

A CONCEPTUAL MODEL OF THE INDIVIDUAL AND HOUSEHOLD RECOVERY
PROCESS: EXAMINING HURRICANE SANDY

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Laura Ann Gould

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By

Laura Ann Gould

The Supervisory Committee certifies that this *disquisition* complies
with North Dakota State University's regulations and meets the accepted
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SUPERVISORY COMMITTEE:

Dr. Jessica Jensen
Chair

Dr. Daniel Klenow

Dr. Heather Fuller-Iglesias

Approved:

4/3/2014
Date

Dr. Daniel Klenow
Department Chair

ABSTRACT

This study examined how comprehensively the Bolin and Trainer (1978) model of recovery reflects the recovery process of individuals and households. A review of the literature since 1978 suggested that various revisions and additions were warranted, but additional research was needed to examine these elements collectively. Rubin and Rubin's (2012) Responsive Interviewing Model was employed to collect and analyze data related to the recovery process of individuals impacted by Hurricane/Superstorm Sandy to determine whether an updated model was appropriate. Interviews with twenty-one respondents representing non-governmental organizations involved in Sandy-related recovery efforts revealed the need for a revised model reflecting key aspects of the original model, revisions suggested by the literature, and a new addition based on the data collected through this study. A Revised Bolin and Trainer Model of Individual and Household Recovery was suggested and implications for the discipline and practice of emergency management discussed.

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On a personal note, I must thank God for carrying me through this process. He has been there in every moment: “You hem me in, behind and before, and lay Your hand upon me” (Psalm 139:5). I am also extremely grateful to my family; particularly my mother and father for emotionally, spiritually, and financially supporting me so that I could pursue my dreams—I would not have been able to do this research without you. Additionally, I would like to thank my brother James. Your life inspired me to pursue excellence and your death exposed to me the incredible pain of losing those we hold most dear. In part, my involvement in the field of emergency management was born out of a desire to protect people and, when necessary, help them to cope with terrible loss because I have known the pain of losing you. Even in death, you make the world a better place, brother.

Finally, I would like to thank my fellow students in North Dakota State University's graduate-level emergency management program; I am so thankful that we had each other through these years; you have all helped me to grow in so many different ways. I cannot wait to see all the big things you do.

DEDICATION

To my loved ones, near and far:

Should we ever face disaster,

May the Grace of God rise up to meet us

And something of the knowledge gained here help us on our way.

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LIST OF ABBREVIATIONS

| | |
|--------------|--|
| FEMA | Federal Emergency Management Agency |
| IA | Individual Assistance |
| ICE | Immigration & Customs Enforcement |
| LTRGs..... | Long Term Recovery Groups |
| NDRF | National Disaster Recovery Framework |
| NFIP | National Flood Insurance Program |
| NJOEM | New Jersey Office of Emergency Management |
| NVOAD | National Voluntary Organizations Active in Disaster |
| PA | Public Assistance |
| PDDs | Presidential Disaster Declarations |
| PKEMRA | Post-Katrina Emergency Management Reform Act |
| PPD-8 | Presidential Policy Directive-8 |
| RREM | Rehabilitation, Reconstruction, Elevation and Mitigation |
| SES..... | Socio-Economic status |
| US | United States |

CHAPTER ONE: INTRODUCTION

A comprehensive understanding of the process by which individuals and households recover from disasters has yet to emerge. While many studies have examined aspects of the recovery process or focused on specific outcomes related to recovery, few have attempted to capture the overarching process of individual and household recovery or to ground their findings within some type of broader theoretical framework related to disaster recovery.

Bolin and Trainer (1978) proposed a conceptual model of individual and household recovery that represented an important step forward in addressing this research gap. Myriad recovery studies conducted since provide significant support for the Bolin and Trainer (1978) recovery model. A thorough review of the literature also suggests there may be additional components of recovery not captured in the 1978 model that are essential to understanding the process. Because there is a lack of comprehensive research on the individual and household recovery process and no research has tested the Bolin & Trainer (1978) model, with or without literature based revisions, the value of the model is unclear. Thus, this study explored how comprehensively the Bolin and Trainer (1978) model of recovery reflects the recovery process of individuals and households through both an extensive review of the literature and original research on individual and household recovery related to a recent disaster, Superstorm Sandy in 2012.

Conceptualizing Recovery

Recovery, a term used to label one of the four functional areas of activity in emergency management, is defined here as “the differential process of restoring, rebuilding, and reshaping the physical, social, economic, and natural environment through pre-event planning and post-

event actions” (Smith & Wenger, 2006, p. 237). Post-event actions often taken to restore, rebuild, and reshape physical, social, economic, and natural environments include conducting damage assessments (Cochrane, 1990; French, 1990; McEntire, Souza, Collins, Peters, & Sadiq, 2012; Phillips, 2009), restoring lifelines (Chang, Wilkinson, Brunsdon, Seville, & Potangaroa, 2011; Menoni, 2011; Phillips, 2009), and carrying out debris management operations (Brown, Milke, & Seville, 2011; Fetter & Rakes, 2012; Phillips, 2009). Recovery activities may also involve restoring environmental, historical, and cultural features of a community (Phillips, 2009; Evans-Cowley & Zimmerman-Gough, 2008; Spennemann & Graham, 2007) and dealing with sheltering and short- and long-term housing needs in the post-impact environment (Levine, Esnard & Sapat, 2007; Phillips, 2009; Zhang & Peacock, 2010). Within this functional area, recovery outcomes related to individuals and households (see for example, Airriess, Li, Leong, Chen, & Keith, 2008; Beggs, Haines, & Hurlbert, 1996; Forgette, Dettry, Van Boening & Swanson, 2009), businesses (see for example, Chamlee-Wright & Storr, 2008, Corey & Deitch, 2011; Haynes, Danes, & Stafford, 2011; Runyan, 2006), nonprofits (Chandra & Acosta, 2009; Fremont-Smith, Boris, & Steurele, 2006), and local government (Alesch et al., 2009; Phillips, 2009; Rubin, 1985; Rubin, Saperstein, Barbee, 1985) are also pursued.

The goal of recovery is to return impacted stakeholder groups (e.g., individuals and households, businesses, nonprofits, and government) to self-sufficiency within generally accepted standards (Alesch, Arendt, & Holly, 2009, p.36). A return to pre-disaster levels of self-sufficiency represents a minimum goal of recovery—ideally, the goal would be to return all stakeholder groups to a state of self-sufficiency that is better post-disaster than it was pre-disaster (Alesch et al., 2009; Natural Hazards Center, 2005; Phillips, 2009; Smith & Wenger, 2006; Smith, 2011). Moreover, self-sufficiency should be considered along multiple dimensions.

Holistic recovery for individuals and households may include five major areas: housing stability, economic stability, physical health, mental health, and social role adaptation (i.e., the functioning of an individual in their roles in various networks, such as family, work, church groups, etcetera) (Abramson, Stehling-Ariza, Park, Walsh, & Culp, 2010). Depending on what aspects of an individual's life has been impacted by disaster recovery, outcomes along each of these dimensions may need to be achieved for recovery to be whole.

This study bases its conceptualization of recovery upon five major assumptions. First, recovery varies within and across stakeholder groups (see for example: Alesch et al., 2009; Finch, Emrich & Cutter, 2010; Phillips, 2009; Quarantelli, 1999; Smith 2011; Smith & Wenger, 2006); and, second, recovery as an end stage is not assured (see for example: Adams et al., 2009; Adams, Kaufman, van Hattum, & Moody, 2011; Alesch et al., 2009; Quarantelli, 1999; Smith 2011). Some will fully recover, some will recover along certain dimensions but not along others, and some will never recover. Third, recovery is also assumed to not have a single beginning or end point (see for example: Alesch et al., 2009; Olshansky, 2005; Rubin, 1985). Fourth, recovery is assumed to be relative to situational context, values, and norms (see for example: Alesch et al., 2009; Phillips, 2009; Quarantelli, 1999; Smith, 2011). Indeed, what is considered "recovered" can vary widely place-to-place and even person-to-person. Finally, community recovery as a process emerges as a result of all impacted stakeholders and how they undertake recovery related tasks and activities (see for example: Berke et al., 1993; Berke & Campanella, 2006; Canton, 2007; Rubin, 1985).

In light of these assumptions, the recovery process of individuals and households, as one of the stakeholder groups recovering from hazard events, is worth further examination.

Individuals and households may experience a diverse array of impacts as the result of a hazard

event such as injuries, damage to property, displacement, and loss of employment. Moreover, several characteristics of individuals and households may shape their recovery process such as age, sex, and race. The various ways in which these factors converge and interact varies significantly person-to-person—each person engages in a recovery process as unique as they are. And, yet, despite the distinctiveness of one person’s recovery journey it is worth considering what, if any, common features might define the recovery processes of all individuals and households. The work of Bolin and Trainer, the literature since 1978, and the findings of this study indicate that there are several major components of the individual and household recovery process that are salient across recovery experiences.

Significance

The significance of this study is multi-faceted. Currently, research on individuals and household recovery is piecemeal, focusing on limited aspects of a greater recovery process or specific recovery outcomes. Until this study, the theoretical work done by Bolin and Trainer (1978) has been largely ignored by disaster researchers. Outside of their model, theoretical work regarding the process of individual and household recovery has been rare. And, research since 1978 revealing additional components of the recovery process for this stakeholder group had not been incorporated into the original, or any, model of individual and household recovery.

This study contributed to recovery theory by examining the comprehensiveness of the Bolin and Trainer (1978) model in two parts. First, the researcher conducted a review of the recovery research to assess whether the model adequately captures what has been found about individual and household recovery since 1978. She found that the literature suggests several additions to the model may be warranted. Second, the researcher conducted original research on individual and household recovery related to a recent disaster (i.e., Superstorm Sandy in 2012) to

empirically examine whether the main features of the recovery process for individuals and households and the additions suggested by the literature since were supported. She found that, for the most part, the components of the original model and the additions suggested by the literature since were supported. This study also resulted in the discovery of an additional component to the individual and household recovery process. Based on these findings, the researcher was able to offer a revision to the 1978 Bolin and Trainer model.

A comprehensive understanding of individual and household recovery is of great significance. In terms of theoretical value, a comprehensive model allows others to ground continuing research within the context of the overall process. The intricacies associated with the major features of the recovery process of this stakeholder group are critical to understanding differential recovery and should still be explored by future research. Having a larger framework of meaning within which to contextualize this niche work stands to benefit both education and training. The model will allow educators and trainers to present an overarching process to help scholars and practitioners have a broad understanding of how people recover. To the extent that specific elements of the process and related research findings are focused on within education and training, those examinations can also be grounded within this model so that students and practitioners are able to understand the details without getting lost in how these individual elements fit into the wider picture of recovery. Finally, a comprehensive model of individual and household recovery offers students and practitioner's a bird's eye view with which to better understand their individual role in influencing the recovery of this stakeholder group.

Conclusion

This chapter has highlighted the basic conceptual foundation that grounded this study. Chapter Two reviews the literature that provided the theoretical framework for this research.

Chapter Three presents the methodology employed by the researcher. Chapters Four and Five present significant results while Chapter Six discusses the implications of those findings. Chapter Seven offers a conclusion and highlights areas for future research.

CHAPTER TWO: LITERATURE REVIEW

This chapter presents the literature that guided this study in two sections. In the first section, the Bolin & Trainer (1978) Conceptual Model of Family Recovery is presented. Extensive review of the recovery literature since the model was introduced suggests that the original 1978 model may not comprehensively capture the recovery process for individuals and households. The second section discusses revisions and additional components to the model as suggested by the recovery literature since 1978. The combination of the components reflected in the original 1978 model and those suggested by continued recovery research served as the foundation for this study's exploration of what the recovery process for individuals and households entails.

Bolin & Trainer (1978) Conceptual Model of Family Recovery

Following a comparative study of how individuals and households recover across three countries, Bolin & Trainer (1978) sought to illustrate the various components of a recovery process that are involved in how individuals and households restore, rebuild, and reshape their lives following disaster. Figure 1 presents their Model.

Empirical support for each of the components of Figure 1 was extrapolated by the authors from the results of their previous work comparing recovery across countries. In so far as the researcher has been able to determine, this model remains untested and unexplored by research since its creation. Although the authors originally developed this conceptual model out of research on "family recovery", it is assumed that the process of recovery is influenced by the same general factors for individuals (whether as single people or as a part of households).

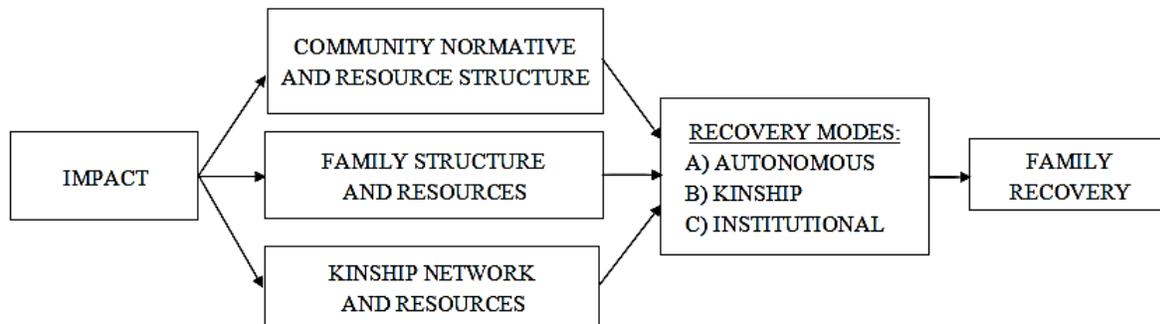


Figure 1. Bolin & Trainer (1978) Conceptual Model of Family Recovery. Note: arrows indicate association, not causality. Reprinted from *Disasters: Theory and Research* p.237, Ed. By E.L. Quarantelli, 1978, London, SAGE Publications Ltd)

Bolin and Trainer (1978) argue that disaster impacts are a critical component of the disaster recovery process because they represent the things from which individuals and households are attempting to recover (p.235). These impacts are influenced by the scope, intensity, and speed of onset of the disaster (Bolin & Trainer, 1978, p.235). Bolin and Trainer (1978) suggest that decisions regarding how to address impacts post-disaster are shaped by the post-disaster status of three critical components: community normative and resource structure, family structure and resources, and kinship network and resources.

Community normative structure refers to the locality's norms surrounding the distribution of resources for the recovery period (Bolin & Trainer, 1978, p.236). Bolin and Trainer (1978) argue that the pre-existing community norms regarding the distribution of assistance (i.e. to whom, for how long, etc.) will dominate the recovery period (p.236). Community resource structure is described by Bolin & Trainer (1978) as the “sum total of its financial, human and material resources available for use after a disaster” as well as any additional resources that may be infused into the local community (p.236). Although Bolin and Trainer (1978) do not specify, these outside infusions of funding arguably include both informal assistance (i.e., donations from individuals, businesses, and/or nonprofits external to the community) and formal assistance from

higher levels of government. Community norms, in combination with the post-disaster resource structure (essentially what resources the community has at their disposal), will influence how resources are delegated to individuals and households within the impacted area (Bolin & Trainer, 1978).

Bolin & Trainer (1978) also state that the recovery process will be shaped by family structure and their associated resources. As the authors explain, family structure and resources are influenced by stage in the family life cycle and socioeconomic status (SES) (Bolin & Trainer, 1978, p.235). Regarding stage in the family life cycle, the authors highlight older adults within the family structure and suggest that this population experiences a greater sense of loss because of their late stage in life (greater accumulation of assets, paid mortgages, etcetera) (Bolin & Trainer, 1978, p.235). Bolin & Trainer (1978) state that those of lower SES generally struggle more than their high SES counterparts in recovering from economic losses (p.236). Contributing factors include ‘smaller savings, ineligibility for credit/financing, less experience and expertise dealing with bureaucratic agencies, or a general reluctance to engage with these bodies’ (Bolin & Trainer, 1978, p.236).

Finally Bolin & Trainer (1978) state that the extensiveness and salience of kinship networks influence the number and type of recovery modes individuals and families will draw upon throughout their recovery process. The authors note that cultural factors may impact the type of assistance these kinship networks provide. In the United States (U.S.), they argue that institutions generally provide financial aid while kin serve as emotional support (Bolin & Trainer, 1978, p.236).

The post-disaster context, in which impacts shape the realities of the community normative and resource structure, family structure and resources, and kinship network and

resources, will in turn influence what recovery mode, or modes, are undertaken. As a result of the interaction between all of these components individuals will have ideally restored, rebuilt, and/or reshaped the aspects of their lives that were impacted by the disaster.

Bolin & Trainer (1978) highlighted three potential modes of recovery: autonomous, kinship, and institutional (p. 236-237). The autonomous recovery mode refers to an individual or family recovering on their own without outside assistance, such as staying in a second home, paying for a hotel/motel, drawing upon their savings or investments, utilizing an insurance payout, making choices about what they will replace that they lost (e.g., if they replace certain items, what quality, etcetera). Within the kinship mode of recovery individuals receive recovery assistance from family members or other members of their kin network (e.g., live with siblings temporarily, borrow money from friends, etcetera). Finally, the institutional recovery mode involves the utilization of any number and type assistance from formal entities such as churches, nonprofits, businesses, and the government in order to reach a state of recovery. Through accessing one or more of these modes, Bolin and Trainer (1978) suggest individuals and households will achieve recovery.

Possible Additions to the Bolin and Trainer (1978) Recovery Model

The wider literature on individual and household recovery supports, refines, and adds new categories of factors that are worthy of consideration in understanding the recovery process of this stakeholder group. These additions were discovered through reading, lecture, and analysis related to a graduate level course, Recovery Theory and Practice, taken by the researcher. The class involved examining the individual and household recovery literature since 1978 to ascertain the degree to which the original Bolin and Trainer model was supported and/or additional components suggested. Based on what was learned in class, there is significant support for the

components in the original model and several additions also seem warranted. Yet, without research exploring these additions in conjunction with the original components of the model the empirical justification for adjusting the model is unclear as is the comprehensiveness of the original model. The following review, while based on a substantial review of the literature, does not reflect the entire breadth of research available on individual and household recovery.

Impact and Impact-Shaping Factors

Since 1978, the literature on impacts has served to support and further refine the way in which impacts are understood to be meaningful to recovery. First, research emphasizes amount of damage as being critical to the recovery process (see for example: Beggs et al., 1996; Bolin, 1976; Bolin, 1986; Chappell, Forgette, Swanson, & Van Boening, 2007; Edwards, 1998; Fussell, Sastry, & Van Landinham, 2010; Green, Bates, Smyth, 2007; Kamel & Loukaitou-Sideris, 2004; Myers, Slack, & Singelmann, 2008; Rohrbach, Grana, Vernberg, Sussman, & Sun, 2009). The influence of amount of damage on the recovery process is not different from what one might expect, based on intuition or basic reasoning. If person A loses their job, their home, and their mode of transportation in a disaster, they may have a more involved recovery process than person B who only has to fix some of the fence posts in their yard; the sheer amount of damage caused by a disaster has been shown to shape their recovery process.

The literature has also served to further refine how impacts are understood by distinguishing between direct and indirect impacts. Direct impacts are those that result from the interaction of a hazard with the environment. For instance, the winds associated with a tornado may destroy a home or ruin a car. Indirect impacts are negative consequences from direct impacts. For instance, a person might experience significant stress as a result of their home being destroyed or lose their job because they lack transportation. Additionally, indirect impacts may

involve changes to any of the following: living accommodations, homeownership/renting status, employment status or place of employment, income, health insurance, and access to primary care facilities. The process of recovery is directed toward addressing these direct and indirect impacts post-disaster. See Table 1 for a small sample of literature supporting this evolution in understanding of impacts.

Table 1
Literature Supporting Types of Impacts

| Type of Impacts | Sample Citation(s) |
|--|---|
| <i>Direct Impacts</i> | |
| <i>Death</i> | McDonnell et al., 1995; Zakour & Harrell, 2003 |
| <i>Injury</i> | Ibanez et al., 2003; Zakour & Harrell, 2003 |
| <i>Damage to property</i> | Forgette et al., 2008; Hori & Schafer, 2010; Ibanez et al., 2003; Kamel & Loukaitou-Sideris, 2004; McDonnell et al., 1995 |
| <i>Indirect Impacts</i> | |
| <i>Displacement</i> | Hori & Schafer, 2010; Rendall, 2011; Zakour & Harrell, 2003 |
| <i>Negative mental health outcomes</i> | Hori & Schafer, 2010; McDonnell et al., 1995; Zakour & Harrell, 2003 |
| <i>Changes to living accommodations</i> | Hori & Schafer, 2010; Zakour & Harrell, 2003 |
| <i>Changes Homeownership/renting status</i> | Hori & Schafer, 2010 |
| <i>Changes to employment status or place of employment</i> | Hori & Schafer, 2010 |
| <i>Changes to income</i> | Hori & Schafer, 2010; Zakour & Harrell, 2003 |
| <i>Changes to health insurance</i> | Hori & Schafer, 2010; Zakour & Harrell, 2003 |
| <i>Changes to access to primary care facilities</i> | Hori & Schafer, 2010; Zakour & Harrell, 2003 |

While the literature since 1978 consistently supports the idea that impact determines what individuals and households will recover from and hence how they will move through the recovery process, the literature also suggests that the impact individuals and households experience is the product of the interaction of four factors. These factors include characteristics associated with the hazard involved, characteristics associated with the disaster event, an

individual's pre-disaster characteristics, and the pre-disaster characteristics of the wider community in which they reside. Thus, the individual and household recovery process is influenced in part by factors present before and at the point of impact.

Hazard and Hazard Event Characteristics. First, concerning characteristics of the hazard, Bolin and Trainer (1978) suggested that characteristics are relevant to understanding the type and degree of impact individuals and households experience. The wider disaster literature, including recovery research, has widely supported this idea. While there are slight variations in the ways disaster scholars classify hazards, the categories of natural (i.e., hurricanes, earthquakes, etcetera), technological (i.e., pollution, nuclear meltdown, etcetera), and willful hazards (i.e., terrorism, violent rioting, etcetera) can serve as a basic orientating classification (National Research Council, 2006). Within these categories, nature of the hazard itself (i.e. wind based, water based, fire, explosive, toxic, etcetera) has intuitive value in anticipating the types of impacts that will result when a hazard interacts with the social, built, and natural environment. The nature of hazards is critical to the types of impacts that will occur and is a basic construct for differentiating between types of hazards. For example, flooding is not likely to rip the shingles off a roof, while a tornado will likely not be associated with water in basements.

Additionally, several factors have been identified to distinguish individual hazards from one another including speed of onset, how much notice individuals and households, organizations, and government might typically have that an event related to the hazard was imminent, the range of geographic scope typically associated with the hazard, and how severe the hazard is assessed to be (Lindell & Prater, 2003; Weller & Kreps, 1970; National Research Council, 2006). The manner in which the severity of hazards is measured is particularly instructive when seeking to understand the type and number of impacts individuals and

households experience. For example, the Enhanced Fujita Scale measures the severity of tornadoes based on wind speed and resulting damage (National Oceanic and Atmospheric Administration, 2011); the Modified Mercalli Intensity Scale measures the severity of an earthquake based on shaking and resulting damage (United States Geological Survey, 2013); and, the Saffir-Simpson Hurricane Scale considers sustained wind speed and potential damage related to hurricanes (National Oceanic and Atmospheric Administration, 2013). Such scales and systems of measurement point to key characteristics of hazards that influence impacts.

Outside of the characteristics of the hazard itself, the specific ways in which the hazard manifests in time and place (i.e., hazard event characteristics) also influence impacts. Hazard event characteristics include how long the hazard interacts with the social, built, and physical environment, the actual severity of the event, and the actual geographic scope of the event. The literature lends significant support to the notion that these characteristics are relevant to understanding the impacts that are experienced. See Table 2 below for examples of support from the literature.

Table 2
Literature Supporting Hazard Event Characteristics

| Hazard Event Characteristics | Sample Citation(s) |
|-------------------------------------|---|
| <i>Duration</i> | Chamlee-Wright & Storr, 2009; Edwards, 1998; Weller & Kreps, 1970 |
| <i>Severity/Magnitude of Event</i> | Bolin, 1976; Finch et al., 2010; Green et al., 2007; Groen & Polivka, 2010; Norris et al., 2002 |
| <i>Geographic Scope</i> | Edwards, 1998; Hori & Schafer, 2010; Spence, Lachlan, & Burke, 2007; Trainer & Bolin, 1976 |

Individual and Household Characteristics. In addition to hazard and hazard event characteristics, individuals and households characteristics also shape the types of impacts that occur. Characteristics that have been found to be related to the differential manifestation of

impacts include sex, race, income, household size, occupational prestige, political capital, and social integration (e.g., to kin, work colleagues, churches, social groups), among many others qualities. The influence of these factors are varied, nuanced, and interact in complex ways to shape impacts. Individual and household characteristics shape one's social and economic position in society and, relatedly, the degree to which they are able to leverage resources to live in locations and structures that reduce their exposure to hazards.

Studies of vulnerability reveal that the following characteristics may increase one's likelihood of experiencing adverse impacts from a hazard event: being female, non-white, low income, having a small household, low occupational prestige, little political capital, and low social integration. The amount and types of impacts that occur are tremendously influential to the recovery process; and, thus, impact-shaping factors like that of individual and household characteristics are important to understanding the broader recovery process. The literature supports various characteristics related to the resources people have as shaping impacts, such as owning versus renting a home (Morrow 1999; Takao, Motoyoshi, Sato, & Fukuzono, 2004), living in a well-constructed structure (Cutter, Mitchell, and Scott 2000; Cutter, 2001; Donner, 2007; Mileti, 1999), and the extent to which people mitigate the effects of relevant hazards in their area (Lindell & Perry, 2000; Paton, McClure, & Burgelt, 2006; Russell, Goltz, & Bourque, 1995). For example, if a person rents a home, they will not be responsible for any physical damage that occurs to their residence. They can move and rent a home elsewhere thereby avoiding the indirect financial losses associated with home repair and reconstruction. Table 3 provides examples of literature-based support for some of the individual and household characteristics that have been found to shape impacts.

Table 3

Literature Supporting Individual and Household Characteristics

| Individual and Household Characteristics | Sample Citation(s) |
|---|--|
| <i>Sex</i> | Enarson & Morrow, 1998; Enarson & Scanlon, 1999; Fothergill, 1996; Ikeda, 1995; Morrow & Phillips, 1999; Peacock, Morrow, & Gladwin, 1997; Wisner, Blaikie, Cannon, & Davis 2003 |
| <i>Race/ethnicity</i> | Bolin, 2006; Bolin & Stanford, 1991; Cutter, Mitchell, & Scott, 2000; Mileti, 1999; Peacock, Morrow, & Gladwin, 1997; Peguero, 2006; Wisner, Blaikie, Cannon, & Davis 2003 |
| <i>Income</i> | Cutter, Mitchell, & Scott, 2000; Kamel & Loukaitou-Sideris, 2004; Peacock, Morrow, & Gladwin, 1997 |
| <i>Household Size</i> | Donner, 2007; Morrow, 1999 |
| <i>Occupational Prestige</i> | McCoy & Dash, 2013; Peacock, Morrow, & Gladwin, 1997 |
| <i>Political Capital</i> | Cutter, Mitchell, & Scott, 2000; Mileti, 1999; Peacock, Morrow, & Gladwin, 1997 |
| <i>Social Integration</i> | Cutter, Boruff, & Shirley, 2003; Klinenberg, 2003; Tierney, Lindell, & Perry, 2003; Wisner et al., 2003 |

Community Situational Context. Lastly concerning impact-shaping factors, the literature indicates that community situational context also contributes to the type and degree of impacts that occur, and, subsequently the recovery process individuals and households will experience. The resounding message of emergency management literature is that context matters. Community context can be conceptualized as being shaped by economic, political, cultural, legal/regulatory, built/constructed, and emergency management dimensions. These aspects of community context will be discussed here. The impacts that occur as a result of interaction of a hazard and hazard event with individual and household characteristics and community situational context significantly affect the impacts people experience; and, hence, their recovery process.

First, the literature suggests that strength and stability of a community's economy may translate into financial impacts for individual and households. More resilient economies are made up of diversified sectors and industries as well as businesses with multiple operating locations and supplier/distribution networks and customer bases that are not confined to the local

area. When a disaster hits a community with a diversified economy and damages one specific sector, such as tourism, the economy may remain relatively stable because other sectors, still performing well, buoy the financial stability of the community. Businesses with multiple operating locations can turn to non-impacted locations to sustain themselves while working to get all of their locations back online. Businesses with supplier/distribution networks and customer bases that are geographically diffuse will face fewer challenges because the goods/services they are able to receive and provide are not wholly dependent upon what happens to suppliers, distributors, and customers in the immediately impacted area. In communities that are heavily dependent upon a single sector and made up of businesses that have single operating locations and local supplier/distribution and customer bases, they may struggle to rebound from disasters. In such an economic context, individuals and households may face indirect impacts such as unemployment, loss of income, diminished savings, and more.

In addition to the economic context, the political context of a community is also salient to understanding the type of impacts that will occur. The political context relates to several factors, such as corruption, political stability or instability, political priorities, and competition for resources. Corruption, political instability, priorities of short-term economic growth over building sustainable, resilient communities, and resource allocations reflecting short-term thinking create an environment in which individuals and households are more exposed to hazards and their direct and indirect impacts. For example, individuals and households may live in communities that do not engage in mitigation practices such as establishing and maintaining sand dunes along beaches (a protective natural barrier to flooding) because political priorities and resource allocations dictate the economic development along the ocean is more important than resiliency. Thus, individuals and households may experience direct impacts such as water in their

homes and other forms of property damage and indirect impacts such as displacement and financial strain because of the way various elements of the political context shape the community in which people reside.

Additionally, cultural context can also affect the impacts that individuals and households experience. Cultural context is shaped by values and norms. Here, values are defined as “general beliefs about what is right and wrong, and about the important standards worth maintaining and achieving in any society or social group” (Browne, 2006, p.6). Norms are defined as “social rules which define the correct and acceptable behavior in a society or social group to which people are expected to conform” (Browne, 2006, p.7). In the United States, values of consumerism and capitalism and norms such as living alone or living with immediate family members in single-family dwellings (versus a multifamily households and/or congregate housing) may shape the types of impacts a person experiences. Because American society values consumerism, individuals and households in the United States may have more things and more items of higher value; thus, they have more to lose, in terms of material and financial losses, when a disaster occurs than someone that simply owns fewer things. In societies that place primacy on a free and flourish market, major transportation routes and industrial bases may be located in hazardous areas (e.g., waterways, across areas of major seismic activity) in order to increase the speed by which goods and services can be produced and exchanged. Consequently, these economic hubs are highly vulnerable to adverse impacts from disasters, and, subsequently, so too are the individuals and households that live in, work in, or depend upon production, from those areas. Lastly, because Americans tend to live in single-family homes as opposed to congregate housing and/or multi-generational households, fewer individuals may inhabit a single space; and, thus fewer individuals may be injured or killed because of hazard event. However, depending on the

degree of social and physical isolation, research also suggests that individuals who live alone may be less socially integrated and, thus, disconnected to information and resources that would enhance their ability to be aware of, respond to, and recover from hazard events.

Community context is also defined by a community's legal/regulatory context which will also shape the impacts from which individuals and household must recover. The legal/regulatory context of a community represents a patchwork of laws, polices, codes, and legal procedures among other features (Godschalk, Beatley, Berke, Brower, & Kaiser, 1999; Sylves, 2008). For example, a community may have buildings codes that are extremely strict in order to protect homeowners from the effects of hazards. However, the community may also passed allowances that "grandfather in" homes built before a certain year. Thus, individuals will be affected by the degree to which the policies of their community serve to protect or expose them to hazards. For example, someone living in a grandfathered-in home may experience increased impacts than an individual who lives in a code-compliant home.

Relatedly, the built/constructed environment has a large role in the impacts that this stakeholder group experience. The nature of the built environment is shaped by the degree to which it is geographically concentrated, located in or in close proximity to hazardous areas, and the quality of construction. For example, even when communities have strict building codes, poor workmanship can led to adverse impacts for residents. Leading up to Hurricane Andrew in 1992, Dade County, Florida had some of the best building codes in the country, yet, many homes were badly damaged by the Hurricane due to their poor construction (Building Performance Assessment Team, 1992; Godschalk et al., 1999).

Finally, the emergency management context will shape the impacts from which individual and households must attempt to recover. The degree to which there are plans in place

to respond to and recover from a hazard event, the quality of those plans (i.e., how comprehensive are they), and how well informed respondents are of the elements of those plans will shape the types of impacts that individuals and households experience. For example, a response plan may designate certain organizations to be in charge of search and rescue, expectations of relevant positions regarding to this task, and how to properly carry out associated activities. Pre-disaster recovery plans may highlight which agencies will be in charge of short- and long-term housing needs and seek to connect together organizations that can be anticipated to be active during the recovery period (e.g., local government and non-profits). Exercises related to these plans can familiarize the relevant parties with their responsibilities and how to best carry out their roles. Thus, an individual may be rescued from a collapsed building saving their life or may be displaced from their home for a shorter period of time because of the presence, quality, and exercising of plans by emergency management professionals. Clearly, then, the emergency management context is also meaningful to understanding what impacts will and will not occur, and thus, what impacts individuals and households must address in navigating the recovery process..

While these contexts have been presented using intuitive examples, the disaster literature broadly supports all of these dimensions of the community's situational context as being important shapers of the types of impacts individuals and households experience. Refer to Table 4 for examples of support for each of these contexts from the literature.

Table 4

Literature Supporting Community Situational Context

| <i>Context</i> | <i>Sample Citation(s)</i> |
|-----------------------------|--|
| <i>Economic</i> | Bruneau et al., 2003; Burby, 1998; Campanella, 2006; Cutter, 2001; Cutter, Burton, & Emrich, 2010; Garmestani, Allen Mittelstaedt, Stow, & Ward, 2006; Mileti, 1999; National Research Council, 2006; Pelling, Ozerdem, & Barakat, 2002; Rose, 2006; Tierney, 1997; Tierney, 2006; Tierney et al., 2003; Wisner et al., 2003; Zhang, Lindell, & Prater, 2009 |
| <i>Political</i> | Blaikie & Brookfield, 1987; Burby, 1998; Cutter, 2001; Drury & Olson, 1998; Gaillard, Liamzon, & Villaneuva, 2007; Green, 2005; Lewis, 2008; Mileti, 1999; National Research Council, 2006; Shefner, 1999; Sylves, 2008; Tierney et al., 2003; Wisner et al., 2003 |
| <i>Legal/Regulatory</i> | Burby, 1998; Godschalk, Beatley, Berke, Brower, & Kaiser, 1999; Mileti, 1999; National Research Council, 2006; Sylves, 2008; Tierney et al., 2003 |
| <i>Cultural</i> | Burby, 1998; Chang, 2000; Fernandez, Byard, Lin, Benson, & Barbera, 2002; Klinenberg, 2003; Mileti, 1999; National Research Council, 2006; Tierney et al., 2003; Wisner et al., 2003 |
| <i>Built/Constructed</i> | Burby, 1998; Cutter, 2001; Finch, Emrich, & Cutter, 2010; Godschalk, Brower, & Beatley, 1989; Godschalk et al., 1999; Masozera, Bailey, Kerchner, 2007; Mileti, 1999; National Research Council, 2006; Tierney et al., 2003; Wisner et al., 2003 |
| <i>Emergency Management</i> | Auf der Heide, 2006; Burby, 1998; Cutter, 2001; McConnell & Drennan, 2006; Kartez & Lindell, 1987; Mileti, 1999; Perry & Lindell, 2007; Wisner et al., 2003; National Research Council, 2006; Tierney et al., 2003 |

Recovery-Shaping Factors

The literature since 1978 suggests there are several factors that will shape the types of recovery modes individuals and households will access. While supporting the 1978 model conceptually, the literature suggests that two of the components of the original model ought to be relabeled and two components might be added to better capture the factors shaping the mode(s) people pursue to support their recovery. As a result of the literature, only one factor is left the same as originally depicted in the model, kin structure and resources. The recovery-shaping factors suggested by the combination of the 1978 model and literature since include post-disaster individual and household characteristics, community situational context, institutional aid

availability and program design, characteristics of aid providing organizations, and kin structure and resources.

Individual and Household Characteristics. While generally supporting what Bolin and Trainer attempted to capture with their inclusion of “family structure and resources” as a key component of the recovery process for individuals and households, the literature since suggests several adjustments in conceptualization are warranted. The original Bolin and Trainer model depicted “family structure and resources” as a key component of the recovery process for individuals and households. Within the literature more broadly, the phrase “individuals and households” has largely replaced the use of the term “family” when studying recovery at this level of analysis.

The literature since the original model has supported the relevance of household structure and resources to recovery processes. The factors of SES and stage in family life cycle highlighted in Bolin and Trainer’s original model continue to have relevance in the literature since. Indeed, research strongly suggests that SES is relevant to the individual recovery process including the commonly used variables used to assess SES: income, education, status of employment, and occupational prestige. Yet, the literature has noted several additional factors are also critical to recovery.

Many of these variables mirror the sample list of characteristics of individuals and households that are relevant as impact-shaping factors—instinctively, it rings true that many of the factors that affect why and how people are affected by disasters also serve to explain why and how they recover. The recovery literature has noted several characteristics of individuals and households, related to who they are and what they have, that shape recovery. For example, noted characteristics include whether the impacted person is or is not a citizen of the country, does or

does not speak and understand the language recovery information and messaging is being offered in, is or is not disabled, and or if the person owns or rents a home. If an individual is not a citizen of the United States, speaks and understands a language other than English, is disabled, and rents a home they may face struggle through the recovery process in ways that a native, English speaking, able-bodied, homeowner may not:

- Citizens may be eligible for a wider array of assistance from the government than non-citizens.
- English speakers may be able to communicate with professionals facilitating the recovery process and comprehend application forms and other materials more easily than non-English speakers/readers.
- Able-bodied individuals may be able to more readily perform certain repair and reconstruction tasks that some individuals with physical limitations may not be able to do or require adjustments to do.
- Homeowners may have a higher degree of control over the pace and quality of repair and reconstruction work in ways that renters do not.

Of course, an individual with any number of the characteristics described here may be able to recover with few obstacles, but the literature suggests that, in general, who people are and what they have is important to understanding how they will recover and that depending on the state of those qualities, the process of recovery may be more or less challenging. Refer to Table 5 for examples of literature supporting an expanded list of individual and household characteristics that influence the recovery process.

Table 5

Literature Supporting Individual and Household Characteristics in Recovery

| Individual and Household Characteristics | Sample Citation(s) |
|---|---|
| <i>SES</i> | Bolin, 1976; David, 2010; Edwards, 1998; Erickson, Drabek, Key & Crowe, 1976; Finch et al., 2010; Fussell et al., 2010; Kamel & Loukaitou-Sideris, 2004; Masozera et al., 2006; Norris et al., 2002; Spence et al., 2007 |
| <i>Income</i> | Abramson, Stehling-Ariza, Park, Walsh, & Culp, 2010; Beggs et al., 1996; Bolin, 1976; Cherry & Cherry, 1997; Edwards, 1998; Elliott and Pais, 2006; Erickson et al., 1976; Finch et al., 2010; Green et al., 2007; Groen & Polivka, 2010; Hori & Schafer, 2010; Kamel & Loukaitou-Sideris, 2004; Landry, Bin, Hindsley, Whitehead, & Wilson, 2007; Masozera et al., 2006 ; McDonnell et al., 1995; Norris et al., 2002; Rohrbach, Grana, Vernberg, Sussman, & Sun, 2009; Spence et al., 2007; Trainer & Bolin, 1976 |
| <i>Education</i> | Chappell, Forgette, Swanson, & Van Boening, 2007; Cherry & Cherry, 1997; Edwards, 1998; Finch et al., 2010; Smith, 2011; Landry et al., 2007; Masozera et al., 2006 ; McDonnell et al., 1995; Myers et al., 2008; Peacock, Killian, & Bates, 1987; Spence et al., 2007 |
| <i>Employment</i> | Elliot & Pais, 2010; Smith, 2011; Hall & Landreth, 1975; Hori & Schafer, 2010; Landry et al., 2007; McDonnell et al., 1995; Myers et al., 2008; Trainer & Bolin, 1976 |
| <i>Owning versus renting a home</i> | Abramson et al., 2010; Beggs et al., 1996; Chappell et al., 2007; Comerio, Landis, & Rofe, 1994; Finch et al., 2010; Green et al., 2007; Groen & Polivka, 2010; Hori & Schafer, 2010; Kamel & Loukaitou-Sideris, 2004; Landry et al., 2007; Myers et al., 2008; Spence et al., 2007; Trainer & Bolin, 1976 |
| <i>Existence/Coverage of insurance</i> | Chappell et al., 2007; Green et al., 2007; Masozera et al., 2006 |
| <i>Stage in family cycle</i> | Bolin, 1976; Edwards, 1998; Klein & Huang, 2007; Peacock, Killian, & Bates, 1987 |
| <i>Citizenship</i> | Kamel & Loukaitou-Sideris, 2004; Messias, Barrington, & Lacy, 2012; Sterett, 2012 |
| <i>Language spoken and understood</i> | Cherry & Cherry, 1997; Finch et al., 2010; Ibanez et al., 2003; Kamel & Loukaitou-Sideris, 2004; Messias et al., 2012 |
| <i>Marriage status</i> | Beggs et al., 1996; Chappell et al., 2007; Landry et al., 2007; Norris et al., 2002 |
| <i>Disability</i> | Chappell et al., 2007; Fothergill, 1999; Phillips et al., 2009 |
| <i>Sex of head of household</i> | Cherry & Cherry, 1997; Edwards, 1998; Elliot & Pais, 2010; Finch et al., 2010; Myers et al., 2008; Zakour & Harrell, 2003 |

(continues)

Table 5. *Literature Supporting Individual and Household Characteristics in Recovery*
(continued)

| Individual and Household Characteristics | Citation(s) |
|---|--|
| <i>Race</i> | Beggs et al., 1996; Edwards, 1998; Elliott and Pais, 2006; Finch et al., 2010; Fussell et al., 2010; Green et al., 2007; Hori & Schafer, 2010; Kamel & Loukaitou-Sideris, 2004; McDonnell et al., 1995; Myers et al., 2008; Shelton & Coleman, 2009; Spence et al., 2007; Zakour & Harrell, 2003 |
| <i>Ethnicity</i> | Edwards, 1998; Erickson et al., 1976; Ibanez et al., 2003; Kamel & Loukaitou-Sideris, 2004; Norris et al., 2002; Peacock, Killian, & Bates, 1987; Shelton & Coleman, 2009 |

Community Situational Context. The Bolin and Trainer (1978) model indicated that community normative and resource structure served to explain recovery mode utilization post-disaster. Research suggests that factors that were once included under this heading—specifically that of institutional aid availability and program design and characteristics of aid providing organizations—are actually so significant that they should be extricated from the community normative and resource discussion and be recognized as independent features of the individual and household recovery process. Moreover, the literature suggests a broader array of variables at a community level influence the recovery process than what is suggested by Bolin and Trainer’s (1978) discussion of norms and resources. Thus, community normative and resource structure might be better reimagined to more comprehensively incorporate the community level factors influencing the recovery process of this stakeholder group under the broader header of community situational context.

Community situational context includes the six dimensions discussed previously: economic, political, cultural, legal/regulatory, built/constructed, and emergency management. Here, the normative concerns of the Bolin and Trainer (1978) model are incorporated into the cultural aspects of the community context. While these six dimensions of the community

situational context are relevant to understanding what impacts occur, they can also help to explain how the recovery process unfolds for each individual. Variables related to the six dimensions may apply both to impacts and recovery, but the way they influence these big-picture concerns differs; what is meaningful to explaining impacts may be meaningful in a different way to explaining the subsequent recovery process. Moreover, new variables relating to these dimensions may serve to influence recovery that did not have a bearing on impacts and vice versa. Finally, the features of the community situational context may have itself been impacted by the disaster and exert different influence on the community than they did pre-disaster as a result.

Examining each of these dimensions in turn, it is found that the economic context is again shaped by factors related to the diversification of sector, and businesses having multiple operating locations and the degree to which businesses work with local, regional, national, or even international suppliers, distributors, and customer bases. The post-disaster strength and stability of the economy explains the degree to which the community can restore itself (i.e., infrastructure, municipal services, places of employment, etcetera) and continue to provide services to individuals and households impacted by the disaster. If communities cannot sustain themselves in the post-disaster environment, it will be more difficult for individuals and household to recover in this setting.

Concerning the political context, research has consistently found that the recovery period can be contentious. There is often a brief period post-impact where there is community consensus regarding priorities, suspension of pre-existing divisions in the community (e.g., race, class); however, this period, often referred to as the “therapeutic” or “altruistic” community typically gives way to a recovery period framed not just by the return to pre-disaster political

conditions within the community (e.g., corruption, distribution of power, in-fighting) but also additional disaster-related political issues (e.g., blame assignment and scape-goating).

The post-disaster cultural context may shape the recovery process as well— as Bolin and Trainer (1978) suggested. Notably, there has been little research that specifically examines community normative structures in the way they are described in the original model. The researcher was able to find a single study (Wolensky, 1983) that discussed the notion that community norms surrounding aid distribution are important to recovery. And, there was limited discussion in the literature of how values interact with recovery specifically. For example, in studies of communities that value sustainability, rebuilding may be done in a way that enhances the quality of life of individuals and serves to protect them from future disaster.

The legal/regulatory environment post-disaster may involve new laws, policies, codes, and procedures that inform recovery and old ones may be relevant in new, and, perhaps, unanticipated, ways. Certainly, the institution of post-disaster mitigation policies may subsequently affect if and how and at what pace individuals and households repair and/or rebuild. For example, communities may institute new building codes for all homes damaged in a disaster event. Individuals and households would then implement these requirements during the repair and reconstruction process, which may slow their recovery process. Procedures around permitting may also affect the speed at which individuals and households can address impacts to their property.

The density, quality, and degree of impacts to the built/constructed environment may serve to shape the recovery process for individuals and households in addition to other factors relevant to the community situational context. If impacted properties are geographically concentrated, it may be easier for helping organizations to serve multiple homeowners versus

far-flung properties. Moreover, if homes are of good construction, there may be fewer things that individuals and households have to do to recover along the housing dimension than those whose homes are of poor quality. Moreover, the degree to which various aspects of the constructed environment, such as levees, are being restored and the timing of that process can affect the degree to which individuals and households are able to return to impacted communities and begin dealing with impacts to their property.

Finally, the emergency management context indirectly influences the recovery of individuals and households. Rubin (1985) points out the leadership, ability to act, and knowledge of what to do shapes the degree to which a community can recover from a disaster. Emergency managers can provide leadership to those involved in recovery work—connecting them to important resources, information and other organizations active in the recovery process. A community's ability to act will be shaped by the availability and sufficiency of technical and administrative resources to carry out recovery work. Finally, individuals involved in the recovery work need to know how to carry out various recovery tasks and activities (e.g., damage assessment, debris management, environmental restoration, etcetera) in order to negotiate these activities effectively. Moreover the literature suggests that the degree to which communities are horizontally linked within themselves and to surrounding organizations and communities and vertically linked to regional and/or national and agencies organizations will affect their ability to leverage resources to facilitate their own recovery (Berke et al., 1993). Although these factor and shape community recovery, individuals and households will be impacted by the way these factors manifest and interact: without strong leadership, the ability to act, knowledge of what to do, and weak horizontal and vertical integration, communities cannot shape their own recovery. Individuals and households will be absent basic supports/ services to carry out their own

recovery. For example, if lifelines have not been restored and municipal services are not back online, individuals and households will struggle to restore, rebuild, and reshape the parts of their own lives impacted by disasters.

In addition to these features, informal resources—both in terms of people and supplies—are incredibly salient to the emergency management context. The emergence of groups in the post-disaster environment that form to address perceived or actual unmet needs related to the disaster has been recognized and analyzed by the literature (see for example: David, 2006; Green & Ireland, 1982; Kreps, 1978; Majchrzak, Jarvenpaa, & Hollingshead, 2007; Scanlon, 1999; Taylor, Zurcher, & Key, 1970; Voorhees, 2008). These emergent groups often converge on the impact area, sometimes to the detriment of the formal response and recovery processes being conducted (Dynes & Quarantelli, 1980; Haas & Drabek, 1970). Individuals not associated with any pre-disaster organization or emergent group may also spontaneously converge on disaster sites with intent to help those impacted (see for example: Dynes & Quarantelli, 1980; Kendra, Wachtendorf, & Quarantelli, 2003; Lowe & Fothergill, 2003).

These groups and individuals tend to engage in critical activities like distributing relief supplies and helping reconstruct homes (Drabek & McEntire, 2002; Drabek & McEntire, 2003; Dynes & Quarantelli, 1980; Wenger, 1992). Informal assistance is also common after disasters in the form of donations—both in-kind (material donations) and financial. The amount of the donations, the type of the donations, the timing of the donations, how the donations are managed (Drabek, 1986; Houlguin-Veras & Jaller, 2012; Houlguin-Veras, Perez, Ukkusuri, Wachtendorf, & Brown, 2007; Kendra & Wachtendorf, 2006; Neal, 1994; Phillips, 2009; Smith, 2011) and a variety of other factors will all influence the recovery process for individuals. Additionally, the literature suggests that the training/skills of those helping (Auf der Heide, 1989; Brudney &

Gazley, 2009; Drabek, 1985; 1987; Katayama, 1992; Stallings, 1978; Voorhees, 2008) and the timing of their involvement (Brennan, Barnett, & Flint, 2005; Fernandez, Barbera, & van Dorp, 2006a; Fernandez, Barbera, & van Dorp, 2006b; Flint & Stevenson, 2010) are important to the recovery processes of impacted stakeholders. These individuals and supplies (related to the amount, type, timing, and management of donations) may serve as critical assistance to individuals and households who may not otherwise be able to afford the labor or materials necessary to address the impacts they experience.

The literature provides support for all of these contexts as being critical components of the broader community situational context; although there has been comparatively less work done concerning culture as far as the researcher has been able to determine. See Table 6 for examples of literature-based support for the role of these contexts in the recovery environment.

Table 6
Literature Supporting Community Situational Context in Recovery

| <i>Context</i> | <i>Sample Citation(s)</i> |
|-----------------------------|--|
| <i>Economic</i> | Alesch, Holly, Mittler, & Nagy, 2001; Alesch et al., 2009; Boettke et al., 2007; Phillips, 2009; Rubin et al., 1985; Smith, 2011; Webb, Tierney, Dahlhamer, 2002; Zhang, Lindell, & Prater, 2009 |
| <i>Political</i> | Alesch et al., 2009; Boettke et al., 2007; Boettke, Chamlee-Wright, Gordon, Ikeda, Leeson, & Sobel, 2007; Boin, 't Hart, McConnell, & Preston, 2010; Chamlee-Wright, 2010; Drury & Olson, 1998; National Research Council, 2006; Olson, 2000; Passerini 2000; Rubin et al., 1985; Shefner, 1999; 't Hart, 1993 |
| <i>Legal/Regulatory</i> | Alesch et al., 2009; Bolin & Stanford, 1991; National Research Council, 2006; Passerini, 2000; Rubin et al., 1985; Rubin, 2012; Smith, 2011 |
| <i>Cultural</i> | Boettke et al., 2007; Burby, 1998; Chamlee-Wright, 2010; Moore, et al., 2004; Paul & Che, 2010; White, 2010 |
| <i>Built/Constructed</i> | Alesch et al., 2009; Phillips, 2009; Smith, 2011; Rose, Benavides, Chang, Szczesniak, & Lim, 1997; Rubin et al., 1985 |
| <i>Emergency Management</i> | Alesch et al., 2009; Berke et al., 1993; Bundy, 2013; Phillips, 2009; Smith, 2011; Rubin et al., 1985 |

Institutional Aid Availability and Program Design. The original 1978 model subsumed all resources within the community normative and resource structure component of the recovery process—both informal and formal. Yet, the literature since suggests that aspects of formal aid—or institutional aid—are so critical to understanding the recovery process of individuals and households that it ought to be considered on its own, on par with, the rest of the community situational context. The specific issues that available aid programs are designed to address, the availability and accessibility of information about formal aid programs, eligibility requirements to utilize aid programs, the accessibility of these programs, and the rigidity of programs (both in terms of implementation and aid delivery) has been shown to be salient to overall recovery outside of a wider resource issue. Clearly, if assistance is available that meets the needs of an impacted individual, if an individual is aware of this assistance because information about it is available and accessible (i.e. in languages, formats, locations relevant to the individual), the individual is eligible for the assistance, and the program is accessible and is flexible in its implementation and delivery of aid, the utilization of institutional assistance by individuals is facilitated. Thus, these factors are important shapers of one’s ability to recover by accessing institutional assistance. Refer to Table 7 for a presentation of examples of literature supporting these findings.

Table 7

Literature Supporting Institutional Aid Availability and Program Design Factors

| Institutional Aid Factors | Sample Citation(s) |
|--|---|
| <i>Aid program design</i> | Cherry & Cherry, 1997; Finch et al., 2010; Smith, 2011; Kamel & Loukaitou-Sideris, 2004; McDonnell et al., 1995; Peacock, Killian, & Bates, 1987 |
| <i>Availability and accessibility of aid information</i> | Chamlee-Wright & Storr, 2009; Cherry & Cherry, 1997; Smith, 2011; Groen & Polivka, 2010; Ibanez et al., 2003; Masozera, Bailey, & Kerchner, 2006; McDonnell et al., 1995; Spence et al., 2007 |
| <i>Aid eligibility requirements</i> | Adams et al., 2009; Cherry & Cherry, 1997; Dash et al., 2007; Finch et al., 2010; Bolin, 1986; Finch et al., 2010; Green et al., 2007; Kamel & Loukaitou-Sideris, 2004; Sterett, 2012 |
| <i>Aid accessibility</i> | Cherry & Cherry, 1997; Dash et al., 2007; Edwards, 1998; Finch et al., 2010; Ibanez et al., 2003; Masozera et al., 2006 |
| <i>Rigidity of implementation and delivery</i> | Cherry & Cherry, 1997; Edwards, 1998; Smith, 2011; Green et al., 2007 |

Characteristics of Aid Providing Organizations. In addition to the influence of institutional aid availability and program design on the recovery of individuals and households, several factors related to the characteristics of formal aid providing organizations themselves have been highlighted to influence the recovery process. These factors seem so critical to understanding individual and household recovery that they must be considered separate from, and on par with, the broader community situational context as was the case with institutional aid. The literature notes many salient characteristics of organizations involved in recovery efforts directed towards individuals and households both related to individual organizations and the network of aid providing organizations as a whole. Characteristics of individual organizations include the perceived legitimacy of the organization and the degree to which the organizations possessed local knowledge (of people and the area). These factors have been formed to influence the organization's ability to effectively support individual and household recovery through the delivery of institutional aid. Additionally, the literature has found that factors across the aid

providing groups as a collective also explain the extent to which they will be able to effectively support the recovery of individuals and households including how many organizations there are, the distribution of organizations in a community, and the degree to which they are networked together.

These characteristics of individual organizations and across organizations serve to shape the recovery process of individuals and households by affecting what recovery mode, or modes they utilize. When there are many organizations located in close-proximity that are well-networked and each has had a positive reputation and an enduring local presence pre-disaster, research suggests they will be able to know how to help people in the area best and do so effectively and efficiently. Table 8 identifies sample support from the literature for these elements.

Table 8
Literature Supporting Characteristics of Aid Providing Organizations Factors

| Characteristics of Aid Providing Organizations Factors | Sample Citation(s) |
|---|--|
| <i>Perceived legitimacy</i> | Bolin & Stanford, 1998; Boris & Steuerle, 2006; DeVita et al., 2008; Phillips, 2009; Pipa, 2006 |
| <i>Local knowledge</i> | Boris & Steuerle, 2006; Chandra & Acosta, 2009; DeVita et al., 2008; Phillips, 2009; Phillips & Jenkins, 2008; Pipa, 2006; Smith, 2011 |
| <i>Number of helping organizations</i> | Boris & Steuerle, 2006; Eikenberry, Arroyave, & Cooper, 2007; Zakour & Harrell, 2003 |
| <i>Geographic distribution of organizations</i> | Auer & Lampkin, 2006; Acosta, Chandra, & Feeney, 2010; Zakour & Harrell, 2003 |
| <i>Network of aid providing organizations</i> | Bolin & Stanford, 1998; Boris & Steuerle, 2006; Chandra & Acosta, 2009; DeVita et al., 2008; Egan & Tischler, 2010; Gajewski, Bell, Lein, & Angel, 2011; Phillips, 2009; Pipa, 2006; Smith, 2011; Waugh & Streib, 2006; Zakour & Harrell, 2003 |

Kin Structure and Resources. The influence of kin structure and resources on recovery processes has been emphasized by the literature in keeping with the ways Bolin and Trainer

(1978) originally conceptualized this variable. Indeed, as with Bolin and Trainer's (1978) emphasis on cultural values surrounding assistance from kin in the recovery process, further cross-cultural comparisons of impacted populations have found that cultural values will shape the extent to which kin networks are accessed and the type of assistance they will provide (see for example: Ibanez et al., 2003; Messias et al., 2012; Nakagawa & Suwa, in press; Peacock, Killian, & Bates, 1987; Trainer & Bolin, 1976). The literature since 1978 has also served to add nuance and depth to our understanding of this component in ways that Bolin and Trainer (1978) did not.

Factors within this conceptual category that have been found to be important include the closeness or level of familiarity the impacted individual/family has with their kin, the composition of their kin network (e.g., informal relationships like family and friends or formal relationships like co-workers), and the size of their social network (in terms of numbers). Moreover, the degree to which the kin network was impacted, the spread of the network (in terms of range), and the density of the network, in terms of concentration have been shown to be relevant to recovery. The literature suggests that those who are close with their kin and have social ties with a variety of social networks and many individuals therein may be able to leverage recovery resources from their kin group more effectively than those with ties to individuals who live too far away to provide hands-on assistance, than those who have few social networks to connect to, and than those who are connected to few other people in general. However, if the kin group experienced impacts itself, which may be the case if they are geographically concentrated in the same area as the impacted individual, they may be able to offer little to no assistance. Thus, network qualities are relevant to understanding the degree to which the kinship mode is utilized. Table 9 presents examples of literature supporting these findings.

Table 9

Literature Supporting Kinship Structure and Resources

| Kinship Network Recovery Factors | Sample Citation(s) |
|---|--|
| <i>Closeness/level of with their kin</i> | Bolin, 1976; Norris et al., 2002; Young, 1954 |
| <i>Composition of kin network</i> | Beggs et al., 1996; Forgette et al., 2009; Messias et al., 2012 |
| <i>Degree to which kin network was impacted</i> | Smith, 2011 |
| <i>Size of kin network</i> | Forgette, et al., 2009; Norris et al., 2002 |
| <i>Spread of kin network</i> | Airriess et al., 2008; Beggs et al., 1996; Messias et al., 2012; Young, 1954 |
| <i>Density of kin network</i> | Airriess et al., 2008; Beggs et al., 1996 |

Recovery Mode(s) & Holistic Recovery. Support for the recovery modes or pathways suggested by Bolin and Trainer (1978) is evident in the literature. As a caveat, rarely is the autonomous mode of recovery explicitly addressed by researchers (see Erickson et al. (1976) and Forgette et al. (2009) for examples of the few articles that do examine autonomous recovery directly). It appears to be an implicit assumption that those who can recover on their own will do so. Much of the work instead is concerned with those who require outside assistance. Indeed, most of this research discusses the availability, accessibility, services provided by, issues associated with, and factors explaining utilization of kinship and institutional modes of recovery. Table 10 includes references to sample literature on kinship or institutional modes of recovery since 1978.

Table 10

Literature Focused on Kinship or Institutional Modes of Recovery

| Recovery Mode | Sample Citation(s) |
|----------------------|--|
| <i>Kinship</i> | Airriess et al., 2008; Beggs et al., 1996; Bolin, 1976; Chappell et al., 2007; Drabek & Key, 1976; Erickson et al., 1976; Finch et al., 2010; Forgette et al., 2009; Ibanez et al., 2003; McDonnell et al., 1995 |
| <i>Institutional</i> | Beggs et al., 1996; Bolin, 1976; Bondy, 1957; Chappell et al., 2007; Cherry & Cherry, 1997; Erickson et al., 1976; Finch et al., 2010; Forgette et al., 2009; Ibanez et al., 2003; Kamel & Loukaitou-Sideris, 2004; McDonnell et al., 1995 |

The Bolin and Trainer (1978) model presented recovery as a single-dimensional end stage of the recovery process that the utilization of one or more recovery modes helped individuals and households achieve. The literature since 1978 has often continued to treat recovery as one-dimensional, frequently focusing on a specific dimension of recovery (see for example: Bolin and Bolton (1986) for an example of work on economic recovery and Norris, Kaniasty, Conrad, and Inman (2002) and Norris, Friedman, and Watson (2002) as examples of work on the socio-psychological dimension of recovery). Yet, implicit in the literature has been recognition that recovery involves more than just the dimension being examined.

Despite recognition that individual and household recovery typically involves recovery along more than one dimension, few scholars have posited how recovery might be conceptualized more holistically. Fortunately, Abramson et al. (2010) offered a socio-ecological framework for conceptualizing the holistic recovery of individuals and households. Abrahamson et al. (2010) suggest that individual and household recovery may involve up to five dimensions, i.e., housing stability, economic stability, physical health, mental health, and social role adaptation, and that progress toward each dimension can, and should be, assessed. Given that individuals seek to become whole again—recovery related to all of the dimensions of their life that have been impacted by a disaster—it is important that recovery be understood as a multi-

dimensional concept as opposed to one-dimensional as suggested in the original 1978 model. Thus, recovery for individuals and households is better reflected by Abramson et al. (2010).

Limitations of the Existing Recovery Research

While the work of Bolin and Trainer (1978) represented an important step forward in understanding individual and household recovery, the shortcomings of the original model are worth noting. The work of Bolin and Trainer (1978) is conceptual and the authors did not intend it to be utilized as a causal model. In reviewing the literature since 1978, it is clear that conducting research using the original model would have yielded far less explanation of individual and household recovery than one based on the literature in conjunction with the original work of Bolin & Trainer in 1978. Introduction and testing of a causal model related to individuals and households would certainly advance research and understanding related to individual and household recovery, yet, it would appear that development of a causal model may be premature based on this literature review.

While this review of the literature has established that the original work of Bolin and Trainer (1978) was less than comprehensive in capturing the most significant features of the overall recovery process of individuals and households, the literature based additions are also subject to constraints. The synthesis of the literature reviewed here may still not have yielded a complete conceptualization of individual and household recovery. Although a large cross-section of research has been reviewed, it does not represent the full breadth of literature on individual and household recovery. Moreover, the findings synthesized here are limited by the quality of the literature, which varies—some research was informed by rigorous methods and/or large data sets and other studies were subject to methodological flaws and/or small sample sizes. Additionally, the literature used to inform this study has not comprehensively explored all of the factors

involved in recovery as suggested by Bolin and Trainer (1978). As with the work of Bolin and Trainer (1978), the literature since 1978 has primarily established association as opposed to causal links between specific factors found to be influential on the recovery process of this stakeholder group. The relative influence of the various factors entailed in the model has certainly not yet been examined and is outside of the scope of this study. Nevertheless, this study takes an initial step toward the development of a causal model by first suggesting what a revised model of individual and household recovery might include based on a literature review. In light of these revisions, this study then conducted original research on individual and household recovery from a recent disaster to assess whether the Bolin and Trainer (1978) model and the factors suggested by the literature since together reflect what the recovery process entails for individuals and households. In Table 11, the ways in which the literature has served to refine and enhance the original work of Bolin and Trainer (1978) are highlighted for the reader.

Table 11
Summary of Literature Based Findings on Individual and Household Recovery

| Features of Process as Revised by the Literature | Features of Process in Bolin and Trainer (1978) Model |
|---|--|
| <i>Impact-Shaping Factors:</i> | |
| Hazard & Hazard Event Characteristics | n/a |
| Individual and Household Characteristics | n/a |
| Community Situational Context | n/a |
| <i>Impact</i> | <i>Impact</i> |
| <i>Recovery-Shaping Factors:</i> | |
| Individual and Household Characteristics | Family Structure and Resources |
| Community Situational Context | Community Normative and Resource Structure |
| Institutional Aid Availability and Program Design | n/a—issue was subsumed within community normative and resource structure |
| Characteristics of Aid Providing Organizations | n/a—issue was subsumed within community normative and resource structure |
| Kin Structure and Resources | Kin Structure and Resources |
| <i>Recovery Modes</i> | <i>Recovery Modes</i> |
| <i>Holistic Recovery (multi-dimensional)</i> | <i>Recovery (one-dimensional)</i> |

Conclusion

This Literature Review has presented the basic theoretical foundation informing this thesis. The original conceptual model put forth by Bolin and Trainer represents an important effort to address a major gap in the research on individual and household recovery. The literature since 1978 suggests that elements of Bolin and Trainer's (1978) were supported but that the model required some adjustment to more comprehensively reflect the individual and household recovery process. In the next Chapter, the methodology utilized to examine how comprehensively the 1978 model and refinements based on the literature since reflect the recovery process of individuals and households.

CHAPTER THREE: RESEARCH METHODS

Chapter Three is organized into six sections. The first section describes the methodological approach to the study. The disaster and area of focus will be discussed in the second section and this study's sampling procedures in the third. The fourth section presents the data collection procedures used. The fifth section articulates the data analysis process employed. Finally, the sixth section critically examines the limitations of this study.

Methodological Approach

Given the exploratory nature of this research, qualitative methods were most appropriate. Qualitative methodology is useful "when context and richness are important" (Rubin & Rubin, 2012, p.3). Indeed, in order to determine if the 1978 model of individual and household recovery and literature based additions are reflective of the realities of recovery for individuals and households, it was necessary to gather detailed accounts of this process. Moreover, the goals of qualitative methods aligned with those of the researcher. Specifically, the researcher sought to 'generate results and theories that are understandable and experientially credible, both to the people you are studying and to others' (Maxwell, 2013, p.31). The extensive descriptions of the recovery process of individuals and households gathered by this research enabled the researcher to credibly reflect how people have engaged in recovery according to those who participate in this research.

Additionally, the researcher was guided, in particular, by an interpretive-constructionist approach to qualitative methodology. Critical to interpretive-constructionist theory is an acknowledgement that individuals can, and often do, view the same phenomena in different ways based on "different experiences, knowledge, and opinions, resulting in different interpretation" (Rubin & Rubin, 2005, p.29). The researcher also employs frameworks for understanding reality

that may diverge from the respondent. These assumptions may shape what the researcher asks and the meaning gleaned from responses; every effort must be made to acknowledge and set aside such assumptions in order to better understand the ways in which respondents are constructing reality (Rubin & Rubin, 2005).

Disaster and Area of Focus

Hurricane/Superstorm Sandy was purposively selected as the disaster of focus because it was a recent disaster (occurring in October of 2012) that resulted in significant, widespread impacts for individuals and households. Surrounding the one-year anniversary of Sandy, news reports indicated that this disaster was a significant event from which many individuals and households were still recovering (see for example: Associated Press, 2013; The Economist, 2013; Herman, 2013; McLaughlin, 2013; National Public Radio, 2013). Hurricane Sandy impacted the Bahamas as a Category 1 and Cuba as a Category 3 event before downgrading to a post-tropical cyclone and crossing into the continental United States (Blake, Kimberlain, Berg, Cangalosi, & Beven, Tropical cyclone report: Hurricane Sandy, 2012). Causing widespread destruction, this event resulted in approximately \$50 billion in property damage and killed 147 people (Blake, Kimberlain, Berg, Cangalosi, & Beven, 2012). Although “Superstorm” is not an official meteorological concept, the event is largely referred to by the colloquialisms of “Superstorm Sandy”, or just “Sandy”, after the nickname was popularized in the media (see for example: Associated Press, 2012; Britt, 2012).

Sandy caused significant damage and destruction, resulting in many Presidential Disaster Declarations (PDDs) to help impacted areas contend with the costs related to response and recovery. The issuance of PDDs indicates that the resources of impacted local and state governments were overwhelmed and that the impacts in these areas were considered significant

enough to warrant federal involvement. Many of the PDDs issued for Sandy involved the distribution of both Individual Assistance (IA) and Public Assistance (PA). Granting IA in a PDD is a relatively rare occurrence and represents the highest echelon of assistance offered through the PDD process (Sylves, 2008). In the state of New Jersey, all twenty-one counties received PDDs with both IA & PA, far outweighing the number and proportion of IA & PA designations received in the three other Sandy impacted states (Federal Emergency Management Agency, 2012a; Federal Emergency Management Agency, 2012b; Federal Emergency Management Agency, 2012c; Federal Emergency Management Agency, 2013a). Thus, the researcher chose to specifically examine the recovery process of individuals and households impacted by Superstorm Sandy in the state of New Jersey.

Sampling Procedures

The sample for this study was developed purposively. Ritchie and Lewis (2003) state that purposive sampling involves a process by which “the sample units are chosen because they have particular features or characteristics which will enable detailed exploration and understanding of the central themes and puzzles which the researcher wishes to study” (p.78). In order to explore the individual and household recovery process with depth, those in the best position to address this process would be individuals themselves or those who assist them in their recovery. This study purposively sampled the latter, speaking with representatives of organizations involved in the recovery efforts following Sandy. It is recognized that individuals and households are best positioned to speak to their own recovery. However, there are significant benefits to sampling amongst organizations participating in the recovery process.

First, organizational representatives are more easily accessed because of the institutional and publically advertised nature of their work. Second, because these organizations often assist

many individuals and households in the recovery process, they are potentially able to speak to the recovery experiences of many people. Arguably, their interactions with large populations of recovering individuals ought to allow them to provide a more representative picture of the recovery process of individuals and households than could be achieved from a handful of individuals discussing their personal recovery experiences. Additionally, undergirding this purposive sampling was the assumption that organizational representatives may become intimately acquainted with personal details of their clients' recoveries (i.e., their financial situation, their level of need, etcetera). More broadly than recovery specific situations, the social work literature suggests that effective service providers will have significant understanding of their clients' lives (Blom, 2002). This understanding ought to allow them to provide meaningful data related to various aspects of their clients' recovery journeys.

The researcher utilized a list, distributed by the New Jersey Office of Emergency Management (NJOEM), of all Long Term Recovery Groups (LTRGs) active in New Jersey at the time of data collection as her sampling frame (NJOEM, undated). LTRGs are, as the National Voluntary Organizations Active in Disaster (NVOAD) describes,

... a cooperative body that is made up of representatives from faith-based, non-profit, government, business and other organizations working within a community to assist individuals and families as they recover from disaster. [...] No matter how a group is structured or what it calls itself [...] the goal is the same: to unite recovery resources with community needs in order to ensure that even the most vulnerable in the community recover from disaster. (NVOAD, 2012, p.6).

In addition to the formal LTRG bodies, the researcher also sought the participation of representatives of independent organizations on LTRG member lists, where lists were available. Six of the 15 LTRGs had publically posted lists of partner/member agencies available on their websites at the time of data collection. These organizations were in some way affiliated with

individual and household recovery efforts related to Sandy. The researcher was particularly interested in the perspectives of non-governmental agencies that were involved in the local area (though not necessarily headquartered in the impacted area) as opposed to governmental agencies; these types of organizations typically work directly with individuals and households during recovery as opposed to government organizations that focus more on restoring government services and infrastructure (Chandra & Acosta, 2009; Smith, 2011; DeVita et al., 2008; Egan & Tischler, 2010; Phillips & Jenkins, 2008). The researcher only invited the participation of nongovernmental organizations on the available lists.

Following Institutional Review Board approval (see Appendix A for Institutional Review Board Approval), strategies used to elicit participation included an initial phone call to organizations meeting the sampling criteria inviting their involvement in the study. See the telephone screening script in Appendix B. When additional information was requested or the researcher could only find email contact information, formal invitation emails were sent to potential respondents. See Appendix C for the invitation email that was used. Occasionally, when an organization seemed particularly well-suited to participate (i.e., having active updates about Sandy recovery on their websites) email and phone outreach was conducted in hopes of establishing a connection with the organization more rapidly. All participating organizations were sent emails with information sheets attached describing the study and potential risks and limitations, among other details. See Appendix D for the information sheet.

In addition to this base sampling strategy, snowball sampling—a type of purposive sampling—was also employed by the researcher. This form of sampling involves asking research respondents to serve as “informants to identify others who qualify for inclusion in the sample” (Bailey, 1994). For the LTRG organizations that did not provide member lists, this strategy was

particularly useful. Moreover, while LTRG representatives and organizations participating as partner or supporting members of LTRGs represent one segment of organizations involved in the recovery efforts, there are additional organizations that are not affiliated formally with these recovery groups that may be doing significant work to help those impacted by Sandy. Because the researcher had no way of knowing what those organizations might be, the snowballing strategy was particularly helpful in making those connections. Outreach to LTRGs and those members meeting the nongovernmental organizations on available LTRG member's lists involved a request for referral to additional organizations active in the recovery efforts. See Appendix B for the telephone screening script utilized for outreach, including the snowballing prompt. Often respondents waited until after the interview was conducted to provide the researcher with a few additional organizations. The researcher then reached out to those organizations and requested their participation in keeping with the general steps laid out here.

In total, 21 organizational representatives participated in this study. The goal of the data collection process was to conduct as many interviews as needed to reach theoretical saturation. Theoretical saturation is considered achieved when the benefits of future data collection have diminished in light of the potential theoretical value and costs associated with future collection (Strauss & Corbin, 1998). The decision to conclude the data collection stage of this research was made in conjunction with the researcher's thesis advisor. The purpose of this study was to determine the extent to which the Bolin and Trainer (1978) model and literature based additions comprehensively reflected the individual and household recovery process. Thus, the decision to stop the interviewing process was made when it was determined that there was or was not broad support for all the elements of the recovery process anticipated by the researcher, new findings

were confirmed in similar ways by multiple respondents, and no new information about the major components of the recovery process was emerging from the data.

Respondents represented a wide variety of organizations, including 7 LTRGs, 9 faith based organizations (mostly churches), and six nonprofits. The LTRGs that participated in this study were structured in a variety of ways—some with large staffs and some with a single paid staff member supported by a volunteer cohort. While various committees, boards, and participation structures were employed, in all cases the LTRGs sought to address the unmet needs of their communities. Among the other organizations involved in this study, their structures varied widely based on a number of factors such as location(s), resources, size. Across the 21 interviews, it was clear that the spread of recovery work that these organizations were involved in was primarily related to housing impacts (e.g., securing financial resources to pay for mortgages, rebuilding costs, and basic home goods and supplies or physically repairing/rebuilding homes). Some of the respondents were also involved in a counseling capacity. In terms of the demographic breakdown of the respondent pool, 13 of the respondents were male, while 8 were female. Almost all of the respondents had been working in the recovery efforts since the storm occurred, and continue to have an active role—sometimes several roles—related to helping individuals and households recover from Sandy. In the majority of cases, although respondents were not involved in disaster recovery work prior to Sandy, they had become deeply engrossed in the daily efforts to help individuals and households recover from this event. Respondents described serving hundreds to thousands of individuals and households as a part of their work and offered detailed, rich data about the recovery process of this stakeholder group based on these many interactions.

Data Collection

This study utilized semi-structured, in-depth telephone interviews. The interviews were conducted in keeping with Rubin & Rubin's Responsive Interviewing Model (2012). This model is defined by four key elements. First, the model supports the collection of rich data contextualized within respondent experiences (Rubin & Rubin, 2012). Second, the model recognizes who the interviewer and the respondent are as people affects the interview. Therefore, the interviewer must always be vigilant and try to guard against the ways in which her "opinions, experiences, cultural definitions, and even prejudices" influence the interview and data analysis process (Rubin & Rubin, 2012, p.38). Third, the respondent is treated as an equal partner in the research, rather than the subject of the research (Rubin & Rubin, 2012). Fourth, and finally, throughout the data collection and analysis process, the research design must remain flexible in order to support the exploration of findings emerging from the data (Rubin & Rubin, 2012).

Furthermore, in-depth interviewing, as informed by the Rubin & Rubin's Responsive Interviewing Model, is characterized by three essential qualities. First, the interviewer is to push beyond short, simplistic responses (e.g., yes, no, sometimes, never, etc.) to gather richly articulated, well-explored responses (Rubin & Rubin, 2012). Second, interviewers utilize open-ended questions so that the respondent is free to answer questions as they see appropriate and drive the interview conversation based on their own ideas and conceptualizations of what is being examined (Rubin & Rubin, 2012). Lastly, interview questions are not fixed, allowing the interviewer the flexibility to pursue the data in the manner in which it is being presented by the respondent—whether or not these responses reflect the researcher's original ideas of how the research conversation might progress.

Within the context of this study, utilizing an open-ended question design to gather highly detailed, rich data conferred significant advantages in exploring how reflective the Bolin and Trainer (1978) recovery model and literature based additions are to the actual recovery processes of people impacted by Hurricane/Superstorm Sandy. An interview guide provided a basic structure for the interviews. In keeping with the Rubin & Rubin (2012) Responsive Interviewing Model and the general tenets of semi-structured interviewing, this interview guide consisted of short list of open-ended questions, such as:

- Describe your role in the Sandy recovery efforts.
- How were people impacted by Sandy?
- What have people done to deal with these impacts?
- How holistic has the recovery of individuals and households been to this point?

Additionally, the researcher used a list of several potential follow-up questions and probes during the interviews. See Appendix E for the interview guide and Appendix F for potential follow-up and probes. As a novice researcher, it was important to be prepared with ways to guide the conversation back to the research topic and continue to seek a holistic understanding of the recovery process of individuals and households

All interviews were recorded through a program on the researcher's computer as well as by an application on the researcher's mobile device and e-reader, in order to reliably and accurately capture the content of the research conversation. The audio files were accessible to the researcher, the thesis advisor, and the transcription company, "Rev", that provided transcription services for this study. The first two interviews were transcribed by the researcher, to encourage deeper immersion in the data during the initial stages of the data collection process. Following the transcription of these two interviews, the researcher delegated the process of transcription to

the transcription company, which provided non-verbatim transcription services. The transcription company describes their normal (non-verbatim) transcription service as follows: “we edit filler words such as "uhh" and "umm" to best represent the integrity of the recording. However, we do not edit grammatical errors as we only transcribe the audio as is” (Rev, 2014). During the writing of results chapters, coded segments used to support particular points were edited by the researcher where the transcription company was unable to distinguish a particular section of the recording.

Data Analysis

In addition to informing the methods employed to collect data in this study, the Rubin & Rubin (2012) Responsive Interviewing Model also served to inform this study’s approach to data analysis. The model consists of a seven step systematic approach to the analysis of data collected through responsive interviews. In keeping with the first step, the researcher and the transcriptionist company transcribed the interviews as the researcher proceeded through the data collection process (Rubin & Rubin, 2012). This first step also involved pausing to reflect on the substance of each interview through informal reflective memo writing involving articulating the extent to which each of the components of the revised model were supported in the interview and if any new categories of process elements had emerged.

The second step in the data analysis process of the Responsive Interviewing Model called for transcripts to be coded based on ‘emerging concepts, themes, examples, events and/or topical markers’ (Rubin & Rubin, 2012, p.193). This coding process was conducted “by hand” (i.e. without the assistance of qualitative coding software). Rubin and Rubin’s Responsive Interview Model allows for deductive coding and states, “using published literature to suggest concepts and themes by which to code is perfectly legitimate” (Rubin & Rubin, 2005, p.209). The researcher

engaged in a coding process by which chunks of texts were analyzed for the extent to which they reflected components of the Bolin and Trainer recovery model, the additional components suggested by the recovery literature since, or represented some new concern related to individual and household recovery. The researcher employed the following codes, as reflected from the descriptions of these factors provided in Chapter Two, to analyze the data:

- Impact-Shaping Factor: Hazard and Hazard Event Characteristics
- Impact-Shaping Factor: Individual and Household Characteristics
- Impact-Shaping Factor: Community Situational Context
- Impact
- Recovery-Shaping Factor: Individual and Household Characteristics
- Recovery-Shaping Factor: Community Situational Context
- Recovery-Shaping Factor: Institutional Aid Availability and Program Design
- Recovery-Shaping Factor: Characteristics of Aid Providing Organizations
- Recovery-Shaping Factor: Kin Structure and Resources
- Recovery Mode (Autonomous/Institutional/Kinship)
- Holistic Recovery (Housing Stability, Economic Stability, Physical Health, Mental Health, Social Role Adaption)

Any data that represented unique attributes outside of the codes within the aforementioned list were also coded using words that described what was “going on” in the chunk of text.

The third step in this approach to data analysis required the researcher to sort through, separate, and summarize excerpts with similar codes drawn together across multiple interviews (Rubin & Rubin, 2012, p.190). This sorting and summarization process helped the researcher to

see how each component of the original model and changes suggested by the literature were supported by empirical evidence as well as the extent to which new components were worthy of consideration. The fourth step, called for the further sorting and summarizing within the individual files into groups of sub-themes that emerged (Rubin & Rubin, 2012, p.205). As nuances of the data emerged among evidence originally seen to support a specific component, new distinctions were drawn and components were adjusted or created accordingly.

The fifth step in this data analysis process was to ‘weigh and integrate the descriptions from different interviewees to create a complete picture’ (Rubin & Rubin, 2012, p.190). The researcher evaluated the level of agreement between findings and sought to understand and describe potential reasons why findings may occasionally diverge. The sixth step involved the researcher attempt to generate their own theory (Rubin & Rubin, 2012, p.190), although in this case it was not exclusively the researcher’s own theoretical work. Findings from this study allowed the researcher to put forth a revised model of individual and household recovery, grounded in significant literature and the data collected here.

As mentioned previously, the Rubin & Rubin (2012) Responsive Interviewing Model includes a seventh step in the data analysis process not fully employed within this research. The seventh steps calls for the researcher to generalize results beyond the cases studied (Rubin & Rubin, 2012, p.190). Due to the limited sample size, single disaster focus, and other factors, it is clear that these findings are not statistically generalizable to the wider population outside of those impacted by Sandy. However, the model of the individual and household recovery process presented at the end of this research may carry a theoretical generalizability beyond the constraints of this individual study; the synthesis of a large body of research on individual and household recovery across many contexts, disasters, and utilizing different methodologies

revealed general truths about the recovery experience of this stakeholder group. Thus, while this study is limited, the strength of the literature in some ways confers a sense of generalizability on this research that it cannot attain in and of itself.

Limitations

Generalizability is greatly constrained within this study. The findings that emerge from the data were drawn from a relatively small number of cases related to one specific disaster event. Furthermore, while the purposive sampling utilized in this study reflects an attempt to collect data that will yield a comprehensive understanding that is reflective of the individual and household recovery process, it does not promise statistically based generalizability. Additionally, the utilization of organizations as the mouthpieces for individuals and households and their related recovery experiences is another significant limitation in this study. Speaking to organizations working in recovery is not the same as direct contact with the people who have been impacted. Organizations potentially offer different representations of their client's recovery process than what their clients would provide. There is no way to know how these representations diverge within the context of this study, nevertheless, these limitations are acknowledged.

This study sought to ensure that the theoretical value of this study was maximized. Specifically, the Guba (1981) Model of Trustworthiness of Qualitative Research was employed. This model is concerned with four criteria for qualitative research: credibility, transferability, dependability, and neutrality of findings (Guba, 1981). Credibility represents an effort by researchers to portray the studied phenomenon so accurately that those involved with the studied phenomena would immediately recognize its validity (Sandelowski, 1986 as cited in Krefting, 1991). Transferability is concerned with the degree to which findings have a goodness-of-fit with

contexts outside of the studied environment (Krefting, 1991). Dependability, as a criterion, acknowledges that there will be variability within findings, but that it is important to be able to attribute this variability to a source (Krefting, 1991). Neutrality represents the extent to which findings are the result of the data and not other “biases, motivations, and perspectives” (Guba 1981 as cited in Krefting, 1991).

This study pursued credibility of findings through attempts to reach theoretical saturation of all pre-established or discovered components of the individual and household recovery process. Dependability of findings was established by articulating findings that did not agree with the bulk of the data and contextualizing their outlier status with related data, when possible. Finally, neutrality in this study is ensured through the data collection and analysis process which heavily emphasizes the role data must play in shaping findings. Thus, open ended questions were used to collect data and respondents were allowed to shape the research conversation as appropriate.

Conclusion

This chapter reviewed the methodological approach, disaster and area of focus, population, sampling, and data collection procedures. Rubin & Rubin’s (2012) Responsive Interviewing Model of the data collection and data analysis process was described to the extent that it informed these processes. Finally, the limitations of this study were explored. Checks of rigor that were employed within this work were discussed. Next, the first of two results chapters is presented. This chapter (Chapter Four) focuses on the major features of the recovery process for individuals and households post-Sandy including the impacts they experienced, the recovery modes they utilized, and how holistic their recovery has been. Chapter Five then explores the factors that shaped how people have moved through the broader recovery process.

CHAPTER FOUR: IMPACTS, MODES, AND HOLISTIC RECOVERY

This chapter is the first of two results chapters. Here, the results regarding how people were impacted by Superstorm Sandy, what they did to deal with those impacts, and where their recovery stood at the time of data collection are described in three separate sections. The subsequent results chapter delves into the array of factors that influenced this wider recovery story. The results in both chapters are presented with reference to what the Bolin and Trainer (1978) model and additions from the literature since indicate as critical aspects of the recovery process.

Impacts

The Bolin and Trainer (1978) model and literature since emphasized that impacts matter to understanding individual and household recovery because they represent the things from which people attempt to recover. Indeed, the amount (see for example: Beggs et al., 1996; Bolin, 1976; Bolin, 1986; Chappell et al., 2007) and type of damage (see for example: Hori & Schafer, 2010; McDonnell et al., 1995; Zakour & Harrell, 2003) are highlighted as important considerations to understanding impacts as situated within the broader recovery picture.

While respondents struggled to remember or noted only a few instances of death or injury in New Jersey as a result of Sandy, several other types of impacts were noted following basic probes including those that were psychological, emotional, social, spiritual, health, and economic in nature. Often respondents articulated a range of impacts simultaneously. For example, one respondent stated, “The emotional ... we can look at construction again, but the emotional, the spiritual, the financial toll that is being done, the strain and the stress is really getting to many people.” Others noted,

I'm talking about very, very serious critical needs. People were living in houses that still had flooding. Disconnected water. Health conditions. There were food shortages. They had lost everything. Cars. They weren't being able to go to work. A variety of storm related issues that they have no assistance with.

I guess if I was going to give you a short answer it's a life changing event. There is not either to say whether it is their emotional, mental, physical, financial state of mind. The rug has pulled out from them.

Despite discovering a range of Sandy related impacts, every respondent reported that housing was the predominant impact experienced by individuals and households; and, they noted this with emphasis. As one respondent stated, "the biggest impact has been the physical damage, houses washed into the bay, roads overtopped, bulkheads shattered, you know, that sort of thing". When discussing housing impacts, respondents highlighted the amount of damage—ranging from total destruction to minor damages. One respondent described,

There were houses literally sitting in the bay. I mean, the pilings went out through, the bulkhead sailed, and the house literally tilted on a 45 degree angle and then end up with the living room being on the beach and the bedroom being up in the air. There were those that were totally devastated that way.

Another respondent described the complete obliteration of homes in some areas,

It, it was a disaster. Especially on the barrier islands out here. It was just, you had homes washed into the street. [...] There are 73 homes unaccounted for in [Town Name] from water. Unaccounted for. I mean, washed into the street, washed into the ocean, washed, you know, it used to be on the slab, now where's it at? We can't find it.

Although total losses represented an important element of housing impacts, not all individuals and households experienced the same extent of damage to their home. For example, respondents described,

We have seen everything from people whose homes were destroyed, and there's nothing we can do, to sometimes the damage was, luckily, contained to the basement or a crawlspace [...], to the people who had two inches to six feet on the first floor. Really, if it's two inches, if it's six feet, it really doesn't make a whole lot of difference as far as that, because we still have to remove at least portions of the wall and some of the insulation that's there is damaged.

That's because, like much of the rest of the state, we didn't have homes that were washed away or completely gone. People lived without heat that first winter if they had to, but at least they could be in their house even if they didn't have walls or a kitchen.

We had lots of people that their whole first floor is ruined and everything in their first floor, and since many of the homes along the coastline area there are only one floor, they lost everything. They just were left with a shell of a house, essentially. Many homes were completely destroyed, but not as many.

When your house is flooded, you know, it's the heat, when it gets that high, again, not like every home was that high but if it comes up two feet, three feet, four feet into your house, it's just wiped out your furnace, it's wiped out all of your appliances, and if it goes over your electrical boxes, which mainly are around 18 inches high, and you've had salt water in your electrical boxes then you'll burn your house down. You know what I mean? The electric has to get shut off. Yeah, they move out and then they tried to find shelters or places that are in land for them to rent.

Hints of several physical, financial, and emotional strains associated with housing are reflected in the quotations above. In many cases, individuals lost precious belongings when water came into their homes, like family pictures.

Yes, that seems to be one of the most emotional pieces that we have been seeing from clients. Is the fact that, just for example, someone, the whole first floor of her home flooded and she lost all the pictures she had of her son who was in the military and like pictures from when he was in the army.

We had one family who had lost two children earlier, one was a sudden infant death and the other was a freak accident. They had the pictures of those children and that part of their lives, or their history, and those pictures were gone. These are things that cannot be replaced now. It doesn't have to be that tragic, just seeing pictures of your own children as they're growing up and different phases that they've gone through, being able to share that with them and having that taken away from you.

The data revealed that impacts play a powerful role in the wider recovery process.

The researcher regularly experienced respondents describe impacts, transition into a discussion of the utilization of a particular recovery mode in order to address those impacts, in order to explain the current state of recovery. For example, one respondent states,

I was talking to my friend [Name] the other day, she's is still out of her home. She's in another home, luckily a second home, in another area she could move to. Her father had passed away and she could move into his house. So it's been [...] it'll be 15 months in two days from the storm. She's been displaced and when I talked to her two days ago or yesterday, she's mentally distraught, tired, exhausted, still fighting this fight with insurance.

Here, it is evident that a direct housing impact led to an indirect impact of displacement. In order to address this impact, the woman utilized a kin resource and also attempted to employ autonomous resources through insurance. Her recovery as it stands today is marked by negative, although, apparently, non-clinical, mental health outcomes. Thus, the role of impacts in the wider recovery process was found to be tightly interconnected with recovery mode utilization and, ultimately, recovery.

Recovery Modes

The Bolin and Trainer (1978) model suggested, there are three recovery modes through which individuals and households can attempt to access to support their recovery: autonomous, kinship, and institutional. The data clearly demonstrated that individuals and households utilized each of these types of assistance to address the impacts from Hurricane/Superstorm Sandy. Moreover, the data clearly indicated that most individuals and households engaged in some combination of all of the recovery modes to address the impacts they experienced.

According to the respondents, a relatively small proportion of the impacted individuals, particularly among the wealthy, were able to exclusively utilize the autonomous mode of recovery. It appears that respondents came by this knowledge during recovery meetings where the recovery progress of the community more broadly (i.e. outside of the clients of particular organizations) was discussed. Also, in most cases, respondents were living in or in close proximity to the impacted communities and thus were aware of recovery experiences outside of

what was seen in working directly with clients. It was noted by a few respondents that these individuals either experienced such minor impacts that it would not be difficult to recover autonomously; or regardless of impact, they had the necessary financial resources to put toward recovery. As one respondent said, “well, they were the people who had damage that wasn’t that severe or had the means or ability to repair the damage” and another noted, “there are some people who were fortunate enough to have the means to fully recover on their own”.

Yet, while some of the impacted individuals were able to successfully utilize the autonomous mode of recovery alone, there were issues that sometimes constrained the ability of individuals and households to satisfactorily leverage this mode. Difficulties included the insufficiency and slowness of insurance pay-outs, disputes over causes of damage and subsequent payments between insurers, claims denials, the expense and time requirements to appeal denials, and the insurance companies’ capacity to handle the mass influx of claims.

Some companies are good, some companies aren't, but it's hard to know which is which. When the insurance companies don't do what the homeowners are expecting them to do or they take their time, they underpay, the homeowners are just left- they may have to figure out how to solve this problem.

I think there is a recognition that not everybody has the money to just pour back into their homes. It's difficult with the insurance companies. I felt for them getting 200,000 claims in one week. What do you do with that?

One respondent highlighted how challenging the insurance appeal process was in light of the fact that families were already struggling to afford the necessities to survive.

You still have people fighting insurance companies [...] one of the problems with taking an insurance company is they’ve got a lot of money, they’ve got lawyers and they have experts. If you’re a home owner and the insurance company gives you \$40,000, they say “You have \$40,000 worth of damage that’s what we’ve assessed.” You know you can’t live in your home and it’s probably more like \$80,000. Well how are you going to afford an engineer report to counter what the insurance company is saying. It’s just very difficult for these home owners to, they have good cases but it’s costly to prove them.

Basically they're struggling to meet their basic needs and now the challenge of actually suing an insurance company and getting the experts needed to win is just overwhelming.

In light of these problems, even those individuals who ought to have recovered autonomously used some combination of recovery modes. Moreover, many other individuals without insurance had to access a combination of modes.

Many respondents described the various streams of money and assistance homeowners would attempt to leverage—often a combination of autonomous and institutional resources—in their recovery process. One respondent explained, “you have to tirelessly advocate for yourself. You have to patch together solutions. [...] Basically, it's just a piecemeal approach.” And, another stated:

But, whether it's using private funds or maybe they got money from FEMA [*Federal Emergency Management Agency*], maybe they got money from insurance, maybe they took out loans, maybe they got a small business association loan, or they took out a bank loan, or maybe they came to the recovery group...if they're seniors, or veterans, or disabled, there are some other programs that are out there, that have just started up, that can provide some measure of relief, although certainly not on magnitude that many of these homes need.

Thus, this ad-hoc effort to cobble together recovery solutions was typical of many individual and household recovery experiences. Indeed, the institutional recovery mode seemed heavily utilized by individuals and households affected by Sandy but rarely sufficient on its own. Resources were made available both through government (e.g., state grants, IA designated from the PDD, etcetera) and non-governmental (e.g., unmet needs service provision, home rebuilding projects, etcetera) programs but many people appear to require more help still.

In speaking to the kinship mode of recovery, respondents continue to emphasize that this was only one of a variety of modes of assistance leveraged by respondents. Although never discussed in great detail, the kinship mode appeared to be readily utilized by many people and

kin provided a variety of resources. Respondents often spoke about this in a general sense (and overwhelmingly in terms of people staying with family members). It appeared to the researcher that respondents felt too far removed from this particular aspect of individual and household recovery to comment with any depth. As one respondent noted, it is difficult to be fully aware of people's current recovery status, because it is was not feasible for them to track kinship assistance in the recovery process.

It's really hard to know how many people are still displaced because most of the people that are still displaced are living with family now, or in some accommodation, some other rental. We just don't have them on the radar anymore. When everyone was in shelters or in hotels and FEMA was paying for their hotel money, we knew exactly how many people there were, in those situations anyway. We've never known with people living with families. You can't know how many people are living with family or friends.

Thus, the data reveals more widely that the three modes of recovery highlighted by Bolin and Trainer (1978) matter to the overall recovery process. All three modes were articulated by respondents and the extent to which any were employed was often contextualized by a number of factors. As one respondent noted, one way or another people are working toward rebuilding, reshaping, and restoring what was impacted by Superstorm Sandy, "Others have had repairs done, whether they've done it themselves or whether they've done it with help from us or with help from a neighbor or whoever. I think they're getting through it. They're getting through it."

Recovery

While the original Bolin and Trainer 1978 model views "recovery" as an end state when all impacts have been addressed, literature since has served to refine how recovery is conceptualized. Abramson et al. (2010) suggest recovery is not one dimensional but multi-dimensional. They propose a holistic approach with five major dimensions: economic stability, housing stability, physical health, mental health, and social role adaption. Most of the literature

tends to focus on an individual element of recovery as an end stage (see for example Bolin & Bolton, 1986; Norris, Friedman, & Watson, 2002; Norris et al., 2002); thus, the extent to which holistic recovery can be, or is, readily achieved is unclear. The fundamental assumptions of recovery underscore the reality that recovery outcomes along any dimension are not assured (see for example: Adams et al., 2009; Adams, Kaufman, van Hattum, & Moody, 2011; Alesch et al., 2009; Quarantelli, 1999; Smith 2011), experiences related to the recovery process are relative (see for example: Alesch et al., 2009; Phillips, 2009; Quarantelli, 1999; Smith, 2011), and the actual extent to which any social unit achieves recovery varies (see for example: Alesch et al., 2009; Finch et al., 2010; Phillips, 2009; Quarantelli, 1999; Smith 2011; Smith & Wenger, 2006).

Within this research, it was clear that there has been great variability in the extent to which individuals and households have progressed within and across various recovery dimensions. As many respondents noted, recovery looks vastly different person-to-person.

So we're looking at her house, it looked great, and she says, I want you to see something. So I say, ok. Walk out on the front porch. She says, 'you see the house directly across the street from me?'. And I said, 'yea'. She said, 'that one's bank owned.' She said, 'you see the one right next to it?'. I said, 'yea'. She said, 'those people walked away from it.' She goes, 'you see the one on the other side of that one?'—the three houses across the street—she says, 'that one, those people never came back, she said, that house flooded, it's so full of mold it's probably, you know, you'll get sick just walking in the house right now.' And she goes, 'I haven't seen those people since the storm'. And these are just the three houses directly across the street from her. And this is a home, this is a street, maybe a block that has probably I don't know 10 homes on each side. You're talking about 20 homes. And, and, just the three she pointed out across the street from her, she's giving me examples of what's going on in town. And that's what I'm trying to, you know, convey, is what's going on here, there's a unique standpoint for every single person.

Seeing what happened with their neighbors around them, living in their communities, those who remained in their communities, seeing all that is happening. It's happening at different speeds, different families. There's maybe a question as to why is mine going slower than that one, but you still see that it is happening.

For some people, it was just getting their home rebuilt, restored, fixed and then they were able to get back into their routine, but for some people, I guess working with this

population, this is still a little bit new for me, for some people, change is so difficult that they have such routines in their lives and those routines are disruptive, it's just such challenge to move forward and maybe now have to live differently.

Evidently, variation in recovery progress can be seen across the aspects of people's lives touched by Superstorm Sandy.

Although social role adaption was largely unaddressed by respondents, a few noted that for children in particular, the effects of the displacement on their social routines, such as playing soccer and hanging out with their friends, have been challenging.

So now, they have to commute from [Name of County] down to [Name of County] to where their work was. They have to worry how do they get their kids to their soccer teams that they used to be a part of and then being able to tell their kids that you can't be with your best friend in soccer, because we are not moving back for a while.

Yet, for the most part, the data clearly provided support for conceptualizing recovery in a more holistic way. Recovery was discussed as it related to housing, financial, physical health, and mental health dimensions.

Housing recovery, as it stands today, is marked by a lack of resolution for many individuals and households more than sixteen months after Sandy made landfall in New Jersey when the data for this study was collected. While many individuals and households have progressed to the point of completed home repair and reconstruction, in some of the hardest hit areas of New Jersey, many have not realized these ends. Respondents emphasized that many people are still displaced from their homes, "in my county alone, and there's about 9 counties affected, in my county alone, ground zero, there's about 26,000 people still displaced by Hurricane Sandy." Another noted, "There was people that were placed in housing that is forty-five minutes to an hour away from their primary residence that was damaged. They were

scattered all over. There's still many people who are scattered all over." Yet another respondent noted,

Yes. Many people were displaced. Oh God, probably thousands of people, because homes were wiped out, homes were wiped out with severe flooding or so damaged that you simply couldn't go back, you couldn't go there. Again, I do have people that were staying in motels for a while, because yes, many people were displaced. The truth is that even now, we're more than a year later. There are still people that are displaced.

Some have fully restored their homes, while others are living in compromised living conditions in order to get by.

Some people, I think, are really struggling with the slowness of the recovery effort. We have clients who haven't had heat, electricity, in their houses, or their apartments, since the storm, and they still don't have it. They're living there.

That's because, like much of the rest of the state, we didn't have homes that were washed away or completely gone. People lived without heat that first winter if they had to, but at least they could be in their house even if they didn't have walls or a kitchen

There are a lot of people living in damaged houses. If people have a two story house, a lot of times the first story isn't back up and running yet. If they were lucky enough to have some sort of basement structure that took the majority of the water, they might not have even thought much about it, yet. They might be down a room, maybe that was their second entertainment room, maybe it was their children's room, maybe it was storage, maybe it was even a bedroom and they're just living without it for now, in a slightly more cramped space and just making do.

Thus, housing recovery has progressed insufficiently for many; many remain displaced and others are in homes that are not meeting basic standards of living. A few respondents noted that even in cases where housing has been repaired, there is still work to be done to make their new house feel like a home. One respondent said, "you can't get them to pre-storm status. Many photos that made this home are no longer there. The couch smells like the new couch." Another respondent remarked, "...because even once you get that building back, making it into a home is a whole 'nother challenge for people" and offered the following example,

I was talking to one man. He was one of my colleagues in the long-term recovery group and lives out there. His elderly mother had been displaced who has now moved back in her home and had been there for like a month or something and someone was asking how his mother was, and he's like, "Well, she's back in her home, but she's so unhappy because the kitchen table is not the kitchen table that I banged my head against when I was two. The things that her husband had owned are not in the house anymore and she doesn't ... grandchildren, this, that and the other. This is not her home.

In regards to economic dimension of recovery, it appears that efforts to address some of the direct and indirect impacts of Sandy has slowed individuals' financial recovery. For many families that were displaced from their homes for significant amounts of time, bills related to property taxes, mortgages, insurance, and more accumulated while they were paying for a second set of expenses at their interim housing location. While federal assistance was offered to cover some of these costs, not all participated in these programs and the time period for assistance is now expired. Many respondents noted that balancing a mortgage and other housing expenditures related to their impacted property on top of rental costs has undermined individual and households attempts to recover financially from Superstorm Sandy,

Some people you are paying taxes, you are paying the mortgage on a home you are not living in. You are paying for an apartment, your family may be all over the place, you may be having to drive further to work. It's just every single ... Some people lost their jobs on top of it. Some of the businesses were not a business. I just think that no matter how you look at it, it is just taxing these people financially to the tilt.

If you're now paying a mortgage still on that home and you're living somewhere else and paying rent. You're not in a normal, your normal economic situation. If you make even \$80,000 taxable income and it afforded you a home and you could cover your bills and make some money and take a vacation or two a year, that might have be normal for you. Now you're in debt, you've got SBA loans, I mean, most of its financial for people.

... they are dipping into their savings, or they had to buy another car because their car was destroyed and their insurance didn't cover the car that they had. Or, their insurance only paid off the car, and they had to go buy another one. That's a lot of the strain that financially that's coming down on them.

It generally costs them out of pocket money to find a temporary house, a temporary place to live, so while they're incurring that cost they're also trying to stay current on the

payments for their primary residence. They potentially have a mortgage, I'm thinking of one homeowner, she has a mortgage over \$200,000 and she have property taxes. She has the challenge of staying current on those items as well as temporary housing.

Outside of displacement costs, for some families, it is a financial strain to address even their most basic needs. Some of the respondents noted increased usage of food banks by families who no longer have enough resources to put food on the table before the next paycheck arrives.

It is a day to day struggle and consequently, the community food pantries are up until Hurricane Sandy, and I'll give you one on a personal on a personal level. Our congregation has had, what's called the [Name of Food Pantry], which is the food pantry. It's been in operation for 34 years. Up until Hurricane Sandy, we never had a waiting list. We were able to service, 35, I think, 30 and 35 families a month, giving them enough food for three meals a day per person in the family, for a minimum of three days. That's usually the gap between check and the loss of funds. Because of Superstorm Sandy, we started having a waiting list currently serving 35 families, but we have 48 families on our waiting list. And the only reason we're at 35, is because that's the maximum we can accommodate with our storage space and staffing. We're doing what we can, but we still have 48 families that on our waiting list. That's been true of each of the other four food pantries in the community.

This trend can be seen at larger levels than individual food pantries. Community level statistics are an equally, if not more, startling indicator of the financial strain experienced by families.

Exactly, being a pantry here in [Name of Town] that has 3,000 people still coming to it a month. Out of those 3,000 90% have never went to a food pantry before Sandy. That's a huge scary indication of where we are. Is that people who have never had to turn for help in that capacity are so stretched that they are still, we're 15 months later, still actively seeking out relief from the storm.

It appears that in some cases families have had to turn to social services to address their financial needs. As one respondent noted, for some, desperation drove them to seek assistance.

This group of people that were impacted by Sandy it's almost as if they were ashamed to have to apply for stuff. They were a different group of people. They wanted assistance but they didn't want a handout. They were at food banks but reluctantly. They were taking the assistance reluctantly. At this point though realizing the level of devastation and what they needed, they're more willing to do—well, we went from this, it's kind of like, "I could never go to a food bank or to social services for assistance, I've never done that, that's not who I am" to, "Okay, I've got no choice to start applying for these benefits

because I'm never going to be able to recover on my own" to today where "I give up, I've applied for everything under the sun and I'm getting nothing."

As another respondent noted, in her community, demand for these forms of government assistance are so high that these organizations did not have the capacity to handle the influx of applicants.

I'll give you an example. FEMA comes in and FEMA is here helping with basic needs for sometimes. FEMA was in Jersey for a while. People were getting rental assistance through FEMA, maybe food assistance or whatever basic need assistance was coming from the federal government. With FEMA pulled out, if people are not at a point where they're self-sufficient they end up at our board of social services. Food stamp applications were three months behind. Any welfare benefited. If you went to apply there was a line around the block, standing remotely in the waiting room, lost applications, it was just a complete breakdown of the social welfare system when the feds pulled out and people went back to go on to county assistance. If you show up on a normal day food stamps are what we call an immediate need. If you're hungry and you have no income and you have no food you should be eligible for food stamps. Since it's an immediate need, you're hungry now a food stamp application should be processed immediately. We saw food stamp applications that were three to six months behind. How do you tell a family of four "We know you're hungry and you're eligible for food stamps, but we can't even keep up with processing these applications." You saw a total jam there and a lot of what we do is fair hearings against the board of social services. We had to take them to task and say "Look, we understand that you are behind but you need to move your resources and get more stuff and move these applications because you're in violation of the regulations." You saw collapse in that system. Even now there's a backlog.

Even for those who are back in their homes, it appears that for some there remains a long road of economic recovery ahead. As one respondent noted, even members of the middle class are struggling financially.

As far as financially, I don't think there's been a much of a recovery even in the middle class. In the upper class members of our community and township, they've recovered nicely.

As it concerns the economic dimension of individual and households recovery, significant barriers to recovery exist for those that did not have substantial financial resources prior to Sandy. Outside of those who were impacted directly by Sandy, the indirect impacts of changed

tax structures and property values was anticipated by a few respondents to continue to have lasting impacts for individuals and households more broadly.

Because physical health impacts were not overwhelming in Sandy, the majority of the population did not have to navigate recovery concerns related to this issue. However, because of the nature of the housing impacts—involving the exposure of homes to water—a mold concern emerged for many. For some, physical health status has worsened due to unaddressed, or poorly remediated, mold. As one respondent commented, although it is difficult to directly attribute these health outcomes to mold concerns, there is evidence of decreased lung function in his community.

Mold is a really tough thing as far as how dangerous it is, at what point is it dangerous, how sick it can make you, but we did have a medical testing company [...] come in for a day and test lung function out of the food pantry. We did pretty terrible as a whole. A lot of people failed. A lot of people's lung function was 10 or more years older than it should be. There are definitely negative impacts.

While these cases cannot be conclusively attributed to mold exposure, incidents of lung infections related to living in moldy environments were reported by a few other respondents as well. For example, one respondent describes,

Fast forward now what we're seeing are health issues as a result of mold. We had a woman in here the other day who we are trying to assist in getting social security benefits and she was probably my age, in her mid-forties. She was working before the storm, she had suffered a lot of damage in the house and she was trying to do some of the work in the home, probably alongside contractors, but she ended up getting a lung infection. Is now unable to work and going disability. We had a two year old, I had a tenancy case just two weeks ago, where there was black mold all over the apartment and the three year old was in and out of hospitals and doctors with various symptoms of what black mold would have done. [...] The two year old who didn't have any upper respiratory problem before Sandy and now in an apartment where there clearly is mold growing all over she's had significant hospitalization or doctors apartments. I think this is just the beginning of the mold issue.

Thus, while not widespread, health impacts related to mold have served to constrain physical health recovery for some individuals.

To date, the majority of the population impacted by Sandy appear to be experiencing positive mental health outcomes, or at the very least, mental health concerns not requiring professional treatment (e.g., stress). The data revealed that a minority of impacted people are facing more significant mental health issues, ranging in severity from situational anxiety to depression and suicide. Some of the respondents noted some individuals and households experience a sense of anxiety concerning stormy weather. One stated, “Whenever it rains heavily or whenever there is a storm, people are extremely anxious over what, with losing power and down trees.” Another said,

I've read newspaper pieces about how kids get freaked out whenever it starts to rain really hard now. Which, I actually also feel some anxiety when that happens. I think that a lot of people are certainly more on edge with the weather stuff.

Additionally, respondents commented on increasing rates of depression, suicide, substance abuse, and elder and intimate partner violence. It appeared that all of these situations were driven, at least in part, by stresses related to Sandy. Respondents stated in regards to depression,

You grieve for the loss of your home, of your possessions and there's all the red tape and the insurance and all the nonsense that come with that. You're experiencing such a terrible sense of loss so there was a lot of depression. How am I going to get through this?

The most recent long-term recovery group, they were saying that it's about now, 12 to 18 months after a storm has hit, where depression starts to peak, you know, I guess it's a realization setting in that they lost everything, they still are not back in their house. They don't see the light at the end of the tunnel. And that was kind of surprising, I guess people are able to be resilient, to stay optimistic for those initial months, but when this much time has passed and they're still waiting to get back in their home, I guess where the depression really starts to take hold. They need assistance to get through that. Ideally the best assistance would be to get back into their home. I can think of, and this is very sad, one of the families that we assisted they said it was a couple months after they were hit that one of the neighbors committed suicide.

Respondents also noted an increase in suicides and suicide attempts, both in regards to specific instances and community level rates.

Suicide has risen. I think one of the saddest stories that I did hear, and it was just in a meeting, was an older gentleman, a senior citizen, who attempted to take his own life because he was eight months out of his home. He just did not ... he didn't see any future—he just took sleeping pills. That's the kind of toll that's being taken.

It was a single gentleman and his home was destroyed and substantially damaged. They think it was some sort of financial hardship before the storm. And after the storm I can only guess that he didn't see a way out. Potentially there's some way we might have been able to help and he never would have to make that decision. But yes, people are overwhelmed; it just depends on- they need a support system.

The amount of suicides has gone up [...] Tremendously. You don't hear about it in national news reports but we know about it here. So, you can't deal with it anymore, you can't deal with the stress. They're not back to normal, whatever normal is for them.

It is important to remind the reader that the researcher spoke with individuals representing organizations involved in the recovery efforts surrounding Sandy in a wide variety of ways.

While some of the respondents provided informal counseling as a part of their work, none of them served in clinical capacity. Thus, while this data provides a sense of the nature of mental health recovery, it is not intended to represent clinical evaluations or official statistics on the matter.

Beyond psychological concerns, even in an emotional sense, the legacy of Sandy reverberates throughout the hearts of impacted individuals and households. As one respondent noted, impacts to housing, leading to loss of belongings, can have a devastating emotional impact on people—one that not everyone has been able to move beyond,

Absolutely, it's still this far out. I met with a client actually yesterday, still very, very, emotional about losing her home, and losing the contents of her home because it was her life, still very much affecting, not everyone, but still people who are very emotional about it.

It is clear that the progress of individuals and households toward each of the dimensions of recovery varies significantly. While many respondents noted the uniqueness of each situation, one respondent in particular was exasperated in attempting to speak about recovery across people. In each interview, the researcher encouraged respondents to speak both to specific cases but also about the post-Sandy recovery of people in general. Time after time the frustrated respondent began or closed his responses with the statement: “every situation is unique”. At one point, he laughed and said, “I know my answer, you hate my answer that everybody is unique”. It was an interesting moment, underscoring the difficulty of encapsulating what recovery looks like today for those living in the wake of Sandy. The researcher had in no way indicated displeasure with the respondent’s answers, nor did the researcher hold assumptions of recovery that were divergent with the idea of variability in recovery experiences. Born out of a difficulty to put words to such a complex landscape, the respondent became somewhat uncomfortable, but this response highlights the incredible variability in recovery progress along any dimension. Nevertheless, recovery as a multi-dimensional concept is supported by this data, and the variation in progress among individuals and households toward recovery dimensions is abundantly evident.

Conclusion

This chapter has served to relate the story of how individuals and households were impacted, the support they received, and where recovery stands today as it relates to the events surrounding Hurricane/Superstorm Sandy in New Jersey. In Chapter 5, the factors that explain impacts and recovery will be presented—the factors also demonstrate support for both the original Bolin and Trainer model and literature based additions to understanding the recovery process for individuals and households.

CHAPTER FIVE: RECOVERY-SHAPING FACTORS

In Chapter Four, a sense of the individual and household recovery story from Hurricane/Superstorm Sandy including impacts, recovery mode utilization, and current progress toward holistic recovery was provided. In Chapter Five, the factors that influenced recovery, both in terms of mode utilization and current recovery progress is presented. Strong support for elements of the Bolin and Trainer (1978) model and literature based additions is demonstrated. In addition to the anticipated components of the recovery process, a new factor, recovery process impacts, was discovered through this research. The empirical support for all these elements, and significant sub-themes within these components, is discussed.

It is clear from the data here that the recovery process of individuals and households is incredibly complex and involves many variables. The researcher attempted to comprehensively capture and convey what the Bolin and Trainer (1978) model and the literature since suggests is salient to this recovery process in Chapter Two. Yet, even in this study, a new component to this process has been suggested. Recovery is clearly complex, multi-faceted, and different for every individual. However, the components presented here reveal common ties across the recovery experiences of individuals and households impacted by Superstorm Sandy and the wider body of individual and household recovery literature to date.

Legal/Regulatory Context

The post-disaster legal/regulatory context was extremely salient to the recovery process of individuals and households from Hurricane/Superstorm Sandy. The Bolin and Trainer (1978) model and research on recovery since suggest that this legal/regulatory dimension (see for example: Rubin et al., 1985; Smith, 2011), among other aspects of the community situational

context, are important to understanding recovery mode utilization and, ultimately, the extent to which holistic recovery is achieved.

There were several policies, regulations, and laws at play in the recovery environment following Sandy—emerging from the local, state, and national level. Local level policies included building codes, permitting requirements, and in some areas flood insurance requirements that went beyond the baseline standards of elevation established by the federal government. State level policies included strong tenancy laws that served to protect individuals living in rentals.

We have a very strong anti-eviction act in New Jersey. It's very difficult to evict a tenant in New Jersey if they're in compliance with lease and they're paying their rent. These landlords were just sending letters saying "Due to the storm your tenancy is terminated." We saw tenancy issues immediately that were odd ones like, "Just you have to leave" and so we were in tenancy court.

These state and local policies were discussed only rarely by respondents, not because they were unimportant, but because another, federal level policy, dominated the recovery landscape for individuals and households.

The federal level policies related to the National Flood Insurance Program (NFIP) and Biggert Waters Flood Insurance Reform Act of 2012 are tremendously salient for those rebuilding in flood zones in New Jersey. In 1968, the NFIP was established as the nation's flood insurance program (Government Accountability Office, 2013). Historically, this program has been heavily subsidized by the federal government and it has amassed a large amount of debt in recent years.

As of July 31, 2013, the program owed approximately \$24 billion to the U.S. Treasury (Treasury). NFIP's financial condition highlights structural weaknesses in how the program has been funded—primarily its rate structure. The annual amount that NFIP collects in both full-risk and subsidized premiums is generally not enough to cover its operating costs, claim payments, and principal and interest payments for the debt owed to

Treasury, especially in years of catastrophic flooding, such as 2005. (Government Accountability Office, 2013).

Additionally, the NFIP has been criticized for miscommunicating the extent to which property owners are actually at risk by subsidizing their insurance at such low rates (see for example: King, 2012; Organisation for Economic Co-operation and Development, 2013). The Biggert-Waters Act of 2012 was passed in an effort to address these issues by making policy holders pay premiums that reflect their actual risk or force them to mitigate (thereby significantly reducing their risk of disaster) to avoid paying the increased cost of flood insurance (Government Accountability Office, 2013).

Problems associated with specific requirements of this policy and the timing associated with its implementation in the recovery context were particularly strong themes in the data. As one respondent described, homeowners with federally-backed mortgages are mandated to have flood insurance and, as a result, Biggert-Waters was influential on their recovery.

The flood maps are changing the way that people have to think about their recovery. Because it's not just about replacing their insulation, sheetrock, floors, cabinets, etcetera. It's about if they can feasibly raise their home to a certain level which is now with FEMA maps. This all changed with the Biggert-Waters Act in 2012. It's just a real hard pill to take for an entire coastline to do at once. So, if you do not have a mortgage you can go back into your home, which a lot of the elderly are doing. Because you don't have to have flood insurance. So they can go back in. Now the downside to that, is that they may actually be in a home that is more vulnerable to storms because our dunes are no longer there. So, you have that side. Then you have other people who, if you have a mortgage, you have a certain amount of time before you reach your maximum amount of rate. They go incrementally up. Even if you can afford the first year then come in to the second year. By the time you get to the third and fourth year they are in double digits, could be ten, fifteen thousand dollars. That is not doable for many people.

While the challenges of paying to elevate one's home or pay increased premiums for flood insurance represent a significant hurdle to recovery, these issues were exacerbated by the timing associated with its implementation due to the fact that decisions related to implementation have

taken several months for FEMA, the state, and municipalities to finalize. FEMA was in the process of revising flood maps prior to Sandy. These maps are the basis from which flood insurance rates are calculated. Post-Sandy, FEMA had to go back to the drawing board to more accurately reflect flooding risk in these communities. As one respondent noted, the lengthy process of updating the maps and the resulting uncertainty was discouraging for impacted individuals,

It was interesting because these maps are being updated before the storm. I forget, it was like the first time that they were doing it since the '70s or something like that. They put them out and they were calling them advisory based flood maps. They weren't official but they wanted to give people a sense of what was happening because it was going to affect them in their building efforts. I'm trying to think of one that ... The first time I went to a meeting with a town that introduced the concept of these advisory based flood maps was in December after the storm. [...] It was honestly the first time that I saw people walking around almost like zombies. Because they just realized that it was more than just replacing their sheetrock—much more in-depth that they ever had thought it was. That was in December. [...] On June 17, 2013, FEMA releases dated preliminary work maps. These new maps replaced the advisory-based flood elevation maps. [...] So, in other words: that wasn't until June. All that time from October till June...

FEMA determines the elevation at which structures must be situated to avoid paying increased insurance rates associated with the NFIP; however, local municipalities can also establish additional elevation requirements. As one respondent noted, municipal level decisions also affected the timing of implementation.

Trying to figure out what the elevation level is because each town has their own level. The FEMA maps are like the base, the towns can say ... The FEMA maps they are six feet, the town can say we are going to make our town eight feet. It's up to the individual town to actually adopt what the elevation height is going to be.

The uncertainty associated with these delays in decision making surrounding policy requirements and implementation impacted individual and households' ability to make decisions about how to best address their own housing needs. This lack of certainty appears to continue to be an issue

nearly a year and a half into the recovery process. As one respondent notes, many people are waiting until elevation expectations are finalized in order to move forward with rebuilding.

As I said, a lot depends on the decisions that FEMA makes with the flood insurance and the raising of the homes. [...] The main thing is the FEMA and the flood insurance thing has to be resolved. Once that's done, I think it's going to be much easier for people to start making decisions.

A handful of respondents described this issue as a “double whammy” or “second disaster” associated with being impacted both by Sandy and the implementation of these policy requirements.

The problem in New Jersey was after the water receded nobody could do anything because they were all waiting for the government to decide what the elevation levels for the homes would be. There was a holding pattern and even today it's still very confusing for people. So your home is destroyed and you want to rebuild it and you want to make those repairs to get back in. The problem is you had to sit around and you had to wait for FEMA and the state to work together to decide on how high you had to raise that house. Because if you didn't raise it and you just fixed it and moved back in, your flood insurance would be \$30,000 a year, or more. If you cover, if you don't pay your flood insurance then you lose your mortgage. People had a double whammy it was like, “Not that I just have to rebuild, I have to raise and how high do I have to raise? I don't even know.” Our process at the long term recovery is a relatively simple process. Waiting for the FEMA maps made it very, very complicated.

Admittedly, the implementation of this policy does not exclusively impact individuals who faced housing damages related to Sandy. The elevation or higher-insurance rates requirements associated with the policy were to be implemented following finalization of maps.

Everybody that lives within a designated B Zone, what they call them, would have to be at a certain elevation, or face increases in their flood insurance premium. So even if your home wasn't damaged, once these flood maps are finalized and officially adopted, you will have to, you will be required to elevate, or, you know, pay more for you flood insurance.

Although the scope of this policy extends beyond those directly impacted by Sandy, it is clear that for those recovering from this disaster, the implementation of this policy has had a significant impact on individuals' ability to recover. Tightly connected to the legal/regulatory

context and institutional aid availability and program design, many individuals are seeking to utilize the institutional mode of assistance in order to afford elevation; a one-time cost described by respondents as ranging from thirty to one hundred thousand dollars.

The presentation of this data should underscore the salience of the legal/regulatory context on the recovery process of individuals and households. This element of the community situational context was particularly prominent for individuals and households recovering from Sandy.

Individual and Household Characteristics

The literature suggests that there are several characteristics related to individuals and households that are important to understanding recovery, such as socioeconomic status (see for example: David, 2010; Edwards, 1998) and owning versus renting a home (see for example: Abramson et al., 2010; Beggs et al., 1996). Respondents articulated a wide variety of individual and household characteristics as being influential to the wider recovery process. These characteristics seemed to naturally fall into two groups: what people have and who they are as people. First, in regards to what people have, noted characteristics included:

- Financial resources (e.g., savings, income, social security, retirement accounts)
- Owning a home versus renting
 - For homeowners: Having a mortgage versus not having a mortgage
 - For homeowners: Second homeownership
- Ownership of mobile home/ renting land where mobile home is situated
- Insurance: existence, extent of coverage, and compliance with insurance agreements

These characteristics were strongly connected to the legal/regulatory context; review of how tightly these factors are connected together is warranted.

First, financial resources influenced individuals' and households' capacity to engage in the recovery process, particularly in light of the extreme and cost-intensive impacts to housing in New Jersey post-Superstorm Sandy. An individual's income served to shape their ability to qualify for and utilize loans, should they need to utilize these resources. The presence and extensiveness of savings/retirement funds also shaped their ability to finance their own recovery. Some people, including older adults, dumped their entire retirements into their recovery.

A lot of that money [*personal savings*] is going towards wherever they are renting now. When you have a senior citizen that had no mortgage and was on a fixed income and the only really extra money that they had that was coming in was their savings that they had from working for 50 years, or even if they had a retirement. They are renting off of that, whether it be added costs to get to the grocery store, or the added electric bill which is now they are renting an apartment, or living with family. Those three things they are dipping into their savings, or they had to buy another car because their car was destroyed and their insurance didn't cover the car that they had. Or, their insurance only paid off the car, and they had to go buy another one. That's a lot of the strain that financially that's coming down on them.

It became clear that for people struggling to sustain themselves financially before the storm, it was difficult to navigate the financial demands of the recovery process.

Let's say they had already lost their job, they were already behind on their mortgage, already behind on their property taxes, so they dropped their insurance, now the storm hit. Wow. They're out of a job, they don't have any insurance, behind on their mortgage, they're behind on their taxes. That's a tough family to help. [...] They lost their job, they couldn't find a job or they're in their house, their bank is about to foreclose on them, now the storm hits. They couldn't find help before, now it's infinitely harder.

Their income levels are really, really low. That part of the job is very difficult because these people were marginalized before the storm, had a lot of needs. Then the storm just really did a number on them. They didn't have the resources to be able to make the repairs while waiting for FEMA. People who don't have that kind of safety net.

This financial situation is greatly influenced by the status of mortgages and insurance policies, two factors with direct ties to the Biggert-Waters policy. Some impacted individuals had paid off their mortgages and were no longer federally mandated to carry insurance policies on their home.

Respondents explained that in some of the impacted areas, homes had been passed down through families. In these situations, mortgages had long since been paid off.

There are also people who live in generational homes that there hasn't been a mortgage on the house for a very long time, so they haven't had any expenses other than their taxes. As such, they didn't have to budget much of their money towards homeownership, and can't afford all the repair costs. The potential loans that they'll need to take out and their inability to maybe rent the house out in the summer to cover their taxes or something like that is now not plausible. That makes things very difficult for them. Those sorts of people are often rebuilding and foregoing flood insurance. If you own the house outright, nobody can force you to have flood insurance, so it's just a risk that they're taking.

Other respondents noted that those with the fewest resources often decided to forgo flood insurance and its requirements related to elevation and just get back in their homes.

We had 12,000 seniors. That to me was probably the biggest tell-tale situation there with the senior population. These are people who for lack of a better way of putting it, they were gliding out their last golden years and their whole worlds have been turned upside down. Like I said many of them don't have mortgages they can move back into the home and not have to worry about the exorbitant cost of insurance.

In such cases, where no mortgage is being carried on the home, there appears to be little legal ramifications associated with not having flood insurance. One respondent, a lawyer for a legal services non-profit, noted that municipalities will attempt to enforce flood insurance requirements through the use of certificates of occupancy (after so many years, certificates would be revoked for non-compliant homes). However, all other respondents that discussed the issue of flood insurance seemed to be unaware of such penalties. Thus, mortgage-free homeowners and were able to move forward in dealing with housing impacts to the extent they were in a financial position to do so while others had to contend with compliance requirements associated with having a mortgage.

For those still carrying mortgages on their homes, simply going without flood insurance is not an option. Individuals and households carrying federally-backed mortgages on their homes

are faced with a decision: repair and/or rebuild at previous elevation and face high flood insurance rates or mitigate now to significantly reduced flood insurance costs in the future.

There are many people that are back in their homes. Other people have to still make that decision as to whether they're going to get their homes raised, because if they don't, then the cost of the flood insurance is going to be astronomical. At the same time, having your home lifted is a pretty hefty price that goes with that, too. There's a lot of questions that still have to be resolved. I'm sure there are some people that are still trying to decide if they're going to keep the property, or if they're going to move and try and sell. There are a tremendous number of homes that are for sale. People that just said, "That's it. I'm done."

Further adding to the complexity here, home mortgages can be incredibly challenging for individuals to carry, especially in an environment where they are incurring a constellation of recovery costs. For those that are displaced from their homes, they may be paying their mortgage and additional housing costs to live somewhere else. Thus, not only are homeowners faced with decisions about flood insurance and its impacts on how they will rebuild, many have to make those decisions in an environment in which they are paying for a home they are not living in.

And some people are spending every day of their savings, their retirement money, charging up their credit cards, just trying to figure out how they will keep their heads above water. Because even if you don't have a house you still have to be paying the mortgage on that house. You are paying a mortgage and sometimes these people are paying a mortgage on a house they don't have and paying for an apartment.

Most people don't realize that in this storm, for somebody who had a house and had a mortgage on that house, now they are paying almost equal the amount of that mortgage to rent a home. So now, they ... a year after, many of them have been living off the insurance money, so they can't put the insurance money into the home because they've been living on it all to rent the place they have now and it is getting to the point where that financial strain is coming up which that leads to everything else.

It should be noted that while there were various assistance programs for housing, through FEMA or other organizations, they were not used by everyone in these predicaments. The researcher got the sense from respondents that FEMA housing assistance was utilized by some and others lived in housing using their own financial resources. It is unclear if these people were ineligible for

housing assistance based on their financial resources or if there were other or additional reasons involved—but it was apparent that not everyone displaced from their primary residence was receiving assistance for temporary or short-term housing.

This presentation of the data should underscore for the reader that the issue of mortgage and insurance status is a double-edged sword. If people had home and flood insurance policies, they were able to receive some level of assistance from their insurers (although several issues have been noted related to the use/sufficiency of insurance). For those who did not have insurance on their homes, they simply could not access a potentially significant body of recovery assistance to deal with the costs of housing recovery. Yet, for those carrying insurance policies, particularly flood insurance, there are costly, sometimes impossible, decisions to be made in regards to how to best address their immediate housing needs and their future financial stability vis-à-vis flood insurance costs.

Outside of those characteristics related to what people have, respondents also noted several attributes related to who individuals are that influenced their recovery process, including:

- Having literacy skills to read, comprehend, and fill out relevant recovery related materials
- Being able to understand and communicate in the language of recovery related materials
- Being physically and mentally capable of carrying out tasks and activities associated with one's recovery
- Being willing to seek out accept assistance in order to recover
- Being willing to speak about impacts and recovery related experiences to facilitate emotional and psychological recovery

- Being motivated to engage in the recovery process
- Being resilient, decisive, tenacious, hardy, and trusting of others as a part of engaging in the recovery process
- Being politically savvy in order to navigate the recovery process
- Having access to and being fluent in technology in order to access and utilize recovery related materials
- Being connected to others through relationships formed at work, church, extracurricular/leisure clubs and activities or by virtue of being part of one's friend or family network
- Having knowledge of what to do to navigate the recovery process
- Being aware of the severity of impacts in order to adequately address them
- Being close to helping organizations in order to more easily access their assistance
- Being a citizen of the United States in order to leverage recovery related resources eligible only to citizens or resources available to all but without fear of deportation
- Being employed, underemployed, unemployed, or retired as it shapes the types of resources an individual has to recover
- Having the psychological well-being and/or having gone through previous life stressors (e.g., divorce, illness, war) to influence one's psychological resilience and ability to cope with impacts and the recovery process
- Having particular standards of living that shape the quality of life individuals and households will seek to restore through the recovery process

While all of these elements appeared to influence various dimensions of recovery, motivation to recover was particularly interesting—though not necessarily more meaningful to an individual’s recovery than any other factor listed. A range of reasons seemed to influence people’s drive to recover. First, for some because they could not afford to pick up their lives and move elsewhere, they absolutely had to try to recover from Sandy. For others, future retirement plans, such as needing to fix their home in order to sell it as part of their retirement plan undergirded their desire to recover. Finally, for a particular group of individuals and households impacted by Sandy, connectedness to place was an incredibly important motivator to recover.

While connectedness to place was only noted by a handful of respondents (in both cases describing the recovery processes of people in same county) it was clear that this factor is tremendously influential for people who are strongly connected to their community. So tied were the people in these communities to the culture, environment, and lifestyle of their localities that it appeared very little would be able to stop their attempts to recover; people would simply endure in their efforts to stay in the places they loved.

These communities are often very tightly knit and um, they’re very provincial in a lot of ways. One of the interesting things that, if you ever come down here, you know, you drive through the town and you see the names on the mailboxes and then you drive out to the cemetery and the same names are on the graves going back hundreds of years. There’s um, a real vitality to these small communities and a real pride in the communities themselves and a lot of the people have lived here for generations upon generations—my family included. And it shapes the recovery effort in that people are more willing to fight for what they see as their homeland and to hang on to places that they feel in a lot of cases are theirs by birthright.

It’s their life. Their father was an oyster man. Their grandfather was an oyster man. Their families have grown up here for centuries. [...] There’s a lot of these families that are just very old, historical, Daughters of the American Revolution families. They live in the [name of area] and this is their history. This is their life. This is their family. They love this area. They love living on the bay. To the degree that they can stay, they will. [...]. Most of the folks that lived in these places have roots that are here, familiar roots, family roots. They’re not going to leave. They’re going to stay here. Their heart is here.

Thus, while this variable of connectedness to place was highlighted by only a couple of respondents, where it was emphasized, it appeared to be particularly important for understanding people's motivation to recover and thus how they might engage in the recovery process.

Overall, it was evident from the data that the role of individual and household characteristics in the wider recovery process is very important and complex. Both what people have and who they are as people represent important aspects of this component. The data suggests that both aspects of individual and household characteristics are equally important. Perhaps the weighting of these dimensions would shift for a different disaster in which housing impacts were not so significant and policy implementation related to housing was not occurring around the same time as the disaster. However, in the case of Sandy, both the post-disaster attributes of people and the resources they possess are tremendously important to understanding the recovery process. Thus, the data suggests that inclusion of individual and household characteristics in a comprehensive model of individual and household recovery is strongly supported.

Institutional Aid Availability and Program Design

Turning to institutional aid availability and program design, the literature highlighted several factors relating to this component such as aid program design (see for example: Cherry & Cherry, 1997; Finch et al., 2010) and eligibility requirements to utilize aid programs (see for example: Adams et al., 2009; Bolin, 1986). This study revealed strong support for the institutional aid availability and program design as a component of the individual and household recovery process. In fact, the data supported all of the variables highlighted by the literature since 1978 with the exception of rigidity of programs which did not appear to be of importance

in this disaster. Themes highlighted by respondents include the types of aid available, the nature of the assistance process, the extent to which aid information was available and accessible, aid eligibility requirements, and the timing of assistance.

In regards to the types of aid available, the data suggested that assistance was offered to address a variety of impacts, ranging from basic needs service provision, psychological services, case management, direct monetary disbursements, to physical home repair and reconstruction. It was clear that these forms of assistance were meaningful to the recovery process in that their type and availability influenced the extent to which individuals and households accessed institutional assistance at all, or multiple times, to patch together solutions to address impacts. As many respondents noted, the gap between the resources made available through FEMA or insurance money and the tremendous financial costs associated with housing repair and reconstruction was often significant.

Moreover, most of the institutional assistance available was designated to address specific needs. While many forms of institutional assistance were and continue to be available for recovery in New Jersey, most of these aid programs have restrictions on what assistance can and cannot be used to address. For example, one respondent noted that FEMA provided assistance related to a home's structural damage but would not pay for bulkhead repair (a bulkhead is a protective structure between homes and the beach to mitigate wave action), "And bulkhead is, again, necessary to protect the residents that exist behind it. And, these people got money, in a lot of cases from FEMA for the damages to their house, but not for the damages to their bulkhead."

Another respondent explained the complex interaction between specific needs and the restrictions associated with the use of institutional assistance.

People are really struggling with financially trying to make ends meet to stay current on their destroyed home, whatever expenses they normally incurred, and also to pay rent. Now the state give out some funding, I want to say ten to fifteen thousand dollars. I forget the name that they called it, but it was it was specifically to be used for non-rehab expenses. So it was specifically to be used for temporary housing or keeping up on their mortgage and property taxes. It could not be used for renovating your house or it could not be used for purchasing a newly used car because their car is destroyed and they need to get to work. So there were some limitations on how that temporary fund could be spent. So they're dealing with all sorts of financial headaches. There have been, like I said, some programs; there is a state program to help homeowners who have fallen behind on property taxes up to six months. There was that temporary money for temporary housing.

Thus, in such an environment, it seems that many affected by Sandy sought to access multiple forms of institutional assistance to try to address various aspects of the impacts they experienced. Factors influencing the degree to which these forms of institutional assistance were utilized included the nature of the aid application and implementation process, accessibility and availability of information about assistance, eligibility requirements associated with these programs, and the timing of assistance.

Respondents articulated that the nature of the aid process, both as it relates to applications and implementation of assistance, was important to understanding how institutional aid was leveraged. Difficulties associated with navigating the application process were noted by respondents. One stated, "It's really, every time they turn around there is more paperwork required. Every time they turn around there is something new that they say they didn't have." Others commented,

It's finding where they are, you know, chasing them down. And then dealing with the process. It becomes a full time job for a homeowner to do the paperwork, follow up on the paperwork, follow-up with the phone calls. Because you might be applying to 7 or 8 different agencies. It becomes a fulltime job for a homeowner just to keep up with the process of trying to figure out what they're going to do.

There's just all these different little tiny pieces on top of the basic dealing with your insurance company, figuring out your flood insurance, talking to FEMA. All that alone is

... I think people are, and still are, very overwhelmed by how many different choices there are and how many million applications they have to fill out. It really is a mess. People that do case management, and it's their job to help these people through the process, they find it overwhelming, so it's so many things are coming up. It's hard to get a sense of a clear path to recover and even those people.

Several respondents noted that case managers were critical to alleviating these challenges because they could help guide people through the application process, knowing what forms of assistance were available and how to properly fill out paperwork.

The case manager can help the clients understand this information. They can fill out applications for the client, with the client. The case manager already knows all these programs like the back of their hand so the client doesn't have to go running around town filling out applications that they may not qualify for and learning all these new programs, and trying to keep up with what's out there, because the case manager does it.

So there's a whole myriad of things out there which is what makes it challenging to come up with a list even, as a homeowner. To know about all those things is impossible. To know about the right set of things is improbable and very challenging, which is why we find it so important to do this disaster case management so that you have this disaster case manager who is with your family and they look at exactly what you need and can go and focus and find those things because they have that list.

However, although case managers were generally reported as being helpful to alleviating some of the burden placed on homeowners to deal with aid applications, it appears that the case managers are tremendously overburdened in many counties with backlogs ranging from the hundreds to thousands of cases.

The first here in [Name of County] the State didn't assign the agencies to handle case management until April, 2013. From there, they had a backlog. They only hired, I believe, ten for [Name of County]. They had a backlog of 3,000 people almost immediately for case managers. Then the actual load was about 35 to 40 cases, so a huge backlog. Then other agencies started bringing them in. I think currently right now in [Name of County] there probably 25 case managers and average case load, so we have started to get 35 and that will be 65 that we will have, so you are still trying to move through cases and funding lives and move through changes. It is still a very tedious process for many of them.

... the problem with disaster case management is, there's not enough of them. Nooo, I mean, powers of magnitude here not enough of them. We were given part of [unclear]

FEMA, it was through FEMA, New Jersey was given a grant set of money to do disaster case management. Somebody had to apply for it. [Nongovernmental Organization X] got that grant and they have hired and they have hired, their original set was 40 staff people, most of whom are case managers. Some are specialists. So, then they've just gotten some more money, so they've hired some more. They may be up to 50 or 60 case managers now, I'm not positive on the numbers. For whatever reason, their progress has been moving very slowly and there seems to be a whole number of reasons as to why, but they have the vast majority of the case managers in the state. Then there's many smaller organizations that have one or two or seven, but really when you're talking about maybe a total of 70 case managers for, I don't know, 50,000 families, it's just not lining up.

Beyond the application period, respondents noted several challenges associated with the implementation phase of the RREM (pronounced "rem") state grant. RREM, or the Rehabilitation, Reconstruction, Elevation and Mitigation program, was, in part, designed to help homeowners comply with the Biggert-Waters Act of 2012 and offers up to \$150,000 to individuals to carry out work on their homes in the four areas highlighted in its name. The complexity of the process to gain final approval and have work carried out on homes has been so intensive that it has taken several months for people to move through this process with little to no results to show for having done so.

Since its inception, which was May 28, 2013 when it started off, not one person is back in their homes due to the RREM grant. Because there are too many hurdles, there is 12, 11 steps to the program. [...] One is you have to have your preliminary approved. Then once you get all of your paperwork in and get approved, the next step is you have to have an engineering study done to make sure that the house can structurally be lifted and salvaged, because the house does have to be, if built with the grant, it has to be lifted to whatever the base flood elevation is. They send an engineer out for that. If you make it past the engineering, then it goes back with the case worker who goes over all your financials to make sure that you will be able to qualify for whatever the dollar amount is for the project to be completed. Then, they get an estimate from three contractors about how much it would be to fix the home. They do an environmental engineering study on it to make sure there is no asbestos, no lead paint, no oil spills, that the structure itself doesn't have any hazardous material on it. Then, from there it starts going into the confirming of the contract and each one of the last six through eleven are all pretty much the construction aspect of it. So, once you're at stage five and six, accept whatever that contract is from the State and put your money into escrow, then the process of construction begins. If you sign and the permits are in, the contractor has 90 days to complete your home. The hurdles is stage one to stage five.

My big criticism of it right now is the fact that they haven't repaired a single house, so far as I know. People are still stuck in the process: the paperwork, inspections, estimates, selecting contractors. As far as I know, they haven't repaired a single house. And I don't really have a lot of sympathy. I know that they're overwhelmed and it's a new program and stuff like that but, I mean, we've repaired 120.

Therefore, the nature of the application and implementation of particular aid programs was revealed to be an important dimension of the institutional aid availability and program design component.

Somewhat related to the difficulties associated with the application process, issues related to the availability and accessibility of information about assistance were highlighted by some of the respondents. Many respondents noted that homeowners faced challenges in trying to keep up with the dynamic assortment of assistance programs. For example, one respondent stated, "Some people are looking for whatever assistance might be out there and waiting for some assistance programs from the state to make their way down to [Name of County]." Other respondents expressed similar sentiments,

... because we're talking about low-income people who may have other challenges, we're talking about just not knowing, just not having seen a lot of people. They don't know about the services that may be available for them because outreach to them hasn't been effective.

Information was really difficult, getting access to information about what's out there and what you're eligible for. That's really difficult. That causes a lot of frustration with people. They get mad at us and said, "Why didn't you tell us about this state program?" It's like, okay, number one, we told you five times. Number two, it's a state program, so that was the state that didn't tell you.

There is definitely not enough information. There is one case manager who wanted to go with the client, which you are allowed to do, to the RREM program for the grant. The day of the case RREM program adjustor was cancelled and rescheduled for another day. He came for the next one, and then it was cancelled again. They didn't have their meeting until a month and a half later just for them to know what the next step is in the process.

Although not germane to the general population, interesting findings emerged surrounding the undocumented population in New Jersey and the issue of information about aid. One of the respondents involved in this study has worked intensively with undocumented individuals and households recovering from Sandy across five counties in New Jersey. The respondent articulated a detailed picture of the role of information availability and accessibility to the wider recovery process for those who are living undocumented in the United States. First, it was noted that while FEMA assistance was available to undocumented populations, outreach attempts were rare. Moreover, when outreach was attempted it was so culturally insensitive that they actively discouraged these individuals from applying,

It turns out, indeed, that for FEMA in the beginning for long-term recovery undocumented individuals were eligible to receive services. However, general mistrust of government bodies and FEMA did not do active marketing role in soliciting undocumented individuals, they had no idea that they were, in fact, eligible to receive the support that they desperately needed. [...] They should have done a better marketing campaign. I'll give you a specific instance. If you're a FEMA representative and you're trying to garner the attention of the undocumented community, why in God's name would you show up with ICE [*Immigration & Customs Enforcement*] agents? That's literally what they were doing.

This respondent argued that the ineffectiveness of FEMA's outreach, combined with many individual characteristics such as mistrust of the government and having little to no resources to recovery autonomously, led to situations in which individuals were living in extremely unsafe conditions for more than a year after Sandy hit New Jersey.

I'm talking about very, very serious critical needs. People were living in houses that still had flooding. Disconnected water. Health conditions. There were food shortages. They had lost everything. Cars. They weren't being able to go to work. A variety of storm related issues that they have no assistance with. [...] Dismal conditions that these people were living in. Warmth issues. Giant, gaping holes in the ceiling. Fly infestations from stagnant water.

A tie between the ability of people to engage in recovery and the accessibility of information about institutional aid is apparent.

However, reaching the community is the difficult part and we've been successful in reaching the community. Which is why I feel, personally, that when you're tailoring disaster recovery efforts in any state that is considered a harbor state for undocumented people, that FEMA and organizations that do disaster recovery management should actively market to these people so that they're not falling into a situation in which they've waited a year to receive help.

This data suggests that the extent to which information about assistance is available and accessible is one critical piece of understanding if individuals and households will leverage these resources.

Eligibility requirements associated with these assistance programs also served to shape people's ability to access these programs. Certain grant programs were only made available to the nine most impacted counties based damage per capita (at a county level). Thus, many impacted individuals residing in New Jersey's 12 other counties were ineligible for certain monies. For example, one respondent noted that because his county was excluded from accessing several state grants, such as the RREM grant, impacted people in his jurisdiction could not engage in addressing home elevation concerns,

The state programs that are supposed to help people like her with elevating and bulk heading and filling in the gaps to rebuild their homes where FEMA and homeowners insurance left off are not available to her. She spent the last 14 months living on her daughters couch. Her home is largely abandoned.

Beyond county level restrictions, aid was often conditioned upon several other eligibility requirements by the funding agencies, based on the particular program (e.g., for homeowners, for renters, etcetera), and/or the organization distributing the aid. A common eligibility requirement of income was noted by respondents. Interestingly, this requirement, depending on the program, either excluded the poorest or wealthiest applicants and, in some cases, both groups.

You know, we don't have anywhere the amount of money that's needed, so we have to be very careful of where we're spending money and that it's going only to people who really need it. [...] people who say that their home is damaged and they didn't get any help from FEMA, but their income is \$120,000 a year, and there's somebody else in the same situation, they're unemployed or they're a senior living on Social Security. So we give to the person who has less of an income.

Yes, the gap to elevate your home and to put in either a new home or rehab your old home on top is huge. For some people, if they have the resources, they can take care of their own and they can take it back to long term recovery group where our target market is that some people tend to have their resources and take care of themselves. There is other people no matter what we do they are not going to get back on their feet. Then there is a chunk of people in the middle that if we can just help them get over the gap and back on their feet, they will be able to sustain themselves. Those are really the target market that the clients for the long term recovery are, People who just need that one shot of help getting over that hump and then they will be able to maintain it.

A lot of the programs, there's eligibility requirements. I know for the state grant, if you made more than 250,000 dollars or you're seeking assistance for a second property, they automatically disqualified you. [...] We know that 70% of the population being assisted by the grants has to be low to moderate income. I'm not exactly sure how that's determined.

Clearly, these eligibility requirements directly affect the ability of individuals and households to utilize particular streams of institutional assistance in order to try to recover; in order to be able to recover, people need resources to do so and these eligibility requirements serve to shape who has access to what monies.

Lastly, related to the issue of how and why certain institutional aid programs were utilized, the data significantly supported the importance of the factor of the timing in which assistance was offered. Timing related both to the length of time people had to apply for assistance and the timing of program implementation. Some of the respondents noted that certain aid programs had such small windows for applying that many people were not even aware that the assistance was being offered. For example, one responded commented, "Oh yes, and then

there's timing. The grants open and close in a way that people are missing out on them.” Another stated,

The state programs have been really, really difficult to work with and actually, right now, there under a lot of criticism for not ... going way to slow, not providing the ... being really confusing. The application period was only for two months. People didn't hear about it in time to apply.

Interestingly, FEMA's application period lasted many months. One respondent noted that this prolonged application period actually delayed the recovery progress of homeowners because people were waiting to see what they would receive from FEMA before reaching out for additional forms of assistance,

Some of the timing for ... FEMA was holding us back at first because FEMA had ... they kept pushing back their deadlines. I think the deadline ended up being June 1st when the storm was in October, I mean, whoa, so you could still apply for FEMA and register your damage all the way up through spring, which meant that people were holding off because they didn't want to deal with the non-profits and the long-term recovery groups until after they had dealt with FEMA, and they were still given the opportunity to deal with FEMA for so long. That was one of the reasons why the long-term recovery groups didn't get going until the summer last year. So we're waiting on FEMA.

Additionally, the time intensive nature of the implementation of certain programs was and continues to be a tremendous burden for many. Several respondents noted that the RREM program has been so slow that, although it opened in May 2013, few, if any, of the approved applicants have received help as of February 2014.

You're on a waiting list for the RREM grant and you think, okay you've got a good shot that you're going to get that \$150,000 to raise your home, but you're on the waiting list. While you're on the waiting list essentially you can do nothing. Wait, now today 16 months later not one home has been build with RREM money. I forget the total number that's on that waiting list, all of those people are in a holding pattern. The problem that we were having at the long term recovery group is we had said to the state, one of the rules under the RREM grant was if you want to participate in RREM you cannot repair your home.

The long term recovery group is saying “Look, we can come in and we can get your home livable, get you your appliances, put your hardwood floors in and get the mold out

and make it livable while you wait for the grant to elevate it.” Well, anybody who did repairs on their home when they were on the waiting list for RREM were told that they would be rendered ineligible for RREM. It didn’t make any sense. One of the things that we were able to do is advocate to the state and said “Wait, let us do the work, let the people do the work, to get back in, and don’t let it affect their RREM grant, they’re still going to need to be raised. Just in December the state agreed to allow homeowners to do the work on their home and not have it impact their RREM. But, again, we’re 16 months out.

Thus, timing of assistance, as it relates to application and implementation periods, has been an important component of the wider concern for institutional aid availability and program design. Overall, the data demonstrated strong support for the inclusion of institutional aid availability and program design as an important component of the individual and household recovery process.

Characteristics of Aid Providing Organizations

The literature suggested that characteristics of aid providing organizations are important to understanding which recovery modes will be leveraged by individuals and households as a part of their recovery process. Respondents noted all of the characteristics highlighted in Chapter Two including local knowledge (see for example: Phillips & Jenkins, 2008; Smith, 2011) and the network of aid providing organizations (see for example: Egan & Tischler, 2010; Zakour & Harrell, 2003). In addition to these themes, respondents touched upon the following factors:

- the characteristics of staff (e.g., previous relevant professional experience, number and capacity) as it shapes their ability to assist in the recovery process
- office proximity to impacted area to access impacted individuals and households
- geographic scope of service provision
- use of volunteers (as staff, as field labor) to perform recovery related tasks and activities

- organizational structure to perform recovery related tasks and activities
- organizational capacity to perform recovery related tasks and activities
- organizational purpose/mission as it shapes the recovery tasks they seek to perform
- organizational prioritization of cases
- funding to perform recovery related tasks and activities

In general, then, these factors fall into two major categories: characteristics across organizations and characteristics of individual organizations. Three themes emerged particularly strongly from the data and will be explored in detail here including the network of aid providing organizations (a characteristic across organizations) and funding and organizational prioritization of cases (characteristics of individual organizations).

The network of aid providing organizations was one of the strongest themes running throughout the responses. Slowness in forming, slowness in establishing processes, and ultimately, slowness in helping homeowners, were all critiques of recovery networks formed post-disaster. As one respondent noted, because of the networks that have been established in the wake of Sandy, these organizations will be more effective in their efforts in the future. However, his response also underlines many of the time-consuming decisions that must be made for organizations without a pre-established network.

Certainly this whole concept of the Long Term Recovery Group and the VOAD, the Volunteer Organizations Assisting in Disaster, that will continue to live after that it for Sandy. You know how VOADs are set up. Again, this is one of the good things, I think, that has come out of Katrina and FEMA, birthing this concept of a volunteer organization, because the volunteer organizations have learned to hold hands. They have learned to collaborate. They have learned to work together and have benefited from it. The organizations have benefited and I think people that are being served have benefited from it. We've been able to do a whole lot more as a VOAD and as a Long Term Recovery Group than we could have done as individual companies, individual

organizations. We've been able to do a whole lot more in our collaboration. That has been a real positive coming out of this. How much is going to affect when the next thing happens, whenever the next thing is? We'll just have to see that. Certainly because it's together and it's organized, we won't have that startup that we had last time. I mean, it took us several months to get to the point where we had set up our books and our [inaudible] abilities and our case working abilities and to find their different organizational structure. They had the Sea Committee and the Construction Committee and the Spiritual and Emotional Committee and all the different committees that we had to form. Then who's going to be on which committee? How's that group going to work together with the whole? How's the steering committee going to work? All of that we hadn't at the time. Now that that's all in place, should we have another storm or should we have whatever disaster, fire or whatever, the group is now organized and we all have each other's phone numbers. We all know where we're going. Yeah.

Although most recovery networks formed following Sandy, in some communities a pre-existing structure of organizations active in disaster had been established. Respondents from these communities noted that they had already knew who to contact and were able to hit the ground running right after Sandy.

One of the things that was really key for us. I mean, number one, we're a volunteer center. That made it kind of easy for us to like hit the ground running when Sandy hit. We already, as a volunteer center, already had a lot of connections to the nonprofits that are working in our community. Since we've in the VOAD for so long, since [year], we've had a core group of people who are ready to respond.

Collaboration and communication between and amongst organizations active in the recovery effort seemed particularly important in explaining the extent to efforts by these networks were successful. One respondent stated, "Then they realized who has what resources and who has what assistance to meet certain ... to meet this need, then they could refer to each other and make things happen quicker." Others commented,

We were absolutely collaborating with other organizations for a number of reasons. Number 1 was all of our volunteers were local, were part of the community and we always want to collaborate with community organizations. Number 2: we don't do everything. Disaster recovery ... Everybody in disaster recovery sees their own little piece. [...] Recognizing your strengths and working together with others to augment their strengths is what VOAD is about and the reason why the Church participates in VOAD is

because we recognize that what we do is one small part and we also don't try to do anything.

We've been doing it. We've been doing it. We've been getting funding. We're going to keep at it. The organizations have been wonderful. We're helping. The volunteer groups are helping. They're wonderful. The school in [Name of Township] gave us their gymnasium to put ... last year we had 20 volunteers come down from where the church is up in Burlington County. They came down and worked on 12 houses and get a lot of work done. [...] The people were so appreciative of the work that we did because they just either didn't have the funding or the funding they got was able to take them so far but not finish it. We would help finish the project for them. Maybe the funding they got would do the roof, but it wouldn't do the back steps, that kind of stuff.

As a part of this collaboration piece, some of the respondents noted that it was important for organizations to work collaboratively so that their efforts were not defeating each other,

So, if you have somebody whose home needs to be lifted and you fix their entire home and you get them back into the home, now that they have to have it lifted, so more damage can be done to the house to elevate it and put a new foundation or footings, pillars, whatever is needed. That is one of the catches. Instead of us working together to get this accomplished, a lot of times we are working against one another. That's the only catch that you really have.

Additionally, some respondents noted that while collaboration between organizations and larger nonprofits appeared to be successful in the majority of cases, their efforts were not always in tandem with the state.

Then when it comes to the state, we don't talk to them. They're not really connected into our system. This is one of my most recent missions that I've got to go and work on, is trying to get the local office to talk to us. The local office has been pretty good. Now some recent issues have come up and people are further along in the process. They're going to have to talk to me whether they like it or not. [...] The government has got to be always concerned with public perception and criticism and stuff. It's just that they're always under a microscope. They don't spend their time trying to figure out what the Long Term Recovery Group is doing. We have the same clients. For us, we need to figure it out.

Certainly we've had that problem with the state government where they have their recovery plan in their heads, which is a decent plan, and then the long-term recovery groups and the non-profits have their own plan, and there is some discussion between, but I don't think enough. We keep banging up against each other and slowing each other down, so it's not quite streamlined, which it would be really, really tough to do. There's

been a lot of collaboration; people have been working very well together. It's been really amazing. It's just we don't live in a perfect world, unfortunately.

Had we [*the State and faith based communities and non-profits*] sat down at the table, we could have said, “No, no, no. We can do this, we can put the floors in, we can get the mold out, we can do all this. They can live in there for a year, while the RREM grant, while they're on the waiting list and we could have been so much further already. It's six months or more advocating as to why they should lift that restriction. If I had a wish, it would be to be more actively involved in the early discussions of how do we rebuild because it would have been much more effective and much more efficient, I believe. Again, it wasn't as if anybody intentionally shut us out, it was a learning process for everybody. But you need to include this community early on because believe it or not at times they have really good ideas as opposed to just being told, ‘this is how it's going to be done and on board or you're not eligible’. It was a lot of waste of time. It was a lot of waste of time... when people didn't have the luxury.

Finally, several respondents indicated that these networks were made up of independent organizations that sometimes were individually connected to other, broader networks of organizations. This was particularly common for the local religious groups that were members of national networks of made up of similarly-affiliated organizations. Using a non-Sandy specific example, a Baptist church may be a member of the Southern Baptist Convention which serves to connect 50,000 different Baptist organizations (Southern Baptist Convention, 2014). Sometimes, these national level organizations not only exist to connect their members, but also are actively involved in executing large-scale disaster response and recovery programs that can be sent to the local communities of their disaster-affected members. Some of the respondents described connections to these national networks and highlighted that they had participated in some aspect of the recovery efforts.

Concerning characteristics of individual organizations, respondents noted a critical dimension of funding. Organizational effectiveness in the recovery efforts was in part shaped by the degree to which they were able to leverage financial resources. Funding was related to several sub-themes including the sufficiency of funding, restrictions on funding by donor

organizations, organization fundraising, and the need to combine various funding streams to help impacted individuals. Merely having funding was a catalyst to being able to participate in the recovery efforts. One respondent noted, “And we just ... What restricts us is having the funding that allows us to help the individuals”. Another said,

A lot of the nonprofits that are out there are trying to use the funding and combine funding with other agencies to help people get back into their home. The key reason why [*organizations cannot help people quickly get back in homes*] really is financial funding.

As other respondents highlighted, beyond possessing financial resources to participate in the recovery efforts, funding restrictions could come in a variety of forms.

So they've picked the town. One, yeah, limited it to \$5,000 per homeowner, and that was it. Another one gave us money. Frequently they'll identify a minimum number of homes and families to be served. So here's money. You'll have to go through an individual approval for each project that you're going to work on. Give us the scope of work. Do the estimate. We'll review it. We'll approve it if we agree. You must complete a minimum of 20 projects with this money. It cannot be used for people. It can only be used for materials.

We look down at what our grantor required, which was very little criteria which was helpful, and then we looked at what we need and how much, so the maximum amount we can spend for any specific case is \$10,000. Our criteria other than that are not very limited. There was a case where a guy completely emptied his retirement account to fix his house, and he's in his 70s now, and like, "What are you going to do?" I can't replenish your retirement account, so I don't know what you're going to do, but that's a problem for another day.

Thus, the extent of restrictions on donor funding streams served to shape the assistance helping organizations could offer to individuals and household accordingly.

Finally, organizational prioritization of cases, the other major characteristic of individual organizations to emerge from the data, was also highlighted by several respondents. This finding has clear implications for individual and household recovery: if an individual or household fits the target population an organization seeks to serve, they will likely be able to utilize the

resources the organization is offering. Individuals and households that fall outside of the designated population will not be able to utilize those resources.

In part, organizational purpose/mission drove the prioritization of cases. Why an organization exists and what issues they seek to address shapes who they are willing to assist and in what manner. For example, many Long Term Recovery Groups noted that they were concerned primarily with providing resources for those with unmet needs.

And we are chartered to assist the most vulnerable populations within the county and addressing their unmet needs following Hurricane Sandy. And so, essentially what we are is a financier of last resort—if there are gaps in the monies necessary for a homeowner to recover their property from damage inflicted by the storm, they can come to us once all other avenues have been exhausted: homeowners insurance, flood insurance, FEMA, Small Business Association, low-interest loans, that sort of thing.

I guess that's kind of what we saw too. We're looking at helping the most needy, who have nowhere else to go and they have nowhere else to turn. There was a lot of those and our community is kind of small.

We work on the concept of unmet needs. You have to show us what you got from FEMA, what you got from insurance, and whatever else, and then we will talk to you. You have to exhaust those resources first.

Other respondents who represented independent organizations (and not the LTRG itself) noted similar trends towards prioritizing those cases that represented the greatest need.

As the process went on, we helped anybody clean and mop their houses, anybody. Then you kind of zone in and you focus on the elderly and the handicap, those who didn't have flood insurance. You know, the ones who don't have family around them to help.

If somebody needed help but they had 2 boats and a Maserati in their front yard, they needed help, but we needed to prioritize the widow who is down the street first. We relied—we have our ecclesiastical priorities—which tended to be the elderly, disabled and first responders. We made a special effort to help those people first.

There's also an ideology that the storm affected everybody and everybody deserves help if they ask for it. We work with people living at or below the poverty line. I work with individuals who only own the home that has been damaged and are displaced, and we also work with secondary homeowners.

While the majority of respondents discussing organizational prioritization of cases indicated that they were in some way seeking to help the neediest segment of the population, some of organizations noted that they also served second homeowners. Yet, even here, primary homeowners received priority in the use of donated funds and resources.

Overall, the component of characteristics of aid providing organizations was heavily supported by the data as being an important recovery mode-shaping factor. Several nuances emerged from the data that serve to further underscore the importance and complexity of this component. A few of these nuances have been reviewed in detail here.

Recovery Process Impacts

In addition to the factors the original 1978 model or literature since suggested would be important to the recovery process, the data revealed the recovery process itself can impact individuals and households. Various recovery process impacts were noted by respondents throughout each interview, most strongly that of stress/frustration produced by several issues associated with the recovery process. Respondents also highlighted how issues of fraud during the recovery process changed the people with whom individuals and households sought to work. These recovery process impacts further influence the use of different recovery modes and ultimately the state of recovery. To the extent that the researcher was able to determine, recovery process impacts have yet to be discussed in the literature in explicit terms.

Sources of stress and frustration were noted by almost all of the respondents and included being ineligible for certain recovery programs, the length of the recovery process, broken or unfulfilled promises made by recovery programs and the government, the bureaucratic nature of many formal assistance mechanisms, mistakes in application processing, and the intensive, complex nature of the recovery process itself. For example, one respondent commented, “people

are just giving up and wanting to leave just because they just don't see the end to this. They don't think that they'll ever get help.” And others noted,

That, you feel like you're abandoned by the system, or ignored. We have a lot of clients that are so frustrated with the way ... one of the challenges about disaster response is that they're so many different programs, and different grant programs have different eligibility requirements, and different applications, and dozens of pages, and all these papers you have to provide to apply, and then you don't hear from the agency, and they say, "Well, we lost your application." There's a lot of frustration with actually applying for assistance, and then you're not getting it, and you don't know why. You don't understand why people aren't helping you. I think there's a lot of that too. People just get very discouraged and that's also not healthy.

I guess the most frequently occurring problem that we have with folks, and this has been since February and probably way before that, but the most frequent occurring emotion is one of anger and one of frustration. Folks are angry because something's not being done. Something's not moving forward. Then frustration to the point that folks just give up on the process.

It's fifteen months later, imagine not being able to go back to your home. Imagine fighting with insurance companies. Imagine trying to navigate a web of what programs are available and out there for you to get back to your normal situation. And try to imagine all the obstacles that you have to overcome to get to that point, if your home is gutted, or has to be lifted. Maybe you have the money to rebuild. Maybe the insurance company said, you know what, here's enough money for you to rebuild your home. And you said, ok great. And you put the sheetrock back in, and the insulation, and the appliances and flooring. And now the government says to you, sorry, you've got to lift your home 10 feet. And you go look for that. And somebody says it's going to cost you 70 grand, or 80 grand, or 90 grand, or 100 grand to lift your home. Where do you come up with the money? Maybe there's a grant out there and there are some grants out there that will give you 10 grand toward lifting your home, 30 grand for lifting your home, but if it's a hundred grand, what do you do? Do you take out a loan? Do you walk away?

These challenges—ineligibility, the length of time it has taken people to recover (or not), disenchantment with unfulfilled promises of help, bureaucratic programming, mistakes in processing, and the sheer complexity of the recovery process—translated into pervasive issues related to stress and frustration. This recovery related impact seems to have discouraged some people impacted by Sandy from trying to recover in their communities.

Additionally, issues related to fraud were also highlighted by respondents, in particular serving to explain people's hesitancy or outright refusal to accept help from recovery programs that emerged post-Sandy. One respondent noted that the convergence of deceitful contractors on the state led some homeowners to seek legal recourse.

Now a lot of what we see is consumer stuff. Contractor came in, contractor did a shoddy job, contractor took your money, contractor left. It was difficult in the beginning because a lot of the contractors who came here were from other states. They weren't registered in New Jersey, you couldn't even get a hand on who it was doing the work. Now what we're doing is suing contractors for failing to perform or for returning the money. Our seniors again, and if you only knew how many they were thrived for one time in Ocean County and you'll know. They just wanted to get a home and if so and so construction drove by and was doing some work on their neighbor's home. Came over and said "For \$3,000 I could fix your whole first floor" [Name of researcher], you'd be surprised how many of these seniors would just hand them a check for \$3,000 because they're just wanting to get home. I guess they didn't think that anybody would take advantage of them at that time and they were. We see a lot of consumers who ... faulty repairs like mold remediation. We've got to sue those contractors for failing to remediate the molds.

Thus, the data provided strong support for the notion that merely by going through the recovery process, some people will be negatively impacted.

These recovery process impacts may influence which recovery modes are utilized and they may also ultimately affect recovery outcomes. Individuals may have to restart the cycle of trying to cobble together assistance to address the parts of their lives impacted by disaster—sometimes over and over again. Many of the respondents described a segment of the people affected by Sandy that were so deeply discouraged because of the recovery process, that they had or would soon give up on trying to recover. Some respondents described individuals and households short selling their homes at a significant loss, just to get out from underneath the seeming impossibility of recovering from Sandy. Others could not afford the debt associated with those losses and were just living day-to-day in homes with no walls, electricity, or heat. For some that go through the recovery process, they may face such adverse conditions and still

endure in their recovery efforts; thus, and significantly, recovery process impacts are somewhat moderated by individual and household characteristics. However, for some who become overburdened by the many challenges associated with the recovery process, recovery as an end stage is no longer something they are actively engaged in pursuing. Thus, the data reveals strong support for addition of recovery process impacts as a relevant component of the individual and household recovery process.

Taking all the components of individual and household recovery presented here as a whole, it is now possible to understand why the recovery story of Sandy, as presented in Chapter Four, manifested as it did. Certainly, this disaster was heavily shaped by housing impacts—another disaster with different impacts may reveal different degrees of support for the recovery process components presented here and, in some cases, perhaps, entirely new components to be added to the model. These components serve to explain the utilization, or lack thereof, of the modes of assistance articulated by Bolin and Trainer (1978) and, ultimately, the degree to which individuals were able to recover holistically or not. Indirectly, then, these components are also salient to understanding the overall picture of recovery. In the specific case of the recovery process impacts, this component may indirectly shape mode utilization and recovery as discussed above, but may also exert direct influence on holistic recover outcomes at times. For example, the psychological strain of the recovery process may inhibit one's mental health recovery; merely by going through the process itself, recovery progress along this dimension can be impeded outside of the issue of mode utilization.

The extent to which these factors interact to influence mode utilization and recovery, as an end stage, is worthy of additional research. The researcher has only observed the connections between these factors to a limited extent, as this was not the main focus of this research.

Purposive examination may reveal greater clarity on the extent to which components of the recovery process influence each other.

Conclusion

The data presented here suggests that recovery is complex and shaped by several variables that interact in a wide variety of ways. Yet, while complex, this chapter has also revealed empirical support for major elements of the recovery process as highlighted by Bolin and Trainer (1978) and literature based additions. Each of the recovery shaping components presented in this Chapter was strongly supported by the data and several sub-dimensions therein were noted by the researcher. This study also highlighted a new component of the individual and household recovery process: recovery process impacts. The impact of the recovery process on this stakeholder group has been discussed in detail. Finally, implications for all of these components as direct and indirect influences on mode utilization and holistic recovery have been explored by the researcher. Given that there is so much complexity involved in why and how people recover from disasters, having a grasp of the major factors influencing this process across individual circumstances can enhance our understanding of the recovery of this stakeholder group. In Chapter Six, several points of discussion will be highlighted and a revised model of individual and household recovery will be presented with implications for the discipline and practice of emergency management.

CHAPTER SIX: DISCUSSION

This chapter will discuss implications of the findings presented in Chapters Four and Five. The first section notes the importance of impacts as a driving factor in the recovery process of individuals and households. Section two discusses the seeming absence of impact-shaping factors, kin structure and resources, and post-disaster community situational context in the data and contextualizes the absence of these factors in this study. The new component, recovery process impacts, is discussed in section three, in addition to implications of findings related to holistic recovery. Based on the original Bolin and Trainer model, the findings of the literature since, and this research, a revised model of individual and household recovery is presented and discussed in section four. Sections five and six discuss implications from this research and the revised model for the discipline and practice of emergency management, respectively.

The Importance of Impacts

This study has underscored the tremendous influence of impacts on the recovery process. It was impossible to extricate impacts from the story of recovery-shaping factors, mode utilization, and, ultimately, holistic recovery. Discussion of the modes that were utilized and where recovery stood to date necessitated a discussion of the impacts from which they were attempting to recover. Explanation of the factors that shaped mode utilization and recovery also required acknowledgement of the impacts from which people were recovering.

Housing impacts were particularly strong in the case of Sandy—many people were affected by damages to homes in a variety of ways. Specifically, data from New Jersey’s Community Development Block Grant (CDBG) Disaster Recovery Action Plan produced by the New Jersey Department of Community Affairs “suggest that approximately 40,500 owners’ primary residences and over 15,600 rental units sustained “severe” or “major” damage according

to classifications made by HUD” (2013, p.i). These statistics are based on data from the US Census American Community Survey (using averages from data spanning 2006-2011) and Federal Emergency Management Agency (FEMA) IA Records (as of March 12, 2013) (New Jersey Department of Community Affairs, 2013). Here, “severe” is defined as \$28,800 (or more) of physical damage or more than four feet of flooding on the first floor, and “major” is defined as \$8,000-\$29,799 of physical damage or more than one foot of flooding on the first floor (New Jersey Department of Community Affairs, 2013, Section 2, p.3). Clearly, in the case of Sandy, impacts to housing were significant and, thus, significantly shaped the subsequent recovery process.

In keeping with this finding, the literature suggests that each disaster brings with it a unique constellation of impacts that will serve to shape the broader recovery process in unique ways; some studies stress this point more strongly and suggest that impacts may be *the* most influential factor in the recovery process (Beggs et al., 1996; Forgette et al., 2008; Kamel & Loukaitou-Sideris, 2004; McDonnell et al., 1995). In this study, it is evident that regardless of the specific direct and indirect impacts of a hazard event, impacts themselves are a powerful driver of what occurs during the recovery process of individuals and households. It is difficult to overstate this point. Moreover, impacts indirectly shape recovery mode utilization as individuals attempt to grapple with community situational context, institutional aid availability and program design, characteristics of aid providing organizations, and kin structure and resources, in order to reach a state of holistic recovery.

The Seeming Absence of Some Aspects of the Literature

In addition to impacts, many of the factors suggested by the original 1978 model and literature since were resoundingly supported by the respondents—particularly as it relates to

individual and household characteristics post-disaster, institutional aid availability and program design, and characteristics of the aid providing organizations. This was to be expected, given that respondents were representatives of aid providing organizations that dealt directly with individuals and household as these individuals attempted to leverage various streams of institutional aid. In light of such strong support for and focus on these elements, it is worth considering what aspects of the individual and household recovery process were comparatively weakly supported and why aid was distributed as it was following Sandy. Indeed, based on the literature reviewed in Chapter Two, it was clear that a comprehensive conceptualization of the recovery process of individuals and households includes components of impact shaping factors, kin structure and resources, and post-disaster community situational context. However, in this study, while respondents did discuss various aspects of all three of these components, the weight of the data supporting these features of the process paled in comparison to the elements of the recovery process presented in Chapters Four and Five. These findings will be discussed here, in light of the literature, with potential explanations for why these factors did not emerge more strongly in this particular study.

First, concerning impact-shaping factors, the literature has stated that hazard characteristics such as speed of onset/forewarning, frequency/likelihood of occurrence, predictability, and controllability (see for example: National Research Council, 2006) and hazard event characteristics such as duration (see for example: Chamlee-Wright & Storr, 2009; Edwards, 1998) and geographic scope (see for example: Edwards, 1998; Hori & Schafer, 2010;) influence the type of impacts that occur. Moreover, individual and household characteristics such as race/ethnicity (see for example: Bolin, 2006; Peguero, 2006) and income (see for example: Cutter, Mitchell, & Scott, 2000; Kamel & Loukaitou-Sideris, 2004) and features of a

community's pre-disaster situational context, such as the economic (Garmestani et al., 2006; Rose, 2006) or political (Blaikie & Brookfield, 1987; Green, 2005) context help to explain the type and extent of impacts that occur. Support for all of these factors was implied in the data, even though respondents tended not to speak about impact-shaping factors explicitly or link pre-disaster factors to Sandy related impacts.

Although relatively rare, explicit ties to impact-shaping factors included respondents noting hazard and hazard event characteristics such as the type of hazard involved (e.g., a hurricane). Respondents also mentioned the geographic scope, magnitude, and the nature of the hazard event in their responses. Pre-disaster individual and household characteristics were also highlighted by a handful of respondents including individual's medical needs, having equipment/supplies (e.g., generators), financial resources, and expectations of Sandy based on previous disaster experience. Lastly, themes related to the previous disaster experiences, proximity to hazardous area, as well as many of the other dimensions of community situational context such as the built/constructed, economic, and cultural context were noted by respondents. These explicit ties resonate with the findings in the literature that impact-shaping factors are critical to the types and severity of impacts that occur and, subsequently, the recovery process that unfolds.

Beyond these overt mentions of impact-shaping factors, the data implied that all sorts of pre-disaster issues influenced the impacts individuals and households experienced. For example, when respondents talked about flooding-related impacts, they were implicitly describing the relationship between hazard and hazard event and impacts. When respondents talked about the difficulties associated with addressing housing impacts, they were often threading this discussion with some recognition of individual and household characteristics that not only shaped recovery

but, even before that, the impacts that occurred. When respondents talked about community situational context, it was clear that many aspects of the community situational context highlighted as recovery-shaping factors existed before Sandy; and, thus, may be relevant not only as impact-shaping factors but also as recovery-shaping factors.

Beyond impact-shaping factors, the literature also suggested that there are several dimensions of kin structure and resources—a recovery-shaping factor—that affect recovery such as cultural values of networks toward giving and receiving aid (see for example: Ibanez et al., 2003; Messias et al., 2012) and the degree to which the kin network was impacted (see for example: Smith, 2011). Respondents touched upon kin structure and resources intermittently in their discussions of recovery. When they spoke of kin-related issues, they framed their responses more in terms of specific resources kin could offer (e.g., skills/labor, supplies, advocacy, financial and material assistance, childcare, and a place to stay) than issues related to kin structure. A few respondents did note that the geographic proximity to kin served to shape the degree to which they could offer hands-on assistance—if family members were located out of state, they struggled to physically assist the impacted individual and household. However, respondents did not provide much detail on the factors that the literature highlighted as being important to this aspect of the recovery process.

Finally, in regards to post-disaster community situational context, the only aspect that was heavily supported by respondents was that of the legal/regulatory context—as discussed in Chapter Five. The literature suggested that five other dimensions of the community's post-disaster situational context matter to the recovery of individuals and households such as the built/constructed (see for example: Alesch et al., 2009; Rose et al., 1997) and emergency management (see for example: Berke et al., 1993; Rubin et al., 1985) contexts. Respondents did

hit upon the various aspects of community context in which recovery unfolded, in addition to the legal/regulatory context; but, again, it was only briefly as compared to the length at which they addressed other issues. In fact, because the legal/regulatory context was such a prominent factor in the recovery process of individuals and households following Hurricane/Superstorm Sandy, it may be worthwhile to consider if it is better conceived of as a stand-alone component of the broader recovery process similar to what the literature suggested (and this research supported) ought to happen with respect to institutional aid availability and program design and characteristics of aid providing organizations. It does not appear that there is sufficient evidence to support elevating the legal/regulatory context (perhaps with some relabeling) to an the status of a stand-alone component of the recovery process based solely on this study. Future research should explore whether this aspect of context is so salient and complex that it ought to be highlighted separate from the meta-category of community situational context.

This discussion reveals that the weight of the data explicitly supporting impact-shaping factors, kin structure and resources, and post-disaster community situational context (outside of the specific sub-dimension of the legal/regulatory context) was minor in comparison to other components discussed in Chapter Five. It may be meaningful to consider why respondents in this study did not more overtly highlight impact-shaping factors, kin structure and resources, and several dimensions of post-disaster community situational context in their responses.

First, concerning impact-shaping factors, it appears that respondents were not naturally oriented toward discussing impacts through pre-disaster lenses. What created the impacts seemed less important to respondents than what impacts actually occurred. Moreover, the researcher did little to push respondents toward this type of thinking. In a single response, respondents often rapidly transitioned from impacts, to recovery modes, to recovery outcomes with several

contextual explanations of recovery-shaping factors mixed in; i.e., this is what happened, this is what people did to deal with what happened—because of a variety of reasons—and this is where they are now. It is evident that respondents were conceptualizing recovery as that which occurs in the environment following impacts.

In the case of kin structure and resources, it appeared that respondents were not very familiar with the kin networks of the individuals they served and were not able to speak to how features of an individual's post-disaster kin network did or did not shape the extent to which they relied upon kin for aid. Chapter Three noted that there were two potential groups from which to sample to conduct this research: representatives of organizations that are involved in the recovery efforts and individuals and households recovering from Sandy. Because there was a desire to speak to individuals who could reflect on the recovery of many people simultaneously (among other motivations), the perceptions of organizational representatives were pursued in this study. This decision was not made without knowing that there would be a trade off when it came to the data. After all, no one is better equipped to speak to the recovery of individuals and households than the people going through that process. Impacted individuals may have been able to better articulate aspects of kin structure and resources than organizational representatives. Yet, even so, the data did reveal support for the relevance of kin structure and resources albeit limited and not as detailed as that revealed for other components suggested in the literature review.

It is possible that if respondents were guided by the researcher to explain impacts, kin structure and resources, and post-disaster community situational context explicitly in terms of the factors suggested by the literature, there would have been greater support for the influence of these factors in the recovery process. However, the researcher allowed participants to respond freely to her open-ended questions using more follow-up questions than probes; and, as a result,

the respondents spoke about the information they found most important at the time the question was asked. More persistent and consistent probing may have led to more data related to these aspects of individual and household recovery, but, the researcher fears the cost may have been the depth and detail respondents provided about other components when they answered unfettered.

Beyond these points, it is not surprising that respondents did not discuss these components of the recovery process in great depth because emergency management practice more broadly is just beginning to recognize the importance of recovery—never mind nuances therein (Bundy, 2013; Jensen, Bundy, Thomas, & Yakubu, e.d.; Rubin, 2009). Emergency management as a function within government or organizations and as an occupational area where people can seek a career is relatively young. The short history of both has been dominated by a focus on preparedness and response (NRC, 2006; Mileti, 1999; Tierney, Perry, & Lindell, 2003; Rubin, 2012). Academics have often discussed how recovery issues, including those related to individuals and households, should be more of a focus pre-disaster by the entities within and outside government who end up actually doing the work associated with recovery (see for example: Rubin, 2009; Smith, 2011; Smith & Wenger, 2006; Stehr, 2001). And, even while government reports (National Governors Association, 1979), standards related to the practice of emergency management (Emergency Management Accreditation Program, 2010; National Fire Protection Association, 2011), and professional organizations (International Association of Emergency Managers, 2014; National Emergency Managers Association, 2014) have all stated that recovery is an integral and important part of what people employed in emergency management do, it does not seem to be true in reality (see for example: Bundy, 2013; Rubin, 2009; Jensen et al., e.d.).

Perhaps part of why individual and household recovery has been “neglected” (Rubin, 2009) is because those involved in recovery work, again, including that related to individuals and households, tend to “end up” in their positions, i.e., recovery work was not their career of first choice and they have little to no educational or training background that has prepared them for the work they do (Bundy, 2013). Perhaps another explanation of why recovery has been more or less ignored, is the historical focus of federal policy, resources, and technical support on other aspects of emergency management. The federal focus has only recently begun to widen to include recovery issues.

Massive failures associated with the management of recovery following Hurricane Katrina (Gall & Cutter, 2012; Green et al., 2007; Smith, 2011; Smith & Wenger, 2006), have led to a number of policy initiatives intended to lead to improved recovery practice in communities. The Post-Katrina Emergency Management Reform Act (PKEMRA) was passed in 2006 charging FEMA, and several other government agencies, to “develop, coordinate, and maintain a National Disaster Recovery Strategy to serve as a guide to recovery efforts after major disasters and emergencies” (Post-Katrina Emergency Management Reform Act, 2006, p.105-107). Presidential Policy Directive 8 (PPD-8) was released in March of 2011 and implies that preparing for recovery is equally important as preparing for response. PPD-8 required that planning frameworks be created for recovery and that progress toward preparing for recovery be assessed (Department of Homeland Security, 2011). The National Disaster Recovery Framework (NDRF) was released in September of 2011. The document recommends a series of recovery coordinating structures for stakeholders participating in recovery efforts and outlines several core principles that should guide the practice of recovery work. One of those principles—individual and household empowerment—suggests that individual and household recovery is multi-

dimensional and that individuals and households need to be able to access the resources they need for their own recovery. Specifically, the NDRF states,

A successful recovery is about the ability of individuals and families to rebound from their losses in a manner that sustains their physical, emotional, social and economic well-being. The restoration of infrastructure systems and services is critical during recovery. It is vital that all individuals who make up the community are provided with the tools to access and use a continuum of care that addresses both the physical losses sustained and the psychological and emotional trauma experienced (p. 4).

The NDRF also includes a unity principle stating that recovery efforts should be coordinated; a timeliness and flexibility principle stating that recovery programs should be designed to facilitate efficient recovery and flexibly enough that they can be shaped to meet the needs of those impacted by disaster; and, other principles. It seems like acknowledgement of individual and household recovery, the need for coordination, and timeliness and flexibility in recovery program design is a positive step forward that may yield positive outcomes in the practice of emergency management. Yet, it is a small step. While these principles were identified, training in support of their implementation in practice was not. And, the policies, including the NDRF, are only a couple of years old—they have not had much of a chance to be implemented.

Respondents naturally emphasized some aspects of individual and household recovery over other parts of the process and may not have had the information they would need to do speak more evenly across the components of the process; and, they were practicing recovery at a time when recovery as a general area, much less the practice of recovery in support of individuals and households, is only just beginning to get policy attention and has not yet had the benefit of attention in the form of widespread or comprehensive training as to what the recovery process includes for individuals and households. Without strong and consistent investment in recovery through trainings, technical assistance, and creation of recovery positions, this is not

likely to change. It is all the more striking that respondents touched upon many elements of the recovery process that are consistent with the literature given the absence of recovery resources to understand and carry out the facilitation of the recovery of individuals and households; even without this investment, they were able to recognize many of the important elements of this recovery process.

While the impact shaping components, kin structure and resources, and many dimensions of post-disaster community situational context were rarely articulated in explicit terms, there were both explicit and implicit references to these factors in the data; and, there certainly was no data suggesting that these components are unhelpful to enhancing our understanding of individual and household recovery. It cannot be argued that these factors should be dropped from any conceptualization of the recovery process for individuals and households just because these components were not heavily emphasized in the data from this study—quite the opposite is true. They were mentioned, and, more importantly, the disaster literature related to the recovery of individuals and households reviewed in Chapter Two offers such overwhelming support for the role of these factors that until future research should suggest otherwise, impact shaping factors, kin structure and resources, and post-disaster community situational context (encompassing more than just the legal/regulatory dimension) ought to be retained in any conceptual model of the process.

Recovery Process Impacts and Holistic Recovery

In addition to those factors that were anticipated, based on the literature, to be more strongly supported than they were, the data also revealed a new component of individual and household recovery that ought to be included in a comprehensive conceptualization of this process. Moreover, the data suggested that holistic recovery, as articulated by Abramson et al.

(2010), might be better conceptualized along certain dimensions. This section will serve to highlight these issues.

First, the impacts that individuals and households sometimes experience as a result of the recovery process have not been emphasized in the literature. Certainly, there is general discussion that the recovery process might be strenuous, but, to the extent that the researcher is aware, no one has articulated that this might serve to shape the decisions individuals and households make about navigating the recovery process. Interestingly, for some people, the recovery process is so effortless that it is essentially a one-directional “non-experience”, i.e., for a variety of reasons, they are able to navigate recovery-shaping factors, leverage recovery modes effectively, and reach a state of holistic recovery without much frustration. For others, significant challenges faced during the process of navigating recovery leave indelible marks that haunt them as they engage in the cycle of trying to manage the impacts they experience again and again.

The inclusion of this component of the recovery process of individuals and households represents a significant advance in researchers’ attempts to comprehensively depict what the main features of the recovery process include for this stakeholder group. Because this study sought to determine how comprehensively the Bolin and Trainer (1978) model of recovery and literature-based additions reflect the recovery process of individuals and households, the discovery of recovery process impacts as a new component is quite significant. The finding suggests that the process itself will have an influence in recovery mode utilization, as individuals deal with the iterative interaction of recovery-shaping factors and attempting to access one or more recovery modes, and, ultimately, the extent to which individuals and households will, if ever, recover.

Given that recovery process impacts has been recognized to be an independent element of the recovery process of individuals and households, it is worthwhile to consider why legal/regulatory context (which emerged so strongly from the data) was not treated similarly. When considering the appropriateness of recognizing the recovery process as a new component of a conceptual recovery model while not doing so with legal/regulatory context, it is important to keep in mind the aims of this study and the limitations of the data. The researcher sought to establish a comprehensive understanding of individual and household recovery. Recovery process impacts must be recognized given the salience of this factor in the data and the fact that no other element of the recovery process highlighted by Bolin and Trainer (1978) or the literature since encapsulates this variable. Legal/regulatory context, on the other hand, is represented within the broader dimension of community situational context and leaving it within this dimension is consistent with the pursuit of comprehensiveness.

Moreover, the data is limited in the extent to which it can be utilized to weigh dimensions of the model against each other. While the literature clearly indicated that institutional aid availability and program design and community situational context were such complex and important elements of the community situational context that they needed to be recognized as independent shapers of the recovery process, there was nothing to suggest that elements of the legal/regulatory context deserved the same treatment. While the data demonstrated that this dimension of the community situational context was extremely salient in the recovery from Sandy, there was nothing to suggest that it would be as important an aspect of context in a different disaster event. Given that the literature did not suggest that legal/regulatory context was one of the key shapers of individual and household recovery, it is not appropriate to extricate it from the context component of which it is currently a part.

Related to the pursuit of a comprehensive conceptualization of the individual and household recovery process, this study also contributes to the scholarly discussion on holistic recovery. While a few of the respondents touched upon several dimensions of recovery without any probing, it was more often the case that the researcher needed to prompt respondents to discuss individual and household recovery progress beyond housing. While respondents articulated a range of impacts, making it clear that Sandy had touched many dimensions of people's lives, respondents' immediate responses revealed that they were not thinking about recovery as a multi-dimensional concept.

There are many potential explanations for this phenomenon. At the broadest level, the recent focus on holistic recovery within research and practice helps to explain the fact that respondents did not readily speak to multi-dimensional recovery. Research has only recently acknowledged recovery along more than one dimension; Abramson et al.'s examination of five dimensions of holistic recovery was written in 2010. And, while the NDRF, as previously mentioned, does recognize recovery for individuals and households as including multiple dimensions, it was only recently established (i.e., released in 2011). Given that research and policy are only beginning to conceptualize recovery as entailing the need to recover in multiple areas, it is, again, not surprising that respondents were did not naturally speak to individual and household recovery progress along many dimensions.

Moreover, it appeared that asking how holistically individuals and households had recovered to date was somewhat at odds with the overwhelming theme in the data that people are still trying to address significant impacts that occurred nearly a year and a half ago. The question of how holistically people have recovered to date was likely incompatible with the sense held by many respondents that, for so many impacted by Sandy, little progress has occurred. In part, the

sense that so little progress has occurred was likely influenced by the fact that the respondents were involved in work related to helping individuals and households who still had enduring needs at the time of this study—people whose progress was clearly not holistic. These people were often still seeking recovery along the housing dimension and the work of respondents was often directed at helping address housing issues (e.g., financial assistance to purchase appliances, small repairs, total home rebuilding, etcetera). When prompted, they were able to articulate a recovery progress across other dimensions, but they initially gravitated toward discussions that in some way intersected with the work they perform as a part of their role in the recovery efforts. In recovery, different organizations work in different capacities but they may be trying to chip away at the same need. One of the respondents highlighted this point well,

Everybody in disaster recovery sees their own little piece. If you ask somebody from the American Red Cross what disaster recovery is about, they'll tell you that disaster recovery is mass care. If you ask somebody from the Seven Day Adventists what disaster recovery is about they'll tell you is the donations management. If you talk to somebody from AmeriCorps, it's all about volunteer management. If you talk to somebody from the Baptists, it's all about they have these amazing mobile kitchens that will turn out 20 and 30 thousand hot meals a day. [...] If you ask a Mormon Helping Hand volunteer, it's all about the muck-outs and the unskilled manual labor. If you ask the Mennonites, it's about rebuilding. [...] If the ask the Catholic, the Catholic Charities, they are all about case-management.

In the case of Sandy, one organization may deal with donations related to sheetrock and home cleaning supplies while another organization does muck-outs; both are concerned with housing may first be oriented toward speaking first to recovery along this dimension. Thus, it is natural that continued recovery needs related to housing is where their discussion would center.

Although respondents did expand upon recovery beyond housing when prompted, respondents rarely articulated anything related to Abramson et al.'s (2010) social role adaption dimension. Certainly, there were moments when the issue of role functioning emerged – a few

respondents noted that displacement meant that some children were removed from their social circles, such as soccer teams, and struggled with that adjustment. Some of the respondents were able to articulate issues related to substance abuse and violence within families, but this was less about returning to one's roles and more about the quality of those interactions. The role of individuals in their networks may be outside of the scope of what respondents could readily attest to, as was the case with discussions of kin structure and resources and impact shaping factors. Thus, while social role adaptation is potentially a meaningful aspect of holistic recovery, respondents were not able to contribute to findings related to this dimension of recovery.

Although they did not address social role adaptation strongly when pushed to speak beyond housing, respondents spoke to recovery along spiritual, emotional, psychological, and physical health dimensions. In fact, the data related to recovery outcomes seemed to indicate that there may be clearer conceptual insight into holistic recovery if the physical and mental health dimensions were to be placed within a broader dimension of well-being. Respondents spoke about physical, mental, emotional, and spiritual impacts and recovery outcomes. In the researcher's view, these elements have a natural relationship that might be best represented as sub-dimensions of a broader well-being dimension of recovery rather than the division originally set in place by Abramson and colleagues (2010).

This study helped to refine the Bolin and Trainer (1978) model of recovery and the literature based findings since. The addition of the recovery process impact component to the broader individual and household recovery process is significant in helping scholarship to gain a more comprehensive understanding of this process. Also, while it is not yet possible to determine whether the legal/regulatory context should be represented as an independent component of the recovery process of this stakeholder group, this issue should be explored through future research.

Finally, the conceptualization of holistic recovery seems to be enhanced by exchanging physical and mental health for a more inclusive dimension of well-being. Based on discussion related to this study's findings and the recovery literature since 1978, a revised, more comprehensive model of individual and household recovery would be meaningful to the advancement of the discipline, the profession, and the distributed function of emergency management.

The Revised Model of Individual and Household Recovery

A significant gap in the research between the original conceptual model of individual and household recovery presented by Bolin and Trainer (1978) and the recovery literature that has emerged since was identified in Chapter Two. Bolin and Trainer presented a conceptual foundation but no future research, outside of this study, has attempted to empirically examine the validity of the elements of the process they present. The literature more widely has approached the study of the process of individual and household recovery by examining particular chunks of the process or recovery along single dimensions (e.g., economic or social-psychological recovery). Scholars to date have failed to seize the opportunity to synthesize findings from the literature to ascertain support for the 1978 model or any other component not reflected in the original research.

This study sought to address this gap in the literature by synthesizing findings related to individual and household recovery from research since 1978. The original model and adjustments suggested by the literature since 1978 were then examined within the context of Sandy, to see if the expanded conceptualization of the process reflected a comprehensive picture of the major features of the individual and household recovery process. The data revealed support for all the major components of this expanded conceptualization, and most strongly of those involved post-impact. Additionally, a new component—recovery process impacts—was

discovered as an important element of individual and household recovery. Thus, the researcher proposes a Revised Bolin and Trainer Model of Individual and Household Recovery in Figure 2.

This simple depiction of the individual and household recovery process developed throughout this thesis, serves to provide an overview of what the recovery process entails for individuals and households. Here, impact-shaping factors interact with each other, influencing the type and extent of impacts that individuals and households experience. These impacts then interact with individual and household characteristics. Individuals and households, including who they are and what they have, determine how they will address impacts as well as the extent to which they will need assistance in addressing those impacts. The characteristics of individuals and households then interact with a suite of factors in the post-disaster environment and influence which recovery mode, or modes, are utilized. These factors include community situational context, institutional aid availability and program design, characteristics of aid providing organizations, and kin structure and resources. This suite of factors interact to some degree with one another and the confluence of those interactions, in combination with individual and household characteristics, shape the mode(s) from which individuals and households seek assistance. The utilization of any given mode may lead to full or partial recovery outcomes on one, some, or all recovery dimensions of their lives that were impacted (e.g., potentially housing stability, economic stability, well-being, and social role adaption).

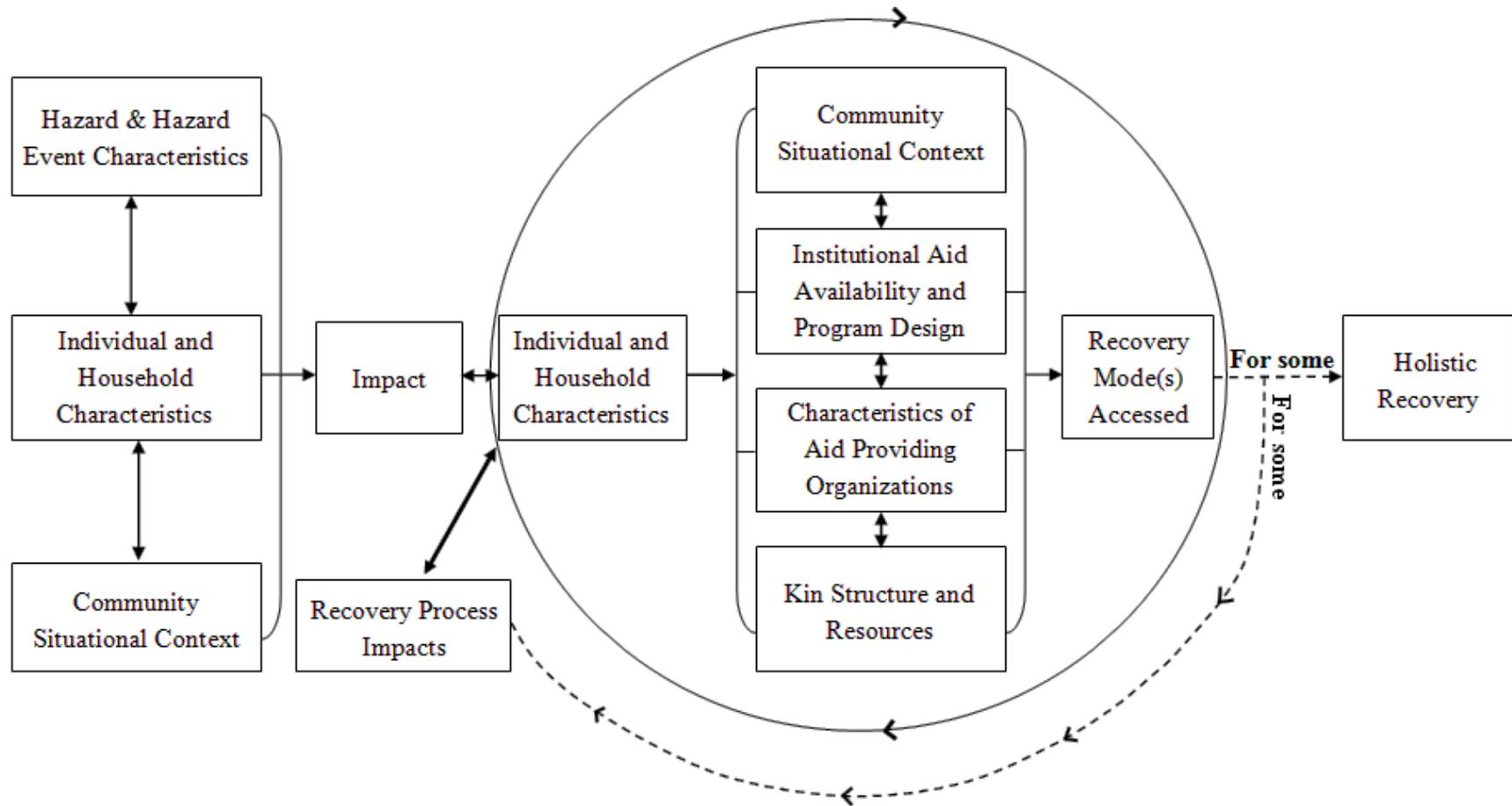


Figure 2. The Revised Bolin and Trainer Model of Individual and Household Recovery

Due to the process associated with trying to address a particular impact, individuals and households continue a cycle of interaction with recovery-shaping factors and attempts to access one or more recovery assistance modes until they consider themselves recovered along all dimensions or chose to give up their pursuit of recovery. Individuals and household characteristics play a significant role in each iteration of this cycle, as who they are and what they have changes, they cycle through this process again and again. Characteristics of individuals and households may change and affect their willingness to deal with recovery-shaping factors in order to leverage recovery modes, and ultimately to recover. This cycling, and the resulting changes it causes for individuals and households, represents a recovery process impact for those who experience such frustrations. Recovery process impacts may emerge in a variety of forms—for example, strain associated with having to deal with the bureaucratic nature of particular programs, such as the RREM grant in the case of Sandy, can slow or entirely prevent recovery progress.

Each person will have a unique journey toward holistic recovery. There are innumerable different ways in which these components, and variables within, can interact to produce the recovery process that a specific individual experiences. The intention of the Revised Model is not to suggest that there is one way that individuals and households recover. Instead, the elements enumerated here appeared to be salient to recovery across individual situations. While recovery is not assured, the revised model suggests a comprehensive picture of the individual and household recovery process as supported by the Bolin and Trainer (1978) model, literature based additions, and the empirical data gathered in this study and provides clues as to why it is never achieved by some.

Implications for Discipline

The implications of the revised model relate both to the discipline and practice of emergency management. Emergency management is an emerging academic discipline the foundation of which is comprised of the research that has been conducted on hazards and disasters by scholars in many disciplines (Jensen, 2011; National Research Council, 2006). Slowing the development of the discipline is the fact that research findings related to hazards and disasters are located in myriad disciplinary-specific journals, countless edited volumes, final grant reports, and books. The literature has not been integrated and synthesized in a manner that facilitates teaching or research (Jensen 2010, 2011, 2012, 2013). Thus, while there is a significant body of knowledge that has been contributed to by scholars from a host of disciplines, their work that has been largely unintegrated, underused, and underdeveloped in both scholarship (Jensen, 2010; 2013) and practice (Quarantelli, 1993; Rubin, 2009). Jensen (2011) does not suggest that integration and synthesis or implementation in practice would be easy. She notes, “the body of knowledge that one has to absorb to be competent in emergency management is vast, specialized, and separate from any one other discipline” (Jensen, 2011, p.33).

The challenge of locating the range of relevant recovery literature as researchers attempt to conceptualize research designs related to recovery is significant—particularly when so much of the literature exists outside of their home discipline’s journals. Nevertheless, review of the literature is a key step in developing a study in such a way that it will maximize its contribution upon completion. The Model offered here will not be a substitute for a thorough literature review or its integration and synthesis; however, familiarity with the Model can help researchers doing work within various academic disciplines to frame their research studies and related findings in

terms of where they fit within the overall process through which individuals and households move in order to holistically recover from disasters.

The challenge to students pursuing an education in emergency management is arguably more significant than those facing researchers, given their relative inexperience in integrating and synthesizing the literature from far-flung disciplines. Currently, emergency management students face the challenge of trying to understand findings from hundreds of pieces of recovery literature related to different pieces of individual and household recovery and how they fit together in the absence of a meaningful theoretical framework within which to interpret, or place, results. For example, a public health study may find that physical mobility influences health impacts for older adults in an event involving flash flooding. It is important to be able to pull apart the array of variables involved in explaining the story of this impact; those of individual and household characteristics and hazard and hazard event characteristics shaping impacts. With conceptual “buckets” in which to place findings, the integration of individual studies into a framework of meaning is not only possible, but also tremendously beneficial. Conceptual models confer significant advantages to those disseminating and consuming emergency management knowledge, allowing students to appreciate the complex realities of recovery without losing sight of the anchoring themes with which we understand and interpret findings. Thus, the Revised Model of Individual and Household Recovery offers a meaningful, empirically supported framework which can facilitate teaching and study related to the individual and household recovery process.

Ideally, further refinements of the Model based on future research examining individual components and the process as a whole will continue this process of unearthing frameworks of meaning within the individual and household recovery literature. The theoretical implications of

this model are important, but without a continual re-examination of the validity and generalizability of these findings, it is worthless. The process of building a science involves assessing support for the discipline's findings, frameworks, and models again and again. The Revised Model of Individual and Household Recovery serves up a potential framework for conceptualizing the recovery process of this stakeholder group and must be critically examined through future research. It is a step forward, and an important one, but one that requires that fellow members of the discipline engage critically with this model and seek to capture this recovery process as comprehensively as possible.

Implications for Practice

One of the respondents who participated in this study stated that there is no way for a person to know in advance what recovery will involve. It is the position of the researcher that, while we cannot forecast everything that will happen in the recovery period, it is entirely possible to approach recovery with a clear understanding of the major factors shaping individual and household recovery processes. In fact, the Revised Model of Individual and Household Recovery presented here offers an orientating framework for the profession and distributed function of emergency management to tackle the challenges of the recovery phase through both policy and program design with a significant sense of what facilitates and hinders recovery for individuals and households.

Practice, as it relates to program design, can take the knowledge gained by this model and seek to control the sphere of factors within its influence. Although there are several elements of this model that are outside of the control of practitioners (e.g., individual and household characteristics, hazard and hazard event characteristics, etcetera), factors such as characteristics of aid providing organizations and institutional aid availability and program design can be

manipulated along certain sub-dimensions. Perhaps one of the best ways to begin is within the domain of characteristics of aid-providing organizations. If the collaboration and communication between the networks of aid-providing organizations are critical to the overall recovery process, then practitioners can seek to engender an environment of collaboration and communication before a disaster ever occurs. Moreover, if clear and accessible information about available assistance represent critical aspects of institutional aid availability and program design, then information repositories can be created that are accessible in multiple formats, languages, and locations to help individuals learn about the various types of assistance that are available at any time. Clearly, there are practical, meaningful things that can be done given the understanding of individual and household recovery processes reflected in the Model.

Policy makers can use these findings to inform decisions regarding funding allocations and the specific intentions and frameworks of policies. The data revealed that individual and household recovery process components do not exist in isolation from each other. Thus, policy can be designed with acknowledgement of the fact that various factors, outside of the control of practitioners, will interact with the policy design to influence the extent to which individuals and households utilize institutional assistance as well as the extent to which they recover.

For example, this study revealed that merely by going through the recovery process, people could reach such levels of frustration that they may give up or become apathetic toward trying to recover. If the roots of these frustrations are related to the slowness of grant programs to help homeowners comply with mitigation policy, then perhaps policy can dictate solutions to address the interaction of these factors. For example, policy can designate that a significant bulk of funding be allocated toward increasing the administrative capacity of assistance programs that help homeowners to comply with policy requirements. In the case of Sandy, a few respondents

noted that a new homeowner/rental assistance program had been developed in order to address the financial strain being caused by the snail-like pace of the state RREM grant. Essentially, the state was said to have recognized the detrimental financial and mental/emotional costs of placing thousands of homeowners in holding patterns and allocated a large block of funding to be used toward months of mortgage or rental payments. In the view of the researcher, it may have been more beneficial to channel that funding into increasing the capacity of the state grant program from the start—thereby reducing or eliminating the role of the recovery process impact component on the broader recovery process and increasing people’s ability to comply with policy (e.g., the Biggert-Waters Act). Thus, policies that acknowledge contextual factors that shape adherence can be more successful based on the knowledge gained here.

Moreover, it is important for this model to be rearticulated in non-technical, discipline-neutral language that can be readily relayed to practitioners both before and during the recovery process. As many professions are involved in emergency management, it is important that all parties be able to come away from trainings with clarity about the individual and household recovery process. To institute such trainings requires investment of time, technical expertise, and financial support by major emergency management agencies, particularly FEMA. The lack of investment in recovery and availability of trainings concerning this functional area is a wider issue facing the field of emergency management today. PPD-8 and the NDRF represent the vision of the current administration on a national level; yet, without a more fully developed strategy for disseminating this vision coupled with resources, it can easily be swept aside with the next change in leadership. Arguably, the relative infancy of these policies and the lack of resources devoted to facilitating the diffusion of a comprehensive understanding of recovery makes the practice of recovery highly vulnerable to political shifts in thinking and resource

allocations. Yet, through investment, the current approach to recovery at a national level—in addition to the trainings based on the work of studies like this one—can provide practitioners with tools and resources to more easily and successfully facilitate the recovery process of this stakeholder group. Trainings on the individual and household recovery process, as presented by this study, are one important piece of this opportunity to improve outcomes for the practice.

Indeed, widely disseminated trainings based on empirical research can enhance the quality of practice in meaningful ways. There is significant interest in seeing emergency management practice professionalize (Britton 1999; Drabek 1991; McEntire 2005; Jensen et al., e.d; Wilson & Oyola-Yemaiel, 2001). Drabek (1997) articulated several qualities of successful emergency managers including having specialized knowledge (e.g., of laws and regulations, proof of knowledge through professional certifications), individual qualities (e.g., communication, composure, expertise), and the ability to perform emergency management tasks and activities effectively. Thus, to facilitate the professionalization of emergency management, it is essential to equip practitioners with the empirically-based knowledge that enables them to better perform the recovery related functions they are assigned. This Model is both a tool for disseminating that information and a heuristic by which practitioners can better understand their role in helping to facilitate the process of individual and household recovery.

Conclusion

In this chapter, the importance of impacts as a driving force in the recovery process was underscored. Additionally, the seeming absence of impact-shaping factors in the data was noted by the researcher and contextualized with several potential explanations. This discussion also highlighted important points related to recovery process impacts, policy, and holistic recovery. The Revised Model of Individual and Household Recovery was presented in order to provide

clarity about the recovery process of individuals and households as suggested by Bolin and Trainer (1978), the literature since, and this research. This chapter has also served to orient the reader to the potential theoretical, discipline, and practice-related implications of this study. In Chapter Seven, summary remarks will be offered as well as suggestions for future research.

CHAPTER SEVEN: CONCLUSION

This study examined how comprehensively the Bolin and Trainer (1978) model of recovery reflected the recovery process of individuals and households. Research on the recovery of this stakeholder group suggested that factors such as hazard and hazard event characteristics, individual and household characteristics, and pre-disaster community situational context are important to understanding the types of impact that manifest in a disaster. Furthermore, the literature suggested that there were several factors that influenced the ways in which recovery modes were utilized in the recovery process including individual and household characteristics, post-disaster community situational context, institutional aid availability and program design, characteristic of aid providing organizations, and kin structure and resources. With these findings in mind, the researcher examined the recovery process of individuals and households recovering from Hurricane/Superstorm Sandy, a significant disaster that caused widespread damage in New Jersey among other states along the eastern seaboard.

To approach the study of recovery within this setting, Rubin and Rubin's (2012) Responsive Interviewing Model was employed. Twenty one interviews were conducted in which respondents were asked open-ended questions about the types of impacts that occurred, what people had done to deal with those impacts, and where recovery stood today. The data collection phase closed following a joint decision by the researcher and thesis advisor that theoretical saturation had been reached for the parameters of this study. Data was analyzed utilizing several steps from Rubin and Rubin's (2012) Responsive Interviewing Model as discussed in Chapter Three. Components of the Bolin and Trainer (1978) model as refined and added to by the literature since were used to guide the thematic coding process. In addition new themes were coded as they emerged.

The data analysis process revealed empirical support for the recovery factors emphasized in the literature as well as the original Bolin and Trainer model, although some factors emerged more strongly from the data than others. A new recovery model component of recovery process impacts was also discovered and nuances related to what may constitute holistic recovery were discussed. These results have been presented in the Revised Bolin and Trainer Model of Individual and Household Recovery. Emphasized throughout the data is the incredible complexity of the recovery process for individuals and households. Admittedly, this study is limited by the fact that it is exploratory, based on a single disaster, and involves data collection from sources one step removed from the recovery process of impacted individuals. However, these findings have significant implications for theory, education, research, and the practice of emergency management as it relates to policy and training of practitioners. The Revised Bolin and Trainer Model of Individual and Household Recovery offers a foundation for understanding the types of factors that will be salient to the recovery process of this stakeholder group; orientating the discipline and practice of emergency management to better study and assist in recovery.

Suggestions for Future Research

Throughout the research process, several areas for future study became evident. While the weight of the literature provides strong support for the components of the revised model, more work needs to be done to assess the extent to which these revisions are empirically supported as a whole within other contexts. In studying different disasters and related recovery processes, different sub-factors associated with established components may be discovered and entirely new factors may emerge. Moreover, the data revealed that the legal/regulatory context was a particularly strong dimension of the broader community situational context. Future research

should ideally examine the significance of this factor in order to determine the extent to which the legal/regulatory context deserves to be represented on par with the other major elements of the model. Furthermore, the role of recovery process impacts in this model should be further analyzed in order to determine the extent to which this is a meaningful component of the process in other disasters, regions, cultures, and so on. Ideally, this model, as a whole, will continue to be empirically tested, using different research designs and settings so that it might be continually refined.

In addition to these recommendations for future research, it is clear to the researcher that continued niche work concerning the individual components of the model must be carried out. While the revised model offers a meaningful framework for understanding individual and household recovery, each individual component of the model is complex and nuanced. The work of studying these intricacies should continue to be conducted by many disciplines, as has historically been the case within the body of individual and household recovery literature. These unique perspectives can enhance emergency management's understanding of various aspects of individual and household recovery. The revised model offers researchers an opportunity to contextualize these more specific examinations within a wider process and further enhance both the model and our understanding of individual elements therein.

Moreover, future studies should examine the model's components in relation to each other to better understand the relative weight of these elements and the ways in which components (and sub-elements therein) interact with each other to influence the wider recovery process. It is clear from the data that, for many, the journey through the recovery process is not a one-time trip. Impacts may interact within individual and household characteristics and a suite of other recovery-shaping factors to influence mode selection. In the wake of the utilization of a

mode or some combination thereof, individual and household characteristics may change, impacts may be addressed to a limited extent, creating a need for these factors to all interact again and influence the utilization of similar or other recovery modes to ideally lead to a state of holistic recovery. Clearly, this process is iterative for many and future research needs to examine the factors involved in the cycling associated with these components.

Future research should also seek to establish the empirical validity of the revised model by collecting data from additional units of analysis than was employed here. While organizations were able to articulate various elements of the recovery process because of their heavy involvement in hundreds, and sometimes thousands, of recovery cases, there is much to be gained by speaking directly with individuals and households. Again, various methodologies should be employed to gather this data. Ethnographic examinations of recovery seem particularly well suited to avoiding the pitfalls of self-report, particularly when respondents are involved in their recovery process as it is unfolding and may be less objective.

Finally, it is the hope of the researcher that this model eventually be translated into quantitative applications, in which indexes for each of the components of the process be developed. It seems probable that large data sets could be gained through the use of surveys designed to encapsulate major elements of the model and various important factors within each component. Such progress could lead to the development of a standardized way of assessing the recovery process of individuals and households. This may enable statistical analysis that more clearly reveals the weight of individual variables and components in a way that cannot be understood through exploratory qualitative research.

Clearly, this research serves to address a critical gap in the literature on individual and household recovery. Future research can contribute in numerous ways to further expanding this contribution and our understanding of how this stakeholder group recovers from disaster.

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APPENDIX A: INSTITUTIONAL REVIEW BOARD APPROVAL



January 24, 2014

FederalWide Assurance FWA00002439

Dr. Jessica Jensen
Emergency Management
Minard Hall

Re: IRB Certification of Exempt Human Subjects Research:
Protocol #HS14153, "The Recovery Process for Individuals and Households following
Hurricane Sandy"

Co-investigator(s) and research team: **Laura Gould**

Certification Date: 1/24/14 Expiration Date: 1/23/17
Study site(s): **New Jersey - varied**
Funding: **n/a**

The above referenced human subjects research project has been certified as exempt (category # 2) in accordance with federal regulations (Code of Federal Regulations, Title 45, Part 46, *Protection of Human Subjects*). This determination is based on protocols submitted 1/17/14 with revised information sheet (received 1/24/14).

Please also note the following:

- If you wish to continue the research after the expiration, submit a request for recertification several weeks prior to the expiration.
- Conduct the study as described in the approved protocol. If you wish to make changes, obtain approval from the IRB prior to initiating, unless the changes are necessary to eliminate an immediate hazard to subjects.
- Notify the IRB promptly of any adverse events, complaints, or unanticipated problems involving risks to subjects or others related to this project.
- Report any significant new findings that may affect the risks and benefits to the participants and the IRB.
- Research records may be subject to a random or directed audit at any time to verify compliance with IRB standard operating procedures.

Thank you for your cooperation with NDSU IRB procedures. Best wishes for a successful study.

Sincerely,

A handwritten signature in cursive script that reads "Kristy Shirley".

Kristy Shirley, CIP, Research Compliance Administrator

INSTITUTIONAL REVIEW BOARD
NDSU Dept 4000 | PO Box 6050 | Fargo ND 58108-6050 | 701.231.8995 | Fax 701.231.8098 | ndsu.edu/irb

Shipping address: Research 1, 1735 NDSU Research Park Drive, Fargo, ND 58102

NDSU is an EO/AAE university.

APPENDIX B: TELEPHONE SCREENING SCRIPT



*Department of Emergency Management
Department 2351
P.O. Box 6050
Fargo, ND 58108-6050*

*Phone 701.231.5595
Fax 701.231.5118
www.ndsu.edu/emgt*

Hello, my name is Laura Gould.

I am a researcher studying how people recover from disasters. To do this I'm talking to all the long term recovery groups in New Jersey to get their perspectives on how people go through the recovery process.

I know you are incredibly busy with the important work you do to help people recover from Sandy. It is because this work is so vital that I am doing this research.

I am conducting phone interviews, taking approximately one hour, focused on how people were impacted by Sandy and how they are dealing with those impacts as a part of the recovery process. Would you be interested in participating in this study?

If yes or no, the researcher will also ask:

In addition to my interest in your perspective on how people recover, I wonder if other organization that you've worked with in the recovery efforts might be interested in participating in such research. Can you suggest 3 or 4 people I could call and talk to about participating in this study?

If yes, the researcher will ask for the name, phone number, and email address of the potential participant. Finally the researcher will thank the individual for their time.

APPENDIX C: INVITATION EMAIL

NOTE: This invitation will be sent by email. It will appear as follows.

North Dakota State University
Center for Disaster Studies and Emergency Management
Dept. 2351
P.O. Box 6050
Fargo, ND 58105-6050
Phone 701.231.5595

17 January 2014,

Dear [Potential Participant Name],

I am writing to request your participation in a study about the recovery process of individuals and households following Hurricane Sandy in 2012. I am eager to learn about this recovery process through the perspectives of individuals, like yourself, that are engaged in helping people recover from the effects of Sandy.

Because little is known about the overall process by which individuals and households recover, benefits include helping scholars and practitioners better understand how people and disaster interact. A holistic understanding of the recovery process may lead to improved training for organizations involved in recovery work to better serve the public. Your personal knowledge of how people have been impacted by Sandy and what their lives have been like since is invaluable to building this knowledge.

A phone interview, taking approximately one hour, will be conducted to learn about your perceptions of individual and household recovery should you choose to participate. If you are willing to participate in this study, please reply to this email (laura.gould@my.ndsu.edu) or contact me by phone at (401) 633-5285 to schedule a time convenient to conduct a phone interview. Please refer to the attached Information Sheet or see below if the attachment is not accessible.

Please refer to the attached document for more detailed information regarding this study. Should you have any questions, please contact me or Dr. Jessica Jensen, my advisor on this project, at (701) 231-5886 or ja.jensen@ndsu.edu.

Thank you in advance for you participation in this study.

Most Sincerely,

Laura Ann Gould

APPENDIX D: INFORMATION SHEET



*Department of Emergency Management
Department 2351
P.O. Box 6050
Fargo, ND 58108-6050*

*Phone 701.231.5595
Fax 701.231.5118
www.ndsu.edu/emgt*

“The Recovery Process for Individuals and Households following Hurricane Sandy”
INFORMATION SHEET

Research Study.

You are being invited to participate in a research project entitled, “The Recovery Process for Individuals and Households following Hurricane Sandy”. This study is being conducted by Laura Ann Gould, from North Dakota State University, Department of Emergency Management.

Purpose of Study.

The purpose of this research is to explore how individuals and households recover. In particular, this study will explore how people were impacted by Hurricane/Superstorm Sandy and how they have dealt with those impacts post-disaster.

Basis for Participant Selection.

Your participation in this study is requested because of you work for an organization involved in helping people recover from Hurricane/Superstorm Sandy.

Explanation of Procedures:

If you opt to participate in this study, a phone interview will be scheduled at your convenience between January 22, 2014 and March 15, 2014. The interview will last approximately one hour. Interviews will be recorded using a digital recorder to assure that I accurately capture the information provided.

Potential Risks and Discomforts.

There should be no potential risk or discomfort associated with your participation in this study.

Potential Benefits.

This research is intended to expand the knowledge of disaster recovery as it relates to individuals and households. It is the hope of this study to determine how people move through the recovery process. Ideally, these findings will benefit the education of future emergency management professionals as well as the wider array of professions involved in helping individuals and households recover from disaster. There is potential that a better understanding of the recovery processes of individuals and households can create and/or improve the quality of training for organizations involved in recovery work. Your participation will play a key role in establishing an understanding of how people recover from disasters.

*Department of Emergency Management
Department 2351
P.O. Box 6050
Fargo, ND 58108-6050*

*Phone 701.231.5595
Fax 701.231.5118
www.ndsu.edu/emgt*

Assurance of Confidentiality.

While we cannot guarantee your confidentiality, there are several considerations given to research respondents to protect your privacy. What is shared by you will not be shared with other respondents in other interviews. In the final research publication, no participant or organizational names or job titles will be attached to quotations included in the results or discussion.

Digital recordings of interviews will be produced and uploaded onto the researcher's personal computer, the researcher's usb, and a cloud storage system dropbox to which only the researcher has access. The sound file will then be transcribed by the researcher or the transcription company the researcher has hired to assist with transcribing the data collected through this study. The researcher will create codes for identifying personal and geographical characteristics will be created. Only I, as the researcher, will be in possession of the code sheet in which these codes and participant information are described. When recordings, transcriptions, and codes are no longer relevant to the research, they will be destroyed.

In the interview transcriptions, notes and memos, and final publication, the codes rather than identifying characteristics will be used. Your personal information will not be used. Your name and the organization you are affiliated with will not be used in any publication. Aliases, when necessary, will be utilized (ex: Service Provider A with Organization 1).

Voluntary Participation and Withdrawal from the Study.

Your participation in this study is voluntary. You are free to quit at any time. Your decision to participate or not will not affect your present or future relationship with North Dakota State University or any other benefits to which you may be entitled related to this research. If you decide to participate, you are free to withdraw your consent and discontinue participation at any time.

Offer to Answer Questions.

Please ask questions regarding this information now or at any time. Should you have any questions, please contact me, Laura Ann Gould, at (401) 633-5285 or laura.gould@my.ndsu.edu or my thesis advisor, Dr. Jessica Jensen at (701) 231-5886 or ja.jensen@ndsu.edu. If you have any questions about the rights of human research respondents, or wish to report a problem related to this research, contact the NDSU Institutional Research Board (IRB) Office at (1-855-800-6717) or by email ndsu.irb@ndsu.edu.

APPENDIX E: INTERVIEW GUIDE



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Introduction Script: *Before we begin, I want to make sure that you are comfortable with a few things. Are you comfortable with the fact that you have been selected for participation in this research due to your role in the recovery efforts following Hurricane Sandy; that your participation in this project is voluntary; that you can let me know if you want to stop participating anytime; that while your confidentiality is not guaranteed, your name and your organization's name will not be used in the final write-up of the data collected for this research; and, that our conversation is going to be digitally recorded? Do you have any questions before we begin?*

1. Describe your role in the Sandy recovery efforts.
2. How were people impacted by Sandy?
3. What have people done to deal with these impacts?
4. How holistic has the recovery of individuals and households been to this point?
5. Is there anything else you think I should know that might contribute to this research?
6. May I contact you if I have any questions during data analysis?
7. Are there other individuals working in organizations that serve older adults in Ocean County that you think might be interested in participating in this research? If so, would you be able to provide their contact information?

| | | |
|---------------------------|-----------------|----------------|
| Name Represented: | Interview Date: | |
| Organization Represented: | Time Started: | Time Finished: |

APPENDIX F: FOLLOW-UP AND PROBES

Main Question 1: Describe your role in the Sandy recovery efforts.

- Job title
- Full time or part time
- Nature of their actual job including job responsibilities
- Nature of recovery program (if applicable) they are participate in administering
- *Frequency that they interact with individuals and households*
- Nature of interactions within scope of recovery individuals and households
- Extent to which they have established personal relationships with individuals and households
- Prior recovery working experiences
 - Their capacity in those recovery experiences

Main Question 2: How were people impacted by Sandy?

- Health impacts
- Psychological impacts
- Economic/financial impacts
- Physical impacts
 - Damaged/destroyed to property (housing)
 - Damaged/destroyed belongings
- Impacts to family/kin group
- Impacts/interruptions to support services that they depend
 - Interruption in medical treatment
 - Interruption in day-to-day routines
- Other changes (due to impacts)
 - Location of residence
 - Physical health status
 - Mental health status
 - Relationships/ Level of interaction
 - With service provider organization
 - With friends/family
 - With church/religious affiliated groups
 - With civic/social groups
- Variations in individuals and households served**

Main Question 3: What have people done to deal with these impacts?

- Restore, rebuild, replace...or NOT
- Use of services to deal with impacts
 - Why?
- Use of social supports to deal with impacts
 - Why?
- Use of community resources to deal with impacts
 - Why?

- Recovery programs in community, state, federal level
- Barriers to dealing with impacts
 - Personal/individual barriers
 - External barriers
- Regain sense of normalcy
- Re-establish day-to-day routines

Main Question 4: How holistic has the recovery of individuals and households been to this point?

- Holistic
 - Economic
 - Social/cultural
 - Physical (health)
 - Psychological
 - Spiritual
 - Housing
- See themselves as recovered/recovering/no hope of recovery
 - How do they report their progress
 - View of recovery as possible/impossible
 - View of recovery as likely/unlikely
- Things that have influenced getting them to their current state
- Things that have slowed down/stopped recovery progress
 - Suggestions for helping them move forward