

Home - Is it the Safest Place?

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ABSTRACT Accident is an event that takes place without foresight or expectation and results in some type of personal and/or damage to equipment or property loss in terms of a productive life like doctor, engineer etc. from the society as well as in terms of prevention and medical treatment. At home, homemaker establishes the safety rules and regulation, for the safety of each and every member of her home, but if all the causes of the accidents were always foreseeable there would be no accident at all. The homemaker must have knowledge regarding safety and must follow safety practices. Thus, the present investigation was undertaken to find out the frequency of occurrences of household accidents.

INTRODUCTION

An accident is an event that takes place without foresight or expectations and results in some types of personal and / or damage to equipment or property. (Ganapathy, 1985). If all the causes of accidents are always foreseeable, there would be no accident at all.

The social and economic implications of the accidents makes one realise the severity of the accidents for both the individual and the society. Accidents causes one not only to lose a member of his family but at times it also claims a life of an unreplaceable talent of the society. 'That unreplaceable talent' can be an engineer or a doctor for whom the country divert its precious economic and non-economic resources to enable him to acquire that significant position.

Meaning of Accidents

Webster's Medical Desk Dictionary (1986) says that "An accident is an unfortunate event resulting from carelessness, unawareness, ignorance or a combination of such causes."

In the words of Heindrich (1985), "An accident is an unplanned and / or uncontrolled event in which the action or reaction of an object, substance or person resulting in personal injury or probability there of and occurs at the work place."

Causes of Accident

A valuable report, 'An inquiry into Accidents in the Home' (Churchill and Boester, 1966), prepared by the Ministry of Works of Great Britain

points out that, "The majority of home accidents can be attributed to personal causes and due to either physical weakness and frailty, especially with advancing age or to such factors as ignorance, lack of judgement, carelessness or physiological disorders."

Different accidents led by different causes or the same cause can lead to different accidents. The review of literature supports this statement. Numerous authors (Baxter, Justin and Rust, 1951; Agan, 1956; Florio, 1962; Strasser, 1967; Creese, 1968; Strong, 1975; WHO, 1978; Pasi, 1978; Joshi, 1983; Shah, 1987 and Menon, 1990) have given the causes of accidents as: 1. Fire, 2. Slipping and falling, 3. Electricity, 4. Falls, 5. Burns and Scalds, 6. Cuts and Scratches, 7. Drowning, 8. Firearms, 9. Explosions, 10. Poisoning (Pharmaceutical causes, household products, insecticides and other chemical products), 11. Suffocation, 12. Mechanical Breakdown (Unguarded machines and defective equipment), 13. Physiological causes (over fatigue and nervousness), 14. Psychological causes (Ignorance, inexperience, carelessness and emotional disturbances), 15. Inadequate knowledge or lack of knowledge, 16. Unsafe behaviour (Physical limitations), 17. Improper/inadequate skills, habits and attitudes, 18. Environmental Hazards (Machines and Protective equipment and working conditions)

Factors Leading to Accidents

Nakajima (1993) says in his report in the magazine of World Health Organisation that, "To lose a healthy life; only through carelessness is a tragic waste". Though each type of accident can

be attributed to a distinguish cause but there are some other factors that accompany those conditions and transform them into causes. Grandjean (1978) studied domestic accidents by age and sex. The findings of his study showed that 13.3% accidental deaths were of males and this proportion rose to 53% for females, in 1966. He said that the first year of life is the most accident prone and practically all accidents at this age take place at the home.

Clark (1961) comments that "A young adolescent of twelve or thirteen has adventurous accidents. He needs to test himself almost to the limits of his skill and endurance and therefore has accidents such as falls while climbing."

Haggerty (1978) reports that 80-90% of fatal falls involve old people and two-third of these cases are of women over 65 years old, whereas only 5% of the accident result in the death of the children.

Burns and scalds constitute a serious risk of fatalities during childhood. In Great Britain 'Colebrook' investigated more than five thousand causalities in hospitals because of burning accidents. It was apparent that half of the admissions to hospitals and about 80% of the deaths were caused by some part of the clothing catching fire. He estimated a mortality of 28%.

In a study done in London with 40 homemakers, it was found that choking accidents were mercifully few but many children were poison addict and adult were notoriously careless leaving poisons accessible everywhere especially in bedrooms, bathrooms and sheds. Pills were the favourite because these look too much like sweets though individual children had penchants for astringents, caustic soda, brasso and dettol. Toy and equipment injury seems due less to parents negligence than to shoddy goods that tipped or collapsed spontaneously with child inside (Good Housekeeping, 1966).

Electrical appliances can be dangerous if those devices are inadequate or defective. It sometimes happens too that children bite into electric flex. In case of adults the main causes of these accidents from electricity is undoubtedly lack of insulation. Defect in insulation may arises from use, alteration, wear and damage and may allow the current to be diverted from the wire or the motor to the metallic part of the apparatus.

The commonest cause of cuts (Grandjean, 1978) in children is broken glass from windows or door panels or bottles etc. Cuts caused by

breaking a window have occasionally resulted in bleeding. Knives are another frequent cause used as plaything or occasionally as a weapon. Other objects that can cause injury are household gadgets such as scissors and wires.

Children are accidentally drowned even in homes which are considered to be 'safe'. Children of the age groups of 18 months to 3 years easily escape from the sight of their parents and active little boys are particularly likely to get into trouble. They easily lose their balance and it is difficult for them to get up. In such circumstances a very small depth of water (even 30 cm) may prove fatal.

Accidents are also related with fatigue. In a study by Imbert and Mestre reported by Webster (1921), 27,000 accidents among over 60,000 workmen were charted. The results showed that for day-time work accidents increased progressively during the morning work hours and after abating somewhat following the midday rest they again became continuously frequent.

Need for Safety Education: Though the home is considered as the safest place, it is dangerous place as well, Its probability increases with increasing conveniences in the home. Home maker is the key person who selects the household items and supervises various household activities and establishes the safely rules as well. These activities should be performed by keeping the safety of its members in mind.

Safety in the home depends more than anything else on carefulness and on tidiness, plus awareness of the possible dangers. If one remembers that the dangers exist then one will look out for them and take care (Carmichael, 1964).

Safety consciousness is actually the mental and emotional condition of an individual. It is an awareness or mental impression rooted in the emotions which an individual possess and which serves as a guide for his conduct, behaviour and over actions to the end that he will be free from danger and personal injury. It is his mental outlook which influences his opinions and actions as these related to safety (Strong, 1975).

The family is a major centre of accident prevention responsibility and activity. The sentiments associated with family life are a powerful motivation for protection and safety training. The parents are leaders who inspire their children and agree on major issues (Johnson, 1961).

Florio (1962) says that education in accident prevention must help man to acquire the sense of responsibility, the skill and the knowledge that

entitled to all the advantages available through technological advances. Scott (1959) expresses his views in the same context that the accident proneness of a household depends on such factors as the presence of children (their liability to accident varying with their ages) and old people. Added to these may be a member of the household who through some disability such as deafness or blindness is more accident prone than others.

Wheatley (1961) extends this information by commenting that in older people physical and mental function progressively decline. Arthritis, fractures etc. are the other disablers of old people that greatly lessen their ability to carry on usual activities safely.

Thus need for safety education arises. Safety consciousness can be created through education which can best be provided not only at school but also at home. In Indian context, child spends a major portion of his time at home during early years of his age. Most of his time is spent around his mother. Thus it is the best time to inculcate good habits and values regarding safety in the child. He must be provided good, safe environment and should be nurtured with healthy safety practices. This will help to develop safety consciousness in the child not only for himself but also for the people around him.

To develop such healthy attitude, the homemaker should have knowledge regarding the causes, the factors and the safety rules in and around the home for the protection of herself and the family members. These causes, factors and safety rules are not only associated with the use and consumption of commodities but also with the selection and arrangement of domestic articles that ranges from an alpin to furniture, from furnishings to the medicines used at home.

The field of Home Management covers the factors of selection while purchasing various household equipment and furniture, selecting a house, arranging the furniture and household supplies and so on. Safety is the most important factor among all. Hence, Home Management is the right field to impart safety education. Beside that, Home Management is also concerned with Human Resource Development. This resource is situated at the uppermost position in the list of all the resources because without its existence others are futile. Loss or damage of this resource is another factor that can influence the functioning of others. Therefore in this frame of reference

imparting safety education is the best solution of all the problems. Consequently by observing the need, the present study was undertaken with the following objectives:

1) To study the background information of the respondents.

2) To find out the frequency of occurrences of household accidents and analyse by age and sex of victims.

The hypothesis of the study was:

There will be variation in the number of occurrences of accidents due to following variables: a) Age, b) Sex, c) Family Income, d) Structure of the house, e) Size of the family

METHODOLOGY

The present study is a descriptive survey as descriptive survey is concerned with the conditions and relationships that exist. This was conducted in five purposively selected slums of Vadodara city of Gujarat State. Through community volunteer appointed by 'Urban Community Development' project of 'Baroda Municipal Corporation', a list of cases of Household Accident was prepared. Care was taken in preparing the list to include those households where atleast one accident must have taken place within past two years. A sample of 18 cases from each slum was selected through random sampling from the list prepared. Altogether 90 homemakers were interviewed for the study.

The type of accidents considered for the study were falls, burns, scalds, wounds, cuts and scratches, electric shock, poisoning and suffocation. The operational definition for the Household Accident is given as an unplanned act or event resulting in injury or death to person (s) within the four walls of the house with the inclusion of falls, burns, scalds, wounds, cuts and scratches, electric shock, poisoning and suffocation. Here, the injury is any wound, scratch, cut down or burn due to fall, fire, hot metal, steam, liquid, poisoning, electricity, gas or sharp objects.

RESULTS AND DISCUSSION

Back-ground Information: The results of the study showed that 45% respondents were young and 17% were old homemakers. Three fourth of them were illiterate and 92% were unemployed. About 70% of respondents' family

income were less than Rs. 1500 per month. More than half of the respondents had nuclear families. About 50% of the families had 3-4 total family members. Nearly half of the families had 3-4 adult members and 48% families had no children. All the families had unauthorised possession of the house and about two-third families had semi pucca house. About 61% families had cemented flooring and 95% had corrugated asbestos cemented sheet roofing. Nearly two third families had two rooms in their house. About two-third families used their kitchen for other purposes such as sleeping, bathing etc. About three-fourth families used kerosene stove as a cooking device.

Occurrences of Accidents: Findings of the study showed that most of the cases were of falls which victimized people belonging to the age group of 51-60 years. There were equal number of cases in two categories, that are burns and wounds, cuts and scratches. The number of burn cases were equal in case of 11-20 years and 21-30 years age groups but most of the scalds cases occurred in the age group of birth to 10 years. Most of the victims of wounds, cuts and scratches belonged to the age group of 31-40 years. The children belonging to the age group of birth to 10 years had most of the cases of electric shock. Only one case of poisoning in the age group ranging from 41-50 years was found and no case of suffocation was found out in the sample.

Out of 47 cases of falls 15% falls (Table 1) cases were due to the inability of clear vision and 5% cases were due to fall from stool or other furniture in which number of females were more than males. About 21% cases of falls were in the age group of 41-50 years and 51-61 years. About 63% falls resulted in plaster. In the case of burns (Fig.1) equal number of cases i.e. about 21% victims belonged to the age groups of 11-20 years and 21-30 years. In nearly 15% of cases of burns, the cause was fire due to spilling of kerosene or touching the body to any hot vessel. Out of total cases of burns, 61% cases were affected severely.

Scalds, a type of burn, usually occur due to moist heat. This mostly occurred by spilling of hot liquid or by pulling hot water over oneself. Children below 10 years were its victims and 48%, scalds cases resulted into severe burns.

The wounds, cuts and scratches did not lead to any serious injury. About 41% of them belonged to the age group of 31 to 40 years (Fig.1).

Table 1: Cases of various accidents.

S. No.	Type of Accident	Respondents (n=90) f	%
1.	Falls	47	52.2
2.	Burns	34	35.5
3.	Wounds, cuts and scratches	34	35.5
4.	Electric shock	26	28.89
5.	Scalds	21	23.3
6.	Poisoning	01	01.11
7.	Suffocation	00	00.00

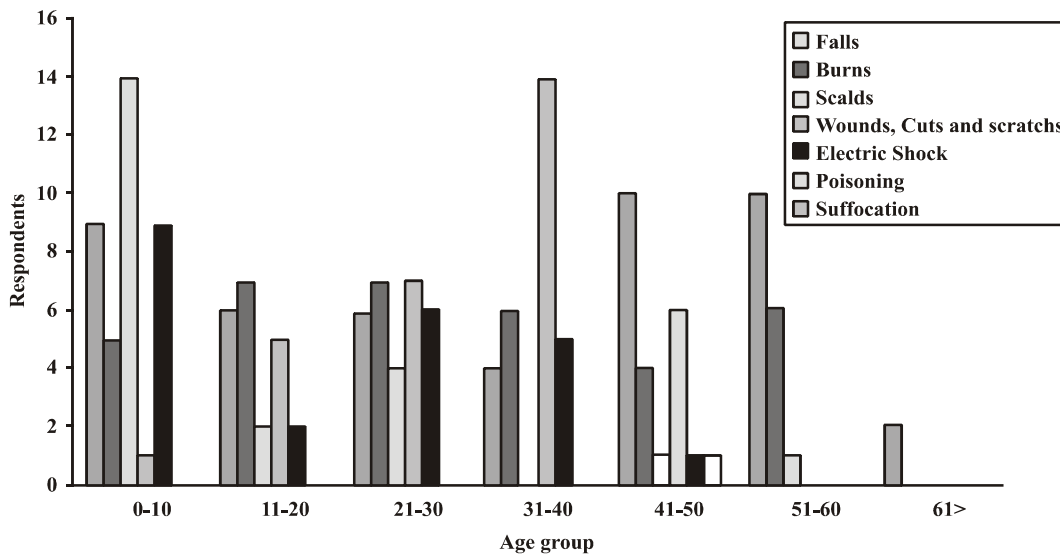


Fig. 1. Distribution of class according to age and type of accidents

About one fourth people had injury due to sharp or pointed tools. About 23% victims of electric shock got shock by putting finger in the bulb holder. Out of 26 cases of electric shock 34% victims were less than 10 years old. In most of the cases i.e. about 58% victims experienced shock as a result, only in one case victim's half body was burnt due to electricity. Only one case of poisoning was found due to drinking of household cleaner accidentally. That victim belonged to age group of 41 to 50 years. As a result of the accident, the victim was hospitalized and was so badly affected that he was terminated from his services.

Viewing the accidents by sex of victim it was observed that number of female victims were more than the number of male victims (Fig. 2) except in the age group of 51-60 years and 61 years and above. The number of female victims was more in

the age group of birth to 10 years and 21-30 years. Males were having less accidents between the age group of 11-20 years and females had less accidents in 51-60 years among all the groups.

The result of testing of hypothesis by applying analysis of variance showed no significant variation between (1) the occurrences of accidents and structure of the house and (2) occurrence and size of the family but there was a significant variation caused in occurrences with family income ($F=5.2112$ at 0.01 level of significance). The t-tests were computed to find out the difference in income groups and number of accidents. It was found that following income group differed from each other in occurrence of accident (a) Below Rs. 1500 and Rs. 2501 and Rs. 3500 ($t=3.82$ at 0.01 level of significance) (b) Rs. 1501 to Rs. 2500 and Rs. 2501 to Rs.3500 ($t = 3.49$ at 0.01 level of significance).

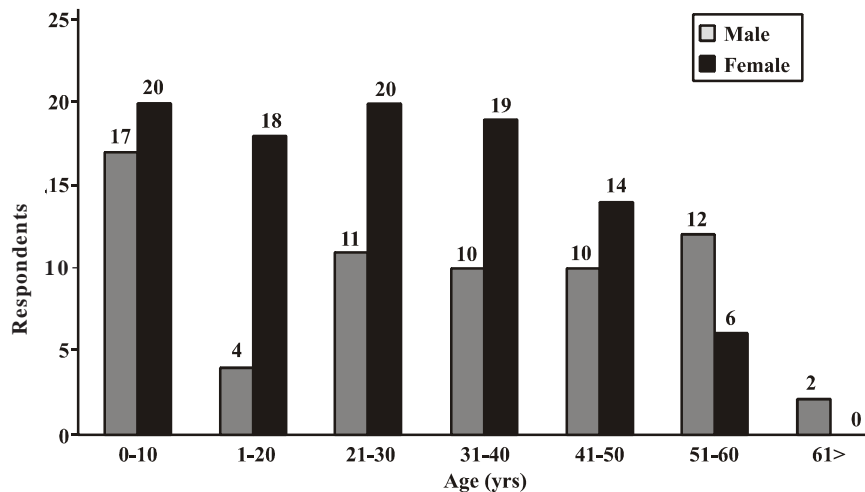


Fig. 2. Distribution of household accidents according to sex

CONCLUSION

The result of the study helps in concluding that more females were the victims of household accidents rather than males. The finding of the study also proved that young and very old people were more prone to the household accidents.

The findings of the study give an in-depth knowledge of the causes of the accidents. Thus, these findings will be helpful not only to the people of Home Management but also to the Non Government Organisations (NGOs), Voluntary Organisations, doctors, nurses, social workers and

common man to develop proper understanding of the factors that will helpful in preventing the accidents. They can promote awareness among people to develop healthy value and habits.

The architectural barriers create unnecessary difficulty in day to day living and generally limit the safety, security, comfort and convenience to all people. It is the designer's responsibility to acquire and apply hazard reduction knowledge for the safety of all users. Therefore, this study will be helpful to the architects, interior designers and engineers to make better design of houses which reduces the health hazards.

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