

Preliminary Study of Categorization and Classification of Household Hazards in Malaysia Using Simplified Hazard Identification Technique

Khairilmizal, S.^{1*}, Nur Syahira Wati, F.¹, Ainul Husna, K.²

¹School of Health Sciences, Universiti Sains Malaysia, Malaysia

²UniKL MESTECH, Malaysia

*Corresponding author: khairilmizal@usm.my

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Abstract

Within the home, there is a wide range of hazards ^[1]. Even though the home is usually perceived as a safe place, it is also a common location for home hazard incidents to occur considering the number of home occupants and property type ^[2]. It is estimated that about 12 out of 100 people were injured in their homes with suffocation and fall strikes as the leading causes of death ^[3].

Categorization and classification allow the organization of things, objects, and ideas. Through categorization of hazards, it can assist households and communities to simplify their understanding of household safety. Generally, hazards can be categorised as physical hazards, biological hazards, chemical hazards, psychosocial hazards and ergonomic hazards ^[4], however, this is too broad to be considered a household hazard. In Malaysia, there is scarce information on the household hazard categories as most studies focused more on the causes of home injuries ^[5-7]. Hence, this study aimed to categorise household hazards and classify the most common household hazards that can be found in Malaysia.

This preliminary study involved a total of 135 USM School of Health Sciences students and staff. The questionnaire was developed based on the HIRARC guideline by the Department of Safety and Health Malaysia. All respondents were required to identify and describe the most common hazards in their homes and upload the relevant pictures. Based on the picture and descriptions, we classified the hazards based on the key indicators of the specific hazards and the common name used.

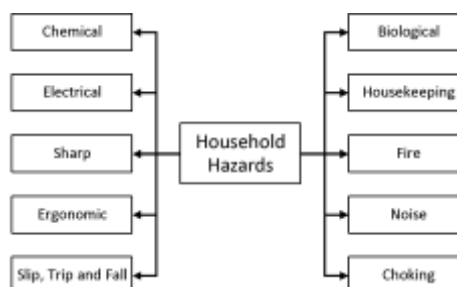


Figure 1: Category of household hazards

Figure 1 illustrated the 10 categories of household hazards. Chemical hazards comprised detergent, paint and thinner while electrical hazards involved exposed wiring, overloading of plug point and damaged socket. Sharp hazards included exposed knives or sharp utensils and sharp corners in household structures or furniture; ergonomic hazards were uncomfortable furniture or unsuitable design of furniture for the task conducted; slip, trip and falls such as wet floor, tripping over furniture and fall from stairs or height when using ladder; biological hazards such as mold, fungal in damp area or on cooking utensils and indoor air quality; housekeeping hazards such as cluttered cables, improper placement or stacking of objects; fire hazards were mainly open candles, overheating of electrical appliances, unattended cooking and placement of flammable material near fire sources; noise hazard involved the usage of noisy machinery including coconut grating machine, vacuum cleaner and grass cutter; choking hazards including toys or any small objects that can be picked up by children with the possibilities to cause choking.

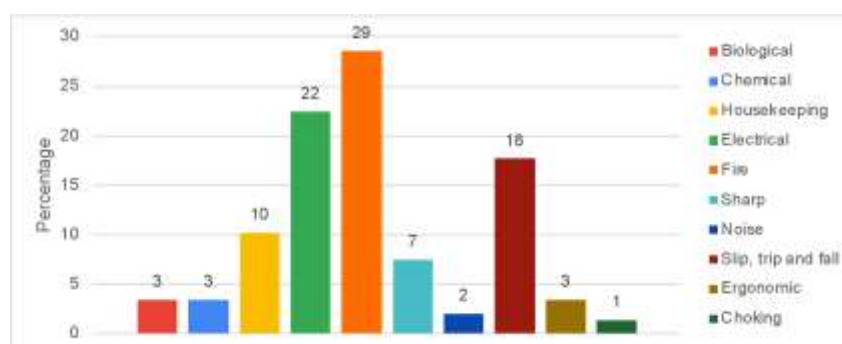


Figure 2: Percentage of categorized common household hazards

The most common household hazards were fire hazards (29%), electrical hazards (22%), slip trips and falls (18%) followed by others as illustrated in Figure 2. The incidence of fire and electrical hazards were in line with previously reported household injuries in Malaysia [8].

In conclusion, 10 categories of household hazard were identified in which fire and electrical hazards were the most common hazards among Malaysian household. Future studies are warranted to explore the details of the identified categories and should include the assessment of household hazards via probability and severity rating in justifying the identified hazards.

Keywords

Hazard category, Hazard identification, Household hazards

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