

EFFECTS OF DISASTER PREVENTION BROADCASTING FOR TSUNAMI ON HUMAN BEHAVIOR ON INITIAL REFUGE

ABSTRACT

This study focuses on broadcast communication in consideration of the refuge direction, pays its attention to direction selection in refuge early stages, and confirms experimentally influences, which broadcast has on refuge. Contents of broadcast consisted of “information without specific directions of refuge direction” and “information with specific directions of refuge direction”. Based on results of the experiments, following things became clear. Residents have an appropriate tendency to take refuge, when broadcasting contents included “information in considering of clue in decision on refuge direction”. Properly refuge was greatly related to easy to

walk, safety in street environment, and good view from crease bend point. When sign guidance and route guidance interlock, it is easy to take refuge. From the above knowledge, this study clarified that “information in considering of clue in decision on refuge direction” is taken disaster prevention broadcasting into consideration on initial refuge.

KEY WORDS: DISASTER PREVENTION, TSUNAMI, BROADCASTING FOR TSUNAMI, HUMAN BEHAVIOR, INITIAL REFUGE.

INTRODUCTION

When a tsunami occurred in an East Japan great earthquake, residents evacuated after hearing an imperative sentence “take refuge in heights immediately” by disaster broadcasting in Oarai-city, Ibaraki. Although 4-m tsunami attacked to Oarai-city, there were nobody killed in tsunami. Reason is considered that contents of broadcast urged refuge strongly. On the other hand, current broadcast communication has been transmitted with the sound. In future, broadcast will be digitized and it will become possible to develop various methods.

This study focuses on broadcast communication in consideration of the refuge direction, pays its attention to direction selection in refuge early stages, and confirms experimentally influences, which broadcast has on refuge. Contents of broadcast consisted of “information without specific directions of refuge direction” and “information with specific directions of refuge direction”.

EXPERIMENTAL METHOD

Although information which experimenter gave to participants is different, how to collect human evaluations and gaze places of course are based on same experimental methods. The participants equipped wearable camera to eyeball and measured gaze place by animation photography. At all bend point, participants evaluated based on five steps of measures “easy – hard to walk” “safety-danger” and “good – bad view”.

In an experiment 1, an experimenter gave participants “information without directions of refuge direction” and made participants evacuate. At first, the participants listened to a siren, which informed residents of earthquake occurrence and broadcasting contents from head phone and participants evacuated.

In an experiment 2, the experimenter gave the participants the intelligible information to go to



Figure 1: Sign for evacuation



Figure 2: Sign for Height above sea level

evacuation shelter. After the experimenter displayed a route to shelter on a map, a sign to a shelter was built on the street.

Based on results of the experiments, following things became clear. Residents have an appropriate tendency to take refuge, when broadcasting contents included “information in considering of clue in decision on refuge direction”.



Figure 3: Disaster Drill with evacuation direction

Properly refuge was greatly related to easy to walk, safety in street environment, and good view from crease bend point. When sign guidance and route guidance interlock, it is easy to take refuge. From the above knowledge, this study clarified that “information in considering of clue in decision on refuge direction” is taken disaster prevention broadcasting into consideration on initial refuge.



Figure 4- Route Map in an experiment 1



Figure 5- Route Map in an experiment 2

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BIBLIOGRAPHY

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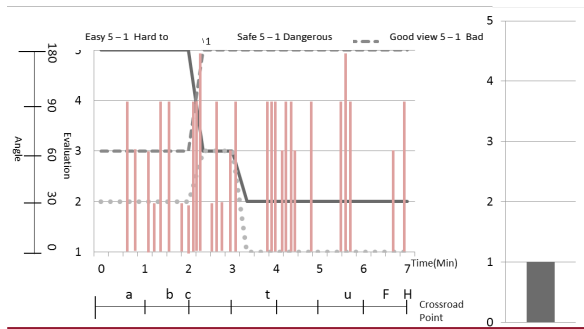


Figure 6- Results on Subject A by An experiment 1

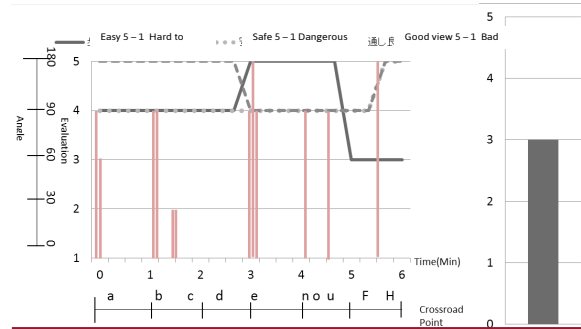


Figure 7- Results on Subject A by An experiment 2

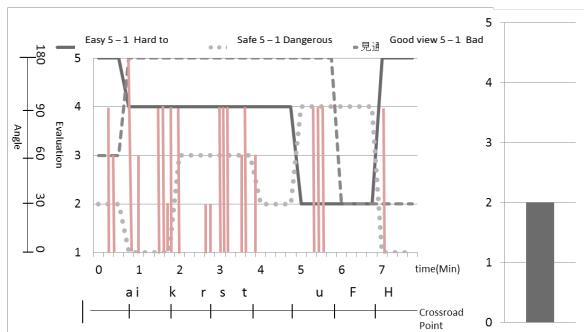


Figure 8- Results on Subject A by An experiment 1

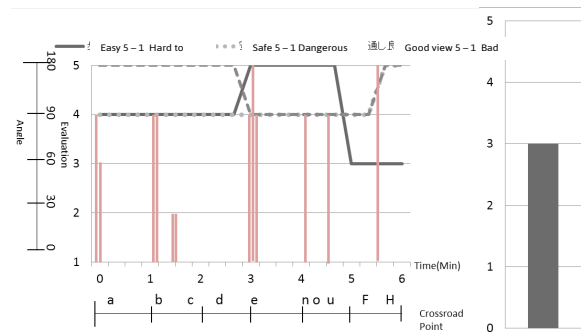


Figure 9- Results on Subject B by An experiment 2