Age-related factors in technological adoption

Little evidence was found for a specific impact of age or generation-related cultural factors in technology adoption specifically in case of a disaster. Further research appeared to be necessary and as such, a case study approach was used. On example found was in the aftermath of the Tuscaloosa Tornado, Stokes and Senkbeil (2016) found that if Facebook was used ubiquitously in the recovery phase by respondents of all ages and demographics in general, Twitter was still mainly used by aged between 19 and 24. Despite the previous habits, older people adopted Facebook rather than Twitter. Despite previous habits, older people adopted Facebook rather than Twitter, suggesting that during a disaster the generation effect played a significant role in technology adoption and reinforced the previous divide. Nevertheless, older people have special needs that can be addressed thanks to technology and crisis management tools which can be adapted to better suit these needs, as was the case in Italy during heat waves. Most studies have shown elderly people as one of the social groups being most at risk during a heat wave (Morabito, Crisci, et al. 2012; Robine et al. 2007). The highest vulnerability of the elderly to heat is related to physiological, health and socio-economic status (Tan 2008). After the disastrous effect of the 2003 heat-wave, Tuscany developed a special program called "Active Surveillance of the Frail Elderly" within the context of the "MeteoSalute" Project in order to address this specific vulnerability. The regional Heat-Health Warning System (HHWS) was developed with the aim of preventing the consequences of excessive heat on the health of elderly people (Morabito, Crisci, et al. 2012). Targeting the elderly meant to use a wide range of technologies to alert them, i.e. technologies that elderly are susceptible to use are used. The communication system includes a set of technology. Traditional media like television and a radio message are used since they allow reaching a population at large, and radio is a resilient technology. Hotline numbers and telephone helplines are normally available as the elderly are used to them. Automatic telephone answering devices are used to reduce the number of telephone calls to the forecast office. Because more and more elderly use the internet and because it is an efficient way to target specific/specialized users such as relevant professionals, specific web communication was also implemented. Online social media and networking services (i.e. Twitter, Facebook) and mobile/desktop applications (Messengers) dedicated to personal communication (i.e. WhatsApp, Telegram) represent very useful tools to inform rapidly and extensively the local population and heath care professionals about a heat-warning and to provide information on how to behave. They may not be used so much by elderly but could reach their relatives which could then help them in case of heat wave. More specifically, e-mail alert systems and SMS allow alarms to be sent to a list of individuals, including emergency managers. These automatic messages can specifically target the frail elderly with information tailored to their specific needs. Finally, the communication process also includes non-technological tools such as leaflets that contain general advice for the population and specific advice for nursing-home managers, also translated in different languages most widely spoken in the country and languages from which most of in-home-nurses speak. They are distributed at beginning of the summer via health centres, and other places where vulnerable people may be. Outdoor and indoor public information display can be used to spread information about heat waves, and based upon a precise knowledge of places frequented by elderly and health monitoring and wearable devices that provide instantaneous data or

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derived indices concerning the actual microclimate and physiological conditions are also used. This Italian case study is more detailed in Annex 1 of the original source document. It is a good example of how knowing the specific behaviour of a generation regarding their technology use can help improve crisis management. Because elderly still mainly use traditional media but are also active on the Internet, the communication strategy must include a wide set of tools. It is also useful when the information targeted at this specific public can be gathered without effort from their side. Thus providing information in places they frequent often by using public information displays can be seen as a good way to reach them.

Note: See source document for full reference.

Applicable to:

Stakeholders: Age-related roles

Disaster Phases: Response

Types of Actors Concerned: Non-active citizens

Hazards: Natural hazards, Man-made non-intentional hazards or emergency situations, Man-made intentional hazards

Recommendations:

- The use of new technologies (e.g. Bluetooth) can improve communication strategies in disaster management situations
- Use cultural factors to improve the effectiveness of disaster communication

Source

Deliverable D3.1 "Cultural factors and technologies" (page 41)

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