting, antiemetic are usually given to make sure that orally given antimalarials retain in the body. Anticonvulsive medication is also given with repeated seizures. The WHO (2008) state that it is important to increase awareness of malaria among people. Information about prophylactics and self-care should be spread and information should be adapted to all inhabitants and to people not only working within the healthcare system. Information can consist of wall-charts, videos and posters in native languages (WHO, 2008).

**Self-care for malaria**

There is an improper use of the antimalarials today; people medicate themselves without confirmed diagnosis and medication is sold at non-registered pharmacies. To optimize the treatment of malaria, people need to be well informed. Information should primarily focus on preventive actions and importance of prompt and proper treatment (WHO, 2008). Self-care for malaria consists of knowledge about causes of the disease and prophylactic actions. If people know how serious malaria can be, they will know how important it is with prompt treatment when symptoms occur and also about importance of compliance with medical treatment. Preventive actions such as using insecticidal-treated net or indoor spray are something people can do, to protect them from mosquitoes (WHO, 2010).

**Malaria in Kenya**

Malaria is the biggest threat against children and leads to death in about 36,000 children less than five years every year in Kenya. In 2002 the government of Kenya developed the National Malaria Strategy, with the aim of reducing morbidity by 30% during 2010. The Department of International Development - DFID, and Population Services International - PSI, supports the Kenyan government in their work and distributes free insecticidal-treated mosquito nets to all pregnant women. PSI also sells nets to a reduced price in common shops, which has increased the number of families sleeping under a mosquito net. In 2008, 80% of the households in high-risk areas owned some sort of mosquito net (DFID, 2009).

**Self-care deficit theory of nursing**

Dorothea Orem has developed the Self-care deficit theory of nursing, which is a general theory divided into three levels; Self-care nursing theory, Self-care deficit nursing theory and Theory of nursing system. This theory identifies what nursing is and how the nurses should act when they meet the patient. The theory describes concepts of self-care and state that demands of self-care can vary throughout life. When individuals or their relatives cannot fulfill the self-care demands, it will lead to self-care deficit. Further, Orem states that nursing care is needed when patients’ abilities to preserve self-care are less than their self-care demands (Orem, 2001).

**Nursing**

Orem states that care is a general term used by different health professions. Nursing care is explained as when nurses identifies patient’s needs and helps them to accomplish health and well-being. Focus in nursing is to compensate for patient’s self-care deficits. Nurses should identify them and plan for how they could be solved with therapeutic self-care actions. Therapeutic self-care demands are specified by Orem as actions needed to maintain health and well-being (Orem, 2001).
For future planning nurses also have responsibility to judge whether patients will be able to increase their knowledge of existing deficits. The next step is to support them to increase their knowledge (Orem, 2001).

**Methods to support self-care**

Orem (2001) defines five methods for nurses to use when helping the patient to self-care; Acting for or doing for another, Guiding another, Supporting another, Providing a developmental environment and Teaching another.

Acting for or doing for another comprise making plans for how to solve patients’ self-care deficits and how to compensate for what the patient cannot do for him- or herself. This method is often used when the nurse needs to use highly specialized techniques. Guiding another means that the nurse guides the patient to perform activities. The nurse will then assist but not act for the patient. By guiding the patient the nurse will suggest and instruct the patient to perform self-care. Supporting another is when the nurse supports a patient, who is experiencing something unpleasant. Support includes both physical and psychological support, like supporting the patient in pain to perform necessary activities. When providing a developmental environment, the nurse is creating a motivating physical, psychological and emotional environment that meets patient’s individual needs. It includes for example the attitude of the nurse, his or hers ability to adjust the environment or food given to the patient’s needs. Teaching another is when the nurse review patient’s former knowledge of her self-care deficits and helps her to develop knowledge required for the situation she is facing. It is important that nurses know what kind of information the patient needs. The nurse uses several techniques to develop to develop this knowledge (Orem, 2001).

**Cure to provide health-care**

To cure includes not just pharmacological treatment in a prompt state of illness but also to stabilize the patient’s condition and to ease her symptoms. It includes preventing or protecting sickness from worsening. The curing process requires continuous evaluation of the progress of the disease. This can be done by monitoring vital signs and/or analyzing changes in the patient’s condition (Orem, 2001).

**Self-care**

According to Orem (2001) self-care is something that individuals performs for himself or herself to maintain physical or physic functions throughout life. It can also be performed by relatives or by other people but then it is called dependent-care. Self-care or dependent-care is something you learn and it varies depending on society, culture and family. It changes trough life and must be re-learned during these changes (Orem, 2001).

**Significance of study**

Before carrying out the study, the databases; Cinahl, Medline and Pubmed were searched to find earlier research. A systematic search in each database was done using the words; self-care, malaria, support and nurse.

A study that was performed in Gambia examined how, when and where patients with malaria seeked treatment. The result showed that low-income households tended to seek treatment outside the health-care system. Length and severity of malaria were factors that made people
seek treatment inside the health-care system. If patients were sick for a longer time and had severe symptoms, it was more likely that they sought treatment inside the health-care system. In addition, elderly was also more likely not to seek care in hospitals (Wiseman, Scott, Conteh, McElroy, & Stevens, 2008).

Another study by Jones, Abeku, Rapuoda, Okia & Cox (2008) investigated how health care workers, including nurses, responded when they worked for a malaria project in the Kenyan- and Uganda highlands. In this study a program for health care workers was established to discover malaria epidemics in their early stage. The result showed that this responsibility lead to an individual empowerment among them (Jones, Abeku, Rapuoda, Okia & Cox, 2008).

**Statement of the problem**

When infected with malaria most individuals’ get some kind of self-care deficits and therefore needs access to health care. When patients are admitted to the hospital, they are taken care of by a nurse.

Research about how and what these nurses do when they support self-care in these patients is lacking diagnosed with malaria. If no plan for how to take care of a patient with malaria exists, treatment can differ, which in turn can result in poorer outcome for the patient. The result and feedback can show strengths or weaknesses in the nurses’ work.

**AIM**

The aim of this study is to investigate how nurses at Moi District Hospital in Voi support self-care in patients diagnosed with Malaria.

**METHOD**

**Scientific view**

Since the aim was to study how nurses at Moi District Hospital support self-care in patients who are diagnosed with malaria, interviews were carried out. The nurses were asked about their lived experiences of supporting this self-care (Dahlberg, 2003).

Dahlberg (1997) writes about the importance of having an open mind for the phenomena you study to be able to see the unique in what is being studied. Further on, she states importance of the interviewer being truly present during the interview. On the other hand, the researcher should also be able to distance from the phenomena during the interview, in order not to influence it (Dahlberg, 1997).

When using inductive approach the researcher first examines data without preconceived notions or categories. The researcher discovers key words or themes that can be used when forming categories (Kondracki, Wellman & Amundson, 2002). When using a deductive qualitative content analysis, focus lies on describing and identifying similarities and differences within the same text (Graneheim & Lundman, 2008). A deductive approach is chosen when an already existing theory is applied when analyzing data collected in a new context (Kyngäs & Vanhanen, 1999). The authors decided to apply Orem’s (2001) self-care deficit theory of nursing in the analysis of the interviews.
According to Kondracki, Wellman & Amundson (2002) a manifest content analyze is done when the researcher analyzes what is literally in the text.

In a deductive qualitative content analysis the first step, after deciding what kind of data material to use, is to read the data through to get a sense of a whole. A deductive qualitative content analysis includes creation of a categorization matrix (Polit & Beck, 2004). A categorization matrix is a table that shows categories based on an already existing theory (Sandelowski, 1995; Polit & Beck, 2004; Hsieh & Shannon, 2005). The creating of different categories classifies where the codes belong and describes the phenomena being studied (Graneheim & Lundman, 2004; Elo & Kyngäs, 2008).

The next step is to sort the data into relevant content materials according to the categorization matrix (Graneheim & Lundman, 2004).

The data is then sorted into meaning units and then meaning units and they are condensed (Graneheim & Lundman, 2004). The condensed meaning units are coded to fit into the categorization matrix and data that do not fit can either be used create new categories or be excluded (Elo & Kyngäs, 2007). When coding the data, meaning units are extracted and labeled (Graneheim & Lundman, 2004; Elo & Kyngäs, 2007).

After coding condensed meaning units, the last step is to divide main categories into sub-categories (Graneheim & Lundman, 2004).

**Sample**

Five interviews were planned and there were three inclusion criteria. Participants had to be educated nurses, work at Moi District Hospital in Voi and have lived experiences of caring for patients diagnosed with malaria.

The informants were two men and three females. They were 28 to 52 years old. Working experiences was six months to 28 years. Most of them had worked for at least 10 years. Two nurses had a Bachelor in Nursing Science and three nurses had a Diploma in Nursing.

**Data collection**

The nurse manager at the hospital introduced authors to three different wards within the hospital. They were then introduced to five nurses who were given an information form about the study (appendix 1). In the form, the study was further explained and the nurses were asked if they had any questions, as it is important that informants knows the purpose of the study (Kvale, 2009). Also, all nurses were asked if they wanted to participate in the study while the nurse manager was absent.

All nurses asked, agreed to participate; therefore no other nurses were asked. The informants gave their written consent before the interview. It was made clear to them that participation was voluntary and that they could withdraw at any time without giving reasons if they wanted, which is recommended by Kvale (2009).

The interviews were held at Moi District Hospital in two quiet rooms. They were recorded with a digital tape-recorder. The informants could choose time and date for the interviews.
Interviews were performed during the informants working hours and informants did not lose income.

One informant was interviewed each time. Both authors were present during three of the interviews, one author carried out the interview while the other author was listening.

Qualitative semi-structured interviews were used, focus lay on “having an open mind” for the informants stories. The first question were open while the following questions were created according to the informants story (Dahlberg, 2003). All interviews were carried out in English, which is one of the official languages in Kenya (Sida, 2010).

The informant got a document with two main research questions so that he or-she could read them during the interview. An interview guide was used only visible for the interviewer (appendix 2). The reason for the interview guide was to make the interviewer focused on the aim with the study throughout the interview.

The main research questions were:
- Can you tell me about how you take care of patients with malaria?
- How do you support the patient who is diagnosed with Malaria to be able to take care of him/herself or other relatives with the disease?

Data analysis

When interviews had been transcribed, both authors listened to the interviews and compared them with the text, to make sure that no mistakes were made.

Interviews were read several times before the analyzing process started to get a deeper understanding of the data. It is important that the researcher become familiar with the data to be able to get insights about it (Polit & Beck, 2004).

A deductive qualitative content analysis method was used. Orem’s definition of the concept nursing was the chosen content area. Nursing created a categorization matrix, with categories; acting, supporting, guiding, providing a developmental environment, teaching and curing, which all are parts of Orem’s definition of nursing (Orem, 2001).

Everything from the interviews that fitted into the content area was highlighted and meaning units answering the aim of the study were picked out. Meaning units were then put in to a table and condensed to preserve the core (Graneheim & Lundman, 2004).

The condensed units were coded after the categorization matrix. Meaning units that could not be sorted into categories were given a new category and a new code. Every interview was analyzed of both authors and each interview was analyzed separately.

After coding date from the interviews, each interview was given a certain color, to be able to separate them from each other. Results from all interviews were put together and codes were placed into pre-made categories. However, no codes would fitted the category Supporting.
Table 1. Example of process from meaning unit to category.

<table>
<thead>
<tr>
<th>Meaning unit</th>
<th>Condensed meaning unit</th>
<th>Code</th>
<th>Sub-category</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>They have no appetite, if he cannot take it by himself we pass down an G-tube: a gastro feeding tube. So we give her or him nutritious at least hmm…to get energy.</td>
<td>They have no appetite, if he cannot take it by himself we pass down a gastro feeding tube, we give nutritious to get energy.</td>
<td>Acting by providing nutrition needs</td>
<td>Compensate self-care deficits</td>
<td>Acting for or doing for another</td>
</tr>
<tr>
<td>We teach them how to do the feeding.. I …through the NG-tube and maybe trough a cup of spoon if the baby is not breast feeding.</td>
<td>Teach them how to do the feeding through the NG-tube and maybe trough a cup of spoon if the baby is not breast feeding</td>
<td>Teaching by instructing relatives</td>
<td>Increasing knowledge</td>
<td>Teaching another</td>
</tr>
</tbody>
</table>

**Excluded data**

The recording of one interview was unfortunately in a poor quality and it was difficult to hear what the informant said, therefore only parts of the conversation were transcribed.

**Ethical considerations**

Beauchamp (2003) talks about four ethical principles, important to consider when carrying out research; respect for autonomy, willingness not harm but to benefit and justice. These principles were used in the study, informants were treated with respect.

Before arriving in Kenya the doctor in charge at the hospital gave us permission to carry out the study.

Before asking for participation from the informants, they were handed a form (Appendix 1), which described the aim of the study. Information was also given about how the interview should be carried out, including recording and transcription of the interview. Informants were told that they could withdraw without giving explanations and data would be handled confidentially and not used for any other purposes. Written informed consent was obtained from all informants before the interviews (Gabre, Hedman, & Ringberg, 2008). Accuracy had to be taken considering identification of the identity of informants; therefore the informants are renamed in the result section.

No ethical permission where needed from an ethical board since this is a bachelor study.
RESULTS

Table 2. Overview of the result presenting categories and sub-categories.

<table>
<thead>
<tr>
<th>Category</th>
<th>Sub-category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identifying patient status</td>
<td>Self-care deficits</td>
</tr>
<tr>
<td></td>
<td>Self-care abilities</td>
</tr>
<tr>
<td>Acting for the patient</td>
<td>Compensating self-care deficits</td>
</tr>
<tr>
<td>Ways to cure the patient</td>
<td>Giving pharmacological treatment</td>
</tr>
<tr>
<td></td>
<td>Evaluating progress of the disease</td>
</tr>
<tr>
<td>Providing a developmental environment</td>
<td>Adapting physical environment</td>
</tr>
<tr>
<td>Guiding the patient</td>
<td>Encouraging the patient</td>
</tr>
<tr>
<td>Teaching the patient</td>
<td>Giving advices</td>
</tr>
<tr>
<td></td>
<td>Increasing patients knowledge</td>
</tr>
</tbody>
</table>

The result showed that nurses use different methods when supporting self-care among patients with malaria. The categories created are; identifying patient status, acting for the patient, ways to cure the patient, providing a developmental environment, guiding the patient and teaching the patient. Categories are divided into subcategories and presented in Table 2. Sub-categories are confirmed with quotations from the informants.

Identifying patient status

The informants described how they talked to and observed the patient when they identified self-care deficits and abilities. They could also interview the patient to find out whether the patient was right or wrong about something.

Self-care deficits

The informants described how they identified self-care deficits and self-care demands. When they talked with the patient, they could disclose if the patient had misunderstood information or instructions. When observing the patient, they could find out if the patient did not take medication or eat properly. The patient might not eat properly due to loss of appetite, but it could change if the patient was informed about the importance of proper nutrition;

“This patient could be anemic. If low I’d like to know how that patient feed.” - Informant 3

Self-care abilities

Informants talked about identifying patient’s knowledge about; the disease, her ability to perform daily activities such as walking to the bathroom and preparing food, was important before the nurse decided if the patient could be discharged from the hospital or not. When the patient was ready to go home and manage to take her medicine on her own she was found to have ability. The informants described how they identified the patient’s knowledge and need for further information by asking the patient to describe causes of malaria and how it should be treated.
“You ask them - What have I said? What are you told about nutrition, in the pharmacy? Then they give you the correct message you tell them to go home.” - Informant 5

Acting for the patient
When acting for the patient the informants described how they compensated for the self-care deficits.

Compensating self-care deficits
Compensating self-care deficits stands for when the informants planned how to solve the patient’s self-care deficits and compensate for them. The most common self-care deficits were high temperatures, nutrition needs and fluid balance. The informants also talked about how lack of knowledge can lead to self-care deficits. The methods they used to compensate such deficits were described as securing medical treatment by for example keeping the patient, who was frequently at the hospital, in the ward until the treatment was completed. If the patient had fever it was lowered by sponging neck, the armpits and groins. To lower body temperature was usually done by removing clothes or by fanning or dabbing the patient’s body with lukewarm water. Assisting the patient when eating or giving par-ental feeding with fluids was done to compensate for nutritional- and hydrate deficits. The informants talked about how they assisted patients who could not walk.

“What they cannot do for themselves we help them.” - Informant 4

Ways to cure the patient
All informants talked about different ways to cure the patient. The methods used were pharmacological treatment and evaluating the progress of disease.

Giving pharmacological treatment
The pharmacological treatment is given orally, intramuscularly and/or intravenously depending on severity of the disease. Antimalaria is given with aim to cure the disease. Other drugs are given to ease symptoms; such as antipyretics when the patient is suffering from fever, antiemetic if the patient has nausea and anticonvulsive treatment if she has convulsions, which by the way, is more common among children. When the patient is discharged from the hospital the nurse writes a prescription so that treatment can continue.

“If they are convulsing you give Diazepam. Intravenously or intramuscular” - Informant 5

Evaluating disease progress
The methods the informants used to evaluate disease progress of malaria included monitoring and evaluating vital signs such as body temperature, blood pressure, the patients energy and/or how much the patient has eaten. The informant evaluated pain intensity, consciousness or the fetal heart if the woman was pregnant.
“In case it is pain. Then we count the level if it is normal, if it is severe...” - Informant 4

Providing a developmental environment

The informants described how they created a physical developmental environment that stimulated patient’s independency.

Adapting the physical environment

When providing a physical developmental environment the informants adapted the environment to make challenges easier to face for the patient. This could be made thanks to the nursing-care-plan, which documented and made the care more individually. If the patient was feeling sick, they helped them to vomit. If the patient had difficulties to walk, a crutch made it easier to move. The space around the toilet was cleared to make it easier for the patient who had trouble moving. If the patient had lost appetite, the informant tried to give her food that suites her needs.

“You can put something like a lemon in the food to make it taste more freshly.” - Informant 3

Guiding the patient

Guiding the patient meant that the informant guided the patient when he or she performed activities aimed to restore health (Orem 2001).

Encouraging the patient

The informants encouraged the patients in need to do something they did not want or had difficulties to do. They talked and explained benefits of doing the activity; that the benefit would overcome the effort and that it was worth the strain. For example it could be telling the patient to walk even if he or she was feeling tired, as it is important to strengthen the body as much as possible. Another example was that they told patients the importance of taking the medication as prescribed, even if it tasted bad. It could also be to encourage the patient to eat, even if they did not have appetite.

“...And when they come here... encouraging feeding. Feeding is also very important... because they intend... to refuse to eat... because they have no appetite while malaria.” - Informant 2

The informants also stimulated patient’s independency. This was done by not helping the patient with activities that the patient could do by him/herself and/or adjust help to the patient abilities. This included daily activities like making their own bed, do their own washing, or if they are mothers; or to feed their baby or change diapers.

“Like if the washing were being done by a caretaker, the washing her clothes or the babies clothes. The caretaker go or stay outside and she does the work herself.” - Informant 4
Teaching the patient

The informants frequently mentioned that they teach the patient and his/hers relatives.

Giving advices

When advising, the informants give the patient recommendations about the medical treatment; and importance of carrying out treatment. Advices about nutrition could be what they should eat to stay healthy or information about how they should cook the food so that vitamins and essentials would not get lost. Informants advised patients to preventive actions, to avoid malaria. Advices were given orally before patient was discharged from the hospital. Advices about good hygiene were also given including importance of keeping the body and environment clean.

“When the patient has been treated and is fit for discharge we advice them, that they should comply with the treatment. To finish the dosage of the treatment given at home.” - Informant 2

Increasing patient knowledge

Informants teach patients and their relatives knowledge using methods like instructing and informing.

The informants instructed the patient and demonstrated how something should be performed; for example instructing relatives how to remove patient’s clothes and how to sponge the body with tepid water. The mother of a sick child was taught how to feed the baby through tube feeding or with a cup or a spoon. Instructions were given about how to put up, soak and re-impregnate the net. Moreover, information about what the patient or her relatives could do to prevent malaria was given, for example that they should use is to use; insecticidal treated nets, indoor spraying and clear the surroundings of their houses from tall grass and bushes. They were told not to leave stagnated water in bottles or tanks around the house because it could create shelter for mosquitoes to breed.

All women are informed about importance of getting prophylactic treatment when getting pregnant. If a baby got sick, the mother was told to give the baby Paracetamol to lower the baby’s fever, then feed it and take the baby the hospital. Information was given about symptoms and severity of malaria and the importance of getting a test and to use antimalarials in case of malaria. The patient was told about nutrition and the importance of eating to regain strengths even when loss of appetite. When teaching the patient or a relative the informants used one-to-one dialogues and planned group sessions. Sometimes they used educational aids like books or pictures, but oral information was generally used as many people cannot read.

It was also important to inform the patients about results of scientific research and myths of malaria. Some people still think that the fruit mango is the reason for malaria, but the informants assure them that mangos are full of vitamins and will help strengthen the immune system.
“Some say that are no mosquitoes, you tell them that so long there is Malaria, there is another mosquito out there” - Informant 3

DISCUSSION

Method discussion

The method chosen was qualitative semi-structured interviews. When interviewing, there is always a chance that informants might answer questions as what they knew should be the right thing to do in a specific situation rather than what they actually did in reality. A method that could have been used is observation. However, it was not chosen due to ethical aspects. The authors came from a different country and patients were in a state of dependence and might have had difficulties refusing being observed.

By giving the informants the questions of a document during the interview, it was easier for them not lose track of the subject.

Data collection

Dahlberg (1997) writes about importance of being truly present during an interview but also to take distance not influence outcome. Preparations were made regarding this issue and presented before every interview. However, it might not have been possible to not influence the person being interviewed.

Interpreters were not used during the interviews, since English is one of the first languages in Kenya. English is also the authors’ second language. This fact has surely meant some language barriers but watching the informants during the interviews made it possible to get a sense of a whole. The authors felt that they understood the informants but some questions had to be reformulated to straighten things out.

As an interview guide was used, it might have restricted the authors from having an open mind for the informants. Since the authors have limited experience in interviewing, the interview guide helped them to stay focused. The questions in the interview guide were only used if the informant had not answered them.

The different background of the authors and informants is obvious. They came from different cultures and had diverse working experiences. These facts and other circumstances can have affected the way they approach or experienced things. A question that is being asked to one person can diverge depending on how that person apprehends to it. The own interests and priority can also affect the answers. But, an answer is not wrong just because of these differences; it reflects only what become apparent in the informant’s mind when they are asked a question. During the interviews the authors had the impression that the informants were honest and comfortable. But there is always a chance that some information was lost.

A limitation of the study could be that both authors did not participate in all interviews. However both listened to all the interviews while transcribing them.

Since the nurse manager introduced the authors to the nurses it might have been difficult for nurses to refuse participation in the study. But they were not asked of participation while the nurse manager was present and they were asked once again right before the interview. Since
the nurse manager chose nurses, the sample collection could be limited but it was found that data were satisfying. Having participants with different experiences is a way to get different perspectives of the research questions (Patton, 1987; Adler and Adler, 1988). One limitation in the sample could be that only three wards were represented.

Data from one of the interviews had to be excluded because of difficulties hearing certain parts of it on the tape-recorder and it might have lead to loss of important information. Since it was not possible to remember exactly what the informant have said the decision were to only include what could be heard from the tape-recording. This choice was made to assure that no false conclusions would be made. The authors could have asked informants confirm what they have said but choses not as informant would have had time to reconsider their answers, which could have affected answers and outcome of the study. It would also have been time consuming and time was lacking there was not enough time for it.

Data analyze
The result might have been interpreted differently, depending on how Orem’s definition of the concept nursing is perceived. After coding and categorization, the meaning units were read again to secure that the codes were placed in the correct category and that quotations were added to each category. During the analyzing process, some codes almost fitted the category supporting, but they fitted even better in the category acting for or doing for another. The category supporting was therefore removed.

According to Graneheim & Lundman (2004) it is important to choose the right meaning unit, not too broad or too narrow. In a deductive content analyze it is possible to use a categorization matrix when sorting out the meaning units. In this study, meaning units that suited the aim of the study were chosen. This was done to reduce the of the risk of missing something important that did not fit in to a fixed categorization matrix.

During the coding process, codes that did not qualify for any of the pre-made categories appeared. Therefore a new category was created labeled; Identifying. The authors discovered that some of the informants where explaining how they had to find out what the patient knew about malaria before further information could be given. Orem often refers to identifying, but not as a helping method of its own. The authors found it necessary to create this new category.

Creating a new category can be done when the meaning units do not fit into the pre-made category and the meaning unit fit the aim of the study. The meaning unit can also be excluded (Elo & Kyngäs, 2007), but everything that fitted the aim of the study were included.

Transferability
This study is small and it might be difficult to transfer its result to a different context.

Result discussion
Giving pharmacological treatment to the patient starts the process toward self-care. It is necessary in all cases of malaria but type of self-care varies depending on the patient’s condition (WHO, 2010). The informants talked about how the patient sometimes could be discharged on oral treatment or treated as inpatients for a long time. The latter is common when the patient is resistant to the drug, is not getting better or symptoms worsen at home. Symptoms of malaria as fever, nausea, body ache, diarrhea or convulsions are usually treated...
pharmacological. Even if it does not cure the disease it eases symptoms and helps the patient feel better and strengthen their quality of life. The informants talked about how they observe the patient to see how he or she responds to treatment. This gives them opportunity to evaluate progress of disease and prevent worsening of it.

By teaching it was assumed that the informant wanted to increase the patient’s knowledge and ability to perform self-care. The informant can do this by giving the patient advises as a nurse. Another way to help the patient to make the right decision was to increase their knowledge about malaria by informing or instructing about something the patient do not know. The authors think that if patients are able to perform more self-care, the outcome will give less trivial cases to burden the already strained health-care system. Since only one third of the population on the countryside have access to health-care (Landguiden, 2010) people need to increase their knowledge of what they should do in a critical condition. The authors think that this people are not enough educated regarding this subject and that teaching could be a good way to improve their present conditions. The informants spooked about different ways to teach their patients. Sometimes they had planned group sessions or just single one-to-one talks with or without teaching aids. Teaching aids like brochures or books are not fundamental for educations since they are hard to access analphabetism are wide spread, therefore; many patients are not able to read and understand written information. The authors think the informants should use group sessions or one-to-one talk when informing because this does not require teaching aids and many patients can be informed at one time. This way is probably effective regarding time and money. Like statements in the Guidelines of treatment for malaria (WHO, 2008) the informants gave information about how people could prevent illness and importance of prompt and correct treatment. Information about preventive methods referred to prophylactic treatment of pregnant women, the importance of insecticidal-treated nets and how they could make the environment unpleasant for the mosquito. The informants described how they instructed some patients how they should use the mosquito-net; how to soak the net and re-impregnate them, or how to hang it up and tuck it in under the mattress. The authors think that this strategy is a good way to reduce chances of misunderstanding. It has been reported that people do not seek treatment when they feel sick (Wiseman, Scott, Conteh et al. 2008). The authors think that this can change by teaching and increasing knowledge among the population. A negative result following teaching can be that the patient ends up with the responsibility. The patient might misunderstand a message due to language barriers or because of a stressed mind. Kenya has more than 30 different spoken languages (Sida, 2010) and, medical staff and patients do not always speak the same language. The authors felt that informants expressed frustration when they spoke about communication with patients who could not read or did not have enough education to understand what have being said. The informants did not have the time for follow-ups and did not always know whether the patient was listening and practiced what they are being taught. Many patients are poor and cannot follow given advice; like for example spraying indoors to kill the mosquitoes. Some patients understand the importance of seeking treatment when feeling symptoms of malaria. But they live in the countryside and even if the treatment for malaria is free, they cannot afford to travel to a health facility, and therefore cannot get medicine in time. The authors think that teaching is important and excellent when caring for patients.

The informants explained how they identified the patient status. It is important to know the patients’ individual needs; their self-care deficits and self-care abilities to be able to give individual nursing care (Orem, 2001). The authors can see importance of recalling both
deficits and abilities. The deficits, so that the patient can get help to compensate for them and improve in what is lacking. The abilities, so no patient get assisted in something that he or she can do. It is important that the patient discovers what he or she is able to do and endeavor toward recovery.

**Conclusion**

The authors think that the result in a structured way gives a good overview for how nurses at Moi District Hospital support self-care in the patient diagnosed with malaria. The most important findings in this study are:

- The nurses stabilize the patient and ease symptoms such as fever, nausea, body ache, diarrhea or convulsions mostly by giving pharmacological treatment.
- The nurses try to increase the patient’s knowledge by having group sessions and one-to-one talk. They inform about how to prevent malaria, the symptoms of malaria and how to act when the symptoms of malaria occur.
REFERENCES


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Appendix 1

For you who are being interviewed regarding:

How the nurses at Moi District hospital support the patient to self-care concerning Malaria.

Background:
We are two nursing students at the Faculty of Health Science, University College of Borås, Sweden. For our examination essay, we both have been rewarded with a scholarship on behalf of SIDA (Swedish International Development Authority). The most common thing patients are being treated for in Kenya is Malaria and we will carry through interviews with focus on how nurses are supporting and informing their patients about Malaria. The result of this study will be given to SIDA and the information will enlighten future project within health-care and malaria.

Aim:
The aim of this study is to investigate how the nurses at Moi District Hospital in Voi support the patient diagnosed with Malaria to self-care.

On inquiry of participation:
You are now asked to participate in the interview since you are working as a nurse at the Moi district Hospital in Kenya.

Accomplishment of interview:
Please inform us whether to participate in the interview or not. The interview will take about an hour and take place in a calm room. Participants will be the both of us and you. One of us will ask prepared questions as the other is taking notes. If you accept, the interview will be recorded with a tape-recorder and later on transcribed by us. The interviews will be unidentifiable and all tapes will be secrecy kept. You have the right to at anytime break the interview without any given explanation. The participation in the interview is completely voluntary.

The profit of taking part of this study:
Your experience and information will help us to write our examination essay. The result will be presented to SIDA and available for future projects. You will also be received a copy of the study.

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Appendix 2

Interview guide

1. Can you tell me about how you are taking care of patients with Malaria?
   
   Medical treatment
   
   First time diagnosed/ had it before
   
   Gender
   
   Age
   
   Other considerations
   
   Nursing
   
   How do you ease the symptoms of the disease?

2. How do you support the patient diagnosed with Malaria to be able to take care of themselves or other relatives with the disease?

   Advice/Information
   
   Who’s informing the patients?
   
   How are you informing?
   
   Verbally
   
   Brochures
   
   Other?
   
   What are you informing about? (prevention, symptoms, if things are getting worse)
   
   Gender
   
   Age
   
   Religion
   
   Previous Knowledge
   
   Compliance to advices and medical treatment
   
   Do you make a judgment however the patient needs information to be able to take care of themselves?
   
   Other things you wish to add?