

**THE UNIVERSITY OF ZAMBIA
SCHOOL OF MEDICINE
DEPARTMENT OF POST BASIC NURSING**

**“A STUDY TO DETERMINE KNOWLEDGE AND
PRACTICES OF NDOLA URBAN RESIDENTS TOWARDS
HOME ACCIDENTS IN CHILDREN”**

This dissertation is submitted to the Department of Post Basic Nursing,
School of Medicine, University of Zambia in partial fulfilment of the requirements for the Degree of
Bachelor of Science in Nursing

Supervisor: Patricia M Ndele (Mrs)

**November 1997
Lusaka**

Lynette Munachoonga Hampande

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BY

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LIST OF ABBREVIATIONS

A.D.H.	Arthur Davison's Children Hospital
W.H.O.	World Health Organisation
U.N.Z.A.	University of Zambia
Z.H.D.S.	Zambia Health Demographic Survey
I.E.C.	Information Education and Communication
M.O.H.	Ministry of Health

DECLARATION

I, Lynette Munachoonga Hampande, hereby declare that the work presented in this study for the Bachelor of Science in Nursing has not been presented either partially or wholly for any other degree, and is not being currently submitted for any other degree.

Signed: LHde Date: 13.11.97
Candidate

Signed: M. Mdele Date: Dec. 8th 1997
Supervisor



STATEMENT

I hereby certify that this study is the result of my own labour and independent investigation. The various sources to whom I am indebted, are clearly indicated throughout the text and in the bibliography.

To my children Mainga and Mutinda for denying them material help

Signed: Hde .

Date: 13.11.97

DEDICATION

To my loving and caring husband Cornwell M Hampande for his patience, encouragement, spiritual, moral and financial support.

To my children Mainga and Mutinta for denying them motherly love.

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I wish to express my gratitude to the Directorate of Human Resources Development for the scholarship, and the Ministry of Health which enabled me study for the Bachelor of Science in Nursing.

My thanks go to the respondents for their willingness to participate, without whose co-operation, this study would ^{have} been a flop.

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I am indebted to Management of Arthur Davison's Children Hospital, Ndola District Health Services and the Ndola Fire Brigade, whose co-operation made it possible for me to collect data and valuable information within a very supportive environment.

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I am especially grateful to Mr M T Simbuwa, who typed the manuscript.

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I wish them all God's blessings!

ABSTRACT

The aim of the study was to determine the knowledge and practices of Ndola Urban residents towards home accidents in children.

A non-experimental descriptive research design was conducted using a standard questionnaire.

The study was conducted in Ndola, on the Copperbelt Province. Ndola has an estimated population of 409,729, with children under 15 years comprising 44.3% of the population.

The study was conducted between August and September 1997, using a systematically selected random sample of 60 residents from three compounds which were of low, medium and high density. The compounds were randomly selected.

The study revealed that the majority of female respondents were knowledgeable on causes and prevention of home accidents than their male counterparts. This discrepancy was attributed to the fact that women are the care providers in the home and are always around children when accidents occur. The majority of the male respondents lacked knowledge because they do not take care of children and are never home when home accidents occur.

The study also revealed that those with low education and those with no formal education lacked knowledge on home accidents.

The findings also revealed that 15 (25%) of the respondents obtained their information on home accidents from family members, and neighbours, while 19 (31.7%) obtained it from different sources, but the majority of them 26 (43.3%) had no information on home accidents from anywhere.

The study further revealed that overcrowded homes had a high incidence of home accidents in a month than homes that were not overcrowded.

Generally the study showed that the respondents did not have adequate knowledge about the causes and prevention of home accidents, and that negative practices to home accident prevention were higher than positive practices.

It was then recommended that:-

1. The Ministry of Health, Maternal and Child Health Services and other stake holders of health should consider the use of mass media to disseminate information on all aspects of child health, home accident prevention inclusive. Through the media many people will be reached.
2. The Government through the Ministry of Education should ensure that it improves the literacy levels of Zambians. Every citizen should be accorded chance to basic education. This is necessary if we are to lower the levels of home accidents as the study shows that those who had higher education were knowledgeable in home accident related issues.

3. There is need to intensify I.E.C on prevention, causes and management of home accidents by health care providers, to all clients who frequent our clinics and hospitals; this health education should also be extended to all compounds in Ndola.

4. Home accident prevention and management campaigns to be instituted at regular intervals. These should target all community members.

5. More research on a wider scale should be carried out to ascertain some of the issues raised and those that were beyond the scope of this study and to identify in more detail causes of home accidents. This will help in the generalization of findings to the whole population.

CHAPTER 1

1.0 INTRODUCTION

1.1 BACKGROUND INFORMATION

Home accident injuries have existed for generations and they are as old as man's history. They result in suffering, disfigurement, disability and above all, death.¹ In addition to the direct suffering caused by home accidental injuries, they make an appreciable economic impact by absorbing the scarce health service funds and health services.

Although Home Accidents contribute to morbidity and mortality in all communities all over the world, there are indications that they remain a low priority among other health priorities.² Muniu E. et al (1994) states that individual governments have not treated mortality arising from home accidents (domestic accidents) with the same seriousness as that occurring due to road traffic injuries or occupational injuries³. Katsivo M. N. et al (1994) also states that because the nature and extent of the problem is virtually unknown, it is difficult for the magnitude of the problem to be appreciated and therefore planned for adequately.

Home accidents or injuries may be defined as any injuries sustained in or outside a home such as burns, scalds, drowning, poisoning, falls, cuts, laceration, suffocation, foreign bodies in the nostrils, ears, or throat, snake bites and

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fractures. Some of these injuries occur right in the presence of a parent or an adult.

The accidental pattern varies from country to country depending on the standard of housing and the facilities available in the home. According to Perla D. and Ocampo S. (1992), childhood injury has become the single largest cause of death and disability in children.⁴ They further state that this may not be appreciated in developing countries because of incomplete or faulty collection of data and unrecorded non-fatal injuries which are greater in number (estimated to be 200 times greater than deaths due to injury). “The problem of domestic injuries is masked in developing countries because of the high incidence of diseases associated with ignorance and poverty”,⁵ such as malnutrition, cholera and diarrhoeal diseases.

According to Mancias M and Romer C.J. (1991), accidents are the leading cause of death in all industrialized countries and in a growing number of developing countries. They further state that, one child in ten suffers an accident for which it is necessary to call the health services at some level.

Katsivo, M.N. et al (1994) attempted to estimate the incidence of injuries in Africa from hospital records and a few population based studies and estimates

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are: 40,000 episodes and 100 deaths per 100,000 population per year for both urban and rural areas.⁶

“Injuries (unintentional and intentional) include Road traffic injuries, falls, burns, poisonings and assaults; are common in age groups between one and forty”.⁷

Injuries are equally common in developing countries like Zambia.

In Zambia, most home accidental injuries are not reported or documented. The available figures come from statistics of admitted patients, who represent the tip of the iceberg. In 1995, the Ministry of health Morbidity, Admission and fatality statistical summaries show that a total of 35,126 people were admitted as a result of injuries and poisoning, out of which 12,473 were under 14 years of age and 22,653 were over 15 years old. There were a total of 780 deaths, 303 were under 15 years old while 477 were 15 years and above.

Zambia with an area of 752,614 square kilometers is one of the developing countries in the sub-Saharan region, consisting about 2.5% of the area of Africa. It shares borders with Zaire and Tanzania in the North, Malawi and Mozambique in the East, Zimbabwe and Botswana in the South, Namibia in the South West, and Angola in the West. Administratively the country is divided into nine provinces and seventy two districts.

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which occur in the home. People who are particularly liable to accidental injuries in the home include:-

- Babies and young children who do not recognize what is dangerous because they do not understand and lack experience such as children playing with kerosene and matches.

- People who are frail or unsteady on their feet such as the elderly

- Young boys who are very active.

- Home accidental injuries are not only confined to children but common to adults as well, especially the elderly. Falls are a major hazard for the elderly. This age group has many difficulties which can lead to accidents, progressively poor sight, failing strength, poor memory, stiffness and mental confusion which make them liable to accidents. Falls are a common cause of injury, disability and death among the elderly. “The percentage in a year ranged from 28% in England to 35% in America¹⁰”. These figures show that adults especially the elderly are proportionately involved in domestic injury fatalities as children. “The majority of accidental injuries to children aged under 5 years occur in the home. In England and Wales 219 children under 5 died as a result of accidents at home in 1990, and it is estimated that there are 645,000 attendances at an accident and emergency Department each year

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following accidental injury”¹¹. Muniu E. et al (1994) have attributed the high incidence of accidental injuries in children to stages of growth and development in their lives.¹²

In Zambia, statistics of morbidity rates resulting from Home Accidents are not very reliable because minor injuries are neglected. As already stated, the available data comes from hospital based statistics. Even hospital data is not very accurate because the method of classification of injuries tends to overlap, for example, fractures, injuries from falls and road Traffic Accidents are grouped together making it difficult to determine the number of fractures which occurred as a result of home accidents. Another classification that groups injuries together is “poisoning and toxic effects including snake bites”. This makes it difficult to determine how many children were admitted to hospital as a result of taking medicines or chemicals, and how many were bitten by snakes.

Records at Ndola’s Arthur Davison Children’s Hospital for 1996 show that, 210 children were admitted with fractures, 234 were admitted for burns out of which 26 died, and 56 were admitted as a result of poisoning and toxic effects of which 07 died. It is difficult to analyse the circumstances under which these accidents occurred since the cases are poorly specified.

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The figures show that the most common types of accidents leading to admissions were burns and scalds resulting from children falling into open fires, which are usually on the ground, unguarded, children's clothes catching fire from cooking apparatus, from hot water or food, while some were burnt by fires caused by bottle lamps. In Zambia, the bottle lamp which is used as a source of light has been the cause of countless cases of burns and house fires. The bottle lamp consists of paraffin into which a cotton wick is dipped. If the lid of the bottle lamp is not tightly closed it is likely to open and send the paraffin into flames, so would careless movement of the bottle lamp. The second commonest type of accident are fractures due to children falling from trees, roof tops, from apartment buildings, while playing on hard uneven surfaces, from bikes, or as a result of slippery floors or while trying to reach items on high shelves. The third cause of admissions was poisoning and toxic effects, poisoning from drinking paraffin kept in containers used for storing water, empty juice or cooking oil containers, toxic effects such as carbon monoxide poisoning from charcoal braziers especially during cold weather and snake bites during the rainy season.

Ndola, with an estimated population of 409,729 with children under 15 years comprising 44.3% of the population. Ndola is a commercial town on the Copperbelt Province of Zambia, with many industries. It is the Headquarters of many big companies like Tazama pipelines, Zambia Oil Company, Indeni, Zambia Telecommunications and Zambia Postal Services. The rural population is mainly involved in Agriculture.

Ndola has two hospitals, namely, Ndola Central Hospital for adults only, and Arthur Davison Hospital for children. There are 18 clinics and two health centres run by the Ndola District Health Management Team, two Zambia Consolidated Copper Mines clinics, one clinic owned by the Anglo American Corporation (Company Clinic) and thirty nine privately owned clinics and private surgeries.

The impact of urbanization has brought about increased population which have created unplanned settlements (Shanty compounds). There are no plans to cater for increased populations in terms of social amenities like schools, health, water, sewerage, refuse and housing. These deficiencies have created unbearable living conditions resulting in high incidences of communicable diseases and injuries as a result of poor structured houses and overcrowding.

“Accidents take an excessive toll on children and young people, including young adults in the form of death, disability and suffering,”¹³ a toll that is unacceptable in this age group since they are the future leaders.

Accidents in the home are almost always preventable and one important aspect of health should be prevention of these accidents. The most important part of prevention is by communication, Education and Information to parents, those who look after children (nannies) and the children themselves.

Most injuries and diseases of children can be prevented if the parents know how the injuries and diseases are caused and can be persuaded to take the right steps to correct this anomaly. The researcher therefore seeks to find out what knowledge residents have on home accidents and what their practices are towards home accidents. The findings will be used to make recommendations to the Ministry of Health and Non Governmental Organizations which offer donor aid to improve the health status of Zambian people.

1.2 STATEMENT OF THE PROBLEM

Home accidents are a serious public Health problem among children under the age of 15 years, and the elderly over 60 years. Home accidents are a major cause of morbidity and mortality among the young. The severity and nature of these accidents have adverse effects on the growth and development of these growing children especially where the accident results into a permanent disability.

The commonest types of home accidents in Zambia in order of incidence are burns and scalds, accidental falls, ingestion of poisons or drugs, inhalation of poisonous gases like carbon monoxide, drowning, suffocation or strangulation, foreign bodies and rarely electric shock and injury due to firearms. Injuries and poisoning rank third among the top ten causes of hospital admissions in Zambia, preceded by Malaria and normal deliveries (Bulletin of Health Statistics 1989-1992) see graph on next page. For major causes of admissions in hospital in 1992

for the ages 1-14 years injuries/poisoning ranked second - see chart below

(Bulletin of Health Statistics 1989-1992)¹⁴.

MAJOR CAUSES OF ADMISSIONS IN 1992 1 - 14 YEARS

DISEASE/CONDITION	ADMISSION	PERCENTAGE
Malaria	38,757	28.8
Injuries/poisoning	12,500	9.3
Other Respiratory Diseases	10,458	7.8
Malnutrition	10,467	7.7
Pneumonia	8,425	6.3
Typhoid, Dysentery, Gastro-Enteritis	7,806	5.8
Non. Infection Gastro-Enteritis	7,634	5.7
Diseases of Skin	6,292	4.7
Measles	6,062	4.5
Anaemia	5,411	4.0
All other Diseases	20,904	15.5
Total Admissions	134,606	100.0

SOURCE: BULLETIN OF HEALTH STATISTICS

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HOME ACCIDENT RELATED ADMISSIONS 1992-1996

DISEASES/CONDITIONS	1992		1993		1994		1995		1996	
	Admis	Deaths	Admis	Deaths	Admis.	Deaths	Admis	Deaths	Admis	Deaths
Fractures	195	0	254	0	226	0	305	0	210	0
Dislocations and sprains	-	-	-	-	2	0	17	0	11	0
Open wounds	-	-	-	-	2	0	-	-	2	0
Burns	256	21	240	18	235	21	258	43	234	26
Poisoning and toxic effects	163	3	134	6	112	10	116	2	56	7

SOURCE: ARTHUR DAVISON HEALTH STATISTICS BULLETIN (1992-1996)

TOP TEN CAUSES OF HOSPITAL ADMISSIONS (ALL AGES 1989-1992)

DISEASE/CONDITION	1989		1990		1991		1992	
	No.	%	No.	%	No.	%	No.	%
Malaria	107 270	21.9	126 912	22	119 109	20.6	113 378	19.6
Normal deliveries	76 167	15.5	106 762	18.5	80 356	13.9	83 537	14.4
Injuries/poisoning	27 155	5.5	37 958	6.6	38 809	6.7	39 187	6.8
Disorders of pregnancy, child birth and uerperium	31 306	6.4	34 783	6.0	35 475	6.1	35 847	6.2
Pneumonia	22 794	4.7	25 029	4.3	29 311	5.1	27 332	4.7
Other respiratory diseases	22 745	4.6	24 378	4.2	28 947	5.0	13 534	2.3
Diseases of the skin and connective tissue	15 859	3.2	20 231	3.5	24 021	4.1	22 555	3.9
Diarrhoeal diseases	11 943	2.4	15 523	2.7	23 473	4.1	41 862	7.2
Anaemias	13 475	2.7	15 065	2.6	17 953	3.1	14 164	2.4
Gento urinary diseases	17 694	3.6	16 870	2.9	17 930	3.1	18 389	3.2
All other diseases	143 597	29.3	153 758	26.6	163 829	28.3	169 909	29.3
Total admissions	490 005	100	577 269	100	579 195	100	579 694	100

SOURCE: BULLETIN OF HEALTH STATISTICS

From the Arthur Davison's Hospital statistics, figures show that the most common type of accident or injury leading to admissions and with the highest mortality are burns and or scalds, burns most commonly occur due to poor supervision of children, burns from open fires and braziers, children playing with matches carelessly left near paraffin or near inflammable substance like petrol which is illegally stored in homes for sale in Shanty Compounds. Burns and scalds also occur when children play near low unprotected cooking places, from carelessly placed pots and pans containing hot liquids on stoves and tables with handles projecting so as to be easily overturned or knocked over by young children and toddlers. The second leading cause of admission are fractures. Because of the type of classification, it is difficult to tell the number of admissions caused by domestic injuries which resulted into fractures. The commonest cause of fractures in the homes are accidental falls from trees and rooftops. There are a few fatalities resulting from falls from high storey apartment buildings, especially the premium plaza in Ndola, which has recorded a few cases of children falling from the balconies. Fall related injuries are common in boys than girls. The third leading cause of some accidental injuries as earlier mentioned are poisoning and toxic effects caused by accidental ingestion of paraffin, and ingestion of medicines left carelessly in the home.

Accidents are often responsible for severe disability and disfigurement especially burns. If disability, disfigurement occurs, this affects the victim and the family who go through a grieving process and will therefore need psychological support. Apart from disfigurement and psychological stress and suffering, domestic

injuries especially burns and scalds are very expensive because they take long to heal and therefore drain the economy of the country.

The human suffering associated with domestic accidents and their consequences, painful injuries, anxiety of close relatives, grief and mourning should not be forgotten. According to the World Health Organization (WHO, 1993), for every child killed, 10 children are handicapped or left with restricted mobility as a result of injuries. A lot of lives are lost as a result of domestic accidents although they are almost always preventable. Home accidents occur because those who are responsible for safety of children are ignorant about children's explorative drive and independent behaviour. Children are curious and have a tendency to take risks that is why it is important that "those who are responsible for children should always be aware of the progressive development of skills with age so that they take appropriate precautions".¹⁵ In Zambia, the majority of mothers work away from home and leave their children under the care of inexperienced girls. These child or baby carers have no skills and therefore give minimum attention to children under their care and this puts the children under their charge at great risk.

A number of factors contribute to home accidental injuries some of which are carelessness, ignorance and lack of order in the conduct of domestic affairs (domestic disorder). Inadequate supervision of young children is a contributory factor especially to injuries that occur in the kitchen. Many domestic chores of cooking, washing clothes and home cleaning conducted in a haphazard manner

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becomes dangerous, something that would not cause accidents in a well managed home. Pots with hot liquids knocked over by children, kitchen knives, razor blades, broken bottles, hoes and axes left carelessly where they can be reached by toddlers, medicines and drugs left where they can be accessible to toddlers and children and matches left where they can be obtained by toddlers are all acts of negligence.

Overcrowding is another contributory factor to home accidents, because of the limited space in the home, cooking, ironing and other household or domestic chores become dangerous. Due to lack of storage space, medicines and household chemicals are not properly stored resulting in poisoning.

Another common cause of accidental fires in homes is overloading electric circuits, especially in old houses with low voltage. Loose electrical appliances and naked wires are also another danger. Placing of electrical appliances in bathrooms where it is damp and wet is also dangerous. No electrical equipment should be used in the bathroom.

Furthermore, inadequate maintenance of furniture and other home equipment can be another hazard leading to injury. This is true especially children who may pick a small piece and either swallow it or push it in their nose causing suffocation.

Some children play with small objects such as buttons, dry beans, dry groundnuts and maize which they push into their noses, ears or other body orifices for which they have to be taken to the Hospital or clinic for removal of these foreign bodies.

Drowning also do occur as a result of falling into unfenced swimming pools, uncovered buckets and drums and water stored in bath tubs. This is very common in Zambia especially where water supply is erratic. Small children particularly those under six years are likely to drown if they are not closely supervised.

There have been reported cases of children who have fallen into pit latrines and died. Children often hurt their fingers in doors and drawers whilst playing. Heavy objects sometimes fall on them while they are trying to reach them off high shelves, for example, a fourteen inch television set fell on the feet of the researcher's son while he was trying to switch it on, a few years back.

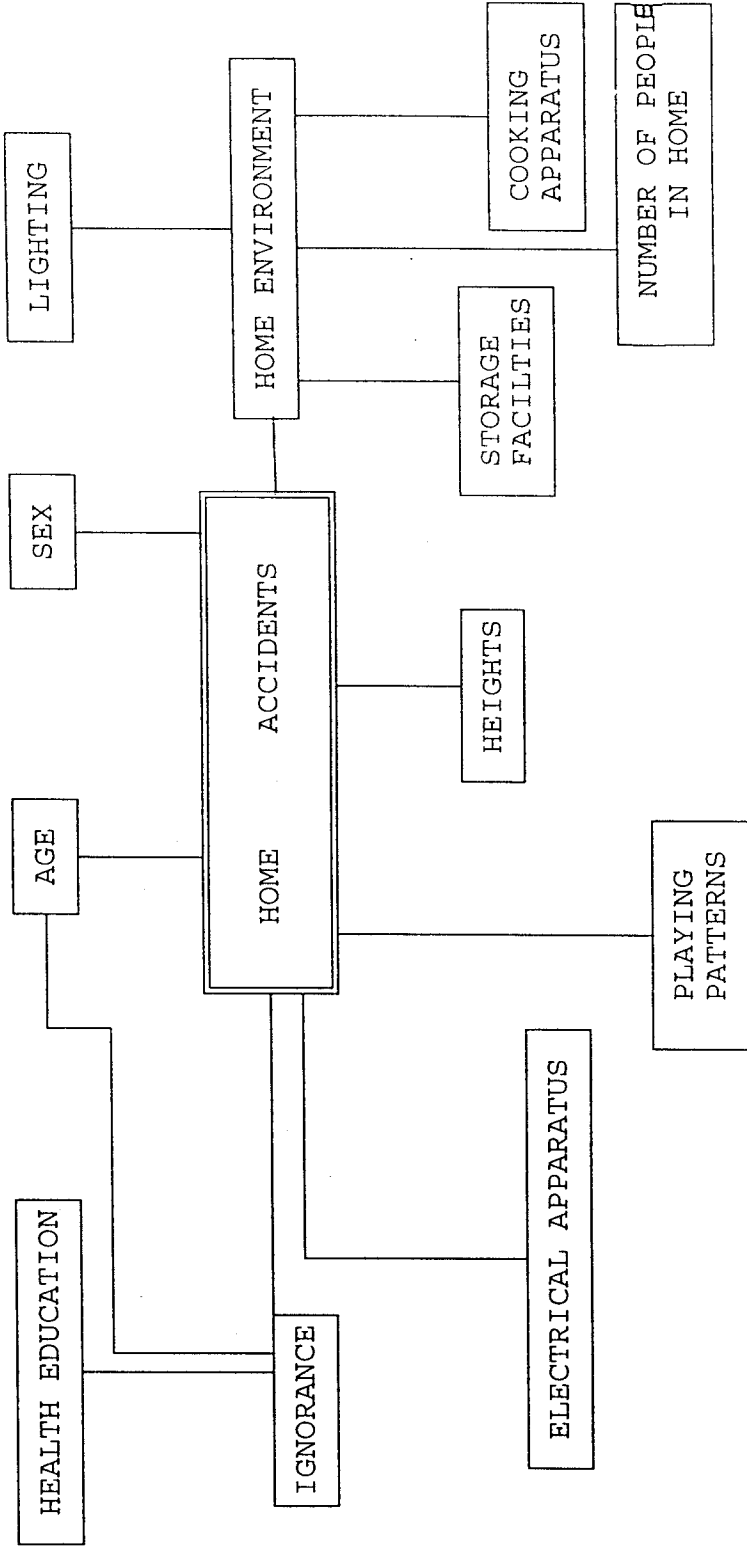
The fact that some members of the public have accepted the fact that accidents are inevitable is a bad image. There is also the notion that, "accidents will happen" or "it cannot happen to me or my children".

The statistics shown may be insignificant, but they indicate how serious the problem of home accidents is becoming. A few years from now, figures will be far much higher than they are if no attempts are made to put the problem under control through prevention.

The researcher has observed that there is not much information or literature on home accidents in Zambia, and not much emphasis is placed on prevention of home accidents during information education and communication given to clients who frequent our clinics and Hospitals. The Red Cross Society through their Red Crescent Volunteers in Africa give free education on prevention of home accidents and first aid tips to households upon request. The question is, how many people are aware that this service exists? The Red Cross Society also give the same kind of education to companies at a fee, the Fire Brigade also does the same as part of their humanitarian service.

There is need to find out what parents know about home accidents, and what measures they take to prevent home accidents, and what their practices are when such accidents occur. The results of the study will provide a basis for initiating accident prevention programmes. Health education is the most important means of preventing home accidents.

ANALYSIS DIAGRAM SHOWING POSSIBLE CONTRIBUTING FACTORS TO HOME ACCIDENTS



1.4.0 OBJECTIVES OF THE STUDY

1.4.1 GENERAL OBJECTIVES

To determine the knowledge and practices of Ndola Urban residents towards Home Accidents in children,

1.4.2 SPECIFIC OBJECTIVES.

1. To determine the knowledge of Ndola residents towards home accidents in children .
2. To establish their practices towards home accidents .
3. To establish the main sources of knowledge of Home Accidents.
4. To identify factors in the home environment that contribute to Home Accidents.
5. To help medical personnel find means of improving prevention of home accidents and means of educating residents on prevention of Home Accidents.
6. To identify other issues for further research
7. To make recommendations to policy makers on what needs to be done in the area of home accident prevention.

1.5 HYPOTHESIS

1. Inadequate information given to members of the public about home accident prevention has led to an increased number of home accidents .
2. Poor living conditions such as overcrowding lead to increase in home accidents .

1.6 INDICATORS AND CUT OFF POINTS FOR VARIABLES.

<u>VARIABLES</u>	<u>CUT OFF POINTS</u>
1	<u>DEPENDENT</u>
(i) Knowledge	Very Knowledgeable, Knowledgeable Not knowledgeable
(ii) Practice	Positive practices, negative practices.
2	<u>INDEPENDENT</u>
(i) Age	15-20 years, 21-30 years. 31-40 years, 41 and above. Not known.
(ii) Sex	Male, Female
(iii) Marital Status	Married, Single, Divorced, Widowed
(iv) Number of People in	Very overcrowded, Overcrowded, Not overcrowded.

Criteria for classifying the respondents as:

(1) being very knowledgeable, Knowledgeable, and not Knowledgeable;

(2) having positive practices, negative practices.

VERY KNOWLEDGEABLE.

Respondents who were able to meet the following conditions:-

- a) were rightly able to give the meaning or definition of Home Accident.
- b) Knew the causes of Home Accidents
- c) Knew safe storage of medicines and poisonous substances.

KNOWLEDGEABLE

Respondents who were able to give any two of the above criteria (for very Knowledgeable)

NOT KNOWLEDGEABLE

Respondents who were able to give one or none of the criteria in Very Knowledgeable.

VERY OVERCROWDED

9-12 people living in 1-2 roomed house.

13 and more people living in 3-4 roomed house

5-8 people living in 1-2 roomed house.

OVERCROWDED

5-8 people living in 3-4 roomed house.

13 and more people living in 5-6 roomed house.

NOT OVERCROWDED

1-4 people in 3-4 roomed house.

1-4 people in 5-6 roomed house.

POSITIVE PRACTICE

- Respondents who were able to protect their children from falls such as not allowing climbing of trees.
- Respondents who were able to protect young children from drowning e.g. covering water stored in large containers.
- Respondents who store medicines and other poisonous substances out of reach of children.

NEGATIVE PRACTICES

Respondents who gave two or less of the above criteria.

1.7 OPERATIONAL DEFINITION OF TERMS

For the purpose of this study, the terms have been defined as follows:-

- | | |
|------------------------|--|
| Children - | An individual who has not reached the age of 15 years. |
| Home Accident - | An accident occurring in and around the home with or without detectable injury leading to medical attention. |
| Knowledge - | Awareness of something. |
| Practice - | Actual use or performance as compared to the idea. |

CHAPTER 2

2.0 LITERATURE REVIEW

2.1 INTRODUCTION

According to a WHO estimate, accidents rank fifth among the leading causes of death. They were responsible for 2,665,000 deaths in 1980, i.e. 5.2% of total mortality¹⁶. Manciaux and Romer (1991), states that there are few countries where accidents do not appear among the five leading causes of death. They further state that while accidents in the home are the most numerous, road accidents cause most deaths.¹⁷ In 1968 alone, 20,000,000 people in the United States were injured in domestic accidents, 5 times more than the number injured on the road. Of these 20,000,000 injured, 28,500 died within the year and 110,000 suffered permanent disabilities.¹⁸

Accidents and unintended injuries are now among the top ten causes of childhood morbidity and mortality. In developed countries, childhood injuries are the single largest cause of death and permanent disability.¹⁹ A number of studies have been conducted world wide because home accidents are now a big and neglected Public Health Problem especially in developing countries.²⁰ According to Perla D Santos Occampo (1992), the injury prevention programme of the world Health Organization together with other International, National and regional organizations, are engaged in a number of activities directed toward bringing about better control of childhood injury.²¹ Most childhood injuries are due to home “accidents”, which have been

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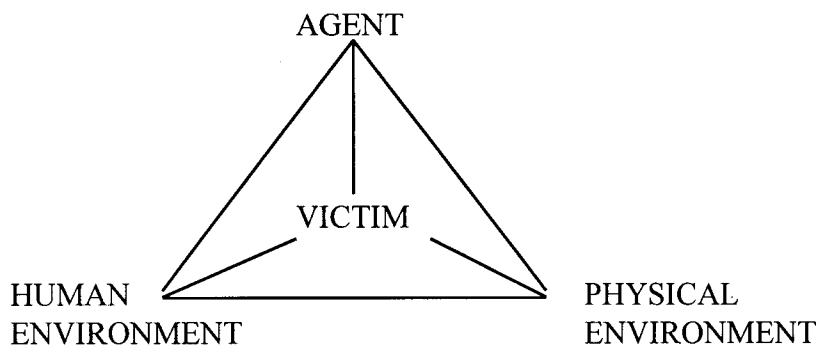
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defined by the WHO as, “an unpremeditated event independent of human will, caused by quick acting external forces and manifesting as an injury or injuries to body or mind”.²²

On the 25th of November, 1989, the then United Nations Secretary General Mr. Javier Perez de Cuellar, in an address to the General Assembly of the United Nations noted, “we have taken the seminal first step, to furnish the World’s children with a means of assuring their fundamental rights. Insofar as for many of the world’s survival is the biggest battle, the convention on the Rights of the child recognizes that notwithstanding differences in race or culture, or economic circumstances, or differences, in the perceptions of childhood or local or regional political ideologies, one fundamental right shared by all children is to have the active intervention of government to protect their life and limb.”²³ Many factors are associated with accidents: Three facets have to be considered in the understanding of injuries as illustrated below.

THE HOST AGENT ENVIRONMENT



Source: International Child Health. Vol. III page 42

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Haddon defines injury as an “energy (e.g. chemical, mechanical, thermal, electrical, etc.) transfer from a hazardous agent to a susceptible host in a conducive environment (physical and social) such that the host sustains physical damage.

THE HOST (who is affected?)

The chronological age, developmental stage, and sex are very important risk factors.

THE AGENTS (What object is the direct cause?)

The objects found in the hosts environment, such as toys, household equipment, maybe sources of injury and even death.

THE ENVIRONMENT (Where and when did it happen?)

The physical environment including unsafe houses, play grounds, swimming pools, etc. are notorious for injuries.

Parents know their children better than anybody would, they know what their children are capable of doing. Therefore it is important for them to foresee what the child might be able to do next or in the next few days. Some parents are complacent, they think that accidents only happen to others “it cannot happen to me”. As medical personnel and children’s advocates, we are responsible for ensuring that their need for protection and education is recognized.²⁴

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GLOBAL SITUATION.

Accidents during childhood are a major problem in the field of public health. Accidental injury has become the principal cause of death in children aged 1-14 years in the Western World. This was, reported by Authors in Sweden, Denmark, United Kingdom the United States of America and France. In 1980, the Accidental Mortality rate among 1-14 year olds was 15.5/100,000 children in France, 11.5 children in the Netherlands, and 10.6 in Great Britain.²⁵

According to the WHO, by different authors, regional problem country reports on childhood injury are as follows:

Singapore has a population of about 2.7 million, 23% of which are children between the ages of 0-15 years. From 1985 through 1989 home accidents had been the major cause of injuries in Singapore. An annual average of 221 cases of home accidents involving children aged 0-12 years were treated at the accident emergency Department of all major hospitals. The number of deaths were also increasing with an annual average of 12 deaths. The causes of death in descending order were falls from heights, drowning, hanging and strangulation, asphyxia from foreign body aspiration, scalds and burns, and accidental poisoning.

In **Taiwan**, thirty years ago, injuries caused only one tenth of all deaths in the 1-14 year age group. Today, however, injuries cause almost half of the deaths in the same age group. The mortality rate in 1987 was around 27 deaths per 100,000 population.

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In **India**, most accidental injuries go unreported and undocumented. The available figures having most resulted from an analysis of serious admitted patients, who represent the tip of the Iceberg.

Burns are a serious problem according to data from seven burn treatment centres. 90% of the victims belong to the poor socio-economic group living in overcrowded huts built of flammable materials where kerosene, pressure stoves or open fires are used for cooking. 68-82% of children poisoned were under five years of age, males with foreign bodies outnumbered females (2:1, in toddlers 3:1).

In **Hong Kong**, in 1988, injury and poisoning caused about 2% of the deaths among children 0-1 year, 24% deaths of those aged 1-4 years and 31% of all deaths of children aged 4-14 years.

In **Malaysia**, injuries constitute the third most common cause of medically certified deaths in children below 15 years of age (after perinatal causes and congenital anomalies). Recent data on home injuries is lacking. A six month study in general Hospitals in peninsular Malaysia in 1976 revealed 1,700 home injuries of children (with 15 deaths). The most common injuries were falls 39%, cuts lacerations and bruises 29%, burns 29% and scalds 19%. About 57% of the injuries occurred in children below 4 years of age. 90% of the injuries occurred in low income families.

The number of children who die of injuries is considerably higher in Japan than in other industrialized countries. As a result, injury prevention and control are now

beginning to receive a high priority. The leading cause of deaths in infants is suffocation. For children over 3 years old, the major cause of death is traffic accidents.

In **China**, deaths caused by accidents accounted for 40% of the deaths of children over 5 years of age. Drowning is the leading cause of death in children 5-10 years old (23.77 per 100,000) and in children 10-14 years old (7.19 per 100,000), and childhood accident rates of children in rural areas are higher than in urban areas.

In the **Philippines**, accidents rank 7th among the ten leading causes of both mortality and morbidity, with the rates (per 100,000 population) 189.1 for morbidity and 19.5 for mortality in 1986. The leading causes of death due to childhood accidents were drowning, 31%, traffic accidents 18%, falls, 4%, poisoning 4%, burns 3%. Burns were most common in children ages 1-4 years old, poisoning in ages 15-19 years, falls in ages 10-14 years, drowning in ages 1-4 years.

In the **United States**, the toll that injury takes in the United States is enormous. In general one third die from motor vehicle accidents one third die from homicides and suicides, and one third die from drowning and fires.²⁶

A study conducted by Kazar G. et al in 1994 revealed that home accidents are on the increase in **Hungary**. The incidence was found to be 45 on 1,000 inhabitants.²⁷

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Another study conducted by Grigorovic L.P. in Moscow in 1988 entitled “injuries to children can be avoided” revealed that there was a reduction in the number of injuries sustained by children after introduction of a health education programme to alert parents and children on how to avoid environmental and behavioral dangers.²⁸

Cliff K. and Li H. conducted a survey in England and Wales in 1981 on how childhood home accidents can be prevented. Their study showed that there were differences in parents’ perception of dangers in the home and the data from hospital studies - parents perception of the most dangerous areas of the home differed considerably from those in hospital based studies.²⁹

In Massachusetts, Halperin S. et al assessed knowledge concerning childhood accident prevention among parents of young children in nine Massachusetts towns. The results of this study demonstrated that parents in all communities needed information education and communication or counseling about how to prevent accidents that injure children.³⁰

REGIONAL PERSPECTIVE

According to Nordberg E. (1994) African injury data are mainly based on hospital records. Injuries rank 3rd behind diarrhoea and malaria at 40,000 episodes and 100 deaths per 100,000 population per year. He further states that incidences are higher in males than in females, and that the most common causes are falls, followed by Road

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Traffic injuries, assault, burns and poisoning. Nordberg further states that most health information systems confuse the situation by aggregating different conditions such as “accidents, poisonings and violence” and sometimes also suicides. Available information is therefore, not very helpful to the development of prevention strategies and programmes.³¹ According to Nordberg, a study of injury cases seen at a Nigerian Teaching Hospital showed that trauma was the main reason for emergency visits and that the most common cause was domestic accidents (42.5% of all trauma). In 1982 and 1984 the number of new patients seeking outpatient care in Kenya was 2.6 and 2.1% respectively.

Nordberg also reports that admissions to a paediatric ward in Lilongwe, Malawi during 2 months in 1983 showed that 9.7% of all admissions were related to accidents, 27% of cases were burns and scalds, 32% were fractures usually caused by falls. For South Africa, Nordberg reports that the number of people Hospitalized from acute poisoning in 1981-85 were due to paraffin in 59% and to overdose of traditional medicine in 16% (37), traditional medicines were however, causing over half of the deaths from poisoning. A study in Tanzania found poisoning to be the most common cause of injury admission to a paediatric hospital, again with kerosene as the leading poisonous chemical.³²

A retrospective study conducted by Mwaura L. W. et al in Kenya in 1991, to determine the types and causes of domestic accidents/injuries in the city of Nairobi

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revealed that, burns were the most prevalent type of injury (37%) followed by cuts/wounds (24.9%) and body swellings (4.9%). The main causes of these injuries/accidents were fire, falls inside and outside the house and cutting implements.³³ Katsivo M. N., Mwaura L. W. et al conducted another retrospective study in Nairobi, Kenya between 1986 and 1990 on accidents involving adults in the home environment. The results showed that out of 9648 hospital records reviewed, 48% were adult cases, with a female ratio of 1.5:1, age groups 18-35 years constituted more than 70% of all the cases, declining markedly with increasing age. The slums and low income groups accounted for 63% of the cases. The main types of injuries attended to were open wounds (34%), burns (13%), swellings (7%), lacerations and bruises (6%), bites and limb injuries (5%), respectively.³⁴

Gedlu E. in Ethiopia conducted a retrospective analysis of accidental injuries among children in North-west Ethiopia. The study was conducted over a five year period (1988-1993) injuries accounted for 341 (48%) of 7055 admissions due to all causes. The cases of injury were firearms, (25%), falls (22%), burns (16%) and motor vehicle accidents (14%). Highest case fatality rates were found in foreign body aspiration (40%), burns (35%), and falls (22%).³⁵

In Zimbabwe, Matanhire D. N. et al conducted a study on, factors associated with incidences of domestic accidents in children aged 0-5 years in Chikomba District,

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Mashonaland. The results revealed that unintentional accidents in five year olds and below were a general problem.³⁶

NATIONAL PERSPECTIVE

There is very little information on studies conducted on home accidents in Zambia, even though the problem seems to be on the increase. A lot of lives have been lost especially among children, which is not only a family problem but it also hinders the socio-economic development of the country.

According to Tambatamba G. (1985) accidents contributed 0.8-9% of total admissions in all Zambian Hospitals and health centres. Of all the total deaths, 3-4% were as a result of accidents, and 9% of all total outpatient new cases were as a result of accidents.³⁷ In 1988 accidents accounted for 9.5% of all hospital admissions, they ranked third among the top ten causes of Hospital admissions.³⁸ In 1992, they accounted for 9.3% of all hospital admissions among children 1-14 years,³⁹ while in 1995 they accounted for 9.74% admissions and 2.9% deaths.⁴⁰

On the Copperbelt province, injuries and poisoning accounted for 5.71% of all hospital admissions and 1.66% of all deaths in 1995. (See graph below)

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COPPERBELT HOSPITAL ADMISSIONS AND DEATHS

ADMISSIONS						
Condition/ diseases	Under 1 Year	1-4 years	5-14 years	15 years	Total	%
Injuries and Poisoning	372	1,278	1,656	4,572	7,888	5.71

DEATHS						
Condition/ disease	Under 1 year	1-4 years	5-14 years	15 years	Total	%
	35	36	36	11	98	1.66

COPPERBELT HOSPITAL AND ALL HEALTH CENTRE ATTENDANCES. NDOLA URBAN (1995)			
Condition/Disease	Under 5 years	15 years and above	
Injuries/Poisoning	4,290	17,852	5.98%

SOURCE: Ministry of Health. Morbidity, Percentage Admission and Fatality Statistical Summaries (1995) Page 18.

It is difficult to accurately report the number of annual accidental injuries because many do not require medical attention and therefore go unreported. (it has been reported that each year hundreds of children are admitted to ADH). Records at this Children's Hospital show that out of 1,267 of all total Hospital admissions in April 1977, 79 were home accident related, while in May, out of a total admission of 1,091, 62 were home accident related (see chart below).

HOME ACCIDENT RELATED ADMISSIONS AT A.D.H. IN APRIL AND MAY, 1977

CONDITION	APRIL 1977		MAY 1977	
	Frequency	Percentage	Frequency	Percentage
BURNS	21	1.6	31	2.84
FRACTURES	27	2.1	19	1.74
OTHER INJURIES	19	1.5	9	0.82
POISONING	8	0.6	-	-
SNAKE BITES	4	0.3	1	0.092
BEE STING	-	-	1	0.092
GUN SHOT	-	-	1	0.092
TOTAL	79	6.2	62	5.683

SOURCE: ARTHUR DAVISON ADMISSION REGISTER 1997.

The Ndola Fire Brigade also has a record of home accidents in which they were called upon to assist. The following data shows the incidents involving children from 1992 - August, 1997.

HOME RELATED INCIDENTS FROM JANUARY 1992 - AUGUST 19.08.97

DATE	INCIDENT
07.02.92	CHILD ELECTROCUTED WHILE PLAYING WITH LIVE WIRE
04.07.92	A MALE CHILD SET HIMSELF ABLAZE
16.01.93	BEDROOM SET ON FIRE AND A CHILD WHO WAS SLEEPING GOT BURNT AND DIED.
01.08.94	A CONTAINER OF LIQUIFIED GAS EXPLODED AND KILLED TWO CHILDREN
12.06.95	CHILDREN PLAYING WITH MATCHES GOT BURNT WHEN THEY SET A LIGHTED MATCH ON A PETROL CONTAINER
20.04.95	CHILD FELL FROM THE TENTH FLOOR OF PREMIUM PLAZA FLATS.
23.03.95	A MALE CHILD FELL FROM A TREE AFTER THE BRANCH BROKE
15.09.96	A CHILD DROWNED IN A SWIMMING POOL AFTER FAILING TO SWIM
07.12.96	THREE CHILDREN DIED WHEN THEIR HOUSE CAUGHT FIRE WHILE THEY WERE SLEEPING
04.02.97	CHILD FELL FROM THE TENTH FLOOR OF PREMIUM PLAZA BUILDING
20.05.97	A CHILD FELL INTO A PIT LATRINE
10.08.97	A CHILD DROWNED IN A SWIMMING POOL

SOURCE: NDOLA FIRE BRIGADE STATISTICS

According to Nordberg (1994), a study of cases visiting the Paediatric Department of a Lusaka Hospital showed that 3.5% of all outpatient visits were due to “accidents and poisoning”. Causes of the poisoning of all cases seen were:

- Paraffin (Kerosene) 27%
- Food 23%
- Drugs 6%
- and herbal poisoning 40%⁴¹

A study on epidemiology of burns conducted in 1977 at the University Teaching Hospital (UTH) showed that 87% of all burn cases were children under 13 years old.⁴²

The local newspapers often carry reports of fires that have razed down houses particularly the semi-permanent ones usually made of wood either in the rural or urban areas. For example, the Daily Mail of November 4th, 1997 reported that a 5 year old boy had been burnt to death in Ndola’s Kaloko Compound after the mattress on which he was sleeping caught fire from a lit candle.⁴³

Most accidental injuries in Zambia are seasonal such as burns, falls, poisoning and snake bites. The incidence of burns is higher in the cold season during the months of June and July, when people sit around braziers and fires in order to warm themselves. These same braziers are also used for cooking and warming water for bathing, which accidentally spills over hot liquid which scalds children’s bodies. Many children

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admitted at ADH have scalds as a result of either hot water or porridge which accidentally spill on them while their mothers were cooking. Other children are scalded by spilling hot liquid over their bodies frequently from a level which parents thought they could not reach, for example, tea from a table or hot water from a stove. In medium and high density areas, observation and experience has demonstrated that because of the small size of houses, mothers do not have much option in terms of where to do their cooking. They therefore do their cooking outside the house, which also constitutes a play ground for children who are at risk to these unguarded fires or cooking places.

Carbon Monoxide poisoning is also very common during the cold season when people keep themselves warm from poorly lit braziers in poorly ventilated houses.

Another common seasonal accident is falling from trees especially from fruit trees such as mangoes, guavas, mulberries and pawpaws, when they are in season. Falls are common when children are playing but the incidence is higher during the time when fruits are in season.

During the rainy or wet season mushroom poisoning and insect bites are common. Mushroom poisoning occurs when poisonous mushrooms are accidentally consumed. Snake bites occur while children are playing outside at night. Very rarely are people bitten by snakes inside the house.

“Munkoyo” poisoning is common during the dry season. Munkoyo is a traditional drink made out of maize meal and other ingredients which differ from province to province. Poisoning is common in areas where roots are used to make the drink either because poisonous roots are accidentally used or the roots were packed in an empty bag which had previously contained fertilizer.

During the hot and dry weather, which ranges from the month of September to early November, when there is a lot of gastroenteritis in children, Herbal toxicity is very common. On the Copperbelt mothers give their children liquid in which the bark of “Chimamba” tree as it is called in Bemba has been soaked. Some children are given sitz baths in cold water from the liquid of the same tree. This is done because it is believed that it cures anal prolapse which usually accompanies severe diarrhoea in children. Herbal toxicity is more pronounced in those children who take this mixture orally, they are usually brought to Hospital with anuria and some end up with paralytic ileus.

Herbal toxicity is not only peculiar to Zambia. The Center for Disease Control and Prevention have a documented case in which 3 unrelated children developed life threatening bradycardia with rapid onset of Central Nervous and Respiratory depression following ingestion of Jin Huan tablets, a Chinese herbal medicine used for relieving pain. This occurred in Colorado in 1993. It is also reported that a study conducted in the United States revealed that 3% of adult respondents reported using herbal medicine during the preceding year.⁴⁴ In Zambia mothers deny giving herbal

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medicine to their children even when there is overwhelming evidence, they only admit to having done so when the condition of the child becomes critical. The mortality rate in children with diarrhoea is very high because of herbal toxicity.

Other common types of poisoning which are not seasonal are paraffin poisoning, Rat poisoning and poisoning from flowers. Paraffin poisoning is common in children because it is mostly stored in containers which previously contained food, water or juice. Children drink paraffin especially at the time while their mothers place paraffin containers on the floor in the process of getting ready to light a fire or paraffin lamp. That short period is enough for a child to take a sip from the paraffin container. Colourful pellets of Rat Poison are eaten by toddlers because they look like small sweets. Leaves from flowers called “Elephant Ears” are very poisonous when eaten especially by children who eat almost anything they come across.

Cuts and lacerations are also common among children while they are playing. Deep cuts on the feet from broken bottles are common because children play with bare feet especially in high and medium density residential areas.

Drowning in swimming pools occurs in low density residential areas either because a child falls into the swimming pool and can not swim or a toddler wanders near an unprotected swimming pool and drowns. Whereas in high density areas children fall in pit latrines because the pits are not protected.

Foreign bodies in Ears, nose and throat are not very common. Records at the Ndola Central Hospital Ear Nose and throat Department (ENT) where even children are taken because the paediatric Hospital has no ENT Department revealed that only less than ten children are attended to monthly for removal of foreign bodies. The common foreign bodies being beans, groundnuts and cockroaches.

Electrocution and gunshots do occur but they are very rare. Other accidents are children taking medicines left carelessly where it can be reached and the accidental consumption of fertilizer mistaken for sugar.

CONCLUSION

Most studies conducted reveal that the problem of Home Accidents is very common in children, and not much is being done to educate members of the Public on this problem in Zambia. Accidents are mainly due to exploratory behaviour of children and adult carelessness. The consequences of home accidents are many, the effects are numerous and they impinge on the development of children which will lead to severe deprivation of the country's manpower when they are expected to participate in the economic development of the country.

Not much has been done by the Zambian Government to help reduce levels of Home Accidents. Obviously prevention is better and cheaper than cure especially that Home Accidents can be prevented. "If all groups of people were given some basic education on accident prevention and management, this would reduce the occurrence of and minimize the consequences of accidents".⁴⁵

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There is therefore need to have a strong accident prevention programme in the country. According to the Health Goals of the National Health Policies and Strategies (1991), “ensuring safe, physical environments and health supportive habitats” do not come out clearly to the Health worker to teach on prevention of accidents. The accidental causes of death and injury require the effort of all, the Government, Non Governmental Organizations, and health care professionals if health of children is to improve. Failure to do so, the WHO slogan “Health for all by the year 2000” will be a pipe dream.

CHAPTER 3

3.0 RESEARCH METHODOLOGY

3.1 RESEARCH DESIGN.

The purpose of the study was to determine the knowledge and practices of Ndola Urban residents towards Home Accidents in Children.

A non-experimental descriptive research design was chosen to explore and describe the cause effect relationship between the dependent and various independent variables.

The variables include:

DEPENDENT

- Knowledge
- Practice

INDEPENDENT

- Age
- Sex
- Heights
- Home environment
- Electrical apparatus
- Health Education
- Cooking apparatus

- Number of people in the home
- Storage facilities

Talbot L.A. (1995) states that a descriptive study describes the variable(s) of interest as it naturally occurs.

This type of design was chosen because it describes phenomena and allows for data collection from existing resources to show the association between dependent and independent variables.

3.2 RESEARCH SETTING

The study was conducted in Ndola, one of the Districts on the Copperbelt. Ndola is 336 kilometers north of Lusaka, the Capital city of Zambia. Ndola was chosen because it was convenient to the researcher as regards time for data collection since it was done during the study break. The study was conducted over a period of ten days, during the Month of September, 1997.

3.3 STUDY POPULATION

The study population consisted residents from three different residential areas, High density, Medium density and low density areas. The reason for sampling from all these areas was to choose from a cross section of residents from different social and economic backgrounds.

3.4 SAMPLE SIZE

A sample of 60 residents were selected considering the time within which the research was to be completed and the funds available for the research. Twenty residents were drawn from each of the three compounds, namely Chifubu, Chipulukusu, and Kansenshi.

3.5 SAMPLING METHOD

The researcher used stratified random sampling because the study units were already grouped into strata; the three compounds.

The final sample in each compound was selected by systematic random sampling. This method was chosen because it has the advantage of according all elements an equal chance of being included in the sample and therefore eliminated bias and enables the researcher to make generalizations. Using systematic sampling (after using the lottery method to come up with the first house) every Kth house was picked until 20 houses were picked in one compound. The same procedure was used to select respondents in the other two compounds.

3.6 DATA COLLECTION TECHNIQUE AND TOOL.

3.6.1 DATA COLLECTION TOOL.

Data was collected through the administration of a standard questionnaire. The questionnaire consisted of both closed and open ended questions. Anonymity was granted by not including the names of the respondents or addresses on the

questionnaires. Data collected included biographic data, knowledge and practice towards home accidents in children.

The use of questionnaires as a data collection tool have several advantages and disadvantages (Treece and Treece, 1986).

ADVANTAGES

- a. Questionnaires are a rapid and efficient method of obtaining data.
- b. They are a rapid and efficient method of gathering information.
- c. The researcher is able to gather data from a widely scattered sample.
- d. Respondents can remain anonymous.
- e. The questionnaire is one of the easiest tools to test for reliability and validity.
- f. The subject has time to contemplate his/her response to each question.
- g. Measurement is enhanced because all subjects respond to the same questions.
- h. Analysis and interpretation of data can be easily accomplished.

DISADVANTAGES

- a. The instrument is unable to probe a topic in depth without becoming lengthy.
- b. The respondent may omit or disregard any item.
- c. Some items may force the subject to select responses that are not his/her actual choice (forced-choice items).
- d. Printing may be costly if the questionnaire is lengthy and is printed on high-quality paper.
- e. Some items may be misunderstood.

- f. The sample is limited to those who are literate.
- g. Subjects usually are able to express their opinions or their views more easily when speaking than when writing.

3.6.2 DATA COLLECTION

Data was collected in 10 days. The principal researcher and one research assistant (a classmate at the Department of Post Basic Nursing) collected data from respondents in their own homes. There was no need to train the research assistant as she was also conducting a similar exercise. The researcher however had to go through the questionnaire with the assistant to ensure there were no problems.

3.7 PILOT STUDY

A pilot study was conducted in Ndola involving a sample of ten residents randomly picked from Peter Singogo Police Compound.

A pilot study is a miniature trial run of the major study, and is aimed at appraising the following:

- i) Reactions of the respondents to the research procedure.
- ii) Validity of the data collection tool.
- iii) Procedure for data processing and analysis.

3.8 ETHICAL CONSIDERATIONS

The researcher obtained permission to carry out the pilot study and the actual study from the police camp commandant and Ndola Town clerk respectively. Permission

was also sought from respondents for them to take part in the study. This was important because it showed respect to authorities and members of the community. The researcher explained to the respondents the purpose and nature of the study and how results were to be used. An explanation was also made as to how they were chosen as respondents and that they were free to accept or refuse to be included in the sample. Confidentiality, anonymity and privacy were assured during data collection.

3.9 LIMITATIONS OF THE STUDY

The major limitation of the study was that time was short, and because the sample was small generalizations could not be done. The size was chosen to accommodate the available funding and time provided for the study.

CHAPTER 4

4.0 DATA ANALYSIS AND PRESENTATION OF FINDINGS.

4.1 INTRODUCTION.

The purpose of the study was to determine the knowledge and practices of Ndola Urban residents towards home accidents in children.

The data presented was analyzed into frequency tables, cross tabulations and numerical descriptions for each table. The data was analyzed manually.

4.2 DATA ANALYSIS

The results presented were obtained from 60 residents aged 15 years and above, randomly selected. After collection, data was sorted out and edited for consistency and accuracy. Data were put on a data master sheet for easy analysis. The data has been presented in the form of tables because tabulated data is easier to remember and make reference to. The percentages indicated in the tables have been rounded off to whole numbers.

PRESENTATION OF FINDINGS

TABLE 1 BIOGRAPHICAL DATA (n=60)

CHARACTERISTICS	FREQUENCY	PERCENTAGE
<u>SEX</u>		
Male	24	40
Female	36	60
Column total	60	100
<u>AGE GROUP</u>		
15-20 years	7	11.7
21-30 years	27	45
31-40 years	16	26.7
41 years and above	9	15
Age not known	1	1.7
Column total	60	100
<u>MARITAL STATUS</u>		
Single	11	18.3
Married	48	80
Divorced	-	-
Widowed	1	1.7
Column total	60	100
<u>EDUCATIONAL LEVEL</u>		
None	7	11.7
Primary	23	38.3
Secondary	23	38.3
College	7	11.7
Column total	60	100
<u>OCCUPATION</u>		
Housewife	16	26.7
Professional	9	15
Business/self employed	14	23.3
Unemployed	13	21.7
Other	8	13.3
Column total	60	100

This table shows that the majority of the respondents 60% were females, while 40% were males, 45% were in the 21-30 years age group with only 1.7% with age unknown. 80% of the respondents were married, 18.3% single with only 1.7% widowed. It also shows that 38.3% of the respondents have had secondary and primary education respectively, 11.7% with college education and no formal education respectively. 26.7% of the respondents were housewives and only 15% were professionals.

TABLE 2 NUMBER OF PEOPLE IN EACH HOUSEHOLD (n=60)

NUMBER OF OCCUPANTS	NUMBER OF ROOMS IN EACH HOUSEHOLD				ROW TOTAL
	<i>1-2</i>	<i>3-4</i>	<i>5-6</i>	<i>More than 6</i>	
1-4	5 (8.3%)	3 (5%)	2 (3.3%)	1 (1.7%)	11 (18.3%)
5-8	6 (10%)	18 (30%)	2 (3.3%)	8 (13.3%)	34 (56.7%)
9-12	1 (1.7%)	6 (10%)	2 (3.3%)	2 (3.3%)	11 (18.3%)
13 and above	-	2 (3.3%)	2 (3.3%)	-	4 (6.7%)
Column total	12 (20%)	29 (48.3%)	8 (13.3%)	11 (18.3%)	60 (100%)

This table shows that the majority 6 (10%) of the respondents live in 1-2 rooms which are occupied by between 5-8 people. The majority of those in 3-4 roomed houses 18 (30%) house 5-8 occupants.

TABLE 3 CHILD MINDERS DURING THE DAY

CHILD MINDER	FREQUENCY	PERCENTAGE
Mother	39	65
Nanny	5	8.3
Relative	13	21.7
Other	3	5
Column total	60	100

This table shows that the majority of mothers 65% take care of the children during the day, 21.7% are taken care of by relatives, while only 5% others are children minders.

TABLE 4 RESPONDENTS' LEVEL OF KNOWLEDGE ON DEFINITION OF HOME ACCIDENTS IN RELATION TO SEX (n=60)

SEX	LEVEL OF KNOWLEDGE ON DEFINITION OF HOME ACCIDENT			ROW TOTAL
	<i>Very knowledgeable</i>	<i>Knowledgeable</i>	<i>Not knowledgeable</i>	
Male	3 (5%)	8 (13.3%)	13 (21.7%)	24 (40%)
Female	19 (31.7%)	11 (18.3%)	6 (10%)	36 (60%)
Column total	22 (36.7%)	19 (31.6%)	19 (31.7%)	60 (100%)

This table shows that the majority of female respondents 19 (31.7%) are very knowledgeable about home accidents while the majority of the male respondents 13 (21.7%) are not knowledgeable.

TABLE 5 RESPONDENTS' KNOWLEDGE ON CAUSES OF HOME ACCIDENTS IN RELATION TO EDUCATION LEVEL

EDUCATIONAL LEVEL	KNOWLEDGE ON CAUSES		ROW TOTAL
	<i>Knowledgeable</i>	<i>Not knowledgeable</i>	
None	-	7 (11.7%)	7 (11.7%)
Primary	7 (11.7%)	16 (26.7%)	23 (38.3%)
Secondary	19 (31.7%)	4 (6.7%)	23 (38.3%)
College	7 (11.7%)	-	7 (11.7%)
Column total	33 (55%)	27 (45%)	60 (100%)

This table shows that the majority of respondents who were knowledgeable on causes of home accidents have secondary education 19 (31.7%), while the majority of those with primary education 16 (26.7%) were not knowledgeable.

TABLE 6 RESPONDENTS' KNOWLEDGE ON CAUSES OF HOME ACCIDENTS IN RELATION TO SEX (n=60)

SEX	KNOWLEDGE ON CAUSES		ROW TOTAL
	<i>Knowledgeable</i>	<i>Not knowledgeable</i>	
Male	9 (15%)	15 (25%)	24 (40%)
Female	25 (41.7%)	11 (18.3%)	36 (60%)
Column total	34 (56.7%)	26 (43.3%)	60 (100%)

This table shows that the majority of female respondents 25 (41.7%) are knowledgeable on causes of home accidents, while the majority of male respondents 15 (25%) are not knowledgeable.

TABLE 7 RESPONDENTS' KNOWLEDGE ON CAUSES OF HOME ACCIDENTS IN RELATION TO AGE

AGE	KNOWLEDGE ON CAUSES		ROW TOTAL
	<i>Knowledgeable</i>	<i>Not Knowledgeable</i>	
15-20 years	5 (8.3%)	2 (3.3%)	7 (11.7%)
21-30 years	14 (23.3%)	13 (21.7%)	27 (45%)
31-40 years	11 (18.4%)	5 (8.3%)	16 (26.7%)
41 and above	3 (5%)	6 (10%)	9 (15%)
Age not known	-	1 (1.7%)	1 (1.7%)
Column total	33 (55%)	27 (45%)	60 (100%)

The table shows that the majority of the respondents aged 15-20, 21-30 and 31-40 are knowledgeable about causes of home accidents while 13 (21.7%) in the 21-30 age group are not. The majority in the age group 41 and above are not knowledgeable.

TABLE 8 RESPONDENTS' SOURCE OF KNOWLEDGE ON HOME ACCIDENTS

SOURCE OF KNOWLEDGE	FREQUENCY	PERCENTAGE
At home or from neighbours	15	25
School or college	6	10
Mass media	7	11.7
Clinic or hospital	6	10
None	26	43.3
Column total	60	100

This table shows that 25% of the respondents obtained their knowledge from family members or neighbours while 10% from the clinic or hospital, school or college respectively. The majority of the respondents 43.3% have had no information on home accidents.

TABLE 9 RESPONDENTS' KNOWLEDGE ON PREVENTION OF HOME ACCIDENTS IN RELATION TO SEX (n=60)

SEX	KNOWLEDGE ON PREVENTION		ROW TOTAL
	<i>Knowledgeable</i>	<i>Not knowledgeable</i>	
Male	19 (31.7%)	5 (8.3%)	24 (40%)
Female	27 (45%)	9 (15%)	36 (60%)
Column total	46 (76.7%)	14 (23.3%)	60 (100%)

This table shows that the majority of female respondents 27 (45%) are knowledgeable on prevention of home accidents.

TABLE 10 RESPONDENTS' KNOWLEDGE OF HOME ACCIDENT PREVENTION IN RELATION TO EDUCATIONAL LEVEL

EDUCATIONAL LEVEL	KNOWLEDGE OF HOME ACCIDENT PREVENTION		ROW TOTAL
	<i>Knowledgeable</i>	<i>Not knowledgeable</i>	
None	2 (3.3%)	5 (8.3%)	7 (11.7%)
Primary	15 (25%)	8 (13.3%)	23 (38.3%)
Secondary	20 (33.3%)	3 (5%)	23 (38.3%)
College	7 (11.7%)	-	7 (11.7%)
Column total	44 (73.3%)	16 (26.7%)	60 (100%)

This table shows that the majority of respondents with secondary education 20 (33.3%) are knowledgeable on home accident prevention, seconded by 15 (25%) with primary education. The majority of those who have never been to school 5 (8.3%) are not knowledgeable.

TABLE 11 RESPONDENTS' EDUCATION LEVEL IN RELATION TO KNOWLEDGE ON STORAGE OF MEDICATION AND POISONOUS SUBSTANCES

EDUCATIONAL LEVEL	KNOWLEDGE ON STORAGE			ROW TOTAL
	<i>Very knowledgeable</i>	<i>Knowledgeable</i>	<i>Not knowledgeable</i>	
None	2 (3.3%)	2 (3.3%)	3 (5%)	7 (11.7%)
Primary	5 (8.3%)	5 (8.3%)	13 (21.7%)	23 (38.3%)
Secondary	14 (23.3%)	6 (10%)	3 (5%)	23 (38.3%)
College	3 (5%)	3 (5%)	1 (1.7%)	7 (11.7%)
Column total	24 (40%)	16 (26.7%)	20 (33.3%)	60 (100%)

The table shows that the majority of the respondents with primary education 13 (21.7%) are not knowledgeable on storage of medicines and poisonous substances, while only 1 (1.7%) of those with college education is not knowledgeable.

TABLE 12 STORAGE OF MEDICINES AND POISONOUS SUBSTANCES IN RELATION TO AGE

AGE	STORAGE OF MEDICINES AND POISONOUS SUBSTANCES			ROW TOTAL
	<i>In a locked cupboard</i>	<i>No specific place/anywhere</i>	<i>In a high place</i>	
15-20 years	5 (8.3%)	1 (1.7%)	-	7 (11.7%)
21-30 years	10 (16.7%)	7 (11.7%)	6 (10%)	27 (45%)
31-40 years	4 (6.7%)	2 (3.3%)	6 (10%)	16 (26.7%)
41 and above	4 (6.7%)	1 (1.7%)	2 (3.3%)	9 (15%)
Age not known	-	-	1 (1.7%)	1 (1.7%)
Column total	23 (38.3%)	11 (18.4%)	14 (23.3%)	60 (100%)

This table shows that 16 (26.7%) of the respondents in the 21-30 year age group store their medicines where they can not be reached by children, while 7 (11.7%) of the respondents in the same age group have no specific place for storage.

TABLE 13 FIRST AID TREATMENT OF PARAFFIN POISONING IN RELATION TO AGE

AGE	FIRST AID TREATMENT OF PARAFFIN POISONING					ROW TOTAL
	<i>Give milk and observe at home</i>	<i>Give milk and take to clinic/hospital</i>	<i>Give nothing but take to clinic/hospital</i>	<i>I do not know</i>	<i>No response</i>	
15-20 years	2 (3.3%)	4 (6.7%)	1 (1.7%)	-	-	7 (11.7%)
21-30 years	-	21 (35%)	4 (6.7%)	1 (1.7%)	-	27 (45%)
31-40 years	-	11 (18.3%)	3 (5%)	-	1 (1.7%)	16 (26.7%)
41 and above	-	6 (10%)	2 (3.3%)	1 (1.7%)	-	9 (15%)
Age not known	-	1 (1.7%)	-	-	-	1 (1.7%)
Column total	2 (3.3%)	43 (71.7%)	10 (16.7%)	2 (3.3%)	1 (1.7%)	60 (100%)

The table shows that only a minority of respondents in all age groups 10 (16.7%) know the proper first aid management of paraffin poisoning, while the majority do not know.

TABLE 14 PRACTICE IN RELATION TO SEX

SEX	PRACTICE		ROW TOTAL
	<i>Positive practice</i>	<i>Negative practice</i>	
Male	4 (6.7%)	20 (33.3%)	24 (40%)
Female	9 (15%)	27 (45%)	36 (60%)
Column total	13 (21.7%)	47 (78.3%)	60 (100%)

This table shows that the majority of the respondents in both sexes have negative practices towards home accidents 47 (78.3%), while only 13 (21.7%) have positive practices.

TABLE 15 COMMONLY OCCURRING HOME ACCIDENTS IN RELATION TO RESIDENTIAL AREAS

RESIDENTIAL AREA	COMMON OCCURRING HOME ACCIDENTS					ROW TOTAL
	<i>Burns scalds</i>	<i>Falls/sprains fractures</i>	<i>Paraffin poisoning</i>	<i>Other</i>	<i>None</i>	
High density	8 (13.3%)	5 (8.3%)	-	1 (1.7%)	6 (10%)	20 (33.3%)
Medium density	13 (21.7%)	-	4 (6.7%)	1 (1.7%)	2 (3.3%)	20 (33.3%)
Low density	3 (5%)	8 (13.3%)	1 (1.7%)	1 (1.7%)	7 (11.7%)	20 (33.3%)
Column total	24 (40%)	13 (21.7%)	5 (8.3%)	3 (5%)	15 (25%)	60 (100%)

This table shows that the medium density area has the highest number of burns or scalds 21.7%. The majority of falls, fractures and sprains come from the low density.

TABLE 16 OVERCROWDING IN RELATION TO OCCURRENCE OF HOME ACCIDENTS MONTHLY

OVERCROWDING	OCCURRENCE OF ACCIDENTS MONTHLY				ROW TOTAL
	<i>None</i>	<i>1-2</i>	<i>3-4</i>	<i>5-6</i>	
<u>Very overcrowded</u> (9-12 in 1-2 roomed house 13 and above in 3-4 roomed house 5-6 in 1-2 roomed house)	2 (3.3%)	-	8 (13.3%)	1 (1.7%)	11 (18.4%)
<u>Overcrowded</u> (5-8 in 3-4 roomed house 13 and above in 5-6 roomed house)	3 (5%)	9 (15%)	13 (21.6%)	2 (3.3%)	27 (44.9%)
<u>No overcrowding</u> (1-4 in 3-4 roomed house 1-4 in 5-6 roomed house)	10 (16.7%)	12 (20%)	-	-	22 (36.7%)
Column total	15 (25%)	21 (35%)	21 (35%)	3 (5%)	60 (100%)

The table shows that the homes that are not overcrowded 10 (16.7%) have no accident in a month while 12 (20%) have 1-2 accidents a month in the same category. The majority of overcrowded households 13 (21.6%) have accidents between 3-4 a month.

CHAPTER 5

5.0 DISCUSSION OF FINDINGS AND IMPLICATIONS

5.1 DISCUSSION OF FINDINGS

In this chapter, the findings of the researcher are discussed. The general objective of the study was to determine the knowledge and practices of Ndola Urban residents towards Home Accidents in children.

The assumption before the study was that factors such as age, sex, ignorance, home environment, cooking apparatus, overcrowding, storage facilities, lighting, playing patterns, electrical apparatus and health education contribute to home accidents.

The results were based on the analysis of the responses from 60 respondents randomly selected from three compounds in Ndola Urban.

BIOGRAPHICAL DATA

The sample was comparatively young with the majority of the respondents 27 (45%) being in the age group 21-30 years. 48 (80%) of the respondents were married while 11 (18.3%) were single. Marriage in *Zambian* culture is valued as a source of pride for parents with daughters. This could explain the bigger percentage of married respondents. The table also shows that 53 (88.3%) have had formal education while 7 (11.7%) have had no formal education. 16 (26.7%) of the respondents were housewives and only 9 (15%) were professionals (Table 1).

The majority of the respondents live in overcrowded homes; 1-2 roomed house occupied by between 5-8 and 9-12 people respectively (Table 2). Those in 3-4 roomed houses 18 (30%) house 5-8 occupants.

The majority of mothers 39 (65%) take care of children during the day, 13 (21.7%) are *taken care of by relatives while only 3 (5%) others are child minders (Table 3)*. The majority of mothers look after children because they are housewives. They therefore take it as their responsibility. Others are looked after by relatives and nannies because 15% of the respondents were professionals and therefore have to go for work.

KNOWLEDGE ABOUT HOME ACCIDENTS

According to the 1992 Zambian Health Demographic Survey conducted by the Central Statistical Office (CSO) in conjunction with the University of Zambia, it was established that knowledge is a precondition for proper or higher utilisation of any given service.

The study revealed that the majority of female respondents were knowledgeable on definition and causes of home accidents while the male respondents were not (Table 4,5 and 6). This could be alluded to the fact that women are always around children when accidents occur and therefore learn through experience, since they are the child minders (Table 3). The males have no knowledge because they are not at home when accidents occur. The researcher concluded that the women are more knowledgeable because they care for the children and make sure that the environment is safe, where as the males are not concerned with safety.

Furthermore the majority of the respondents who were knowledgeable were those who had had higher education; secondary and college education. The more educated the more knowledgeable the individual would be on home accidents, which shows that lack of knowledge predisposes those with low or no formal education to home accidents. The least educated an individual is, the less knowledgeable he/she is. This shows that being literate is important if one has to know how to prevent hazards like home accidents. This calls for improvement of the education system in the country so that every citizen is accorded chance to formal education, so that they will know how to prevent home accidents. This will reduce economic drain as a result of reduction in home accident related admissions in our hospitals; especially burns and scalds which take long to heal, and the cost of treatment and rehabilitation of these burns put an enormous strain on the health care budget.

Table 7 revealed that the majority in the age group 15-20 years, 21-30 years and 31-40 years had more knowledge than those in the 41 years and above age group. This could be attributed to the fact that the former are in the prime child bearing age group and are inquisitive about their children's safety and therefore take measures to know how home accidents can be prevented. Those not in the prime child bearing age group are not knowledgeable because they do not look after children. The same table shows that a good number of respondents 13 (21.7%) in the age group 21-30 years are not knowledgeable. This is worrying because if they do not know the causes of home accidents, they therefore cannot prevent them. This is supported by Jellife D.B. who states that "most diseases of children (accidents inclusive) can be prevented if the

parents know how they are caused and can be persuaded to take the right steps to protect their children”.⁴⁶

Lack of knowledge on causes of home accidents in the age group 41 and above is also alarming because it is taken for granted that these elderly respondents are knowledgeable in many matters, and whatever they teach the young is taken as Bible truth.

Knowledge is a precondition for the success of any programme. This is so because knowledge on any disease outcome and its prevention help people to have better understanding and compel them to be active and help prevent it (Milambo A., 1994).

Grigorovic L.P. (1988)⁴⁷ described measures that were taken to reduce the number of injuries sustained by children in Moscow. This was done through health education to alert parents and children on avoidable environmental and behavioral dangers. This action led to a reduction of a number of injuries. This shows that knowledge is a very important condition for the success of any programme.

The findings reveal that the majority of the respondents 15 (25%) obtained their knowledge from family members or neighbours while 6 (10%) from the hospital or clinic, school or college respectively. This means that many residents learn from friends and relatives and are bound to get false information which gives an impression

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that health workers are not in the forefront in educating members of the public on home accident prevention. The source of information usually determines its accuracy and adequacy. The source of information from friends and neighbours is not always reliable, most of it, could be misleading.

The majority of the respondents 26 (43.3%) had no education on home accidents (Table 8). These results are in support of the study's hypothesis number 1 which states that, inadequate information given to members of the public about home accident prevention has led to an increased number of home accidents.

In relation to knowledge, the study revealed that women were more knowledgeable than men and that those who had attained primary education including those with no formal education were not knowledgeable. This is of great concern because these are the people who are either employed as nannies or are brought in as dependants to come and take care of the children while their parents go for work. This confirms the study conducted by Muniu E. et al (1994) in Nairobi, Kenya, that "the majority of mothers work away from home and leave their children under the care of young and inexperienced substitutes/surrogates who give minimum attention to children under their care".⁴⁸

The study further shows that most residents need more information on home accidents, because even some of those who knew the definition of home accidents gave witchcraft and germs as causes of home accidents.

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PRACTICE

Findings show that females 27 (45%) had more knowledge on home accident prevention compared to only 19 (31.7%) males (Table 9). This disparity was attributed to the fact that women are in the forefront of looking after children. They therefore know how to take care of hazards in the home.

The study revealed that those who had higher education were more enlightened about home accident prevention than those with low and no formal education (Tables 10, 11).

As regarding storage of medicines and poisonous substances (Table 12), findings show that the majority in all age groups 37 (61.7%) store medicines and poisonous substances where they cannot be reached by children, while 11 (18.4%) have no specific place for storage of these substances. 12 (20%) of the respondents gave the following responses as regards storage of medicines and poisonous substances:-

-Lunch boxes	4 (6.7%)
-Tins and boxes	2 (3.3%)
-Pockets	1 (1.7%)
-Fridge	2 (3.3%)
-Bag	1 (1.7%)
-Bedroom	1 (1.7%)
-Wardrobe	1 (1.7%)

Lack of specific places for storage of medicines puts the young children at risk of poisoning because they can easily reach them. Storing them in lunch boxes, tins and boxes etc., equally puts children at risk, because these medicines/poisons are easily accessible to them.

Table 13 shows that very few respondents 10 (16.7%) know the first aid treatment of paraffin poisoning. Most respondents give milk before taking the paraffin poison victim to hospital or clinic 10 (16.7%). Members of staff at the Arthur Davison Children's Hospital revealed that most parents give their children a lot of milk which makes the children vomit in the long run. Induction of vomiting is now contradicted for fear that if the child vomits he/she will inhale the paraffin. An unexpected finding was that some respondents give raw eggs or salty water as first aid treatment. This is given to induce vomiting which is contradicted as earlier stated (Table 13). Although very few respondents know how to manage paraffin poisoning, it is one of the commonest causes of poisoning in children in many Zambian compounds, despite the fact that it does not come out as such in this study (Table 15). Health care providers should step up a teaching campaign on first aid treatment of paraffin poisoning.

Table 14 shows that practice is very poor or negative towards home accidents among both sexes. Only 13 (21.7%) have positive practice. These findings were arrived at after scoring the responses of each respondent against a preset scale of points as illustrated in 1.6 (indicators and cut off points for variables). Despite the fact that knowledge was high among female respondents, the percentage for positive practice was very low 9 (15%). Health care providers should set up a teaching

campaign on first aid treatment of paraffin poisoning. This calls for intensifying information education and communication to all members of the public on home accident prevention and current management practices.

The study also revealed that high density and medium density residential areas had the highest number of burns and scalds (Table 15). This could be alluded to the fact that these places are overcrowded with 5-8 people occupying a 1-2 roomed house (Table 2). This means that the same space is used for cooking, warming, sleeping, storage of medicines, paraffin and other poisonous substances and also caters as “playing field” for children since there is no adequate room for them to play outside, because the houses are built too close to each other. Where as in low density residential areas, the incidence of burns is low 3 (5%) because they are less overcrowded and they also use electricity. The use of fire in an overcrowded place could also be a contributing factor to the high incidence of burns and scalds, in medium 13 (21.7%) and high density residential areas 8 (13.3%). This agrees with the study of Sinha, which states that “it was the younger children in the poorer and larger families who got burnt in their homes”.⁴⁹ The study of Barradas R. also confirms the above findings which state that, open fires and paraffin stores and lamps are usually responsible for burns that occur in homes and that overcrowding increases the risk. The same table also shows that there were many incidences of paraffin poisoning in the medium density residential area 4 (6.7%) than in the high density residential area. This could be due to the fact that those who live in medium density residential areas can afford to buy enough paraffin

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for use and storage while those in the high density residential area only buy enough for use and do not stock away.

Table 15 also shows that the majority of falls, fractures and sprains come from the low residential area. Most of these falls are as a result of children falling from trees, especially when fruits are in season, falling off bicycles or while playing because there is more space for playing outside the houses. These findings are in support of the findings by the WHO (1972) which revealed that “young children have the highest rate of fall injuries requiring medical treatment with a low fatality except in infants”.⁵⁰ These fall related injuries are usually not as fatal as burns and scalds. The study of Islam M.N. (1991) also supports the above findings. His study revealed that “children are frequently found as victims of injuries caused by a fall from a height (usually a tree) causing various types of fractures”.⁵¹

In relation to overcrowding and occurrence of home accidents monthly, the study revealed that the homes that are not overcrowded 10 (16.7%) have no accidents, while 12 (20%) have 1-2 accidents a month. The majority of overcrowded homes 13 (21.6%) have between 3-4 accidents per month (Table 16). This agrees with a study conducted by Davies I.G. which revealed that “family overcrowding is a common cause of home accidents.”⁵²

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These studies support the study's hypothesis number 2, which states that, poor living conditions such as overcrowding lead to increase in home accidents.

Generally, the findings show that those who attained higher education are more knowledgeable on prevention of home accidents because their knowledge translates into practice. The more educated an individual is, the more perceptive he/she becomes to health related issues. An educated person is better able to participate in self information and education and more likely to make informed decisions about health related issues.

Therefore from the above findings, it was concluded that poor living conditions and lack of knowledge contribute to home accidents.

5.2 IMPLICATIONS FOR HEALTH

Although the study revealed that the majority of female respondents were more knowledgeable on home accident related matters, there was a large number of respondents 26 (43.3%) who had not had education on home accidents. Even those who attained knowledge on home accidents received it from other sources other than medical personnel. Generally, the study shows that the people do not have adequate knowledge about the causes and prevention as shown by the high rate of admissions; therefore, there is a probability that more and more children will be affected by home related injuries while some of them will continue to die if nothing is done to change the present trend.

The findings of the study spell a great need to reinforce and intensify Information Education Communication (I.E.C) to mothers and child minders as well as the community as a whole, on home accident prevention. “It has been globally accepted that women, because of their roles can contribute to the improvement of health in their communities”.⁵³ It is for this reason that when mothers go to the clinics for any reason, I.E.C. should include causes, prevention and first aid management of home accidents. Although all community members should be educated, the stress should be more on women because once you educate a woman, you educate the whole nation. Women’s general care and advice usually extends to the neighbourhood and communities,⁵⁴ as the study has revealed that 39 (65%) of the mothers take care of children during the day. There is need to educate them because they spend more time looking after the home and the family and most of the common daily emergencies affect them and their children. If more people are educated on home accidents, they will guide and supervise their children in the home which will lead to reduction in home accidents. Prevention is better and cheaper than cure.

We need to intensify education and awareness of home accident causes, prevention and management as the case has been in the control of cholera and HIV/AIDS, as I.E.C. is an important tool in accident prevention in children, both for the children themselves and for those who look after children .⁵⁵

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Members of the public have to be made to understand the seriousness of the problem so that they can participate in the control and prevention of home accidents. Dissemination of information is of great importance and therefore the mass media should be brought in to promote public awareness of home accidents.

CHAPTER 6

6.0 CONCLUSION AND RECOMMENDATION

6.1 CONCLUSION

The study sought to determine the knowledge and practices of Ndola Urban residents towards home accidents in children.

It was shown that knowledge was high among female respondents and this may be alluded to the fact that they have learnt from experience, since women are the care providers in the home. The majority of male respondents lacked knowledge because they do not look after children and are rarely home when home accidents occur. The study also revealed that the majority of those with low or no formal education lacked knowledge and yet these are the people who are left with the responsibility of taking care of children while their parents are at work.

With one of the major source of information being at home or from neighbours, most of the respondents' knowledge failed to translate into practice especially where storage of medicines and poisonous substances was concerned. Practice on storage was good among those with higher education. This could be alluded to the fact that they are well informed and can read and write unlike their counterparts with low or no education. The percentage of respondents with negative practices to home accident prevention was higher than those with positive practices.

The study also revealed that more accidents occur in overcrowded homes than in those homes with few occupants. This could be due to the fact that there is limited space for

household chores like cooking, storage of medicines and poisonous substances and no room for children to play freely without hitting or knocking over household furniture. The researcher feels that in order to reduce the high morbidity and mortality rates due to home accidents, there is need to involve members of the public on home accident prevention programmes, as well as current management practices.

It must be concluded that prevention of home accidents is the least catered for programme pertaining to child's health in Zambia. However, it should be pointed out that the objectives of the study have been met.

6.2 RECOMMENDATIONS

In view of the findings of the study, the following are the recommendations:-

1. The Ministry of Health, Maternal and Child Health Services and other stake holders of health should consider the use of the mass media to disseminate information on all aspects of child health, home accident prevention inclusive. Through the media many people will be reached.

2. The government through the Ministry of Education and the Ministry of Community Development and Social Welfare should ensure that it improves the literacy levels of Zambians. Every citizen should be accorded a chance to basic education. This is necessary if we are to lower the levels of home accidents as the study shows that those who had higher education were more knowledgeable in home accident related issues.

3. *There is need to intensify I.E.C. on prevention, causes and management of home accidents by health care providers, to all clients who frequent our clinics and hospitals; this health education should also be extended to all compounds in Ndola.*

4. Home accident prevention management campaigns to be instituted at regular intervals. These should target all community members.

5. More research on a wider scale should be carried out to ascertain some of the issues raised and those that were beyond the scope of this study and to identify in more detail causes of home accidents. This will help in the generalisation of findings to the whole population.

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QUESTIONNAIRE NUMBER:.....

QUESTIONNAIRE FOR NDOLA URBAN RESIDENTS ON KNOWLEDGE AND PRACTICES TOWARDS HOME ACCIDENTS IN CHILDREN

INSTRUCTIONS TO RESPONDENTS

1. Do not write your name on the questionnaire.
2. Please answer all questions.
3. Answer questions by ticking in the box provided
4. For extensive answer, write in the space provided.
5. Do not write in the space indicated "For official use only".
6. Information will be treated confidentially.

SECTION A. BIOGRAPHIC DATA

1. Age of respondent.

- a) 15-20 years
- b) 21-30 years
- c) 31-40 years
- d) 41 and above
- e) Not known

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

2. Marital status of respondent.

- a) Single
- b) Married
- c) Widowed
- d) Divorced

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

3. Sex

- a) Female
- b) Male

<input type="checkbox"/>
<input type="checkbox"/>

4. Level of education

- a) None
- b) Primary
- c) Secondary
- d) College
- e) University

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

FOR OFFICIAL USE ONLY

<input type="checkbox"/>

<input type="checkbox"/>

<input type="checkbox"/>

<input type="checkbox"/>

5. How many are you in the household?

- a) 1-4
- b) 5-8
- c) 9-12
- d) 13 and above

--

6. How many rooms are in your house?

- a) 1-2
- b) 3-4
- c) 5-6
- d) More than 6

--

7. Who takes care of your children in your household during the day?

- a) Mother
- b) Nanny
- c) Relative
- d) Any other, specify:.....

--

8. What is your occupation?

- a) Housewife
- b) Professional
- c) Business/self employed
- d) Unemployed
- e) Any other, specify:.....

--

SECTION B KNOWLEDGE ON HOME ACCIDENTS

9. What do you understand by home accident?

- a) An accident caused by a car near a home.
- b) Any injury, poisoning, drowning, fall, burns or scalds, suffocation occurring inside or outside a home or house.
- c) A house collapsing.
- d) I do not know.

--

10. Do you have adequate knowledge on home accidents?

- a) Yes
- b) No

--

11. If your answer to question 10 is Yes,
which of the following was your source
of information?

- a) At home or from neighbours.
- b) At school or college.
- c) Hospital or clinic.
- d) Any other, specify:.....

--

12. What causes home accidents from what you
know or have heard?

- a) Germs.
- b) Witchcraft.
- c) Carelessness of parents or guardians, poor
supervision of children, unguarded fires, poor
storage of poisonous substances.
- d) I do not know.
- e) Any other, specify:.....

--

13. Do you think home accidents can be prevented?

- a) Yes
- b) No

--

14. If your answer to question 13 is Yes, how can
they be prevented?

- a) Ensuring adequate supervision of children and
removing hazards in the home environment.
- b) Through education from medical personnel,
mass media etc.
- c) Advising children on home accident prevention
- d) Any other, specify:.....

--

15. If your answer to question 13 is No,
give reasons.

.....
.....
.....

--

16. Have you ever received education on prevention
of home accidents?

- a) Yes.
- b) No.

--

17. If your answer to question 16 is Yes, who taught you?

- a) Health personnel.
- b) School teachers.
- c) Parents.
- d) Any other, specify:.....

--

18. What type of home accidents frequently occur in your home?

- a) Burns.
- b) Falls, fractures.
- c) Paraffin poisoning.
- d) Any other, specify:.....

--

19. How many times in a month do home accidents occur in your home?

- a) None.
- b) 1-2 times.
- c) 2-3 times.
- d) 3-4 times.

--

SECTION C PRACTICES TOWARDS HOME ACCIDENTS

20. Do you or any members of your family climb trees when fruits are in season, for example mango, guava and mulberries?

- a) Yes.
- b) No.
- c) Not allowed.

--

21. When there is no water, where do you store your water?

- a) Bath tub.
- b) Large containers or buckets.
- c) Do not use any.

--

22. If you do store water, is it always covered to prevent children from drowning?

- a) Yes.
- b) No.

--

23. Do you have a swimming pool?

- a) Yes.
- b) No.

--

24. If your answer to question 22 is Yes, how is safety ensured?

- a) By a lockable fence enclosing it.
- b) By not allowing children to play near it.
- c) Water is drained out when not in use.
- d) I do not know.
- e) Any other, specify:.....

--

25. Where do you store medicines and poisonous substances?

- a) In a lockable cupboard.
- b) No specific place/anywhere.
- c) In a high place.
- d) Any other, specify:.....

--

26. What type of containers do you store your paraffin in?

- a) Empty cooking oil containers.
- b) Empty juice containers.
- c) Empty Coca-Cola, Fanta or beer bottles.
- d) Do not stock any.
- e) Any other, specify:.....

--

27. If a child drunk paraffin at home, what would you do?

- a) Give milk and observe at home.
- b) Give milk and take to clinic or hospital.
- c) Give nothing, but take to clinic or hospital.
- d) Make child vomit.
- e) I do not know.
- f) Any other, specify:.....

--

THE END

Thank you for you participating in this study!

The University of Zambia,
School of Medicine,
Department of Post Basic Nursing,
Ridgeway Campus,
P O Box RW 50110,
LUSAKA.

13th June 1997

The Executive Director
Arthur Davison
Children's Hospital
P O Box 240227
NDOLA

Dear Sir,

I am a 4th year student in the School of Medicine, Department of Post Basic Nursing, pursuing a Bachelor of Science in Nursing. In partial fulfillment of the degree programme, I am required to carry out a research study in order to graduate. My chosen topic is:- A study to determine knowledge, attitude and practice towards home accidents in Ndola Urban.

In view of the above, I am seeking permission to collect data from the Casualty Department, Out Patient Department, Surgical Wards and Statistical Offices regarding the number of patients admitted to your Institution with home accident related injuries or complaints e.g. burns, drowning, falling off heights, poisoning (Paraffin or Pesticide) electric shocks, suffocation, strangulation etc. from the years 1992 - 1996.

Yours faithfully,

L. Hampande

13-06-97

L. HAMPANDE (MRS)

LH/nsm

Approved.
ARTHUR DAVISON CHILDREN'S HOSPITAL
BOARD OF MANAGER
13 JUN 1997
GENERAL MANAGER
P.O. BOX 240227 NDOLA

University of Zambia,
School of Medicine,
Dept. of Post Basic Nursing,
Ridgeway Campus,
P. O. Box RW 50110,
LUSAKA.

2nd September, 1997.

The Chief Fire Officer,
Ndola Fire Brigade,
NDOLA.

Dear Sir,

RE: REQUEST FOR DATA

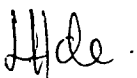
I am a fourth year student in the School of medicine, Department of Post Basic Nursing persuing a Bachelor of Science Degree in Nursing. In partial fulfilment of the Degree Programme, I am required to carry out a research study in order to graduate. My chosen topic is; "A study to determine the knowledge and practices of Ndola Urban residents towards Home Accidents in children".

In view of the above, I am requesting for data in which your organization assisted or was called upon to assist in Home related Accidents such as:-

- children falling from balconies of high storey buildings or flats
- children falling into pit latrines
- children falling or drowning into swimming pools or wells near homes
- children electrocuted in homes
- children burnt by fires caused by inflammable substances illegally stored in homes or any other Home Accidents in which children were victims from 1992 to date.

Thanking you in anticipation.

Yours faithfully,



LYNETTE M. HAMPANDE (Mrs.)



City of Ndola

Phone: 611663/9
Faxes: CITY OF NDOLA
ZA-30270
3001

All communications
to be addressed to:
(TOWN CLERK)

Verbal enquiries to

TOWN CLERK
P.O. Box 70197
NDOLA
Zambia

YOUR REF

MY REF:

DDA/5403

22nd August 1998

The Head of Department
School of Medicine
University of Zambia
Department of Post Basic Nursing
P O Box RW50110
LUSAKA

ATTENTION: MS LYNETTE M HAMPANDE

Dear Sir/Madam

RE: RESEARCH STUDY REQUEST

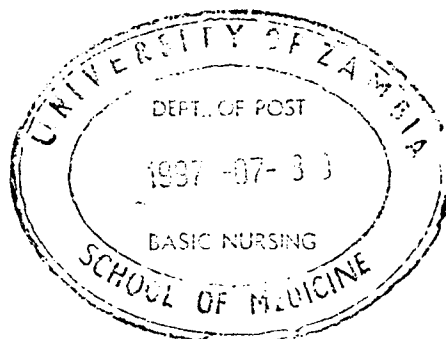
I refer to your letter dated 1st July 1997 pertaining to the above request.

Kindly note that this Council raises no objection to your request. And you are advised to report to the office of the Director of Administration upon your arrival to embark on your research study.

Yours faithfully


E T CHENDA
TOWN CLERK

*dm



Handwritten notes:
8/7/98
MS Lynette M Hampande
Assistant
Principal

THE UNIVERSITY OF ZAMBIA
SCHOOL OF MEDICINE
DEPARTMENT OF POST BASIC NURSING

Dear Sir/Madam,

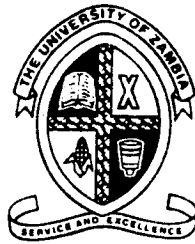
This is to introduce..... **LYNETTE M. HAMPANDE (MRS)**.....
a Fourth Year BScN student in the School of Medicine, Department of
Post Basic Nursing. This student is carrying out a Research study in
partial fulfillment of the Degree requirement. The name of the Research
Topic is.. **A STUDY TO DETERMINE KNOWLEDGE.....**
AND PRACTICES OF NDOLA ^{URBAN} RESIDENTS TOWARDS HOME ACCIDENTS
IN CHILDREN.

We shall be most grateful if you could access the student to information
on the subject, clients or interviews and any other assistance the student
may require.

Yours faithfully,

for
The stamp is circular with the text "UNIVERSITY OF ZAMBIA" around the top edge and "SCHOOL OF MEDICINE" around the bottom edge. Inside the circle, it says "DEPT. OF POST BASIC NURSING". The name "Patricia M. Ndele (Mrs)" is stamped in the center, with "ACTING HEAD/RESEARCH LECTURER" printed below it. A handwritten signature "Pwanga" is written over the stamp.
Patricia M. Ndele (Mrs)
ACTING HEAD/RESEARCH LECTURER

/cm



THE UNIVERSITY OF ZAMBIA

SCHOOL OF MEDICINE

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211440 (UTH) 254824 (Pre-Clinical) Ridgeway Campus
Telegrams: UNZA, LUSAKA
Telex: UNZALU ZA 44370
Fax: + 260-1-250753

Department of Post Basic Nursing

P.O. Box 50110
Lusaka, Zambia

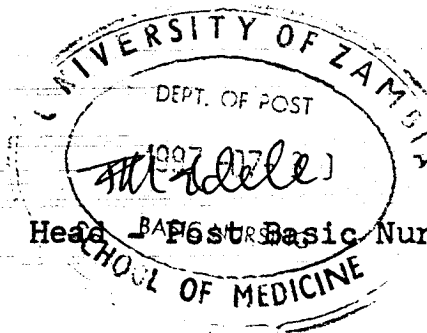
Your Ref:

Our Ref:

1st July, 1997

The Town Clerk,
Ndola City Council
NDOLA

u.f.s. Head, ~~BAF~~ Post Basic Nursing



Dear Sir,

re: RESEARCH STUDY REQUEST

I am a fourth year student in the School of Medicine, Department of Post Basic Nursing, pursuing a Bachelor of Science Degree.

As partial fulfilment for my degree programme, I am required to carry out a research study. My chosen topic of study is: "Knowledge, Attitudes and Practices of Ndola Urban Residents Towards Prevention of Home Accidents in Children."

I intend to collect data from a randomly selected sample of residents in Kansenshi, Chifubu and Chipulukusu Compounds during the month of August, 1997.

The purpose of this letter is to kindly ask for permission to enable me carry out the study in the mentioned compounds.

Thanking you in anticipation.

Yours faithfully,

Lynette M. Hampande (Mrs)