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## RESEARCH ARTICLE

### PARENTAL KNOWLEDGE ATTITUDE AND PRACTICES CONCERNING THEIR CHILDREN PRESENTING WITH FEBRILE CONVULSIONS IN DAR ES SALAAM

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#### ABSTRACT

**Background:** There is insufficient correct knowledge of childhood convulsions since many parents do not know the fact that febrile convulsions can occur due to fever. Many parents do not know the long term effects of febrile convulsions. Moreover, parents also do not know how to attend a convulsing child at home. Not knowing how to manage a convulsing child at home results into parents going into panic and confusion necessitating the use of various unpleasant home remedies when confronted with such a situation. **Objective:** The Main objective of this study was to assess the parents' knowledge, attitude and practices concerning children with febrile convulsions in Mwananyamala hospital and Kambangwa dispensary, Kinondoni District, Dar es salaam, Tanzania. **Methodology:** This was a cross-sectional descriptive hospital-based study, comprising 152 parents with children affected with febrile convulsions and/or have had a history of febrile convulsions aged less than six years. The participants were interviewed using a structured questionnaire and purposive sampling method was used. **Results:** Majority of participants, 127 (83.6%), knew that febrile convulsions were associated with fever while other parents, 14 (9.2%) and 4 (2.6%), attributed febrile convulsions to demonic possession and bewitchment respectively. Amongst the participants, 123 (80.3%) parents had concerns for long term effect of febrile convulsions that can progress to epilepsy. The commonest immediate effect was fear of death as expressed by 96 (63.2%) study participants. Majority of the parents, 129 (84.9%), took their children to hospital during febrile convulsions while 106 (69.7%) applied home treatment. Garlic was the most commonly used item to treat convulsions at home 81(53.3%). Among the unpleasant items used were sewage mud and feces, direct urination, elephant dung and garlic. **Conclusion:** Majority of the parents knows how to describe febrile convulsions but there are some who still believe in other causes of febrile convulsions. Due to lack of adequate education, parent's fear of febrile convulsions has resulted into negative attitude and improper management at home. **Recommendation:** Creating awareness among parents and caregivers by providing adequate health education on febrile convulsions can reduce their fear. This should be done in the clinics during vaccination visits and in the pediatric ward.

## INTRODUCTION

A convulsion is a medical condition experienced when body muscles contract and relax rapidly and repeatedly, resulting in an uncontrolled shaking of the body.<sup>1</sup> Febrile convulsions (febrile seizures) are the most recognized result of high fever, which occurs in 3-4% of children under 5 years.<sup>2</sup> Globally, children with fever and febrile convulsions account for as many as twenty percent of pediatric emergency department visits (Delpishah, Veisani, Sayehmiri, Fayyazi, 2014; Graneto, 2011; Khazai, Hossein Zadeh, Javadzadeh, 2007).

In Sub-Saharan Africa empirical research has shown that about twenty-five to thirty-five percent admissions in paediatric emergency wards are a result of febrile convulsion and febrile related conditions (Jarrett Fatunde et.al, Osinus and Lagunju et.al 2012; Esegbe and Adama, 2012). Whereas researchers recorded prevalence rate in Sub-Saharan Africa at 116.1/1,000 which has been determined in a rural population in Nigeria while in Tanzania at 11.2% (Andrea S.Winkler et al). In spite of the above statistics, empirical studies have also shown that parental knowledge of skillful home management of fever and febrile convulsion can prevent about sixty to sixty-five percent (60-65%) of paediatric emergencies resulting from febrile

convulsions in health facilities (Graneto, 2011; Karwowska, et al., 2002; Walsh, et al, 2007). The majority of mothers/ caregivers are able to describe a febrile convulsive attack as a sickness in children which is exhibited by the child twitching or fitting, with eyes widely opened.<sup>6</sup> Some other mothers believe that febrile convulsions are normally caused by witchcraft and or evil spirits<sup>5</sup> while some are not aware that fever can cause convulsions.<sup>9</sup> The daily life of some parents may negatively be affected when they have a child who gets frequent febrile convulsions. These parents may frequently be compelled to wake up at night to monitor their children's temperature.<sup>2</sup> Not knowing how to manage a convulsing child at home, i.e. first aid to be offered when the child convulses, has resulted into mothers going into panic and confusion necessitating the use of various unorthodox remedies.<sup>7</sup>

Various practices of providing first aid to a convulsing child exist in parts of Africa and developing world. For example in Nigeria women have been reported to use human or cow's urine, kerosene, palm oil and bloodletting with razor blade to treat or manage children with convulsions at home.<sup>7</sup> For example, as first aid, cow's or human urine can be offered to a convulsing child to drink.<sup>7, 14</sup> Also a concoction of various substances like tobacco leaves, garlic leaves and lemon juice may be painted topically on the body of a convulsing child.<sup>7</sup> Makundi reports from Tanzania that parents send a convulsing child to a traditional healer who will fumigate the child with elephant dung, smoke and with other herbs as well as washing the convulsing child with water mixed with herbs.<sup>13</sup> Nonetheless in most parts of the country parents do not perform any first aid on the child other than rushing the child to the nearest hospital.<sup>3</sup> There is a paucity of correct knowledge of childhood convulsions since many parents do not know the fact that convulsions can occur due to fever.<sup>2</sup> Also parents do not know the long term effects of convulsions. Moreover, parents do not know how to attend a convulsing child at home<sup>17</sup>. In many cases parents put their hands and/or a spoon into the mouth of a convulsing child.<sup>5, 6, and 7</sup> Parents also have their concerns regarding the health of their convulsing children.<sup>2</sup>

Due to this gap of knowledge regarding management of a convulsing child, mothers are known to have attempted bridging the gap by using a number of apparently harmful practices to manage febrile convulsions at home.<sup>2, 5</sup> Such harmful traditional practices vary from one country to another and from one tribe to the other in the same country.

Many studies have investigated the etiology and natural history of febrile convulsions and evaluated various management strategies, but very little information is available about parental KAP.<sup>2</sup> In Tanzania there is a significant number of children suffering from febrile convulsions and their parents living a miserable life due to poor or inadequate knowledge, negative attitudes and harmful practices towards febrile convulsions in their children.

Febrile convulsions as an entity constitute one of the leading causes of hospital attendance. It is a serious condition which sometimes may lead to death. Despite the various measures taken in this country, there is no improvement in the reduction of the problem.

Many of the studies about febrile convulsions on parental knowledge, attitude and practices have been done several years back and mostly in rural areas of Tanzania. Therefore this study aimed to know the current situation of parents KAP in relation to febrile convulsions.

## RESEARCH METHODOLOGY

**Research methodology and design:** Research methodology refers to systematic way applied to solve the research problem (Kothari, 1990). Therefore, this chapter presents the methodology that will be employed in data collection and analysis, including the study design, area of study, targeted population, and sample and sampling procedures. It also presents data collection methods and finally the methods employed to analyze data.

**Area of the Study and population:** The study was conducted in two public hospitals of Mwananyamala hospital and Kambangwa dispensary in Dar es Salaam region. Dar es Salaam has a total population of 5.2 million inhabitants, making it the largest city in Tanzania (National Census, 2012).

**Study design:** A descriptive cross sectional prospective design was used, in order to assess parent's knowledge, attitude and practice in children aged 6month to 6 years from Mwananyamala and Kambangwa dispensary. The study was conducted between April and June 2021.

### Study Sample and Sampling Procedures

**Sample Size:** The term sample means a portion of people drawn from a larger population. According to Manheim (1977), sample is a part of the population which is studied in order to make inference about the whole population. Data to be obtained from this selected sample will be used to provide sufficient information for statistical analysis and thus making scientific inference and conclusions. As pointed out by Kothari (2004) the sample must be of optimum size, should be neither excessively large nor too small. The sample size was calculated using Kothar formula as follows:

$$N = Z^2PQ/E^2$$

N=required sample size,

Z= Percentage of Standard normal distribution corresponding to 95% [CI 1.96],

P=0.9(the proportion of the target population, assumed that the commonest immediate effect of the febrile convulsion on the parents was fear of death 90% (study done in India by RC Parmar et. 2001).

$$Q = 1 - P (1 - 0.9 = 0.1)$$

E= margin of error = 5 % ( 0.05)

Thus  $1.96 \times 1.96 \times 0.9 \times 0.1 / 0.05^2 = 138$  participants

Therefore the minimum sample size N was 138 however 152 participants were recruited to increase the power of the study.

**Sampling Procedures:** During sampling, the purposive sampling methods was used to select 152 parents/caregivers with children aged 6 months to 6 years who had febrile convulsion and were admitted in the pediatric ward, at RCH and outpatient clinic. Purposive sampling enables the researcher to select parents with children from 6 months to 6 years who were diagnosed with febrile convulsion or have ever had febrile convulsions.

**Inclusion criteria:** Parents of children who were diagnosed with febrile convulsion and who had history of febrile convulsion aged 6mo-6yrs at outpatient departments, pediatric wards and RCH clinics at the two selected health facilities were included in the study.

**Exclusion criteria:** Parents with children with known epilepsy or other seizure disorders, Children with convulsions associated with intracranial infection, cerebral palsy and children with convulsions without fever were excluded from the study

**Data Collection Methods:** In collecting data, a structured questionnaire was used to interview parents of children under six years who were on admission at the paediatric wards, OPD and RCH. The questions were close-ended.

**Data Analysis Plan and Procedures:** Data was collected, entered, filled questionnaires were checked for completeness and accuracy, and data cleaning was done and later analyzed using EPI INFO version 7.2 statistical packages (USA, Center for Disease Control and Prevention).

The participants' demographic characteristics, level of knowledge, attitude and practices regarding management of febrile convulsion were analyzed using descriptive statistics. Data were reported using frequencies and percentages and presented in tables and figures.

**Research Ethics:** Ethical clearance was obtained from the HKMU Research Ethics Committee before this study was conducted. Permission from Kinondoni District Medical Officer was sought and obtained. A written consent was obtained from parents/caretakers of participants. Confidentiality was ensured to all parents who participated in the study. The protocol and importance of the study was explained to the participants before recruitment into the study. Those unwilling to participate in the study were still given services equal to those participating in the study.

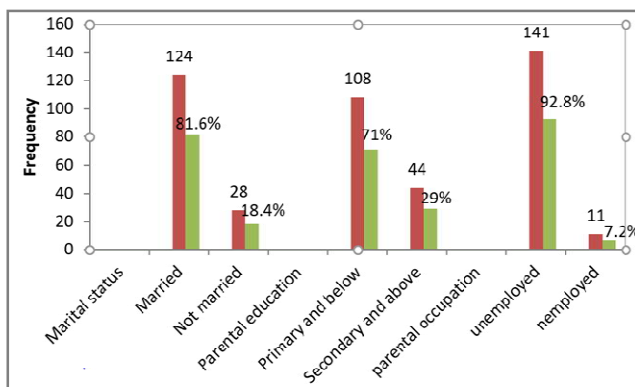
## RESULTS

The total number of enrolled parents/guardians into the study were 152 (100%) most of them 138(90.8%) being biological mothers and other respondents were grandmothers 4(2.6%) and aunt 10(6.6%) respectively. All study participants were females. Out of 152 study cases 90(60.53%) were from Mwananyamala hospital and 14 (9.2%) were from Kambangwa clinic. Their ages ranged from 19 to 67 years with mean age of 32+ 7.7 years. The majority of them fell between 19 to 34 years. (Table 1 refers).

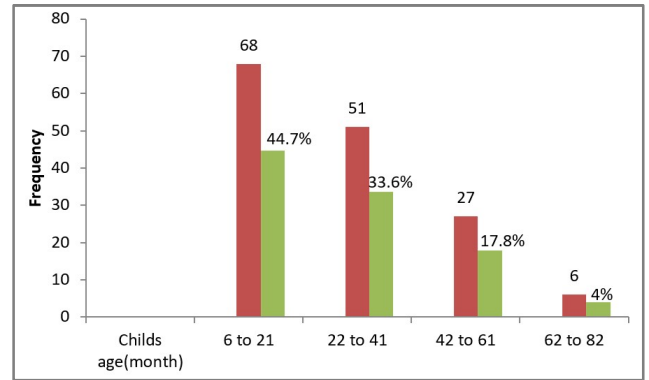
**Table 1. Social demographics**

Characteristics of the Study Participants		
Demographics	Frequency	Percentage
<b>Responder</b>		
Mother	138	90.8
Grandmother	4	2.6
Aunt	10	6.6
Total	152	100
<b>Hospital name</b>		
Mwananyamala	92	60.5
Kambangwa	60	39.4
Total	152	100
<b>Parents age groups (years)</b>		
19 to 34	103	67.8
35 to 50	45	29.6
51 to 65	3	2.0
65+	1	0.7
Total	152	100

Parents/guardians 124(81.6%) were married and living with their husbands. Those with primary or lower education were 108 (71%) while 141(92.8%) were unemployed (refer to Figure 1). The age of children with febrile convulsions ranged from 6 to 72 month with most of them being 6 to 21 month 68(44.7%) and those above 60 months were 6 (4%) (Figure 2 refers). As seen on Figure 3 boys who presented with febrile convulsions were 87(57.2%) while girls were 65(42.8%).

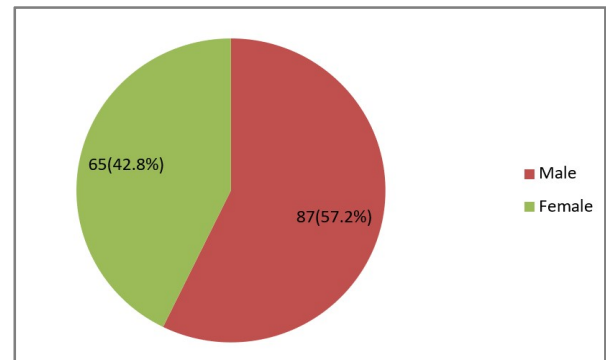


**Figure 1. Distribution of parents of children with febrile convulsions according to marital status, education level and occupation**



**Figure 2. Distribution of children with febrile convulsion by age (month)**

Parents/guardians 124(81.6%) were married and living with their husbands. Those with primary or lower education were 108 (71%) while 141(92.8%) were unemployed (refer to Figure 1). The age of children with febrile convulsions ranged from 6 to 72 month with most of them being 6 to 21 month 68(44.7%) and those above 60 months were 6 (4%) (Figure 2 refers). As seen on Figure 3 boys who presented with febrile convulsions were 87(57.2%) while girls were 65(42.8%).

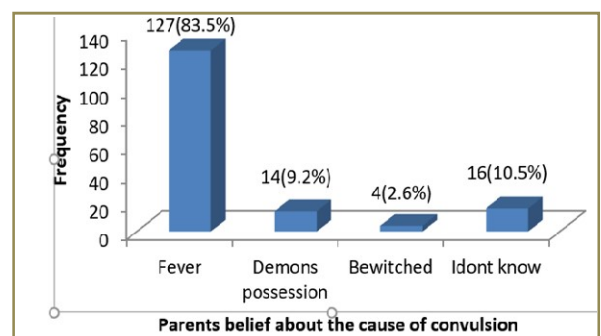


**Figure 3. Distribution of children with febrile convulsion by sex**

Most mothers 75(49.4%) defined seizure as stiffening of the body and up rolling of the eyes, 37(24.3%) explained seizure as twitching, 17(11.2%) as childhood illness (*ugonjwawakitoto*) and 23(15.1%) were not able to describe convulsions (See Table 2). Parents who knew that febrile convulsions was associated with fever were 127(83.6%) while 14(9.2%) attributed febrile convulsions to demons possession, 4(2.6%) attributed convulsions to witchcraft (*bewitchment*) and 16(10.5%) said they did not know the cause of febrile convulsions (Fig 4).

**Table 2. How parents describe febrile convulsions**

Parents description of febrile convulsion	Frequency	Percentage
Twitching	37	24.3
Stiffening and rolling eyes up	75	49.4
Childhood illness ( <i>ugonjwawautotoni</i> )	17	11.2
I don't know the meaning	23	15.1
Total	152	100



**Figure 4. What parents believe to be causes of febrile convulsions**

Some parents 133(87.5%) had fear that febrile convulsions could progress to epilepsy. The commonest immediate effect of febrile convulsions was death 96(63.2%). Others had fear of disability 32(21.1%), 15(9.9%) had fear of mental retardation and 27(7.9%) had fear of reoccurrence (figure 5). About 129(84.9%) parents took their children to the hospital during convulsions attack, while 106(69.7%) applied home treatment. Other parents 26(17.1%) were forcing to correct the stiff limbs and neck of the convulsing child, and 10(6.6%) parents called for help. Other parents 7(4.6%) prayed during while children were convulsing. The remaining 2(1.3%) took their children to the herbalist and none of the parents stayed calm during their child convulsions (Table 3).

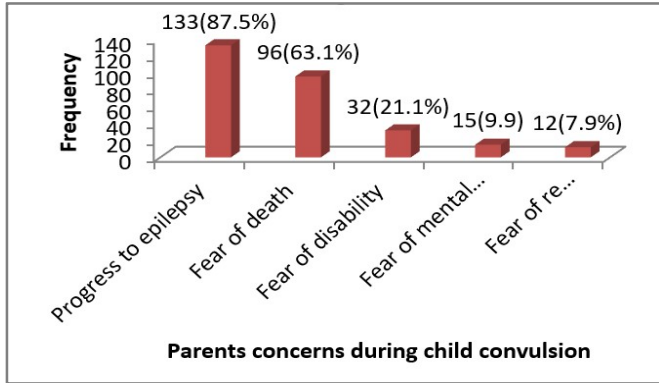


Figure 5. Parents concerns during child convulsions

Attitude*	Yes n(%)	No n(%)	Total
Take the child to hospital	129(84.9)	23(15.2)	152(100)
Apply home treatment	106(69.7)	46(30.3)	152(100)
Take the child to herbalist	2(1.3)	150(98.7)	152(100)
Pray	7(4.6)	145(95.4)	152(100)
Call for help	10(6.6)	142(93.4)	152(100)
Calm down	Nil	152(100)	152(100)

Among the interventions which were done, 78(51.3%) parents rubbed and or smeared garlic smoke and 48(31.6%) others smeared elephant dung smoke while 35(23.0%) rubbed and or smeared leaves (e.g. dumbasi) smoke to the convulsing child. 22(14.5%) rubbed the child body with sewage mud, 25(16.5%) direct urinated to the child and kept under the bed, 2(1.3%) rubbed the child with feces and 4(2.6%) parents kept an object to the convulsing child to avoid tongue biting. 1 (0.7%) did sponging and gave paracetamol to lower the body temperature and 1(0.7%) did other intervention (rubbing sugar) (Figure 6). 81(53.3%) used garlic to treat convulsions at home, followed by elephant dung 48(31.6%), different type of leaves (dumbasi, mvuje, mshashu, mdeka) were used in 35(23.0%), human urine 24(15.9%), sewage mud 22(14.5%), feces 2(1.3%) were used to rub into the convulsing child body, 1(0.7%) used other item (sugar) (Figure 7).

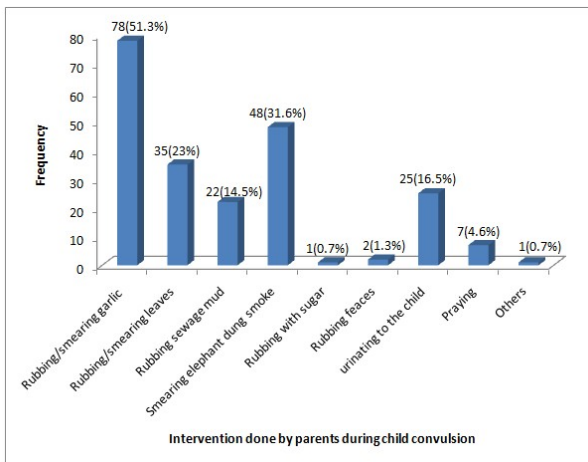


Figure 6. Interventions made at home to manage febrile convulsions

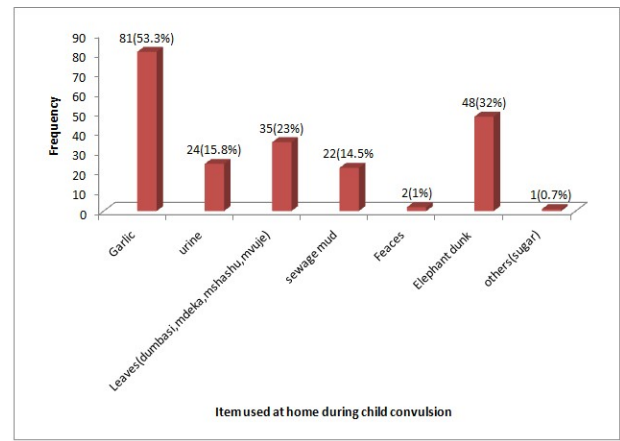


Figure 7. Item used at home during child convulsions

## DISCUSSION

For a health care worker, febrile convulsions may be a common phenomenon and may not create any worry while attending a convulsing child. However, to an ignorant parent witnessing their child having a seizure may be a frightening experience. Health specialists must better understand the behaviors of parents whose children have febrile convulsions to ensure appropriate care.<sup>2</sup> The sample size in this study was one hundred and fifty two parents. This was five times less compared to the study done by Anigilaje et al which comprised five hundred mothers<sup>5</sup>. This is certainly a big difference but it can be accounted for by the fact that the latter study was done in the community while the current study was hospital-based. The study results showed that all participants were female and similar findings were observed in the study by Mansur et al<sup>7</sup> and the reason for this may be because mothers are primary caregivers and they spend most of the time with their children. In this study findings show that boys were more affected (87 boys or 57.2%) than girls (65 in number or 42.6%). This finding is in consistency with that of Kayserli et al in Turkey which showed boys were 70 ( 57.4%) and girls 52 (42.6%)<sup>2</sup>. This predominance of males over females may be adequately explicated when one considers the fact that boys are predisposed to infection as they have an XY chromosome and, in general condition, X chromosome is strongly related to the production of immunoglobulin.<sup>36</sup>

The study shows that parents are able to define febrile convulsions. Majority of them 75 (49.4%) described febrile convulsions as stiffening of the body and up rolling of eyes, 37 (24.3%) defined FC as twitching which is associated with fever 127 (83 %). The ability of mothers to describe signs and symptoms of febrile seizure in children might be as a result of the experiences of mothers as care givers who always with their children at the time of convulsion attack. These findings are in accordance with that of Anigile and Anigile(2012) who found that parents have good understanding of febrile convulsions affecting children under five years of age<sup>5</sup>. Similarly, a study done in Ghana by Nyaledzibor et al (2006) who showed that mothers have good knowledge about the signs and symptoms of febrile convulsions<sup>6</sup>. Majority 127 (83.6%) of participants knew that febrile seizures were associated with fever. This finding differs from that of Parmar et al (2001) who found that about 77.9% parents did not know that fever can give rise to convulsions. Ofovwre et al also showed almost similar findings in his study; that 71% of urban mothers knew the cause febrile seizures was fever<sup>7</sup>. The Parmar's findings was observed to the parent of children with first convulsions attack ,so in the current study parents responded fever as a cause of febrile convulsions might be due their previous experience. Other study participants attributed febrile convulsions to demonic possession 14 (9.2%) as well as witch craft 4 (2.6%) respectively. This study findings is accordance with that of Makundi et al carried out at Kilosa and Handeni districts in Tanzania which showed that most parents believe the cause of febrile convulsions is witchcraft<sup>13</sup>.

These findings are low compared with the study of Oche Mansur et al who reported 40 (80%) women perceived febrile convulsions to be associated with witchcraft<sup>7</sup>. This difference may be due to the settings of the studies since the current study was done in an urban area and in hospital, specifically, while the previous one was done in a rural area and was a community-based study. This study also showed other participants did not know the cause of febrile convulsions 16 (10.5%) the reason for this may be these ones are those mothers whose children were having first seizures attack. About febrile convulsions outcome this study found that most parents (123 or 80.3%) knew that FC can progress to epilepsy. This observation corresponds to the study by Kayserli et al. In both studies the findings confirmed that there are possibilities that convulsions could lead to epilepsy in the future (47, 73.4%; 52, 85.2%).<sup>2</sup> This observation, however, is incorrect because there is a low chance 1-2.4% that febrile seizure may develop into epilepsy. Zeglam et al in Libya showed most mothers did not know that epilepsy is different from febrile seizure<sup>3</sup>. It is necessary to let the parents know febrile convulsions/seizures and epilepsy are two different entities. The current study findings differ from those of a study done by Maysaloun and FerasSadi in Iraq where they found 77.2% knew that febrile convulsions cannot progress to epilepsy.<sup>4</sup> The reason for this difference may be because Iraq is more developed country compared to Tanzania so for them they can access information easily. Another reason may be due to poor education of the current study participants as in this study most parents attained primary education. Zeglam et al in Libya showed most mothers did not know that epilepsy is different from febrile seizure.<sup>3</sup> Another study by Srinivasa et al findings showed a high proportion of parents perceived febrile convulsions as epilepsy and believed that anticonvulsants were necessary.<sup>36</sup> Febrile convulsion does not need prophylaxis and parents should be informed that this condition has an excellent prognosis. The commonest immediate concern found in this study was fear of death in about ninety six (63.2%) out of 152 parents. This finding is low<sup>11,12,24,34,35</sup> compared to Parmar's which found 126 (90%) out of 140 parents thought that their children would die during the convulsions<sup>9</sup>. This not true because if FCs are handled well, that is when parents know how to position a convulsing child in a recovery position, the risk of salivary aspiration, which may block the airway and be the cause of death, will be minimized. Parents' fear of their children's death has resulted into unwanted home management for febrile convulsions. Parents should be taught to stay calm during their child convulsions so that they can have better decision. Another concern was fear of disability and mental retardation in 32 (21.1%) and 15 (9.9%) respectively. However, there is no evidence that recurrent simple febrile convulsions lead to brain damage, learning problems or premature death. FCs has an excellent outcome; population studies show normal intellect and behavior, even for children with complex febrile convulsions. In the population based prospective case controlled studies from Taiwan found that children who had FC did at least as well as, if not better, than controls on measures of intelligence, academic achievement, behavior, and working memory. Hence, families must be informed regarding recurrence and prognosis of FC, and the benign nature of the disease must be emphasized.<sup>2</sup>

The other concern was fear of reoccurrence in 12 (7.9%). Hence, parents must be informed regarding recurrence and prognosis of febrile convulsions. In the study by Kuruguoglu, findings of fear of recurrence was higher compared to this study 91.4%<sup>10</sup>. The reason for this difference is because Kurugouglu selected only parents of children with initial febrile convulsions attack. This study revealed most parents 129 (84.9%) took their children to hospital during convulsions episodes. However there are still many parents who started by home management and then went to hospital for further management. Unfortunately there was no question to find out how many parents/caregivers directly went to the hospital without attempt of pre-hospital management. The reason for this may be there are some parents who believe of other causes of FC like witchcraft and evil spirit. This perception is very common in many parts of Africa.<sup>13, 29, 30, 31</sup> Huang from Taiwan showed even after parent education about febrile convulsions still there was high number of parents who rushed their convulsing children to a doctor before any first aid at

home<sup>15</sup>. This shows that continuous health education about febrile convulsions to the parents is needed and will, eventually, increase their confidence in how to deal with a child with febrile convulsions at home and help to reduce complications which appears during convulsions when handled properly. The parents must be informed that febrile convulsions spontaneously recover with excellent long term prognosis.<sup>36</sup> A parent who knows this will attend the convulsing child correctly before hospital management and this kind of information will alleviate their fear of epilepsy, mental retardation and even death. Parents also should be advised on how to remain calm in the course of a seizure; this will make them act wisely.<sup>36</sup> In the current study 2 (1.3%) parents sent convulsing children to herbalists. This number is very small compared to that found in others studies.<sup>5,6,7,13,17</sup> Parents who send convulsing child to the herbalist has risk of developing hypoglycemia (low blood sugar in the blood) because of herbal remedies which are given the child to drink. Not only hypoglycemia but also can cause kidney injury, all these increases morbidity and mortality to the febrile convulsions children. Many studies which showed high proportion of parents or caregivers sending their children during convulsions to the herbalist mainly were done in rural areas.<sup>6, 7, and 13</sup> The low proportion of herbalist attendance during child convulsions in this study might be due to the study was done in city where there was easy access to the health facility and may be the low number of herbalists in the city. In this study only 17(11.8%) participants agreed that there was stigma in a child with febrile convulsions but many participants did not agree with this. This finding is different from that found in the study by Kayserli who showed 60 (49.2%) parents were ashamed of having a child with febrile convulsions. The findings in Turkey were high because most parents perceived febrile convulsions as epilepsy. Thus there is a need educate parents well that epilepsy and febrile convulsions are two different things. Due to the belief in witchcraft and evil spirits as a cause of febrile convulsions parents tend to act very wrong at home during child convulsions, although there is a great number of study participants who said febrile seizures were associated with fever but their practice was different from what they said. Among the one hundred and six (69.7%) parents who managed convulsions at home, rubbing/smearing garlic 78(51.3%) was the common intervention. This was done by burning garlic leaves and smearing the smoke to the convulsed child or by grinding garlic and rubbing it into the Childs body. This findings is different with that of Emmanuel Ademola where he found most participants used cows urine concoctions eighty seven percent (87%) that was given to the child to drink or topically applied on the body of the convulsing child.<sup>5</sup> In the current study it was found that parents directly urinated on the child after which he/she was kept under the bed for a sometime in the belief that it would stop the convulsions; a finding also showed by Makundi et al in his study.<sup>13</sup> In the study by Fatunde et al; a cohort study of 147 participants, 51 (40.1%) received at least one form of intervention during seizure attack at home and herbal preparation was commonly used.

Similar study by Jarrett et al. showed other form of pre hospital intervention including application of substances to the eyes, incisions on the body, burns inflicted on the feet and buttock were other home remedies that were being practiced<sup>28</sup>. In the current study parents used leaves as herbal remedies for convulsions however none of the parents burnt or made incision on the body of the convulsing children. Based on the findings another unusual intervention that was practiced was the topical application of sewage mud or feces over the body of the convulsing child. The explanation given by the parents was that they believed painting dirty material to the convulsing child would help to cure febrile convulsions. As for those parents who believe in demonic possessions and evil spirits, such practices would drive away the demons and evil spirits from the child. However these practices are wrong and parents/caregivers should be taught the correct first aid while at home. This type of dirty material painting to the convulsing child was not found to be addressed as a remedy to convulsions in countries. It is believed that mothers' attitudes and behavior contribute immensely to the high morbidity and unfavorable prognosis of febrile seizures in the developing countries of the world Jarrett, al et<sup>28</sup>.

This study showed only one parent lowered child body temperature by sponging and administration of *paracetamol*. This finding is different from that of Srinivasa et al who showed that fourteen parents (12.7%) treated convulsions at home with anticonvulsants and antipyretics and seventy eight participants (70.9%) lowered body temperature<sup>36</sup>. Thus lowering child body temperature is one of the recommended practice. However these findings come in agreements with that of Kanemura et al. reported that fifty-one percent of parents did not attempt and did not take any action to lower the child's temperature before the FC attack<sup>40</sup>. This indicates insufficient parents' knowledge about this condition even in developed countries. Another unusual practice which was found in this study was 26(17.1%) of the parents were forcing to return the stiff limbs and neck when child was at convulsive state. It is important that health care providers understand potential parental misconceptions, anxieties and fears about febrile seizures so that they may allay those fears effectively<sup>6</sup>. Unlike other African countries, the present study showed garlic and elephant droppings 81(51.3%) and 48(31.6%) were the commonly used items. Parents should be educated in proper first aid measures and be informed that those remedies applied at home are not helpful. Not only this but also the current study showed 91(59.9%) parents kept the convulsing children in their laps. In Sudan study done by Kheir A et al showed 34% out of 200 of the mothers practiced by shaking and rousing their convulsing child<sup>32</sup>. Furthermore 27 (17.8%) participants did not know how to position the convulsing child correctly and none of the participants kept the convulsing child safe to lie on their left lateral position which is the recommended position when a child is convulsing. This is almost similar findings to that of Sudan where only six percents of the mothers placed their child on his/her side<sup>32</sup>. Parents should be told the importance of keeping the convulsing child in a lateral position in order to secure the airway and that will help to avoid aspiration which may increase morbidity and mortality to these children.

## CONCLUSION

Majority of parents know how to describe febrile convulsions (signs and symptoms) but there are some of them who still believe in other causes of febrile convulsions like demonic possession and witchcraft. Parents also lack first aid skills as majority of them do not know how to position a convulsing child as recommended. A good number of them still use home remedies for febrile convulsions.

## REFERENCES

1. <https://en.wikipedia.org/wiki/Convulsion>
2. Kayseri E, Unalp A, Apa H. et al., 2008. Parental knowledge and practices regarding febrile convulsion in Turkish children. *Turk J Med Sci*. May 2008, 38(4):343-350
3. Zeglam AM, AL-Hmadi S, Beshish A. 2010. Auditing the attitude and knowledge of parents of children with febrile convulsions. *African Journal of Neurological Sciences*. 29(1):8.
4. Abdulla MM and Abdulhadi FS. 2015. Knowledge, attitudes and practices regarding Febrile Convulsions among Iraqi under 5years children's mothers attending pediatric department in a teaching hospital in Baghdad. *International Journal of Advanced Research*. 3(6): 973-983.
5. Anigilaje EA and Anigilaje OO. 2012. Childhood convulsion. *International Scholarly Research Network (ISRN) Pediatric*. Oct; 2012:6
6. Nyaledzigbor M, Adatarap, Kuug A and Abotsi. Mother knowledge beliefs and practices regarding febrile convulsion and home management. *Journal of Research in nursing and Midwifery*. Feb 2016; 5(2): 030-036
7. Oche M O and Onankpa BO. 2013. Using women advocacy groups to enhance knowledge and home management of febrile convulsion amongst mothers in a rural community of sokotostate, Nigeria. *The Pan African Medical Journal*. Feb 14:49
8. Najimi A, Dolatabadi NK, Esmaeili AA et al., 2013. The effect of educational program on knowledge attitude and practice of mothers regarding prevention of febrile convulsion in children. *J Educ Health Promot*. May 2: 26
9. Parmar RC, Sahu RD and Bavdekar SB. 2001. Knowledge, attitude and practice of parents of children with febrile convulsion. *Postgrad Med*, 47(1):19-23.
10. Kurugol NZ, Tuncuoglu S and Tekgul H. 1995. The family attitudes towards febrile convulsions. *Indian journal of pediatrics*. 62 (1): 69-75.
11. Basler T. 1991. Parental reactions to child's first febrile convulsion. *Acta Paediatr Scand* 80:466-469.
12. Wirrell E, Turner T. 2001. Parental anxiety and family disruption following a first febrile convulsion in childhood. *Pediatr child health*, 6(3):139-143.
13. Makundi EA, Malebo HM, Mhame P et al. 2006. Role of traditional healers in the management of severe malaria among children below five years of age, the case of Kilosa and Handeni districts, Tanzania. *Malaria Journal*. July 5: 58-64.
14. Ofovwe G.E, Ibadin M, Ofovwe E.C, and Okolo A.A. 2002. Home management of febrile convulsion in an African population, a comparison of urban and rural mothers' knowledge, attitude and practice. *Journal of the Neurological Sciences*, 200(1-2):49-52.
15. Huang MC, Liu CC, Chi YC, Thomas K and Huang CC. 2002. Effects of educational intervention on changing parental practices for recurrent febrile convulsions in Taiwan. *Epilepsia*. Nov; 43(1): 81-86.
16. <https://www.nhs.uk/conditions/febrile-convulsions>
17. Deng CT, Zulkifli H I and Azizi B H. 1996. Parental Reactions to Febrile Convulsions in Malaysian Children. *Med J Malaysia*. Dec 51(4):462-468.
18. Delpisheh A, Veisani Y, Sayehmiri K et al. 2014. Febrile Convulsions: Etiology, Prevalence, and Geographical Variation. *Iran J Child Neurol*, 8(3):30-37.
19. Winkler AS., Tluway A. and Schumutzhard E. 2013. Febrile convulsions in rural Tanzania: Hospital-based incidence and clinical characteristics. *Journal of Tropical Pediatrics*, 59(4):298-304.
20. Storz C., Meindi M., Matuja W. et al. 2015. Community based prevalence and clinical characteristics of febrile convulsions in Tanzania. *Pediatric research*. 77(4):591-596.
21. Ling SG. 2000. Parental response and understanding towards febrile convulsion. *Med J Malaysia*, 55(4): 419-23.
22. Sheringham A, Teodor M, Salci T. 2006. Febrile convulsion development and validation of a questionnaire to measure parental knowledge attitude concern and practice. *J Formos Med Assoc*, 105(1): 38-42.
23. Huang MC, Liu CC, Huang CC. 1998. Effects of an educational program on parents with febrile convulsive children. *Paediatr Neurol* 18: 150-5.
24. Rutter N, Metcalfe DH. 1978. Febrile Convulsion - What do parents do? *BMJ*, 2:1345 - 1346.
25. Huang MC, Liu CC, Huang CC. 1998. Effects of an educational program on parents with febrile convulsive children. *Pediatr Neurol*. 18:150-5.
26. Flury T, Aebi C, Donati F. 2001. Febrile convulsions and parental anxiety: Does information help? *Swiss Med Wkly*. 131:556-60.
27. Comoro C., Nsimba SE, Warsame M. et al., 2001. Local understanding, perceptions and reported practices of mothers/guardians and health workers on childhood malaria in a Tanzanian district-implications for malaria control. *Acta Trop*, 87: 305-313.
28. Jarrett OO, Fatunde OJ, Osinus K et al. 2012. Pre-hospital management of febrile convulsions in children seen at the University College Hospital, Ibadan, Nigeria; *Ann Ibd*. Pg. Med., 10 (20) 6-10.
29. Makemba AM., Winch PJ., Makame VM. et al., 1996. Treatment practices for *degedege*, locally recognized febrile illness and implications for strategies to decrease mortality from

- severe malaria in Bagamonyo District, Tanzania . *Trop Med Int Health.*, 1:305-313
30. Ahorlu CK, Dunyo SK, Afari EA et al., 1997. Malaria related beliefs and behaviour in southern Ghana. Implications for treatment, prevention and control. *Trop Med Int Health.*, 2: 488-499.
31. Kambarangwe CK. 2004. Determinants of treatment seeking for malaria in a rural district of Muleba in the Northwest of the United Republic of Tanzania. Master of International Health Thesis, University of Copenhagen, Denmark..
32. Khier M, Ibrahim SA. 2013. Knowledge, attitude, and practice of Sudanese mothers towards home management of febrile convulsion. *Khartoum Med J.*, 6(1):847-53.
33. Sheringham, 1998. Effects of an educational program on parents with febrile convulsive children. *Paediatr Neurol.*, 18: 150-5.
34. Baumer JH, David TJ, Valentine SJ et al., 1981. Many parents think their child is dying when having a first febrile convulsion. *Dev Med Child Neurol.*, 23:462-4.
35. Van Stuijvenberg M, de Vos S, Tjiang G et al. 1999. Parents' fear regarding fever and febrile seizures. *Acta Paediatr.*, 88:618-22.
36. Srinivasa S, Anjum SK, Patel S. et al., 2018. Parental knowledge, attitude and practices regarding febrile convulsion. *International Journal of Contemporary Pediatrics.* 5(2):515-519
37. Ofovwe GE., Okolo AA., Ibadin OM. et al., 2004. Home management of febrile convulsion in an African population: A comparison of urban and rural mothers' knowledge attitude and practice in febrile convulsions. *Journal of the Neurological Sciences* Aug 200(1-2):49-52
38. Dienye Po, AkaniAB, Itmi K. 2012. Uses of crude oil as traditional medicine a survey of mothers in a rural clinic in south Nigeria December. 10(2): 6-10
39. Obi JO, Ejeheri NA, Alakija W. 1994. Childhood febrile seizures (Benin City experience). *Ann Trop Paediatric.*, 14(3):211-4
40. Kanemura H., Sano, F., Mizorogi, S. et al. 2013. Parental thoughts and actions regarding their child's first febrile seizure. *Pediatrics International.* 2013; 55(3): 315-319

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