

## Exploratory Factor Analysis of Natural Disaster Preparedness Awareness of Thai Citizens

**Authors :** Chaiyaset Promsri

**Abstract :** Based on the synthesis of related literatures, this research found thirteen related dimensions that involved the development of natural disaster preparedness awareness including hazard knowledge, hazard attitude, training for disaster preparedness, rehearsal and practice for disaster preparedness, cultural development for preparedness, public relations and communication, storytelling, disaster awareness game, simulation, past experience to natural disaster, information sharing with family members, and commitment to the community (time of living). The 40-item of natural disaster preparedness awareness questionnaire was developed based on these thirteen dimensions. Data were collected from 595 participants in Bangkok metropolitan and vicinity. Cronbach's alpha was used to examine the internal consistency for this instrument. Reliability coefficient was .97, which was highly acceptable. Exploratory Factor Analysis where principal axis factor analysis was employed. The Kaiser-Meyer-Olkin index of sampling adequacy was .973, indicating that the data represented a homogeneous collection of variables suitable for factor analysis. Bartlett's test of Sphericity was significant for the sample as Chi-Square = 23168.657, df = 780, and p-value < .0001, which indicated that the set of correlations in the correlation matrix was significantly different and acceptable for utilizing EFA. Factor extraction was done to determine the number of factors by using principal component analysis and varimax. The result revealed that four factors had Eigen value greater than 1 with more than 60% cumulative of variance. Factor #1 had Eigen value of 22.270, and factor loadings ranged from 0.626-0.760. This factor was named as "Knowledge and Attitude of Natural Disaster Preparedness". Factor #2 had Eigen value of 2.491, and factor loadings ranged from 0.596-0.696. This factor was named as "Training and Development". Factor #3 had Eigen value of 1.821, and factor loadings ranged from 0.643-0.777. This factor was named as "Building Experiences about Disaster Preparedness". Factor #4 had Eigen value of 1.365, and factor loadings ranged from 0.657-0.760. This was named as "Family and Community". The results of this study provided support for the reliability and construct validity of natural disaster preparedness awareness for utilizing with populations similar to sample employed.

**Keywords :** natural disaster, disaster preparedness, disaster awareness, Thai citizens

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