Disaster awareness scale

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Abstract. Disaster awareness is a concept that must be understood by everyone, especially residents of housing in disaster prone areas. However, is disaster awareness also owned by the architects who do housing designs? This study tries to explore the views of housing residents on the work of architects who have awareness of disasters by looking at various categories of housing residents' backgrounds. Research using the Neuroresearch method. The number of samples taken was 743 respondents with a sampling technique using cluster random sampling. Data collection techniques were carried out using a questionnaire and a Likert scale of 1 to 5. The results of the study showed the diversity of the occupants' background which showed that the work of housing architects was considered to have a bit of disaster awareness and disaster awareness but not yet maximal. Therefore, it is very important for architects to be given an understanding and education about disaster awareness in order to produce work in the form of housing designs that can accommodate a sense of security for residents, especially in the face of disasters.

Keywords: Disaster Awareness, preparedness behaviour, housing.

1. Introduction

Natural disasters are an unavoidable phenomenon. Increasing the intensity of natural disasters in recent years requires people to increase their vigilance and preparedness in dealing with disasters [1], [2]. In 2002 in Cankiri, Turkey a disaster training program was held which focused on earthquake, flood and landslide disasters. This training includes disaster mitigation, preparedness and disaster response management. In this training it was seen that participants who came from the community had high hopes for disaster management. The community shows preparedness behaviour because they are worried about the disaster itself and the loss caused by the disaster [3]. Another effort made to improve disaster management is to utilize technology, namely social media [4].
With the potential for natural disasters that are difficult to predict, public awareness needs to be increased. Several studies have been conducted to examine efforts to instill disaster awareness into the community through education as well as studies on the importance of developing tools to increase disaster awareness [5]-[7]. The most important factor in disaster awareness is how people get disaster awareness education. This education will help the community in producing behaviour before a disaster, when a disaster occurs and after a disaster occurs [8].

For urban communities that mostly inhabit housing, this awareness is also important. The housing aspect that prioritizes security so that it is able to anticipate disaster risks is a choice for people living in the disaster area. So another important thing is do the architects who design housing designs also have that awareness? This study seeks to see whether there are differences in the views of residents of the work of architects who have awareness of the disaster by looking at various categories of housing residents' backgrounds.

2. Literature Review
The experience of disaster management during the Aceh tsunami provided insight into the importance of instilling disaster awareness for communities, especially those living in disaster prone areas [9]. A study in Puerto Rico explained that there are three important actors in an effective disaster management process, namely government officials who produce disaster information, media that send disaster information and the public who receive information so that they can act appropriately in the face of disasters [10]. In Australia, another element that is also important in dealing with disasters is nurses. Nurses who are ready and confident in responding to disaster events are influenced by experience, education and training. These three things are important factors to increase disaster awareness [11].

The concept in some of these studies produced a Disaster Awareness construct that was appropriate to the Indonesian context. Disaster awareness is closely related to housing as a place to live. Housing that is currently developing and in demand is housing with concepts and designs that are the work of architects. Considering the disaster-prone condition of the capital, have these architects implemented designs that accommodate disaster awareness?

Disaster Awareness in the context of this research is a public awareness of natural disaster events that can be seen from how disaster education is obtained so that it can be applied before a disaster occurs, when a disaster takes place or after a disaster occurs. The concept of disaster awareness is then implemented in a community assessment of the work of architects in various housing scattered in Jakarta.
3. Research Method

The research method was carried out using the Neuroresearch method through confirmatory analysis in the form of various categories of housing residents' backgrounds. Neuroresearch research method is a method that combines qualitative research and quantitative research [12]. The population taken is residents of housing complexes in Jakarta. Sampling technique using cluster random sampling as many as 743 respondents spread over 94 housing complexes. Data collection techniques are done by questionnaire and Likert scale 1 to 5. The research paradigm is presented in Figure 1.

4. Result

Normality test is an initial step that is carried out before carrying out further data processing. Normality test is done by Proportion Estimation Test from Blom with Quartil-Quartil Plot. The normality test results are as follows:

Based on Figure 2 it can be explained that the distribution of occupants' answers is proven to be normally distributed, namely the distribution of data tends to lead to the normal line, and also the distribution of data has no outlier. Likewise, if seen from the Detrended Normal Q-Q plot, it is evident
that the data distribution does not reflect the sine or cosine curves. So, it can be concluded that the answers of all residents have a normal distribu-
tion.

Next, an analysis of the trend of responses from the entire population from the study sample data was performed with confidence intervals at the significance level $\alpha<0.05$. The researcher draws a trend conclusion based on 5 (five) categories, namely residents assessing their housing design by architects: (1) not having disaster awareness, (2) not understanding disaster awareness, (3) somewhat understanding disaster awareness, (4) already having disaster awareness but not optimal, and (5) is very detailed and shows high disaster awareness. Based on the results of statistical analysis, the range of the lower bound up to the upper bound of 94.0064 to 95.3583 can be interpreted that the occupants consider that the architect of the housing inhabited already has a disaster awareness but not maximal significantly at $\alpha<0.05$.

The results of the study based on location and name of housing are as follows:
Residents of Greenwich Park, Alam Sutera and Pondok Indah Safari housing residents consider that the housing architects already have disaster awareness but are still not maximally significant at $\alpha<0.05$;
Resident of housing originating from the City of Serpong considered that the housing architects had a significant disaster awareness at $\alpha<0.05$;
Rating of male and female occupants equal to t-count of 0.371 is non-significant at $\alpha>0.05$. That is, male and female assessors alike consider that the housing architect in Jabodetabek already has a significant disaster awareness at $\alpha<0.05$;

Residents of housing with a master’s education (S2) rate that the housing architects in Jakarta already have a significant disaster awareness at $\alpha<0.05$; while residents with other educational backgrounds consider architects to somewhat understand having disaster awareness.

There is no difference in the rating of occupants who have lived <1 year or 1-3 years or 4-6 years or> 6 years equal to F of 0.448 is non-significant at $\alpha>0.05$. So, based on length of stay, they both considered that the housing architect in Jabodetabek already had a significant disaster awareness at $\alpha<0.05$.

The assessment of house occupants whose status is still in credit or has been paid in full is equal to a t-count of 0.371 is non-significant at $\alpha>0.05$. That is, residents who have houses with credit or paid status consider that housing architects in Jabodetabek already have a significant disaster awareness at $\alpha<0.05$.

5. Conclusion
The results showed that there were variations in the assessment of housing residents towards disaster awareness owned by architects. This condition provides some input for architects and institutions that produce graduates of architects. Understanding disaster awareness is an important concept that must be taught to prospective architects so that it can become one of the important considerations when architects design housing, especially housing in disaster prone areas. Architects who do not have disaster awareness will produce a good work but are not able to facilitate the needs of the community in dealing with disasters.

Therefore, the role of architects in designing safe and comfortable housing and housing that is able to anticipate disasters is important.

6. References
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