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Knowledge and Practices Relating To Domestic Accident among Mothers of Pre-School Children in Ibadan Southwest Local Government Area, Nigeria

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Abstract : *The study assessed the knowledge and practices for domestic accident among 756 mothers of pre-school children in Ibadan Southwest Local Government Area, Nigeria. Pretested questionnaire with a 15-point knowledge scale relating to domestic accident prevention was used for data collection. Descriptive statistics and ANOVA were used for data analysis. Mean age of respondents was 28.7±5.8 years and 97.8% had at least primary school education. About 30.3% of mothers place cooking utensils on the floor and 46.0% reported domestic accidents [falls (47.0%), burns (23.5%) and ingestion of kerosene (8.4%)] in their preschool children. Domestic accidents were perceived as not totally preventable (85.3%) and part of children's development (50.8%). Preventive practices employed included consistent monitoring of preschool children (58.5) and keeping drugs in secured boxes (55.5%). Self responsibility (58.1%), perceived danger (37.0%) and fear of husband's reaction (32.7%) were main influences for adoption of the preventive behaviour. Although knowledge on the causes and prevention of domestic accidents was high among the respondents, preventive practices need to be strengthened. Educational interventions such as training and public enlightenment aimed at empowering mothers and significant others to be more involved in the prevention of domestic accidents among their pre-school children are recommended.*

Keywords - *Domestic accident, Preschool children, Mothers, Knowledge, Prevention*

I. Introduction

Accidents throughout the world have reached major epidemic proportions [1]. It is an occurrence that is unpremeditated, unintentional, and unforeseen. Domestic accident is a potentially harmful, unexpected, unintended and abrupt occurrence affecting a child which may or may not produce injuries, and which leads to medical consultation [2]. Domestic accidents occur in a home or in its immediate surroundings. Children especially preschool children constitute about 40% of the population in developing countries, together with infectious disease, accidents resulting in injuries among children are the leading causes of death [3]. Accidents are one of the leading causes of death in industrialized and developing countries therefore injuries arising from accident are an increasing public health problem. Over 4 million pre-school aged children are injured annually, with the greatest risk of accidents occurring in their homes [4]. Furthermore, over 700,000 children reportedly die every year as a result of accident especially in developing countries where 13% of the total burden of disease among children less than 15 years has been attributed to injuries. Among children under five years of age the impact of injury is often obscured by the substantial burden of perinatal and infectious disease [5].

Compounding the problem of domestic accident is the acceptability of accidents as a way of life, the increasing lack of supervision of the young and parents' lack of awareness. A study conducted in Brazil documented that mothers are often very knowledgeable about accident risk at home, unaware of the scope of the child injury problem and do not routinely think about accident risk in their day to day interactions with their children [6]. Domestic accident though not the leading child health problem in Nigeria constitute a major cause of morbidity among children, commonly encountered in rural clinics and casualty departments of major hospitals [7]. However, there is dearth of information about mothers' knowledge of domestic accident and their preventive practices, a gap that this study set out to fill. The study therefore was designed to assess knowledge of mothers of preschool children and practices relating to domestic accident prevention.

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II. Methods

2.1 Study design

The study was a community based descriptive survey designed to assess the knowledge of mothers of preschool children and practices relating to domestic accident prevention in Ibadan South-West Local Government Area (LGA), Ibadan, Nigeria.

2.2 Study setting and study population

Ibadan Southwest Local Government Area, created in August 1991, is one of the five Local Government Areas in Ibadan metropolis. It is located within the rain forest belt of western Nigeria and has a landmass of 244.55km square. It is about 150km from Lagos and 659km from Abuja the Federal Capital Territory. It shares boundaries with Ibadan Northwest Local Government Area on the north axis, Ido local Government Area on the west, Oluyole Local Government Area on the south and Southeast Local Government Area on the eastern axis. It has a population of 282585 [8]. There are twelve political wards in the local government area with residential, commercial and industrial sections as well as a combination of well-planned peripheral, transitory and indigenous inner-core areas. Consequently people of mixed levels of socio-economic class populate the local government area.

The study population consists of mothers of under five children in Ibadan South-West LGA. The variation of women in this local government cut across different ethnic groups, age ranges, educational qualifications and social status.

2.3 Sampling procedure

A multi-stage sampling technique was used in selecting the 756 mothers. This consisted of the division of the local government area into three strata - periphery, inner core and transitory, random selection of 14 communities and systematic selection of final respondents from households in the communities selected at the interval of two. Four hundred and thirty-two were selected from 8 inner core communities, 216 from 4 transitory communities and 198 from 2 peripheral communities in the ratio of 4: 2: 1 based on population density.

2.4 Instrument for data collection and process of data collection

The questionnaire employed in this study had both open ended and closed ended questions. It was divided into 6 sections: demographic characteristics, knowledge of mothers of preschool children, beliefs about domestic accident, experiences of domestic accidents and preventive practices. The instrument was pretested for validity and reliability.

Trained research assistants, with the authors supervising, collected the data among the consenting mothers. Verbal informed consent was obtained from the respondents before questionnaire administration while confidentiality was ensured. Interviews were conducted away from the hearing distance of other people and respondents' work schedules were respected. Data collected were stored in a secured place**.**

2.5 Data analysis

Data collected were reviewed on the field at the end of each day for correctness. The developed coding guide was used in coding the data. Data were entered into the computer using the SPSS version 15 package. Descriptive statistics was used to summarize quantitative variables while ANOVA was used to investigate associations between categorical variables. The knowledge of the respondents was subjected to further assessment by awarding one point to every correct response and zero to incorrect response to generate a 15-point scale. The scale range from 0 point (poorest) to 15 points (best) and knowledge was categorized into poor (0-5 points), fair (6-7 points) and good (8-15 points) respectively.

2.6 Ethical consideration

All the ethical principles were observed in the course of the study. Prior to entering the research site, permission to carry out the study was obtained from community leaders concerned. The nature, purpose and process of the study were explained to the respondents after which verbal informed consent were obtained. Respondents were assured of confidentiality, privacy and anonymity of information provided. It was explained to the respondents that information shared during the interview would be guaranteed and treated as confidential and private. Necessary steps such as asking for no names and keeping data sources in a secure place were taken to ensure confidentiality. Respondents were continuously reminded of their right to withdraw from the study at any time. After each session, the respondents were consulted to ensure that study findings reflected their voices and perceptions.

III. Results

3.1 Socio-demographic factors

The ages of the respondents ranged between 17 and 46 years with a mean of 28.7 ±5.8 years. Overall, 739 (97.8%) had at least primary school education. Three hundred and ninety-one (51.7%) respondents were traders and only 41(5.4%) were full housewives (Table 1). Four hundred and sixty five (61.5%) respondents had one preschool child, 261 (34.5%) had two and 31 (4.0%) had three preschool children.

Table 1 Socio-demographic characteristics of respondents

Socio-demographic characteristics of respondents	Frequency	Percentage
Educational Level		
No Formal Education	17	2.2
Primary School	136	18.0
Secondary School	477	63.1
NCE/OND	109	14.4
Degree/HND	17	2.2
Total	**756**	**100**
Occupation		
Artisan	230	30.4
Civil Servants	45	6.0
Student	49	6.5
Traders	391	51.7
Housewives	41	5.4
Total	**756**	**100**

3.2 Knowledge about domestic accidents among preschool children

Respondents' knowledge was assessed on the types, causes and prevention of domestic accidents among preschool children. Fall from slippery floor in the house, burn from hot water/pap/tea and cuts from sharp objects such as blade or knife were identified by 744 (98.4%), 735 (97.2%) and 741 (98.0%) respondents respectively. Other types of domestic accident identified by the respondents were drinking of poisonous substances like kerosene (92.9%), swallowing of objects like pin, seed or beads (91.9%), eating of soap (92.3%), touching of electrical outlets (93.7%), hitting a child during parental fight (84.9%) and fall from mother's back (77.8%).

The responses on causes of domestic accidents indicated that 734 (97.1%) of the respondents knew that leaving unsafe equipment such as electrical appliances and allowing children access to open fire could cause domestic accident. Other responses relating to knowledge on cause of domestic accident is presented in Table 2.

Table 2 Respondents' knowledge of the cause of domestic accident in children

Respondents' knowledge of the cause of domestic accident in children*	Frequency N=756	Percentage
Leaving unsafe equipment such as faulty electrical appliance without proper attention cause domestic accident	734	97.1
Keeping medications where children can give access to swallow them	495	65.5
Allowing children to play unsupervised can make them prone to domestic accident	727	96.2
Poor maintenance of facilities in the home such as staircase without railing can cause domestic accident	745	98.5
Allowing children to have access to where open fire is used for cooking can cause domestic accident	738	97.6

* Multiple responses

The overall mean knowledge score of respondents was 11.5±1.2 out of 15 points. Age (p=0.350) and educational status (p=0.57) of respondents did not influence knowledge of domestic accidents.

3.3 Beliefs of respondents about prevention of domestic accident among preschool children

Two hundred and fifty-two (33.3%), 384 (50.8%) and 645 (85.3%) of the respondents were of the opinion that domestic accidents among preschool children are normal, part of children development and not preventable respectively. Similarly, 304 (40.2%) of the respondents agreed that a child that has not experienced domestic accident would not be strong and 478 (63.2%) agreed that children should be made to learn from their mishaps. However, 719 (95.1%) agreed that some domestic accidents are more serious than others and 688 (91.0%) believed that domestic accident could result into permanent disability for the child.

All the respondents were of the opinion that prevention of domestic accident is beneficial to the child, mother and the family. Perceived benefits of preventing domestic accidents elicited by the respondents included prevention of injury 61(8.1%), disability 171 (22.6%) and incessant expenditure on treating injuries resulting from domestic accident among children.

3.4 Practices of mothers that could predispose preschool children to domestic accidents

The practices of respondents that could predispose their preschool children to domestic accidents were assessed. The sources and position of fire commonly used for cooking are presented in Table 3. Only 17.6% put the cooking utensils on a high platform where their school children could not reach.

Table 3 Sources and position of fire used for cooking by respondents (N=756)

Sources of Fire	Position of source of Fire While Cooking			Total
	Floor	Low Platform	High Platform	
Kerosene Stove	173	355	109	637 (84.3%)
Coal Pot	37	9	2	48 (6.3%)
Electric Stove	4	19	13	36 (4.8%)
Gas Cooker	2	11	9	22 (2.9%)
Fire Wood	13	0	0	13 (1.7%)
Total	229 (30.3%)	394 (52.1%)	133 (17.6%)	756 (100.0%)

On storage of items that are conventionally supposed to be kept out of the reach of preschool children, more respondents (46.1%) kept the kerosene container on the floor while 18.9% kept drugs in open container (Table 4).

Table 4 Storage practices of respondents

Material and Mode of Storage	Frequency	Percentage
Kerosene		
On the Ground/Floor	343	46.1
On Shelves	192	25.8
Inside Locked Cabinets	190	25.5
In the Store	19	2.6
Total	**744**	**100.0**
Drugs		
Secured Box/Fridge	412	55.5
Shelve	163	22.0
Open Container/Table/Trolley	140	18.9
Floor	27	3.6
Total	**742**	**100.0**

3.5 Preventive measures taken by respondents against domestic accidents among preschool children

Preventive practices reported by respondents included keeping drugs in safe place (55.5%) and cooking on a high platform that is beyond the reach of the preschool children (17.6%). Factors that influence the decision of the respondents to adopt preventive practices at home included self-motivation (58.1%), perceived danger (37.0%), to avoid being scolded by their husbands (32.7%), lesson from other peoples' experiences (29.9%) and self experience (21.8%).

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3.6 Reported Experiences of Domestic accident among Respondents' preschool children

Three hundred and forty-five (45.6%) of respondents admitted that their preschool children had experienced one type of domestic accident or the other. They were asked to recall one of such accident, their perceived severity of the accident and its outcome. Fall from slippery floor occurred most (32.8%) and the least reported was electric shock (0.3%). (Table 5)

Table 5 Types of domestic accidents experienced by respondents' preschool children

Types of domestic accidents experienced by respondents' preschool children	Frequency	Percentage
Fall from slippery floor	113	32.8
Cut from knife/blade	61	17.7
Fall from bed/chair/staircase	49	14.2
Burns from boiling water	44	12.8
Burns from lighted candle/lantern	37	10.7
Kerosene ingestion	20	5.8
Insertion of pin in the ear	11	3.2
Ingestion of soap	9	2.6
Electric shock	1	0.3
Total	**345**	**100.0**

The perceived severity of the injuries sustained from the accidents and the outcome of the accident experienced by the preschool children of respondents are presented in Figures 1 and 2.

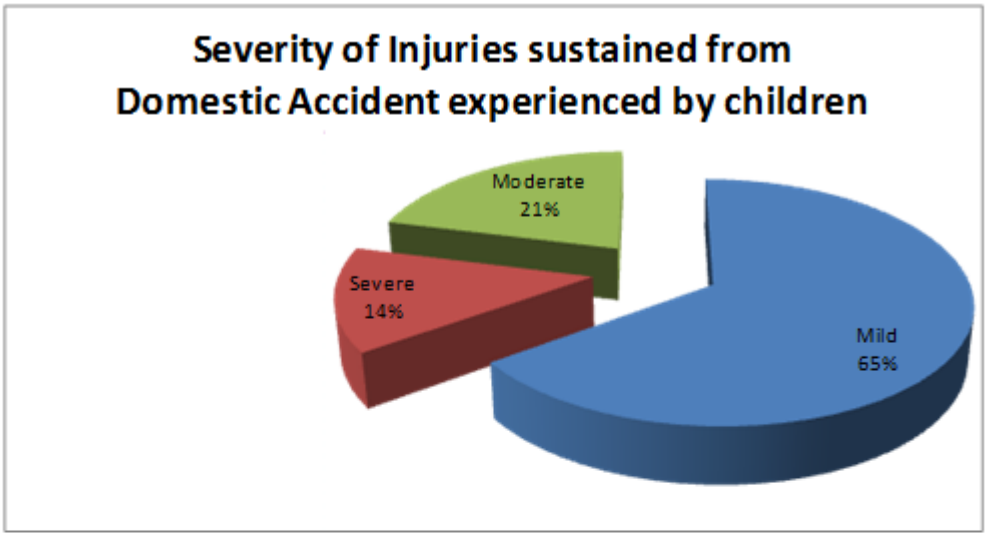

Figure 1 Severity of injuries sustained by preschool children

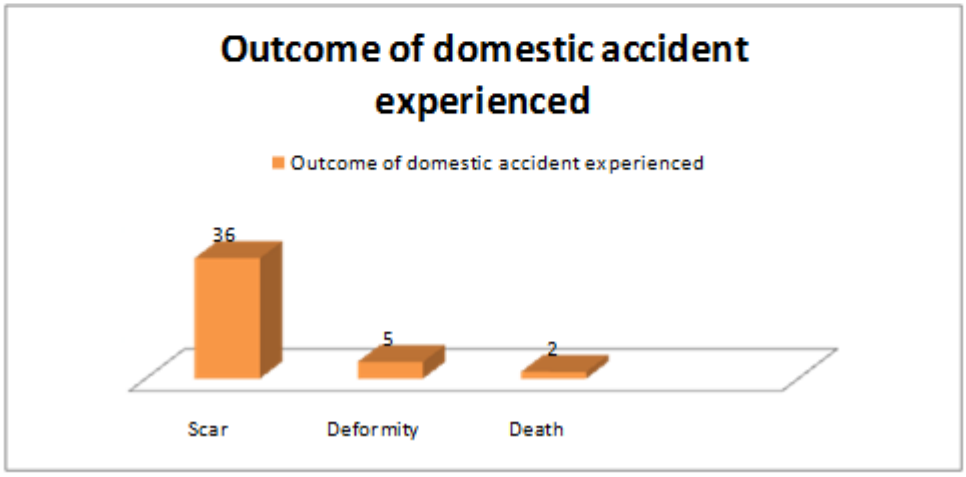

Figure 2 Outcome of accident experienced by respondents' children

IV. Discussion

The high literacy level among the respondents may be a reflection of the improved literacy level in Nigeria as well as the policy of free basic education at the primary school level. This is in contrast with the findings of Sharma [8] where educational status of 89.3% mothers of preschool children studied was illiterate. Beirens, Beeck, Dekker, Brug and Raat [9] stated that lower educational level of mothers were associated with unsafe storage of medicine and poison. Literacy is an index of awareness and knowledge and plays an important role in detecting the behaviour of a person towards health and disease.

The high level of knowledge of domestic accidents recorded among the study population is consistent with that of a study by Saad et al [10] where mothers saw themselves as being knowledgeable about the causes and risk factors as well as how to prevent injuries. The high level of mothers' knowledge in this study did not however influence how closely they supervise their children as they still experienced domestic accidents. This could be due to the fact that the mothers could not control the situation leading to the accidents as documented by Saad et al [10] where mothers reported that they were not always in the situation to prevent the injuries due to circumstances beyond their control. This could also be attributable to various household chores mothers have to attend to aside their own job/trade which is consistent with the view of WHO [11] that the pressure of modern day society dramatically cuts down time spent with children in an average household. The finding that respondents' educational level did not affect domestic accident prevention knowledge was at variance with the outcome of a similar study among mothers in a rural community of Indore, India [12] where it was found that under five children whose mothers were either illiterate or educated up to primary standard were more at risk of

different types of domestic accidents as compared with highly educated mothers a finding reiterating that of Erkal et al [13] which reported that as educational level of mother increased, the number of domestic accidents decreased.

Almost all the respondents believed that domestic accidents among preschool children are normal part of children development and it is inevitable. Mothers view accident largely as a natural consequence of childhood and they believe children learn about risk avoidance from injury experiences. This presupposes that mothers do not hold a strong belief in the preventability of domestic accident. Similar views have been reported in previous studies [14, 15].

Falls was the highest recorded domestic accident reported in the study and it is consistent with previous studies [16, 17, 18, 13]. The preventive practices employed by the respondents in relation to domestic accident prevention are diverse and not satisfactory. Though majority of the respondents appeared to engage in preventive practices, it was not consistent and preschool children can still access substances that can cause domestic accident such as kerosene which are mostly kept on the floor. There was no substantial evidence for an association between the mothers' safety measures and their education a finding similar to those of earlier studies [19, 20].

The finding that mothers saw it as their responsibility to prevent accidents could be due to the consequences that follow such accidents. According to Robert, Smith and Bryce [21], there are many emotional and social consequences of injury for children and their caregivers such as financial costs including loss of earnings of parents and care givers. In the opinion of Dinesh and Sushilkumar [22], the consequences of domestic accident may be disastrous both for the individual and the society when the accident results in permanent disability as it could lead to loss of future productivity. Again, the fear of husband's reaction to the occurrence of domestic accident was indicated by some to be an influencing factor. This has implications for planning preventive intervention practices. The partners are key stakeholders that need to be mobilised for a successful implementation of preventive interventions

V. Conclusion

This study revealed that there was high level of knowledge about domestic accident among mothers of preschool children especially in the study area as well as a high prevalence. Accident was seen as inevitable and part of normal child growth and development. All these may be attributed to lack of importance attached to domestic accidents, lack of detailed information and awareness on the severity and consequences. The inclusion of accident prevention in strategies for the health of children will certainly bring to the fore the issue of domestic accidents which is neglected in the environment where the study was conducted. Child safety is a social value that demands attention hence, these findings therefore call for prompt and target group interventions.

A multi-faceted integrated preventive approach such as safety measures and education about the early treatment of domestic accidents can play important role in the prevention of domestic accidents at the home level.

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