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Trust and Community Contexts: An Integrative Study of Hazard Preparedness Influences in Hampton Roads, Virginia.

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Introduction

While many efforts have successfully enhanced capacity and preparedness across government levels, the same cannot easily be said for individual households, communities, and various organizations. (FEMA, 2014; FEMA, 2017; FEMA, 2019). This shortcoming highlights the need to examine the factors that influence community preparedness, strategies to increase systematic readiness, rebuild institutional trust across communities, and enhance service delivery capacity for governmental and community resilience (Robbins, 2016; Paton & McClure, 2013; Lindell & Perry, 2012).

The purpose of this study is to provide a community-level understanding of factors that influence hazard preparedness, with policy implications that will be relevant to the emergency management and preparedness planning agencies and researchers.

This study provides significance to the emergency management and preparedness planning field and overall preparedness efforts by providing preliminary insights into the unique needs of coastal communities and how members make decisions to protect themselves. It also provides insights on how to tailor information appropriately, empower communities, and improve preparedness outcomes (Wachinger et al., 2013; Lindell & Perry, 2012; Paton, 2006).

This study seeks to answer the following focal research questions: *What is the relationship between community contexts and social trust in evacuation and vaccination decisions? How does social trust impact Covid-19 and flooding risk perceptions and self-protective actions?*

Methods and Materials

An integrative or mixed methods approach will be used in this study. Findings will be compared from data analyses to determine whether they confirm or disconfirm each other, and to integrate them to generate "deep structure" conclusions (Castro et al., 2010; Creswell & Creswell, 2018).

Secondary quantitative data used will be from the 2020 Virginia Department Emergency Management (VDEM) survey data on COVID-19 evacuation and evacuation risk perception study (Behr et al., 2020) and the 2020 and 2021 Life in Hampton Roads 2021 Survey Report (Vandecar-Burdin et al., 2020 & 2021). These data will be analyzed via statistical analysis to investigate the relationships between the predictor and outcome variables in evacuation or vaccination decisions. The variables of interest and data sources are outlined in Table 1 below.

The study will also use a focus group data collection method with distinct groups of stakeholders: civil authorities involved with emergency management and preparedness planning and residents. This data collection method will be guided by an open-ended interview protocol that guides the conversation and provides a starting point for the interview (Hays & Singh, 2012).

Population and Sampling

The sample population that will be examined in this study will be primarily from the greater Hampton Roads area: residents and public officials involved in preparedness planning in the region. This will help propagate a multiplicity of perspectives and voices around the phenomena of interest (Hays & Singh, 2012).

For the focus groups, a combination of purposive and snowball sampling methods will be used to secure study participants. Purposive sampling will be adopted as an intentional attempt to ensure that participants invited to the study are eligible for the study. Snowball sampling will be used in conjunction with the purposive technique to bring in other participants who are directly involved with the phenomenon of trust and will be able to provide additional insight to the study (Hays & Singh, 2012).



Figure 1: Community Hazard Preparedness Influences Source: Adapted from Lindell & Perry (2012).

Literature Review

Several studies have communicated the impact of trust across communities on preparedness and recovery efforts (Mizrahi et al., 2019). Trust is critical to the functioning of any society: it is the foundation of relationships among individuals, groups, and other components of a society (Kwon, 2019; Robbins, 2016). Lack of trust in how agencies manage risk can amplify community concerns and increase public hesitancy to adopt preventive and avoidant behaviors in the face of hazard events that may cause the loss of life or injury, property damage, social and economic disruption, or environmental degradation (Storopoli et al., 2020; McComas 2004).

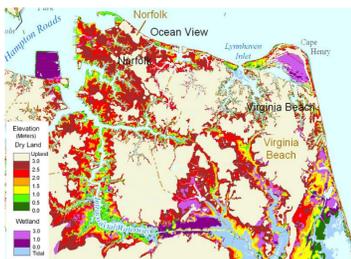
The Protective Action Decision-Making Model (PADM) was developed by Lindell and Perry in 2004 to help clarify the process of decision-making in response to imminent hazards and threats and is a model that is useful in all phases of a disaster management cycle, and especially in preparedness. The modified PADM theory (Lindell & Perry, 2012) is based on the findings from research on public response to environmental hazards and integrates information obtained from messaging with social and environmental cues with messages transmitted through communication channels to at-risk populations (Lindell & Perry, 2012).

Conceptual Framework

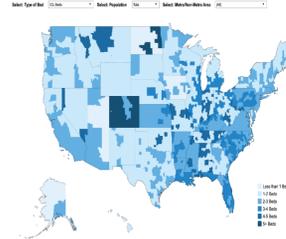
The Community Hazard Preparedness model (Fig. 1) was developed to examine how community hazard preparedness influences interact to produce protective actions such as evacuations to safe places, the purchase of hazard insurance, making household emergency plans, storing food and water supplies, and becoming vaccinated (Wachinger et al., 2013; Lindell and Perry, 2012; Paton, 2007). To understand how people make risk assessments, it is crucial to remember that human beings are social entities with beliefs that determine their response behaviors and actions (Ayeib-Karlsson et al., 2019).

Based on this conceptual framework, this study hypothesizes that:

- Racial groups perceive hazard risks differently and take protective actions based on prior experiences with civil authorities.
- Lower income households have lower propensity to take protective action due to resource constraints and low engagement with/ trust of civil authorities.



Source: J.G. Titus & J. Wang. (2008). Maps of the Lands Close to Sea Level Along the Mid-Atlantic Coast.



Source: Orgera et al. (2020). KFF Analysis of Urban and Rural Differences in Coronavirus Pandemic Preparedness.

	Behr et al. (2020)	Vandecar-Burdin et al. (2020)	Vandecar-Burdin et al. (2021)
Household income	✓	-	-
Race	-	✓	✓
Propensity to act	✓	✓	✓
Frequency of hazards	✓	✓	✓
Trust in civil authorities	✓	✓	✓

Table 1. Variables of interest in evacuation and vaccination decisions and data sources

Implications, Limitations, and areas for future research

Implications: Study findings can improve preparedness outcomes by providing insight into influences of community preparedness decision-making. Findings will provide a starting point for civil authorities to tailor information in ways that will lead to compliance and collaborative problem-solving and public participation.

Limitations: The variables of interest (trust, race, household income, frequency of hazards, and propensity to act) are found across three survey datasets (Behr et al., 2020; Vandecar-Burdin et al. 2020 and 2021), the sample populations will differ, affecting the generalizability of the study. To address this limitation, the researcher will state clearly what database the variable data was extracted from, and elaborate the analysis process clearly, to include the rationale for selection of the variable and the overall importance to the study.

Future Research: Exploring the role of social capital and collective efficacy (social contextual factors) in protective action decisions. Exploring the role of individual factors and trust in preparedness planning from the perspective of civil authorities in emergency management and preparedness planning

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