

“It seems like it’s never going to end”: The Experiences of Those Living in Damaged Dwellings following Superstorm Sandy.

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Abstract: Where people go between evacuation and recovery remains an understudied aspect of disaster research. Whether experiencing multiple displacements, permanent displacement, or undergoing recovery in a damaged dwelling, the spatial and temporal dimensions of disaster displacement can have direct impacts on the recovery experience of survivors. Pulling from focus group data gathered in 2017 from Hurricane Sandy survivors in New Jersey, this qualitative research focuses on the experiences of those who recovered in-situ, or within their damaged dwelling following the storm, and the various ways this non-displacement impacted their recovery. A content analysis following a grounded theory approach produced the emergent themes of the in-situ experience, including: a lack of suitable shelter, an exposure to secondary hazards, and an inability to achieve satisfactory emotional recovery. This study contributes to the growing body of literature surrounding recovery experiences, and it introduces valuable insights into the challenges that survivors face while recovering in-situ.

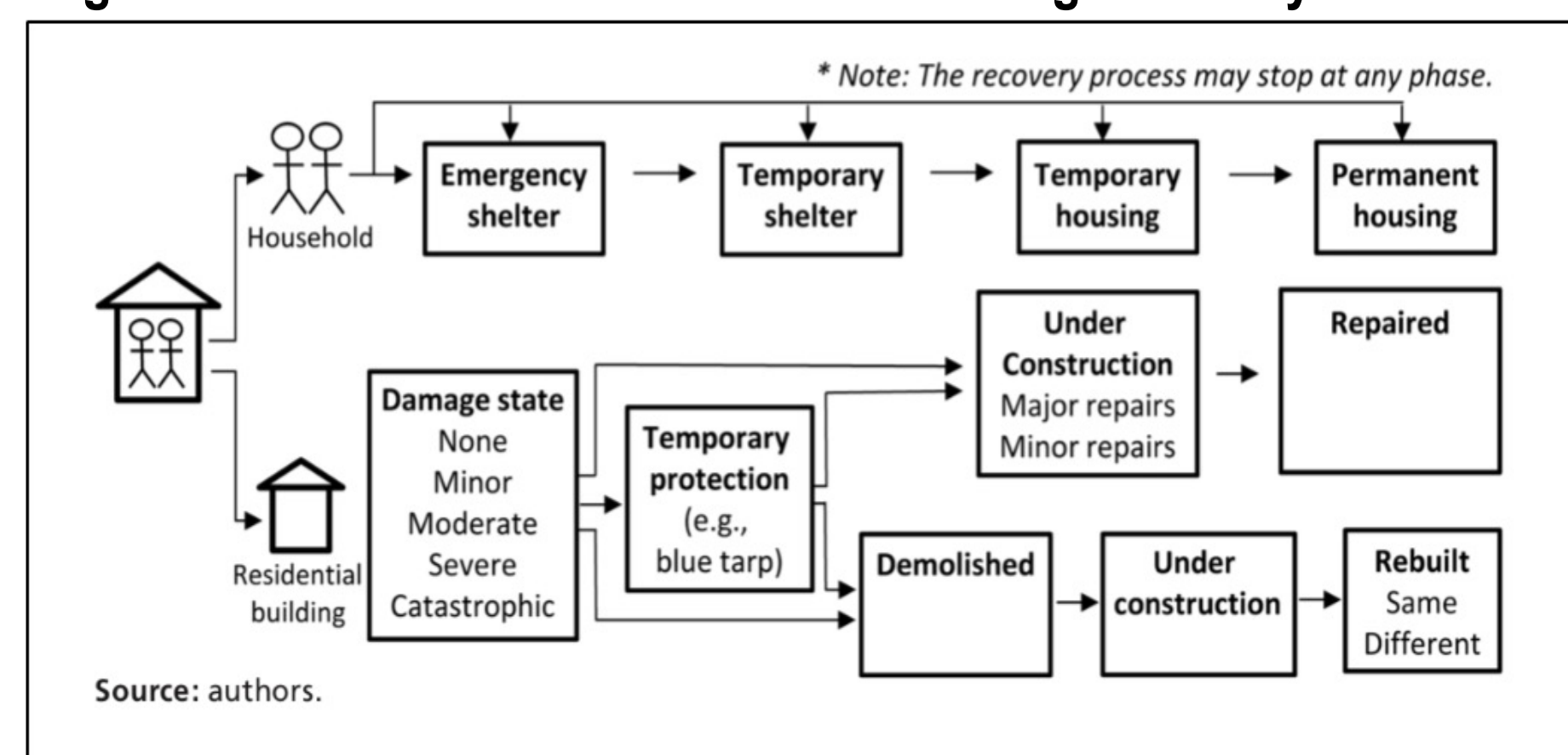
Introduction

Where households recover may have important impacts on their recovery. Whether through multiple displacements or through recovering in-situ, the spatial aspect of recovery can directly impact whether a household is able to achieve full recovery. **A household’s recovery is dependent on if a household feels satisfied with their living situation after a disaster** (Bolin 1982).

Various studies have examined household recovery following a disaster (Bolin 1982; Quarantelli 1995; Rathfon et al. 2013). Quarantelli (1995) introduced the phases of household sheltering, which Rathfon et al., (2013) built upon by including the phases that the physical dwelling goes through during recovery.

This model is particularly useful when examining **recovery in-situ**, or the process of recovering in a damaged home and community.

Figure 1. Household and Residential Building Recovery Processes



Source: Rathfon et al., 2013

This research explores the experiences of those who recovered in-situ during the years following Hurricane Sandy (2012) in New Jersey. This qualitative study utilizes data previously collected through focus groups to address the following research questions:

RQ1: What is the experience of recovering in-situ?

- a. What motivated residents to recover in-situ?
- b. How did conditions differ between households recovering in-situ?

RQ2: What is the relationship between emotional and physical recovery of residents recovering in-situ?

Impacts of Superstorm Sandy

Superstorm Sandy struck the north-east coast of the United States on October 29th, 2012. The damage that resulted from Sandy was “unprecedented” in New Jersey’s history, and a majority of structures along the coast were “flooded, badly damaged, or destroyed” (Blake et al., 2013). An estimated **346,000 housing structures were damaged or destroyed**, and 19,000 small businesses sustained damage of some sort (Blake et al., 2013). Interviews for this study took place five years after Hurricane Sandy hit the New Jersey coast, and many participants were still undergoing reconstruction or completing paperwork to close out their recovery.

Figure 2. Homes undergoing reconstruction in Ocean County, NJ five years after Superstorm Sandy



Methodology

A content analysis was conducted on the focus group data collected from Hurricane Sandy survivors located in three different communities along the New Jersey coast: Manahawkin, Hazlet, and Seaside Heights. Local contacts (established by the original research team) advertised the research opportunity and assigned twenty-eight willing participants into six focus groups comprising of three to six people (Lee et al., 2020). The focus group interviews were conducted over three days in May 2017, five years after Hurricane Sandy made landfall along the New Jersey coast. These interviews produced approximately 11.5 hours of audio.

These focus group interviews were guided by a protocol which probed for information regarding barriers and facilitators to recovery, physical infrastructure, secondary hazards, information acquisition and distribution, and community interactions. The interview transcripts were uploaded into Atlas.ti and coded for emerging themes using a grounded theory approach. These early coding schemes were developed into three broad themes: 1. Reasons for Recovering In-Situ; 2. Experience of Recovering In-Situ; and 3. Relationship between Physical and Emotional Recovery.



Figure 3. (Left) A photo of one of the focus groups.

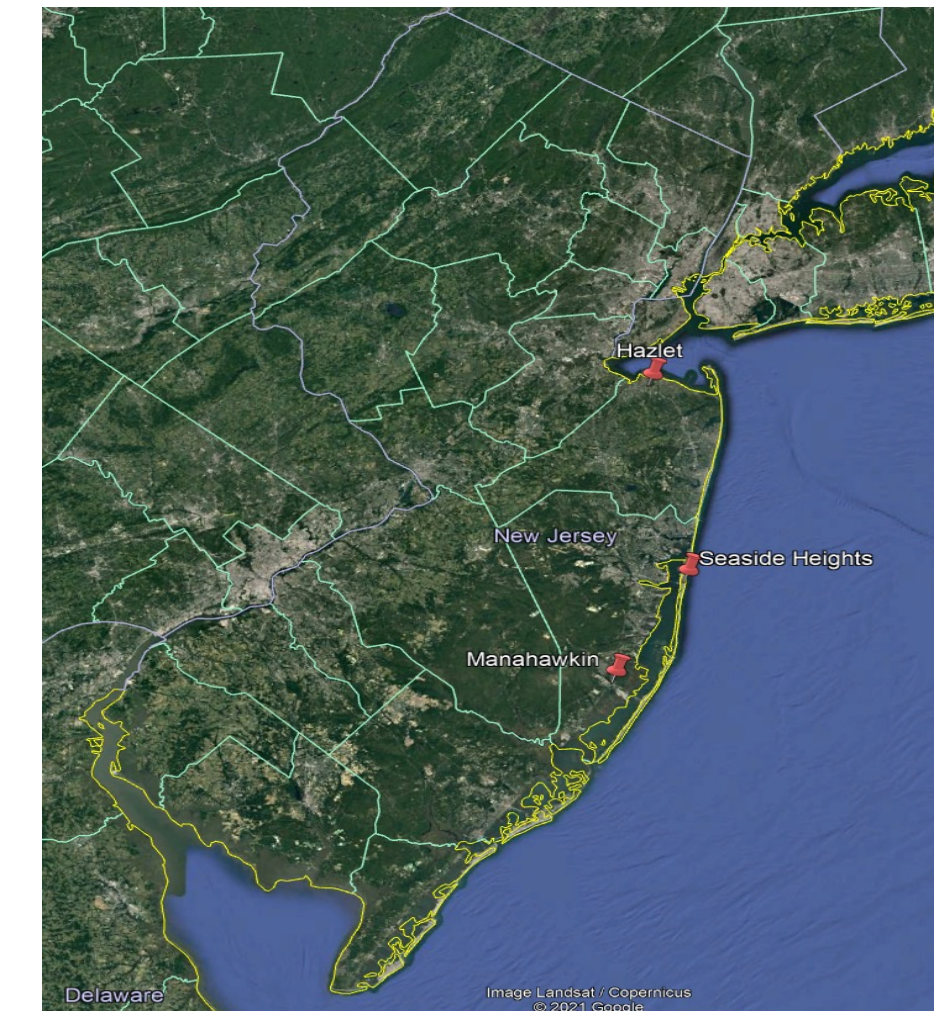


Figure 4. (right) Map of the Study Area

Results

Within each of the three broad themes, three subthemes were developed to explore the experience of recovering in-situ. First, this research examines why residents chose to recover in-situ. Secondly, the experience of recovering in-situ and the various hazards that accompany that process are explored. Finally, the relationship between the physical and emotional recovery process is explained.

Figure 5. Results Summarized

1. Reasons for Recovering In-Situ	2. Experience of Recovering In-Situ	3. Relationship between Physical and Emotional Recovery
1.1 No Place to Stay	2.1 Secondary Hazards	3.1 Physical Recovery as a Means to Emotional Recovery
1.2 Limited Alternative Options	2.2 Lack of Utilities and Resources	3.2 Physical Recovery as a Measure of Emotional Recovery
1.3 Security Against Looters	2.3 Vulnerability to Fraud	3.3 Shifting Prospects for Recovery

1. Reasons for Recovering In-Situ

The uncertainty of the future, lack of suitable and/or affordable alternative options, and perceived safety threats led to many participants to feel that recovering within their damaged dwellings was their best option. As some participants explain below:

“...I knew I had to stay there, because there were so many unknowns. We didn’t know how long they would take to get insurance money and what the whole, you know, you didn’t know what was to come...” Loretta, Manahawkin

Results Continued

2. Experience of Recovering In-Situ

When living in their damaged dwellings, the participants were exposed to various secondary hazards, including mold, electrical fires, and a vulnerability to fraud.

“We lived in our house with nothing with the baby for weeks, I don’t even know when I had utilities, I mean it was probably I mean I don’t even know. We froze, literally, and didn’t have hot food to eat for probably a good almost two months...” Monica, Hazlet

3. Relationship Between Physical and Emotional Recovery

The survivors recovering in-situ had to adapt to their situations and become active agents in their recovery. Tasks like ripping out drywall, removing debris, and salvaging personal belongings helped participants begin recovery almost instantaneously.

“It was my oldest son and his friend and me and my husband. We just ripped and gutted, and did whatever we needed to do, to get it to where we... you know it’s funny because it’s amazing to how you adapt to your situation.” Beth, Manahawkin

As time went on and participants transitioned from active agent to passive observer, their emotional recovery stalled.

“We got back in our house in October of 2015, and we still are recovering emotionally rather than physically at this point.” Julia, Hazlet

Conclusion

The the experience of recovering in-situ is frustrating, time-consuming, and exposes households to a wide variety of vulnerabilities and hazards. This study found that though the survivors were living in functionally reconstructed homes, they still did not *feel* recovered; they had not achieved a satisfactory level of recovery. This stall in emotional recovery may be attributed to a loss of agency in their recovery: as their recovery became dependent on outside sources the residents were unable to find closure in their recovery. At the time of the interviews, not one participant reported achieving recovery.

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