Table 3. Studies of Natural Disaster Preparedness in Elderly

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| **Author** | **Settings** | **Samples** | **Sampling Method** | **Research Purpose** | **Research**  **Design** | **Instrument** | **Major Findings** |
| [(Hattori et al., 2021)](https://doi.org/10.1017/dmp.2020.39) | Japan | 673 participants, collected from October 2014 to June 2017, were ages 75 and older | Convenience sampling | To clarify the characteristics of older adults and to examine the preparedness associated with disaster preparedness. | Cross Sectional Study | Researchers created a questionnaire with sections on evacuation, community preparedness, family preparedness, and emergency goods | Inadequate disaster preparedness and great vulnerability occur among residents aged 75 years and over who live in high-risk areas for earthquake disasters. Factors causing their low preparedness in facing disasters include cognitive impairment, being female, and living alone. |
| (Bell et al*.* (2021b)) | USA | 2,256 participants aged 50–80 years were selected by the National Poll on Healthy Aging (NPHA) online in May 2019. | Random and stratified sampling | To investigate predictors of emergency readiness and confidence in the ability to deal with disaster events among older Americans | Cross Sectional Study | Researchers created a questionnaire based on major recommendations from top disaster response agencies such as the Federal Emergency Management Agency, the American Red Cross, and the Centers for Disease Control and Prevention | Especially for those who live alone and use mobility aids or medical equipment that requires electricity, identifying at-risk groups is useful in supporting preparedness. |
| Bell et al*.* (2021a) | USA | Five focus groups were held in January, October, and November 2019 with home-based care providers (n = 25) who provided in-home care during Hurricanes Irma and Harvey | Convenience sampling | To identify individual and community-level support needs of older adults after a disaster based on home-care providers. | Descriptive qualitative study | A questionnaire based on previous conceptual work on disasters, home care and aging, and information made by researchers | Home-based care providers acknowledged the challenges of responding to and recovering from a disaster, such as encouraging individual preparedness, preserving continuity of care, and obtaining complex governmental assistance |
| [(Boonyaratkalin et al., 2021)](https://doi.org/10.1017/dmp.2020.27) | Thailand | 134 older adults | Purposive sampling | To explore the association between flood preparedness literacy and behaviors, as well as flood preparedness-related factors | Quantitative descriptive correlational study | The researcher created a questionnaire that included demographic characteristics, the Charlson Comorbidity Index of Charlson et al. (2008), the social support for flood preparedness questionnaire from Schaefer, Coyne, and Lazarus (1981) and translated into Thai by Hanucharurnkul (1988), and the flood preparedness literacy and behavior questionnaire | Flood preparedness behavior is correlated with the level of flood preparedness literacy. Hearing ability, marital status, social support, and instrumental activities in daily life are factors related to flood preparedness literacy. |
| [(Cong et al., 2022)](https://doi.org/10.1017/dmp.2020.194) | USA | 223 respondents who had a household emergency plan before the tornadoes in 2023 | Random sampling | To investigate the effectiveness of household emergency plans during tornadoes and the attributes of the plan for different age groups. | Cross-Sectional Study | A questionnaire on the effectiveness of the household emergency plan in response to tornadoes made by researchers. | To increase the comprehensiveness of plans and encourage family discussions, service programs for older adults should be adapted. The planning process for older adults is more important than for young adults. |
| [(Engelman et al., 2022)](https://doi.org/10.3390/ijerph19042156) | In Puerto Rico | 22 senior-or disabled-serving CBOs | Not determined | To gain insight into the emergency preparedness role that CBOs play, as well as their challenges as an aging, disabled and mentally ill population faces Hurricane María and COVID-19. | Descriptive qualitative study | A questionnaire modified from a CDC-funded emergency preparedness initiative for the deaf, which investigates the emergency preparedness capabilities of CBOs as well as state and territory government authorities | Puerto Rican community-based organizations (CBOs) play an important role in EPR or disability-inclusive disaster risk reduction (DiDRR) for areas with high medical and functional requirements |
| [(Matsuo & Hirano, 2021)](https://doi.org/10.1111/phn.12911) | Japan | 40 participated in disaster preparedness education and 500 people from the Basic Resident Register | Systematic sampling method | To clarify the effect of regional disaster preparedness education on efforts to prevent the isolation of older people in a disaster. | quasi-experimental study | A questionary made by researchers. | Disaster preparedness education invokes perceives it as a community issue and encourages individuals to support others. |
| [(Wagle et al., 2020)](https://doi.org/10.1017/dmp.2019.154) | Nepal | 362 older adults | Multi-stage sampling technique | To investigate the factors influencing HQL among older persons residing in the Lalitpur District of Nepal | Not determined | Questionnaires were used to interview | Worse HQL was demonstrated by the majority of respondents. Multivariate analysis found the impact of factors on HQL: functional status, PTSD, chronic illness, social support, injury, age, and accessibility to resources. |
| [(Fatmah et al., 2021)](https://doi.org/10.3390/ijerph18073686) | Indonesia | 33 Subjects | Not determined | The purpose of this study is to see how a broccoli-soybean-mangrove meal bar affects the weight of older adults after natural disasters | Pre-experimental Study Design | The assessment consists of height and mid-upper arm circumference (MUAC), BADL (Basic Activity Daily Living), IADL (Instrument Activity Daily Living), and MMSE (Mini-Mental State Examination) tools. | Balanced nutrition education for the elderly substantially increases the elderly's knowledge about nutrition. After consuming the broccoli-soybean-mangrove food bar, there was an increase in body weight of 0.2 kg, energy (291.9 kcal), carbohydrates (31.1g), fat (15.6g), and protein (6.1g). |
| [(Fatmah 2022)](https://doi.org/10.4102/jamba.v14i1.1262) | Indonesia | 30 participants | Purposive Sampling | To determine the impact of disaster preparedness training on knowledge of flood disaster preparedness and management in households with elderly members | Quasi-experimental Study Design | The pre-posttest questionnaire included the following items: sociodemographic factors, general knowledge of natural hazards, particular knowledge of flood, and older people's preparedness practices before, during, and after the flood | General knowledge about disasters and floods has undergone significant changes. Disaster preparedness practices are good, reflected in the actions taken before, during and after a disaster. |
| [(Fletcher et al., 2021)](https://doi.org/10.1017/dmp.2021.276) | USA | 139 rural community-dwelling older adults rely on social support respondents | Purposive Sampling | Understanding how older persons in Jackson County, Florida, prepare for and deal with the aftermath of a natural disaster | Not determined | A questionary made by researchers. | To prepare for and recover from disaster-related events, older adults living in rural areas rely on social support, community organizations, and trusted disaster relief agencies. |
| [(Kim et al., 2022)](https://doi.org/10.1186/s12955-022-01944-8) | Korea | 312 older adults living in eight villages of a district | Proportional Quota Sampling | To investigate the HRQOL and associated characteristics in older persons who have experienced the earthquake | Cross-sectional Study | HRQOL was evaluated using the abbreviated brief version of the World Health Organization (WHO) questionnaire (WHOQOL-BREF). | Improved HRQOL is linked to reduced depression, increased community resilience, social support, and disaster readiness |
| [(Kwan & Tam, 2021)](https://doi.org/10.3390/su13094618) | Hong Kong | 12 participants | Purposive and Snowball Sampling | To investigate the ageing in place (AIP) experiences of older individuals who live in Tai O Village, a disaster-prone rural coastal neighborhood in Hong Kong | Qualitative Case Study Research Design | Semi-structured interview | AIP plays a multifaceted role in sustaining and advancing their activities. Local community-based organizations play a crucial role in providing social assistance during disasters. More support and resources are required for mitigation efforts. Despite AIP support and catastrophe relief, older adults may not seek assistance |
| [(Luna & Pingol, 2020)](https://www.apjmr.com/wp-content/uploads/2020/03/APJMR-2020.8.1.13.pdf) | Filipina | Information and Communication Technology Professionals consisted of 20 samples, 30 rescue professional participants from the City of NDRRMO, BFP and Red Cross | Non-probability Sampling | To develop “HELP BRO”: A Mobile Application for Calamities and Disaster | Descriptive and developmental method | Information and Communication Technology experts, and rescue professionals coming from the City NDRRMO, BFP and Red Cross evaluate the mobile application | The mobile application is well-functional, reliable, efficient, easy to maintain, and portable so it can help rescue teams to find the exact location of victims and provide precise assistance. |
| [(Fathoni et al., 2020)](https://doi.org/10.20473/jn.v15i1Sp.19005) | Indonesia | 120 participants | Purposive sampling | To raise awareness and society's preparedness for the Mount Bromo eruption | Correlative analytic observational design and cross-sectional approach | online questionare | An evaluation of the application's UI, the information it delivers, and the features it provides reveals that it is really useful and offers a fresh perspective.   The smartphone application, as a source of information on Mount Bromo, is a medium that the general public and tourists may use to learn about the volcano's eruptive activities |
| [(Yarmohammadian et al., 2023)](https://journals.lww.com/jehp/fulltext/2023/05310/elders_in_natural_disasters__community_based.153.aspx) | Iran | 17 participants | Not determined | To provide a complete training program that addresses goals, objectives, time, target group, syllabus, educational approach, budget, and teaching techniques for CBOs interested and serviced by elders in disasters | Qualitative Study | An interview guide was provided by researchers | The outcome of an educational program and relief skills that CBHO stakeholders must acquire before helping elders in a disaster can help them reduce the negative effects of disasters on the aged |
| [(Adepoju et al., 2023)](https://doi.org/10.3390/ijerph20010401) | USA | 522 individuals represented | Not determined | To analyze correlates of older persons' readiness for catastrophes and investigate distinctive disparities between African American and Hispanic older individuals | Not determined | An electronic survey | About 6 out of 10 older adults consider themselves unprepared to face disasters. Medicare coverage was positively associated with survival and planning measures. Income level and previous experience with disasters are associated with survival measures in the African American population. |
| [(Sawangnate et al., 2022)](https://doi.org/10.3390/w14081268) | Thailand | 736 elderly | Simple Random Sampling | To assess flood-prone areas and the level of knowledge regarding flood disaster situations among the elderly in Bangkok, Thailand, as well as analyze the SWOT of flood preparedness | Case Study Design | Expert interviews and a community survey | SWOT analysis found that many elderly people have low digital and media literacy and limited experience using information technology for flood preparedness. |
| [(Yulianto et al., 2020)](https://doi.org/10.1016/j.ijdrr.2019.101457) | Indonesia | 30 participants | Non-Probability Samping | To find out about communication technology when facing the dangers of natural disasters in Indonesia | Single Case Study Design | in-depth interviews | Some mobile technology devices, such as two-way radio systems and satellite phones, are reliable devices in emergency situations |
| [(Nakai et al., 2022)](https://doi.org/10.3390/ijerph19159694) | Japan | 14 participants | Not determined | To provide medical information in disaster situations, and present initial test results of its use in Nankoku, Japan | Not determined | Based on mobile Application | Disaster response solutions have proven beneficial in connecting individuals with government offices thereby enabling a consistent flow of information from patient details, supply inventory, simulation, training, and response during disasters. |