Mothers Knowledge, Attitudes and Practice Towards Management of Febrile Convulsions, Elnuba Catchement Area, Gezira state, Sudan (2013)

By

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A Dissertation submitted in partial fulfillment for the Requirements for the Degree of Master of Science

In

Family Medicine

Department of Family and Community Medicine

Faculty of Medicine

University of Gezira

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Mothers Knowledge, Attitudes and Practice Towards Management of Febrile Convulsions, Elnuba Catchement Area, Gezira state, Sudan (2013)

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Supervision Committee

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Examination Committee

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Date of Examination: 13/August/2013
بسم الله الرحمن الرحيم

قال الله تعالى على لسان الملائكة:

قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا إِلاَّ مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ الْعَلِيمُ الْحَكِيمُ

صدق الله العظم

الآية (32) - سورة البقرة
Dedication

To whom my secret of success belongsto;

the soul of my father

my dear mother,

my lovely kids .. (Amona & Exeer)
Acknowledgement

I give of myself when I give gifts of the mind: ideas, dreams, purposes, ideals, principles, plans, projects …

I give of myself when I give the gifts of words; encouragement, inspiration and guidance …

I would like to express my sincere appreciation and thanks to Dr. Salwa Sanousi for all her valuable help, guidance and encouragement, which enabled me to complete this study.

I am glad to express my sincere appreciation and thanks to Family medicine & Community medicine Department for giving me an opportunity to engage in research work and guiding me throughout the study experience. My sincere appreciation and thanks goes to Dr. Osman, Dr. Abdalnasir, Dr. Khalid for his support, guidance and humane concern.

I would like to express my appreciation and thanks Mr. Ramy, for his valuable and timely help, in bringing a clear focus to the statistical data, that emerged from this study.

I would like to express my appreciation and thanks to my daughters, my mother and all my classmates for their many acts of friendship, from time to time.

I am very thankful to God, for all the many blessings showered on me, from time to time.

Rasha Abdelgadir Gasim Ahmed

**ABSTRACT**

A wide range of childhood illnesses are accompanied by fever, many of which are treated at home prior to presentation to hospital. An assessment of mothers’ knowledge and ability to recognize fever in their child, as well as management instituted at home were the focus of this study. The study conducted in Elnuba catchment area, to assess fever control measures in children under 6 years in order to prevent the occurrence of febrile convulsions. The study aimTo assess the existing knowledge of the mothers regarding fever control measures, to prevent the occurrence of febrile convulsions in children and to co-relate mothers’ knowledge with socio-demographic variables. A cross-sectional community-based study carried out in Elnuba catchment area – Alkamleen locality – Gezira state - Sudan in April 2013. 108 mothers had the children between the age group of (0 - 6) years. Data was collected by using Questionnaire. It comprises of two parts. Part-I deals with socio-demographic profile of the child and mothers, and Part-II contains knowledge questions related to cause, signs and symptoms, fever control measures, complications, and emergency care of febrile convulsions (first aid measures). Data was analyzed by using SPSS. Regarding correlations between age of mothers, type level of education and type of family with knowledge questions related to cause, signs and symptoms, fever control measures, complications, and emergency care of febrile convulsions (first aid measures), it was found that, education level is correlated to all measures asked under level of confidence (97%) where all relations were found significant (< 0.03). That shows that their knowledge is inadequate regarding fever control measures. The study concluded that, Knowledge is inadequate regarding fever control measure to prevent the occurrence of febrile convulsions. So, a health education should be provided to the mothers regarding fever control measure and first aid measures of febrile convulsions. This will help the mothers to acquire the knowledge related to fever control measure measures, and be able to prevent the re-occurrence of febrile convulsions in their children in the future.
المعرفة والسلوك والممارسة للأمهات في علاج تشنجات الحمى، منطقة النوبة القابضة، ولاية الجزيرة، السودان (2013)

ملخص البحث

كثر من أمراض الأطفال تصحبحا حمي وغالباً تعالج منزلياً قبل إحضار الطفل إلى المستشفى أو المركز الصحي. لذلك تقيم معرفة الأم وإدراكها ومارستها تجاه هذه الحميات في المنزل لتقليل المضاعفات الناتجة هو ما استهدفته الدراسة. تم إجراء هذه الدراسة في منطقة النوبة القابضة لتقييم معايير السيطرة على الحميات عند الأطفال أقل من 6 سنوات لمنع حدوث تشنجات الحمى. هدفت هذه الدراسة إلى تقييم معرفة الأم وإدراكها تجاه معايير السيطرة على الحمى لدى الأطفال للوقاية من حدوث تشنجات الحمى ومقارنة معرفة الأم مع المتغيرات الديموغرافية الاجتماعية.

دراسة مقطعية مستعرضة تم إجراها في منطقة النوبة القابضة في أبريل 2013. شملت الدراسة 108 أم تفاوتت أعمار أطفالهن بين (صغر – 6 سنوات). تم جمع البيانات بواسطة استبيان والتي يكومن من جزئين: الجزء الأول يحتوي على البيانات الشخصية لكل من الأمهات والأطفال، بينما تناول الجزء الثاني على العلاقة بين معرفة الأم بأعراض وعلامات الحمى ووسائل التحكم فيها والمضاعفات الخطوات الإسعافية الميدانية لرعاية الأطفال في حالة حدوث تشنجات الحمى. تم تحليل البيانات باستعمال برنامج الحزمة الإحصائية للدراسات الاجتماعية. عند المقارنة باستخدام القيم الإحصائية بين التعليم وعمر المرأة ونوع الأسرة أظهرت الدراسة أن التعليم له تأثير كبير في مدى معرفة الأطفال بأعراض وعلامات الحمى ووسائل التحكم فيها والمضاعفات والخطوات الإسعافية الميدانية لرعاية الأطفال في حالة حدوث تشنجات الحمى وذلك من خلال وجود أهمية ذات دالة إحصائية (القيمة الإحصائية كانت أقل من 3% حيث درجة الثقة للدراسة كانت 97%) في كل العلاقات. مما يوضح أن معرفة الأمهات غير كافية. خلصت الدراسة إلى أن معرفة الأمهات تجاه معايير تقييم الحمى غير كافية، ويجب تقدم تقييف صحي لمن في هذا الجانب وفي الإسعافات الأولية مما يشجع الأمهات لزيادة من المعرفة ويمكنهم من التعامل في حالة اكتشاف تشنجات الحمى في المستقبل.
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Chapter 1

1.1.1 INTRODUCTION:

Fever is defined as a body temperature above the normal range; a rectal temperature above 38.0 °C, an oral temperature above 37.8 °C, and an axillary temperature above 37.2 °C are all considered as fever. Children in the age group of 3 months to 36 months have approximately six febrile episodes per year, representing the highest incidence of fever during childhood. Adam, and it is estimated that fever is the primary complaint for as many as one third of all pediatric consultations in general practice Crocetti. Although fever was considered a protective response for thousands of years, and was even induced by physicians to combat certain infections, the advent of antipyretic drugs has led to the common belief that fever is maladaptive and harmful Sarrell. Parents have shown a lot of anxiety and unrealistic fears of fever, and they generally see it as the main component of an illness in their children which often prompts them to seek immediate medical care Schmitt. In Britain, Kai interviewed socially disadvantaged parents and identified a fear that causes panic when children are feverish Kai. Therefore, mothers knowledge and perception of fever may determine the degree of their anxiety and fear, and reflect on the way the fever is managed at home Nouri.

We conducted this study to explore mothers’ ideas, knowledge and concerns about fever in their children and their home management strategy and to study the relationship between mother’s knowledge about fever and their fears with the educational level and number of children. The conclusions of this survey will help doctors in their management of a feverish child.

Feverish illness in young children usually indicates an underlying infection and is a cause of concern for parents and carers. Feverish illness is very common in young children, with between 20 and 40% of parents reporting such an illness each year. As a result, fever is probably the commonest reason for a child to be taken to the doctor. Feverish illness is also the second most common reason for a child being admitted to hospital. Despite advances in healthcare, infections remain the leading cause of death in children under the age of 5 years.

Fever in young children can be a diagnostic challenge for healthcare professionals because it is often difficult to identify the cause. In most cases, the illness is due to a self-limiting viral infection. However, fever may also be the presenting feature of serious bacterial infections such as meningitis or pneumonia. A significant number of children have no obvious cause of fever despite careful assessment. These children with fever without apparent source are of particular concern to healthcare professionals because it is especially difficult to distinguish between simple viral illnesses and life-threatening bacterial infections in this group.
Although there are guidelines for many individual infections, there is no national guidance on the management of fever as a presenting illness. Management varies across the UK and there is some evidence that mortality and morbidity from infectious diseases in children is sometimes associated with deficiencies in the healthcare system and in the diagnosis and treatment of illnesses. There is also some evidence that death rates are higher in the least affluent areas. As a result, there is a perceived need to improve the recognition, assessment and immediate treatment of feverish illnesses in children.

1.2 JUSTIFICATION
The oxford dictionary defines “Mothering, as looking after kindly and protectively, Mothers need greater awareness about the disease & their management to perform this effectively”. As febrile seizure are the most common convulsive disorder among children, Mother should have adequate knowledge regarding prevention and Management of this condition.

The most important problem that physician & the Nurse taking care of children with febrile seizure, fall is parenteral anxiety. Many parents feel that child is going to die during the seizure. Again the most important factor that trigger, the febrile seizure is fever, so the Parents, especially the Mothers should have adequate knowledge. Various Measures like appropriate immunization to prevent, childhood infections, and aggressive Management of fever. Parents should understand how to take care of the child temperature and use of fever reducing Measures including sponging and administration of antipyretics. However they must also understand about that.

1.3 OBJECTIVES

General objective of study
To assess Mothers’Knowledge, Attitude, and Practice regarding fever control measures to prevent the occurrence of febrile convulsions in Elnuba catchment area.

Specific objectives of the study
1. To Assess the existing knowledge of the mothers regarding fever control measures in Elnuba catchment area.
2. To identify the relation between knowledge of mothers of children under 6 years, with socio-demographic variables (Age of mothers – Education level – Type of the family).
1.4 REVIEW OF LITERATURE

Review of Literature helps in supporting the studies. The literature related to fever is reviewed under the following headings: Signs and Symptoms of Fever, Complications of Fever and Fever control measures.

1. SIGNS AND SYMPTOMS OF FEVER

Fever results not only in rise of temperature, but it also affects all the systems of the body. The signs and symptoms produced in each system are as follows:

Respiratory System: Shallow and Rapid Breathing
Circulatory System: Increased pulse rate and palpitation

<table>
<thead>
<tr>
<th>appetite, loss</th>
<th>tongue, coated</th>
<th>mouth, Dry</th>
<th>Alimentary System</th>
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<td>(or) constipation</td>
<td>nausea, vomiting, indigestion</td>
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<tr>
<td>Micturation, urinary output, burning</td>
<td>Diminished</td>
<td>Urinary System</td>
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<td>high coloured urine</td>
<td></td>
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<td>convulsions</td>
<td>irritability, restlessness, Headache,</td>
<td>Nervous System</td>
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<tr>
<td>delirium</td>
<td></td>
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<td>Malaise, fatigue, body pain, joint pain</td>
<td>Musculo Skeletal System</td>
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<td>flushes, goose flushes, hot sweating, Heavy</td>
<td>Integumentary System</td>
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<td>shivering (or) rigor (13)</td>
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</table>
2. COMPLICATIONS OF FEVER:
The main complications of fever are febrile convulsions. The Department of Paediatrics at G.S. Medical College and K.E.M. Hospital, Parel, Mumbai conducted a study on “Parental Anxiety and apprehension is related to inadequate knowledge of fever and febrile convulsions”. In the study conducted for a period of 1 year, 140 parents of convulsive children were the sample for the study. 83 parents (59.3%) could not recognize the convulsions. 124 (90.7%) did not carryout any intervention prior to getting the child to the hospital. The commonest immediate effect of the convulsions were fear of recurrence . The parents did not know that the convulsions could occur due to fever. Febrile convulsions are the commonest cause of convulsions among children. About 4% of children in the age group of 1-6 years have had atleast one episode of febrile convulsions, and 30% have had recurrent convulsions and many get admitted to the hospital. (Rosalind)

“A clinical study of febrile convulsions in children” undertaken at Vani Vilas Children’s Hospital, Bangalore between June 99 to December 99 revealed that 108 children admitted to the Emergency ward with the diagnosis of febrile convulsions were the sample of the study. The children chosen for the study were between the age group of 6 months and 6 years, associated with fever without the evidence of intra-cranial infection. (Dhanalakshmi) A study conducted in Ajmer revealed that Black water fever is a rare manifestation of falciparum Malaria which is characterized by sudden intra-vascular hemolysis, followed by fever and haemoglobinuria, which occurred after the administration of quinine and that was treated with Artemether. (Mei) The Mothers accompanying febrile children who had “fever” as a major complaint were interviewed. A sample of 439 mothers were interviewed, the children were physically examined and their blood tested for Malaria parasites. Mother’s diagnosis was compared with the clinical findings. The results revealed that 39% of the Mothers associated fever with Malaria. The conclusion revealed that majority of the Mothers do not associate fever with Malaria. The study revealed in Uganda, Malaria was the commonest cause of fever in children. (Housea)

The general incidence of febrile seizures among children at Bangalore Medical College Hospital was 37.2 / 1000. Among that 32% of the children were female. Majority of the febrile convulsions occurred between the age group of 6 months to 2 years which
constitutes 75% of cases, 40% of the cases were found within 1 year of age and 36% cases found between 1-2 years of age, seizures occur within 24 hours in 88% of the cases. At the onset of febrile convulsions, 77% of the cases had moderate degree of temperature and 33% had high temperature. According to Dr. Dhanalakshmi febrile convulsions could be prevented by providing parental education regarding the therapy during a febrile episode (or) convulsions. Bala

Houseer (1994) stated that febrile seizures in Asia range 1%, from China 4% and 8% from Japan. Bauroch 81.4% children had their first febrile seizures between 6 months and 3 years of age, 8% in less than 6 months of age and 2% in more than 6 years of age. Valden A study stated that the incidence of febrile convulsions is 19-36 / 1000 children. Carol

3. FEVER CONTROL MEASURES AND PREVENTION OF FEBRILE CONVULSIONS:

According to Nancy, Canol Lilly, Lemore, care of the patients with febrile illness focuses on reducing the elevated body temperature thereby preventing the occurrence of febrile convulsions.

The various measures adopted are as follows:

1. The room temperature should be maintained as normal.
2. Ventilation should be provided by opening the windows, doors and putting on the fan or using the hand fan (or) air cooler.
3. Provide calm and quiet environment for the patients to take rest, provide a comfortable bed to the patient, place the side rails for safety.
4. Record the vital signs once in 15 minutes.
5. The Thick Blanket should be removed.
6. Excessive clothing should be removed, the patient should be made to use thin cotton dress.
7. Provide cool drinks to the patient. The fluid intake should be increased 2500-3000 ml.
8. If the temperature is between 99-100°F apply cold compress and use Ice cap.
9. If the temperature is elevated to 100°F and above, tepid sponging should be done.
10. If the temperature is not controlled, cold sponging could be used, but this is contra indicated in infants and young children.
11. If all these measures fail, then use antipyretic such as Paracetamol (or) Acetaminophen as per the doctor’s orders.
12. Since high fever increase the metabolism of the patients, high caloric easily digestible small frequent meals should be provided. Eg. Canjee, Bread with Milk, Porriage, Soft cooked Idlis.
13. Since elevated temperature causes dryness of the mouth and skin, apply some emollient to lips, glycerin, cold cream (or) moisturizer not only to the lips even to the skin.
14. Provide oral care once in 4 hours.
15. With all these measures if fever is not reduced, then the child should be taken to the hospital for further investigation and treatment.
16. Not only that if the child has temperature above 100.4°F, then immediate medical help should be sought. Fever is one of the most common symptoms reported to Paediatrician. A temperature of more than 100.4°F Fahrenheit is considered fever. Fever of more than 101°F should be actively controlled. Acetaminophen is the most commonly used drug for this purpose. The recommended dose of Acetaminophen is 10 to 15 mg. per kg. of body weight every four hours. It is also stated that one of the common mistake parents make in management of febrile children is to bundle them up in layers of clothes and blankets. This conserves body heat. So the heat should be allowed to dissipate from the skin surface.

Therefore a child with fever should be dressed lightly. For temperature more than 103°F, sponging with tepid water is recommended. Fiona
A Study of “Evidence on the use of paracetamol in febrile children”, Antipyretics including Acetaminophen (Paracetomol) are prescribed commonly in children with Pyrexia, despite minimal effect of clinical benefit. None of the studies showed any clear benefits from the use of Paracetamol in therapeutic doses in febrile children with viral (or) bacterial infections (or) with Malaria. But in other fever, it may be helpful. The use of Paracetamol in therapeutic doses is generally safe, although hepatotoxicity has occurred with recommended dosage in children. Treatment should be given only to children who are in obvious discomfort and those with conditions known to be painful. (Elizabeth)

A study was conducted at St. John’s Medical College, Bangalore on the effectiveness of Paracetamol and Tepid sponging. The studies revealed that Paracetamol alone is ineffective in controlling fever. A combination of Tepid sponge with Paracetamol was found to be very effective. (Axelord) A study on external cooling in the management of fever revealed that febrile children treated with tepid water sponging plus antipyretic drugs are found to be more effective in controlling fever. (26) The addition of Tepid sponging to Paracetamol was found to be effective. If both are combined, then it offers rapid cooling. (La) An Article written by La Coosse WI, 2000, Department of Paediatrics, Children’s Hospital of Lowa stated two broad lines of Management, one without Medication and another with Medication.

**WITHOUT MEDICATION**

<table>
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<tr>
<th>In spite of having fever, if the child is content, eats, drinks and plays, then no medication is required.</th>
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<td>Dress the child with light weight clothing (or) remove clothing to allow heat loss through the skin surface.</td>
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<tr>
<td>Use a light weight blanket if the child feels cold (or) is shivering.</td>
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<tr>
<td>Keep the child quiet because activities increase the body temperature.</td>
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<tr>
<td>Make the child to take extra fluid to prevent dehydration (or) extra loss of water.</td>
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WITH MEDICATION

Medication is needed to make the child comfortable.

Give Acetaminophen every 4 hours.

If Ibuprofen is ordered, administer it.

Do not use Aspirin for fever.

Always give your child Medication for fever if he/she has had febrile seizures. Give your child a sponge bath with warm water, if fever is higher than 104°F and fever is not decreased within 30-60 minutes after medication is given. Never leave him/her alone in the Tub. Stop sponge bath if your child starts to shiver. Alcohol should not be used for baths (or) sponging. This can cool the child quickly but if it gets absorbed through the skin, it may result in alcohol poisoning.

The Principle Management consists of bringing down the temperature quickly from 102° - 103°F (39° - 39.5°C) by doing the following steps:

1. Tepid sponging (or) Ice sponging.
2. Ice water enema in severe conditions.
3. Air conditioning which is very effective in reducing temperature.
5. Fluids to prevent dehydration.
6. Adjustment of clothings.
7. Identifying the underlying causes and treating them.
Chapter 2

2. METHODOLOGY

2.1 Study Design:

Cross Sectional Study - Community Base

2.2 Study Period:

First of April 2013 to 25 May 2013

2.3 Study Area:

*Elnuba* area - alkamleen locality, elmaseed administrative unit, north Gezira state surrounded from North by Blue Nile, from South by Elhareeg & Elhafeer villages, from East by elmaseed railway station and from West by Masaudyia in 3×2 square km. Electricity, safe water supply and education facilities are available

The number of population is about 7000. The population pyramid shows that large number of population is middle aged. Most of the tribes in Nuba (mainly Mahas), kwahla and Rofaa’a. Urbanization lifestyle is found there. The community very helpful and community participation is obvious in *Elnuba* Health Center.

Health services provide in Elnuba Health center (Child Health – Anti natal care – Follow up of Chronic diseases – Conducted among Gezira Family medicine programme (GFMP) in *Elmuna* Health Center. The researcher conducted home-visiting programme in the catchment area.

2.4 Study population:

- The target populations: mothers who has children under 6 years Selected with proportional Random Sampling

2.5 Sampling Technique: Proportional random sampling technique

The Children under 6 years in *Elnuba* catchment area = 789

Male (398) – Female (391)

2.6 Sample Size Calculation: 

19
Using the following equation with p1=0.03, and d=0.03, we get a sample size of 108 parents.

\[ n = \frac{z^2 \cdot \frac{1}{2} \cdot p(1 - p) \cdot N}{d^2 \cdot (N - 1) + z^2 \cdot \frac{1}{2} \cdot p(1 - p)} \]

Where:

- \( n \): the sample size
- \( p \): the anticipated population proportion of under 5 children with Febrile Convulsion
- \( d \): the absolute precision required for the population proportion
- \( \alpha \): the significance level
- \( z \): confidence coefficient

\[ n = \frac{2^2 \cdot 0.03(1 - 0.03) \cdot 789}{0.03^2 \cdot (789 - 1) + 2^2 \cdot 0.03(1 - 0.03)} = 108 \]

We then allocate the sample size to the four sub-population proportional to their sizes:

- Northern Nuba (205/789)*n=28
- Southern Nuba (173/789)*n=24
- Eastern Nuba (214/789)*n=29
- Western Nuba (197/789)*n=27

Then; within each sub-population we select our sub-sample systematically by means of systematic random sampling. (Cochran)
socio-demographic variables, Part-II contains knowledge questions related to pyrexia.

**Data analysis tools:**

Electronic data analysis by using specific computer software as such as **SPSS** Data analysis will be done by SPSS under assistance of statistic. Using Chi test.

**HYPOTHESIS**

H0: Mothers’ awareness regarding fever control measures is inadequate

H1: Mothers’ have some awareness regarding fever control measures.

**Ethical considerations:**

Verbal consent was obtained from mothers who has children under 6 years old.
Chapter 3

3. RESULTS

Figure (1):

Distribution of mothers who has children under 6 years in Elnuba catchement area – Alkamleen locality –Gezira state –Sudan. according to age group:

Among the 108 mothers surveyed, the age group of 23-27 years represented the most common age group (36.1), followed by the age group of 28-32 years (34.3%), as shown in figure (1).
Figure (2): Distribution of mothers who has children under 6 years in *Elnuba* catchment area –Alkamleen locality –Gezira state –Sudan. according to education level

Figure (2) Shows that, high school and graduates represented 52.8% and 34.3% respectively.
Most of families were Extended family representing (68.5%), while nuclear families were (31.5%), this was shown in figure (3).
Figure (4): Mothers’ knowledge regarding features of the fever

Figure (4) illustrates that, most of mothers know of fever of their children by touching the forehead (86.1%), while those who use thermometer for measuring represented 1.9%.
Figure (5): Response of mother when her child having fever

Forty five percent of mothers when her child having fever bathing the child with cold water,55% will not bath the child at all, this was shown in figure (5).
Regarding response of mothers towards children fever increase, 46.3% of them mentioned that they put on the fan and open the windows, followed by 37% of mothers said they put off the fan and 15.7% said they cover the child with blanket, as shown in figure (6).

**Figure (6): Response of mothers when child fever increased**
Figure (7): Complications of fever mentioned by mothers who has children under 6 years in *Elnuba* catchment area

Figure (7) shows convulsions, dehydration were known by (43.5%) and (21.3%) respectively.
Figure (8): Drugs given to child by mother when the above measures fail?

Figure (8) shows that, 56.6% of mothers give paracetamol to their children if other control measures failed (bathing, etc), 17.6% give aspirin and 25.9% give other (all mentioned cafelgin).
In case of developing febrile convulsions, 48.1% of mothers said that the child should be put in a supine position, only 12% said that the child should be turned to one side, as shown in figure (9).

Figure (9): Behavior of mother when her child develop febrile convulsions
Figure (10): Behavior of mother to prevent tongue falling back and obstructing the airway when her child develop febrile convulsions

Figure (10) shows that, to prevent obstruction of airway by tongue during febrile convulsions, 63% of mothers said that they insert spoon between the teeth, 35.2% said nothing to be done.
Figure (11): Attitude of mother regarding setting an environment when her child develops febrile convulsions, \((n = 108)\)

Regarding setting environment during convulsions, 52.8% of mothers said they let the child in his place, 41.7% of them said that they put the child in safe place, this was shown in figure (11).
Figure (12): Reason of fever among children under 6 years in *Alnuba* Catchment area, (n = 108)

When mothers inquired about reasons of fever, 86% of them said that the fever occurs due to eruption of deciduous teeth and 14% said that fever occurs due to infection, as shown in figure (12).
Figure (13): Correlation between age of mothers and methods of recognizing the child fever, (n = 108)

Regarding methods of recognizing child fever in correlation with age groups it was found that, touching the forehead was the commonest among all age groups, there was statistically significant relations (0.003).
Figure (14): Correlation between mothers' education and child positioning during febrile convulsions?

Figure (14) Correlation between mother education and positioning of child during febrile convulsions showed a highly statistically significant correlation (0.000), post graduates and graduates chose the right action of laying the child into side during the febrile convulsions.
Figure (15): correlation between educational level of mothers and drugs given to their children when the above measures fails, \((n = 108)\).

The correlation between mothers' education and drugs should be given to the child showed a statistically significant correlation \((0.000)\), it was noticed that graduates and high school mothers prefer giving paracetamol (56), this was shown in figure (15).
Table (1): Significant results of correlations between age of the mothers, education level and type of the family with fever control measures (P value < 0.03).

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<td>when your child has increased temperature what will do?</td>
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<td>what drugs will you administer to your child when the above measures fails?</td>
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<td>what are the complications of fever?</td>
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• The sign (*) shows cross-tabulation
• Insignificant correlations were attached in annexes.
Chapter 4

4.1 DISCUSSION

A cross-sectional study conducted in Elnuba catchment area in April 2013 regarding mothers’ knowledge about fever in children, how they manage it at home and fever control measures. In the current study, most of mothers (86.1%) recognize fever in the child by non-measurement methods which were observing the child’s general look or touching him. This is compatible with the study of Bergson PS and Steinfeld HJ who said that tactile temperature taking practice has been shown to be inaccurate with a high percentage of false-negative or false-positive fever determination. Bergson, and also compatible with the study of Chaturvedi D. Chaturvedi concluded that touch is not a valid screening test for fever. Measuring the temperature is obviously the most accurate method of detecting fever, in the current study only 1.9% mothers actually measure the child’s temperature at home to detect fever. It is recommended that a thermometer should always be used by a medical staff to record fever and caregivers must be motivated for the same, this compatible with the study of Hooker EA, Smith SW, Miles T, King L 1996. Hooker. A common myth that has persisted since the time of Hippocrates is the association of fever with teething. Kramer MS et al reported 80% of mothers who said fever is due to teeth eruption. It seems that this myth is still persisting as seen in current study results where 86% of mothers reported the same belief. Parents and clinicians have traditionally attributed to teething many symptoms such as fever, pain, irritability, diarrhea, drooling and sleep disturbance, but a prospective cohort study carried out in Washington by Wake M, et al (2000) which investigated the relationship between tooth eruption, fever and teething symptoms provided no conclusive evidence that a relationship exists between the eruption of teeth and the experience of these symptoms, and a temperature greater than 38 ºC or other serious symptoms in an infant should not be regarded by clinicians as due to teething and should be evaluated appropriately.

Current pediatric practice for a febrile child includes the use of antipyretics when the fever control measures failed. Adam D and Stankov G reported that, parents and most physicians feel compelled to give antipyretics whenever a child has any fever at all. Antipyretics should however be used with discretion and not given automatically. Whether or not to use antipyretics should depend on the comfort of the child rather than the thermometer readings. Adam. Our study revealed the same findings regarding ignorance of thermometer before using antipyretics for child fever. The majority of mothers are so occupied with a feverish child, sponging him, giving an antipyretic and taking him to the doctor, probably to reduce the fever in a short time. The role of tepid sponging to promote heat loss is controversial. Impicciatore. An American study not compatible with the current study, it is stated that bathing with cool or tepid water and sponge bathing is ineffective and causes shivering which increases the body’s temperature, not to mention discomfort to the child. Krantz. Additional opinion of Aynsley-Green and Pickering suggests that sponge bathing may aggravate vasoconstriction in dehydrated febrile children and result in increased core temperature. Raven.
Initial management of a febrile child should ensure that the child is adequately hydrated and has received an adequate dose of an antipyretic.

Currently, paracetamol is the most commonly used antipyretic and analgesic drug in pediatric practice. It has the advantage of being available in liquid and suppository form. The latter offers an alternative route in those children for whom the oral route is unsuitable or impractical (vomiting, refusal to take suspension, drowsiness or unconsciousness). Several studies have demonstrated an equal antipyretic effectiveness for rectal and oral preparations of paracetamol [Al-Eissa]. In this study, more mothers preferred paracetamol 56.5%, and 25.9% of mothers used cafe-gin tabs from supermarkets. In our study, the educational level correlated to all measures asked under level of confidence (97%) where all relations were found significant (≤ 0.03). Impact of mothers knowledge related to age, educational status, type of family, control measures, age of the mother:

According to the educational status, most of them studied up to High School education. Graduate & postgraduate their Knowledge high. The respondents who have studied up to Primary education have Less knowledge. Thus the interest and motivation help significantly to acquire the knowledge. Education level is correlated to all measures asked under level of confidence (97%) where all relations were found significant (≤ 0.03). The Mothers who belong to joint family have a higher knowledge. This shows that in Joint family, the family members hold the responsibility to look after the child. So they tend to support mother through caring for children and discussing with others about the fever control measures. This helps them to acquire more knowledge, whereas in a nuclear family, the Mothers have less experiences to deal with the febrile child. This made them to get less Knowledge compared to the respondents belonging to the joint family. Compared to study done in Bangalore The Mothers who belong to Nuclear family have a higher knowledge. This shows that in nuclear family, the family members hold the responsibility to look after the off-spring whereas in a joint family, the elders look after the children and the Mothers have less responsibility to look after the child. This made them to get less knowledge compared to the respondents belonging to the Nuclear family.
4.2 CONCLUSION

The present Study revealed that majority of mothers are having inadequate knowledge regarding fever control measures. The inadequate knowledge influences the care of the children with febrile illness. So their knowledge regarding fever control measures should be increased so that, the occurrence of febrile convulsions among children could be prevented by taking care of them effectively. So a Health education is to be provided to mothers with the help of planned Health Education. “If we educate the women, we can educate the whole generations”. As per this statement, every mother should be educated regarding fever control measures, so that the complications of fever, that is febrile convulsions could be prevented. This helps us to prevent the occurrence of irreversible brain damage which occurs due to febrile seizures. In hospitals, community health centres, & home care, the mother should be educated on fever control measures. A public awareness should be created to enable the mothers to give a better care to their children and protect their children from febrile convulsions. Regarding correlations between age of mothers, type level of education and type of family with knowledge questions related to cause, signs and symptoms, fever control measures, complications, and emergency care of febrile convulsions (first aid measures), it was found that education level is correlated to all measures asked under level of confidence (97%) where all relations were found significant (< 0.03).
4.3 RECOMMENDATION

1 - To offer Health education sessions to mothers who has children under 6 years during their antenatal care, postnatal, and immunization visits.

2 - Information, education, and communication materials on signs, symptoms, complications, home management, and fever control measure to mothers of under 6 years children.

3 - Among home-visiting programme which conducted in my catchment area, the mothers of under 6 years children will be educated about the fever control measures and home management.
REFERENCES

- Sr. Elizabeth. Effectiveness of Paracetamol and Tepid Sponging in reducing fever among children, St. John’s Medical College & Research Centre, Bangalore, 2002.
- La Coosse WI. Fever management, Department of Paediatrics, Children’s Hospital of Iowa, 2000.


Questionnaire

Part 1

1) child /parent character:

(A) child ID: ( )

(B) child Age: 0-6months ( ) 6m -1 year ( ) 1year -6years ( )

(C) child Sex: female ( ) male ( )

(D) Age of mother:

18-22 years ( ) 23-27 years ( )

28-32 years ( ) 33-45 years ( )

2) Educational Status:

Primary school and less ( ) High school ( )

Graduate ( ) Post graduate ( )

3) Type of Family:

Nuclear Family ( ) Extended Family ( )

4) Have you heard about fever control measures earlier:

Yes ( ) No ( )

If Yes where: Radio ( ) TV ( ) Newspaper & magazine ( )

Part 2

1) what are features of fever

(A) increase body temperatures ( )

(B) decrease body temperature ( )
2) How will you recognize fever?

(A) by touching the forehead (  )

(B) by using thermometer (  )

(C) with signs & symptoms (  )

(D) by visiting the doctor (  )

3) What is the reason for fever?

(A) Teeth eruption (  )

(B) Infection (  )

(C) Familial (  )

4) What do you think about fever?

(B) Not Contagious (  )

(A) Contagious (  )

5) What are the signs & symptoms of fever?

(B) dry mouth (  )

(A) increase temperature (  )

(C) running nose, cough, & cold (  )

6) When the child has fever, what will you do?

(A) Bathing the child with tap water (  )

(B) Bathing the child with cold water (  )

(C) I will not bath the child at all (  )

7) When your child has increased temperature, what will you do?

(A) On the Fan & open windows (  )
(B) Put off the Fan

(c) Cover the child with blanket

(D) No measures to undertake

8) What drugs will you administer to your child when the above measures fails?

(C) Others

(B) Paracetamol

(A) Aspirin

9) What are the complications of fever?

(A) Dehydration

(B) Diarrhoea & Vomitting

(C) Cough

(D) Convulsions

(E) I don’t Know

10) What are the signs & symptoms of Dehydration?

(B) Sunken eyes

(Dry mouth)

(A) Diarrhoea, vomiting & abdominal pain

(C) (D) Loss of skin turgers

11) How will you maintain hydration status during fever?

(A) Milk

(B) Antibiotics

(D) Just water

(C) Water, ORS, Fruit juice

12) During convulsions what will you do?

(A) The child should be turned to one side

(B) The child should be put in an upright position

(C) The child should be put in supine position

13) How will you prevent tongue falling back & obstructing the airway?
(A) spoon will be kept between the teeth (  )
(B) by administering fluids (  )
(C) Nothing to be done (  )

14) for the child with convulsions the environments should be?

(B) As usual (  ) (A) Noisy (  )
(D) None (  ) (C) Safe (  )

15) what will you do if convulsions persist inspite of applying all fever control measures?

(A) Seeking immediate medical advice (  ) (B) Allowing the child to rest (  )
(C) Nothing to be (  )
# Gantt chart

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