Paediatric Burns and its Related Infections
- a Qualitative Study Emphasizing the Preventive Work Conducted by Nurses in Dar es Salaam

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ABSTRACT

Introduction: Burn injuries are a major health problem and a leading problem of childhood mortality, particularly in developing countries. The most common complication of burn injuries is infections in the wound.

Purpose: The purpose of the study was to investigate what advice is given to parents concerning precautions to avoid burns and related infections. Furthermore, the purpose is to investigate what nurses do to prevent infections in the wounds that might appear after burns at the ward.

Method: A qualitative, explorative study was conducted. Semi-structured interviews were conducted among seven nurses, working at the burn unit in Dar es Salaam. A qualitative content analysis was used for data analysis.

Result: Four categories of advice which nurses gave to parents were emerged from the data - Importance of family as well as community resources, Aseptic technique and regulation at the ward to prevent infections, Thoughtful counselling and Looking into a bright future - burns can be prevented. The advices given to parents from nurses are to pay attention to their child and to not leave the child alone. To prevent infections nurses work aseptic at the ward, and they give education to mothers and children about hygiene and nutrition.

Conclusion: Nurses put a lot of effort in counselling in order to prevent future burns and their related complications. The limited economic resources of the families, is one of the main reasons to cause burns and at the same time affecting the care negatively. The nurses working at the burn unit emphasized the importance of education.

Key words: burns, children, prevention, Tanzania, parents
SAMMANFATTNING

Inledning: Brännskador är ett förödande hälsoproblem och en ledande orsak till barnädödlighet, framför allt i utvecklingsländer. Den vanligaste komplikationen tillbrännskador är sårinfektion.

Syfte: Syftet var att undersöka vilka råd som ges till föräldrar för att undvika brännskador och relaterade infektioner. Vidare syftade studien till att undersöka vad sjuksköterskor gör för att förhindra att infektion uppstår i brännskadesåren.


Nyckelord: brännskador, barn, förebygga, Tanzania, föräldrar
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1. INTRODUCTION
Burn injuries are a devastating health problem all over the world, and it has a high potential of mortality. For those who survive the trauma of a burn accident the lifelong complications are plenty, both emotional and physical. Scar contractures cause changes to the visual appearance as well as restricted movement in the affected part of the body. This might lead to that a reoperation will be needed which will demand extra time, and the person in question might not be able to attend school, go to work or socialize in the same way as before. It is not uncommon that a person who has been undergoing a burn injury strikes by posttraumatic stress disorder (PTSD), anxiety, depression and personality changes (Dissanaike&Rahimi, 2009).

World Health Organization (WHO) has stated that 95 % of the fatal fire-related burns injuries are occurring in low- and middle-income countries (WHO, 2014). The mortality rate for burn injuries in low-and middle-income countries averages 4.3 per 100,000, nearly eleven times higher than the rate in high income countries (Roman et al., 2011). To minimize the injuries after a severe burn accident, intensive care performed by specialized professionals is required. This is hard to accomplish in a developing country, where very few specialized burn centres and trained burn professionals exists (Chalya et al., 2011).

One of the highest risk groups concerning fire-related burn mortality rate are children under five years old (WHO, 2014). Burn injuries in children differ a lot from burn injuries in adults. The injury is commonly more severe among children since the extent and depth is greater, this according to that the dermis of children is thinner. Children have different proportions, which contribute to greater water and heat loss from their bodies (Chalya et al., 2011).

1.1 Risk factors for burn injuries
In sub-Saharan Africa it is common to live in small spaces due to urban migration, development of slum areas and poverty. Therefore it is common to sleep and cook in the same room, which increases the risk of burns (Albertyn et al., 2006). Burn accidents often happen when the children are left alone, or supervised by other children, when the parents are out trying to find a job. Another risk factor is that African children often wear long, flowing, highly flammable cotton robes (Albertyn et al., 2006).
Forjuoh et al. (1995) did a case-control study to examine the risk factors for childhood burns; in the study it shows that the strongest risk factor for a child to get burn injured is the presence of a pre-existing impairment in a child. Pre-existing impairment is for example hearing loss, difficulty in seeing, lameness, a history of epilepsy or convulsion. Other significant risk factors are for example history of a burn in a sibling and storage of flammable substance in the home. In order to reduce childhood burns, community programs to ensure adequate child supervision, particularly for those with impairments, as well as parental education about burns are recommended. The public should also be advised against storing flammable substances in the home (Forjuoh et al., 1995).

1.2 Care in Tanzania
A huge problem in Sub-Saharan Africa, when a burn injury has occurred, is that the professional health care often is delayed, due to environmental factors. For example, the distance to a hospital can be long and the roads may be inaccessible (Albertyn et al., 2006). In Tanzania it has been shown that most of the burn injuries among children occur in the home, especially in the kitchen during cooking, due to hot water, open fires or hot food (Outwater et al., 2013). There are plenty of traditional ways to treat the wounds, for example with palm oil, raw egg yolk, milk, cow dung, dirt, soil, herbs or leaves. Therefore, the parents don’t seek professional care until the wound is infected (Albertyn et al., 2006).

The environment is of great importance for the human being, since the cultural environment affects the human to develop their own capacity of caring. This means that the individual from a certain culture will develop a special kind of caring activities, which will be characterized by the existing cultural norms and values (Kristofferssen, 2006). How burn injuries are treated at home, for example with palm oil, raw egg yolk etc. (Albertyn et al., 2006), could be an outcome of cultural environmental effects.

1.3 Nursing education in Tanzania
In Tanzania there are two different types of nurses; those who have a diploma, and those who have a degree. Those who have a diploma have gone to nursing college for four years after
finishing secondary school. Those who have a degree - which is equal to a bachelor in nursing - have gone to university, also for four years, after finishing secondary school. These nurses with degree can, apart from the ordinary responsibilities of a nurse, be entrusted with higher responsibilities such as leadership and management (N. Menti, Senior Lecturer, 28 March 2015).

1.4 Burn assessment
The majority of burn injuries in children are scald injuries, resulting from hot liquids. Other types of burn injuries include chemicals, electrical and intentional injury. When assessing a burnt child it includes airway, breathing, circulation stabilization and then an assessment of the extent of the burn (Toon et al., 2011).

When it comes to the assessment of the severity of the burns, usually four different degrees are used to describe it. First degree is burns that involve the top layer of the skin, epidermis - also called superficial burn. If parts of the second layer, dermis, is also affected it is referred to as a second degree burn, or partial thickness. Third degree burns, full thickness, are when the burns have encompassed the entire dermis. If the burns have affected even deeper, into fat, muscle or bone, it is a case of fourth degree burns (Orgill, 2009). Superficial burns leave the dermis intact and without blisters, and it will heal without scarring. Partial thickness burns can either be superficial or deep, superficial giving blisters and deep partial thickness burns involves nerve fibres being destroyed and it takes 2-3 weeks to heal. Full thickness burns is the most severe; it is painless but the patient is at a high risk for getting infections and severe fluid loss (Toon et al., 2011)

1.5 Wound infections
Patients with burn injuries are at high risk to get infections. When a wound gets contaminated with bacteria, both from the hospital equipment and from the patient himself, the wound can be infected and at the worst this could lead to developing of sepsis. Infections cause the patient more suffering and extend the stay at the hospital (Almås et al., 2011). Infection in the burn wounds may also result in increased scarring and the developing of sepsis may lead to death of the patient (Barajas-Nava et al., 2013). Therefore, it is of great importance that health care professionals work to prevent infections among burn injured patients. One of the first thing to be considered is to make sure that the environment around the wounds is aseptic, that the nurses are
observant for early signs of infections and that the dressing of the wound are being conducted aseptic (Almås et al., 2011).

To determine whether a burn wound is infected or not can be difficult. It can be hard to determine whether the inflammation in the wound is caused by the injury itself, or if it is caused by infection, since these two conditions look almost the same. In addition, due to the rapid and extensive microbial colonization of the wound, with microorganisms coming both from the patient itself and from its surroundings, this makes the interpretation of surface cultures difficult. The spectrum of infective agents in burns is various, but nowadays the predominant bacteria are Staphylococcus aureus and Pseudomonas aeruginosa. It should also be noted that multi-drug resistant microorganisms, such as methicillin-resistant Staphylococcus aureus (MRSA), are frequently identified in burn wounds, which complicates the choice of treatment (Barajas-Nava et al., 2013).

Local burn wound management is one of the most important aspects to avoid infections. In developing and low-income countries the resources of dressing materials and the topical creams and ointments needed may be too expensive or not available. The major factor that has to be considered, for healing the wound and to avoid infections, is how to reduce the cost of the therapy (Atiyeh et al., 2009).

1.6 Treatment options and methods for preventing infections
There is a wide range of treatment options for burn wounds, different types of surgical treatments, different types of topical ointments and dressing materials, but there is no consensus of the optimal treatment of partial-thickness burns in children. The treatment focuses on, among other things, promoting rapid wound healing and preventing infections (Rashaan et al., 2014). For deeper partial-thickness burns, early excision and grafting is beneficial, usually defined as 1-7 days after injury (Gonzalez & Shanti, 2015). The excision of eschars removes nidus for bacteria to grow, and it provides a viable foundation for skin grafting. The grafting works as a protection from infectious organisms, it reduces the metabolic demand and reduces the loss of fluids. In all, early excision and skin grafting has been shown to reduce the risk of infection as well as inflammation, and it also reduces the risk of sepsis and multi-organ failure (Orgill, 2009).
One commonly used method is topical agents containing silver. Silver has been used for centuries to treat different maladies with the intention to prevent infections (Politano et al., 2013). The action of silver-containing ointments is caused by binding of the silver ions to the DNA of the bacteria, which reduces the bacteria’s ability to replicate. However, in a systematic review of randomized-controlled studies comparing silver-containing treatments with non-silver containing treatments, it has been shown that there is no evidence to support the use of silver-containing treatments for prevention of wound infections in burn injuries among children. It has also been shown that wounds treated with non-silver treatments heal more rapidly and requires less dressing changes than wounds treated with silver-containing treatments (Rashaan et al., 2014).

Another way that might help prevent wound infection is through antibiotic prophylaxis. There are different ways to administrate antibiotics, some are applied locally on the skin (topical treatments), some are given orally and some are given as injections. Thus, in a review article (Barajas-Nava et al, 2013), it is stated that evidence are insufficient to determine whether prophylactic antibiotics are beneficial or not.

Human amniotic membranes, the inner layer of the placenta, have been used to treat burn wounds for a long time and are ideal as a burn wound cover. It is easy to store and reduces the cost and the nursing time remarkably. “Amnion banks” could therefore be used in all hospital in all developing countries (Atiyeh et al., 2009).

Other, more traditional, ways of treating the wounds plays a huge role in African countries. For example, the use of papaya paste has been shown to prevent infections (Atiyeh et al., 2009). Papaya is cheap and available all year around (Starley et al., 1999). Another option of cheap dressing material is the use of banana leaves. Banana leaves are easy accessed in most cities and towns in low-income countries and the preparation and dressing can easily be taught to previously treated patients and their relatives (Atiyeh et al., 2009).
1.7 Theoretical framework
For this study, The Ottawa Charter for Health Promotion (WHO, 1986) was chosen as a theoretical framework. According to this Charter there are certain conditions that need to be fulfilled to achieve a good health. Some of these are shelter, education, income and food. To achieve this, three basic strategies for health promotion has been formed, of which the first one is advocate. There are different factors that can either favour or harm health - for example economic, cultural, environmental and behavioural factors. Through advocacy for health the aim is to make these conditions as good as possible. The second strategy is mediate, which means that prospect for health cannot be ensured by the health sector itself; cooperation with voluntary and non-governmental organization, media and local authorities is needed. The third strategy is enable, which means that to reach a full health potential, a safe foundation, a supportive environment and access to information are needed. It is important to ensure the availability of equal opportunities and resources. According to the charter, action areas to give priority to are; developing personal skills, strengthen community actions and create safe home environments. In the preventive work of burn injuries, this Charter can be used as a foundation upon where the preventive work can rely, figure 1.
Advocate - Economic, cultural, environmental and behavioural factors has to be as good as possible to prevent burn injuries. This could for example be to teach the children to keep away from fire and to have a protection cover around the fireplace. Financial resources are also needed to be able to go to the hospital.

Mediate - To spread information about preventing burn injuries, and to make sure that the best care is given, it is important that the health sector cooperate with non-governmental organizations, media, voluntary organizations and local authorities.

Enable - Through education from nurses to parents about burn injuries and how to prevent them, as well as prevent infections, the prevalence of burn injuries and its related infections can be decreased. Creating a safe foundation and a supportive environment will also help decrease the prevalence.

1.8 Research problem
Since burn injuries are a major health problem in the world and a leading problem of childhood mortality, particularly in developing countries (Chalya et al., 2011), there is a need for preventative precautions and that information from the nurses at the hospital is given to the parents concerning burn injuries. Evidence shows that preventive strategies are working, but it is important that the strategies are adapted to the specific environment and it is also important to take into consideration local risk factors as well as available resources (Outwater et al., 2013).

Infections are the most common complication after burn injuries, and this causes the patient more suffering and extends the stay at the hospital. To avoid infections in the wounds, the healthcare professionals’ preventative work is of great importance, as well as the continuous care of the wound at home (Almås et al., 2011).

The lack of parental education concerning how to prevent burn injuries and knowledge about dressing of the wounds is one of the factors leading to the high prevalence of burn injuries and wound infections among children (Chalya et al., 2011). Therefore, there is a need to investigate what advice nurses give to parents to prevent burn injuries and to prevent related infections.
1.9 Aims
The purpose of the study was to investigate what advice is given to parents concerning preventive precautions to avoid burn injuries and to avoid related infections. Furthermore the purpose of this study was to investigate what nurses do to prevent infections in the wounds that might appear after burn injuries at the children's burns unit.

2. METHODOLOGY

2.1 Design
This study had an explorative, qualitative approach. Interviews were made to obtain relevant information. This was considered to best fit the study; hence it was perceptions and experiences that were meant to be investigated. The design allows a phenomenon to be studied and described, whereas valuable reflections of the individuals can be presented (Polit& Beck, 2008).

2.2 Sample
The sample for this study was strategic and consisted of seven nurses working at the paediatric burn unit at Muhimbili National Hospital in Dar es Salaam, Tanzania. The inclusion criteria were nurses who had experience of taking care with children with burns, that they were willing to participate and share their experience and that they had been working at the burn unit for at least six months. The latter criteria was chosen because nurses with at least six months experience of caring for children with burns were believed to have more and deeper knowledge, and therefore able to contribute with helpful information. The only exclusion criterion was non-English speaking nurses. This criterion was chosen because it would facilitate the interviews since none of the authors speak Swahili fluently, which is the official language in Tanzania. Furthermore it was chosen because there would be no need to hire an interpreter. The sample was made in cooperation with the block manager in order to reach nurses who fulfilled both inclusion criteria. When making the sampling procedure, it showed that solely some of the nurses at the ward were English-speaking. Therefore, the decision to hire an interpreter was made.
2.3 Data collection
A semi-structured interview guide with open-ended questions was constructed in cooperation with supervisors from Uppsala University. To be able to determine whether this interview guide was giving appropriate answers that correlated with the aim of the study, two pilot-interviews were conducted before starting the data collection. After the pilot-interviews, it was noted that some of the questions were redundant and did not give relevant information that correlated to the purpose of the study. These questions were therefore removed. To reach a deeper understanding for the nurse’s perceptions on how to prevent burns, a few questions were added to the interview guide.

The final interview guide (appendix 1) consisted of 17 questions in total. The first five questions were asked to get some background information and to make the participants feel comfortable with being interviewed. The following questions were asked to provide information responding to the purpose of the study, and these were sorted into different themes, concerning care given at the ward, dressing of the wound, prevention of infections and prevention of future burns. The open-ended questions made it possible to fill in with additional questions when so were needed.

2.4 Procedure
The interviews took place in the administration room at the burn unit at Muhimbili National Hospital. The wish to conduct the interviews in private could not be fulfilled, since there was no room at the ward where interviews could be conducted completely undisturbed. Before starting interviewing, the participant got information about the study, both verbally and written (appendix 2). They were informed about the aim of the study, about who is being responsible for the study, and about that they can at any time decline their participation without giving any further reasons. They were also asked to sign the consent to participate before starting (appendix 3). Apart from the participant and the two conductors, an interpreter was also present during the interviews, this due to the fact that not all of the included nurses were English-speaking. Each interview lasted for 19-44 minutes. The interviews were audio taped.

2.5 Ethical considerations
A project plan was sent to the ethical committee of Muhimbili University of Health and Allied Sciences (MUHAS). After the committee had approved the project plan, the data collection was
getting started. Ethical guidelines were followed as according to Vetenskapsrådets (i.d) ethical principles for research. This document states four key requirements; the requirement of information, the requirement of consent, the requirement of confidentiality and the requirement of usage. All these requirements were fulfilled. Participants were informed that participation is voluntary and that they could at any time end their participation without giving further reasons, and without any following negative consequences. They were also informed about the non-economic benefits. Concerning the requirement of confidentiality, participants were informed about that their identity will be sealed and that the audio recordings will be deleted after transcription. Furthermore, they were told that no one unauthorized will be able to get access to personal information.

Before the start of this project, the conductors of the study spent two weeks at the burn unit to join the nurses in their daily work. The reason for this was to establish good relations with the nurses and to inform them about the project to come. In this way, the nurses were a bit prepared, which was believed to have made them more motivated and willing to participate in the study. Furthermore, by establishing good relations with the nurses, they might have been more comfortable and might have felt more motivated to give detailed answers when making the interviews.

One ethical obstacle that was faced was that the participating nurses had a lot of work to do. The interviews took place during their working hours, and this caused them less time to care for the children. This was tackled by not trying to stress the nurses, and if they had a lot to do, the interviews were postponed till later in the afternoon or to another day. Another ethical obstacle was that the nurses might have felt as they were being questioned, and some of them might have found it hard to answer the questions. Therefore, the attempt was to make the interviews more like a dialogue, and not to make it feel like an interrogation.

2.6 Data analysis
Qualitative content analysis is focusing on the interpretations of texts and is commonly used in behaviour science as well as caring sciences. The method is applicable in various kinds of texts and interpretations can be done at different levels, which makes it suitable to use it to study and
interpret text from tape-recorded interviews. A content analysis as described by Lundman and Graneheim (2012) was therefore used for data analysis. During the interviews, both authors were present in order to make the interpretation of the non-verbal language easier, like facial expressions and body language. Each interview was tape recorded and thereafter transcribed word by word by the authors. Thereafter the authors, together, read all of the data and marked out parts of the text that was useful and responded to the aim of this study – meaning units (Lundman & Graneheim, 2012). The meaning units where condensed into shorter meanings, and each of these were given a code. Thereafter these codes were abstracted, which means to raise the underlying message to a higher logical level by creating categories and sub-categories (Lundman & Graneheim, 2012), which also worked as topics to present the result. An example of how the meaning units were condensed and abstracted, and sorted into categories is given in table 1.

Table 1. Example of meaning units, condensed meaning units, codes, sub-categories and categories

<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>“..and for those who are not able to have a big house, like here in Dar es Salaam, because people they are living in one room.”</td>
<td>Those who are living in Dares Salaam, they can not afford a big house, so they live in only one room.</td>
<td>One room</td>
<td>Socio-economic status of the family</td>
<td>Importance of family as well as community resources</td>
</tr>
<tr>
<td>“As a nurse, if you know about the burn, when you go to the villages, you can try to teach as many people as you can. “</td>
<td>As a nurse, you can go to the village and teach people about burns.</td>
<td>Teach in village</td>
<td>Motivational dialogues</td>
<td>Thoughtful counselling</td>
</tr>
</tbody>
</table>
3. RESULTS
During the analyzing process four categories emerged: Importance of family as well as community resources, Aseptic technique and regulations at the ward to prevent infections, Thoughtful counselling and Looking in to a bright future – burns can be prevented. Thereafter 12 subcategories were formed. The categories and subcategories are presented in table 2.

Table 2. Overview of results

<table>
<thead>
<tr>
<th>Category</th>
<th>Sub Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Importance of family as well as community resources</td>
<td>Limited resources at the hospital</td>
</tr>
<tr>
<td></td>
<td>Socio-economic status of the family</td>
</tr>
<tr>
<td>Aseptic technique and regulations at the ward to prevent infections</td>
<td>Dressing possibilities of the wound</td>
</tr>
<tr>
<td></td>
<td>Regulations at the ward</td>
</tr>
<tr>
<td></td>
<td>The continuous wound care</td>
</tr>
<tr>
<td>Thoughtful counselling</td>
<td>Motivational dialogues</td>
</tr>
<tr>
<td></td>
<td>Education about nutrition</td>
</tr>
<tr>
<td></td>
<td>Education about hygiene</td>
</tr>
<tr>
<td>Looking in to a bright future - burns can be prevented</td>
<td>Readjustment at home</td>
</tr>
<tr>
<td></td>
<td>Seriouslyparenting</td>
</tr>
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<td></td>
<td>Advocate – parents role as ambassadors</td>
</tr>
<tr>
<td></td>
<td>Information distribution</td>
</tr>
</tbody>
</table>
3.1 Importance of family as well as community resources
A reoccurring subject when interviewing the nurses was a lack of financial resources, both at the hospital but even so within the families of the affected child. This was considered as a great obstacle when taking care of the patient.

3.1.1 Limited resources at the hospital
Many of the interviewed nurses highlighted the issues that occurred at the hospital due to lack of resources. A shortage of equipment and material was considered as a common problem, hence it complicates the conduction of certain procedures, such as dressing and applying an aseptic technique.

“There is not enough equipment, burns is a sterile procedure so we need to have a barrier, like mask, sometimes there is no mask and the hospital doesn’t have mask. That’s a problem” (Nurse 7)

At the ward they are striving to not have to many patients, one of the nurses explain they are fighting not to get too many cases but sometimes it happens, two patients have to share one bed.

3.1.2 Socio-economic status of the family
According to the nurses at the ward, the socio-economic status was a contributing factor to how the accident happened in the first place. Due to overcrowding in Dar es Salaam, the families live in only one room; they use the same room for sleeping, dining, cooking and eating. This makes it hard to keep the children away from the kitchen area, which sometimes result into a burn accident.

“But in our place here, Dar es Salaam, it is a bit difficult because a person can have just one room. Sleeping, cooking and putting other things in the same room. So because of this overcrowding it is a problem” (Nurse 3)

One of the nurses highlighted that some of the burns were caused due to the families’ shortage of money to buy electricity, causing them to use candlelight instead. She added that this is not advisable at all, since they keep the candlelight near the beds and the mosquito net can easily
catch fire. Another issue concerning the economic-status, brought up by the nurses, is that some families cannot afford to send their children to school or to the nursery. The children are therefore bound to stay with their mothers at home, and the children will play whether they are at school or at home, and playing at home, in the same room where the mother is cooking the food, can lead to a burn accident.

One of the biggest issues at the ward, was that the care given, is depending on the socio-economical status of the families. If the parents couldnot afford the medicine or material necessary for the care, the child had to wait until sufficient materials were brought to the burn unit.

“They run shortage of equipment and supplies. So the mothers have to buy, and if they have to buy, sometimes they delay bringing it.” (Nurse 4)

The insufficiency is regarding not only dressing material and medicine but also food. Many of the interviewed nurses were mentioning that, before giving advice on what food to buy, they have to consider what the parents can afford and then adjust the advices depending on the family situation.

“The economic status. What she can afford, we teach her, according to what she can afford..according to what she have at home” (Nurse 4)

3.2 Aseptic technique and regulations at the ward to prevent infections
The essential areas that were described when the nurses were asked about what they do to prevent infections, were dressing of the wound and regulations that applies at the ward. One nurse mentioned that they give antibiotics as prophylaxis as well as doing blood investigation, to be able to sort out early whether there is infection or not.

“..and when the patients come at the ward, we are just giving antibiotics. Starting with Proxacin.” (Nurse 2)
3.2.1 Dressing possibilities of the wound

When the participants were asked how the dressing of the wound is being conducted, they all replied in almost the same way. Dressing is a painful procedure, and therefore children are given morphine before the session. One of the nurses highlighted that this is good, because if the child is in pain, the healing will take longer time, and then the risk for infection increases. The dressing is being conducted every other day in a special dressing room, where aseptic technique is being applied. The dressing session is seen as a sterile procedure.

“When you enter in the room there are special apron, mask and shoes. Your shoes, there is a place where you may put it, then you wear special shoes for dressing, and apron and mask.” (Nurse 3)

“.and there is strict sterility in the dressing room, it is the best to prevent infections.” (Nurse 2)

Before taking the old bandages off, the nurses put on clean gloves. When this has been done, they wash their hands and sterile gloves are being put on. Then the nurse cleans the wound with normal saline and applies a topical antibiotic, called “Silverex”, to the wound. Then gauze soaked with Vaseline is put on to prevent the dressing material to stick in the wound. At last the wound is covered with big gauze.

“We start from the clean area to the dirty area. We make sure the wound is cleaned well, after cleaning then we dry, after drying we put Silverex, after finishing applying Silverex we put Vaseline gauze, then after finishing Vaseline gauze we put that big towel which is heavy. And then we cover with that big gauze.” (Nurse 3)

3.2.2 Regulations at the ward

At the burn unit there are several regulations that are set up to avoid spreading of bacteria and infections. When the participants were asked about this, one of the first things that was mentioned was that patients should stay in their own bed, and not move from one bed to another. The patients are also told to keep their things for themselves, and not to share with...
others. Another commonly mentioned regulation was that relatives or friends of the patient are not allowed to enter the ward; only one caretaker should be near the child.

“We tell them not to move from one bed to another. To prevent those infections. Everyone is to stay in their own bed.” (Nurse 6)

Some of the regulations that applied for the nurses involved weekly cleaning of the ward and decontamination of the beds after the patients have been discharged. One nurse mentioned that they have a system for throwing away waste, where infectious waste is being sorted out in a certain bin. The nurses also practiced basal hygieneroutines – using gloves when conducting certain procedures, washing hands and using alcoholic hand rub after contact with patients.

3.2.3 Continuous wound care
When the children are being discharged, nurses advice the parents either to go to a nearby hospital to dress the wound, or to come back to the ward - depending on the severity of the wound and also depending on how close the family is living to the hospital.

”Most of them, we tell them to dress on nearby hospital, because we’ve got a lot of patients near. But for those who had done skin grafting, we advice them to come back every second day, dress here, until they recover.” (Nurse 3)

3.4 Thoughtful counselling
All of the nurses who were participating in this study stated that they are continuously giving advice and counselling to patients and their parents. All of the nurses said they give the mother health education, already from the first day of admission. The health education was mainly about nutrition and hygiene. Several of the nurses said that, before giving advice, they have to know the situation of the mother, and then teach her from that point.

“You have to know the situation where the child first got this burn. So I ask the mother – how did the child get burn? And after that, I have to teach her from that point.” (Nurse 6)
One nurse also highlighted that health education is a continuous process; you have to keep on educating the mother during the whole stay at the ward.

“You have to continue with counselling, you keep on talking and talking every day, as a continuous process. You don’t get tired.” (Nurse 6)

3.4.1 Motivational Dialogues
An important aspect that some of the nurses talked about, was that you have to encourage the mothers. Two of the nurses said that mothers are often despairoed when they first arrive to the ward; thinking that they are going to lose their child. Furthermore, mothers were often condemning and blaming themselves for the accident that caused the burn. Therefore, the nurses have to talk to the mothers, and try to reassure them that the child will get well, and that it was not her fault. One nurse also claimed that the wellbeing of mothers are important for the continuous care of the child - if the mother is feeling sad and guilty, she might not be motivated to care for the child.

“No, they feel guilty, and sometime condemning themselves. So you have to say:

“Mummy, sorry. This is a normal thing, it was an accident. Your child is going to be cured. Now – feed the child. You have to come up!” So what nurses normally try to – wake up the mother.” (Nurse 6)

One of the nurses talked about another type of encouragement; the one of the children. This nurse wanted to make the children feel comfortable and not afraid of the nurses. Therefore, she spent time to talk and play with the children at the ward.

3.4.2 Education about nutrition
Many of the nurses were conscious about the many beneficial effects that come with good nutrition, for example increased healing process of the wound and decreased risk of complications. Therefore, they felt an urge to teach the mothers how to feed the child properly. Most of the children at the ward had a nasogastric tube (NGT) in order to fulfil the need of
nutrition easier. The nurses often supervised the mothers how to mix the food, and how to feed it via the NGT. To avoid malnutrition and complications, the general recommendation at the ward was a high protein diet. The nurses also gave specific advice of which foodstuff are good. 

“..Those peanuts they cook and give them in porridge, it's a good protein. And also at home - these vegetables and especially pumpkin leaves, and we have yam leaves - it raises the haemoglobin. They are plenty in home.” (Nurse 4)

The most common way to give the education was orally, by talking to the mothers. But one of the nurses highlighted that at the burn ward; there are pictures at the walls that show different types of nutritious food. She usually showed these pictures to mothers and children to teach them which food is good, and which different food groups there are.

3.4.3 Education about hygiene

The nurses considered personal hygiene among the mothers as a good way of preventing infections. The most common advice from nurses to mothers, concerning hygiene, was that they should wash their hands often, especially before and after eating, and before holding the child. Another recurring advice was that the mothers have to wash their utensils and keep them clean.

“For example, washing of hands before caring the child, before feeding. And how to handle the utensils of the child which he is using for the feeding. Some things like that.” (Nurse 1)

Another advice that occurred was to use a clean kanga (a blanket that is used for caring the child on the back) after dressing session and to not share utensils or pots with other people.

3.5 Looking in to a bright future - burns can be prevented

A very thoroughgoing and important job at the burn unit was the work nurses do to help preventing burns from occurring, and to prevent them from happening again. All the participants
of the study emphasized the importance of this work, and they conducted the work throughout various strategies.

3.5.1 Seriously Parenting

The nurses’ daily work includes giving the families information and advice about how to prevent burns. It is an ongoing process and one of the most important things the nurses told the parents was to be careful and look after their child. All of the nurses were in consensus to keep the child away from the kitchen, while cooking. This advice was frequently stated to the parents. They also added that the child should not be left alone, not even when sleeping, because if the child wakes up and the parents are not there, the child might get a burn accident. Many of the families are boiling their drinking water during daytime. This activity is suggested to be done in the evening, when the children are asleep, and then the water will be cold the following morning.

“If it is prepared food hot, the child should be kept away, the mother should be careful. Serious and careful.” (Nurse 5)

“During preparing the food in the kitchen, they have to keep away their children. So, we advice the mother to keep the child on her back, or to keep outside, until she finish the work of preparing food” (Nurse 1)

The parents were told to keep the children outside to play whilst they are inside cooking or to have their own playing area, far from the kitchen. It is also important not to leave the kitchen when they are cooking, the parents should stay close to all the hot foods and liquids to avoid accident from occurring. One of the nurses suggested that the children should go to school or nursery when the mother is at work, so the children are not left alone at home. Thus, this is a concern of financial resources, which is a reoccurring problem. The message to the parents given by the nurses, is to be serious in their parenting, be careful, pay attention and avoid dangerous situations that can cause their children harm.
3.5.2 Readjustment at home

Many of the burn accidents at the ward happened due to the family’s home environment, and could be prevented with some adjustments in their homes. If the family has a separate room for the kitchen, the parents should have it closed while preparing the food, so the children cannot enter. In a lot of cases, the families only have one room to live in, in those cases it is suggested to put some kind of barrier between the cooking area and the area for the children to stay in. Furthermore the place to cook should be higher up, to make it harder for the children to reach any of the hazardous hot food or liquids.

“If they have just a single room, they have to put a barrier to the kitchen, so those kids can’t go to the kitchen.” (Nurse 3)

The narrow space at home was considered as a big issue when interviewing the nurses at the ward. The problem is when the children play close to where food is prepared. One of the nurses said that it would make it a lot easier if the kids could have a playground to go to outside their homes. Then the mothers can be home cooking without risking their children to get harmed.

“Children should have a playground far away from home, so they have enough place to play. Mother can cook while the children are playing, and when they come back, they just shower, eat and sleep. So not play home where there is a narrow space” (Nurse 4)

3.5.3 Advocate – parents role as ambassadors

When discussing prevention of burns, the nurses stated that the families should be advocate and act as ambassadors to spread information to their friends and neighbours.

“We tell them to be careful and to be an advocate to the community. To try to tell your neighbour that the fire or the boiling water is very dangerous!” (Nurse 2)

The nurses told the parents about the importance of raising awareness in the community, and that they should tell their neighbours to take precautions. Furthermore, parents should let their
neighbours know that burns are fatal, causing severe injuries. They should not only look after their own children, but also care for the other children in the area.

“Or when they see children are playing with fire, don’t just state to say that it’s not my child. It is better to take effort and save that child” (Nurse 2)

“Ambassador for their neighbours and the other kids at home. If they are not ambassador, then you find the next kid coming with burn or the near neighbours they come with burn.” (Nurse 4)

3.5.4 Information distribution
The complications of burns are many - including loss of fluids, infection, anaemia, deformities and even sepsis. This is one of many reasons why spreading information about how to prevent burns to the community is of outermost importance. All of the participants in the study had several suggestions on how this could be done.

“Share the knowledge which we have with the others. I think it is the best way to prevent burns” (Nurse 7)

“So we are still fighting to see if we can minimize the cases of this burns not to come and the public not to be, to be occurred even. And the doctors are talking in the TV weekly in order to educate people and the nation, in order to minimize this” (Nurse 2)

The nurses also taught the elder children at the ward. They teach through talking with the children and giving them education. To the smaller children, the nurses taught through showing pictures and paintings of what kind of situations the children should avoid.

“For the kids, we show them pictures. To not be near to the fire, not to play with the hot iron or electricity” (Nurse 4)
An important aspect that has to be considered was that in order to prevent burns from occurring, it is not only the families that need education; it is a responsibility that should stretch throughout the community. One nurse in this study said that the best way to prevent burns is to educate the mother but also to give education to the personnel at the day care. All of the nurses thought that education through mass media like radio and TV is a good way to make the information reach throughout the country.

One of the nurses explained that in order to give the best information to the parents, the nurse have to know what situation caused the burn, and thereafter she can give the information most suitable to that family. Nurses told the parents various advices; for example to keep the stove off, to not give the children hot porridge, and to not put any hot food near the baby.

“First of all you have to know the situation, because each burn it is has different cause. Each patient different cause. So we teach according to the situation” (Nurse 7)

4. DISCUSSION
Four categories emerged from the data - Importance of family as well as community resources, Aseptic technique and regulation at the ward to prevent infections, Thoughtful counselling and Looking into a bright future - burns can be prevented. The results showed that nurses put a lot of effort in counselling parents and children in order to prevent future burns and their related complications. Nurses at the burn unit were highly aware of the devastating consequences of burn injuries and the related infections. The greatest obstacle the nurses are facing was the lack of financial resources, both of the families and the hospital. Some examples of the advice that was given to parents from nurses was to be aware and keep attention to their child and to not leave the child home alone. To prevent infections nurses adopted an aseptic technique while dressing the wound, and they gave education about hygiene and nutrition to mothers and children.
4.1 Discussion of results

4.1.1. Importance of family as well as community resources

The result of this study showed that according to the nurses, socio economical status of the families is an essential issue when dealing with burn injuries. All of the nurses highlighted that many of the accidents occurred due to the family’s economical situations. This is in accordance to World Health organization (WHO) that states that 95% of the fatal fire-related burns injuries are occurring in low- and middle-income countries (WHO, 2014).

According to the Ottawa Charter (WHO, 1986), there are different factors that can either harm or favour our health. One of these factors is financial resources - and in this case, the lack of financial resources - both within the families and at the hospital, is a harming factor to the health. Lack of money makes it hard for mothers to buy the materials and foods that are needed for optimal wound healing. Also, lack of economical resources at the hospital is leading to lack of materials like gloves, aprons and masks, which are needed to be able to apply an aseptic technique. If it is not possible to work aseptic when conducting the dressing of the wound, the risk for infection will be increased (Almås, 2011). Last, but not least, the nurses participating in this study often meant that the lack of financial resources within the family is not rarely the actual reason why the accident occurred in the first place.

A related issue to the economical status was the family’s living situation: the nurses often spoke of the problem being single room houses, where the family cook, dine and sleep in the same room. This is coherent with the findings of Fourjoh et al. (2006) who states that it is common to sleep and cook in the same room, which increases the risk of burns. According to the nurses participating in the study, the affected family could not always afford to supply the nurses with essential equipment needed for the care, causing the nurses to be unable to give sufficient care to the child. This finding is in line with Atiyeh et al. (2009) where it is stated that in developing and low-income countries the resources of dressing materials, topical creams and ointments needed, may be too expensive or not available. Furthermore, it is expressed that the major issue is how to reduce the cost of therapy and treatment, in order to increase the availability and in the extent heal the wound faster (Atiyeh et al., 2009). According to Chalya et al. (2011) care performed by
specialised professionals is required to minimize the injuries after a severe burn accident. This is hard to achieve when the financial resources within the families are limited.

4.1.2 Aseptic technique and regulation at the ward to prevent infections

When it comes to dressing of the wound, all of the nurses were in consensus about the procedure. They all adopted the same aseptic technique, and used the same dressing materials. This can be interpreted as a sign of well-functioning guidelines at the ward, and also as good adherence to these guidelines. According to Almås et al. (2011), one of the first things to be considered to prevent infection is to make sure that the environment around the wounds is clean and that the dressing of the wound is being conducted aseptic.

All of the nurses also said that they use silver sulfadine when dressing. According to Rashaan et al. (2014), there is no evidence to support the use of silver-containing ointments, since it has not been proved to prevent infections among burn wounds. On the contrary, wounds that are treated without silver-containing ointments have been showed to heal more rapidly than those who are treated with silver-containing ointments (Rashaan et al., 2014). When considering the financial situation of the family and the mother, deliberating the actual effect of Silverex is of great importance, before recommending the mother to go and buy it.

The regulations existing at the ward were for example that the patients are not allowed to share beds, relatives cannot enter the ward, and the nurses are conducting weekly cleaning. These regulations are in line with Almås et al. (2011), which claim that in order to prevent infections, the environment around the wound should be clean. This correlates with the Ottawa Charter (WHO, 1986) where it is stated that through advocacy for health the aim is to make certain conditions, such as the environment, as good as possible. By these regulations at the ward, an appropriate environment is created, which promotes health in the sense of infections being prevented and it supports a faster wound healing.

The nurses at the Burn Unit at Muhimbili Hospital were highly aware of the many complications that come with infections in burn wound; for example increased scarring and development of sepsis. Therefore, they do their best to avoid getting the wounds contaminated with bacteria. This
is in consensus with Barajas-Nava et al. (2013) and Almås et al. (2011) who claims that infections in burn wounds causes patients mote suffering and is often a reason for an extended stay at the hospital.

4.1.3 Thoughtful counselling

To support the mothers and provide them with information was a part of the nurse’s daily work at the burn unit. The nurses had to be encouraging in order to motivate the mothers to take care of their children. They also had to provide with information about nutrition and hygiene, so that complications due to the burn are being avoided. The Ottawa Charter for health promotion (WHO, 1986) presents three different strategies to promote health, which are advocate, enable and mediate. The second one, enable, contains two key factors that are needed to reach a full health potential. These are to have a supportive environment and to get access to information. By encouraging the mothers and provide them with information, nurses are creating a supporting environment which will help the child to get back to his or hers original health status. According to the charter, one of the action areas to give priority to, is developing personal skills (WHO, 1986). The nurses often acted as supervisors of the mothers, teaching them how to feed the child properly and how to keep themselves clean, in order to benefit rapid healing and to prevent infections.

The nurses participating in this study were also explaining about the parents’ state of mind when being admitted to the ward. They were often despaired and afraid they were going to lose their children, condemning and blaming themselves for the accident. This is supported with the findings from Öster et al. (2013), stating that for the parents, this can be one of their most stressful experiences. Furthermore parents often appear to suffer as much as the child in response to their child's exposure to pain (Öster et al., 2013).

The nurses talked about the significance of supporting the parents and encouraging them, they accomplished this by talking to them and reassuring the parents that it is not their fault. The parents’ wellbeing was considered an important aspect, in order for the parents to be able to help their child. Long-lasting stress symptoms in some parents also emphasize the need for increased availability of counselling and psychological support during aftercare (Öster et al., 2013).
According to Thompson et al. (2014), adequate nutrition is critical for timely and complete wound healing, and the most important components for rapid wound healing are protein, vitamin C and zinc. The education that was given to mothers and patients about nutrition was mostly about eating varied and nutritious food that are rich in protein, and also to eat lots of vegetables and fruits. The counselling about nutrition given by nurses to mothers and patients at the burn unit goes along well with the findings of Thompson et al (2014).

4.1.4 Looking in to a brighter future – burns can be prevented

The nurses of the study claimed that it was of equal importance to try to stop burns from occurring as well as treating the once that had already happened. Therefore a lot of the nurses work, was to give advice and education to both parents and the children concerning prevention of burns. This strategy is supported by Chalya et al. (2011) who claims that the lack of education to parents about burns is one of the main reason why burns among children occurs. The nurses told the parents to be careful and aware of their child’s whereabouts. Furthermore they explained the importance of being present and not leaving the kids alone at home. According to Albertyn et al (2006) it is a high risk factor for the children to get burned, when they are left alone at home.

The third strategy that is mentioned in the Ottawa Charter (WHO, 1986) is mediate, and is addressing ways to spread information. The health sector itself cannot reach out to everyone; they have to cooperate with media, non-governmental organizations as well as local authorities. The nurses participating in this study were taking in to consideration that to prevent future burns, advice should not only be directed to the parents. They also found it important to engage other parts in the community, for example caregivers at school and nurseries. Furthermore, nurses encouraged parents to be ambassadors, and to tell their neighbours and friends about the dangers of fire. Another way to spread information to the community was through media. The significance of community programs to ensure adequate child supervision is mentioned by Forjuoh et al. (1995) where it is explained that in order to reduce childhood burns, community programs is needed as well as parental education about burns are recommended.
4.2 Discussion of method
The chosen design of this study was qualitative and explorative in order to present valuable reflections of each individual (Polit& Beck, 2008). By using this method, the aim of the study was obtained. The limitation of the selected design was that there was no room for observing the nurses during work, which could have provided useful information.

4.2.1 Trustworthiness
Considering the pre-understanding of the authors, the authors had acquired some theoretical knowledge about how burn injuries are commonly treated and handled in Sub-Saharan Africa, but had no own experience of caring for patients with burn injuries. Therefore, the authors spent two weeks at the Burn Unit, as a part of the clinical practice, in order to see how the daily work of the nurses was being conducted. In this way, the authors got a pre-understanding, which were helpful and simplified the interviewing. To spend two weeks with the nurses before starting interviewing was also a good way to get to know the participants, which might have made them more relaxed and more comfortable with being interviewed. When analysing the data, the pre-understanding might have affected the analysing process in a good way, since the authors had the ability to put the collected material into a context.

4.2.2 Dependability
A detailed description of the analysis process and that the researcher verifies the standpoints during the whole research process is increasing the dependability (Lundman&Graneheim, 2012). One of the strengths in this study is that both of the two authors read all of the collected data. Even the analysis was made by both of the authors in cooperation, and according to Lundman and Graneheim (2012), this is increasing the dependability. The meaning units were discussed and interpreted several times each, and the different abstraction levels were rigorously discussed between the authors until consensus was reached, and then the final categories were chosen with great thoughtfulness. What might limit the dependability is that none of the authors had previous knowledge or experience of interviewing; thus the interview technique could have been better, which might have led to longer and more detailed answers of the participants.
4.2.3 Credibility
To establish credibility it is of importance to enhance the characteristics of what is intended to describe (Lundman & Graneheim, 2012). This was achieved by the authors through using a semi-structured interview guide with open-ended questions, allowing the interviewed to give their own views and opinion. To increase the credibility, two pilot interviews were conducted. This enabled the authors to readjust the questions in order to capture the essence in a more suitable way and to better fit the purpose of the study. The aim of a qualitative content analysis is to get the area highlighted from different point of views, in order to describe variations (Lundman & Graneheim, 2012). In this study the variation in the nurses’ working experience, of the selected sample group, is increasing the range of views and experience. However, it would have been desirable to have a larger sample group, with greater variety in both ages and sex, in order to increase the credibility.

The interviews were conducted at the ward, during the nurses working hours. Due to heavy workload sometimes the interviews were cancelled and had to be rescheduled. The stressful situation at the ward may have caused the nurses to give shorter answers and might have inhibited them to give explicit explanations. The atmosphere within the room, where the interviews were conducted, was not as secluded and quiet as was desirable. The interviews were not seldom interrupted by medical staff and patients, and the busy environment might have affected the answers from the nurses.

One of the obstacles that were faced was the language barrier. Most of the nurses were not able to, or not comfortable with, speaking English. Therefore, an English-speaking nurse from the burn unit was asked to work as an interpreter for the interview sessions. The intent was to hire a professional interpreter, to minimize the risk for bias. Unfortunately, this could not be found. On the other hand, the English-speaking nurse was familiar with the situation at the hospital, which can have been an advantage.

4.2.4 Confirmability
When making the interviews, both of the authors were present. This can be regarded as an advantage, since the authors in this way were aware of how the other one asked the questions,
and what kind of follow up questions was asked. This created consensus of the interviewing technique. It also gave the authors ability to discuss what had been communicated; not only regarding the spoken language, but also the language expressed by face and body which can create an underlying message. These factors increase the confirmability (Lundman & Graneheim, 2012).

4.2.5 Transferability
This study does not aim to be generalized, considering it is a study with a qualitative design. This study is enhancing the care and advice given by the nurses to burn injured children and their parents, concerning infections and future burns. It also attempts to explain different views and perceptions of what the nurses are considering as challenges, and what future work needs to be done. The results of this study might be applicable to other similar health-care settings in order to compare if the advice given to parents and actions taken to prevent burns and its related infections are similar, or if they differ.

4.2.6 Ethical considerations
The subject of this thesis were not considered to be sensitive or of offensive character for staff, and therefore the participants did not feel uncomfortable or under pressure during the interviews. Before starting the interviews the participants were told that they could at any time decline their participation without giving any further reasons.

One ethical problem that was faced was that the interviews took place during the nurses working hours. Due to this, the nurses got less time to care for the children. After all, this was taking into consideration by the authors, who tried to be flexible when setting up times for making the interviews, and also applying an understanding attitude against the nurses and showed no impatience if the participants had to finish some tasks before starting the interviews or could not make it at the time that were set up. Furthermore, it is desirable that the results can benefit the care of the patients.
4.2.7 Clinical implications
This study highlights the role of the nurse as an important part in the work of preventing burns and its related infections. By given proper and thoughtful counselling to children and their parents, a lot of burns can be prevented. The counselling has to be situation-bound, and the nurse has to give close consideration to what kind of advice is the best to give in each given situation. By adequate counselling from nurses to patients, lots of funds can be spared, concerning both economical means of the families as well as the resources of the hospital. The results of this study can raise the awareness among nurses of how important they are in the work of preventing burns among children.

4.2.8 Suggestions to further research
Further research of interest would be to focus on how the information about preventing future burns could better be spread, since many of the nurses expressed that this is one of the most important issues to prevent future burns in Tanzania. Also, it is desirable to investigate how to get more parts of the society involved; for example educating nurses at peripheral hospitals, educating day care staff and spreading the information into smaller communities. An important aspect that has to be taken into consideration is the socio-economic situation of the families. According to United Nations Development Programme (UNDP, 2012) one third of the population in Tanzania is considered poor, and reducing poverty is a key development challenge. High youth unemployment and increasing economic disparities could derail further economic and social progress unless urgent action is being made. The main aim of UNDP is to eradicate poverty, and to reach this, they have set up eight specific goals, which are called the eight millennium goals. To eradicate extreme hunger and poverty, is the first goal of the 8 millennium goals (UNDP, 2012). If this goal can be achieved, the prospects are looking brighter concerning preventing future burns. The fourth goal is to reduce childhood mortality (UNDP, 2012), and the work of preventing burns is a step in the right direction.

4.3 Conclusion
The advice given by nurses at the ward were numerous and with wide variety. The advice about precautions to avoid burns, were often coherent with the parents being careful and aware of their child’s whereabouts as well as making readjustments in the homes. The essential actions taken to
avoid infections were counselling parents about hygiene and nutrition, and adopting aseptic technique when conducting dressing of the wound. The limited economic resources of the families, was one of the main reasons to cause burns and was at the same time affecting the care negatively. The result of this study showed that the nurses working at the burn unit, is emphasizing the importance of educating the children and their parents in order to prevent burns and avoid related infections. Further research on the subject is desirable.
REFERENCES


APPENDIX 1 - INTERVIEW GUDIE

Background data
How long have you been working as a nurse?
How long have you been working in this ward?
How old are you?
What kind of education do you have?
What made you want to become a nurse?

Experience of care given at the ward
How do you experience the care given to the children?
What is good about the care? Can you give some examples?
Are there any problems? If yes, can you give some examples?
Do you give the parents any specific information about nutrition?

Dressing of the wound
Can you describe how the dressing of the wound is being conducted?
When the children are discharged, what do you tell the parents about future wound care?

Preventing infections
Do you consider infections as a common problem among burn injured children? Why/why not?
How are infections being prevented at the ward?
Do you give parents any specific advice to avoid infections in the wound?

Preventing burns
What kind of information is given to the parents about preventing future burn injuries?
What do you think is the best way to spread information about how to prevent burns?
What do you think is the best way to prevent burns?
APPENDIX 2 - INFORMATION LETTER

Study concerning prevention of burn injuries and related infections among children – nurses’ preventive care and advice to patients in Dar es Salaam

Dear Sir/Madame,

We are two nursing students from Uppsala University in Sweden writing our Bachelor thesis at Muhimbili National Hospital in Dar es Salaam. You are hereby asked to participate in a study where we will investigate nurses’ preventative care and advices to parents concerning burn injuries and related infections among children.

Background

Burn injuries among children are a devastating problem all over the world. In Tanzania it has been shown that most of the burn injuries among children occur in the home, especially in the kitchen during cooking, due to hot water, open fires or hot food. The most common complication of burn injuries is wound infections. Evidence shows that prevention strategies are important in the work to decrease the prevalence of burn injuries.

Aim

This study aims to investigate which advices are given to the parents concerning continuous care of the wound to avoid infections and concerning preventive precautions to avoid burn injuries. Furthermore the purpose of this study is to investigate what nurses do to prevent infections in the wounds that appear after burn injuries at the children's burns unit.

Conduction of the study

The participants of the study will be nurses working at the paediatric burn ward. To collect the data, six to eight interviews will be conducted. The interview will be conducted in private, except where there is a need for an interpreter, at the paediatric burn ward. The estimated time for each interview is 20-40 minutes. The interviews will be audio taped and thereafter analyzed.

Participation is voluntary, the participant can choose to withdraw his or hers participation in the study at any time, without giving any reasons.
The finished bachelor thesis will be sent to Muhimbili School of Nursing as well as to the paediatric burn ward. If any of the participants wish to take part of it, they will be able to get access to it.

There are no economical benefits in this study.

**Confidentiality**

All personal information collected will be transformed into codes to assume confidentiality. After transcribing the interviews the recorded interviews will be deleted.

Your participation is highly valuable for our study. If you have any question we will be happy to answer.

Kind regards,

Johanna Lindén and Greta Persson

**Responsible for this study**

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APPENDIX 3 – CONSENT TO PARTICIPATE

Your participation is entirely voluntary. Even though you have agreed to participate, you can at any time decline further participation without giving any reasons. In the use of this information, your identity will be concealed.

I have been informed about the study, both verbally as well as in written form, and I am willing to participate according to the information mentioned above.

Signature of participant________________________

Date of signed consent_________________________