Investigating Older Adults' Attitudes towards Crisis Informatics Tools: Opportunities for Enhancing Community Resilience during Disasters

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ABSTRACT

The world population is projected to rapidly age over the next 30 years. Given the increasing digital technology adoption amongst older adults, researchers have investigated how technology can support aging populations. However, little work has examined how technology can support older adults during crises, despite increasingly common natural disasters, public health emergencies, and other crisis scenarios in which older adults are especially vulnerable. Addressing this gap, we conducted focus groups with older adults residing in coastal locations to examine to what extent they felt technology could support them during emergencies. Our findings characterize participants' desire for tools that enhance community resilience-local knowledge, preparedness, community relationships, and communication, that help communities withstand disasters. Further, older adults' crisis technology preferences were linked to their sense of control, social relationships, and digital readiness. We discuss how a focus on community resilience can yield crisis technologies that more effectively support older adults.

CCS CONCEPTS

• **Human-centered computing → Human computer interaction (HCI)**; *Empirical studies in HCI*.

KEYWORDS

crisis informatics, older adults, aging population, ageing, emergencies, disasters, critical events, mobile applications

1 INTRODUCTION

By 2050, the number of adults aged 65 and above in the world will be 1.5 billion, double the numbers in 2017 [80]. In the United States, this shift will increase the median age by ten years [60]. The increase in the older adult population will indirectly increase the number of at-risk populations during emergencies, since older adults are more likely than others in a community to have multiple chronic conditions, limitations in daily activities, and disabilities that impede their ability to communicate about, prepare for, and respond to a natural disaster [69]. For instance, older adults made up 75 percent of the fatalities in Hurricane Katrina [18], and 73 percent of the deaths from the October 2017 Wildfires in Northern California [8, 50]. Additionally, in the recent COVID-19 pandemic, mortality rates among adults aged 60 and above were the highest among age groups [14], not only due to results of illness [16], but also resulting from isolation and mobility challenges [12, 93].

While there has been significant progress toward understanding the disaster risk profile among older adults [20, 79], there are significant research gaps that must be addressed in order to continue advancing support for older adults in times of crisis. For example, few studies consider the abilities and experiences of older adults living independently in community settings (i.e., community-dwelling older adults) [20]. Additionally, most research does not highlight the active role older adults play in making independent decisions pertaining to their safety [20, 96]. Instead, much of the existing literature focuses on a limited view that considers older adults as passive victims in emergencies [20].

Similar to how current literature disregards the active participation of older adults in crisis response, to the best of our knowledge,