Research Poster

Informed and Prepared: An Analysis of Information Sources Texas Residents Used During Winter Storm Uri

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Introduction/Need for Research

Disaster communication is an essential piece to ensuring residents are fully informed and aware of future inclement weather, as well as how to ensure safety. Winter Storm Uri impacted many Texas communities throughout February 2021, resulting in a record-breaking number of residents without power (Doss-Gollin, 2021; Glazer et al., 2021). Disasters of any kind cause major impacts to communities and their surrounding areas; however, organizations can help prepare the community to help address and mitigate complex problems (Liu et al., 2020). Prior literature has shown these organizations assist the public with managing risk, communicating pertinent information and ensuring residents understand the potential consequences of the disaster with minimal confusion or uncertainty (Liu et al., 2020). One such organization, Extension, is a relevant, quality source to seek during disaster communication and long-term recovery (Kerr et al., 2018). Residents have identified Extension as a trustworthy, credible source with important information that can be used to prepare or recover from disasters (Boteler, 2007; Cathey et al., 2007; Eighmy et al., 2012; Kerr et al., 2018).

The American Association for Agricultural Education (AAAE) national research agenda discussed how the impacts from the rapidly changing climate have led to a major shift in weather patterns (Andenero et al., 2016). As a result, larger and more severe floods, hurricanes, tornadoes, droughts, and earthquakes are likely to have significant negative impacts and on communities (Andenero et al., 2016). We need to provide information to the public to educate them during each stage of the disaster cycle: from mitigation, preparedness, response, and recovery (FEMA, 2022). The purpose of this study is to identify the information sources and how often Texas residents used them to receive information and communication about Winter Storm Uri to inform future strategic, disaster communication practices.

Theoretical Framework

This study was guided by the Media Dependency Theory, which explains the process of information seeking and the public's dependence on varying types of media for information (Ball-Rokeach & DeFleur, 1976). This theory posits individuals seek out media sources to meet and fulfill their needs, with increased information-seeking during uncertain times. In the case of a natural disaster, the receiver is dependent on the media to receive information about hazards, potential threats, severe impacts, and protective action guidance. This study is one step toward understanding where the public seeks out information during natural disasters and how organizations, like Extension, can strategically communicate during disaster phases.

Methodology

To fulfill the purpose of this study, an online Qualtrics survey was distributed to Texas adults. We used a non-probability, opt-in sample to gather responses from 483 respondents who matched census characteristics for age and community type (rural, urban and suburban). To understand information seeking behaviors, the respondents were asked to answer how often they sought out 17 types of information channels during Winter Storm Uri (1 = *I didn't use this source,* 2 = *1-2 times per month,* 3 = *Once a week,* 4 = *2-6 times per week,* 5 = *Once daily,* 6 = *More than once daily).* The data were analyzed using descriptive statistics via SPSS 28.

Results/Findings

Our results reflected the sources Texas residents used to seek out information regarding the disaster. The information source that was used multiple times daily by Texas residents was the National Weather Service ($M = 4.07$, $SD = 1.99$). Respondents also indicated they used television news ($M = 4.05$, $SD = 2.02$) and text alerts and/or emergency alerts ($M = 3.42$, $SD = 2.15$) frequently to receive pertinent information about the storm.

Table 1

Information Sources Sought Out by Texas Residents' During Winter Storm Uri

Information Source	*M*	*SD*
National Weather Service	4.07	1.99
Television News	4.05	2.02
Text Alerts and/or Emergency Alerts	3.42	2.15
Friends, Family and Neighbors	3.22	1.97
Websites	3.02	2.09
Facebook	2.98	2.13
Radio News	2.88	2.07
Local Officials (Fire department, local police, etc.)	2.65	1.99
Utility Companies	2.65	1.96
Government Press Conferences	2.50	1.94
Newspapers	2.10	1.69
Instagram	2.07	1.81
Twitter	1.81	1.47
Community Public Meetings	1.71	1.47
TikTok	1.65	1.47
County Extension Agents	1.60	1.36
Other (please specify)	1.58	1.34

Conclusions, Implications, and Recommendations

Effective disaster communication is an essential part of the response and recovery steps in the disaster cycle (Kerr et al., 2018). Ensuring information is being communicated through credible and accessible sources that are desirable for residents is important to note. Therefore, based off prior literature, research should seek to determine the best placement and distribution of information in order to prepare the public for the disaster situation. Specifically, further research within Extension is necessary in order to not only deliver disaster communication, but to connect with the residents within the area. Additionally, Extension communicates science-based information and has the best understanding of the nature of natural disasters that will impact their region. This highlights the needs for research into how Extension communication can be used during times of crisis. Further research should also focus on the content individuals are seeking out and if there are any variations due to demographic characteristics.

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