



Full Length Research Paper

Mothers' knowledge, beliefs and practices regarding febrile convulsions and home management: A study in Ho, Ghana

¹Mwini Nyaledzigbor, Peter Adatar², Anthony Kuug³ and Dziedzorm Abotsi⁴

¹Dean, School of Nursing and Midwifery, University of Health and Allied Sciences, PMB 31, Ho, Ghana

²School of Nursing and Midwifery, University of Health and Allied Sciences, PMB 31, Ho, Ghana

³School of Nursing and Midwifery, University of Health and Allied Sciences, PMB 31, Ho, Ghana

⁴Volta Regional Hospital, Ho, Ghana

Corresponding author's E-mail: mwinituo@yahoo.com

Abstract

Background: This study investigated mothers' knowledge, beliefs and practices regarding febrile convulsion and how it is being managed in homes among women with children under five years (0-5). **Methods:** A cross-sectional descriptive study was conducted among 50 women with children with the diagnosis of febrile seizures. Data was collected by the researcher using structured questionnaires. **Results:** It was found that majority, 35(70%) of the mothers were able to describe febrile convulsions as a sickness in children which is exhibited by the child twitching or fitting, with eyes wide opened. Only 25(50%) of the mothers indicated that febrile convulsion is caused by high fever (high body temperature) but could not specify the number of degrees Celsius due to high illiteracy rates amongst women in Ghana. The results also showed that, a substantial number 27 (48%) of the mothers had the belief that febrile convulsion is normally caused by witchcraft and evil spirits while 8 (16%) of the respondents hold beliefs that a sore in the child's abdomen can cause convulsions. Regarding the home management of febrile convulsions most of the women indicated that tepid sponging the child, bathing the child with cold water; putting spoon in child's mouth and using traditional herbal preparation to rub all over the child's body or it into the child's nostrils. **Conclusion:** The study concluded that even though majority of mothers have good knowledge about febrile convulsion and its first aid interventions at home, a good number of mothers still have negative beliefs regarding the cause of the condition.

Keywords: Mothers' Knowledge, Beliefs, Practices, Febrile convulsions, Home management, Ghana.

INTRODUCTION

Febrile convulsion in children under five years is a common childhood problem which usually cause anxiety and fear among parents, especially mothers. A febrile convulsion refers to a seizure occurring in infancy or childhood usually between three months and five years of age as a result of elevated body temperature (Jarrett, Fatunde, Osinus and Lagunju, 2012). Studies show that febrile seizures, which are usually caused by infections in children are the single most common seizure type and occur in two to five percent of children younger than age five years with a peak incidence in the second year of life

(Seinfeld and Pellock, 2014; Felipe and Siqueira, 2010; Jones and Jacobsen, 2007). Globally, children with fever and febrile convulsions account for as many as twenty percent of pediatric emergency department visits (Delpisheh, 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, Osinus and Lagunju, 2012; Esegbe, Esegbe

and Adama, 2012). Febrile convulsions, being the most common type of convulsions in children under five years constitute one of the causes of hospital admissions in Ghana (Ghana Health Service, 2013). The 2014 Annual Health Performance Reports from the Volta Region indicates that febrile related conditions accounts for thirty to forty percent of admissions among children under five years in the region (Volta Regional Health Annual Reports, 2014). Also, health statistics from the Volta Regional Hospital indicates that febrile conditions in children under five years accounts for about forty to fifty percent of admissions in 2013 (Volta Regional Hospital Annual Reports, 2014).

In spite of the above statistics, empirical studies have also shown that parental knowledge of skilful home management of fever and febrile convulsion can prevent about sixty to sixty-five percent of paediatric emergencies resulting from febrile convulsions in health facilities (Graneto, 2011; Karwowska, et al., 2002; Walsh, et al, 2007). The researcher as a nurse who has worked at the paediatric ward and now working at the Out Patient Department of a Regional Hospital, observed that parents with children suffering febrile convulsions bring their children to hospital only when they failed to control the fever and convulsion and, the children are usually brought in critical states. It was also observed that parents applied herbal preparations and onions and concoctions to the febrile children as a way of managing the convulsion at home and have often realized that those interventions do not work and had to resort to medical treatment in a critical state.

In the mist of these beliefs and practices, there is dearth of literature in the area to assess mothers' knowledge, beliefs and practices regarding home management of febrile convulsion in children under five years in Ghana, hence the relevance of the investigation into the knowledge, beliefs and practices regarding home management of febrile convulsions amongst nursing mothers of children under five years of age. The purpose of the study was to use the findings of the study to educate parents about home management of febrile convulsion in children under five years.

Objective of the Study

To assess parents' knowledge, beliefs and practices regarding home management of fever and febrile convulsion among children under five years

MATERIALS AND METHODS

Research Design

To achieve the objective of this study, a descriptive cross-sectional retrospective design was used with the aim of assessing mothers' knowledge, beliefs and

practices regarding febrile convulsion and its home management among children under five years. Data was collected between March, 2015 and August, 2015.

The Study Context

The place where the participants were sampled was in a Regional and referral hospital in the Volta Region of Ghana. It is the main health training institution in the region and accommodates both undergraduate medical, nursing and allied health students from different colleges and Universities. The hospital is a 240 bedded hospital. The average daily bed state of the hospital as at mid-year 2013 was at 118 with average length of stay being 4-6 day (Hospital Reports, 2014). According to the hospital reports, it has bed turnover rate of 29.3% and bed occupancy rate of 72.9%. The hospital was originally built to provide tertiary care for referred patients but currently Provides Primary Health Care services for the people of the region and beyond. The hospital comprises of 42 units/departments (Hospital Reports, 2014). The hospital has a staff strength of 542 with the breakdown as 232 nurses, 23 doctors and 287 paramedical staff (Hospital Reports, 2014).

Population of Study

The population of interest in this study was mothers with children under five years who were admitted in the paediatric ward of the Hospital with the diagnosis of febrile convulsion or previous history of febrile convulsion during the period of the study. Mothers with children without diagnosis of febrile convulsion or convulsions not associated with fever were excluded from the study. Mothers with children above five years were also excluded from the study.

Sampling Method and Sample Size

Purposive sampling methods was used to select 50 mothers with children under five years who had febrile convulsion and were admitted in the paediatric wards. Purposive sampling enable the researcher to select parents with children under five years who were diagnosed with febrile convulsion or have ever had febrile convulsion.

Data Collection Instrument

A structured questionnaire was used to interview mothers of children under five years who were on admission at the paediatric wards with their children. The questions were both closed-ended and open-ended in order to provide a more accurate reflection of parental knowledge, beliefs and practices regarding home management of fever and febrile convulsion. The study was conducted for a period of three months.

Table 1: Demographic data of respondents

Demographics		Frequency	Percent
Child's Age	6-12mths	20	40.0
	13-36mths	15	30.0
	37-48mths	5	10.0
	49-60mths	10	20.0
	Total	50	100.0
Gender	Male	20	40.0
	Female	30	60.0
	Total	50	100.0
Mother's Age	20-29yrs	35	70.0
	30-40yrs	25	30.0
	Total	50	100.0
Father's Age	20-29yrs	15	30.0
	30-39yrs	23	46.0
	40-50yrs	12	26.0
	Total	50	100.0
Family Structure	Nuclear Family	35	70.0
	Extended Family	15	30.0
	Total	50	100.0
Family Residence	Village	30	60.0
	Town	20	40.0
	Total	50	100.0
Parental Education	No Formal Education	30	60.0
	Primary	10	20.0
	Junior High School	5	10.0
	Senior High School	4	8.0
	Tertiary	1	2.0
	Total	50	100.0

Ethical Considerations

The researcher obtained approval from the University of Health and Allied Sciences, Ghana. Approval was also obtained from the Health Service Administrators and Nurse Managers of Hospital. Information was given to the Nurse-managers in paediatric ward of the hospital where the study was carried out. Informed consent was sought from parents before the administration of questionnaires. Parents who could read and write were given a written informed consent form to sign after they had voluntarily accepted to participate in the study. Parents who could not read and write were asked to thumb print after the researcher explained to them and they agreed to take part in the study. Full disclosure of information to respondents was made, and study subjects' anonymity was ensured through the absence of names on the questionnaires. The respondents were informed of their right to participate or withdraw from the study without any repercussions whatsoever. There were no competing interests, and the study was self-sponsored and aimed at improving paediatric nursing care.

Data Analysis

Filled-in questionnaires were checked for completeness

and consistency of the responses. Data were analysed sample tallying and cumulative percentages. The participants' demographic characteristics, level of knowledge, and practices regarding management and prevention of febrile convulsion were analysed using descriptive statistics. Data were reported using percentages and presented in tables.

RESULTS

Demographic data

The results of the study show that children of mothers were from various age range and gender. About 20(40%) of children were from the age range of 6-12months, while 15(30%) of them were from the age range of 13-24months. Majority 30(60%) of children of parent studied were females while 20(40%) were males. Most of the children (70%) live with their nuclear family and only 15(30%) of them live with extended family. Their parents' ages ranged from 22 to 38 and 25 to 50 for the mothers and fathers respectively. Majority of the parents had some level of formal education (70%) with most of them ending at the Junior High School level (40%). (Refer to Table 1).

Table 2: Mothers' description of febrile convulsion

Responses (N=50)	Count	Percent of Response	Percent of Cases
Mothers' description of febrile convulsion			
It is a sickness in children which is exhibited by child is twitching or fitting	35	45.5	70.0
It is a sickness in children which is normally cause by witchcraft and evil spirits	24	31.2	48.0
It is associated with (High temperature)	18	23.4	36
Total	77	100.0	100.0
Mothers' Knowledge on the signs and symptoms of febrile convulsion			
Clenching the teeth and vomiting	23	32.0	46.0
Stiffening of the arm	20	27.8	40.0
Loss of consciousness	15	20.8	30.0
Twitching of the face or an extremity	9	12.5	18.0
Others	5	6.9	10.0
Total	72	100.0	100.0

Percentage's and totals based on respondents (Multiple responses)

Table: 3 Mothers' knowledge regarding the prevention of febrile convulsion

Responses (N=50)	Count	Percent of Response	Percent of Cases
By reducing fever in children by sponging	30	31.3	60.0
By giving paracetamol syrup	22	23.0	44.0
By treating the cause of fevers in children	20	20.8	40.0
By giving concoction or herbs to the child	10	10.4	20.0
Prophylaxis for repeated convulsions	9	9.3	18
Other (<i>praying; not allowing child play under scorching sun</i>)	5	3.1	10
Total	96	100.0	100.0

Percentages and totals based on respondents (Multiple response)

Mother's knowledge regarding febrile convulsion

Table 2, revealed that mothers have good knowledge on the description of febrile convulsion in children under five years as majority 35 (70%) of mothers described febrile convulsion as a sickness in children which is exhibited by child is twitching or fitting, and another 18(36%) them describing febrile convulsion as a sickness associated with high temperature, extreme case of malaria, whereby the child is unconscious with eyes wide opened. Mothers also mentioned various signs and symptoms of febrile convulsion to include clenching of teeth and vomiting 23 (46) %, stiffening of the arm 20(30%), loss of consciousness 10(20%) and twitching of the face or an extremity 9 (18%).

Mothers' knowledge regarding the prevention of febrile convulsion

Mothers mentioned various ways by which febrile convulsion could be prevented at home. Majority 30 (60%) of parents indicate that febrile convulsion can be prevented by reducing fever in children by sponging, while 22 (44%) of them mentioned giving paracetamol syrup to the child having fever to prevent febrile convulsion. Another 20 (40%) indicate that the treating the cause of the fever can prevent febrile convulsion. However, 10 (20%) of mothers are of the view that giving some concoctions or herbs to the child who has fever can prevent febrile convulsion in children under five years(See details in Table 3).

Table 4: Mothers' beliefs on the causes of febrile convulsion

Responses (N=50)	Count	Percent of Responses	Percent of Cases
High fever (high temperature)	25	30.5	50.0
Supernatural spirit	15	18.3	30.0
Witchcraft	12	14.6	24.0
Malaria parasites	10	12.2	20.0
Sore in the stomach	8	9.8	16.0
Abnormal functioning of the brain	7	8.5	14.0
Other	5	6.1	10.0
Total	82	100.0	100.0

Percentages and totals based on respondents (Multiple response)

Table 5: Where mothers's took child to when child had febrile convulsion

Responses (N=50)	Frequency	Percent
Hospital	20	40.0
Managed at home	15	30.0
Witch doctor/herbalist	12	24.0
Traditional Birth Attendant	3	6.0
Total	50	100.0

Table 6: Interventions taken at home by mothers to manage febrile convulsion

Responses (N=50)	Count	Percent of Responses	Percent of Cases
I tepid sponged child	25	25.3	50.0
I gave paracetamol syrup,	20	20.0	40.0
I bathed child with cold water	10	10.1	20.0
I put spoon in child's mouth	9	9.1	18.0
I smeared herbal preparation on body	8	8.1	16.0
I smeared cow dung on the child's forehead	7	7.1	14.0
I lacerated the back of child's waist and forehead to allow the bad spirit to go out	7	7.1	14.0
I gave some orally liquid in snail shell, honey, lime for the child to drink	5	5.1	10.0
I gave salt water to the child to drink	3	3.0	6.0
I gave cow urine for the child to drink	3	3.0	6.0
others (pray, smeared cream on forehead)	2	2.0	4.0
Total	99	100.0%	100.0%

Percentages and totals based on respondents (Multiple responses)

Mothers'beliefs regarding the cause of febrile convulsion

Mothers expressed diverse opinions regarding the cause of febrile convulsion. Half of 25(50%) of mothers indicate that febrile convulsion is caused by high fever (high body temperature), while 15(30%) of parents stated that febrile convulsion is cause by supernatural spirit. Other parents also attributed febrile convulsion to witchcraft 12(24%), malaria parasites 10(20%), sore in the stomach 8(16%) and abnormal functioning of the brain 7(14%).

Mothers'attitude towards febrile convulsion in children

Table 5. reveals that a good number 20 (40%) of

respondents took their child to the hospital while 15 (30.0%) mothers managed the convulsion at home when child had convulsion. About 12 (24%) of them took the child to herbalist or witch doctor for treatment, while a few 3 (6%) of mothers took their child to the Traditional Birth Attendant (TBA) for management.

Interventions taken at home by mothers to manage febrile convulsion

When the mothers were asked what action they took when their child was having febrile convulsion at home, various answers were given which has been tabulated above (Table 6). The actions the mothers took includes tepid sponging child (25%) ;giving paracetamol syrup (20%) bathing the child with cold water (10%); putting

spoon in child's mouth (9%); and using traditional preparation (8%) among others.

DISCUSSION

The study was aimed at assessing mothers' knowledge, beliefs and practices regarding of fever and febrile convulsion and its home management among children under five years. Knowledge and beliefs on febrile convulsion in children under five years can influence parents' home management of febrile convulsion and outcomes. The study show that mothers had adequate knowledge of febrile convulsion as a majority of the mothers described febrile convulsion as a sickness in children which is exhibited by child is twitching or fitting, and it is associated with high temperature. Also, the findings show how mothers have good knowledge about the signs and symptoms of febrile convulsion as they were able to mention various signs and symptoms of the condition such as consciousness and twitching of the face or an extremity. Furthermore, the participants understand that convulsion can be prevented by reducing fever in children by sponging and giving paracetamol syrup to the child. These findings confirm that of Anigilaje and Anigilaje (2013) who found that parent have good understanding of febrile convulsion children under five years. The ability of mothers to describe the signs and symptoms of febrile convulsion in children under five years might be as a result of the experiences of mothers as caregivers who are always with their children at the time the seizures episodes occur. Ironically, the finding contradicts that of Kayser, et al. (2008), who found that families with children with febrile convulsion that got admitted several times into hospital still lacked adequate knowledge regarding febrile convulsion among. These findings are also supported by Palmar, Sahu and Bavdekar (2001) who found that about 77.9% of the parents were unaware of the entity of febrile convulsion. This difference in findings may be due to a variety of reasons, including ethnic and geographic differences, better diagnosis of partial seizures and improved methods of patient selection.

Regarding the beliefs of mothers on febrile convulsion in children under five years, the findings show that substantial number of mothers described febrile convulsion as a sickness in children which is normally caused by witchcraft, evil spirits that fly as birds in the night. and sore in the abdomen of the child and abnormal functioning of the brain. The findings of this study confirms a study by Anigilaje and Anigilaje (2013) who also found that Subjects attributed angry gods, evil spirit (49.0%), constipation (36.8%) and black blood to be causes of childhood convulsion. The gross misconceptions about febrile convulsions by mothers informed mothers'

decision to take inappropriate or even harmful actions in an attempt to control the convulsions.

In most African countries including Ghana, the beliefs system of parents greatly influence their health seeking behaviour for sick children. This explains the reason why some of the mothers took their children to herbalist or witch doctor for treatment, while a few of them took their children to the Traditional Birth Attendant (TBA) for management. Additionally, the findings further point to the fact that some mothers gave various first aid treatment or interventions when their children had febrile convulsion at home. The actions mothers gave to children having seizures included tepid sponging, bathing the child with cold water, putting spoon in the child's mouth and using traditional herbal preparation. This peculiar findings confirms a study in Nigeria (Jarrett, al et. 2012), which show that fifty-nine (40.1%) of the children received at least one form of intervention believed to be capable of aborting the seizure during the attack at home. Herbal preparation was the most common form of pre-hospital treatment, given in 15 (10.2%) of the cases. Other forms of pre-hospital interventions given were application of substances to the eyes (6.1%), incisions on the body (2%) and bur ns inflicted on the feet and buttocks (1.4%). It is believed that mothers' attitudes and behaviour contribute immensely to the high morbidity and unfavourable prognosis of febrile seizures in the developing countries of the world (Jarrett, al et. 2012). It is important that health care providers especially nurses understand potential parental misconceptions, anxieties and fears about fever and febrile seizures so that they may allay those fears effectively.

CONCLUSION

In conclusion, febrile convulsion in children under five years is a common illness in Ghana. In this study it was found that mothers whose children have ever suffered from febrile convulsion even though, have adequate knowledge regarding the causes, signs and symptoms of febrile convulsion, negative beliefs still persist amongst mothers who attribute the cause of febrile convulsion in children to supernatural forces. These beliefs of parents informed their decision regarding the type of remedy or treatment to be given to the child who has the febrile convulsion. There is a need for women to be educated and health education about the causes and appropriate home care or management of febrile convulsion in children under five years is paramount in Ghana to reduce under five mortality.

REFERENCES

Anigilaje EA , Anigilaje OO (2013). Perception of childhood convulsion among women in a peri-urban community in Ilorin, Nigeria. *OSR J.*

- of *Dental and Med. Sci.* 4(5), 32-38.
- Berg AT, Shinnar S, Shapiro ED, Salomon ME, Crain EF (1995). Risk factors for a first febrile seizure: a matched case-control study. *Epilepsia*, 36:334-341.
- Delpisheh A, Veisani Y, Sayehmiri K, Fayyazi A (2014). Febrile Seizures: Etiology, Prevalence, and Geographical Variation. *Iran J Child Neurol*, 8(3), 30-37.
- Eseigbe E, Eseigbe P and Adama S (2012). Febrile seizures in Kaduna, north western Nigeria. *Niger Med J*. 53 (3):140-4.
- Felipe L, Siqueira M (2010). Febrile seizures: update on diagnosis and management. *Siqueira LFM*, 56 (4), 489-92.
- Ghana Health Service Annual Report (2013). *Reproductive and Child Health Unit*, Public Health Unit, Ghana.
- Graneto WJ (2011). Emergent management of paediatric patients with fever. Retrieved June 5, 2015. Available online at: <http://emedicine.medscape.com/article/801598-overview>.
- Jarrett OO, Fatunde OJ, Osinus K and Lagunju A (2012). Pre-hospital management of febrile seizures in children seen at the University College Hospital, Ibadan, Nigeria; *Ann Ibd. Pg. Med.* 10 (20) 6-10.
- Jones T, Jacobsen ST (2007). Childhood Febrile Seizures: Overview and Implications. *Intl. J. of Med. Sci.* 4(2), 110-114.
- Karwowska A, Nijssen-Jordan C, Johnson D, Davies H (2002). Parental and health care provider understanding of childhood fever: a Canadian perspective. *Canadian J. of Emergency Med.* 4, 394-400.
- Khazai T, Hossein Zadeh A, Javadzadeh M. (2007). Causes of seizures in children. *J. of Birj and Medical Sci.* 14 (4), 45-52.
- Kayser E, Ünalp A, Apa H, Aslsoy S, Hizarcioglu M, Gülez P, Hasan Agin H (2008). Parental Knowledge and Practices Regarding Febrile Convulsion, *Turk J Med Sci*, 38 (4), 343-350.
- Oche OM, Onankpa OB (2013). Using women advocacy groups to enhance knowledge and home management of febrile convulsion amongst mothers in a rural community of Sokoto State, Nigeria. *Pan Afr Med J.* (2), 14:49.
- Parmar RC, Sahu DR. Bavdekar SB (2001). Knowledge, attitude and practices of parents of children with febrile convulsion. *J. Postgrad. Med.* 47(1), 19-23.
- Seinfeld DS, Pellock JM (2014). Recent Research on Febrile Seizures: A Review, *J Neurol Neurophysiol.* ; 4(165), 6-7.
- Shinnar S, Glauser TA (2002). Febrile seizures. *J Child Neurol.*; 17:S44-52.
- Shinnar S, Berg AT, Moshe SL, Shinnar R (2001). How long do new-onset seizures in children last? *Ann Neurol*, 49:659-664.
- Volta Regional Hospital (2014). *Volta regional hospital annual report*. HO, Ghana: Author.
- Walsh AM, Edwards HE, Fraser J (2007). Influences on parents' fever management: Beliefs, experiences and information sources. *J. of Clinical Nursing*, 23 (4), 12-15.