

Wildfire Risk Perception and Communication in Disadvantaged Communities: Eastern Coachella Valley, Southern California.



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Disadvantaged, geographically isolated communities in Eastern Coachella Valley (ECV) face recurrent wildfire threats and persistent barriers to preparedness including language challenges and limited government support. From February to April 2023, researchers surveyed 115 residents in four unincorporated ECV communities with recent wildfire experience. Nearly all respondents identified as Hispanic/Latino; 60% reported annual household incomes under \$25,000. The study analyzed the associations between sociodemographic predictors and communication preferences.

Key Takeaways & Implications:

- **Preparedness gaps and communication barriers:** Only 9.6% of participants had signed up for wildfire alert messages, and only 37.4% had received health advice or air quality notifications during wildfires. Language barriers were identified as obstacles, with 60.5% indicating language could prevent understanding of messages.
- **Safety awareness:** Participants with higher safety awareness and those participating in social or community groups at least monthly were significantly more likely to perceive wildfire risks appropriately. These were the two strongest predictors of risk perception.
- **Communication preferences vary by demographics:** Short messages were the most preferred information style (78.3%). For communication channels, television (70.4%) and radio (67.8%) were most favored overall. Young adults preferred social media (73.3% vs 27.8% of elderly), while elderly participants relied more on doctors for information. Agricultural workers depended primarily on mobile texts and personal observations.
- **Prior wildfire experience had no effect:** Contrary to other studies, previous wildfire experiences showed no significant associations with risk perception, possibly due to desensitization from frequent exposure.

MANAGEMENT IMPLICATIONS

- **Address preparedness gaps through proactive outreach:** Increase the low wildfire alert enrollment through door-to-door campaigns and community events, while developing Spanish-language materials to overcome the language barriers.
- **Build safety awareness and formal community networks:** Develop targeted educational campaigns that increase individual safety awareness while supporting formation of community groups and relevant activities, as these were strong predictors of appropriate risk perception.
- **Implement demographic-tailored communication strategies:** Develop short messages and deploy multiple communication channels—including television/radio, social media, healthcare providers, and mobile texts—to reach diverse demographic groups through their preferred, trusted, and linguistically appropriate sources.
- **Strengthen county-community partnerships:** County governments should enhance engagement with unincorporated communities through Spanish-language educational sessions, handbooks, and training at accessible venues, as these areas currently receive minimal interaction from emergency services.

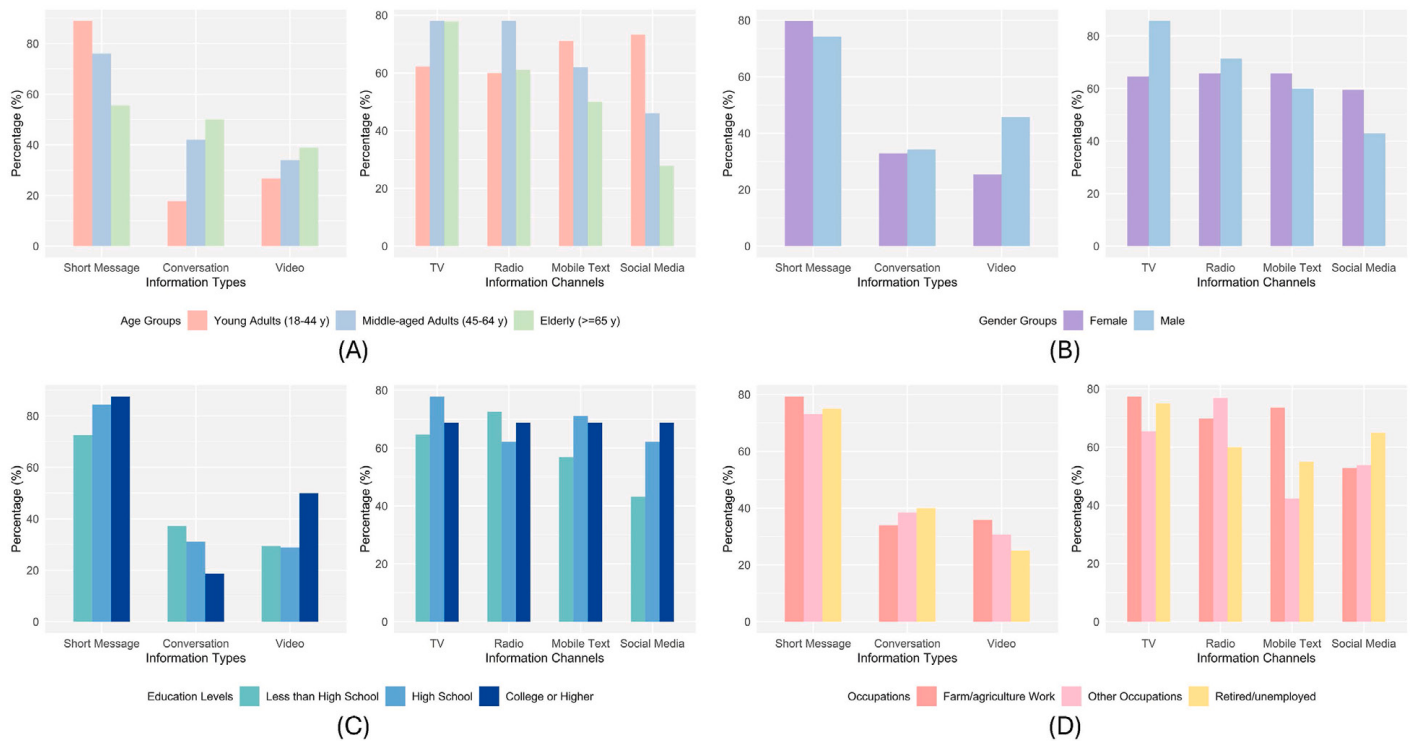


Figure 1. The preferences for the most popular information types and channels among study participants stratified by age (A), gender (B), educational attainment (C), and occupation (D).

Additional Information

This brief is based on the following article:

Jiao, Anqi, Anna Lisa Vargas, Yuliya D. Gluhova, Kathyryne Headon, Lilia Rangel, Sara Abdallah, Erika C. Ramsey, et al. 2025. Wildfire Risk Perception and Communication in Disadvantaged Communities: Insights from Eastern Coachella Valley in Southern California. *International Journal of Disaster Risk Reduction* 117: 105186. <https://doi.org/10.1016/j.ijdr.2025.105186>.

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