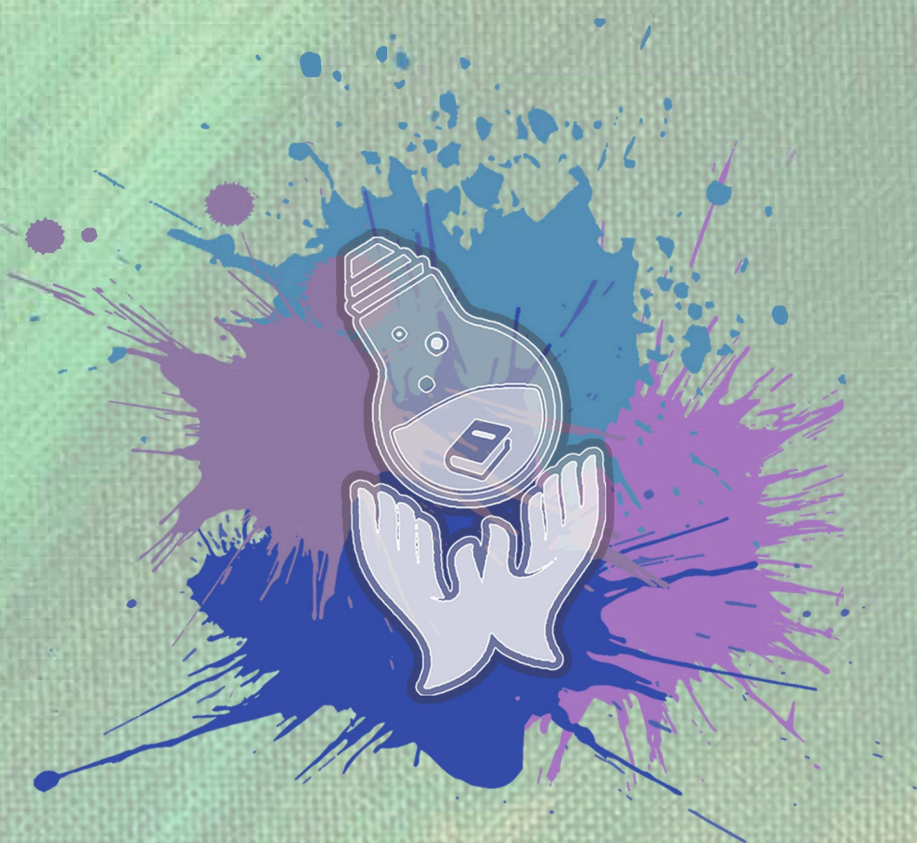




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FACTORS AFFECTING HUMAN BEHAVIOUR TOWARDS FIRE SAFETY IN RESIDENTIAL COLLEGE. CASE STUDY: UiTM SERI ISKANDAR

Mohamad Azim Bin Kamaruzzaman¹ and Najma Binti Azman²

^{1 2} Department of Estate Management, Faculty of Architecture, Planning and Surveying,
Universiti Teknologi MARA, Perak Branch, Seri Iskandar Campus, 32610 Seri Iskandar, Perak
Email: azimkama96@gmail.com¹, najma245@uitm.edu.my²

Abstract:

Human behaviour in fire is a new study that many researcher try solve compare to others study areas. Recently, the research based on human behaviour in fire has begun to flourishing. The objectives of this research are to identify the factors affecting human behaviour in fire safety as well as to find the significance of students' background and human behaviour towards fire safety in residential colleges. Factors affecting human behaviours being collected from secondary data mainly from journals, books, reports, articles, internet and presented into a conceptual framework. A set of questionnaire being developed and posted to 250 respondents to complete the survey. The statistical packages for the social science (SPSS) Version 22 is being used to run the results. Based on the findings the attitude, personality, beliefs and values ranking in order, have show positive significant with the student background where P-value is less than 0.05.

Keywords:

Fire Safety, Human Behaviour, Residential Collage

1.0 INTRODUCTION

Historically fire hazard will not only cause injuries and loss of lives, but also cause serious damages to the properties and buildings. In many references, fires can be prevented when communities are aware of the importance of fire safety. Fire safety measure must been taken into account even at the initial stage of construction in any property development. Fire safety also related to human involvement elements, apart from the building elements as to ensure the best practice of fire safety management being carried out. In this research, human elements are being tested on the human behaviour towards fire safety among students in residential colleges. Human behaviour can be defined as an action where a person response to certain stimulations. In fire safety measures, human behaviour can be translated into how a person handles the situation in terms of processing information, course of action based on experience, knowledge and cues during limited time of fire emergency. The objectives of this research are to identify the factors affecting human behaviour in fire safety as well as to find the significance of students' background and human behaviour towards fire safety in residential colleges.

2.0 HUMAN BEHAVIOUR IN FIRE SAFETY

Based on study made by Chandrakantan, S., (2004), the human behaviour is classified into several factors. These factors are influenced by a person characteristic such as attitude, knowledge, value, belief and personality that have relationship with behaviour of a person. He also added that these factor also known as a conceptualized that creates a motivation for certain behaviour towards the surrounding or people. There are many elements that need to be considered as to measure the fire safety. Among the elements are human elements, environment elements, building elements and intervention elements. However, this paper only discuss on human factors towards fire safety.

Council, C. W. (2000), stated that the fire safety is to reduce the possibility of harmful toward people in a building in case of fire. However, the potential to be killed or injured in case of fire cannot be underestimate completely. To overcome this, the design, material use in construction must be well made to reduce the fire risk in a building and protect the people inside the building. Past several years the numbers of death due to fire have been decreases slowly due to increase of use smoke detector, improvement in electrical and heating system.

3.0 METHODOLOGY

The primary data were collected from distributed questionnaires to the respondents. Based on Krejcie and Morgan (1970) the sample number of samples is 357 respondents of 5,000 populations but the researcher only managed to get 257 due to time factor. For the response rate is about 72% which is still valid for the study. A pilot study has been conducted before the final questionnaires being distributed. The respondent for the pilot study is approach by simple convenient method where the respondents are at the right time and the right place to answer the questionnaire. A validity test also being conducted as Cronbach Alpha resulted 0.7 which indicated the high level of reliability. The questionnaire was divided into two sections that were Section A, background of respondents and Section B, human behaviour towards fire safety. A four-point of Likert Scale was used with “four” for strongly agree and “one” being strongly disagree. For the data analysis, The Statistical Packages for the Social Science (SPSS) Version 22 have been used to interpret all the collected data into results and findings.

4.0 ANALYSIS AND FINDING

The results shown in Table 1 reveal mean, p-value and significance of students’ background and human behavioural factors towards fire safety. The fire safety behaviour are positively correlated with the students’ background which indicated of demographic profiling such as faculty, age and experience with fire at 0.05 confidence level.

Table 1: The significance level of fire safety behaviour to students’ background

No.	Human Behavioural Factors	Mean	P-Value	Significance
Knowledge				
1.	Knows the number to be contacted in the case of fire	2.94	0.000***	Significant
2.	Knows the person in-charge to be contacted in the case of fire	2.63	0.835	Not Significant
3.	Level of knowledge on right action to be taken during the occurrence of fire	2.67	0.073	Not Significant
4.	Do attending on any fire safety activities organized by relevant parties to increase the knowledge of fire safety	3.41	0.140	Not Significant
5.	Participating in fire drill will helps to get some knowledge and confidence in case of fire	3.35	0.004***	Significant
Attitude				
6.	Continuing activities when the fire alarm is active	1.65	0.000***	Significant
7.	To find out the cause of fire immediately	2.37	0.008***	Significant
8.	To advise others to continue activities when smell something is burning	2.05	0.000***	Significant
9.	To warn others to leave the building when seeing fire	3.25	0.000***	Significant
10.	To wait until being told what to do during fire occurrence	2.14	0.002***	Significant
Beliefs				
11.	Panicking during present of fire	2.32	0.001***	Significant
12.	Inform the people next door if the fire alarm started to activate	3.40	0.000***	Significant
13.	Shall wait for the help rather than immediately evacuated the building in case of fire	2.07	0.029**	Significant
14.	Dialling 999 when there is fire	3.15	0.025**	Significant
15.	Helping others in case of fire	3.00	0.095	Not Significant
Value				
16.	The first action need to be done in case of fire is to activate the fire alarm	3.13	0.037*	Significant
17.	Do understand the evacuation routes	2.82	0.170	Not Significant
18.	Do receive any fire safety training	2.87	0.000***	Significant
19.	Knows how to use the fire extinguisher	3.18	0.000***	Significant
20.	Understands about the do and don'ts in case of fire emergency	3.00	0.009***	Significant

Personality				
21.	To be brave enough to put out fire	2.35	0.000***	Significant
22.	Do turns back when fire is present	2.34	0.011**	Significant
23.	To ask for help to fight fire	2.96	0.004***	Significant
24.	Do tries another way to get out of the building during fire	3.19	0.011**	Significant
25.	Do freezes when see fire	2.00	0.000***	Significant

Note: *p-value, ≤ 0.05 , significant

Table 2: Summary of significance level of fire safety behaviour to students' background

No.	Influencing Factors	Mean	P-Value	Significance	Rank
1	Attitude	2.29	0.002***	Significant	1
2	Personality	2.57	0.005***	Significant	2
3	Beliefs	2.79	0.030**	Significant	3
4	Value	3.00	0.043**	Significant	4
5	Knowledge	3.00	0.196	Not Significant	5

The results indicate that attitude is the most significant factor in fire safety behaviour among the students. According to Ajzen (2005), an attitude is a nature to respond favourably or unfavourably to an object, person, institution or even in an event. In this research, it reveals that the students have the constructively responds to the event of fire. Chandrakantan, S., (2004) in his research believe that fire safety behaviour needs to be developed from the person's own initiatives whilst personality and beliefs are elements that developed along the person's upbringings. Beliefs also being one of the significant elements as the students believe that the building is well equipped with fire protection. However, beliefs also lead to insignificant of knowledge element among students as they really rely on the perception that the building will be safe in case of fire or there will be no case of fire during their stay in residential colleges. They are reluctant to have some knowledge on what action to be taken in the case of fire occurrence. In addition to that, the university or the residential college offices need to take action on providing awareness and knowledge of to the students. Providing knowledge on fire safety also helps the students to appreciate and not to vandalise the fire safety equipment in the buildings.

5.0 CONCLUSION

Residential college buildings fortified with compliance firefighting equipment so do to the residents. They really need to equipped themselves with knowledge and to develop the values, attitudes, personality and beliefs towards fire safety. If there is no motivation towards fire safety behaviour, all the efforts will be meaningless. The people need to prepare what is the most influence factors that affect them in building that under fire. As the recommendations for the study is the management of the residential colleges must made an inspection by per months or annually to allocate which fire safety features have been broken and must give strict rule toward contractor who manage fire safety feature in the colleges.

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