

# The Impact of Psychosocial Factors on Disaster Preparedness of Foreign Residents in Japan

47-216759, Christina Fasser  
 Supervisor: Prof. Riki Honda

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## 1. BACKGROUND

Disaster preparedness is key to saving lives when a disaster strikes. Individuals, households, communities, or societies that possess a high level of disaster preparedness can respond effectively to disasters and are able to recover more quickly after the disaster has happened [1]. Research has identified that foreigners in Japan have lower disaster preparedness levels than their host country counterparts. [2]. Numerous studies have addressed this problem and investigated possible causes. Past research focuses on the lack of Japanese skills and information in foreign languages as a major barrier to disaster preparedness [3]. In addition, insufficient knowledge about disasters and correct response behavior have been identified [4]. However, Japan has put a lot of effort into multilingual services, and according to a study about disaster information conducted by the public sector, most area websites now provide multilingual disaster-related information [5]. Provided that many services offer multilingual information, language barrier and a lack of information in foreign languages cannot fully explain the lower preparedness levels. Moreover, even though it is a common belief that providing people with information will result in increased preparedness, past studies have not consistently supported this view. One might think that preparing for disasters seems to be a logical step or ingrained in our instinct, however, studies have revealed that it is the result of complex psychological evaluations [6]. Disaster preparedness is not a static phenomenon but is influenced by several factors. Among these, trust in one's community, and as a result in the information members provide, is a predictor of preparedness in previous studies. However, past studies have not covered the impact of psychosocial factors on the disaster preparedness of foreigners yet.

## 2. RESEARCH QUESTION AND HYPOTHESES

The main research question of this thesis is: **What factors influence the disaster preparedness of foreigners in Japan?** Disaster risk policies in Japan are inclusive of migrants. Despite this, it is unclear if foreigners in Japan feel included and see themselves as part of a community, in other words, if they feel a Sense of Community. Sense of Community, which indicates one's feeling of belonging to a community, has been recognized as having a positive effect on disaster preparedness [7]. In comparison to native Japanese, it can be assumed that an absence of a tight-knit community is a characteristic that many foreigners in Japan share. It is hypothesized that feeling connected to social networks positively affects foreign residents' disaster preparedness behaviors. In addition, it is expected that low Japanese language proficiency and a lack of

multilingual information can't fully explain why preparedness levels are low. Thus, the impact of Sense of Community and its relationship with past factors will be analyzed.

## 3. METHOD

To answer the research question, an online questionnaire survey about the personal disaster preparedness of foreign residents in Japan is utilized. The survey includes questions to measure disaster preparedness, as well as factors identified by past research about foreigners in Japan (Language Proficiency, Disaster Experience etc.), and demographic factors deemed important by literature about preparedness in general, for example, Age or Educational Background. When it comes to the psychosocial factors (Sense of Community, Self-Efficacy etc.), this thesis draws inspiration from the Community Engagement Theory. This theory analyses how characteristics of the relationships among community members and between them and civic risk management agencies play interdependent roles in predicting preparedness [8]. Qualitative (N=58) semi-structured interviews and quantitative (N=430) survey methodology using structural equation modeling, multi-regression analysis, and correlation analysis are implemented to identify the impact of the above-mentioned factors on preparedness, as well as the correlation between the variables.

## 4. RESULTS AND DISCUSSION

The results are in line with the hypotheses.

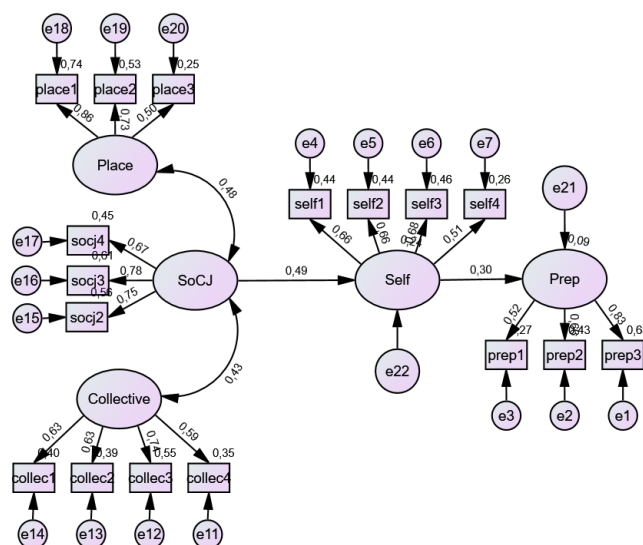


Figure 1: Pathway of Sense of Community- Holistic Model

Sense of Community influences Self-Efficacy, which positively impacts disaster preparedness. This is in line with past literature, which defined Self-Efficacy as one of the most crucial and consistent drivers of individual preparedness [9]. This finding suggests that living in environments that promote strong community relationships can assist individuals to feel more confident in their ability to respond and prepare adequately for disasters. An explanation for this phenomenon is that social persuasion, for example in the form of encouragement, is one way of increasing people's beliefs about their capabilities and decreasing their self-doubt [10].

The interview also showed that involvement in a community can trigger preparedness by making the disaster risk feel more imminent and important to the individual ("If it affects our friends, then we should know too."), and giving people more opportunities and motivation to increase their awareness and knowledge about disasters and preparedness. This indicates that Sense of Community could possibly make up for a lack of disaster education/training or disaster experience, since individuals can obtain information through their community members, without having to experience or learn about disasters themselves. From this, it can be referred, that people in tight-knit communities can prepare, without fully understanding the risk or disasters. Worrying about the risk was not related to increased preparedness behaviors. Thus, involvement in the community, rather than a rational cost-benefit analysis is influential in deciding to prepare. In addition, a correlation between a Sense of Community and Outcome Expectancy, and Responsibility can also be anticipated. If individuals see that being prepared was beneficial for their community members in regard to natural disasters, it can further a positive outcome expectancy. Furthermore, if people feel attached to their community, they are more likely to want to fit in and feel more responsible to adapt to Japanese ways of living. Therefore, Sense of Community can be said to have a positive impact or sometimes is even able to compensate for factors that have been shown to improve preparedness.

Foreigners in this sample can easily prepare but need a trigger to start being motivated to prepare. The main Barriers identified by past research about foreigners in Japan were not supported. In contrast to past studies, a lack of multilingual information regarding disaster preparedness was not reported. However, difficulty in accessing information was correlated with lower disaster preparedness in the regression analysis. This is not because of a language barrier, since Japanese language proficiency had no significant impact, but due to a lack of knowledge about where to obtain information. A feeling of Responsibility and a positive Outcome Expectancy were important factors necessary to start the preparedness process. In addition, experiencing a disaster in Japan or abroad, especially a severe one, as well as disaster education/training and marital status, are factors that were associated with better preparedness.

## 5. CONCLUSION

The primary objective of this thesis was to find out which factors encourage or hinder preparedness for foreigners in Japan. Furthermore, two hypotheses were tested. The first one is if low language proficiency and lack of information really present the main barriers. The second tests if and how Sense of Community impacts preparedness. In addition, other factors and the correlation between those factors were tested as well. Based on a quantitative and qualitative analysis of the online survey results, it can be concluded that language proficiency and lack of information are not hindering foreigners from preparing. Preparing was described as easy, however many lacked the motivation to do so. This research highlights the multifaceted importance of inclusion in communities for disaster preparedness and shows that the exclusion of foreigners can heighten their vulnerability. As for the limitation of this research, the bias of the sample when it comes to education and country of origin needs to be mentioned. The ratio of highly educated people, as well as people from western countries, was higher than it is the case for the foreign population in Japan. Even though meaningful results could be obtained despite this bias, future research should aim for a sample that more accurately captures the characteristics of foreign residents in Japan.

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