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Knowledge of Risk Factors and Preventive Practices towards Domestic Fire Accidents among Residents of Tanke Community in Ilorin, Nigeria

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Abstract:- Fire accidents in homes have been noticed to be as a result of lack of knowledge of the risk factors and the preventive practices. This study determined the knowledge of the risk factors and preventive practices among residents of Tanke community in Ilorin, Nigeria towards domestic fire accident. The current study was also done to determine the prevalence of domestic fire accidents in Tanke with a view to determine the education needs of the people. A total of 500 respondents were randomly selected for this study. Heads of households chosen from a cluster of houses in Tanke community were interviewed using structured questionnaire. 55.5% of households had knowledge of the risk factors and 81% had knowledge of the preventive practices towards domestic fire accidents and the prevalence rate was 13.6%. The risk factors of domestic fire accident include carelessness, leaving cooking appliances unattended, faulty electrical appliances, smoking cigarettes, failure to switch off electrical devices when not in use, alcoholism amongst others. The preventive practices towards fire outbreak at home and fire hazard preventions include installation of smoke detectors, owning fire extinguishers, taking precautionary measures, turning off all cooking appliances after use among others. A large proportion of the respondents did not have fire accident preventive devices like fire extinguisher and smoke detectors at home. Most of the respondents had factors that could predispose them to domestic fire accident like keeping flammable substances at home, smoking carelessness and faulty electrical appliances. Recommendation for the study included: intensification of fire prevention programs, enforcement of fire laws that mandates the adoption of fire preventive devices in all homes and health education aimed at knowing the risk factors of domestic fire accidents and its prevention which is of utmost importance in our fight against the devastating trauma of fire injuries in homes.

Keywords:- *Accident, Domestic Fire, Fire Hazard, Prevalence, Risk Factors, Preventive Practices, Fire Extinguishers, Smoke Detector, Electrical Appliances.*

I. INTRODUCTION

Fires and burn injuries have great impact on human existence since Prometheus gave the gift of flame to mortal man. Without question one of the most powerful tools in our history, fire nonetheless leaves its scars (WHO Global Burden of Disease Database, 2002). Over the centuries, the use of simple appliances such as stoves and lamps has resulted in inestimable damage to persons and property. This is largely a result of ignorance; inexperience; overcrowded and substandard living conditions; faulty design; improper use of the device; intoxication or carelessness (Grange, Akinsulie & Sowemimo, 1988).

Fire accidents in homes can result in catastrophic personal injury and devastating damage. The frequent occurrence of major fire accidents in homes in Nigeria has become a serious threat to the nation's fragile economy. Many homes/houses have been gutted by these fires" destroying lives and properties worth several billions of naira (NFPA'S Report, 2011). The rate of fire accidents in the country, where hundreds of lives and property worth billions of naira are lost annually to fire disasters, has become a subject of concern among the people (NFPA'S Report, 2011). In an estimate of 7,129 fire accidents, about 990 lives are lost annually in the country; while the United States Fire Administration (USFA) statistical analysis showed that there were about 3,320 deaths and that 17, 000 fire -related injuries occurred in the year 2008 (US Fire Administration Report, 1985-1994). Every year billions of lives and property are loss due to domestic fire accidents. Statistics showed that accidental death from fire and explosions by place of occurrence, fatalities in the home comprise more than 80% of all deaths from fire and explosions (Adesunkanmi et al, 1994). The burden of suffering from fire is exceedingly distributed among the poor. Over 98% of deaths from fire and burns occur in developing nations, which are least able to provide the resources for care or the community support for rehabilitation. The rate at which developing nations will acquire experienced personnel and modern facilities for burn care will lag behind their general socioeconomic development (Ahuja & Bhattcharya, 2002 & Forjuoh, 2006).

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Domestic fire accidents are of public health importance in developing countries such as Nigeria because of its high prevalence and association with morbidity and mortality affecting people. This type of accident has multiple negative consequences on the health of people, the community and country as a whole. A number of consequences may arise which include medical, economical, and social and others to mention a few (Laloe, 2002). The socio-economic impacts of these accidents are aggravated by the fact that victims of such fire disasters, mostly small scale traders and artisans, are without adequate insurance cover. These fires" have continued to render many jobless, damage the environment, disrupt economic activities and worsening the problem of poverty. The effective prevention of these accidents will require enhancing the capacity of the relevant regulatory institutions in the evaluating the proneness of any complex to fire accidents (Runyan, Bangdiwala, Linzer, Sacks & Butts, 1992).

The aim of this study was to determine the knowledge of risk factors and preventive practices towards domestic fire accident among residents of Tanke community in Ilorin, Nigeria by specifically determining the prevalence rate of domestic fire accident in Tanke community, assessing the knowledge of risk factors towards domestic fire accident among the respondents, identifying risk factors for domestic fire accidents among residents of Tanke community and determining the preventive practices towards domestic fire accident among the respondents. This study will help to create awareness on the, causes, sources, risk factors and preventive practices towards domestic fire accidents among residents' of Tanke community in Ilorin and thereby giving an insight of the prevalence of domestic fire accidents in the area. The result of the study will draw the attention of the Government and stakeholders involved, on the need to provide sensitization on owning protective devices at home to combat fire accidents when it occurs and also to ensure the enforcement of fire preventive legislations like the installation of smoke detectors in buildings and others.

II. MATERIALS AND METHODS

This paper utilized a descriptive cross sectional study design which involved the collection of data in order to answer some specific and general questions on the knowledge of risk factors and preventive practices towards domestic fire accidents among residents' of Tanke community in Ilorin, Kwara State, Nigeria. Five hundred (500) households were randomly selected for the study. Heads of households who met the selection criteria were interviewed using a semi-structured interviewer administered questionnaire in which quantitative data was collected, collated and checked manually for error and analyzed using the statistical package for social sciences (SPSS) version 15.0. Results were presented in tables, percentages and charts. This research was approved by the ethics committee of the University of Ilorin.

III. RESULTS/ DISCUSSION

A total of 500 respondents were randomly selected for this study. 500 heads of households responded out of 500 making a response rate of 100%. From table 1, the age of respondents ranged from 18 – 49 years and above with the mean age of 73.5±8.45. Majority of the respondents were between the age range of 29 – 38 years followed by those of 31 - 40 years (33.4%) and this age group were the working age group. Majority of the respondents were females (67.2%), civil service job (58.2%) was observed to be the major occupation and majority of the respondents (71.4%) had tertiary education qualification in the study area. From table 2, 305 (61.0%) lived in rented apartments, while 195 (39.0%) live in personally owned houses. Type of houses include 228 (45.6%) bungalow, 35 (7.0%) duplex, 139 (27.8%) multi flats, 50 (10.0%) multi rooms and 33 (6.6%) other type of houses. Table 3 shows that 30 (6.0%) of the respondents said domestic fire accident occur during the rainy season, 470 (94.0%) said it occurs during the dry season. 425 (85%) said domestic fire accident usually starts from the kitchen, This is simillar to the finding by (Karter et.al, 2003) in another study. The kitchen was found to be the area where most accidents occurred, followed by the living room and the dining room (Adams et al, 1991). 25 (5.0%) of the respondents reported that domestic fires starts from electrical outlets/ rooms while 50 (10.0%) said it could start from anywhere in the home. On the prevalence of domestic fire in the area, table 4 shows that 68 (13.6) have had domestic fire accident before while 432 (86.4%) of the respondents have not had domestic fire accident before. 14 (2.8%) have had it less than two times, 25 (5.0%) have had it two times, 15 (3.0%) have had domestic fire accident more than two times while 14 (14%) gave no response. 13 (2.6%) of the respondents had fire accident in their homes in the last three months, 41 (8.2%) had it more than a year now, while 14 (2.8%) gave no response. This study reveals that the prevalence rate of domestic fire in Tanke community of Ilorin Nigeria as at the time of this study was 13.6% which is comparatively low as compared to that reported in Ghana where domestic fires accounted for 41% of the total number of incidents for this category(Addai et al, 2016). Also this study reveals that most of the respondents' who have had domestic fire accident before lived in rented houses. This is similar to a study by (Olaitan et al, 2007) who reported that respondents used in similar study were more in rented apartments than personally owned houses. On the causes of domestic fire accidents, 25 (5.0%) of the respondents perceived kitchen fire as the cause of most domestic fire accidents 28 (5.6%) of the respondents feels it was due to electricity, 14 (2.8%) of the respondents feels it was as a result of smoking cigarettes, while 1(0.2%) feels it was due to other causes. This is similar to a study by Diguiseppi (2000) who reported that cooking (31%) was the leading cause of urban residential fire and flame injuries (Diguiseppi et al, 2000). From this study on the knowledge of the risk factors of domestic fire, table 5 reveals that 98

(19.6%) of the respondents had faulty electrical appliances at home, 361 (72.2%) had no faulty electrical appliances while 41 (8.2%) gave no response. 65 (13.0%) of the respondents use candles when light is off, 370 (74.0%) do not use candles while 65 (13.0%) gave no response. 74 (14.8%) of the respondents smoke cigarettes, 373 (74.6%) do not smoke cigarettes while 53 (10.6%) gave no response. 209 (41.8%) of the respondents keep petrol (flammable material) at home, 238 (47.6%) keep kerosene, while 53 (10.6%) gave no response. On factors respondents consider are risk factors from table 6, 493 (98.6%) said carelessness is a risk factor of domestic fire accident, 486 (97.2%) suggested faulty electrical appliances, 443 (88.6%) said smoking cigarettes and improperly extinguished cigarette stalks, 480 (96.0%) said failure to switch off electrical appliances when not in use or electricity, 203 (40.6%) said alcoholism, 264 (52.8%) said burning candles overnight, 376 (75.2%) said leaving cooking appliances unattended, while 74 (14.8%), 122 (24.4%) and 87 (17.4%) suggested that fuelling generator while still on, unsafe storage/keeping inflammable substances and pattern/design of house/building respectively are risk factors of domestic fire accident. Cumulatively 55.5% of the respondents had good knowledge of the risk factors of domestic fire accidents. From table 7, this research shows the opinion of respondents on the factors that they consider as risk factors/ predisposing factors for domestic fire accident as follows: carelessness, ranked first, this was closely followed by the use of faulty electrical appliances, smoking cigarettes and improperly extinguished cigarette stalks, failure to switch off electrical appliances when not in use among others. The risk factors for domestic fire accident are largely preventable and modifiable, indicating a need for health promotion and prevention intervention. This study revealed that domestic fire accident is not a common incidence in the area of study with the reported prevalence rate of 13.6% in which the major cause of the fire accident was electricity and then followed by kitchen fire and smoking, as between the time of collection of this data and more than one year ago. This is similar to a study by Abu (2013), who reported that fire outbreaks in Ghana is attributed to smoking while Abdullai (2014) reported that improper use of electrical appliances, gas leakage, over frequent power outages were the major causes of fire outbreaks in Ghana. However this is in contrast to a population based descriptive study of fatal residential fires accident by (Runyan et. al, 2005) who reported that smoking is usually the major cause of fire followed by cooking appliances. This result is also significantly at variance with that of (Adesunkanmi et al, 1994) who reported that fire from kerosene explosions (kitchen fire) was responsible for 43.5% of cases of domestic fire accident in patients admitted in guild hospital, Ilesha Nigeria over a 5 years period 1998-1992. On the knowledge of the preventive practices towards domestic fire accidents, results from tables 7 shows that (49.4%) have building materials that are of concrete, zinc and aluminum, and 22.8% have building made of bricks and modern roofing materials. Only 55 (11.0%) of the respondents have smoke detectors installed in their houses while 445 (89.0%) do not have smoke detectors in their homes. 99 (19.8%) of the respondents have less than two people occupying their house, 110 (22.0%) have two people occupying their house, while 291 (58.2%) have more than two people occupying their house. 329 (65.8%) of the respondents do not properly check or put out their electric appliances when not in use; while 85 (61%) have never forgotten to put out their cooking appliances after use. 330 (66.0%) of the respondents have and will use water to combat fire accident at home, 30 (6.0%) would use sand, only 45 (9.0%) of the respondents have and will use fire extinguisher while 95 (19.0%) of the respondents do not have devices at all to combat fire accident at home. Only 32 (6.4%) of the respondents have persons in their household who have been trained on fire accident prevention while the remaining 468 (93.6%) do not have. This study also revealed the opinion of respondents in case of fire outbreak at home. Majority 312 (62.4%) said they would run and call for help while 163 (32.6%) said they would call the fire fighters/service authorities. Majority 245 (49.0%) of the respondents got information on fire accident prevention from the media. 25 (5.0%) of the respondents said they would fight fire in case of an outbreak, 245 (92.0%) of the respondents said their source of information on fire accident prevention was from the mass media, 12 (2.4%) had information from GSM, 98 (19.6%) had from the newspapers, 100 (20.0%) from the internet, 25 (5.0%) from health workers while 20 (4.0%) of the respondents got information from other sources. Cumulatively 81% of respondents had knowledge of the preventive practices towards domestic fire accidents from this study. These results are similar to those reported in some studies and recommendations such as legislation requiring smoke alarm installation or other fire protection measures (Diguiseppi, 2000), enforcement of fire safety regulation, improving building codes, public education on fire safety (Addai, 2016) among others were stated as potential solutions for fire prevention. From tables 8-10, hypotheses tested showed that there was significant relationship between the experience of fire accident by respondents ($p = 0.000$), house ownership ($p = 0.013$) and house type (0.000) with the knowledge of preventive practices towards domestic fire accident. Majority of the respondents had good knowledge of the preventive practices towards domestic fire accident. Age, sex occupation and educational level had significant influence on the respondents knowledge of risk factors towards domestic fire accident ($p = 0.000$; $p= 0.001$; $p = 0.000$; $p =0.000$ respectively). Also Age, education, occupation and marital status had significant influence on the respondents knowledge of preventive practices towards domestic fire accident ($p = 0.000$; $p =0.004$; $p =0.000$; $p =0.000$ respectively). The result shows that the experience of fire accident by respondents ($p = 0.000$), significantly relate or associate with their knowledge of preventive practices at 5% level ($p < 0.05$). Also the respondents' house ownership ($p = 0.013$) significantly relates or associates with their knowledge of preventive practices at 5% level ($p < 0.05$). A significant

association was found between house ownership (p = 0.045) and knowledge of risk factor at 5% level.

IV. CONCLUSION

This study revealed that there was high level of knowledge of the risk factors and the preventive practices towards domestic fire accident among residents of Tanke community. Domestic fire accident cases are a special group in themselves reflecting more clearly than any other, the character and way of living of people. It may be inevitable in the home. All these may be attributed to lack of importance attached to domestic fire accidents, lack of detailed information and awareness on the risk factors, preventive practices, its severity and consequences. The inclusion of accident prevention in strategies for the health of people will certainly bring to the fore the issue of fire accidents in homes which is neglected in the environment where the study was conducted. Preventive practices like installing smoke detectors at home, living in houses that are well designed to avoid overcrowding, not keeping inflammable substances at home, and owning fire extinguishers among others should be encouraged. Without effective intervention strategies, the number of fire accidents will increase in the population. Fire prevention programs will reduce fire outbreak and fire-related injuries among high risk populations using multifaceted approaches that include education on fire prevention strategies.

- *Based on the results of this study, the following recommendations were made:*

1. Home safety intervention should be encouraged in every home this includes improved lighting and encouraging proper electrical connections.
2. All electrical appliances should be swithched off when not in use.
3. Appropriate Government agencies should be given more support to educate the populace on proper domestic fire accident prevention.
4. Legislation on the installation of fire detecting devices in buildings should be enforced.

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CONFLICT OF INTEREST

All authors have no conflict of interest to declare.

REFERENCES

[1]. Abu J. (2013). Smoking is number one cause of Fire Outbreak in Ghana. Ghana news agency 2013.
[2]. "Accident Investigations and Reporting, Instruction 5102.1" Chief or Naval Operations, Department of Defense, 18 May 1977.
[3]. Accident Prevention Manual for Industrial Operations." National Safety Council, Chicago, IL 1976.
[4]. Adams LE, Purdue GF, Hunt J. L (1991). Tap-water scald burns: awareness is not the problem. J Burn Care Rehabilitation; Vol 12:91–95.
[5]. Addai EK et al (2016). Trend of Fire Outbreaks in Ghana and ways to prevent this Incidents, Safetyand Health at Work. Available at: http://dx.doi.org/10.1016/j.shaw2016.02.004
[6]. Adesunkanmi K. et al (1994). The pattern and outcome of burn injuries at westley guild hospital, Ilesha, Nigeria. J Tropical med hyg. 97(2):108-12.
[7]. Ahuja RB, Bhattacharya S (2002). An analysis of 11,196 burn admissions and evaluation of conservative management techniques Vol **28**: 555-61.
[8]. Amernic Jerry (2008), "Fire Safety Disaster." Canadian Healthcare Facilities Volume 28 Issue 3, ed Amie Silverwood.
[9]. American Academy of Pediatrics (1997). Fires and burns Injury prevention and control for children and youth. 3rd ed. Elk Grove Village IL: American Academy of Pediatrics, Committee on Injury and Poison Prevention; pp. 233–267.
[10]. Attia, AF, Sherif, AA, Mandil, AM, et al (1997). Epidemiological and sociocultural study of burn patients in Alexandria, Egypt. Eastern Mediterranean Health Journal; Vol 3, pg 452.
[11]. Benner, L (1975). "Accident theory and Accident Investigation." Proceedings of the Society of Air Safety Investigators Annual Seminar, Ottawa Canada.
[12]. Boukind EH, Chafiki N, Terrab S, Alibou F, Bahechar N, Zerouali NO (1995). Aetiology of burn injuries in childhood in Casablanca, Morocco: epidemiological data and preventive aspects. Vol **21** pg 349-51.
[13]. Center for Disease Control. Fire deaths and injuries: Fact sheet overview 2008 www.cdc.gov/HomeandRecreationalSafety/Fire-Prevention/fires-factsheet.html (Accessed on September 26, 2012).
[14]. Davies J. W (1990). The problems of burns in India. Burns 1990; Suppl 1:51.
[15]. Diguiseppi C, Edwards P, Godward C, et al, (2000). Urban Residential Fire and Flame injuries: A Population based study. Injury Prevention, 6: 250-254
[16]. Dinesh JB, Sushilkumar C (2008). A Study of Domestic Accident in semi-urban community. Indian Journal of Community Medicine. Vol 33(2):104-106.

[17]. El-Badawy A, Mabrouk AR (1998). Epidemiology of childhood burns in the burn unit of Ain Shams University in Cairo, Egypt. Vol **24**: 728-32.
[18]. FCI Ltd international, A review of fire safety legislation center for technical development document RC.4595775.
[19]. "Fault Tree Analysis as an Aid to Improved Performance." AMC Safety Digest, US Army Materiel Command, May 1971.
[20]. "Fault Tree For Safety." D-6-75133, The Boeing Company, Seattle, WA 1966.
[21]. Feldman KW, Schaller RT, Feldman JA, McMillon M. (1977) Tap water scald burns in children; Vol 62:1–7.
[22]. Forjuoh S. N (2006). Burns in low- and middle-income countries: a review of available literature on descriptive epidemiology, risk factors, treatment, and prevention; pg 32:529.
[23]. G.K Osagbemi (2009). The essentials of disaster management and epidemics.
[24]. Grange AO, Akinsulie AO, Sowemimo GOA (1988). Flame burn disasters from kerosene appliance explosions in Lagos, Nigeria; Vol **14**: 147-50.
[25]. Heinrich, H.W (1936). "Industrial Accident Prevention." New York, McGraw Hill.
[26]. Hemeda M, Maher A, Mabrouk A. (2003). Epidemiology of burns admitted to Ain Shams University Burns Unit, Cairo, Egypt; Vol 29:353.
[27]. Hyder, AA, Kashyap, KS, Fishman, S, Wali, SA (2004). Review on childhood burn injuries in Sub-Saharan Africa: A forgotten public health challenge. African Safety Promotion. Vol 2:43.
[28]. Ibrahim T (2009). Research methodology. Abuja: Cress Global Link Ltd.p.70- 75.
[29]. Internet-Bureau of fire protection (2011). (Accessed on September 26, 2017).
[30]. Karim K, Alam I, Ul-Hassan N (1975). The socioeconomic factor of burn injuries in children. Vol **1**: 45.
[31]. Karter M. J (2003). Fire loss in the United States during 2002. Quincy MA: National Fire Protection Association, Fire Analysis and Research Division. Pg 34.
[32]. Laloë V (2002). Epidemiology and mortality of burns in a general hospital of Eastern Sri Lanka. Vol **28**: 778-81.
[33]. Leth PM, et al-Gregersen M, Sabroe S (1998). fatal accidents in house fires. Ugeskr Laeger 60 (23) :3403-8. Article in Danish Aarhus university, Retsmedicinsk institute. Fatal residential fire accidents in the Municipality of Copenhagen 199-1996.
[34]. Mabrouk A, El Badawy A, Sherif M (2000). Kerosene stove as a cause of burns admitted to the Ain Shams burn unit. Vol **26**: 474-7.
[35]. Mabrouk A, Maher A, Nasser S (2003). An epidemiologic study of elderly burn patients in Ain Shams University Burn Unit, Cairo, Egypt. 29:687.
[36]. Manual of BFP fire fighters institutional regulations and standards quezon city, 2001.
[37]. Micheal D Peck et al (2002). Burns and fires from flammable non-electric domestic appliances part1.
[38]. Nega KE, Lindtjørn B (2002). Epidemiology of burn injuries in Mekele Town, Northern Ethiopia: A community based study. *Ethiop J Health Dev*. Vol **16**: 1-7.
[39]. NFPA's home fires involving cooking equipment' report by marty ahrens, November 2011.
[40]. P.B Olaitan, & M.D Dairo (2007). Research on domestic fire accidents in a developing country: reducing morbidity/ mortality by modifying the "Burglary proof". The internet journal of rescue and disaster medicine 2007 volume 6 no 1.
[41]. Report on fire in the United States 1985-1994. 9th ed, US fire administration, Emmitsburg , MD 1997.
[42]. Rossi LA, Braga EC, Barruffini RC, Carvalho EC (1998). Childhood burn injuries: circumstances of occurrences and their prevention in Ribeirão Preto, Brazil. Vol 24:416.
[43]. Runyan CW, Casteel C, Perkis DF, et al (2005). Unintentional injuries in the home in the United States. Part I: mortality. Am J Prev Med. Vol ;28:73–79.
[44]. Runyan CW, Bangdiwala SI, Linzer MA, Sacks JJ, Butts J (1992). Risk factors for fatal residential fires. N Engl J Med. Vol 327:859–863.
[45]. Sawhney CP. Flame burns involving kerosene pressure stoves in India. *Burns* 1989;**15**: 362-4.p30 & Ahuja RB, Bhattacharya S. An analysis of 11, 196 burn admissions and evaluation of conservative management techniques. *Burns* 2002 April 2002;**28**: 555-61.
[46]. Sen R, Banerjee C. Survey of 1000 admission to a burns unit SSKM hospital Calcutta. *Burns* 1981;**7**: 357.
[47]. The US centers for disease and control report, 2000 (Accessed on September 26, 2011).
[48]. The population commission of Nigeria. Report of the 2006 census result. Available at www.population.gov.ng Last accessed 7th june 2012.
[49]. Warda.L, Tenenbein M, Moffat ME (1999). House fire prevention update. Part II . A review of the effectiveness of preventive interventis . Inj prev. Vol 5 (3):217-218.
[50]. Werneck GL, Reichenheim ME (1997). Paediatric burns and associated risk factors in Rio de Janeiro, Brazil. Vol **23**: 478-83.
[51]. WHO Global Burden of Disease database 2002. Available at http://www.who.int/violence_injury_prevention/publications/other_injury/en/burns_factsheet.pdf. (Accessed on September 20, 2011).
[52]. WHO (2004). Global Burden of Disease 2004 Summary Tables. Geneva, World Health Organization, 2008. www. who. Int /healthinfo /global _burden _disease /estimates_regional/en/index.html (Accessed on September 20, 2011).

TABLES

Sociodemographic Characteristics (n = 500)	Frequency	Percentage (%)
Ages (years)		
18 – 28	14	2.8
29 – 38	254	50.8
39 – 48	167	33.4
49 – above	65	13.0
Sex		
Male	164	32.8
Female	336	67.2
Occupation		
Banking	12	2.4
Civil service	291	58.2
Entrepreneur	13	2.6
Lawyer	33	6.6
Medical Practitioner	13	2.6
Nurse	10	2.0
Student	99	19.8
Teacher	29	2.8
Educational Qualification		
No formal education	10	2.0
Primary	20	4.0
Secondary	113	22.6
Tertiary	357	71.4
Religion		
Christian	116	38.7
Islam	184	61.3

Table 1:- Sociodemographic Characteristics of Respondents

Respondents housing	Frequency	Percentage %
House Ownership status		
Rented	305	61.0
Personally owned	195	39.0
Type of House		
Bungalow	228	45.6
Duplex	35	7.0
Multiple flats	139	27.8
Multiple rooms	50	10.0
Other	33	6.6

Table 2:- Respondents house ownership status and type of house (n=500)

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Knowledge of occurrence of domestic fire accident	Frequency	Percentage (%)
Season of occurrence		
Rainy season	30	(6.0)
Dry season	470	(94.0)
Place/ where fire usually starts from		
Kitchen	425	(85.0)
Electrical outlets/ room	25	(5.0)
Anywhere	50	(10.0)

Table 3:- Respondents knowledge of time and place of occurrence of domestic fire accident (n= 500)

Response	Frequency	Percentage (%)
Have you ever had a domestic fire accident before?		
Yes	68	(13.6)
No	432	(86.4)
Total	500	(100.0)
If yes how many times? (n =68)		
< 2 times	14	(2.8)
2 times	25	(5.0)
More than 2 times	15	(3.0)
No response	14	(2.8)
When was the last time you had fire accident at home (n=68)		
Last three months	13	(2.6)
More than a year	41	(8.2)
No response	14	(2.8)
What was the cause?		
Kitchen fire/cooking appliance	25	(5.0)
Electricity	28	(5.6)
Smoking	14	(2.8)
Fire works	1	(0.2)
What were the effects? (n=68)		
Injury	35	(7.0)
Loss of property	33	(6.6)
Did you receive any government intervention?		
Yes	0	(0)
No	68	(13.6)

Table 4:- Distribution of respondents by occurence of domestic fire accident in the house

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Response	Frequency	Percentage (%)
Do you have some faulty electrical appliances at home?		
Yes	98	(19.6)
No	361	(72.2)
No response	41	(8.2)
Do you use candles when light is off?		
Yes	65	(13.0)
No	370	(74.0)
No response	65	(13.0)
Do you smoke?		
Yes	74	(14.8)
No	373	(74.6)
No response	53	(10.6)
What flammable material do you keep at home?		
Petrol	209	(41.8)
Kerosene	238	(47.6)
Alcohol	53	(10.6)
Petrol	209	(41.8)
Are your cooking appliances within the reach of children?		
Yes	47	(9.4)
No	412	(82.4)
No response	41	(8.2)
Do you refuel your generator while it is still on?		
Yes	168	(33.6)
No	291	(58.2)
I don't have a generator	41	(8.2)
Do you keep matches away from the reach of children?		
Yes	176	(35.2)
No	230	(46.0)
No response	55	(11.0)
Do you refuel your lamp after igniting? Yes	117	(23.4)
No	313	(62.6)
No response	70	(14.0)
Have you ever forgotten to put out your cooking appliances after use?		
Yes	88	(17.6)
No	305	(61.0)
No response	107	(21.4)

Table 5:- Knowledge of Risk Factors towards Domestic Fire Accident (n=500)

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Predisposing factors	Frequency	Percent (%)
Carelessness	493	(98.6)
Leaving cooking appliances unattended	376	(75.2)
Burning candles overnight	264	(52.8)
Faulty electrical appliances	486	(97.2)
Smoking and improperly extinguished cigarette stalks	443	(88.6)
Unsafe storage/ keeping inflammable substances at home	122	(24.4)
Alcoholism	203	(40.6)
Pattern/Design of the house /building	87	(17.4)
Fueling generator while still on	74	(14.8)
Refueling lamps while still on	23	(4.6)
Failure to switch off all electrical devices when not at home	480	(96.0)

Table 6:- Factors that respondents consider risk factors/ predisposing factors to domestic fire accidents (Multiple response n= 500)

Response	Frequency	Percentage (%)
What type of building/ house material do you have at home?		
Concrete, zinc & aluminum	247	(49.4)
Brick and modern roofing material	114	(22.8)
Mud tarsh and bamboo	62	(12.4)
Others	77	(15.4)
Do you have a smoke detector installed in your home?		
Yes	55	(11.0)
No	445	(89.0)
How many people occupy your house?		
< 2	99	(19.8)
2	110	(22.0)
> 2	291	(58.2)
Do you properly check or put out your electric appliances when not in use?		
Yes	85	(17.0)
No	329	(65.8)
What devices do you have at home to combat domestic fire accident?		
water	330	(66.0)
sand	30	(6.0)
fire extinguisher	45	(9.0)
none	95	(19.0)
Is any of your household ever trained on fire prevention?		
Yes	32	(6.4)
No	468	(93.6)
In case of fire outbreak in your home what actions will you take?		
Fight the fire	25	(5.0)
Call fire service/fighters	312	(62.4)
Call fire service/fighters	163	(32.6)
What is your source of information on fire accident prevention?		
Media	245	(49.0)
Gsm	12	(2.4)
Newspaper	98	(19.6)
Internet	100	(20.0)
Health workers	25	(5.0)
Others	20	(4.0)
No	468	(93.6)

Table 7:- Knowledge of preventive practices towards Domestic Fire Accident (n=500)

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Socio demographic Factors	Do you have some faulty electrical appliances at home		X^2	Df	P
	Yes	No			
Age (years)*			26.064	3	0.000
0 – 20	0	14			
21 – 30	58	156			
31 – 40	40	127			
41 and above	0	64			
Sex*					
Male	13	111	11.948	1	0.001
Female	85	250			
Occupation*					
Banking	0	12			
Civil servant	28	182	212.175	12	0.000
Corp member	0	24			
Entrepreneur	0	13			
Lawyer	0	33			
Medical Practitioner	0	13			
Public service	12	0			
Student	58	27			
Education*					
Primary	10	10			
Secondary	14	85	17.766	2	0.000
Tertiary	69	261			
No formal	5	5			
Marital Status*					
Married	52	198			
Single	46	149	4.428	2	0.109
Widow	0	14			

Table 8:- Relationship between respondents' Sociodemographic factors and their knowledge of risk factors of domestic fire accident (n=500)

*Variables significantly related to knowledge of risk factors ($p < 0.05$)

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Socio demographic Factors	Do you properly check or put out your electrical appliance		X^2	Df	P
	Yes	No			
Age (years)					
0 – 20	0	14			
21 – 30	169	12	96.590	3	0.000
31 – 40	123	44			
41 and above	27	27			
Sex					
Male	96	28	0.054	1	0.817
Female	223	69			
Occupation					
Banking	12	0			
Civil servant	152	58			
Corp member	42	0			
Entrepreneur	13	0	126.050	10	0.000
Lawyer	33	0			
Medical Practitioner	0	13			
Public service	12	0			
Student	73	12			
Education					
Primary	20	0			
Secondary	70	29	11.122	2	0.004
Tertiary	10	68			
No formal	10	0			
Marital Status					
Married	171	69			
Single	148	14	69.515	2	0.000
Widow	0	14			

Table 9:- Relationship between Respondents Socio demographic factors and Knowledge of Preventive Practice (n=500)
*Variables significantly related to knowledge of risk factors ($p < 0.05$)

Factors	Do you properly check or put out electric appliances when not in use?		Chi Square Value	Df	Sig (p)
	Yes	No			
Ever experienced domestic fire accident					
Yes	25	29			
No	294	68	32.045	1	0.000

Table 10:- Relationship between respondents experience of domestic fire accident and their knowledge of preventive practices towards domestic fire accident.