



To Study the Knowledge and Awareness of PPE amongst Housewives

*Ms. Neha Mehra **Dr. Seema Kwatra

* Student, Department of Family Resource Management, College Of Home Science, G.B.P.U.A& T. PANTNAGAR, UTTARAKHAND

** Senior Research Officer, Department of Family Resource Management, College Of Home Science, G.B.P.U.A& T. PANTNAGAR, UTTARAKHAND

ABSTRACT

Household Hazards exist in every workplace so strategies to protect housewives are very essential. Many of the housewives confront each day with the difficult household task of working at the home. Today, the most common household related hazards viz. cuts, burn, slips/falls and skin reaction/allergies and so on are faced by the housewives. Due to unawareness/lack of knowledge of personal protective equipment (PPE), housewives confront with many of the toxic chemicals found in their homes which otherwise are used to make their lives easier. But they do not realize the consequences of the same. The main purpose behind the PPE is to give complete protection against hazardous household materials because now days, housewives are very conscious for their health and for maintaining the quality of life. So there is a need to carry out the present study as it will provide the in-depth knowledge/ awareness related to PPE and to protect the housewives against the hazardous materials. The present study was carried out in two colonies of Bareilly city of Uttar Pradesh. The purposive and random sampling design was used with a total sample size of 120. The descriptive data was collected with the help of adapted SES scale and checklist. The collected data was tabulated and analysed, and the overall results of descriptive data revealed that cuts were the major household related hazards with knife as associated parameter. It was followed by slips/falls due to inappropriate footwear and burns were mostly due to touch of hot utensils. Lastly detergents were responsible for skin allergy. Significant relationship exists between age and awareness of the respondents as well as income and awareness at 5 % level of significance.

Keywords : Household hazards, Unawareness/knowledge, Personal protective equipment (PPE).

Introduction

Many of housewives are using household hazardous toxic chemicals in everyday life. Sometimes they are aware of it, sometimes not. Many actions which appear to be harmless actually involve the use of harmful chemicals. Household cleaners, detergent, paints even flea powders can be hazardous to our health and our home environment. Detergents, stain removers and pesticides have made our homes miniature chemical factories. Hazardous chemicals endanger the environment by contaminating our household environment. If these hazardous products in the home are ingested, absorbed through the skin or inhaled they can cause illness that may only appear years later.

Household health hazards in the home can be grouped under mechanical and non-mechanical hazards. Mechanical hazards including accidental issues from impact, penetration from scrap metal and sharp objects, crushing and physical hazards. However, non-mechanical sources of hazards include chemical, electrical, thermal and ergonomic hazards (Dong et al., 2001; Wasserman, 2004). Hazards in kitchen area may come from accidental injury from the use of knife, chopper or peeler etc and also environmental variables may create additional risk as heat and noise. When health hazards are identified, the first step is to try to eliminate them properly, either by doing the job in a different way or using a substitute. If prevention is not practicable, the next step is to try to control the risk as using water suppression to control dust emission. If, finally exposure of risk cannot be adequately controlled by any combination of measures, personal protective equipment (PPE) should be provided.

According to Occupational Safety and Health Administration (OSHA 2005), personal protective equipment (PPE) must be provided as a last resort, when other measures cannot pro-

vide enough protection. The employer is required to first make efforts to eliminate or minimize hazardous working conditions. It is equipment worn by a worker to minimize exposure to specific occupational hazards. Using PPE is only one element in a complete safety program that would use a variety of strategies to maintain a safe and healthy working environment. It does not reduce the household hazard itself nor does it guarantee permanent or total protection (Mackenzie et al. 2000).

Housewives have to face number of household related hazards such as cuts, burns, slips/falls and skin reaction/ allergy due to the unawareness and knowledge of use of personal protective equipment (PPE). Awareness and knowledge of the intervening variables which affected the housewives related risk and to produce potential health hazards.

Now a day, people think home as a safe place. But each year, many people (mainly housewives) are injured at home. Hazards exist in many different forms: sharp edges, falling objects, flying sparks, chemicals, noise and a myriad of other potentially dangerous situations. Adequate protection of body is essential in order to ensure the safety of human life at workplace though the nature of protection varies from home to home and is dependent not only on the type of household work done but also on the kind of associated household related hazards. Controlling household related hazards at its source is the best way to protect housewives. Depending on the household hazards, the housewives may be required to use personal protective equipment (PPE) and to manage or eliminate household hazards to the greatest extent possible.

It is proposed that personal protective equipment (PPE) is designed for human use but due to the unawareness and less knowledge of personal protective equipment (PPE) many of the housewives were not used by personal protective equip-

ment (PPE). Mainly housewives spend most of the time at home and they use or interact with many household hazardous substances like detergents, soaps, washing powder and so on. They are very sensitive to the household related materials and the environment where they live.

So there is a need to generate awareness/ knowledge amongst housewives. Effective knowledge/ awareness should result in safe behaviour, leading to a reduction in the associated household related hazards. Unfortunately the response rate of housewives to use of personal protective equipment (PPE) is usually now a day become very low.

It is important to study the awareness and knowledge about use of personal protective equipment (PPE) amongst housewives to suggest the possible guidelines to reduce household related potential hazards and injuries and to improve the quality of human life.

Objective-

- 1) Assessment of major household related hazards.
- 2) Categorization based on prioritization of household hazards and their injury control strategy.

Materials and Methods

The present study was carried out in two colony of Bareilly city of Uttar Pradesh. The purposive and random sampling design was used to select housewives. A total sample size was 120 selected for descriptive data. The descriptive data was collected with the help of interview schedule through interview method. Descriptive designs were chosen to find out the socio- economic status of the housewives, assessment of major household related hazards (cuts, burns, slips/falls and skin reaction/ allergy), categorization based on prioritization of household related hazards and their injury control strategy and to investigate the level of awareness/ knowledge regarding availability and usage of personal protective equipment (PPE) amongst housewives with the help of various standardized questionnaire.

RESULTS

Assessment of Major Household Related Hazards

Household Hazards exist in every workplace. Today, the most common major household related risk like falls/ slips, cuts; burn and skin reaction/allergies and so on are faced by housewives.

The data pertaining to responses of housewives on information available on major household related hazards is shown in table 1. It covers various major household related hazards such as cuts, burns, slips/falls, skin reaction/ allergy.

Table 1: Assessment of major household related hazards. (N= 120)

Sl. No.	Household hazard types	Yes	No
1)	Cuts	108 (90)	12 (10)
2)	Burns	75 (62.5)	45 (37.5)
3)	Slips/falls	98 (81.6)	22 (18.3)
4)	Skin reaction/ allergy	62 (51.6)	58 (48.3)

Note: Values in parentheses indicate percentage.

After analysing the responses of housewives with respect to current information, available as per their household related hazards of the sample population one twenty, 90 percent were having the thought that the cuts was the major household related hazards which occurs mostly and only 10 percent said that it was not major household hazards. Whereas 62.5 percent told that burns was major household hazards which was faced by among housewives, 37.5 percent said that it's not a big problem which was faced by among housewives

and besides this there were 81.6 percent housewives who said that the major household related hazards was slips/falls and only 18 percent housewives reported that slips/falls was not major household related hazards. When the responses were collected about major household hazards skin reaction/ allergy 51 percent said that skin reaction/ allergy was major household hazards whereas 48 percent reported that allergy was not major household hazards.

Frequency of Occurrence of Major Household Related Hazards (cuts, burns, slips/falls and skin reaction/ allergy)

More or less all housewives were of opinion that frequency of occurrence played a vital role to know that what major household hazards such as cuts, burns, slips/falls and skin reaction/ allergy are more or less frequently occurred to the most of the housewives.

Table 2: Frequency of occurrence of major household related hazards. (N= 120)

Sl. No.	Household hazard types	Responses	Responses
1)	Cuts	Yes	No
	Frequency of Accident		
	Weekly	46(38.33)	74(61.6)
	Monthly	78(65.0)	42(35.0)
	Six monthly	28(23.33)	92(76.6)
	Yearly	59(49.16)	61(50.3)
	After 2-4 year	71(59.16)	49(40.83)
2)	Burns		
	Frequency of Accident		
	Weekly	68(56.6)	52(43.3)
	Monthly	61(50.83)	59(49.16)
	Six monthly	79(65.83)	41(34.16)
	Yearly	75(62.5)	45(37.5)
	After 2-4 year	49(40.83)	71(50.0)
3)	Slips/falls		
	Frequency of Accident		
	Weekly	48(40.00)	72(60.00)
	Monthly	69(37.5)	51(42.5)
	Six monthly	75(62.5)	45(37.5)
	Yearly	88(73.3)	32(26.6)
	After 2-4 year	15 (12.66)	106(88.33)
4)	Skin reaction/allergy		
	Frequency of Accident		
	Weekly	75(62.5)	45(37.5)
	Monthly	61(50.8)	59(49.1)
	Six monthly	56(46.6)	64(53.33)
	Yearly	70(58.33)	50(41.66)
	After 2-4 year	72(60.00)	48(40.00)

Note: Values in parentheses indicate percentage.





On in the whole above table 2 the frequency of occurrence of the major household related hazards were categorized into four categories viz. weekly, monthly, six monthly, yearly, after two- four years. So the maximum (62.5 percent) weekly frequency of occurrence of major household hazards was skin reaction/allergy and minimum (38 percent) in this case was cuts. Maximum (69 percent) monthly frequency of occurring of household hazards was slips/falls where as maximum six monthly frequency of occurring of household hazards was burns and as maximum (73 percent) yearly frequency of occurring of household hazards were slips/ falls and at last maximum (71 percent) two to four frequency of occurring of household hazards were cuts.

Categorization Based on Prioritization of Household Hazards and their Associated Activities

In the below table 3 shows that major household hazards and

their associated activities such as first major household hazards was cuts and their associated activities were like chopper, knife, scissors, paper cutter, blade and second major household hazards was burns and their associated activities were cooking range, flames, touch of hot utensils, spilling of hot liquids/ semi solid, unconscious touch of hot utensils and third major household hazards was slips/falls and their associated activities were stairs, bathroom, slippery floor, inappropriate footwear and fourth or last major household activities was skin reaction/ allergy and their associated activities were detergent, washing powder, soap, cosmetics, chemicals.

Table 3: Categorization based on prioritization of household hazards and their associated activities. (N=120)

Sl. No.	Household hazards type	Associated activities	Responses	
			Yes	No
1)		1) Chopper	46 (38.3)	74 (61.6)
		2) Knife	78 (65)	42 (35)
		3) Scissors	28 (23.3)	92 (76.6)
		4) Paper cutter	59 (49.1)	61 (50)
		5) Blade	71 (59.1)	49 (40)
2)		1) Cooking range	68 (56.6)	52 (43.3)
		2) Flames	49 (40.8)	71 (50)
		3) Touch of hot utensils	79 (65.5)	41 (34.1)
		4) Spilling of hot liquids/ semi solid	75 (62.5)	45 (37.5)
		5) Unconscious touch of hot utensil	61 (50.8)	59 (49.1)
3)		1) Stairs	48 (40)	72 (60)
		2) Bathroom	69 (62.5)	51 (42.5)
		3) Slippery floor	75 (69.7)	45 (37.5)
		4) Inappropriate footwear	88 (73.3)	32 (26.6)
4)		1) Detergent	75 (62.5)	45 (37.5)
		2) Washing powder	61 (50)	59 (49.1)
		3) Soap	56 (46.6)	64 (53.3)
		4) Cosmetics	70 (58.3)	50 (41.6)
		5) Chemicals	72 (60)	48 (40)

Note: Values in parentheses indicate percentage.

On the whole overall result revealed that there are four basic categories of major household related hazards and there are various sub associated activities of all those household related hazards. In case of associated activities of major household hazards cuts, the majority of housewives were (65 percent) knife and very few (23.3 percent) fall under the associated activity of scissors which was also the associated activity of major household hazards cuts and in case of burns the majority of housewives were (65 percent) touch of hot utensils and very few (40.8 percent) fall under the associated activ-

ity of flames which was also the associated activity of major household hazards burns, under the third category of hazards slips/ falls the majority (65.8 percent) of housewives were inappropriate footwear and very few (40.8 percent) fall under the associated activity of stairs. At last, the fourth category of hazards skin reaction/allergy the majority (62.5 percent) of housewives were detergent and very few (46.6 percent) fall under the associated activity of soap.

Conclusion

Household hazards in kitchen area may come from hazardous substances used in the area and also environmental variables may create additional risk as heat and noise. When health hazards are identified, the first steps is to try to eliminate them properly, either by doing the job in a different way or using a substitute. If prevention is not practicable, the next step is to try to control the risk. If, finally exposure of risk cannot be adequate controlled by any combination of measures, personal protective equipment (PPE) should be provided. At last testing of hypothesis revealed that positive relationship exist between age and awareness of PPE. Significant relationship was found between income and awareness of PPE at 5% level of significance. Whereas relationship between education and knowledge of PPE showed no significant relationship at 5% level of significance.

Implications of the Study

The findings of the investigation brought out a number of important implications:

1. The present study can be utilized for awareness generation amongst PPE designers for designing women friendly PPE for healthier living and safety for all at home.
2. The present study can be utilized by women organizations working at governmental/ nongovernmental level in the interest of protecting the women work force at work and ensuring women safety and health. It will also enhance the performance of women at work.
3. Through extension training programme, we can inculcate knowledge among women regarding "Household Toxics" and "Household Hazards Assessment" so as to ensure safety at work and to encourage usage of safe substitutes at home and at work.
4. The present study can be utilized by Consumer Policy Committee (CPC) and ISO in the interest of protecting the housewives and improving consumer safety and health.
5. Through mass media communication, awareness can be generated amongst housewives regarding presence of toxic chemicals at home and guidelines for hazard assessment. This will encourage self assessment and compliance to ensure safety.

Recommendations for Future Research

A few suggestions for future research are submitted as under:

1. An exploratory analysis of the causal links between women's daily lives and their experience of health illness and disability.
2. A further study can be conducted on designing climate smart PPE and their use among housewives.
3. Study can be conducted to investigate about awareness and knowledge of factors contributing to discomfort or dissatisfaction of wearing PPE among industrial workers.
4. A study can be planned to determine the level of awareness, knowledge and attitude of storekeepers to sell PPE and workers to use PPE at work.
5. To investigate PPE as functionality driven product among industrial workforce and to combine safety with style and protection with comfort.
6. A comprehensive survey can be conducted to investigate the quality and standards of PPE being sold in the market.

REFERENCES

- Dong, R.G.; Rakheja, S.; Schopper, A.W.; Han, B. and Smuts, W.R. (2001). Hand- transmitted vibration and biodynamic response of the human hand arm: a critical review. *Critical Reviews in Engineering*, 29 (4), 393-439. | OSHA report (2005). Preventing lead poisoning in construction workers. Pp.1-19. | Wassermann, D.E. 2004. Reynaud phenomenon as it relates to hand-tool vibration in the workplace. *American Journal*. 172(8): 1001-1002. | Mackenzie, R.; Lynette, K.; Byles, P.; Julie, H.; Higginbotham and Nick 2000. Fact Sheet: Safe Substitutes at Home. Non-toxic Household Products. Page no.186-187. |