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Home-Based Practices For Preventing Childhood Burns In The New Juaben Municipality Of Ghana

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Abstract:
This study explored the preventive practices among parents / caretakers of children in the New Juaben Municipality of Ghana with the aim of determining the effectiveness of such practices for the sake of providing interventions to reduce the occurrence of such injuries. The cross-sectional descriptive design which employed the quantitative and qualitative methods of data collection was used. Simple random sampling was used to select 600 parents/caretakers from 12 out of the 52 communities in the New Juaben Municipality. It was found that covariates such as not leaving children alone at home (OR 3.216, 95% CI 1.813 to 5.704), keeping matches / lighter out of reach of children (OR 2.806, 95% CI .039 to .160), preventing children from playing at the kitchen (OR 1.806, 95% CI 1.060 to 4.981) and educating children not to play with fire/lighter/matches (OR 1.278, 95% CI .0970 to 3.052) were found to be significant in preventing childhood burns while educating mothers on fire safety practices at home (OR .864, 95% CI .380 to 1.964) was not significant in preventing childhood burns.There is therefore the need for all stakeholders in child protection and welfare to collaborate in designing home-specific safety education campaign targeting the various age groups of children and parents with different socio – demographic backgrounds.

Key words: *home based preventive practices, educational campaign, injury prevention, preventive strategies*

1.Introduction

Parents/caretakers of children would want to keep their children safe and secured in addition, would want to help children live their full potential (WHO 2008 and WRCIP 2008). Knowing how to prevent major causes of childhood injuries like burns is a step toward reducing infant/ child mortalities and morbidities (CDC 2012). In Ghana, Nukunya (2003) indicated that Ghanaians love children and would want to have large families due to the socio-cultural value of children. As a result of this, communities, families and individuals would do everything to ensure the survival and growth of children. This view suggests that injury prevention practices are paramount in most homes in Ghana. It is therefore not surprising to note that in the New JuabenMunicipality there is a general perception that every adult of sound mind has a repertoire of knowledge and skills to prevent injury at home. As a result, all adults are expected to protect children in their communities irrespective of whether the child is a family member or not (Kaye 1965).

Newly delivered mothers who do not have adequate child care and handling skills are made to stay with an elderly woman especially their mothers or mother in-law soon after delivery to either learn or sharpen their skills in proper handling and protection of the newly born baby (Nukunya 2003). It is also an underlying reason why Ghana Health Services organizes ante-natal and post-natal clinics to educate mothers on diverse issues including safe handling and protection of newborn babies (MOH 2005). All these practices are made to build the capacity of parents especially mothers to be sensitive to the issues of child protection and injury prevention with the aim of reducing infant and child mortality (WRCIP 2008).

Despite these efforts at protecting children, many studies have acknowledged the high rates of paediatric burns (Forjouh 1996, Budu 2005 and Aries 2007) and hospital reports confirm that injuries associated with burns is the leading cause of hospitalization due to injuries (Aries 2007). For instance, an extract from the 2012 report from the Reconstructive Plastic Surgery and Burn Centre at Korle Bu Teaching Hospital in Accra published in the 20th February, 2013, edition of the Daily Graphic, indicated that there were 9,859 fatal burn cases treated at the Centre in 2012 and 37% of that number were children aged less than 10 years.Considering the rate of childhood burns in the study area, there are reported cases of acute burns on regular basis with an average of four (4) admissions per week. (Eastern Regional Hospital Report 2011). This implies that the burden of such injury is enormous to the victim, family, society and the nation at large. The extreme situation is the loss of life or permanent disability with its attendant emotional and psycho-social problems.

2.Methods

2.1.Research Design

This study employs the cross – sectional descriptive design. It used both quantitative and qualitative methods of collecting data. The use of the mixed methods of collecting data offers better understanding of the research problem and it also provides in – depth information on the phenomenon under study (Creswell et al 2007). However the main weakness of the mixed method is the investment of time and efforts required (Kohlbachor 2005). Nevertheless, Gillham (2000) argued that the investment of time and efforts required is worthwhile since different methods have different strength and weakness therefore the use of both approaches of the problem than a single approach could offer.

2.2.Sampling Issues

Sample Size Determination

In calculating the sample size for the study, the Godden's (2004) formula for infinite population was used. The main assumption underlying the use of the formula is that the population should be greater than 50,000. The adult population for New Juaben Municipality from the 2010 Population and Housing Census was 83,018, hence the use of the formula;

$$SS = \frac{Z^2(p) \times (1-p)}{C^2}$$

Where
SS = Sample size
Z = Z statistic for a level of confidence
P = percentage of population picking a choice expressed as decimal
C = Confidence interval, expressed as a decimal
Using the estimates of
Z = 1.96 for 95% confidence level
P = 0.5
1 – P = 0.5
C = 0.04

$$SS = \frac{3.8416 \times 0.5 \times 0.5}{0.0016} = 600$$

$$\therefore SS = 600$$

2.3.Sampling Procedures

The simple random sampling method was used for the study and this involved two stages. The first stage comprises the selection of communities for the study, while the second stage involves the selection of houses from within the selected communities.

In all, there are 52 communities in the municipality and using the simple random sampling method, twelve (12) communities were selected. This was to reduce the number of communities to be studied for the sake of convenience. However, care was taken to ensure that a fairly large number of communities were selected for the study because communities in the municipality are heterogeneous. As indicated by Ratray (1976) and Neuman (2007), ethnographic studies involving heterogeneous communities must have a wider coverage for the sake of representativeness of the variables concerned.

The second stage involved the selection of houses and individual respondents from the twelve (12) communities selected. This has been difficult to do since the list of houses to be used for the selection was not available. As a result of this, the researcher decided to use the enumeration areas (EAs) demarcated by the Ghana Statistical Service for the 2010 Population and Housing Census. This was the way to get a list of houses in the selected communities for the study. The simple random sampling method was employed again to select two (2) Enumeration Areas (EAs) from each of the twelve (12) communities selected. It was estimated that there were at least five (5) EAs in each community. This suggests that all the EAs are almost of the same size and as a result, a proportionate number of twenty-five (25) houses were randomly selected using the house numbers from each EA by the lottery method. Parents/caretakers from the houses selected were brought together to form the total sample size (600) for the study.

On entering the selected house, and in a situation where a spouse was not available, the one present was selected for the administration of the questionnaire. In a situation where both spouses were present, the preference was for the female. In the case of caretakers who are not spouses, the preference was still for the female. This is because issues concerning child care are mostly dealt with by women and this explains why most of the studies on health-seeking behaviour for children are limited to mothers and female caretakers (Mbagada et al., 2005; Mashreky, 2010).

2.4. Data Collection Instruments

Two main instruments were used for the data collection. These were a semi-structured questionnaire and an in-depth interview guide. The semi-structured questionnaire was chosen bearing in mind that it is less rigorous in use as such will allow new ideas to be brought up during the interview as a result of what the interviewee said. It was also chosen based on the fact that the researcher was interested in exploring parents'/ caretakers' attitude and practices affecting prevention of childhood burns. This required the use of a more flexible instrument other than the structured questionnaire. According to Lynn (2001), the beauty of using the semi-structured questionnaire is the ability to probe as new and interesting issues emerge. It is a good strategy for obtaining more in-depth data.

The semi-structured questionnaire was used mainly for the community-based and the household survey where parents and caretakers of children constituted the study population. This questionnaire comprised close-ended and open-ended questions. The open-ended questions, though limited in number, gave the respondents the opportunity to respond freely to the questions under discussion without restricting their responses while the closed ended questions helped in restricting responses particularly on issues that are sensitive and needed restricted responses.

The questionnaires were administered to parents or caretakers, to explore their beliefs, attitudes and practices in the management and prevention of childhood burns in their respective households. The study assumed that every parent has ideas, skills, practices and strategies he or she uses in preventing and /or treating childhood injury. It was therefore deemed necessary to uncover these local beliefs and practices associated with childhood injury. The understanding of these perceptions and practices may help form a strong basis for effective interventions in childhood injury prevention and treatment.

The face-to-face method of administering questionnaires was used despite its inherent problems of high cost and time consumption. The reason for using this method was born out of Kumekpor's (2002) submission that its use establishes a strong rapport, collaboration and exchange of information beyond the specific interview. This method has the advantage of having a high response rate and the opportunity to clarify as well as probe into issues regarding the study.

The use of the in-depth interview guide was based on the fact that specialist health personnel and other key stakeholders in child care and protection have some information which would help enrich the study. Wertz et al. (2011) found the use of in-depth interviews to be most appropriate for situations in which one wants to ask open-ended questions that elicit depth of information from relatively few people on their feelings and perspectives on a subject.

Based on the above background, two separate key informant interview guides were developed for the study. These are for parents whose children were on admission and key health personnel for childhood burns. An interview guide for parents whose children were on admission for burns was developed in order to capture among others, first hand descriptive information on the circumstances leading to the occurrence of the injuries. The parents were selected because they are often the first point of call whenever information on a child is required and because most parents are directly involved in the health-seeking behaviour of their children and also are observers of whatever experiences their children go through.

The in-depth interview was conducted for all key personalities in the various health facilities in the municipality. Such key informants included nursing officers in charge of childhood injury, pharmacists, drugstore keepers, elderly women, herbalists and traditional bone setters. The purpose of these key informant interviews was to determine how they prevent as well as treat childhood injuries and the challenges they face with their prevention and treatment. A total of twelve (12) in-depth interviews were conducted comprising two informants from each category of the facility. They were purposefully selected based on their popularity and their clientele base. The reason for widening the base of the in-depth interview was to gather detailed and diversified information on the study.

2.5.Methods of data presentation and analysis

All the data collected through the key informant interview were audio-recorded, transcribed verbatim and analysed using core content analytical steps.

In the case of the quantitative data, after a careful editing and cleaning, the questionnaires were coded and data entered into the computer. The SPSS software version 17 was used to run cross tabulation and chi-square test to show the association between various socio-demographic background of parents and their choice of preventive measures. The logistic regression test was also run to determine the odds of parents preventing childhood injury at home.

2.6.Ethical issues

Ethical clearance was sought from Ministry of Health before data collection at the hospital began. Informal consent was sought from all respondents of the study.

3.Results

Findings from the survey suggest that parents / caretakers of children adopt three (3) broad preventive practices for childhood burns. Most parents / caretakers (50.3%) are more likely to use restrictive measures to prevent childhood burns at home than to educate their children on preventive measures (22.3%) or keep hazardous substances safe (27.3%) [Table 5.8a]

Most parents / caretakers interviewed confirmed the use of three (3) preventive practices for childhood burns and explained that the main restrictive measures adopted were the practice of not leaving children alone at home, locking up of the kitchen when not in use, preventing children from playing in the kitchen and carrying a child on the back when cooking. With reference to the use of education as a preventive measure, it was found that most parents / caretakers train their children not to play with fire or with

fire ignition equipment such as lighters and match sticks. While the preventive practices adopted to ensure safe keeping of hazardous substances at home include covering hot water with the appropriate lid and keeping inflammable substances such as kerosene in a tight container and under lock and key, mother explained how she prevents injuries by restricting the movement of children at the kitchen:

Children are so curious that they always want to know whatever goes on around when they are in the kitchen. Some would turn the lid of bowls to determine the type of food placed in there. Others would climb tables in the kitchen in order to reach out for food. Some would without authori007Aation deep their hands in a bowl of food in order to taste it. Since children are unpredictable and can do anything, however dangerous it might be, I normally do not leave them alone in the kitchen. I keep a close look at whatever they do whenever they are with me in the kitchen. In a situation where I think I have a divided attention and cannot do effective supervision I simply keep the youngest child on my back since she is the most vulnerable among the siblings. (Asantewaa, a mother)

Another mother, Kunadu, also explained the behaviour of children in the kitchen and gave an instance where a friend's son out of curiosity got burnt when the boy attempted opening a bowl containing hot soup. The content slipped off the hands and poured on his feet. Kunadu further explained that out of this experience and the understanding of the nature of children in terms of their curiosity, she suggests that children under 8 years should not be made to run errands in the kitchen. Toddlers should also be kept at the back of their mothers whenever they need to accompany their mothers in the kitchen in order to restrict the movement of children at the kitchen since the kitchen is the most hazardous place in every home.
Maame Anima, also a mother, supported Kunadu's submission and added that the kitchen should always be locked to prevent children from getting hurt there. She in addition indicated that households which do not have kitchens, but set open fire and cook should also restrict the movement of children in such an area even though it is a difficult thing to do.
Auntie Elizabeth, the Nursing officer, however suggested that restrictive measures alone should not be emphasized, but rather parents/ caretakers should make it their responsibility to educate as well as train their children on certain basic burn safety practices and also ensure that hazardous substances are kept out of reach of children. These are Auntie Elizabeth's comments:

Well, I think the effort made by most mothers to restrict children at the kitchen is laudable. But far more reaching strategies such as keeping hazardous and inflammable substance under key and lock and also educating the children at an early age on the need not to play with fire and or fire igniting substance must be embarked on.

The submission made by the Nursing officer, Auntie Elizabeth was welcomed by most respondents. The respondents indicated that the suggestion given seems to be the most effective strategy for preventing childhood burns. Some of the mothers indicated that they already practice the suggestion made by Auntie Elizabeth, the Nursing officer. A mother remarked:

I am cautious about where I keep my kerosene, gas cylinder and even match box because my children are curious. The store room where I keep the kerosene is always locked and the kitchen as well. I always advise my children not to play with match box and the cylinder. I keep a close eye on the children at all times in the house not only in the kitchen.

The case of Auntie Elizabeth, Maame Anima and others show how most parents /caretakers prevent childhood burns at home by adopting the various restrictive, educational and safe keeping measures. It appears that most parents /caretakers adopt more restrictive measures to prevent childhood burns than the use of educational strategies because of the low cognitive development of most of the children, especially the younger children.
Each preventive practice for childhood burns was examined on the basis of its significance in influencing burn prevention. Covariates such as not leaving children alone at home (OR 3.216, 95% CI 1.813 to 5.704), keeping matches / lighter out of reach of children (OR 2.806, 95% CI .039 to .160), prevent children from playing at the kitchen (OR 1.806, 95% CI 1.060 to 4.981) and educate children not to play with fire/lighter/matches (OR 1.278, 95% CI .0970 to 3.052) were found to be significant in preventing childhood burns while educating mothers on fire safety practices at home (OR .864, 95% CI .380 to 1.964) was not significant in preventing childhood burns. The finding that all the restrictive measures are significant in preventing childhood burns might explain why most parents/caretakers prefer using such measures at home. The details are presented in table 1
The classification table was used to determine how correctly the model predicts preventive practices for childhood burns. This table indicates that the final model correctly classifies 75% of the cases correctly. Out of the 370 respondents who indicated 'Yes' to the preventive practices associated with burns, the model correctly identified 305 (82%) of them as likely to be affected by the preventive practices associated with childhood burns. Similarly, out of the 230 responses which indicated 'no' to the risk factors associated with childhood burns, the model identified 145(63%) of them as not likely to be affected by the preventive practices associated with childhood burns. The details are presented below in table 2.

Variables	B	S.E.	Wald	df	Sig.	Exp (B)	95.0% C.I.for EXP(B)	
							Lower	Upper
Not leaving children alone at home	1.168	.292	15.958	1	.000	3.216	1.813	5.704
Not leaving children alone near heat source	.326	.466	17.891	1	.000	.496	.397	.620
Lock up kitchen when not in use	.701	.632	24.778	1	.000	2.015	1.431	5.042
Prevent children from playing with fire	-3.395	1.135	8.943	1	.003	.034	.004	.331
Prevent children from playing at kitchen	.591	.433	20.116	1	.000	1.806	1.060	4.981
Keep children at the back of Mother when cooking	-3.027	1.187	6.506	1	.011	.048	.003	.341
Train children not to play with fire/lighter/matches	.245	.135	34.955	1	.000	1.278	,0970	3.052
Train mothers on fire safety practices at home	-.146	.420	.121	1	.728	.864	.380	1.967
Safe storage of flammable substances	-2.587	1.072	5.819	1	.016	.075	.005	.510
Keeping matches/ lighters out of reach of children	1.032	.475	4.713	1	.030	2.806	.039	.160
Constant	-3.396	.447	57.731	1	.000	.033		

Table 1: Logistic Regression Output On Preventive Practices For Childhood Burns

Observed		Predicted		
		No. of cases		Percentage Correct
		Yes	No	
No. of cases	Yes	305	65	82
	No	85	145	63
Overall Percentage				75
a. Constant is included in the model.				
b. The cut value is .500				

Table 2: Classification Table Showing Percentage Accuracy For Preventive Practices For Childhood Burns

$$(\chi^2 = 4.286, \quad P - value = .638)$$

In order to determine the socio-demographic factors influencing childhood burns prevention, the chi square test was conducted and it was found that apart from marital status
which was not significant in influencing parents and caretakers preventive practices for childhood burns, the other socio-demographic variables were found to be significant as in all the cases their p – values were less than the confidence interval of 0.05 [Table 3].

From table 3 the following trends were found in the chi square analysis. The analysis revealed an inverse relationship for all the socio-demographic variables found to be significant with respect to preventive measures for childhood burns. It could be observed that restrictive measures and safe keeping of hazardous substances decreases in frequencies across the different educational backgrounds of parents, while educational measures to prevent childhood burns increase in frequency with respect to educational background of parents. This implies that when educational background of parents increases, they turn to adopt more educational measures to prevent childhood burns at home.

There was an inverse relationship between the age of parents and the use of restrictive measures as well as safe keeping of hazardous substance. In the case of the use of educational measures to prevent childhood burns, a direct relationship was found between that measure and age of parents. This suggest that as the age of parents increases they turn to educate and train their children on how to prevent burns than use restrictive measures[Table 3]

Preventive practices	Educational Background of Parents						Total n(%)	χ^2 test
	No Education n(%)	Primary n(%)	JHS n(%)	SHS n(%)	Vocational n(%)	Tertiary n(%)		
Restrictive	123(88.5)	72(76.6)	35(56.5)	28(48.3)	25(23.4)	19(13.6)	302(50.3)	P - value = .020
Educational	9(6.5)	10(10.6)	14(22.6)	16(27.6)	35(32.7)	50(35.7)	134(22.3)	
Safe-keeping of Hazardous substances	7(5.0)	12(12.8)	13(21.0)	14(24.1)	47(43.9)	71(50.7)	164(27.3)	
Total	**139(100)**	**94(100)**	**62(100)**	**58(100)**	**107(100)**	**140(100)**	**600(100)**	

Preventive practices	Income of Parents						Total n(%)	χ^2 test
	Less than 100.00 n(%)	100.00-200.00 n(%)	200.01-300.00 n(%)	300.01-400.00 n(%)	400.01-500.00 n(%)	500.01+ n(%)		
Restrictive	14(24.1)	16(27.6)	42(42.9)	51(49.5)	85(63.4)	94(63.9)	302(50.3)	P - value = .005
Educational	33(56.9)	31(51.7)	28(28.6)	18(17.5)	14(10.4)	10(6.8)	134(22.3)	
Safe-keeping of Hazardous substances	11(19.0)	13(21.7)	28(28.5)	34(33.0)	35(26.2)	43(29.3)	164(27.3)	
Total	**58(100)**	**60(100)**	**98(100)**	**103(100)**	**134(100)**	**147(100)**	**600(100)**	

Table 3a: Distribution Of Educational Background Of Parents And Preventive Practices For Childhood Burns
Table 3b: Distribution Of Income Level Of Parents And Preventive Practices For Childhood Burns
Source: Field Data

Preventive practices	Age of parents				Total	χ^2 test
	Less than 20 n(%)	20-29 n(%)	30-39 n(%)	40-49 n(%)	n(%)	
Restrictive	45(39.8)	71(49.3)	88(53.7)	98(54.7)	302(50.3)	P - value = .000
Educational	49(43.4)	36(25.0)	28(17.1)	21(11.7)	134(22.3)	
Safe-keeping of Hazardous substances	19(16.8)	37(25.7)	48(29.2)	60(33.5)	164(27.3)	
Total	**113(100)**	**144(100)**	**164(100)**	**179(100)**	**600(100)**	

Preventive practices	Marital Status				Total	Marital Status
	Single n(%)	Married n(%)	Divorced n(%)	Widowed n(%)	n(%)	
Restrictive	62(62.0)	204(48.6)	19(37.3)	17(58.6)	302(50.3)	P - value = .638
Educational	19(19.0)	97(32.1)	12(23.5)	6(20.7)	134(22.3)	
Safe-keeping of Hazardous substances	19(19.0)	119(28.3)	20(39.2)	6(20.7)	164(27.3)	
Total	**100(100)**	**420(100)**	**51(100)**	**29(100)**	**600(100)**	

Mode of treatment	Parity				Total	χ^2 test
	1 Child n(%)	2 Children n(%)	3 Children n(%)	4 Children n(%)		
Restrictive	39(33.3)	52(41.6)	98(58.0)	113(59.8)	302(50.3)	
Educational	55(47.0)	43(34.4)	19(11.2)	17(9.0)	134(22.3)	P - value = .000
Safe-keeping of Hazardous substances	23(19.7)	30(24.0)	52(30.8)	59(31.2)	164(27.3)	
Total	**117(100)**	**125(100)**	**169(100)**	**189(100)**	**600(100)**	

Table 3c: Distribution Of Age Of Parents And Preventive Practices For Childhood Burns
Table 3d: Distribution Of Marital Status Of Parents And Preventive Practices For Childhood Burns
Table 3e: Distribution Of Parity And Preventive Practices For Childhood Burns
Source: Field Data

4.Discussion

Three main preventive measures for childhood burns are practiced in the study area and the most dominant of these measures is the restrictive practices which include, not leaving the child alone at home,preventing children from playing at the kitchen and, mothers keeping the children at their back when cooking. In rural Bangladesh similar finding was made(Mashreky et al 2008). This suggests that parents are aware of the threats involved in allowing children to play at unsafe places in the home. The Mayo Foundation for Medical Education and Research (MFMER) in 2011 indicated that one of the best practices for protecting children from burns is to establish "no" zones in most hazardous places in the house. For instance blocking access to the stove and fireplace, and making other heating equipment inaccessible to children. Even though this protective strategy seems very simple and easy to achieve, Chow et al (1998) found that it is difficult for most parents, even among the high income earners, because very often most of these parents either leave their children with elder siblings at home, or do not ensure that children do not go near heat or fire sources. For instance it was found in Hong Kong that many children are left unattended to at home because both parents are working (Chung et al. 1996). Due to this, the incidence of fire-related death among children less than 13 years is high. Another survey conducted in Hong Kong also revealed that between 7.1% and 42% of parents have on one or more occasions left children younger than 13years of age alone at home (Child Injury Research Group 1998). Furthermore a study in Ashanti Region of Ghana by Forjuoh et al (1995) revealed similar observation. They found that 90% of the burn cases they studied occurred in the home, particularly in the kitchen and the house yard. The explanation may be that after cooking, especially in the evening, some of these parents do not ensure that the children do not play close to the fire sources. This is evident by the finding ofMunro, Van Nickerk and Seedat (2006) report thata major setback to childhood burn prevention in South Africa is the lack of supervision by parents.

University of Kentucky Chandler Medical Centre in 2003 came out with a report on the need to intensify supervision of children and to promote educational campaigns to reduce the incidence of childhood burns. This is in response to the numerous needless childhood deaths and injuries associated with negligence of parents at home. Notwithstanding this, the current study found education on safety practices as a minor preventive practice to childhood burns. This might be due to the low level of education on safety practices by parents and the fact that some parents perceive the education on safety to be the responsibility of school teachers.It is unfortunate that even though the Ghana National Fire Safety Act 537 enjoins Ghana National Fire Service to take a leading role in managing undesired fires and to educate the public on fire safety issues, their performance has been abysmal (Hayfron 2011). It is therefore not startling to note that educational campaign on fire safety which is considered a major tool in reducing burn injury risk behaviour is lacking in the study area. Ghosh and Bharat (2008) have shown that the use of educational campaign to prevent burn injury is common in most low-income countries and it is normally carried out through school educational campaigns and community awareness programmes.It is however unclear whether educational programmes on Safety in Schools have any effect in reducing the incidence of burns, as it lacks a rigorous evaluation of the long-term outcomes of burn injuries (Warda 2007). What most studies are certain about is that educating children either at school or at home on burn safety practices will result in increased knowledge but again it has not been possible so far, to demonstrate that as a result of the increased knowledge there has been a change in injury risk behaviour (Gielen et al 2005).

Most parents / caretakers indicated that they are cautious of where they keep hazardous substances at home. What needs to be considered is whether such inflammable and harmful chemicals are properly labelled and safely stored away from the reach of children as suggested by child safety experts (Health Plus 2012). This is difficult to ascertain in the current study but one thing stands clear in keeping proper safety precautions at home, that is, most parents / caretakers cannot read and write in the study area. This presupposes that such parents will have difficulty in labelling and differentiating harmful chemical substances from non-harmful ones. Children living with such parents are more prone to burns. This situation goes to explain why the level of education is inversely related to burn risk in the study area.

Based on the fact that individual strategies in preventing childhood burns seem not to be very effective in reducing the incidence of childhood burns, combined strategies which give holistic approach to burn prevention need to be considered. strategies combine restrictions on the use of highly inflammable substances such as petrol at home or the use of fireworks/crackers, and education on safety practices and restrictive activities at home can yield far reaching results in reducing the incidence of burns. In doing this, the background characteristics of the parents / caretakers which greatly influence the ability to either educate or restrict the child at home should not be taken for granted.

Thus, the combined approach to childhood injury prevention has become an emerging concept in injury prevention and the 2008 WHO report on childhood injury prevention and the 2008 World Report on Childhood Injury Prevention have called for the adoption of this approach in national, community-based and local interventions.

5.Conclusion

Three broad preventive practices are adopted for childhood burns: restrictive measures, education and safe keeping of hazardous substances. Most parents use more of restrictive measures at home to prevent childhood burns than the education of their children and safe keeping of hazardous substances. All the restrictive measures were significant in preventing childhood burns. In addition, all the safe keeping strategies were found to be fairly significant in preventing childhood burns. Training of mothers on fire safety practices is not a significant practice in preventing childhood burns as parents' socio-demographic characteristics such as education, income, and age, are significant in preventing childhood burns.

The finding that educating children and parents on home safety practices are not significant in preventing childhood burns due to lack of educational campaigns on safety practices at home suggests the need for all stakeholders in child protection and welfare in the

municipality such as the Municipal Assembly, RHA, Municipal education directorate, Religious groups and NGOs to collaborate to design home safety education campaign targeting specific groups of children and parents in the municipality.

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