

## AN ASSESSMENT OF HOME ACCIDENTS AMONG UNDER FIVE CHILDREN IN MADAGALI LOCAL GOVERNMENT AREA OF ADAMAWA STATE

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### ABSTRACT

**Background:** Domestic accidents occur at all ages but the very young and very old are especially susceptible, (children being particularly more susceptible). Young children are naturally curious and explore, and this makes them vulnerable to risks and accidents.

**Objective:** To assess the prevalence of domestic accidents among under five (U5) children in Madagali local government area of Adamawa state and to determine treatment options and outcome of such options.

**Method:** A cross sectional descriptive study was conducted from January to February, 2009 using a pre-tested validated questionnaire to collect data. Four hundred questionnaires were administered, the respondents were selected using multistage sampling methods and data was analyzed using Epi Info tm version 3.3.2 software 2001.

**Results:** One hundred and sixty one of respondents (40.25%) admitted that there were many cases of accidents in their homes and that boys were the most affected. Animal and insect bites were the commonest accidents encountered with 47 cases (29.2%). Out of the total home accidents recorded, 107 (66.5%) sought for orthodox treatment accounting for significant number of hospital visits. A few cases of animal bites were treated traditionally.

**Conclusion:** Home accidents among under fives cause significant morbidity and mortality in the communities. Steps such as health education should be carried out within the LGA to prevent such occurrences to promote the health status within the area.

**Keywords:** Child, Home accidents, Madagali.

### INTRODUCTION

Home/ domestic accidents occur among all age groups but those at extremes of life are particularly more vulnerable. Children are especially more vulnerable because in addition to their lack of coordination and the inability to avoid or escape danger, they are also more curious to explore into situations that may expose them to hazard and accidents.<sup>1</sup> The maximum number of accidents occurred in the

second year of life.<sup>2</sup>

Home accident is an unexpected and undesirable event, especially one resulting in damage or harm at home and its surroundings.<sup>2</sup> It is independent of the will of man caused by a quickly acting extraneous force and manifesting itself by an injury to the body and/or mind.

The peak age for domestic accidents is the second year of life.<sup>2</sup> Accident is the main cause of injury and even death in children.<sup>3</sup> Every year nearly 20,000 people die and 21,000,000 medical visits are needed due to home accidents in the United States according to U.S. Home Safety Council.<sup>4</sup> The importance of accidents include death, incapacitation and economic involvement. The immediate environment of a child is the home and its environment (or surrounding). The age of the child makes them susceptible to accidents, which is further compounded by negligence or ignorance on the parts of the parents and caregivers.

Young children exhibit negativism and older children may have suppressed hostility towards their parents, which leads them to incur risks in deliberate defiance of parental wishes.

The common causes of home accidents and deaths according to the Centre for Disease Control and Prevention (CDC) are fire and burns, suffocation, drowning, falls, and electrocution.<sup>34</sup> Home injuries are one of the top reasons kids under age 3 visit the ER, and nearly 70% of the children who die from unintentional injuries at home are 4 years old and under. Young kids have the highest risk of being injured at home because that's where they spend most of their time.<sup>5</sup>

Most accidents occur between late afternoon and early evening in summer during school and at weekends.<sup>6</sup> Factors such as stress, death in the family, chronic illness, homelessness, or moving home, increases the likelihood of the child having an accident. Some happen due to change in routine. Distractions and poor supervision are often other causes of accidents. Childhood accidents are also closely linked with social deprivation. Children from poorer background are five times more likely to die as a result of accident than children from better off families and the gap is widening.<sup>6</sup>

In an effort to raise parents' awareness about the leading cause of child injury in the United States and they can be prevented, the centers for disease control and prevention (CDC) has launched the project "Protect the Ones You Love initiative".<sup>7</sup>

The National Action Plan, Child Injury Prevention was developed by CDC as follows: Raise awareness about the problem of child injury and the effects, Highlight prevention solutions, mobilize action on a coordinated effort to reduce child injury.<sup>8</sup>

A home accident especially among the vulnerable under five populations is a global problem that requires concerted action. However, there is lack of documentation and/or action plan to map and address the menace in Nigeria especially in the hilly and difficult terrain of the north-eastern Nigeria. Against this background this study was planned to determine the prevalence and treatment seeking options for home accidents among under five children in Madagali local government area, and also to determine outcomes of the selected options. The findings from this study would be useful policy makers and programme managers in Nigeria in the mapping and designing strategies for the global control of this problem.

#### MATERIALS AND METHOD

Madagali (with coordinates 10°44'N and 13°25'E) is a local government area which was created out of Adamawa State Nigeria when Taraba State was separated from former Gongola State in 1991. It borders with Michika town to the north, Askira Uba to the west, Gwoza local government area to the south and the Republic of Cameroon to the east.

Using cross sectional descriptive study design 400 randomly selected caregivers of U-5 children in Madagali LGA were examined over eight weeks (within January and February 2009). The sample size was determined using

the formula for calculating minimum sample size for descriptive studies  $[Z^2 \times p \times q/d^2]$ <sup>9</sup> and a prevalence  $p$  was obtained from a past study.<sup>10</sup> The respondents were selected using a multistage sampling methods. For convenience the study was done in the local government headquarter (Michika) which was selected by balloting out of all the local government headquarters of Adamawa state in the first stage. In the second stage a ward was selected by balloting within Michika town. The respondents were selected by visiting them in their households. Direction of movement of interviewer was determined by a pen spun in the air and allowed to fall freely on the ground.

The closest street pointed by the tip of the pen was accepted as the direction of movement to select every fifth household until all the questionnaires were filled. At the end of each selected street the next nearest street was selected for continuation. In each household only one child caretaker or mother was interviewed. Questionnaire was administered on a respondent only after thorough explanation and his/her informed consent obtained. The respondents were assured of the confidentiality of the information gathered from them. Data was collected using pretested interviewer administered questionnaires. Analysis of the data was by use of Epi Info VERSION 3.3.2 computer software.

## RESULTS

**Table 1: Socio-demographic characteristics of caregivers**

	Frequency	Percentage
<b>Gender</b>		
Male	77	19.2
Female	323	80.8
<b>Tribe</b>		
Kanuri	4	1.0
Marghi	197	49.2
Shuwa	44	11.0
Fulani	154	38.5
Others	1	0.2

<b>Religion</b>		
Islam	125	31.2
Christianity	275	68.8
<b>Occupation</b>		
Farming	232	58.0
Fishing	6	1.5
Trading	70	17.5
Others	92	23.0

The caregivers interviewed were mothers (298, 74.5%), fathers (76, 19.2%), grandmothers (12, 3.0%), grandfather (1, 0.2%) and others (7, 1.8%). Majority of the respondents (182, 45.5%) did not receive any form of education. One hundred and seventy four (25.6%) received western education out of which a third had reached tertiary level. The remaining (44, 11.0%) had only Islamic education.

Most of the cases of accidents occurred among boys, probably due to the facts that boys are more adventurous and more curious than their female counterparts. In this study, one hundred and sixty one i.e. 40.3% of the respondents admitted that they had home accidents in the previous years, see table 2.

**Table 2: Occurrence of home accidents according to sex among children below 5 years.**

Gender	Frequency	Percentage (%)
<b>Male</b>		
Accident	103	25.75
No Accident	125	31.25
<b>Female</b>		
Accident	58	14.50
No Accident	114	28.5
<b>Total</b>	<b>400</b>	<b>100</b>

Of these, animals and insects bites accounted for forty seven (29.2%) of the cases.

This could be attributed to the poor sanitary condition of the home environment and

out of harm's way every second of the day. However, the local government chairman with the help of the state and federal government responsible to see that all the measures to be taken to avoid home accidents are enforced.

## REFERENCES

1. First and Safety Child proofing and preventing household accidents. [Online]. 1995 [cited on 2010 Jan 01]; Available from : [http://kidshealth.org/parent/firstaid\\_safe/index.html](http://kidshealth.org/parent/firstaid_safe/index.html)
2. The American Heritage, Dictionary of the English language, 4<sup>th</sup> Ed. [Online]. Houghton Mifflin Company. 2000. [Cited on 2010 Jan 01]; Available from: <http://www.thefreedictionary.com/accident>.
3. Cronan K. Kidshealth: Childproofing and Preventing Household Accident. [Online] 2007[Cited on 2013 Dec. 9]; Available from : <http://WWW.childrensColorado.org/wellness/info/parents>.
4. The Top-6-Accidents Waiting to Happen in Your Home. [Online]. 2009. [Cited on 2010 Jan 01]; Available from: <http.www.sixwise.com/newsletters>.
5. Kidshealth. Child proofing and preventing household accidents. [Online]2010[cited on Jan 01]; Available from: [http://kidshealth.org/parent/firstaid\\_safe/home/childproof.html](http://kidshealth.org/parent/firstaid_safe/home/childproof.html).
6. Royal Society for the Prevention of Accidents. Accidents to children. [Online]2009[Cited On 2010 Jan 01]; Available from : <http://www.rosipa.com/homesafety/adviceandinformation/childsafety/accidents-to-children.aspx>
7. Home Accident Prevention for Children. [Online]. 2010 [Cited on 2010 APR 01]; Available from: [http://www.hkfsd.gov.hk/home/eng/source/safety/Children\\_home\\_accident.html](http://www.hkfsd.gov.hk/home/eng/source/safety/Children_home_accident.html)
8. Onadeko, M.O "Domestic Accidents among Rural and urban children in Nigeria". *Nigeria Journal of Paediatrics* 1983;10: 23 – 27.
9. Araoye MA. Sample size estimation, Research methodology with statistics for health and social sciences.1<sup>st</sup> edition. Ilorin (Nigeria): Nathadex Publishers; 2003. P.115-121,140-147.
10. Carter YH, Jones PW. Accidents among children under five years old: A general practice based study in north Staffordshire. *Br J Gen Pract*. 1993 April; 43(369):159-163.