

**Examining Evacuation Decisions of People Experiencing Homelessness During
Natural Disasters Using the Protective Action Decision Model (PADM)**

by

Andrea Ramos

A Dissertation Submitted to the Faculty of the

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This dissertation was prepared under the direction of the candidate's dissertation advisor, Dr. Alka Sapat, School of Public Administration, and has been approved by all members of the supervisory committee. It was submitted to the faculty of the Dorothy F. Schmidt College of Arts and Letters in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

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Abstract

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In this dissertation, I examined the lived experiences of people experiencing homelessness (PEH) and their perceptions of protective actions when making evacuation decisions during disasters or extreme weather events. Compared to other members of society, individuals experiencing homelessness during disasters face unique challenges, including a lack of shelter, transportation, access to news, and the need to carry all their belongings. This vulnerability is further heightened when natural disasters occur, as they lack physical protection, leading to increased exposure to hazards and adverse weather effects.

The literature on homeless evacuation decision-making is limited (Donley & Wright, 2012), and the direct experiences of PEH and their decision-making processes during natural disasters remain underexplored (Brookfield & Fitzgerald, 2018; Brown et al., 2013; Every & Thompson, 2014; Gaillard et al., 2019; Settembrino, 2017).

Additionally, the unsafe living conditions of PEH, coupled with the uncertainty of the

COVID-19 virus, posed unique challenges for homeless communities, increasing the risk of virus transmission and exacerbating social disparities.

In this study, I explored PEH's lived experiences and perspectives when making evacuation decisions during disasters. I utilized Lindell and Perry's (2012) Protective Action Decision Model (PADM) as the theoretical framework. The PADM enabled me to analyze various factors influencing the evacuation decisions of PEH, including their physical aspects (shelter use and mobility) and social context (relationships with other PEH and employment). The findings presented in this study are the result of 41 in-depth semi-structured field interviews with PEH living unsheltered in Fort Lauderdale, Broward County.

The direct experiences of people experiencing homelessness (PEH) make essential contributions to both theory and practice. In terms of theory, it enhances our understanding of human behavior through the application of a framework for protective action decision-making within the homeless community. In practical terms, it amplifies the voices of marginalized populations, offering an opportunity to improve current evacuation emergency plans developed by local governments and community partners that support the homeless community. Furthermore, it empowers human agency by initiating conversations about research questions related to evacuations and perceptions of shelters, bridging the gap between disaster research and homelessness research.

Dedication

I would like to dedicate this dissertation to the people experiencing homelessness in Broward County. They not only opened their hearts to share their stories but also placed their trust in me. We shared moments of laughter and tears as they recounted their experiences and challenges. I will always remember and hold dear this meaningful experience.

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Chapter I: Introduction

Natural disasters can strike suddenly and indiscriminately around the world. Preparedness plays a crucial role in preventing and minimizing the loss and disruption they cause in our daily lives. Over the past three years, the United States (U.S.) has endured 60 weather and climate disasters, averaging 20 per year. These events have resulted in over \$440 billion in damages and tragically claimed the lives of 1,460 individuals (NCEI, 2023). Protecting human life stands as the paramount focus of disaster preparedness efforts. Despite the advancements and comprehensiveness of contemporary disaster management plans, there exists a critical need to thoroughly examine and address the incorporation of evacuation processes that specifically cater to vulnerable populations. Among these vulnerable groups, the population of people experiencing homelessness (PEH) in the U.S. has been steadily growing. According to the U.S. Department of Housing and Urban Development's (HUD) Annual Homeless Assessment Report (AHAR), more than half a million individuals in the United States are experiencing homelessness, with an alarming thirty percent increase in the number of unsheltered individuals living on the streets (HUD, 2022).

Compared to other members of society, PEH encounter unique challenges, including a lack of shelter, transportation, access to news, and the necessity to carry all their belongings with them. Besides contributing to their unhoused status, these challenges may influence whether a person evacuates and seeks shelter during a natural disaster. Furthermore, PEH often find it difficult to protect themselves physically or

psychologically from extreme weather events (Every & Richardson, 2018). When confronted with a natural disaster, this population becomes even more vulnerable due to their lack of physical protection, resulting in increased exposure to hazards and adverse weather effects (Cusack et al., 2013).

There are various definitions of homelessness, each depending on different perspectives, such as those in government or academia. The U.S. Department of Housing and Urban Development (HUD) (2011) defines homelessness as the "lack of a fixed, regular, and adequate nighttime residence" (p.1), which is consistent with most national-level definitions that categorize this form of living as a housing problem. A more detailed definition was proposed by Edgar et al. (2007), dividing it into the categories of "rooflessness" and "houselessness." Both categories exclude the legal (no title to space) and social (no safe or private space) domains, but the former additionally involves exclusion from a physical (place fit for habitation) domain (p. 58). In their conceptualization, rooflessness would encompass individuals sleeping rough, in other words, sleeping unsheltered in the streets (Edgar et al. 2007).

Table 1. *Conceptualization of Homelessness*

Homelessness	Conceptual Category		
	Physical Domain	Legal Domain	Social Domain
Rooflessness	No dwelling (roof)	No legal title to a space	No private/safe personal space for social relations
Houselessness	Has a place to live, fit for habitation	No legal title to a space	No private/safe personal space for social relations

Note: Edgar et al. 2007

Group differences within the homeless population are observed concerning the type and mode of shelter in which they reside. For instance, individuals living in shelters can be categorized into the following housing types: Emergency Shelters (for those facing sudden housing loss), Transitional Housing (temporarily accommodating the displaced or chronically homeless), Permanent Supportive Housing (long-term housing for the elderly or vulnerable), Rapid Re-housing (providing short-term rental assistance services), and Permanent Housing (encompassing both permanent supportive housing and rapid re-housing) (Homeless Shelter Directory, 2019; HUD, 2022). In contrast to sheltered PEH, the HUD (2004) defines unsheltered individuals as those living in places not meant for human habitation, such as streets, cars, parks, sidewalks, or abandoned buildings. Despite government agencies offering various types of shelter services, many homeless individuals choose to live unsheltered. For unsheltered homeless individuals, making evacuation decisions during a natural disaster can be even more challenging compared to those who are sheltered.

Scholarship on homelessness highlights a range of reasons why individuals refuse to use the shelter systems provided by government agencies (Barret et al., 2011; Brookfield & Fitzgerald, 2018; Donley & Wright, 2012; Every & Thompson, 2014; Gaillard et al., 2019; Settembrino, 2017). One of the significant factors contributing to the reluctance of PEH to stay in shelters is their previous negative experiences with the services provided in these facilities (Donley & Wright, 2012).

Furthermore, PEH are characterized as vulnerable due to their lack of social support, untreated medical and mental disorders, and social isolation (Brown et al., 2013; Gaillard et al., 2019; Myers et al., 2008; Pendrey et al., 2014; Settembrino, 2016, 2017;

Singh et al., 2014; Sundararaj, 2021). Gaillard et al. (2019) and Vickery (2018) have described the vulnerability of homeless individuals during disasters as an extension of their daily emergencies, where every day represents a disaster due to their inability to control their lives. Within the field of disaster management, the absence of stable housing further compounds the vulnerability of PEH, categorizing them as a special needs population (Myers et al., 2008; Settembrino, 2017; Singh et al., 2014). Hence, it is essential to prioritize the integration of all the components contributing to their vulnerability to ensure safe evacuations and sheltering.

The term "evacuation" is commonly used in disaster management and is described as an "organized and supervised withdrawal, dispersal, or removal of civilians from hazardous or potentially hazardous areas, and their reception and care in designated safe areas" (DHS Lexicon, 2017, p. 221). There is an ongoing debate in the literature about whether people should evacuate or shelter in place during a natural disaster (Sorensen et al., 2004). However, this debate becomes less significant when considering the unsheltered homeless community, as their lack of a physical structure prevents them from sheltering in place. In this context, the most appropriate focus for this population will be on evacuation or seeking shelter.

Before the onset of a natural disaster within a specific geographical area, the public receives information from multiple sources to determine whether they should evacuate or shelter in place. The factors that influence the homeless community's decision to evacuate differ from those affecting the rest of the community (Every & Thompson, 2014; Gaillard et al., 2019; Venter & Heese, 2022). For unsheltered PEH, making evacuation decisions becomes a complex process with multiple implications,

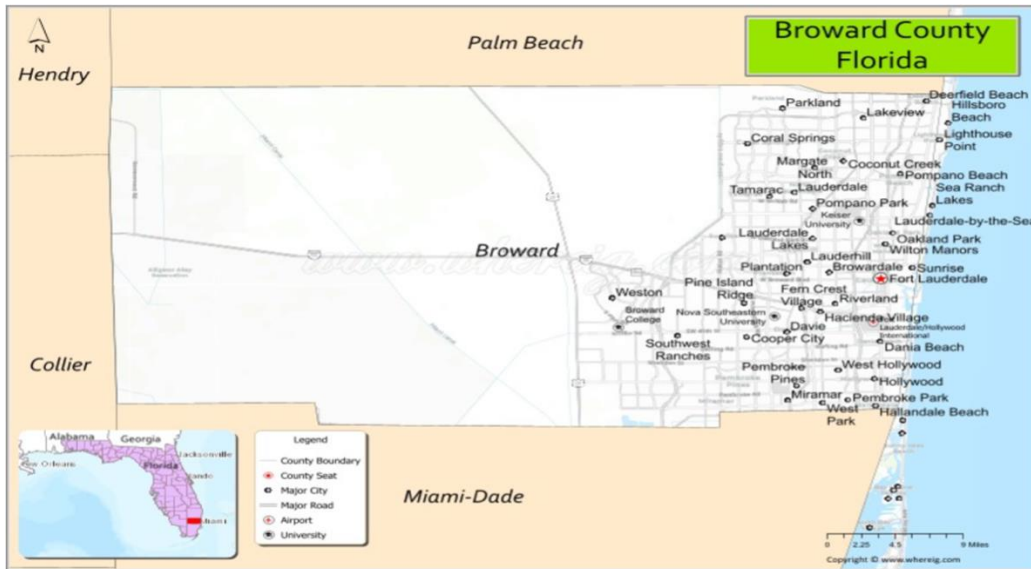
exacerbated by their social vulnerabilities (Donley & Wright, 2012; Every et al., 2019). Similarly, these complexities and vulnerabilities place this population at a higher risk of danger when a natural disaster occurs (Cusack et al., 2013; Pendrey et al., 2014; Pixley et al., 2021; Settembrino, 2017; Sundararaj, 2021). To facilitate evacuation within this population, it is essential to understand the factors influencing their evacuation decision-making process.

Study Context

Broward County, Florida.

Broward County, Florida, situated in southeastern Florida, has a total population of 1,947,026 people, characterized by a diverse demographic consisting of 32% White, 30.6% Black, and 32% Hispanic residents (U.S. Census Bureau, 2022). It is a coastal county bordered by the Atlantic Ocean and neighboring Collier, Hendry, Miami-Dade, and Palm Beach counties (see Figure 1). Due to its coastal location, Broward County experiences an annual average high temperature of 83°F and an annual low temperature of 68°F (U.S. Climate Data, 2023). The county's stunning beaches and warm ocean have established it as a premier tourist destination worldwide, a popular vacation spot nationwide, and a temporary residence for many northern residents, often referred to as 'snowbirds.' This diversity is reflected in its population composition, with permanent residents born in Florida accounting for 34.7%, those from other U.S. states at 31.2%, and individuals from other countries constituting 34.1% of the population (Broward County, 2021; HUD, 2019).

Figure 1. Map of Broward County, Florida



Note: Map from Whereig.com

Broward County has witnessed a rapid increase in the number of rehabilitation centers serving individuals seeking addiction treatment, aligning with a trend observed in other South Florida counties in recent years. Being a renowned international vacation hotspot, the county is home to an international airport and operates as a port capital, leading to a continuous arrival of individuals from various parts of the globe. The county includes 31 cities and towns, with Fort Lauderdale having the largest population. Lastly, due to its geographical location, Broward County is susceptible to various hazards throughout the year, including hurricanes, flooding, and extreme heat weather. In the past year, the county has faced challenges such as flooding, extreme weather events, tornadoes, and hurricanes.

Homelessness in Broward County

In 2021, HUD reported that more than half of all the people experiencing homelessness (PEH) in the country lived in the states of California, New York, Florida,

and Texas. According to the National Alliance to End Homelessness (2022), these numbers reflect the most recent full Point-in-Time (PIT) counts conducted before the COVID-19 pandemic began. The Point-In-Time Homeless Count (PIT Count) is an annual census of all sheltered and unsheltered PEH, typically conducted by county governments (HUD, 2012). In the 2022 PIT homeless count in Broward County, 2,054 PEH were reported (both sheltered and unsheltered), with 1,228 individuals living unsheltered (Broward County, 2023). Although the latest count revealed a decrease in PEH in the county, a significant number of PEH continue to live unsheltered on the streets (see Table 2). In March 2023, county officials reported a surge in the number of PEH, with an estimated increase of 500 people compared to the previous year (Odzer, 2023).

Table 2. Five-year Point-in-Time Count Comparison in Broward County

PEH	Year				
	2022	2021	2020	2019	2018
Sheltered	826 (40%)	794 (31%)	1227 (55%)	1453 (52%)	1449 (63%)
Unsheltered	1228 (60%)	1767 (69%)	984 (45%)	1350 (48%)	869 (37%)
Total	2054	2561	2211	2803	2318

Source: BrowardCounty.org, 2023

Within the county, the highest number of unsheltered people experiencing homelessness (PEH) reside in Fort Lauderdale, accounting for 415 out of the 1,228 unsheltered individuals (Broward County Government, 2023). In the city, unsheltered individuals tend to congregate around downtown areas, including the library, bus terminal, and churches, as well as the beaches.

While Fort Lauderdale may seem like a sunny destination for PEH to live in, a report by the National Coalition for the Homelessness (NCH) has indicated that the State of Florida is one of the most dangerous places for the homeless community to live and survive, due to a high incidence of hate crimes targeting this population (NCH, 2013). Furthermore, the unsheltered population of PEH faces additional threats from extreme heat, storms, and hurricanes, which are characteristic of the year-round weather fluctuations in the area.

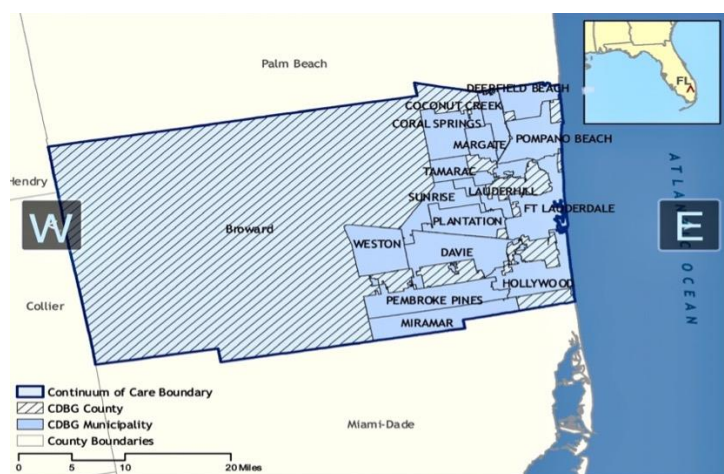
Broward County Continuums of Care, Homeless Services, and Evacuation Plans.

The HUD established the McKinney Homeless Assistance Act of 1987 to provide federal financial grants to assist homeless communities nationwide (HUD, 2009). In 1994, the HUD required the creation of coalitions, known as Continuums of Care (CoCs), to promote community-wide planning and improve coordination in the use of resources for people experiencing homelessness (PEH) (HUD, 2009; 2012). Later, in 2009, the HUD amended the McKinney Homeless Assistance Act of 1987 by consolidating three homeless programs, now known as the Homeless Emergency Assistance and Rapid Transition to Housing Act (HEARTH Act) (HUD, 2012). During this time, the CoCs aimed to streamline the efforts of local government and non-government organizations towards the efficient and effective allocation of resources to serve the homeless community in their jurisdiction. Today, the CoC program is the largest source of federal grant funding for homeless communities and housing initiatives nationwide (HUD, 2022).

There are nearly 400 active homeless coalitions in the U.S., with 27 in the State of Florida (HUD, 2022). Broward County is represented by one CoC, where agencies and

organizations coordinate to meet HUD's requirements to receive funding to assist and support PEH within their jurisdiction (see Figure 2). The Homeless Initiative Partnership Section (HIP) serves as the designated advisory board coordinator and applicant, supporting the Local Homeless Providers and Stakeholders Council (LHSPC), while the county leads the CoC's Homeless Management Information System (HMIS) (Broward County, 2023). Therefore, the county supports HIP and LHSPC working together to fulfill HUD's three primary responsibilities: 1) Operating the CoC, 2) Designating and Operating the HMIS, and 3) CoC Planning (HUD, 2012). As part of the planning responsibilities, the CoC must conduct a Point-in-Time (PIT) count of sheltered and unsheltered PEH, and in Broward County, it is conducted once a year. In addition to meeting HUD's requirements, the PIT homeless count data provides insight into the demographic characteristics of the homeless community, and it is available to the public through the county's website.

Figure 2. Jurisdiction Broward County: Continuum of Care



Source: HUD CoC, 2023

The county's online platform provides information regarding the different homeless partnerships within the county and contact information with resources for PEH in the event of an emergency. On the website, PEH can find contact information for the homeless helpline and a detailed weekly schedule of where to reach the Taskforce Homeless Outreach team (Broward County, 2023). The county's website lists the pick-up points of the Broward County Transit (BCT) buses that transport to general population shelters once a hurricane warning or a mandatory evacuation order has been issued (Broward County, 2023). Although no specific information is available to the public regarding evacuation mandates towards PEH during a disaster event, law enforcement and homeless outreach teams are tasked with providing information and resources to encourage evacuations before a disaster or extreme weather event.

Daily, multiple organizations provide support services to the homeless community, from shelter placement, meals, provision of showers, clothing, and other necessities. Facilities such as shelters, soup kitchens, and churches provide various services with the assistance of many volunteers in the county. In Fort Lauderdale, churches like Hope South Florida and the United Church of Christ provide comprehensive services to PEH focused on a holistic and caring approach regardless of the person's faith (HopeSouth, 2023; UCCFTL, 2023). For example, the United Church of Christ provides PEH meals, clothing, toiletries, and to-go meals through Ruth Ministry every Thursday. The ministry was named after the church member Ruth Earn, who assisted a young woman in need one Sunday morning by feeding her a peanut butter sandwich, which was all she found in the church kitchen (UCCFTL, 2023). Years later, Ruth Ministry provides support services to PEH and brings various community partners

that provide guidance and support related to housing, healthcare, and self-care. One of these stakeholders is the non-profit organization Showering Love, which provides bathroom services (ability to use showers, toilets, and provision of toiletries) and grooming services (haircuts, beard and mustache trim). The provision of these services in the county not only provides the necessities for PEH but it provides hope to a marginalized community. Therefore, Broward County is a unique setting within which to examine the evacuation decisions of PEH during disasters.

Problem Statement of this Dissertation

PEH face unique challenges in protecting themselves 'physically or psychologically from extreme weather' (Every & Richardson, 2018, p. 146). When confronted with a natural disaster, this population can become particularly vulnerable due to their lack of physical protection, exposing them to greater hazards and adverse weather effects (Cusack et al., 2013). To gain a deeper understanding of how these challenges influence their decision-making process during evacuations for natural disasters, it is essential to examine their perspectives and lived experiences, rather than relying solely on statistical findings. In the processes of disaster planning and policymaking, it is crucial to consider the experiences and needs of PEH (Cusack et al., 2013). On a daily basis, many PEH choose not to seek shelter and instead opt to sleep on the streets, despite the higher risk of harm. Understanding the factors contributing to their decision to refuse shelter is essential for comprehending evacuation decisions, particularly in a geographical area prone to natural disasters and other hazards.

Research Questions

This research examined the lived experiences of PEH in the context of natural disasters. PEH face unique challenges during natural disasters, setting them apart from other segments of society. These challenges encompass a lack of transportation, limited access to news sources, and the daily necessity of carrying all their belongings. These circumstances can significantly impact their decision-making process of seeking shelter or to evacuate when a disaster strikes. Previous disaster research concerning PEH has predominantly focused on the root causes of their social conditions or the perceptions of service providers during disasters (Fogel, 2017; Gin et al., 2021; Pendrey et al., 2014; Settembrino, 2017; Whytlaw et al., 2021). Thus, the main goal of this study was to examine the direct lived experiences of PEH and their evacuation decisions during disasters. This research aimed to answer the following questions:

1. What factors influence the evacuation decisions of a person experiencing homelessness (PEH) to seek shelter or to evacuate when a natural disaster occurs?
2. How has the COVID-19 pandemic influenced the decision of a PEH to evacuate or seek shelter?

Significance the Study

The existing literature on homeless evacuation decision-making is limited (Donley & Wright, 2012), and research on the lived experiences of PEH during evacuations is underexamined (Brookfield & Fitzgerald, 2018; Brown et al., 2013; Every & Thompson, 2014; Gaillard et al., 2019; Settembrino, 2017). Existing discussions primarily focus on the vulnerabilities and life choices of the homeless community (Mabhala et al., 2017). Additionally, research on evacuations of PEH often relies on the

perspectives and experiences of healthcare personnel, emergency management, and social services (Gin et al., 2016; Gin et al., 2018; Singh et al., 2014). While these perspectives offer valuable insights into optimal evacuation processes and service delivery for vulnerable populations, they may not directly capture the experiences and decisions of PEH during evacuations.

This study utilizes Lindell and Perry's (2012) Protective Action Decision Model (PADM) to explore the lived experiences of PEH when initiating protective actions during hazardous events. Despite the fact that many PEH are resistant to using daily shelters, some unsheltered individuals do seek refuge in shelters during disaster events (Brookfield & Fitzgerald, 2018; Corburn, 2020; Donley & Wright, 2012; Fogel, 2017). Therefore, gaining an understanding of the factors that influence PEH to take protective actions could shed light on their evacuation decisions during disasters or extreme weather events. Moreover, comprehending evacuation decisions within a marginalized population and considering social and community dynamics can facilitate more effective evacuations during disasters.

Examining the lived experiences of PEH using Lindell and Perry's (2012) PADM offers an opportunity to evaluate various threat perceptions within this community. Additionally, applying the PADM to individuals living unsheltered allows for an examination of its applicability to a population with different housing conditions than traditionally considered by the model. Therefore, this study provides insights into protective actions among marginalized populations with diverse housing conditions, expanding the scope of the PADM's application.

The significance of this study lies in its focus on the direct perceptions and experiences of the unsheltered homeless community. The findings can assist service providers and organizations in developing more targeted communication systems and evacuation plans accessible to PEH during disasters or extreme weather events. Furthermore, the research will offer insights into the challenges and evacuation decisions of PEH during strict quarantine and isolation measures, enhancing preparedness for global pandemics.

Overview of the Dissertation

In the upcoming chapter, I will discuss the literature review and theoretical model guiding this research. The literature review covers scholarly work concerning homelessness, evacuation decisions, and the COVID-19 pandemic. Lindell and Perry's (2012) Protective Action Decision Model (PADM) will be presented to guide this study as a multistage process for examining the initiation of protective actions during disasters.

Chapter 3 will focus on the research design and the development of interview questions. In this section, I will describe the qualitative methods employed in this dissertation to explore the lived experiences of people experiencing homelessness (PEH). Chapters 4, 5, and 6 will be dedicated to data analysis and the interpretation of the participants' interviews.

In Chapter 7, I will discuss the research questions aimed at understanding the factors influencing the evacuation of PEH. In this chapter, I will also present implications, contributions, and suggestions for future research. Finally, I will conclude the chapter with my final thoughts on the dissertation.

Chapter II: Literature Review and Theoretical Framework

The existing research on homeless evacuation decision-making during hazards and natural disasters remains limited (Gaillard et al., 2019; Settembrino, 2016). While disaster research has examined those who become homeless due to natural disasters, there is a lack of research into the direct experiences of PEH and how they make choices during disaster events (Brookfield & Fitzgerald, 2018; Brown et al., 2013; Every & Thompson, 2014; Gaillard et al., 2019; Settembrino, 2017). Current scholarly discourse in the literature generally centers on the vulnerabilities of the homeless community and their life choices (Mabhala et al., 2017). This emphasis primarily arises from the unique challenges this population faces, including limited access to transportation, information, and stable housing.

Evacuation plans for homeless populations are typically planned and directed by social, emergency, and medical care providers (Gin et al., 2016, 2018; Singh et al., 2014). Consequently, disaster research pertaining to the evacuation of PEH often relies on the experiences and perceptions of individuals who serve this population (Fogel, 2017; Settembrino, 2017). Moreover, the global COVID-19 pandemic has introduced new challenges and opportunities to disaster research and management. Vulnerable populations are at risk of further marginalization and exposure to hazards and dangerous situations. The literature discussed in this section encompasses various themes, including the Root Causes of Vulnerability, Disabilities, Inequities, Refusal to Seek Shelter, and the COVID-19 Pandemic Measures and Structures, Health Risks, and Social Disparities.

Root Causes of Vulnerability

Research on homelessness in the context of disasters has consistently revealed an increased vulnerability within this community (see Table 3). Scholars argue that existing literature often centers on generalized assumptions about the root causes of homelessness among people experiencing homelessness (PEH), ultimately leading to their further exclusion and marginalization during disasters (Fogel, 2017; Settembrino, 2017; Vickery, 2017). In her 2017 study, Jamie Vickery examined the experiences of PEH and providers from homeless-serving organizations (HSOs) following the 2013 floods in Boulder County, Colorado. Her findings unveiled that the vulnerability of PEH was exacerbated by their marginalized status and the weakened social and structural processes of HSOs (Vickery, 2017). She also underscored the stigmatization of homelessness and the lack of resources, both of which intensified the risks faced by PEH during disasters. Vickery's (2017) recommendation was for HSOs to prioritize addressing unique service needs during disaster planning.

Similarly, in 2017, Marc Settembrino employed the social vulnerability perspective to explore the risk perceptions of unsheltered PEH and homeless service providers concerning natural hazards in Central Florida. His findings illuminated that social stigma, unequal exposure, special medical needs, and chronic unemployment heightened the vulnerability of PEH during disasters (Settembrino, 2017). He concluded by emphasizing the importance of raising awareness about the challenges faced by PEH as a fundamental step in understanding the social causes of their vulnerability during disasters (Settembrino, 2017).

Table 3. Studies on Homelessness - Vulnerabilities

Author, Year, Country	Methodology	Findings
Fogel 2017 USA	Exploratory qualitative, focus groups	<ul style="list-style-type: none"> • Disconnect EM plans: timing/response. • Too late official government declarations.
Gaillard et. al 2019 New Zealand	“Sensitive” qualitative research, interviews and focus groups	<ul style="list-style-type: none"> • High vulnerability to natural hazards • Lack power to control daily life and to prepare for large-scale events
Settembrino 2017 USA	Ethnographic study, interviews	<ul style="list-style-type: none"> • Unequal exposure • Social stigma • Unequal resources • Special medical needs
Vickery 2017 USA	Qualitative research: Observations, documents, interviews, and focus groups	<p>Processes of neoliberalization:</p> <ul style="list-style-type: none"> • Unequal urban design/policy • Criminalizing PEH • Increase disaster vulnerability • Shifted responsibility from the state to non-state actors
Walters & Gaillard 2014 New Zealand	Draws on study: homelessness and hazards.	<ul style="list-style-type: none"> • Unique community needs/values • Victim of neglect by existing government policies/practices • Marginalization constructed by social/economic/political factors

Disaster researchers have frequently drawn comparisons between the challenges faced by homeless individuals and the enduring difficulties observed in natural disasters (Gaillard et al., 2019; Gin et al., 2018; Sundareswaran et al., 2015; Vickery, 2017; Walters & Gaillard, 2014). Vickery (2017) articulated this by framing it as if every day were a disaster, while Walters and Gaillard (2014) depicted it as an extension of a continuous state of emergency. Additionally, Gaillard et al. (2019) highlighted the continuous nature of precarity and vulnerability. In their study, they conducted interviews and focus groups involving PEH, shelter organizations, and disaster policy stakeholders to explore the vulnerability of PEH to hazards. The findings revealed that PEH's inability

to manage their daily challenges mirrored their vulnerability during natural disasters, where a lack of resources and their state of precarity exposed them to ongoing risks, both in daily life and during natural hazards (Gaillard et al., 2019). Furthermore, the authors suggested that the vulnerability of PEH to hazards was exacerbated by policy decisions made by state actors regarding government priorities and spending (Gaillard et al., 2019).

Walters and Gaillard (2014) explored the vulnerability of PEH to daily and large-scale hazards to understand the disaster risk faced by this marginalized population. The authors argued that PEH were frequently unaccounted for, overlooked, and excluded from disaster risk reduction policies (Walters & Gaillard, 2014). They concluded by emphasizing that the lack of inclusion and attention to PEHs in disaster policy further contributes to their social and legal invisibility and exacerbates their marginalization, particularly when it comes to receiving support following a disaster (Walters & Gaillard, 2014). Thus, an increased vulnerability stemming from the daily state of precarity among PEH is further heightened when their specific needs are not considered or, worse yet, neglected in disaster policies.

Disaster research on homelessness has also examined the vulnerability of PEH to natural disasters, particularly focusing on their limited access to information before a disaster occurs. For instance, in Sondra Fogel's (2017) study, focus groups were conducted with PEH and social service providers to gain insights into their perceptions during disaster responses. The findings from her study revealed contradictory perceptions and a disconnect in responses related to timing and resource allocation. Preparations for unsheltered PEH were often delayed due to late government declarations (Fogel, 2017). Furthermore, Fogel illustrated the warning signs and hazard impact perceptions of PEH

living unsheltered, highlighting the pressing need for improved methods to access and inform this population about disaster-related information (Fogel, 2017). Consequently, the lack of information and the inability to access resources compound the day-to-day challenges experienced by PEH during disasters, ultimately increasing their vulnerability to disasters and extreme weather events.

Disabilities and Inequities

Research on homelessness typically focuses on examining the disabilities and inequities faced by many individuals living unsheltered on the streets (see Table 4). Studies on homelessness often center on the high prevalence of mental and physical health problems within this community, which places them at a higher risk of the impacts of hazards and extreme weather events (Pendrey et al., 2013). Scholars have suggested that mental health problems, such as psychiatric issues and substance abuse disorders, exacerbate their daily hardships (Settembrino, 2016; Sundararaj, 2021). Donley and Wright (2021) explored these challenges and explained that a large number of PEH live unsheltered on the streets with severe untreated psychiatric illnesses. Brown et al. (2013) studied the effects of hurricanes on the care of veterans experiencing homelessness who were being treated for mental health disorders. Their study suggested that discontinuing mental health treatment for homeless veterans could lead to traumatic events or tragedies due to their compounded vulnerabilities, including higher health, economic, and psychological stressors (Brown et al., 2013). Therefore, mental health problems are a significant concern for people living without stable housing conditions. Consequently, the ability of PEH with a mental health disorder to make daily and disaster evacuation decisions can be hindered.

Table 4. Studies on Homelessness - Disabilities and Inequities

Author, Year, Country	Methodology	Findings
Barret et al. 2011 USA	Cross-sectional survey. Comprehensive needs assessment.	<ul style="list-style-type: none"> • Extensive needs for physical and behavioral health services • Inability obtain needed health care • Unaddressed mental health issues • Substance abuse problem(s)
Brown et. al 2013 USA	Quantitative, Veterans Health Administration (VHA) Outpatient Medical Dataset	<ul style="list-style-type: none"> • Extended, well-functioning, and supportive networks fare better • Hurricane-affected areas: more likely service-connected disability and participate in group therapy
Cusack et. al 2013 Australia	Qualitative interpretive, Semi-structured interviews	<ul style="list-style-type: none"> • Health/well-being compromised by extreme weather (EW) • Lack of access to cool centers and water exacerbate health decline • Service responses geared toward extreme heat rather than cold • At times of EW services stretched
Every et al. 2019 Australia	Mixed-method approach - Survey and interviews	<p>Extreme weather affects PEH:</p> <ul style="list-style-type: none"> • Exacerbates daily challenges • Worsening or new mental health issues, sleep, skin, nutrition, mood • Loss of or damage living structure • Increase in fights, violence
Ramin & Svoboda (2009) USA	Meta analysis	<p>Climate change impact PEH by:</p> <ul style="list-style-type: none"> • increased heat waves, air pollution • increased severity floods/storms • changing infectious disease-vector • poorly controlled chronic diseases

Studies on homelessness have also linked PEH's lack of stable housing to a degraded quality of life, characterized by health deficiencies caused by malnutrition and decreased self-care behaviors (Brown et al., 2013; Gaillard et al., 2019). Sundararaj (2021) explained that PEH's need for daily survival often takes precedence over seeking medical care, regardless of the potential for future health complications. Similarly, Barrett et al. (2011) discussed that health deterioration in this community varies, with some PEH experiencing health decline due to the exacerbation of their poverty status, while others experience health decline that leads them to homelessness. The authors conducted a cross-sectional study to assess the health services received and needed among PEH, resulting in participants reporting unaddressed medical and mental health issues due to a lack of access or an inability to obtain treatment (Barrett et al., 2011). In line with Sundararaj (2021), the authors concluded that their results were not surprising, as "meeting immediate survival demands competes with the ability of homeless persons to acquire healthcare" (Barrett et al., 2011, p. 345). While PEH's main priority is daily survival, physical health decline can hinder their ability to safely seek evacuation in the event of a disaster.

The effects of extreme weather and climate change have been documented as relevant issues within the homeless community (Cusack et al., 2013; Pendrey et al., 2014; Ramin & Svoboda, 2009). Compared to the general population, PEH are more vulnerable to small climate changes, such as increased heat waves, air pollution, and flooding, placing them at higher risks of illness and death due to their acute vulnerability and exposure (Brookfield & Fitzgerald, 2018; Ramin & Svoboda, 2009). A study by Cusack et al. (2013) conducted 25 semi-structured interviews with PEH to explore the adverse

effects of extreme weather events. Their findings revealed that PEH's health and well-being were negatively affected by extreme cold and hot weather, as well as the lack of access to services due to early closures and short staffing during extreme weather conditions (Cusack et al., 2013). Every et al.'s (2019) study also examined the impacts of severe weather and disasters on the homeless community using a mixed-methods approach. The authors suggested that extreme weather not only exacerbated PEH's daily challenges and chronic health stressors but also increased the number of arguments, fights, and other forms of violence within the community (Every et al., 2019). They concluded by recommending a more comprehensive and inclusive approach to emergency planning that addresses the inequities in the impact of extreme weather on the homeless community (Every et al., 2019).

Refusal to Seek Shelter

Recent studies on homelessness have increasingly emphasized the need to understand the decisions of unsheltered People Experiencing Homelessness (PEH) who choose not to stay in shelters at night (see Table 5). For unsheltered PEH, seeking shelter can be their only means of physically protecting themselves from hazards (Brookfield & Fitzgerald, 2018; Corburn, 2020; Donley & Wright, 2012; Fogel, 2017). A study conducted by Donley and Wright (2012) involved focus groups of PEH to examine their motivations for opting to sleep on the streets rather than in available local shelters. Their findings indicated that some reasons for not staying at night shelters included concerns about the location of facilities, safety, prior negative experiences, companionship, and the desire for freedom (Donley & Wright, 2012, p. 295). Furthermore, their research highlighted pet ownership as a factor, with PEH viewing their pets as sources of

Table 5. Refusal to Seek Shelter

Author, Year, Country	Methodology	Findings
Brookfield & Fitzgerald 2018 Australia	Qualitative research, in-depth interviews	Identified three themes: <ul style="list-style-type: none"> • Disconnection (isolation causing a reliance on non-durable support) • Service provider trust (participants accessed services they trusted) • Personal disaster (increased vulnerability to minor hazards)
Donley & Wright 2012 USA	Five focus groups	<ul style="list-style-type: none"> • Shelter complaints: <ul style="list-style-type: none"> (a) costs in staying (b) enforced rules and regulations • Desire of free, accessible bathing, showering, and laundry facilities • Couples refusal from separation
Settembrino 2016 USA	Ethnographic and qualitative methods: observations, group interviews.	<ul style="list-style-type: none"> • Great empathy to the community • PEH positive experiences • Shelters and guests were able to get back to their regular routines

protection, companionship, and surveillance, making it impossible for them to leave their animals behind (Donley & Wright, 2012). The study concluded by suggesting that awareness of the unique characteristics of a population consisting of many individuals with untreated addictions and mental health conditions is essential for understanding their behavior and their mistrust of the regulated services provided by local shelters (Donley & Wright, 2012).

As previously mentioned, research on the decision-making process of PEH regarding evacuation during a disaster is limited. Consequently, gaining insights into their reasons for refusing daily shelter could offer valuable perspectives on their attitudes towards seeking shelter (Brookfield & Fitzgerald, 2018; Corburn, 2020; Donley & Wright, 2012; Fogel, 2017; Gaillard et al., 2019). For instance, Fogel's study (2017)

revealed that some participants' previous experiences with shelters contributed to their distrust of local shelters due to authoritarian and indifferent treatment by staff. Similarly, Every and Thompson (2014) described the experiences of PEH when evacuating to emergency shelters as marked by surveillance and policing.

Other studies, such as those conducted by Brookfield and Fitzgerald (2018), involved semi-structured interviews with PEH to explore their experiences during natural disasters and their perceptions of service providers' roles. Their findings suggested that some participants believed that "most service providers fundamentally could not comprehend the experience of rough sleepers, which limited their trust in those providers" (Brookfield & Fitzgerald, 2018, p. 65)¹. The authors concluded that trust played a pivotal role in the decision to seek shelter during disasters and cautioned that trust relationships with service providers were complex and challenging to establish (Brookfield & Fitzgerald, 2018).

While the literature consistently highlights PEH expressing mistrust toward shelter services based on past negative experiences (Brookfield & Fitzgerald, 2018; Every & Thompson, 2014; Donley & Wright, 2012; Fogel, 2017), an exception to this perspective was observed in Settembrino's 2016 study, which examined the effects of Hurricane Sandy on the homeless population while they were staying in an emergency shelter. Participants in his study reported a positive experience, feeling that they were able to contribute to the community and "were proud to be able to help others in their time of need" (Settembrino, 2016, p. 9).

¹ The term rough sleepers describe individuals who intentionally chose not to use homeless shelters, living roofless and attempting "to sleep in urban nooks and crannies, in abandoned buildings, in bus shelters, under bridges, or in urban encampments in parks and industrial areas" (Larsen et al., 2004, p.580).

In conclusion, the perceptions of PEH regarding daily and emergency shelter-seeking vary, and scholars consistently suggest the need for further research to delve into their lived experiences in order to gain a deeper understanding of their decision-making processes when seeking local shelter services.

Homelessness and the COVID-19 Pandemic

In the U.S., the official declaration of the COVID-19 pandemic was made in March 2020. Since then, a substantial amount of research has been conducted on homelessness and its intersection with the pandemic, with a primary focus on how this vulnerable community was impacted and provided care (see Table 6). However, it's worth noting that the majority of available research draws from the experiences and narratives of service providers who work with this population (Afkhamiaghda & Elwakil, 2020; Benavides & Nukpezah, 2020; Brocious et al., 2021; Brown & Edwards, 2021; Marcus et al., 2020; Fujita et al., 2020; Shadmi et al., 2020; Thomas et al., 2020; Venter & Heese, 2021; Whytlaw et al., 2021).

The implementation of social distancing restrictions, quarantine measures, and intermittent lockdowns posed significant challenges and, in many cases, rendered the task of conducting interviews with PEH very difficult, if not nearly impossible. For this reason, the following discussion focused on the literature addressing the measures implemented by community-based organizations and to the literature describing the health risks and social disparities of the homeless community during the early stages of COVID-19 (see Table 6).

Table 6. Homelessness and the COVID-19 Pandemic

Author, Year, Country	Methodology	Findings
<i>Measures</i>		
Afkhamiaghda & Elwakil 2020	Quantitative, data U.S. Census Bureau	<ul style="list-style-type: none"> • Need for policies addressing vulnerable needs • Environment integral to resilience • More funding for evacuations • Creative responses to serve PEH
Benavides & Nukpezah 2020 USA	Qualitative, case study, Texas	<ul style="list-style-type: none"> • Effective government/nonprofits • Local government manage most efficient PEH
Fujita et al. 2020 Japan	Qualitative, two-dimension framework	<ul style="list-style-type: none"> • Need rental/mortgage assistance • Stay at home order unattainable • Identified challenges, low use of social welfare
Pixley et al. 2021 USA	Survey ten CBO's	<ul style="list-style-type: none"> • Homelessness daily life extension Identified three needs: <ul style="list-style-type: none"> • Basic services - guests/clients. • New organizational challenges for the CBO's. • Issues related to EM and disasters.
<i>Health Risks and Social Disparities</i>		
Bhattacharya et al. 2021 India	Semi-structured interviews	<ul style="list-style-type: none"> • Lack of awareness, victim structural violence, increased risks • Community and social workers partially mitigating challenges
Brocius et al. 2021 USA	Interviews	<ul style="list-style-type: none"> • Collaboration key among team • Talking early/often potential issue • Bureaucracy can mitigate stigma • Flexible as collectives/institutions
Venter & Heese 2021 South Africa	Narrative reflection	<ul style="list-style-type: none"> • Eliminate stigma, providing quality healthcare • Basic needs met, improve health/well-being • Providing quality care: any-setting
Whytlaw et al. 2021	Qualitative data workshops	<ul style="list-style-type: none"> • Evacuation/shelter concerns, health/disparities • Non-congregate not expected accommodate all • Registries: evaluate and align resources • Expanded definition of vulnerable populations

Measures

During the early stages of the pandemic, hotels played a crucial role in providing isolation measures and quarantine strategies to safeguard PEH from the transmission of the COVID-19 virus. This initiative was observed in cities such as San Francisco, Chicago, and Fort Lauderdale (Fuchs et al., 2021; Kennedy & Rathke, 2021; Preidt, 2021). Consequently, scholarly research on the COVID-19 pandemic rapidly developed, with a primary focus on the measures taken to isolate and quarantine this vulnerable and marginalized homeless population within the context of virus transmission (Afkhamiaghda & Elwakil, 2020; Brown & Edwards, 2021; Fujita et al., 2020).

A study conducted by Akhmiaghda and Elwakil (2020) delved into the implications of congregating vulnerable populations in dense urban areas in emergency shelters during the pandemic. The study also highlighted providers' concerns about shelter volunteer shortages and the challenges posed by a staff primarily composed of older adults (Afkhamiaghda & Elwakil, 2020). The authors contended that deficiencies in planning within the available shelter system ultimately placed vulnerable and marginalized populations at high risk of injury during disasters (Afkhamiaghda & Elwakil, 2020).

Pixley et al. (2021) conducted another study that explored the perspectives of service providers engaged in homeless outreach and sheltering during the early stages of the pandemic. Their research revealed that, in most instances, there was a lack of integration between emergency management officials and organizations providing homelessness services during the pandemic (Pixley et al., 2021, p.12). Furthermore, reports of staff and volunteers experiencing burnout, fatigue, and mental health

challenges within these organizations underscored the pressing need to explore additional methods for delivering care and providing resources to People Experiencing Homelessness (PEH) (Pixley et al., 2021).

Benavides and Nukpezah (2020) undertook a comprehensive examination of how various levels of government served and addressed the needs of the homeless community during the COVID-19 pandemic, with a particular focus on the roles of administrators. They concluded that local governments played a more significant role in serving the homeless community, and the most favorable outcomes were achieved when public administrators, driven by a commitment to public service, practiced shared competence and cooperation (Benavides & Nukpezah, 2020).

In an international context, Fujita et al. (2020) delved into the measures and strategies implemented in Japan to support groups vulnerable to homelessness during the pandemic. Their findings suggested that enforcing stay-at-home orders was not feasible, and they proposed that caring for PEH should be seamlessly integrated into daily life as an ongoing effort (Fujita et al., 2020).

Health Risks and Social Disparities.

The isolation measures and quarantine strategies implemented in certain homeless communities to contain virus transmission were often viewed as impractical (Fujita et al., 2020). The medical community expressed significant concerns about the homeless population's inability to practice social distancing, given their heightened risk of virus transmission due to untreated chronic conditions and mental health disorders (Brown & Edwards, 2021). Consequently, research on homelessness and the COVID-19 pandemic shed light on the exacerbation of health risks and social disparities within this population

(see Table 6). Scholars highlighted that this community faced an elevated risk of contagion due to their living conditions, typically in congregate living spaces lacking access to basic hygiene supplies (Bhat et al., 2020).

Moreover, research on homelessness and the COVID-19 pandemic revealed the social disparities and injustices faced by this community. For example, Bhattacharya et al. (2021) reported critical insights from the experiences of homeless individuals with mental illness during the COVID-19 pandemic, portraying them as victims of structural violence and emphasizing their exclusion and victimization due to their existing marginalized status. Studies also indicated that during the pandemic, PEH were at a higher risk of domestic violence (Corburn et al., 2020; Pixley et al., 2021; Thomas et al., 2020).

Similarly, research on homelessness and the COVID-19 pandemic revealed social disparities and injustices this community faced. For example, Bhattacharya et al. (2021) reported critical insights from the experiences of homeless persons with mental illness during the COVID-19 pandemic as victims of structural violence, highlighting their exclusion and victimization due to their existing marginalized status. Studies also reported that during the pandemic, PEHs were at higher risk for domestic violence (Corburn et al., 2020; Pixley et al., 2021; Thomas et al., 2020).

As mentioned earlier, many individuals in the homeless community struggle with mental disorders and substance abuse. Throughout the pandemic, organizations responsible for providing services to PEH encountered various challenges in supporting individuals coping with these disorders. Brocius et al.'s (2021) study conducted interviews to investigate providers' experiences with a harm reduction managed alcohol

program (MAP) site that served PEH during the pandemic. Their findings indicated that early discussions surrounding the issue facilitated the program's implementation, and bureaucratic policies displayed flexibility when confronted with the challenges posed by COVID-19, where saving lives was observed as the absence of deaths resulting from withdrawals (Brocius et al., 2021).

Another study by Marcus et al. (2020) adopted a narrative approach to showcase the firsthand experiences of healthcare first responders who were members of a community-oriented substance use program (COSUP) addressing substance use emergencies among PEH exacerbated by the lockdowns. The authors provided several recommendations, including the importance of direct communication with PEH, the need for inclusive and collaborative substance use interventions, the value of using methadone, and the importance of incorporating opioid substitution therapy (OST) (Marcus et al., 2020). Overall, the provision of these services during the COVID-19 pandemic not only alleviated the heavy burden on hospitals but also likely saved many lives within the PEH community during a time of great uncertainty.

Theoretical Framework

The growing body of literature dealing with evacuation decision-making during hazards serves as the background for this study. In the field of disaster research, the protective action decision model (PADM) builds on scholars' long history of work on disasters and evacuation behavior (Lindell & Perry, 2004). The PADM has been utilized in three primary domains: "risk communication programs, evacuation modeling, and long-term hazard adjustment" (Lindell & Perry, 2012, p. 626). Numerous studies have applied the model or its constituent variables to gain insights into household evacuation

decision-making primarily through a quantitative approach (see Table 7). Furthermore, the PADM has found application in examining evacuation decision-making across a wide range of hazards, including wildfires (McCaffrey et al., 2018; Strahan et al., 2019),

Table 7. Studies with an Application of the PADM

Author, Year, Country	Hazard and Setting	Methodology	Findings
Huang et al. 2012 USA	Hurricane - Household	Quantitative, Survey	Evacuation decisions: <ul style="list-style-type: none"> • Strongly related to expected personal impacts • Evacuation impediments direct effect • Official warnings direct/indirect effect • Unnecessary evacuation experience positively related to perceived evacuation impediments
Huang et al. 2017 USA	Hurricane – Household	Quantitative, Survey	<ul style="list-style-type: none"> • Environmental cues, risk area, and hurricane experience affect perception of threat • Misconception of wind damage, more dangerous than flood/surges • Evacuations directly affected by official warnings/risk area
McCaffrey et al. 2017 USA	Wildfire - Household	Quantitative, Survey	Key response factors: <ul style="list-style-type: none"> • Different beliefs efficacy response • Differences in risk attitudes • Emphasis on different cues to act
Lechner & Rouleau 2019 USA	Volcano - Household	Quantitative, Survey	<ul style="list-style-type: none"> • Evacuation during eruption influenced by exposure/perception hazards and readiness perception • Prior eruption, perceptions of home vulnerability and warnings, strong influence on future intention to evacuate • Perceived property risk - less impact on evacuation intention • Perception effectiveness - protect personal safety/property
Strahan & Watson 2019 Australia	Bushfires/Wildfire - Household	Quantitative, Survey	<ul style="list-style-type: none"> • Protective action perceptions influenced by preparedness
Strahan et al. 2019 Australia	Bushfire - Household	Quantitative, Survey	<ul style="list-style-type: none"> • Evacuation perception effective in protecting personal safety • Receipt of official warnings • Perceived threat to property

Chen et al. 2021 USA	Tsunami - Household	Quantitative, Survey	<ul style="list-style-type: none"> • Risk perception, perceived hazard knowledge, and evacuation mode efficacy associated with some demographic/experience • Evacuation intention/mode (EIM) choice not demographic associated • Location/experience no impact on EIM
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hurricanes (Huang et al., 2012; 2017, Lazo et al., 2015), earthquakes (Lindell et al., 2015; 2016; Lindell & Prater, 2000; Lindell & Whitney, 2000; MacPherson-Krutsky et al., 2023), tsunamis (Chen et al., 2021; Lindell et al., 2015; 2021), and volcanoes (Lechner & Rouleau, 2019).

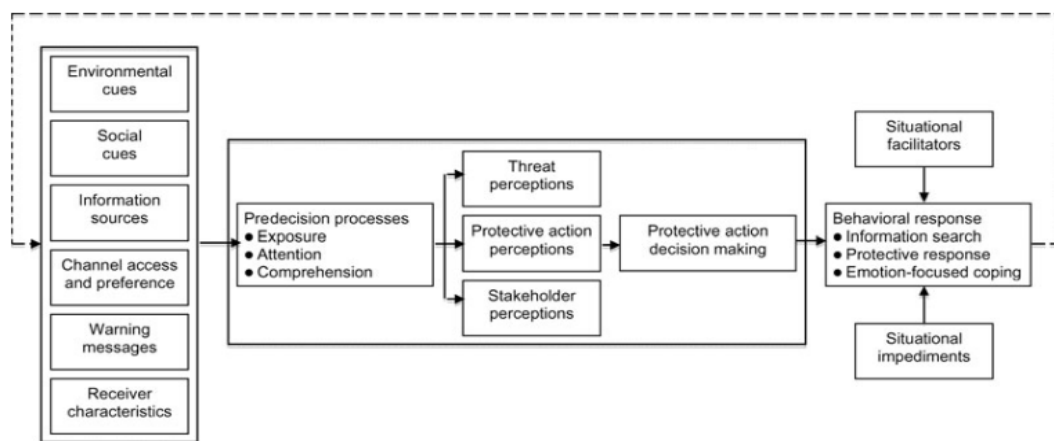
The Protective Action Decision Model (PADM), originally introduced by Lindell and Perry in 1992 and subsequently updated in 2004 and 2012, has evolved to incorporate various elements explaining responses to threatening events and hazardous situations. Kusenbach (2017) highlighted the complexity of the PADM in evacuation research due to its comprehensive approach, which involves analyzing the sequential steps in evacuation decision-making. Importantly, this holistic approach to understanding decision-making processes doesn't mandate a specific order or require the inclusion of all elements for initiating protective actions (Lindell & Perry, 2012). In this study, I applied the PADM to examine the evacuation decisions of PEH, considering elements related to their physical context (shelter use, mobility) and social context (relationships with other PEH, employment).

The Protective Action Decision Model (PADM)

Lindell and Perry's (2012) PADM model outlines three stages that reflect common decision-making patterns people use to protect themselves from environmental

hazards: 1) Environmental and Social Context, 2) Psychological Processes, and 3) Behavioral Responses (see Figure 3). In the first stage, various sources of information can initiate protective actions. This stage encompasses environmental cues, social cues, information sources, channel access and preference, warning messages, and receiver characteristics (Lindell & Perry, 2012). Next, the second stage begins with psychological

Figure 3. The Protective Action Decision Model



Note. Lindell & Perry (2012), p. 617

pre-decision processes, which include exposure, attention, and comprehension—fundamental aspects of initiating protective actions (Lindell & Perry, 2004). Finally, the third stage involves behavioral responses, which include information search, protective actions, and emotion-based coping. These responses are influenced by situational facilitators and impediments that affect the initiation of protective actions.

First Stage: Environmental and Social Context

The PADM starts at this stage with environmental and social cues, as well as warnings. These cues are influenced by how information is transmitted, the channels used

for transmission, and the characteristics of the receivers (Lindell & Perry, 1992; 2004; 2012). The model suggests that initial information about a disaster can originate from environmental cues, social cues, or warnings, and this information can vary significantly across different hazards (Lindell, 2018). Protective action decisions can be initiated when perceptions of threat "divert a recipient's attention from normal activities" (Lindell, 2013, p. 807).

Environmental cues encompass physical characteristics recognized in the environment before the occurrence of a hazard, such as "sights, smells, or sounds that signal the onset of a threat" (Lindell & Perry, 2012, p.617). These characteristics serve as powerful stimuli for taking protective actions since, in some cases, they may be the sole signals of an impending hazard (Huang et al., 2012). Examples of environmental cues include the "sight of funnel clouds or the roaring of the wind" preceding tornadoes or "seeing the ash plume and hearing the eruption" before a volcano erupts (Lindell & Perry, 2004, p.69).

Social cues consist of observed behaviors from others that can prompt protective actions in response to a hazard (Lindell & Perry, 2004). Several studies have reported that social cues influence evacuation decisions before a hazard strikes, such as observing others evacuate (Huang et al., 2012; Lindell, 2005; Lechner & Rouleau, 2019) or noting store closings (Lindell, 2005; Lindell & Prater, 2008). While social cues might appear to influence the initiation of protective action during an emergency, Tierney et al. (2001) cautioned that social cues stemming from observing others "can either reinforce or undermine the recommendations made by authorities" (p. 106).

Information Sources refer to individuals, organizations, or networks that transmit messages about a hazard, including authorities, media outlets, or peers (Lindell & Perry, 2012). The credibility of these sources is assessed based on trustworthiness and expertise, with authorities often being perceived as credible due to their expertise (Lindell & Perry, 2004). Moreover, authorities tend to be the primary source of information warning people about hazards; nevertheless, news media and peers are also sources of information that people rely on (Huang et al., 2012)

Channel access and preference characterize the various ways people receive information about hazards. Common transmission methods for warning messages include "face-to-face contact, telephone, siren, mobile loudspeaker (route alerting), radio (normal and tone alert), television (broadcast and cable), and newspaper" (Lindell & Perry, 2004, p.75). These transmission channels differ in terms of their "dissemination rate and precision, penetration of normal activities, message specificity/distortion, sender and receiver requirements for specialized equipment, and feedback/receipt verification (Lindell & Perry, 2012, p. 618). Lindell (2018) explained that all warning channels have limitations and advantages, and the influence of specific warning channels, such as the Internet and social media, has grown more significant over the years.

Warning messages encompass the information transmitted, which is based on the "sources' assessments of the existence of a threat, its seriousness, and what should be done in response to it" (Lindell & Perry, 2004, p. 80). Sorensen (2000) emphasized the importance of integrating warning messages that were specific, clear, accurate, and consistent with the nature of the hazard. Lindell (2013) explained that by providing specific information about the hazard agent, such as the "type, specific threats, and

potential impacts," messages are more effective in forming an immediate personal risk (p.807). Besides transmitting clear and specific messages, Lindell and Perry (2012) stressed the importance of avoiding esoteric or overly technical terminology that could be difficult to understand and lacked relevance to the associated risk or threat. Consequently, the choice of language and words in a message played a crucial role in ensuring its correct interpretation by the receiver (Lindell, 2018).

Receiver Characteristics include the psychological, physical, and psychomotor abilities and disabilities, as well as the economic and social resources of individuals (Lindell, 2018; Lindell & Perry, 2012). As a result, the dissemination of warning messages becomes a social process influenced by the characteristics of both individuals and communities, as well as their relevant activities (Savitt, 2015). The impact of a transmitted message varies based on these receiver attributes. For instance, the psychological attributes of the receiver can significantly affect the initiation of protective actions due to factors such as credibility, comprehension, attention, or mistrust regarding the received information (Lindell & Perry, 2004). While demographic characteristics are among the most frequently studied receiver attributes, Lindell (2018) cautioned that their effects are often weak and inconsistent, primarily because "few demographic variables directly measure people's resources" (p.463).

Second Stage: Psychological Processes

Predecision Processes constitute the initial step in the psychological processes of the PADM. These processes consist of three pre-decision components: exposure, attention, and comprehension. They occur outside conscious processing and play a crucial role in initiating a protective action (Lindell and Perry, 2012). To trigger a

protective action, all three predecision processes are necessary. Without them, the initiation of an appropriate protective response would be impossible since individuals must be “exposed to, heed, and accurately interpret” the cues or messages (Lindell & Perry, 2004, p. 49). Therefore, if a person is not exposed to the information (whether it's an environmental cue, social cue, or warning message), cannot pay heed to the available information, or fails to comprehend its meaning, they will not initiate an appropriate protective action response.

Core Perceptions encompass the psychological processes that can trigger an individual's *perception of a threat, protective actions*, and their perception of social *stakeholders* (Lindell & Perry, 2012). These elicited responses can be automatic or reflective judgments and depend on the receivers' preexisting beliefs, often referred to as schemas (Lindell, 2018; Lindell & Perry, 2004; 2012). *Perceptions of threat* involve an individual's awareness in recognizing a hazard and understanding its potential consequences, such as death, harm, or destruction. Huang et al. (2012) explained how near misses can influence these perceptions, leading to negative consequences regarding evacuation decisions. These perceptions are also influenced by prior beliefs about hazard agents, where an individual's beliefs regarding the impact of hurricanes, for example, are tied to their belief in whether a storm surge can reach inland (Lindell & Perry, 2012).

Protective actions encompass an individual's perceptions of hazards in addition to their natural hazard adjustment (Lindell & Perry, 2012). The basic premise of hazard adjustment focuses on modifying human behavior, considering hazard-related attributes (protecting people and property) and resource-related attributes (cost, knowledge and skill requirements, time requirements, effort requirements, and required cooperation with

others) (Lindell & Perry, 2004; 2012). Lechner and Rouleau (2019) emphasized the importance of understanding these concepts by recognizing that individuals respond to risk differently due to their varying perceptions of the same risk. McCaffrey et al. (2018) and Riad et al. (1990) found that various factors influenced individuals' decisions to evacuate during wildfires and hurricanes, concluding that the likelihood of a response or action was based on the individual's belief in their ability to take protective action and that the action would minimize the risks posed by the hazard.

Stakeholder perceptions are defined by the interrelationships among various stakeholders, including authorities, evaluators, watchdogs, and industry, which collectively influence hazard adjustment actions (Lindell & Perry, 2012, p. 620). These stakeholders exert influence on the receivers based on their perceived “expertise, trustworthiness, and protection responsibility” (Lindell, 2018, p.467).

Protective Action Decision Making is the final step of the psychological processes, involving a series of decision stages. At each stage, an evaluation is made to determine whether a protective action should be adopted (see Table 8) (Lindell & Perry, 2012, p. 621). Within this five-stage protective action decision process, a negative response to the identification of risk related to a hazard or disaster can lead to the discontinuation of a protective action, and the receiver will then return to their normal activities (Lindell & Perry, 2004).

Table 8. *Protective Action Making Decision Stages*

Decision Stages	Question
Risk Identification	Is there a real threat that I need to pay attention to?
Risk Assessment	Do I need to take protective action?

Protective Action Search	What can be done to achieve protection?
Protective Action Assessment	What is the best method of protection?
Protective Action Implementation	Does protective action need to be taken now?

Source: Lindell and Perry (2012), pp.621-623.

Third Stage: Behavioral Response, Situational Facilitators, and Impediments

Behavioral Response is the third stage of the PADM, during which receivers' responses can be characterized as ***information search, a protective response, or emotion-based coping*** (Lindell & Perry, 2012). According to Lindell and Perry (2004), each behavioral response is dependent on the receiver's evaluation of the threat and the available protective actions. ***Information Search*** is based on the process where the receivers seek additional information about the hazard or disaster. involves the process of receivers seeking additional information about the hazard or disaster when the available information is insufficient for them to feel confident in implementing a protective action (Lindell, 2018). A decreased level of confidence to act on a protective action will be reflected in the receiver's disposition to commit time, energy, and money to a protective response (Lindell & Perry, 2004). A reduced level of confidence in taking a protective action often translates into the receiver's willingness to invest time, energy, and resources into a protective response (Lindell & Perry, 2004). Moreover, a lack of information about a hazard or disaster can lead to repetitive cycles of information searches, further increasing ambiguity in the decision to adopt a protective action (Lindell & Perry, 2012).

A ***Protective Response*** is characterized as the adoption of protective action in response to a hazard or disaster. In the context of this study, a protective response would entail PEH evacuating and/or seeking shelter in a safe area during a disaster or extreme weather event. Lindell and Perry (2004) described these protective responses of

evacuating or sheltering in place as behavioral changes in response “to an imminent threat” (p.3).

Emotion-focused coping refers to the various emotion-based responses that individuals may adopt when processing hazard information. Lindell and Perry (2004) described this emotion-focused coping strategy as dependent on susceptibility to distraction, where avoidance, denial, and panic can result from negative responses to accepting or adopting a protective action (p. 64).

Situational facilitators are factors that have helped individuals make the decision to evacuate as a protective action. *Situational impediments* consist of factors that have hindered the possibility of deciding to evacuate, such as lacking access to a personal vehicle or facing personal mobility challenges due to physical disabilities (Lindell & Perry, 2012, p. 624). Lechner and Rouleau (2019) identified the most important facilitators and impediments in their study as health, physical ability, and having a safe place to go. Savitt's study (2015) examined variables that may have facilitated or inhibited evacuation during the Casselton train derailment, finding that the majority of participants had a facilitator (access to a vehicle, 96%), while few had an inhibitor (a household member with a physical, vision, hearing, or cognitive impairment) (p. 41). However, Lindell and Perry (2012) argued that situational facilitators are less common than situational impediments, suggesting a lower probability of individuals taking protective action. Moreover, Lindell (2018) suggested that situational impediments have a more significant effect on people's adoption of protective actions than unexpected facilitators.

Research Gaps

Scholarly research on disaster preparedness and response among PEH often lacks insights into their lived experiences and decision-making processes related to evacuation and seeking shelter during disasters (Barret et al., 2011; Brookfield & Fitzgerald, 2018; Fogel, 2017; Settembrino, 2017). Being a marginalized and vulnerable population, PEH cannot be easily categorized alongside the rest of society when it comes to seeking shelter during disasters (Fogel, 2017; Every et al., 2019). Therefore, understanding the evacuation decisions of unsheltered PEH requires a more focused framework that addresses their specific needs.

While Lindell and Perry's (2012) Protective Action Decision Model (PADM) offers valuable insights into general hazard decision-making, it is not specifically tailored to study particular populations or hazard scenarios. Most studies that have employed the PADM have leaned towards quantitative approaches, predominantly focusing on household evacuation decisions (Chen et al., 2021; Huang et al., 2012; 2017; McCaffrey et al., 2018; Strahan et al., 2019). However, a substantial research gap exists in our understanding of how PEH who lack households and live unsheltered make evacuation decisions.

The emergence of the COVID-19 pandemic has exacerbated the vulnerability of PEH (Corburn et al., 2020; Venter & Heese, 2022; Whytlaw et al., 2021). Despite this, the existing literature lacks direct insights into how the pandemic has influenced the evacuation decisions of PEH. To address this gap, this study aims to assess the applicability of the PADM (Protective Action Decision Model) through a qualitative approach. This study aims to gain insight into the evacuation decisions of PEH by

exploring their lived experiences during disaster events. Additionally, it seeks to determine the extent to which the COVID-19 pandemic influenced these decisions.

Chapter III: Research Approach and Design

In this dissertation, I chose to use a qualitative approach to address the research questions. I made this choice because a qualitative approach allows for an in-depth and detailed exploration of an issue experienced by a population that cannot be easily quantified, such as the silenced voices in the homeless community (Creswell & Poth, 2016). As mentioned earlier, the direct experiences of people experiencing homelessness in disaster research have been under-examined. In contrast to a quantitative approach, a qualitative approach is better suited to understanding the unique issues and perspectives of people experiencing homelessness (Cusack et al., 2013). Fink (2014) characterized qualitative researchers as individuals who make sense of human behavior and social problems based on direct experiences and meanings provided by participants, resulting in a "detailed, complex, and holistic picture or narrative" (p. 131). In this study, I conducted a direct examination of the lived experiences of PEH, encompassing both simple and complex issues that impact their lives. Utilizing a qualitative research approach was the most appropriate method for capturing these experiences as it allowed participants to freely express their thoughts.

A qualitative approach enabled me to explore the opinions and perceptions of PEH regarding the factors influencing their decisions on evacuations during disasters or extreme weather events. This approach also facilitated an exploration of how they perceived and made sense of disaster-related events as they applied to their daily lives. It shed light on how seemingly mundane activities, such as using a bathroom or finding a

warm place to sleep, held different meanings and values for unsheltered PEH. Berg (2001) characterized qualitative research in terms of its ability to capture and recount experiences that "cannot be meaningfully expressed through numbers" (p. 3).

Furthermore, the daily stressors faced by PEH were largely rooted in their struggle for daily survival, a complex issue best examined through the broad scope of a qualitative approach. For these reasons, using a qualitative research approach was appropriate as it provided deeper insight into the factors influencing PEH in making evacuation decisions during disasters or extreme weather events.

Study Design

Participants

A total of 41 participants were interviewed in this study. The inclusion criteria were adults aged 18 years and older experiencing homelessness in Broward County, living unsheltered for most of the year. As justified geographically, Broward County has seen an increase in its unsheltered PEH population in recent years. However, both sheltered and unsheltered PEH access similar community resources. Therefore, strict exclusion criteria were enforced, disqualifying minors and PEH who permanently stayed in shelter facilities or other roofed housing structures from the study.

This study received approval from the institutional review board (IRB) for human subjects' research through the Florida Atlantic University (FAU) Division of Research (See Appendix A). All necessary forms and documentation for the study were submitted electronically, including an agreement with the Church of Christ in Fort Lauderdale, Broward County (See Appendix A).

Recruitment of Participants

Due to the impracticality of contacting unsheltered individuals experiencing homelessness through telephone, mail, or email, data collection and participant recruitment were conducted in person at the United Church of Christ in Fort Lauderdale. I individually approached each participant and verbally presented them with information about the study, the interview structure, and a flyer containing brief study details (See Appendices B & C). Some participants agreed to be interviewed immediately, while others approached me later during the time I was present at the church premises. Once the participants expressed their willingness to participate in the interview, I read the consent form to them, and they provided verbal consent if they chose to proceed with the interview or not (See Appendix D). Subsequently, I sought their permission to audio record the interviews, to which all participants agreed. As part of the recruitment process, I offered each participant a \$15 gift certificate for Dunkin' Donuts upon completion of each interview. The suitability of this incentive was discussed with the homeless liaison and the IRB department, both of which approved it.

Research Setting

The setting for this study was the United Church of Christ in Fort Lauderdale. My introduction to the homeless liaison at the church came through a social worker at a hospital where I have worked for several years. The homeless liaison played a crucial role as a point of contact and facilitator in the discussions that eventually led to the church granting permission for the study. As Berg (2001) notes, gaining access often relies on having a point of contact or gatekeeper who views the “research favorably” and is willing to support the researcher throughout the interview process (p.145). Accessing

organizations providing services to the homeless community can be challenging, as scholars have pointed out (Fogel, 2017; Vickery, 2017). In this case, the homeless liaison was instrumental in securing access to both the church and the study participants. After submitting an agreement between the church and the university to the IRB, I received approval to proceed with the interviews.

Before connecting with the homeless liaison, I made efforts for over a month to contact various organizations that provide services to PEH in Broward County. Unfortunately, I was consistently denied access, with these organizations citing their commitment to maintaining a safe and private environment for those seeking their services. Initially, this posed a significant setback, and I realized that I needed a contact with established connections to these organizations to move forward. The introduction of the homeless liaison marked a turning point for the study. He was a trusted volunteer at the hospital, symbolizing trust within the community, and was available 24/7 to assist PEHs seeking shelter, leaving the hospital, or simply in need of a meal.

Interview Process

Upon receiving approval from the University Institutional Review Board (IRB), the interviews were conducted in person, individually, over a period of seven weeks. These interviews took place on Thursdays from 10 am to 1:30 pm in the outdoor areas of the church. During this time frame, the church hosted the Ruth Ministry services in the cafeteria, offering a range of services and resources free of charge to PEH. The services were run by volunteers from both the church and the county.

The services provided during the Ruth Ministry sessions were comprehensive. PEH had the opportunity to enjoy warm meals in a communal dining setting, and

prepackaged meals were also available for those on the go. Inside the cafeteria, PEH had access to a variety of like-new clothing, shoes, and even medical equipment such as wheelchairs, crutches, and slings. These items were generously donated by the community to support the needs of the homeless population.

In addition to the indoor services, there was a mobile shower unit located in the parking lot area adjacent to the church. These mobile units were repurposed old Broward Transit buses, transformed into shower and toilet units, and fully stocked with personal hygiene supplies. Furthermore, near the mobile showers, a dedicated volunteer offered grooming services to anyone who wished to have a haircut.

Interviews

Qualitative interviewing is often considered the primary research instrument chosen by researchers in the human and social sciences to generate knowledge (Brinkmann, 2018). It is widely “regarded as the gold standard” in qualitative research (Mason, 2017, p.136). This study employed a qualitative research design that involved conducting in-depth, one-on-one, semi-structured interviews with individuals experiencing homelessness. These interviews allowed participants to express their opinions and share their experiences related to evacuation decisions during disaster events. Conducting qualitative interviews with PEH in a street setting presents unique challenges for the researcher, including concerns about safety, data quality, and effective communication. Consequently, meticulous and comprehensive preparation was crucial, requiring extensive planning on the part of the researcher (Mason, 2017).

For this study, I developed an interview protocol that included open-ended questions, follow-up inquiries, and information about the interview's time and location

(Creswell & Creswell, 2018). The questions were carefully crafted to maintain a friendly and nonjudgmental tone, ensuring that participants felt safe and unthreatened throughout the interview process. Soss (2015) emphasized the importance of recognizing participants' humanity and agency, particularly in discussions that could evoke emotional responses. Consequently, every effort was made to create a stress-free environment that encouraged organic interactions between the interviewer and interviewee. Each interaction and response guided the interview, fostering a comfortable atmosphere and establishing a positive rapport between the parties involved. As Yanow and Schwartz-Shea (2006) explained, "Interviewing, as used in interpretive methods, differs from administering a survey or following a predefined list of questions that must be covered in their entirety to avoid labeling the interview as a failure" (p.116). This approach allowed participants to answer questions with greater candor and minimized the pressure associated with responding to multiple inquiries. Additionally, this qualitative interviewing approach enabled me to generate relevant data for the study while actively listening to participants' responses.

Semi-Structured-Interviews

Before selecting the interview format for this study, I conducted an extensive search to find the most appropriate format that would facilitate meaningful dialogue with participants while allowing flexibility to redirect the conversation toward the research questions. In my search, I came across debates among scholars concerning the practicality of extreme interview formats. Parker (2005) maintained that interviews cannot be fully structured, while Mason (2017) argued that no interview could be entirely lacking in structure, referring to unstructured interviews. To gain clarity on this matter, I

turned to Brinkmann's (2018) nuanced distinction between semi-structured formats and more structured or unstructured formats:

Compared to more structured interviews, semistructured interviews can make better use of the knowledge-producing potentials of dialogues by allowing much more leeway for following up on whatever angles are deemed important by the interviewee, and the interviewer has a greater chance of becoming visible as a knowledge-producing participant in the process itself, rather than hiding behind a preset interview guide. And compared to more unstructured interviews, the interviewer has a greater say in focusing the conversation on issues that he or she deems important in relation to the research project (p.1002).

I relied on this logic when choosing the interview format, ultimately deciding that a semi-structured format was the most suitable. It allowed me to capture participants' perspectives and narratives within the framework of my theoretical approach. I also crafted interview questions with the expectation that participants might provide brief responses. Therefore, the flexible format allowed me to explore more deeply into their answers and inquire about any additional issues related to disaster research and homelessness. When formulating the questions, I took care to use simple, everyday language rather than technical or academic jargon. The semi-structured format encouraged participants to open up more freely about potentially uncomfortable topics, such as their reluctance to seek shelter. Brinkmann (2018) argued that establishing a "conversational structure that is flexible" allows participants to articulate their experiences "in their own words and from their own perspectives" (p.1001). Consequently, a semi-structured format facilitated a conversational-style interview rather than a rigid structure, which might have made participants more guarded and less willing to share.

Furthermore, this interview format allowed me to actively listen to participants' responses during the interviews, rather than adhering strictly to the predetermined list of questions in the protocol (Rubin & Rubin, 2012). Despite my efforts to provide a private and comfortable environment for participants to express themselves fully and freely, there were constant external stressors and distractions due to the proximity of other homeless individuals during the interviews. Nevertheless, the semi-structured format of the study was essential in regaining participants' focus and maintaining the flow of the interview, regardless of the numerous external stressors in the outdoor setting.

Development of Interview Questions

The interview questions were thoughtfully constructed, considering the participants' environment and their potential to connect with the study's subject. While the literacy levels of each participant were uncertain, the vocabulary in each question was chosen to be straightforward and familiar, ensuring inclusivity for all participants (Dillman et al., 2014). This same approach was applied when translating the interview guide into Spanish for participants who primarily spoke Spanish.

Subject Matter Experts (SME) Perspectives

Following the development of the interview questions for this study, I sought the input of a panel of six Subject Matter Experts (SMEs) comprising a multidisciplinary team active within the local community. The primary objective was to ensure the appropriateness of these interview questions for the study's target population. My initial contact was with a highly experienced social worker who has dedicated more than 30 years to providing care for People Experiencing Homelessness (PEH) within a hospital

setting, striving to improve their quality of life. Subsequently, I initiated a snowball sampling process to reach out to the remaining SMEs.

Each of the SMEs I engaged with was a seasoned professional who had devoted the majority of their careers to working closely with Broward County's homeless community. They represented various sectors, including social services, county government planning, law enforcement, fire rescue, emergency services, and homeless outreach in Broward County. Specifically, the panel included a senior social worker, a retired emergency evacuation planner, a police officer, a fire rescue chief, a senior registered nurse, and a homeless liaison. Consulting with this interdisciplinary team, which routinely interacts with and provides assistance to PEH in the community, proved highly beneficial in fine-tuning the interview questions. Their diverse perspectives and extensive knowledge, all directed toward a shared goal of enhancing our comprehension of the behavior of PEH during disasters, significantly contributed to the refinement of these questions.

The feedback I received from each SME had a significant impact on the style² and content of the interview questions. Conversations with these experts revealed that my initial interview questions were overly academic and laden with technical terminology. It became clear that the language I intended to use closely resembled that of a research essay rather than questions designed for individuals. This insight prompted a necessary shift in both the wording and approach of the interview questions to ensure that People

² Although I was initially hesitant to reach out to SMEs to inform them about the questions for the study (as recommended by my dissertation committee), I quickly changed my mind, and I am so grateful that I incorporated this part into the study. Not only were my interviews more thoughtful, caring, and effective, but the SMEs showed so much support and enthusiasm toward the topic of this dissertation.

Experiencing Homelessness (PEH) would readily comprehend and engage with the content.

The SMEs' feedback also guided me in establishing a more respectful and approachable tone for each question. Phrasing such as "Would you please elaborate on..." or "How do you feel about..." replaced the previously more formal and distant style. Furthermore, some of the feedback highlighted questions that were perceived as not addressing the core issues adequately or suggested alternative ways to frame them. The combined expertise and contributions of these six SMEs proved invaluable in shaping the interview questions to better suit the research's objectives and the needs of the PEH participants.

Interview Questions. The interview consisted of demographic, terminology, and framework-guided questions related to the research questions (see Table 9 and Table 10). The purpose of including terminology questions was to assess the participant's

Table 9. Demographics and Terminology Questions

Component	Questions
Demographics	<ul style="list-style-type: none"> • How old are you? • How many years have you lived without a home? • Are you currently employed? • Which best describes where you currently stay at? • How do you think your health right now, rate it? • What is your main mode of transportation? • How many hours a day do you sleep? • What is your current marital status?
Terminology	<p>What does the following term mean to you:</p> <ul style="list-style-type: none"> • Disaster • Hurricane • Flood • Storm • Extreme Weather

understanding of concepts related to disasters and extreme weather events. In most cases, responses to demographic and terminology questions were brief, consisting of single-word or short answers like "destruction," "bad," "water," or "run."

In contrast to these concise responses, questions based on the PADM framework yielded more elaborate answers, with participants sharing their experiences, stories, concerns, and everyday fears in greater detail. During this section, I actively engaged in active listening, recognizing the importance of follow-up questions to capture their realities. There were instances where I had to make strategic decisions on how to proceed with the interview, especially when participants were less forthcoming or displayed defensiveness towards certain questions. As Mason (2017) noted:

“on-the-spot decisions about the substance and style, scope and sequence of questions outlined above, for while the decisions have to be made and acted upon quickly, they should nevertheless be strategic and considered rather than *ad hoc* and idiosyncratic” (p.118).

The following were the interview questions:

Table 10. Interview Questions – PADM framework and the COVID-19 Pandemic

PADM Stage	Questions
First Stage	<ul style="list-style-type: none"> • How do you initially know a storm or a disaster like a hurricane is coming? • How do you get news or information about the weather or disasters? • How do you manage your belongings or pets during an evacuation to a shelter?
	<ul style="list-style-type: none"> • What is your understanding about having to evacuate or seek shelter? • Have you ever ignored warning messages given to you about bad weather or a hurricane? • How do you feel about the words and language used to communicate that you must seek shelter?
	<ul style="list-style-type: none"> • Would you please tell me a little bit about how the weather affects your daily life?
Second Stage	<ul style="list-style-type: none"> • When do you consider it would be necessary for you to evacuate and seek shelter? • Do you feel you need to protect yourself from the weather or a disaster like a hurricane? • Which information do you trust related to extreme weather events like storms or hurricanes? • How would you protect yourself from the weather or a possible disaster event like a hurricane? • When asked to evacuate or seek shelter, who do you trust, and why?

	<ul style="list-style-type: none"> • Is there a difference between seeking shelter and evacuating during a disaster compared to going to a shelter in your daily life? Please explain. • Where would you go to seek shelter if it was necessary? • Where do you go when there are severe storms? What do you do with your property?
Third Stage	<ul style="list-style-type: none"> • Have you ever experienced a disaster? • Have you gone to a shelter for a hurricane or bad weather in the past? <ul style="list-style-type: none"> • How was your experience, how long were you there for? • What transportation did you use, • How was your sleep, did you receive food? • How was your treatment and how do you feel others were treated? • Where was the last place you evacuated? • What makes it easier for you to seek shelter or evacuate during a disaster? • What are some reasons you would not seek shelter and evacuate during a hurricane or extreme weather event, like a storm or cold front?
COVID-19	<ul style="list-style-type: none"> • Has the pandemic affected you? If yes, please provide an example. • Did the pandemic affect your decision to seek shelter or evacuate during a storm or disaster? • How did you obtain information about the pandemic?

Data Management and Analysis

From the beginning of the data collection process, I meticulously organized and stored the data in password-protected electronic files on my online Dropbox account. Although participants provided me with nicknames and first names, I stored the uploaded files separately, identifying them by the participant's assigned number to maintain anonymity. Each voice recording was individually uploaded to Dropbox upon completion of each interview and was labeled with a unique identification number. Once all the interviews were concluded, I initiated the transcription process for each interview. Similar to the voice recordings, these files were uploaded individually to Dropbox and identified by the corresponding recording number.

While I initially attempted to transcribe all the interviews myself, I encountered challenges due to the volume of recordings and the background noise, accents, and use of slang by the participants. To address these challenges, I sought assistance from online transcription services. I first used Trint, an online transcription service, but found that its

accuracy in transcribing the interviews was only around 50%. This lower accuracy could be attributed to the background noises in the recordings and the participants' accents and use of slang.

Subsequently, I personally transcribed 20 full interviews. This process was exceptionally time-consuming. As I progressed with transcription, I decided to enlist the services of GoTranscript, another online transcription service that utilizes human transcribers. I selected the most challenging-to-understand interviews, including one conducted entirely in Spanish, to transcribe myself. The remaining 21 transcriptions were sent to GoTranscript. My rationale for this decision was to ensure that every word spoken by each participant during the interviews was captured accurately. Rubin and Rubin (2012) noted that repetitions of nouns or noun phrases could signify important ideas, even if those ideas were not explicitly labeled or stated. Many of the interviews featured numerous repetitions, pauses, and broken sentences that might have been omitted or inaccurately transcribed by an automated service. Therefore, I conducted a thorough verification of the accuracy of all transcriptions in the end.

Development of Codes, Categories, and Themes

The process of data analysis began as soon as I started transcribing the interviews. I uploaded the transcriptions to the qualitative software program NVivo, which served as my primary tool for analysis. This software facilitated the coding of data, the examination of relationships between codes, and the creation of visual representations, such as word clouds. As I delved into the coding process, I reviewed the data repeatedly, identifying focused codes that emerged. Given that I had applied the PADM framework to guide the interviews, I approached the data with thematic analysis in mind. Thematic analysis is

recommended for research designs that encompass “primary questions, goals, conceptual framework, and literature review” (Saldaña, 2021, p.260).

With a substantial amount of data at hand, I needed to devise a meaningful organization that would allow me to address the research questions while preserving the content's essence. I revisited several research methods books and online resources, realizing that I needed to shift from creating more focused codes to seeing them from a different perspective— "organizing them into categories or themes that cut across all of the data sources" (Creswell, 2013, p. 38). This process, described by other scholars as bringing "order, structure, and meaning" to collected data (Rossman & Rallis, 2016, p.278), was essential.

I continued the process by further refining my codes, with a specific focus on categorizing them into more specific themes, as recommended by Saldaña (2021). This strategy proved suitable for the thematic analysis of the interview transcripts. Through this approach, I could discern patterns that allowed me to identify relationships between the themes, as emphasized by Corbin and Strauss (2008). However, I still had a substantial volume of data to manage, and my aim was to retain all the important meanings conveyed in the participants' responses.

Analyzing data in interpretive studies can be intricate and multifaceted, given the diverse strategies employed to access and generate data (Yanow & Schwartz-Shea, 2015). As Mason (2017) pointed out, making sense of qualitative data can be intense and demanding due to the various approaches used in data generation. As the process continued, nine themes emerged, representing the factors I identified as influencing the evacuation decisions of PEH.

Researcher Positionality

Positionality played a crucial role in this study, not only because the homeless community is marginalized but also due to the differences in lifestyle between the researcher and the participants. It was essential to engage in self-examination throughout the entire study to address potential bias.

Positionality:

- As a Ph.D. student
- As a practitioner

Reflecting on my background, I grew up in a stable financial home and lived most of my life in stable and comfortable financial circumstances with a certain social status in society. Acknowledging these differences in access to resources between myself and the study population was critical. Marginalized individuals often did not have the same resources and opportunities as I did. However, being a graduate student in social sciences and a healthcare practitioner provided me with a deeper understanding of the study population.

My experience as a healthcare provider allowed me to directly engage with homeless individuals in the past, addressing their health, social, and psychological challenges. In this role, I could listen, discuss, and offer assistance with health-related issues. Beyond the confines of the hospital setting, it would have been challenging to gain insights into their lifestyle. Nonetheless, my prior interactions enabled me to be more aware and sensitive to their needs.

Ethical Considerations

I was aware that the study population constituted a marginalized community characterized as vulnerable, potentially facing an elevated "risk of harm or wrong" (Bracken-Roche et al., 2017, p. 1). As the researcher, I recognized the heightened ethical challenges associated with studying an economically and socially disenfranchised group that had been mistreated or exploited in previous studies or by organizations in the past. To address these concerns, I meticulously crafted an Institutional Review Board (IRB) protocol that outlined every step of the study.

I took extensive measures to ensure that each participant had a thorough understanding of the study's purpose, their voluntary participation, and the potential consequences of their involvement. Furthermore, I diligently explored diverse methods to guarantee confidentiality and provide comfort, particularly considering that many participants lacked proper identification or the ability to sign a consent form. As a result, I introduced a verbal consent process and refrained from mandating participants to provide identification for participation in the study.

Concluding Remarks

In conclusion, this chapter has provided an overview of the methodological approach employed in this dissertation and highlighted the appropriateness of the research design for this study. The utilization of a qualitative research approach offered invaluable benefits in accessing and generating data from the lived experiences of the homeless population, allowing for an examination of multiple facets of PEH's evacuation decision-making.

It is important to note that implementing a thematic analysis was appropriate, as it is a qualitative research technique that facilitated the systematic examination of patterns, themes, and meanings within the interview transcripts. Thematic analysis was instrumental in identifying and interpreting the detailed lived experiences of the participants.

The interview required extensive work, involving various stages, from gaining access to the facility to addressing the minute technical details associated with conducting interviews in an outdoor, unsheltered setting. The semi-structured interview format provided the flexibility needed to navigate these interviews effectively, considering the unpredictability of the participants and the constant outdoor stressors during data collection. Moreover, the conversational interview style adopted allowed for the establishment of a positive rapport with the participants, fostering genuine conversation.

While adjustments to the initial interview plan were necessary, a total of 41 semi-structured, in-depth interviews were successfully completed. Each interaction with a participant and every visit to the facility contributed to the refinement of interview skills, particularly in the context of qualitative fieldwork. Actively listening to the participants' stories provided profound insights into the actions and behaviors of this marginalized population in the context of their daily survival and decision-making processes, both in ordinary circumstances and during disaster events. The exploration of the detail and nuances of evacuation decisions by PEH could have only been accomplished using an interpretative qualitative design that allowed ideas, perceptions, and lived experiences to emerge into meaningful data.

Chapter IV: Data Analysis and Interpretation – First Stage of the PADM

In Chapters IV, V, and VI, I will thoroughly explore the data analysis and interpretation of the 41 interviews. Chapter IV begins with the first section, providing demographic information about the participants and offering descriptive details about the interviews. Subsequently, this section encompasses the data analysis and interpretation of the First Stage of the Protective Action Decision Model (PADM) application. Chapter V follows, covering the data analysis and interpretation of the Second Stage of the PADM. Finally, Chapter VI examines the data analysis and interpretation of the Third Stage of the PADM, with a focus on the impact of the COVID-19 Pandemic.

As previously discussed in Chapter II, the theoretical model guiding this dissertation is Lindell and Perry's (2012) Protective Action Decision Model. This model has evolved from a rich history of disaster research and has been influenced by behavior-based theories (Lindell & Perry, 2004). Applying the PADM facilitates a comprehensive exploration of PEH's lived experiences when making evacuation decisions during disasters. Furthermore, the application of the PADM to understand PEH's evacuation decisions centers on addressing the main research questions of this dissertation:

RQ1: What factors influence the evacuation decisions of a person experiencing homelessness (PEH) to seek shelter or to evacuate when a natural disaster occurs?

RQ2: How has the COVID-19 pandemic influenced the decision of a PEH to evacuate or seek shelter?

The data analysis and interpretation presented in the following three chapters are intended to address these questions. Each phase of the PADM will be presented alongside the participants' responses, as well as the identified focused codes, categories, and themes. In this dissertation, nine themes have surfaced from the participants' responses (see Table 11).

Table 11. *PADM Stages and Emerging Themes*

PADM Stages	Core Theme
First Stage	Technology vs. Nature Disaster of Survival
Second Stage	Free Will Dilemma Evacuation Dilemma Hope by Helping Others Daily Cycle Shelter Antithesis
Third Stage	Facilitators and Impediments
COVID-19 Pandemic	Informed Hopeless/Helpless

Demographics and Interview Information

As mentioned earlier, the focus of this dissertation was on adults experiencing homelessness, specifically those who spent most of the year without shelter, often living on the streets. Originally, I planned to conduct interviews inside the church's cafeteria. However, circumstances changed. Due to COVID-19 social distancing rules, the cafeteria was initially empty, and church services were held outdoors. But on the first day of interviews, meals were served inside the cafeteria, necessitating a change in my plans. I had to quickly find alternative locations for interviews, which ended up being near the portable showers and in the hallway near the cafeteria. This shift meant I had to prepare

for outdoor interviews by wearing suitable clothing, bringing cold drinks, identifying shaded spots, and being ready to talk to people waiting for showers, haircuts, or meals.

The interview phase spanned seven weeks, from July 7th to August 25th, and I consistently conducted them on Thursdays between 10 am and 1:30 pm, as indicated in. I initiated this phase by interviewing Participant 1 on the first day, which provided valuable insights. It offered essential guidance into various aspects of conducting subsequent interviews, including my approach to engage participants, setting an appropriate pace, and formulating questions that resonated with the unique characteristics of the study group.

This initial encounter also provided practical skills in managing potential challenges, such as addressing background noise that could potentially disrupt our conversations. Recognizing the importance of establishing a rapport with the interviewees, I thoughtfully determined the optimal physical distance to ensure compliance with social distancing protocols while still fostering a genuine connection with the participants. To achieve this, I intentionally adopted an informal and approachable interviewing style, often choosing to sit on the ground. This approach created an atmosphere akin to conversing with a friend, which proved instrumental in building trust and rapport with the participants over the weeks.

Interestingly, there were instances when multiple individuals experiencing homelessness gathered around during the interviews. While the church offered the convenience of using a table or an office space for our interactions, I deliberately opted to conduct the interviews outdoors, either beneath the sheltering trees or within the hallways

where individuals awaited their meals. This strategic decision played a crucial role in building stronger connections with the participants as the weeks progressed.

At the beginning of the interviews, an interesting trend emerged. Men displayed a greater willingness to participate and appeared more curious, often forming a line of 4 to 8 individuals eager to share their experiences. In contrast, women initially exhibited more caution and frequently declined interviews. However, as they observed others engaging in the interview process, many women subsequently expressed interest. It was intriguing to note that their trust levels seemed to increase as they witnessed interactions with their peers. As the seven-week period came to an end, I had successfully conducted interviews with a total of 41 individuals, comprising 32 men and 9 women, as detailed in Table 12.

Table 12. *Timeline of the Interviews*

Day	# Interviews	Men	Women
1	1	1	
2	5	4	1
3	9	8	1
4	7	5	2
5	9	8	1
6	8	4	4
7	2	2	
Total	41	32	9

There were instances where women approached me after the designated interview times, and I had to inform them that I would return the following Thursday. Some of these women reappeared in the subsequent weeks, demonstrating their commitment to participating in the study. It's worth mentioning that I conducted an interview with one woman who had an active psychotic disorder; however, her responses were not included in this study. Nonetheless, I conducted the interview as a gesture of respect for her time

and willingness to participate. Additionally, two incomplete interviews occurred when participants changed their minds and departed within minutes of initiating the conversation.

I observed data saturation by the end of Week 5, indicating that no new information was emerging, and I consistently encountered the same themes in the data. Data saturation holds significant importance in qualitative research, as it contributes to the study's rigor and reliability. Although the exact number of interviews needed to reach saturation was uncertain before starting the dissertation, I had a general idea based on Guest et al.'s (2006) findings, which suggested that approximately twelve interviews within a homogenous group would be adequate. However, I extended the interviews for an additional 2 weeks due to the growing interest of individuals toward the end of my visits to the church. Many expressed a desire to be interviewed, and I had given my word that I would return. Moreover, by the end of Week 5, several women approached me, wanting to be interviewed, so I committed to returning for them. Having established a bond of trustworthiness with this community, it became imperative to offer each person the opportunity to be heard, should they wish to do so.

On average, the interviews lasted for 16 minutes and 29 seconds (refer to Table 13). The interview structure encompassed basic demographic inquiries, discussions about their comprehension of disaster-related terminology, questions pertaining to my research objectives, and inquiries about their survival experiences. Initial responses to demographic questions were typically brief, but when I delved into more detailed follow-up questions, participants shared more intricate aspects of their experiences and perspectives. The interviews became notably longer when participants shared their

experiences of life on the streets, often accompanied by emotions like sadness or distress. Regardless of the questions asked, the informal and conversational style of the interviews allowed for a natural and relaxed exchange of information.

Table 13. *Length of Interviews (minutes)*

Individual Interview	Time
<i>Average</i>	16:29m
<i>Median</i>	16:07m
<i>Min</i>	11:30m
<i>Max</i>	28:34m

The majority of interviews occurred on the streets, in proximity to the portable showers or the hallway where individuals accessed food and resources. My approach involved approaching each participant and gauging their comfort with the interview. In most instances, participants preferred to remain in their current location, prompting me to sit on the ground. Remarkably, they often provided a chair for me, often expressing sentiments like, "Ma'am, we may be homeless, but we still maintain our courtesy." Consequently, the interviews transpired on folding chairs, with one allocated for me and one for the participant.

The participants' ages ranged from 20 to 69 years, with a median age of 49 years (refer to Table 14). Notably, there were no discernible cliques or divisions among participants based on age; instead, individuals of various age groups often sat together. In terms of racial composition, the population included 26 Black participants, 11 White participants, and 4 Hispanic participants. Furthermore, one interview was conducted entirely in Spanish with a participant who did not speak English. As for cell phone ownership, 29 participants reported possessing a functional cellphone, while the

remaining participants either had their phones stolen, were non-functional, or could not afford one.

Table 14. Participant Characteristics

Demographic Characteristics	Participants		Broward County* Unsheltered PEH	
	n	%	n	%
Gender				
Women	9	22	275	22
Men	32	78	953	78
Race				
Black	26	63	767	62
White	11	27	443	36
Hispanic	4	10	141	12
Employment				
Unemployed	28	68		
Works Fulltime	4	10		
Works Part-time	3	7		
Disabled	5	12		
Retired	1	3		
Has a Cellphone	29	71		
Self-Paid	23	79		
Government Paid	6	21		
Has a Bus Pass	27	66		
Age	<i>Average 49 years, Median 52 years, Min 20 years, and Max 69 years</i>			

*Broward County Coalition Report 2022

First Stage: Environmental and Social Context

Lindell and Perry (2012) describe the first stage of the PADM as the phase where individuals receive initial information about a hazardous event. In this stage, codes emerged through inquiries into how people experiencing homelessness typically became aware of approaching disasters or extreme weather events (see Table 15). Follow-up questions explored the medium and source of this initial information. Codes also formed based on the unique characteristics of PEH, particularly focusing on factors that influence

their daily lives and disaster survival. As a result, two emerging themes have developed in the First Stage: "Technology versus Nature" and "Disaster of Survival."

Table 15. *Categories and Themes – PADM First Stage*

Component	Category	Core Theme
Environmental cues	<ul style="list-style-type: none"> • Nature • Intuition and Senses 	
Social cues	<ul style="list-style-type: none"> • Word of Mouth • Nearby Technology 	
Information sources	<ul style="list-style-type: none"> • News • Community Liaisons 	Technology vs. Nature
Channel access and preferences	<ul style="list-style-type: none"> • Cellphone 	
Warning messages	<ul style="list-style-type: none"> • Official Alert 	
Receiver characteristics	<ul style="list-style-type: none"> • Bits and Pieces • Street Survival • Heat Madness • Unfair • Daily Lifelines 	Disaster of Survival

Theme - Technology vs. Nature

In this theme, codes emerged from five components (see Table 16) within the First Stage of the PADM. The focused codes centered on how each participant typically perceived the impending arrival of a hurricane or disaster. The subsequent sections provide detailed insights into the findings from each component.

Environmental Cues. In this component, participants' responses regarding their initial awareness of an impending disaster or extreme weather event were rooted in environmental cues. These cues, as described by Lindell and Perry (2012), encompass physical manifestations that "signal the onset of a threat" (p.617). Many participants identified their first sign of an approaching disaster or extreme weather event as an

environmental cue, as indicated by the focused codes related to the sky, wind, animals, and sensory observations. Relying on environmental cues holds various implications for PEH, including the potential misinterpretation of physical signs in their surroundings, which could influence their decision-making regarding protective actions. McCaffrey et al.'s (2017) study on wildfire evacuations highlighted the potential drawbacks of depending solely on physical cues, as it may lead to adopting a "wait and see approach" to evacuation decisions (p. 12). For PEH, this approach could result in missed opportunities for accessing emergency transportation or, worse, failing to reach an emergency shelter when adverse weather conditions begin.

Table 16. *Focused Codes and Categories within Technology vs. Nature, First Stage*

Component	Focused Code	Category	Core Theme
Environmental cues	<ul style="list-style-type: none"> • Sky, Wind and Animals • Senses 	<ul style="list-style-type: none"> • Nature • Intuition and Senses 	
Social cues	<ul style="list-style-type: none"> • Street Weatherman • Word of Mouth 	<ul style="list-style-type: none"> • Word of Mouth • Nearby Technology 	
Information sources	<ul style="list-style-type: none"> • News • Public Officials, CBOs 	<ul style="list-style-type: none"> • News • Community Liaisons 	Technology vs. Nature
Channel access and preferences	<ul style="list-style-type: none"> • Cellphone, TV, Radio 	<ul style="list-style-type: none"> • Cellphone 	
Warning messages	<ul style="list-style-type: none"> • Phone Text Alerts 	<ul style="list-style-type: none"> • Official Alert 	

Sky, Wind, and Animals. This focused code emerged as participants reported the sky, wind, and animal behaviors as the initial indicator of an approaching hurricane or bad weather event. Participants who relied on the sky and wind as their primary

indicators included Participant #16, who explained, “I usually watch the weather, but if not, just look up in the sky and see all the black clouds and everything.” Participant #24 stated, “By the weather, by the wind, yes, like hard, like rough”, and Participant #15 emphasized,

Because I pay attention to the sky, and I look at the clouds and I see the cloud formation. I study climate. I am very good at climate change. Plus, your body has a certain chemical in it, the atmosphere reacts to your body and it tells you when it is coming. Atmospheric pressure, it is called.

Sky and wind environmental cues have also been noted in Paul and Dutt's (2019) study, where coastal residents mentioned cloud patterns and wind behaviors as signs of approaching cyclones. Their research found that many household residents adopted a "wait-and-see" approach, which often led to delayed evacuation decisions (Paul & Dutt, 2019). Tierney et al. (2001) also suggested that environmental cues like wind and rain can influence evacuation decisions.

It's important to emphasize that the interpretation of a hazard's physical manifestations (such as sights, smells, or sounds) can vary depending on the specific hazard and may not always indicate an imminent threat, as cautioned by the PADM (Lindell & Perry, 2012). For instance, seeing funnel clouds or hearing the wind's roar before a tornado, or witnessing an ash plume and hearing volcanic eruptions before a volcano eruption, can signal an imminent threat (Lindell & Perry, 1990; 1992). In contrast, observing a coastal water recession before a tsunami can be more ambiguous and prone to misinterpretation (Lindell & Perry, 2012). Hence, taking protective actions solely based on environmental cues may vary depending on how individuals interpret the physical signs associated with each hazard.

Participants who mentioned animal behavior as their initial indicator of a disaster or extreme weather event included Participant #2, who said, "If the animals are not around," and Participant #28, who explained, "If there's a real hurricane and you know it's a hurricane, you wouldn't see any birds on the telephone wire. If there's a hurricane, you would not see any birds." Animal behavior has also been observed in evacuation studies as a potential predictor of impending natural disasters or extreme weather events (Heupel et al., 2003; Liu et al., 2010; Streby et al., 2015; Udyawer et al., 2015). Streby et al. (2015) reported that birds evacuated more than 24 hours before the onset of a tornadic storm. Similarly, Udyawer et al. (2015) observed sharks seeking refuge in deeper waters upon detecting acute environmental changes before a tropical storm. Some researchers have attributed these animal prediction behaviors to their ability to detect changes in barometric pressure and atmospheric variations prior to the onset of a storm (Bailey & Secor, 2016; Streby et al., 2015).

For coastal residents, observations of animal behaviors, including those of birds, ants, and dogs, before a cyclone influenced their decision to evacuate, often resulting in delayed evacuation choices (Paul & Dutt, 2019). Despite animal behavior being considered a possible indicator of an impending disaster, Bailey and Secor (2016) cautioned that the documentation of migratory animal evacuations has been limited and subject to chance.

Senses. Some participants mentioned relying on their sense of smell as an initial indicator of an approaching hurricane or bad weather event. For example, Participant #8 explained, "I can smell the rain and look up in the sky and then, yeah," while Participant #17 said, "I can smell it, it smells real salty in the air." Another participant reported

perceiving the initial cues of a disaster or bad weather event through physical sensations in their body, stating: Participant #40, “Basically, I could feel it because I got an artificial hip. I could feel like it was going to rain or storm because my body hurts.”

Studies on bushfires have shown that individuals often become aware of fires through smelling or seeing smoke (Strahan, 2017; Whittaker et al., 2020). While relying on the smell of smoke can be a prompt indicator of a threat, it can also lead to dangerous situations due to the rapid spread of the hazard, potentially compromising individuals' airways from smoke inhalation and even resulting in fatalities.

The PADM categorizes the sense of smell as an environmental cue. However, the effectiveness of this cue varies depending on the specific hazard and its chemical composition. Consequently, relying on the sense of smell as an environmental cue for disaster onset is contingent on the nature of each hazard, influencing the decision to take protective actions.

Social Cues. The PADM defines social cues as signals drawn from observing the behavior of others, including their evacuation or shelter-seeking actions prior to a disaster event (Lindell & Perry, 2012). These cues hold significant influence over evacuation decisions, with individuals often looking to others for guidance on whether to evacuate (Tierney et al., 2001). In this component, the focused codes that emerged were "street weatherman" and "word of mouth," representing how participants received information by observing what others were sharing in the streets.

In the case of the "street weatherman," some participants referred to individuals they knew as the "neighborhood weatherman" or "our little newscaster," highlighting the role of specific people in disseminating weather-related information within their

community. In contrast, a smaller number of participants mentioned relying on information passed on by others through word of mouth. These participants explained that due to their lack of access to technology or warning systems, their only option was to depend on information provided by others.

Street Weatherman. Participants who placed trust in weather information from someone within their community justified this trust by emphasizing the individual's expertise and access to diverse information sources. Furthermore, they highlighted the significance of receiving frequent and up-to-date information from these trusted community members, underscoring:

Participant #3

Oh, I hear it from somebody I know that got a phone. But I don't I don't watch TV; I don't have a TV to watch. I know a couple of people that stays up on that really, really good, so.. We got a neighborhood weatherman. He has five or six different weather apps.

I trust the weatherman. I mean, if he shows it to me on the phone and I see that it's like a Channel seven thing or something like that, then I believe it. He show you real-time, like updates on Channel seven and the Weather Channel and everybody saying the same thing, I'd trust that. Sometimes the cops don't come around.

Participant #31

Well, my one friend, she's always on her phone. It's great. She's our little newscaster, minute by minute. I just go, so "Demi, what is going on? She will look at the radar and she goes comfortable, on the phone.

Huang et al. (2012) have elucidated that the interpretation of weather information by community members can unofficially lead to "independent emergency assessments" (p. 284). Consequently, the social cues provided by PEH who interpret weather forecasts can significantly influence the evacuation decisions of others within the community. One participant, who did not possess a cellphone, expressed trust in weather information when

they could directly view it on someone else's cellphone rather than relying on interpretation by others. Participant #25 articulated this by stating, "I ask somebody around me, can I see it? Can they put their phone on the app, turn the news app, and then watch the latest news, the updates, man?"

Word of Mouth. Other participants reported social cues obtained whenever they interacted with other community members. Similarly, lacking access to technology or warning systems, they depended on information exchanged in the streets, expressing:

Participant #5

De las news. A veces de las personas que la oyen, porque no tengo tiempo para oír news. Pero la oigo por mediación de otras persona y mas o menos asi se sabeslo que va a pasar.

No tengo nada tampoco. Pero lo hago por mediación, me entiende. Yo no tengo nada de eso, yo no tengo trabajo, no tengo teléfono, no tengo casa, no tengo nada.

Translation:

From the news. Sometimes from the people that listen, because I do not have time to listen to the news. But I hear it through them, and that's kind of how you know what is going to happen. I get it from other people, know what I mean, I don't have anything, I don't have a job, or phone, or house, I got nothing.

Participant #26

Word of mouth. It's the same thing. Something as big as a storm or a hurricane, I'll be worried about. Anything other than that, nothing really because there's nothing really important. I see my brother once a week, twice a week, watch the news over there, anything important. He'll let me know, and things like that.

Before conducting the interviews, I initially anticipated that, in the First Stage of the PADM, social cues conveyed through word of mouth would be the predominant means by which PEH acquired initial information about disasters or extreme weather events. This presumption may have arisen from my perception of the literature, which often highlights word of mouth as a reliable method for disseminating daily information

among PEH (Fitzgerald, 2019). Furthermore, previous research has demonstrated that PEH have limited access to disaster warnings (Every & Thompson, 2014). Given their limited access to technology and formal warning systems, it seemed reasonable to expect that social cues via word of mouth would represent a straightforward and natural way of transmitting information within a community where PEH's daily lives often intersect with those of their peers.

Information Sources. Information sources encompassed data obtained from news outlets, public authorities, or organizations disseminating weather-related and emergency shelter evacuation information. Responses predominantly indicated that participants accessed information from news sources through internet searches on their cellphones. Other common methods included watching television news or listening to it on the radio. Some respondents mentioned receiving information from public officials, particularly law enforcement agencies, and organizations such as churches. Within this category, focused codes such as "news," "public officials," and "organizations" emerged, falling under the broader category of "News and Community Liaisons."

Participants noted information sources as their primary means of initially learning about impending disasters or extreme weather events. This aligns with Sorensen's (2000) assertion that informal notifications are crucial for disseminating information during emergencies. For the majority of participants, news media played a significant role in staying informed, surpassing official warnings or social cues in importance. The predominant method for accessing news was through cellphone internet searches, followed by television and radio. Information from newspapers was occasionally mentioned, but it was typically sourced digitally rather than in print. Interestingly,

pamphlets or printed materials were not reported as part of shelter or disaster survival guidance.

News. Regarding news and information sources, participants described accessing information through weather channels or cellphone applications, while others preferred watching local or national news channels on television. An important factor affecting the reliability of receiving information through cellphones is the number of people with working devices. In this study, 29 out of 41 participants had a functional cell phone. Among this group, some reported having limited internet access unless they were connected to Wi-Fi. Although Wi-Fi access was readily available at most shopping plazas, restaurants, and airports, it was generally not accessible at the places where they resided, such as streets, bus benches, and bus terminals. Participants who didn't have cellphones explained that this was primarily due to affordability issues or the fact that their phones had been stolen.

Information sources from news outlets were described by participants as follows:

Participant #4: "Newspaper media. Media outlets."

Participant #12: "Forecast. News forecast..."

Participant #21: "I watch the news on my phone."

Other participants who reported receiving information cues from television expressed:

Participant #14: "Radio, TV, telephone."

Participant #28: "They constantly announce it on TV."

Participant #34: "TV or just word of mouth."

Another source of information came from watching television during their daily routine:

Participant #8: "Sometimes I go to places like Burger Kings or McDonald's, where they have a TV on, and I sit down and have a coffee."

Public Officials and Organizations. Information regarding weather events was often obtained from public officials, such as law enforcement officers, who would venture out onto the streets to provide updates on impending hurricanes or extreme weather conditions that necessitated evacuation or relocation to safer areas, including evacuation shelters. Some participants recounted instances where police officers had given them rides to shelters when natural disasters were approaching. Information from organizations, like churches, typically came from participants' visits to these facilities, where they received food and other resources.

Specific responses regarding information cues from the community or public officials included: Participant #7: "The homeless shelters told us. And the churches", and Participant #33:

Police let me know and the weather imposed in a place, a friend's house, put the weather on, see what the weather is, and then when I'm on the street, the police officers come by or anybody like task force or the police department or the lifeguard.

During certain extreme weather events, such as severe cold temperatures, churches would offer shelter to PEH who couldn't access other shelters. For instance, during the cold front weekend of Christmas in 2022, organizations like Hope South Florida and the Salvation Army opened their doors to provide shelter to PEH. Hope South Florida, comprising some of the largest churches in the Fort Lauderdale area, takes

a comprehensive approach to addressing homelessness (HopeSouthFlorida, 2019). Consequently, information about impending low temperatures and shelter availability was communicated to PEH during their regular visits to these organizations.

The provision of hazard information by community organizations plays a crucial role in communicating with PEH, particularly when official government warnings do not reach them in a timely manner, giving them adequate time to decide and plan for safe shelter and evacuation. Fogel's (2017) focus group responses from PEH demonstrated their concerns regarding official government declarations of natural disasters, which they often perceived as coming too late for them to make informed decisions about seeking shelter and evacuating.

Channel Access and Preference. The PADM framework describes this component as the various modes of transmitting warning messages to individuals who are receiving information about a hazard. Channel access and preference are crucial for PEH due to their limited access to technology. Moreover, providing services through such channel systems is more challenging for unsheltered PEH who live on the streets. For instance, owning a cell phone requires having a service provider that offers the service, having access to the internet, and having access to an electrical outlet for charging the phone. These limitations are even more significant for unsheltered PEH when it comes to owning a working television, computer, or other devices. Therefore, examining channel access and preference for unsheltered PEH is essential for identifying the limited channels PEH use to receive disaster information.

Cellphone, TV, and Radio. In most cases, participants reported receiving information from news sources by using their cellphones to navigate the internet,

watching TV news broadcasts, and listening to the radio. Information from newspapers was specifically mentioned, with media sources like CNN and the Sun-Sentinel being cited, and in a few instances, participants referred to obtaining information in a printed format. It's important to note that pamphlets, booklets, or paper-based information were not commonly mentioned as part of shelter or disaster survival guidance. This is noteworthy because a study conducted by Fogel (2017) revealed that PEH suggested that during disasters, it would be helpful for them to have resource booklets with accurate transport-related information.

Regarding the news, participants primarily accessed information through weather channels or cellphone applications. Others mentioned watching local or national news channels on televisions in places like fast-food restaurants or libraries. An essential factor to consider in assessing the reliability of receiving information via cellphones is the number of people with working cell phones. In this study, 29 out of the 41 participants had working cell phones. Among them, some reported having limited access to the internet unless they were connected to Wi-Fi. Although Wi-Fi access was readily available at most shopping plazas, restaurants, and airports, it was generally inaccessible to most of them at their places of stay, such as streets, bus benches, or bus terminals. As previously mentioned, participants who reported not having a cellphone explained that the main reasons were either affordability issues or theft."

Warning messages. The PADM framework characterizes warning messages as specific to the content of hazard information. Participants who reported receiving initial hazard information via warning messages stated that it was in the form of text messages. In some cases, these text messages instructed them to seek shelter promptly. These

messages were deemed trustworthy by participants because they considered them official warnings from a credible authority. Within this component, the focused code 'phone text alerts' emerged as the sole type of warning message received containing disaster or extreme weather information.

Phone Text Alerts. The participants' responses to warning messages via text were straightforward. Examples of these responses included Participant #18 stating, "Smartphone"; Participant #22, "I see it in my phone"; Participant #32, "They give me a warning on my phone"; Participant #35, "Right now, my phone is broken, but it would still let me know the weather alert"; and Participant #38 explaining, "I get a text load on my phone when it says tornado watch or stuff like that."

In this study, official warning messages were not the primary means of receiving information about disasters or extreme weather events. This finding aligns with studies by Whittaker et al. (2013), which indicated that official warnings did not play a significant role in initiating protective action responses, and Dash and Gladwin (2007), who suggested that "warnings by themselves do not motivate evacuation" (p. 69). Conversely, other studies have suggested that official warning messages are crucial for evacuation decisions. In a hurricane evacuation study, Huang et al. (2012) found that information obtained from official warnings had a more significant potential to influence evacuation behavior. Similarly, Lechner and Rouleau's (2019) volcanic evacuation study revealed that the most critical factors in evacuation decision-making included official warning messages, with messages from friends or family ranking lower. Strahan et al. (2019) also observed similar findings, noting that official warnings through text messages

became a significant factor in evacuation decisions based on changes in practices and recommendations from past bushfire evacuation studies.

Compared to environmental cues and information sources from the news, official warning messages were mentioned by only a few participants, possibly because not all participants reported having a working cell phone. Similar findings were observed by Lechner and Rouleau (2019), where their respondents expressed a high level of importance in receiving official warnings, even though half of them had limited access to resources and services for receiving such messages. Therefore, it's important to recognize that not possessing a cell phone within the homeless community or not staying close to someone who has one could potentially exclude PEH from receiving crucial official warnings regarding disasters or extreme weather events.

Theme - Disaster of Survival

Receiver Characteristics. The PADM describes this component as encompassing the psychological, physical, and psychomotor abilities and disabilities of individuals, as well as their economic and social resources (Lindell, 2018; Lindell & Perry, 2012). In this study, receiver characteristics are reflected in PEH's responses to questions about their daily living conditions and their economic and social resources. Furthermore, demographic questions complement the receiver characteristics component of PEH to examine the factors that prompt protective actions or evacuations during disasters or extreme weather events. As explained by Lindell and Perry (2004), disaster responses are associated with the receiver characteristics of "previous experience, preexisting beliefs, personality traits, and demographic characteristics" (p. 82).

As mentioned earlier, researchers have applied the PADM in their studies using various variables related to PEH's characteristics. For example, Chen et al. (2021) observed that demographic variables did not significantly impact evacuation intentions. In this section, the emerging codes were developed inductively based on PEH's lived experiences in their daily lives (see Table 17) and their demographic information (see Table 13).

Table 17. Focused Codes and Categories within Disaster of Survival, First Stage

Component	Focused Code	Category	Core Theme
Receiver characteristics	<ul style="list-style-type: none"> • Belongings • Storage • Backpack 	<ul style="list-style-type: none"> • Bits and Pieces 	Disaster of Survival
	<ul style="list-style-type: none"> • Challenges • Life and People • Food and Sleep • Job and Transport 	<ul style="list-style-type: none"> • Street Survival 	
	<ul style="list-style-type: none"> • Effects daily weather • Pets • Resources • CBOs • Library 	<ul style="list-style-type: none"> • Heat Madness • Unfair • Daily Lifelines 	

Belongings. Questions in this component were related to how PEH managed their belongings during an evacuation to a shelter, such as backpacks and shopping carts. For PEH, their personal belongings play an essential role in their lives. Although these belongings may not hold much monetary value, they carry great significance to PEH because they contain everything they have and what they need to survive daily. Therefore, examining how personal belongings impact their lives was crucial to providing insight into understanding the role of property in evacuation decisions. Previous studies applying the PADM have observed the relationship between household

evacuations and property perceptions during various disasters, including earthquakes (Macpherson-Krusty et al., 2022), hurricanes (Huang et al., 2017), volcanoes (Lechner & Rouleau, 2019), and wildfires (McCaffrey, 2017; Strahan et al., 2019; Strahan & Watson, 2019). In contrast to household evacuations, unsheltered PEH face unique challenges that influence their evacuation decisions. The following focused codes emerged inductively from questions related to PEH's personal belongings or property.

Storage. This focused code emerged from the participants referencing how they kept and protected their personal belongings or property while living unsheltered on the streets. Many participants described their daily struggle to protect their few valuables from being taken by others. For this reason, some participants reported using their only income towards securing their belongings using a storage system. Participants shared how much they pay to use these systems. For instance, Participant #24 mentioned, “I’ll put it in storage. Yes, it’s \$30 a month. Probably about six months now”, and Participant #12 explained,

My property stays with me or in a storage. In a storage or carry with me. Oh, I don't. I don't have that much stuff. Yeah, storage bimonthly. I mean, \$40 a month. I think that should be affordable for me.

Another participant shared being able to use a storage system thanks to the help of his family. Participant #15 stated, “I have a storage that's paid for by my sister. I put everything in storage. I keep what I need, and I don't carry what I don't need. I carry a weather radio in my bag.”

Backpack. This focused code emerged from responses by the participants when asked about their personal belongings. Although such simplistic responses might not fully convey the importance of a backpack, understanding that this object might be the only

possession a person experiencing homelessness (PEH) has can provide insight into how they make daily decisions, especially during disaster events. In this focused code, participants referred to their backpacks or bags as something they always have with them. Some participants even mentioned sleeping with their backpacks every night. Therefore, a backpack for a PEH can mean everything to them since it carries their entire world.

Some participants shared their attachment to their backpacks, like Participant #17, who said, “My backpack is always on my wheelchair” and Participant #22 who mentioned, “My Backpack. Always keep with me. See, like my wallet and my ID, everything is in there. My backpack I keep it with me. Always”.

Participant #16 recounted how she learned to take care of her belongings the hard way after losing everything during her stay at a day shelter, stating,

I already left it behind and I lost everything I had. They tossed it away at a shelter, which I can't understand. You know people are homeless, why would you toss belongings? That's why now I carry everything. Oh, my goodness. The only thing I have is just my book bag and a bag, and I carry it with me always.

Other participants described their backpacks in terms of their small size yet with the capacity to hold everything they possessed, as seen in Participant #28's statement, “What I got right now is that bag. You can't destroy much”, Participant #36's comment, “Keep them in my bag. No. I don't have that much”, and Participant #10,

They're wet? Oh I got more clothes to put on, I throw in my backpack, I'll put extra set of clothes. My belongings I had them with me yeah. I take them with me. I have a little backpack, that's it.

Another participant, Participant #40, provided a detailed account of the measures he takes to protect his belongings from theft by other individuals experiencing homelessness (PEH). He stated:

Well, usually, I get me a green bag, a trash bag in a time of, and I try to set them somewhere high and I hide it. I hide them. I've got stuff stashed now in Hollywood and I got a sleeping bags stashed. No, I'll find somewhere like a bush and I hide it. Well, I've lost a few things but it all depends on where you hide it because a lot of people watch you. Homeless people watch you to see where you hide your stuff, so they come to get it. They watch you.

The focused codes *storage* and *backpack* responses offer valuable insights into the participants' perceptions and the significance they attach to their belongings, which often represent their sole possessions. Previous studies that applied the PADM to examine perceived threats to property during household evacuations revealed some noteworthy findings. Strahan et al. (2019) found that positive self-evacuations were more likely to occur when individuals believed their property was under imminent threat of damage or destruction. Similarly, Strahan and Watson (2019) discovered that a household's ability to prepare and protect their property before a bushfire had a direct impact on their evacuation decisions.

In contrast, Lechner and Rouleau's (2019) study observed that householders' perception of property risk had a lesser influence on their intention to evacuate, with property ranking as one of the least significant factors affecting their evacuation decision-making. Moreover, their findings highlighted that respondents, particularly those in vulnerable populations with limited resources, placed a low level of importance on protecting their property when considering evacuation decisions.

In this study, responses from PEH revealed the value they place on their property, without any indication that property serves as an impediment or a factor preventing them from evacuating during a disaster event. While many PEH reported taking significant measures to protect their belongings, including storing them, sleeping with them, or

hiding them, the participants' responses did not suggest that their personal possessions deterred them from seeking protective action during such events. On the contrary, one participant emphasized that, despite the considerable effort invested in securing his property, there were more important priorities for him, as conveyed by Participant #14:

Most of the time I have a storage for my belongings. Yeah, storage company alright. Storage, yes, ma'am. Sure, I can buy new clothes, one loses life, all money in the world aint't gonna buy me a new one.

Challenges. In this section, focused codes emerged inductively from the participants' responses regarding the daily challenges they encounter while living unsheltered on the streets. Existing literature has outlined the increased vulnerability of people experiencing homelessness (PEH) during disasters, primarily due to their limited resources and limited access to services (Brown et al., 2013; Every & Thompson, 2014; Every & Richardson, 2018; Gin et al., 2021). Understanding the challenges described by the participants is crucial for examination, as these challenges have the potential to worsen during disasters, thereby influencing their evacuation decisions.

Life and People. Some of the responses within this focused code touch deeply into the core of their experience with homelessness. The challenges described here go beyond those lacking a physical structure to sleep but encompass their current life situation, including the daily struggle to meet the basic necessities of being human. As previously mentioned in the literature, scholars have drawn parallels between the circumstances of homelessness and a continuous daily disaster, no different from a natural disaster (Gaillard et al., 2019; Gin et al., 2018; Sundareswaran et al., 2015; Vickery, 2018; Walters & Gaillard, 2014). Within this focused code, some participants expressed the challenges concerning their current life situation, Participant #39 stated,

“Just doing this over and over and over”, while Participant #14 provided a more detailed reflection on their experience:

Life in general. Life in general. The set of circumstances that life has set. So you are basically the same. They have different changes, of course. Like today I'm here. This is a change from my regular routine. Actually, I don't really have a regular routine at this point.

Participant #16 shared she had been staying for 2 weeks at a daily shelter, describing her unstable housing situation,

It's tough because just to know that I'm homeless, it's just the mindset that you have to just breathe in, breathe out, and at least you're in a safe place and just go to sleep. Last night I did, the night before it was a little bit difficult. For the most part, I do because at least I know I'm safe. The weather. Being out here. Oh, lordy. I try to ride the bus. They have air conditioning at least, and I try to stay at the library reading. That's my little refuge right there that has air conditioning. I could use the computer. I can use the Wi-Fi. They have a bathroom there.

Participant #37 shared the adjustments she had to make while living unsheltered on the streets, particularly related to basic necessities such as eating and using the bathroom.,

Like when I woke up this morning, oh, I peed in a bucket. I put a bag. Tie that bag and I.. I put a bag inside the bucket and I shit in the bag, tie it up and throw it away. I had to learn because I got to where I used to eat anything and every morning at home and then you can go to the restroom. I'm just going to go to the bathroom, but once I became homeless I got where you can't shit this morning because where am I shit at?

Several participants expressed difficulties associated with navigating the presence of individuals possessing diverse personalities and attitudes. Participant #4 specifically articulated these challenges:

Challenges, not being able to know the comfort of your own place with privacy, that's, that's a challenge for me. Having to always be around people, that's a challenge for me. Not really understanding people, different type of personalities, challenging, not dealing with, but putting

you in a situation where you can't really run from it. I was out, know what I'm saying, so that's a challenge for me. Basically dealing with a lot of different personalities. I just manage, I just don't talk. I talk, but I basically pick and choose very wisely.

Food and Place to Sleep. The focused code "food" emerged from the participants' responses detailing their struggles in finding food and a secure place to sleep. In Broward County, various community organizations provide daily meals and snacks through soup kitchens and churches. The participants' remarks about accessing food also raise questions about their ability to reach these locations and adhere to the designated meal times. Some participants expressed their difficulties, with Participant #6 stating,

It's financial, like having money because sometimes they don't pay and the kids be hungry and stuff like that, so it's mostly that. I just had a job. I get my last paycheck tomorrow from Krispy Kreme. I did have a job, but it's kind of hard having a job and you don't have no place to leave the kids. I don't know, I have peoples who I ask, I take advice and stuff like that, if I need to.

Some participants discussed the daily struggle of finding a safe place to sleep on the streets.

Participant #12:

Challenges, of not getting enough, and I guess staying inside. Always outside. I'm outside too much, exposed to too much outside. I'd rather be inside. I don't want to be outside. Exposure to everything. COVID still out here, you still have COVID, you know. I mean, how I manage. I go to library, I try to I try to move around. I buy a bus pass and I start traveling. I start going everywhere.

Participant #25

Yes, and no. Because when you sleep, anybody can walk up on you and hurt you. Someone walked up on me and took all of my clothes, and I was knocked out. I was asleep. I don't feel safe.

Participants' responses revealed that despite the presence of multiple organizations throughout the county providing meals, they still struggle to access

food. Moreover, the daily stressors experienced by PEH can compound their challenges, increasing their vulnerability and reducing their chances of survival and recovery during disaster events (Gin et al., 2022).

Compared to housed residents, PEH are less likely to prepare for disasters (Fothergill & Peek, 2004; Gin et al., 2018; Ramin & Svoboda, 2009). Other responses in this focused code expressed the difficulty of finding a safe place to sleep at night. Many participants faced challenges in securing a safe sleeping location, even if they refused to seek shelter. Consequently, the combined challenges of finding food and a safe place to sleep at night dominate the concerns of PEH. Therefore, the preparations made by PEH related to stockpiling supplies or evacuating before a disaster can be seen as an extension of their daily lives, but intensified by the stressors of a disaster event.

Job and Transportation. The focused code emerged from challenges PEH reported on finding a job and accessing transportation. One participant described his struggle to find a job because of his previous history of being in jail; he was visibly frustrated and emotionally expressed, Participant #32,

My challenge is, it's hard to make money because the cars don't give you nothing. That's my biggest challenge. My biggest challenge, I just want to get a fucking job and get off the street. I'm just, and my charges that I'm a convicted felony because my charges are very serious. I can't find a fucking job because they won't take me, excuse my language, but that's how I feel. That's how I freaking feel. I have a burglary charge, they won't take me. It's hard, and I just wish they'd take me.

Other participants described difficulty in accessing transportation as one of their daily challenges. Settembrino (2017) suggested that PEH's lack of access to transportation increases their vulnerability. In this study, many of the participants relied

on the bus system to move around the city, and not all had access to a monthly bus pass. Participant #19 stated, “Well, not having a bus pass. Every day that I work, I make sure I have that pass for next week.” Participant #23 added, “I just ain't got the money. Sometimes the bus driver won't let me get on.” Participant #21 mentioned,

The heat and the buses. They're never on time. I just go to the library, Publix, mall. That's it. I buy mine because I don't have time to apply for that free bus pass because it's too many things. I have too many struggles and too many obstacles. I just buy it, that's it.

Effects daily weather. In this section, the focused code "heat" emerged as an adverse factor affecting the daily lives of the participants. While it is well-known that South Florida experiences hot and humid weather for most of the year, this climate can have adverse health and psychological implications for unsheltered PEH due to their constant direct exposure to the heat.

As mentioned in the literature, extreme weather represents a significant hazard for PEH, impacting their acclimatization and placing higher demands on their bodies for temperature regulation (Cusack et al., 2013). Additionally, the absence of stable housing further contributes to a deteriorated quality of life, characterized by malnutrition and decreased self-care behaviors (Brown et al., 2013; Gaillard et al., 2019).

Heat. The focused code "heat" emerged from participants' responses regarding how weather affects them daily. Their responses revealed that many participants were adversely affected by the intense heat throughout the year. Living unsheltered, they are constantly in search of cover, shade, and relief from the humidity and heat wherever they stay. Several participants expressed the detrimental effects of heat on their health and daily activities.

Studies exploring the health effects of extreme weather on PEH have shown a decline in their overall health and well-being, exacerbation of mental health and mood disorders, and the development of mental health issues (Cusack et al., 2013; Every et al., 2019). Consequently, the daily weather poses an additional challenge among the multiple factors influencing PEH's protective action decisions. Their physical and mental health deteriorates due to constant exposure to extremely hot temperatures for most of the year.

Some participants who experienced negative health effects mentioned, Participant #24, “The heat is very bad for me. It makes me feel bad, my blood pressure rise”, Participant #25, “It's terrible. It gives me seizures. It's horrible. It keeps me cool because I get seizures when it get hot”, Participant #32, “Sometimes I can't stay too much in heat because I have seizures”, and Participant #13, “Yes. I got shot in the head. And that severe hot weather can cause migraine headaches and send me to the hospital. Stay out of the sun as much as possible”.

Others expressed how daily weather affected their mood, energy levels, and ability to function by stating, Participant #29, “It makes my life miserable. I hate it. It makes my life miserable. I hate it, destroys all my clothes. I swear, I lose weight. I'm miserable. I hate it. It makes my life hard”, Participant #30, “Like cooks your brain like heat stroke”, and Participant #35, “It slows me down so much because I won't be wanting to do anything in the heat and plus, I have to take the bus, so I just feel worse”.

Another participant mentioned that they had been adapting to the extremely hot temperatures and frequent rain, consistently seeking shade or some form of protection.

Participant #12 stated,

The heat affects my life cause I'm not from Florida. I'm from New York. I'm not used to the heat, so.. I go for shelter when I see heat, rain, go for

shelter. It does affect me, yes. But I'm getting used to it. I'm getting used to the heat now. I mean. Sometimes the rain better than the sun. It depends what type of day, you know, depends what type of day.

For unsheltered PEH, exposure to extremely hot temperatures is a daily occurrence. Many participants reported constantly seeking shelter from the heat due to its adverse effects on their health. Every et al. (2019) suggested that extreme weather exacerbates the daily challenges faced by PEH. Furthermore, studies have shown that during periods of extreme weather, available services for PEH were stretched thin, resulting in a lack of access to cooling centers and contributing to declining health. Prendrey et al. (2014) explained that climate change could impact PEH through an increase in heatwaves, heightened exposure to infectious-vector diseases, and difficulties in obtaining basic necessities. The physical or mental decline of PEH could affect their ability to make protective action decisions, such as evacuating or seeking shelter. Many participants in this study were already experiencing negative effects from the weather, highlighting how this population continually adapts to the adverse effects of extremely hot temperatures in their daily lives.

Pets. This component emerged from the participant's responses to questions about pet ownership. The majority of participants reported not owning pets, with only one participant who had two small dogs present during the interview. This participant mentioned that their ability to feed and care for their pets was reliant on donations from the church and various organizations that provided food and supplies to support them.

Overall, this focused code emerged from participants' perceptions of the ethical concerns associated with having a pet (towards the pets themselves). The literature highlights pet ownership by PEH as a significant factor contributing to their reluctance to

seek shelter (Donley & Wright, 2012; Every et al., 2019). In this study, some participants expressed the decision not to have pets based on their awareness of their inability to properly care for a pet when they could hardly take care of themselves.

Unfair. Some participants expressed the belief that having a pet would be unfair due to their homeless condition. For instance, Participant #1 shared, “Yeah. I mean, I've been thinking about it. I just don't have a way of feeding a pet. I don't want to treat an animal like this. It would be unfair”.

Participant #5 remarked,
Animales! Mira que animales, nada tengo. No, pero señora, si yo estoy jodido.
Qué voy a ser yo un animal de esos? Eso es sacrificarlo.

Translation:

Animals! Look what animals, I got nothing. No, but ma'am if I am screwed. What am I going to do with an animal? That would be sacrificing it.

Research on evacuation decisions during disasters has consistently shown that having a disabled family member or owning a pet can significantly influence the choice to refuse or delay evacuations before a disaster event (Heath et al., 2001). In the State of Florida and Broward County, emergency shelters have provisions in place to accommodate pets, making it easier for residents to evacuate with their animal companions. Additionally, the state and county have established a special needs registry to provide shelter options for vulnerable populations requiring medical assistance or specific accommodations during a disaster. Importantly, PEH who meet the criteria for this type of assistance can also register in the special needs registry and access care at special needs shelters. This inclusive approach ensures that PEH have the necessary support and shelter available to them during emergencies.

Resources. In this section, focused codes emerged from participants' responses regarding community organizations and the library as their primary sources of daily survival. In the United States, community-based organizations (CBOs) and public libraries play a critical role as essential lifelines for the survival and safety PEH (Gin et al., 2018; Vickery, 2017). Numerous studies have highlighted how the limited resources available to PEH can significantly affect their ability to prepare for, evacuate from, and recover from disasters or extreme weather events (Edgington, 2009; Edgington et al., 2014; Every & Thompson, 2014; Walters & Gaillard, 2014). For this reason, the role of CBOs during disasters is fundamental, as they provide reliable resources within the community when the challenges faced by PEH further exacerbate their vulnerability.

Community Organizations. In this focused code, participants' responses highlighted their consistent utilization of resources provided by community-based organizations (CBOs) on a daily basis. Many participants reported incorporating services offered by the "Co-Op" or the "Taskforce" into their daily routines. Some participants elaborated: Participant #22, "I usually go to Co-Op. I'll tell you that I take the shower, then after my shower, I go back to the bus terminal", Participant #24, "I go catch the bus and go to the terminal. From the terminal, I go to the co-op. They give food, clothing, and you shower there", Participant #26 "I go to the soup kitchens every morning for lunch, dinner, and breakfast. Co-op, right", and Participant #38,

I was getting food stamps, but I'm trying to work on that now. I get WIC. I don't know. I'm trying to talk to TaskForce. I've been scared to tell them my situation because I don't want nobody trying to call a child protective service.

While many participants regularly utilize services provided by CBOs for their survival, it's worth noting that some express apprehension due to pending legal status or other concerns, such as Participant #38, who fears the potential separation of their children. Nonetheless, CBOs remain essential sources of survival for people experiencing homelessness (PEH), and most participants rely on these organizations daily.

Additionally, churches play a vital role in supporting the well-being of PEH, offering a variety of resources. Here are some participant responses regarding churches: Participant #9, "To go to the churches. For their basic necessities, food, clothing, cosmetics", Participant #30, "I get food from a church. Food from a church, yes, in my disability SSI. I get disability, SSI", and Participant #12,

I go to different programs. I go to churches that provide services as far as food. So those are the shelters. I go to co-op, which provides a service. So those throughout the day I have different services that provide shelter. I mean, usually, you know, word of mouth, you know where they're feeding places at. Churches, yeah certain churches.

Library. This focused code emerged from the responses of many participants who emphasized the vital role of the library in their daily lives. Participants described the library as a place they visit daily, offering both physical and mental shelter. Moreover, the library provides them with access to the internet and various sources of information about current events in the community.

Scholarly research supports the importance of public libraries as places for individuals to charge their electronics or access Wi-Fi (Young, 2018). In this study, participants highlighted the library as their primary location for charging their phones, a crucial resource for unsheltered PEH who often lack access to a power source, particularly during nighttime hours.

For many participants, their daily routines revolve around their visits to the library. They plan their days based on how to reach this facility and when they will depart. Here are some participant responses that illustrate the significance of the library: Participant #2, “The library. Yes. Everything be in the library”, Participant #19, “I check the computer every day at the library. They usually would tell you what's happening and what's going on. That's it. Library”, and Participant #7,

Hanging out at the library. Oh, pretty much the same. Yeah, but I, you know, I study my disorder at the library and stuff like that. I try to be proactive as far as my, my anxiety disorder and study it at the library.

Participant responses in this section align with Young's (2018) description of public libraries as "important communal spaces that serve as access points for technology and modern methods of communication, particularly for disadvantaged populations" (p. 37). Similarly, Veil and Bishop (2014) recognized the critical role of public libraries in community planning and resilience, advocating for their active involvement in disaster response and recovery plans. For PEH, the use of libraries was deemed vital, as access to disaster-related information was directly tied to their use of library services. Consequently, the role of public libraries in the community holds broader implications for unsheltered PEH, influencing their capacity to make protective decisions in the event of a disaster.

Participant responses underscore the crucial role that resources such as CBOs and libraries play in their daily lives. This observation aligns with the findings of Brookfield and Fitzgerald's (2018) study, where participants identified community organizations as their "primary source of support during hazardous weather" (p. 65). In Broward County, some CBOs have expanded their services to allow PEH to sleep inside their facilities in

emergency situations, particularly when county shelters reach limited capacity, as observed during the early stages of the COVID-19 pandemic (Gin et al., 2018). Therefore, CBOs, through their familiarity and trustworthiness, can facilitate evacuation decisions among PEH.

Another significant consideration is the continuation of CBO services after disasters. Settembrino's (2016) study revealed that homeless shelters and their guests played essential roles in community recovery efforts following Hurricane Sandy. However, Doran et al. (2016) observed an increase in PEH visiting hospitals with complaints related to housing issues, potentially due to difficulties accessing shelters or placement services, negatively impacting their mental health and exacerbating chronic disorders. Additionally, Brown et al. (2013) emphasized the critical role of mental health services for homeless veterans and warned against the detrimental effects of discontinuing these services post-disaster. The disruption of services provided by CBOs following a disaster can exacerbate vulnerabilities and further marginalize the homeless population, especially considering that CBOs are composed of community members who may also be affected by the same hazards.

In summary, public libraries and CBOs serve as lifelines for PEH, providing essential resources, information, and support. Their roles extend beyond daily survival and have crucial implications for PEH's ability to respond to and recover from disasters while also mitigating the potential worsening of their vulnerabilities in post-disaster scenarios.

Chapter V: Data Analysis and Interpretation - Second Stage of the PADM

In this chapter, I discuss the data analysis and interpretation of the Second Stage of the Protective Action Decision Model (PADM) - Psychological Processes: Predecision Processes, Core Perceptions, and Protective Action Decision Making. Each stage of the PADM will be presented with the participants' responses, accompanied by the emerged focused codes, categories, and themes.

Second Stage: Psychological Processes – Predecision Processes

Theme - Free Will Dilemma

In the PADM, an individual must go through a set of pre-decision steps to develop situational awareness of the risk posed by a hazard. As previously mentioned in the literature, these pre-decision processes include exposure, attention, and comprehension (Lindell & Perry, 2012). To evaluate the pre-decision processes of PEH (People Experiencing Homelessness) regarding the initiation of protective action, the questions asked related to their perception and experiences when receiving initial information about a disaster or extreme weather event. More specifically, the questions inquired how they received the initial information, whether they paid attention to it, and if they understood the content regarding the impending disaster. In this section, I will present the emergent codes derived from the participants' responses that examined their predecision processes (see Table 18).

Table 18. *Focused Codes and Categories within Free Will Dilemma, PADM Second Stage*

Component	Focused Code	Category	Core Theme
<i>Exposure</i>	<ul style="list-style-type: none"> • Phone Alert • Others with Phone 	<ul style="list-style-type: none"> • Access 	
<i>Comprehension</i>	<ul style="list-style-type: none"> • Understanding • Clear language 	<ul style="list-style-type: none"> • Clear Understanding 	Free Will Dilemma
<i>Attention</i>	<ul style="list-style-type: none"> • Ignored Warnings • Regret 	<ul style="list-style-type: none"> • Dismissal and Regret 	

Exposure. According to the PADM, exposure is considered one of the fundamental psychological processes that individuals must go through to take protective action. Lindell and Perry (2012) defined exposure as an individual's ability to receive information about a hazard without external interference or information blocking. For example, this interference can result from loud surrounding noises or areas with poor internet signal, where the message might not reach them.

For unsheltered PEH, their living conditions may change every day. Depending on where they sleep each night, information about a disaster may or may not reach them. For instance, PEH who sleep at train or bus stations might be hindered by continuous background noises, which could disrupt messages from others regarding an impending disaster. On the other hand, PEH who sleep under a sewage system would not be exposed to the physical environment's signs before the onset of a disaster event.

A lack of exposure to disaster information can also result from poor cellphone signal strength, preventing PEH from receiving warning messages about disaster events. While access to Wi-Fi and charging stations is often available for free, PEH's ability to

access these services may be inconsistent (Heaslip et al., 2021), especially during disasters or extreme weather events.

Regarding physical barriers, only one participant in this study mentioned his van as a physical structure that sometimes impeded him from receiving information, stating, "Usually, when the cops are beating on my window, telling me to get out of there" (Participant #30). Therefore, exposure to information for unsheltered PEH can occur in various ways, and exposure to disaster information is a critical initial step for an individual to take protective action.

Phone Alert and Others with Phone. The focused codes *phone alert* and *others with phone* emerged as the primary elements related to access to disaster-related information. As mentioned in Chapter 4, the majority of participants had access to information through a working cellphone, whether it was their own or borrowed from others. While some participants reported receiving information from sources such as libraries, churches, or law enforcement, most indicated that they received their initial disaster information via cellphone.

Studies on mobile technology used for healthcare interventions have shown that a significant number of PEH own cellphones (Asgary et al., 2015; Jennings et al., 2016; McInnes et al., 2015; Rhoades, 2017). Similar findings were observed in this study, with 71% of the participants reporting ownership of a working cellphone, most of which they had paid for themselves. Consequently, exposure to information for most participants was directly linked to owning a working cellphone (with service, signal, and power). Only a few participants reported living in complete isolation from other PEHs, where access to a working cellphone was unavailable. Overall, the majority of participants reported

exposure to information related to daily weather or disaster-related information through a mobile phone.

As for the physical and cognitive characteristics of the participants and their ability to receive information, none exhibited significant difficulty with auditory or visual impairments. Identifying these types of disabilities is crucial because they can act as barriers to receiving and communicating information. During the interviews, all participants completed the discussions without any apparent signs of sensory decline. For example, instances where a participant requested that a question be repeated or that they speak louder were rare, especially given the constant background noises while being outdoors on the streets. Moreover, all participants maintained eye contact and remained engaged throughout the interviews, despite the numerous distractions in their surroundings. Their active engagement and ability to answer various questions related to weather and disaster events demonstrated their comprehension of the information.

Comprehension. In this component, the emergent focused codes revolved around *understanding* and *clear language* concerning the information participants received about disasters. When asked if they comprehended the information provided by public officials about hurricanes, disasters, and evacuations, 40 participants affirmed that they understood the information clearly. Regardless of their primary language or level of education, participants confidently responded that they grasped the language and terminology used in relation to information about disasters, evacuations, or seeking shelter.

As previously discussed in Chapter 2, warning messages that employ overly technical or esoteric terms can hinder recipients from understanding the information's

content. Lindell and Perry (2004) explained that "specialized terms cause confusion and distract people from processing the information," leading to a lack of comprehensive understanding of all the provided information (p.50). Furthermore, disseminating information in only one language in areas where people speak multiple languages can also hinder groups from comprehending the information. Therefore, for a protective action to be successfully initiated, the recipient must comprehend the message that conveys a risk related to the disaster information received.

Understanding and Clear Language. Responses within these focused codes from participants were as follows: Participant #1, "I understand it, you know, I very understand it", Participant #14, "Of course. I comprehend it", and Participant #15, "Sure, absolutely". When I asked participants if they ever felt confused by the language used by public officials, some expressed: Participant #3, "No, it's not confusing all", Participant #22, "No, I understand what they are saying, and I go and check too"; Participant #23, "No, I know I'll understand what it is", and Participant #26, "No, very understandable. I speak English, they speak English. It's very understanding."

Other participants expressed their understanding of clear language in relation to their respect and trust towards the public officials providing the information, with statements such as: Participant #4, "No, I feel they know what they're talking about. It's a warning, expert opinion", and Participant #15,

Sure, no. They're very well educated. They're very educated people, they know better than anybody. They get their information from a reliable source, and when they got that, they pass it on to you, then you listen. Because I worked for the newspaper for 22 years. I know. I worked for the Miami Herald. I'm retired now.

However, one participant's response regarding understanding the information was based on a negative perception: Participant #6, "It's clear, but I don't deal with them anyway. I don't like dealing with no government officials".

Attention. Responses in this section were related to questions about paying attention to warnings and information regarding an impending hurricane or severe storm. Attention involves the conscious act of choosing to heed the information received. Based on the interviews, and as previously described, none of the participants reported having a disability that hindered their ability to listen to or see the information provided to them. Additionally, their responses did not indicate that their environment posed a barrier that affected their attention when receiving disaster-related information. Therefore, the emerged focused codes were "ignored warnings" and "regret."

Studies on evacuation behavior have indicated that the credibility of warning information has been associated with false alarms (Breznitz, 1984; Dow & Cutter, 1998; LeClerc & Joslyn, 2015). Breznitz (1984) described the psychological impact of false alarms from warning systems on threat responses, using the story of "the shepherd who cried wolf," also referred to as the cry wolf effect (p. xiii). Some scholars have attributed this effect to repeated false alarms in warning forecasts or disaster predictions (Burnside, 2006; Dow & Cutter, 1998; LeClerc & Joslyn, 2015; Lim, 2019). Other scholars have described the influence of repeated emergency scenarios, such as evacuation drills, false bomb threats, and actual threats, as significant false alarms that can affect future evacuation decisions (Rigos et al., 2019). Although the impact of false alarms on the evacuation decisions of People Experiencing Homelessness (PEH) is not mentioned in

the literature, examining their attention to warnings might provide insights into their perception of the risk posed by a threat.

Ignored Warnings and Regret. In these focused codes, the responses reflect some participants' experiences of ignoring information related to disasters, while others express regret for not paying adequate attention to the information given to them. Some participants shared their experiences: Participant #10, “And I got stuck out in a hurricane, and I wish I didn’t did that. I hid behind a building and the wind was blowing and it was scary”, Participant #13, “I got caught in it, bad mistake, but I still survived”, and Participant #24, “I got almost blown away. The wind was too strong for me”.

Other participants admitted to ignoring and continuing to ignore warning messages about bad weather events: Participant #1, “Yes, do it all the time. Get caught in it. Get wet in it, you know what I'm saying, drenched” and Participant #4, “Yes, numerous times. You get the results and be like you. Basically, hits you being unprepared, you know unprepared”. Another participant recounted not paying attention and underestimating a warning about a bad weather event: Participant #3, “Thought it ain’t going to be that bad, I’ll be alright, and I ended up going to a shelter <laughing>”.

Another participant remembered the consequences of not paying attention to the warning signs as a lesson that she would never forget. Participant #31 shared,

Yes. I ignored, I was young then and I didn't-- I was just like, Oh, whatever I'm getting in my car. Then I wouldn't listen to a report about how slippery the roads are or how deep the snow is going to get. I found myself in a ditch the one-time.

Although in this study, the participants who reported ignoring warnings were not influenced by repeated false alarms, they did question the credibility of the potential threat, as discussed in Threat Perception. Similarly, some scholars have found no

evidence to support the "crying wolf" effect on evacuation behavior (Burnside, 2006; LeClerc & Joslyn, 2015; Lindell et al., 2016).

Likewise, Dow & Cutter's (1998) reflections on their findings suggested a study population with "bipolar views on evacuations" and a sense of "backlash from the crying wolf syndrome," in addition to misconceptions about emergency evacuation efforts (p. 249). Nonetheless, scholars have reported positive findings related to false alarms, with participants expressing a "great amount of relief and gratitude and much less fear, uneasiness, and anxiety" (LeClerc & Joslyn, 2015, p. 560).

Second Stage: Psychological Processes - Core Perceptions

Theme - Evacuation Dilemma

Core Perceptions. As mentioned earlier in the literature, core perceptions are psychological processes that can influence an individual's perception of a threat, protective actions, and their views on social stakeholders (Lindell & Perry, 2012). To assess the core perception processes of PEH concerning the initiation of protective action, the questions asked pertained to their perceptions regarding the threats of hazards, their perceptions of protective actions, and their perceptions of community stakeholders, especially in the context of receiving initial information about disasters and extreme weather events. These responses were shaped by the participant's pre-existing beliefs about hazards, past evacuation decisions, and their relationships with community stakeholders (see Table 19).

Table 19. Focused Codes and Categories within Evacuation Dilemma, PADM Second Stage

Component	Focused Code	Category	Core Theme
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<i>Threat Perceptions</i>	<ul style="list-style-type: none"> • Intensity • Sense of Danger • Survival 	<ul style="list-style-type: none"> • Physical Threats of Nature 	
<i>Protective Actions</i>	<ul style="list-style-type: none"> • Shelter • Safe Zone • Family 	<ul style="list-style-type: none"> • Evacuation and Safety Umbrella 	Evacuation Dilemma
<i>Stakeholder Perceptions</i>	<ul style="list-style-type: none"> • Law Enforcement • Government Information 	<ul style="list-style-type: none"> • Public Officials Trust 	

Threat Perceptions. In this component, participants' responses characterized their perceptions of the risks associated with disasters and extreme weather events. Scholars who have applied the PADM have suggested that identifying individuals' threat perceptions is crucial for understanding their evacuation decisions (Huang et al., 2012). For PEH, threat perceptions related to hazards can significantly differ from those of individuals who have stable housing conditions. Fothergill and Peek (2004) explained that people living below the poverty line were more likely to perceive hazards as risky and were also more vulnerable to risks, injuries, and suffering from such hazards.

Based on the participants' responses regarding their perceptions of hazard threats, the emerging focused codes included *intensity*, *sense of danger*, and *survival*. Some participants' responses were influenced by their past disaster experiences and were connected to their perceptions in the face of an impending event. However, in most cases, these responses led to contemplation of initiating a protective response.

Intensity. Some of the participants reported that their perception of the threat was influenced by the intensity of the event. For instance, during a hurricane, their perception of danger was primarily based on factors like the hurricane's category or the speed of the

winds. One participant provided detailed insight into his perception of when to evacuate, as stated by Participant #4:

When is trouble at hand, or there's a risk of injury or something like that. I really, I usually I trust my inner judgment. But for the most part, if it's a category over two or three, and I'm living around these days basically in high risk of losing property or life, so I move inland.

Other responses by participants included: Participant #9, "If the weather gets really bad. Winds over a hundred miles an hour", Participant #13, "Yes. It depends on what category of the hurricane, now four or five, I'm going to a shelter. Three or two is bad, but I would last", Participant #22, "No. If it's a small one, I can withstand it. But if it's a category 4-4, then I go seek shelter. No, no, no. Tri-rail you can sleep, but not when there's a hurricane because Tri-rail is wide open", and, Participant #26, "No, I wouldn't ignore that. Especially if it's a very serious, big category, I wouldn't ignore that. Dangerous, you could die. I wouldn't ignore that".

One participant recalled watching the news during Hurricane Katrina and described the sentiment and awareness regarding the threat of a hurricane of that magnitude. Participant #3 shared,

It didn't hit here hard like that. I remember I remember being at my grandmother's house and the hurricane literally looking like it was coming right down at 75, going across Florida to the other side. I didn't feel safe for them. Once it hit the Gulf, Louisiana was gone. If you are not in the shelter and when there's a real bad storm coming. You're out here, what are you doing?

Sense of Danger. Participants also reported their threat perceptions in terms of how they sensed danger, often considering how it would directly affect them. As mentioned earlier, Participant #10 ignored the warning signs of a hurricane, describing it

as a scary experience. This participant also expressed an increased sense of danger as the hurricane intensified:

Yeah, a lot of rain. A lot of wind blowing real hard. Yeah. Yeah. I did, I feel something was gonna happen.. Yeah. In went in the corner, but when the wind fell by me, it kinda slow down, but that felt like... I got up in a corner when I see wind coming, kept coming real hard. I got up and caught up in the corner, in a building.

Other participants reported a sense of danger based on their ability to tolerate the weather: Participant #24, “The wind was too strong for me” and Participant #6, “When the winds and rain are fierce, where its too, it's not normal, rain and wind is extreme”. Some others expressed their sense of danger when the physical structure they were in couldn't provide protection: Participant #2, “When your house is about to be destroyed or your place you stay at is about to be destroyed” and Participant #29, “I don't know where, to the point where standing under something can't protect me”.

Survival. Some participants expressed their perception of the threat in terms of survival. For example, one participant described their experience of staying at the Tri-Rail station during a hurricane, stating:

Participant #12:
I mean, I was in there during the hurricane, so I had cover. I mean, I survived, I wasn't safe floor but survived. Well, I'm going to follow what the news reports saying, if the news is saying and get inside and this is going to be a severe hurricane, you know, evacuate. I'm not going to be. I'm going to be a victim, no. I'm not going to be flying, like Peter Pan, I'm not going to be doing that.

Similarly, this participant's perception of the threat related to an extreme weather event varied depending on the type and perceived intensity of the event. Participant #12 explained: “For a cold front? No, no. I look for cover. I go to Burger King, or McDonalds. When it's a severe storm? Oh, if the library is open, I go to the library”.

This participant's response indicated that, although there was an awareness of a threat, the focus was more on survival by any means rather than on the act of going to an evacuation shelter. Participant #12 stated: "I know how to survive. I'm going to trap myself somewhere where I'm not going to be flying".

Participant #32 expressed a perception of the threat from the perspective of avoiding death by evacuating to a shelter, saying:

When they tell me to evacuate to go to shelter, I go. I've been saved, I take my family. I say, Bro, let's get out of here, let's go to the shelter because there's a big hurricane or there's a tornado coming. They're going to kill us all. Let's go. Let's get out of here. I take my kids.

Responses from these focused codes reveal participants' perceptions of threats related to the intensity, category, or numerical scale of the hazard or disaster event.

Similar findings were reported by Whitehead et al. (2000), who observed that the size and magnitude of hurricanes were the "most important predictor of evacuation" (p.133).

Scholars studying threat perceptions have described misconceptions in respondents' perceptions of the intensity and actual risk of hazards, with some perceiving wind damage as more dangerous than hydrological impacts like "storm surges and inland flooding" (Huang et al., 2017, p.13).

In this study, perceptions about the risks of a threat from hazards showed misconceptions that can be problematic for unsheltered individuals. These misconceptions are problematic because PEH might perceive the threat's risks from a housed-based perspective (based on previous housing situations) rather than considering their actual unsheltered living situation. Moreover, misconceptions stemming from daily exposure to hazards might lead to a denial of potential injury. Regardless of the reasons, the participants' responses provided insight into their perceptions of threats and the

circumstances under which these perceptions could lead them to initiate a protective response.

Protective Actions. In this component, participants' responses consistently revealed how they perceived actions in response to a disaster or extreme weather event. Their responses led to the emergence of focused codes: *shelter*, *safe zone*, and *family*. In this context, evacuation and safety encompass actions such as seeking shelter and finding a safe area for protection, such as a shelter or building overhang. Additionally, family responses to protective actions included seeking shelter at their relatives' homes in the event of extreme weather or disasters.

Shelter. In this focus code, several participants described protective actions as the act of seeking shelter at designated shelter facilities. For example, Participant #6 stated:

A shelter if one is available. Just the shelter. If there's a hurricane, then yes. Whatever Broward County said. In Broward County they have certain locations. So it depends on where I was and what, which location would be closer for me.

The park under under shade, under the pavilion. If there was a storm, they would open like certain high schools to put us in. Listen, as I say, us is the homeless.

Participant #7:

Oh, you have to leave the premises or the area. Safety. When everybody else is going. Yeah. Yeah, man. But yeah, that is the case. You know, when I see the desperation coming from other people. Seek a homeless shelter. Again seek a shelter, or police department.

Safe Zone. Protective actions described by some participants involved seeking a safe zone. In this focused code, seeking shelter refers to finding a safe area other than an established shelter facility. Some participants expressed the need to find a safe indoor area where they could seek shelter. This notion of seeking a safe zone signifies an awareness of an impending disaster and the necessity to find shelter or a secure location.

Studies by Dow and Cutter (2000) and Lindell and Prater (2008) have shown that evacuation responses are more likely when people perceive the landfall of a hurricane as being close to their location. This concept was evident in the responses of the study participants, with phrases like "going inland" or "seeking higher ground" in response to the landfall of a hurricane. For instance, Participant #14 stated, "Okay, then I seek shelter. I go to a hospital, a stadium, or an indoor venue. I would consider places like the Civic Center, wherever the city and the state open for such purposes. Participant #4 explained:

Get inside or be in a safe environment. I usually, umm, move more inland because I stay near the beach last. My condo, before I lost my condo was near the beach. So, usually would have to move more inland when there's a possibility of a hurricane. I'd probably go to a hotel more inland. I don't like close things near the water, bodies of water.

Participant #17 mentioned,

Find somewhere safe. Somewhere where there's an overhang. A church or somewhere that has a placed that would bring you in". Another participant described the safer zone characterized on being elevated, and with an established structure where shelter is provided by going inside.

Some participants expressed discomfort with going to evacuation shelters and shared their preference for seeking their own indoor shelter. Participant #27 stated:

When the weather gets very, very bad, I have to go somewhere. Like I said, I go to a safer-- go to a motel. I don't trust those places because Lord knows who might be maybe stealing from you and all that stuff. No, I don't play that.

Other participants described their safe zones as areas that would not collapse and could potentially withstand strong winds or extreme weather. Some participants stated:

Participant #15

Of course, you do. Absolutely. Are you crazy? You would seek shelter, like a place that's been structured, won't collapse or something like that, unless

it's a tornado, you can't help. You can't survive with a tornado. That's impossible.

Participant #28

Get out. A safe zone. No, I'll be around people that don't panic. People that have been in a hurricane, they get used to it, they know what to expect. I would go inside and I watch the trees right across, I go to a safe zone. The closest building that's near me. What people don't know, all buildings have emergency entrance and exit to get in. They don't bother me.

Participant #36

To get out of the area and-- To get out of the area and then go into a roofed place. Well, any hurricane or whatever, you know what I mean, I'll get out there. It depends if they call it an evacuation, I get out there. By evacuating. You need to go somewhere where there's a roof.

Family. Some participants described protective actions as seeking shelter with their families. This focused code emerged from participants expressing their family's willingness to take them in during a disaster or extreme weather event. Although their initial instinct was to seek shelter at a family member's house, most were also open to the idea of going to an emergency shelter if that option were not available. Therefore, the desire for protective action was evident among most participants, regardless of whether they went to the house of a family member or to an emergency shelter. Some of these participants expressed these sentiments on this topic. Participant #26 stated:

I would go see my brother or stay with my brother or I definitely taken to the emergency shelters. Yes, I'm going to check with my brother first. Yes, he lives in Wilton Manors. So, in an emergency I can walk to his house or catch a bus. If I couldn't go to my brother's, I definitely go to emergency shelter. To seek shelter means get out of the street. There might be rain, or whatever.

Participant #11:

Oh, I got a few family members I could go to. Oh, they come get me and things like that. Or sometimes, depends on a certain situation. The storm, cold atmosphere, they open up the shelters that you come in. I'll try to make it to one of my family houses. If you know, things like that they let me come in. But if not, then I go to the nearest shelter. Probably call one of my family

members, one in particular like my brother. And I go help him put a board, you know, board up the house and stay away until the storm.

Participants' responses on protective action perceptions varied when it came to seeking shelter to protect their lives during disasters or extreme weather events. Similar to the responses discussed under threat perceptions, participants' views reflected misconceptions stemming from an underestimation of hazard impacts based on location (coastal versus inland). As mentioned earlier, evacuation responses have been positively linked to the proximity of individuals to the landfall of a hurricane (Dow & Cutter, 2000; Lindell & Prater, 2008). Other scholars have also noted that evacuation decisions can be directly influenced by location-related variables (Apatu et al., 2016; Buylova et al., 2020; Huang et al., 2016). However, in contrast, some studies have shown that factors such as the "inundation zone, home elevation, and ocean proximity" are not directly associated with evacuation expectations (Chen et al., 2021, p. 8).

In this study, many of the participants' perceptions of protective actions were directly influenced by their understanding of hazard locations. Consequently, their responses often revolved around mobilizing to safer zones. While the concept of a safe zone warrants further exploration in future studies, these responses suggest a need for greater clarity regarding how relocating to another area may not necessarily provide protection from a threat, especially for individuals without access to indoor shelter.

Stakeholders. In this component, responses consisted of the perceptions of stakeholders that participants described as affecting their decision to initiate a protective response. Huang et al.'s (2012) research noted that during disasters, stakeholders, such as authorities, "are often the first to warn residents and provide almost all the information about the event" (p. 284). However, Lindell et al. (2005) argued that authorities may not

always be consistent in providing information compared to other sources. The emerging focused codes were *law enforcement* and *government information*.

Law Enforcement. Within this focused code, participants referred to stakeholders as law enforcement or the police. Some of the responses from participants provided a detailed insight into their perceptions of law enforcement while consistently highlighting the respect and trustworthiness they attributed to them. For instance, Participant #13 stated, "Yes, if they are in uniform, yes," and Participant #15,

It has to be somebody that's in law enforcement or with authority to tell you that. You're just not going to listen to a person in the street just because they say it. You listen to somebody with authority, like somebody that's in law enforcement, or somebody that knows what they're talking about or has some credentials to back up like a meteorologist or somebody from the news station. Those people will give you better information.

Sure, no. They're very well educated. They're very educated people, they know better than anybody. They get their information from a reliable source, and when they got that, they pass it on to you, then you listen. Because I worked for the newspaper for 22 years. I know. I worked for the Miami Herald. I'm retired now. As long as it's from somebody with authority, not somebody from the street, or who is in a house.

Participant #26 stated:

Definitely. I can always trust law enforcement as far as I know. I'm leaving. Definitely evacuate. Yes, definitely trust law enforcement. As long as they not showing up because someone called on me, then I definitely it's not to trust them. There's no reason not to trust them if they're giving me just information, but if I-- If someone calls them on me, then there's a reason not to trust them.

Government Information. Stakeholder In this focused code, stakeholder perceptions centered around the information provided by the government or government officials. Similar to law enforcement, the trustworthiness in this context relates to the reliability of the information. Some participants expressed this by stating: Participant #14, "If it's if it's an official, then I'll listen. If it's not an official, then I'll get it confirmed by an official. Any official", Participant #34, "Anything coming from the government",

and Participant #4. “No, I feel they know what they're talking about. It’s a warning, expert opinion. Yes, I trust their judgement”.

However, Participant #6 differed in their perception, stating that they didn't regularly trust government officials but made an exception during a hurricane:

It's clear, but I don't deal with them anyway. I don't like dealing with no government officials. 50-50. I don't trust the officials, period. During the hurricane, there may be differently, depending on the situation and what's going on. It's how I would react and feel about them.

Some participant responses reflected their perceptions based on their trust and confidence in stakeholders when it comes to the provision of disaster-related information. Similar observations were made decades ago by Lindell and Perry (2000), who characterized stakeholders as official sources and noted that perceptions were derived from their "expertise and trustworthiness" (p. 485). These responses also revealed that some participants' perceptions varied depending on whether the stakeholder information was disaster-related or related to daily life. In the latter case, responses were shaped by past experiences with stakeholders that led to perceptions of distrust and fear. Lindell (2018) similarly discussed how the credibility of stakeholders varies in different communities and suggested further exploration of these perceptual variances in the context of hazards.

For the participants, the trustworthiness of stakeholders varied depending on the presence of a hazardous event. As observed in some participants' responses, perceptions towards stakeholders were different when there was no disaster event. Therefore, stakeholders are likely to have a more significant influence on shaping protective actions

by PEH concerning disaster-related information compared to situations without a disaster event.

Second Stage: Psychological Processes - Protective Action Decision Making

Protective Action Decision Making. Lindell and Perry (2012) described how individuals may choose to take protective actions once the pre-decisional and core perception processes are complete. In this section, focused codes were developed through inductive analysis of responses related to various questions regarding both daily and disaster survival (see Table 20). These responses also led to an examination of day-to-day protective action decisions, such as where they sleep and their daily routines.

Moreover, decisions concerning shelter use were also examined, encompassing the search for daily shelter and emergency shelter during disasters. Overall, these responses provided insight into the factors that affect individuals' decisions to adopt protective responses daily and before a disaster event when living unsheltered in the streets.

Table 20. Categories and Themes – Protective Action Decision Making, PADM Second Stage

Component	Category	Core Theme
PADM on Advice	Daily	Hope by Helping Others
	<ul style="list-style-type: none"> • Help by Sharing Information • Help by Bringing Along 	
PADM on Living	Routine	Daily Cycle
	<ul style="list-style-type: none"> • Street Survival Cycle 	
	<ul style="list-style-type: none"> • Open Concept 	

PADM on Shelters	Daily Shelter	Shelter Antithesis
	<ul style="list-style-type: none"> • Negative Experiences • Fear of Injury • Mistrust • Difficult Access 	
	Emergency Shelter	
	<ul style="list-style-type: none"> • Flexible and Accessible 	

Theme - Hope by Helping Others

In this section, focused codes emerged from questions related to the advice provided by people regarding daily and disaster survival (refer to Table 21). The responses of the participants portray guidance founded on a selfless perspective, where they offer assistance to others to the best of their abilities. For these individuals, helping others is constrained by their available resources and the shared daily struggle for self-preservation. Consequently, many participants expressed a commitment to helping others, irrespective of their limited means, while demonstrating care for others' survival in both daily life and during disasters. These acts align with the principles of social capital theory, encompassing elements such as "social networks, social contacts, social cohesion, social interaction, and solidarity" (Mathbor, 2007, p. 360).

Studies on social capital have described it as a multifaceted concept, with its meaning varying based on the nature of relationships between people (Ayed et al., 2020; Kapucu, 2011). The literature defines social capital in terms of three distinct network types: bonding, bridging, and linking (Aldrich, 2010; Aldrich & Meyer, 2015; Ayed et al., 2020; Kapucu, 2011; Mathbor, 2007; Meyer, 2017; Uekusa et al., 2022). In this context, bonding social capital characterizes their internal connections with others, as their social interactions primarily involve "individuals with the same or similar background" (Kapucu, 2011, p. 25). Consequently, the advice provided by these

individuals in this section embodies these network relationships, derived from their experiences and perceptions, which prove valuable in shaping protective survival strategies while living unsheltered on the streets.

Table 21. *Focused Codes and Categories within Hope by Helping Others*

Component	Focused Code	Category	Core Theme
PADM on Advice	Daily		Hope by Helping Others
	• Navigating Information	• Help by Sharing Information	
	• Daily Survival Disaster		
	• Come with Me • Shelter Information	• Help by Bringing Along	

Daily Advice. In this component, participants' responses led to the emergence of focused codes related to daily advice, specifically concerning information navigation and daily survival. The questions inquired about participants' advice to new individuals experiencing homelessness on their first day sleeping unsheltered on the streets. The responses in this section support social capital theory, as evidenced by participants' expressed desire to assist those who are more vulnerable and newly experiencing homelessness on the streets.

The examination of these responses was essential because it humanizes the experience of PEH within society. Ayed et al. (2020) emphasized this aspect, illustrating how social capital is often "overlooked during the process of othering and dehumanizing marginalized groups" (p. 101). Therefore, participants' responses reflected a unified capacity for caring for others, underscoring the significance of social relationships for survival and their potential to lead to the development of protective actions.

Navigating Information. Responses characterized under this focused code centered on how participants would offer advice and guidance on accessing resources to new individuals experiencing homelessness in the streets. Participant #16 stated, “All the information I know. Everything and I've done that. A lady didn't really know the system and everything, and automatically I shared what I know”, Participant #11 provided a detailed response, advising,

My advice, tell them where to places to eat at, where the clothes, showers, tell them about the task force. Cause a lot of people can't hack it out here. Men and women see they need to get it be in a place where they can, you know what I'm saying... No, a lot of peoples give up. Yeah. Yeah. You know, I know a lot of women out the airport, they surviving, they were working, and they saving money. But it so they can't just say, I know man and woman I know. And I know some women stronger than me!

Participant #21 mentioned,
Tell them where to go eat. How to survive, yes. I will tell them go to the churches, go eat, get some food, get some clothes. From there, tell them you got to get some information there. On the weekends, they feed at the library, Saturday, and Sunday. You sit there all day people bring food all day. That way they wouldn't go hungry. They can go to the library, if you got money, buy bus pass and if not, apply for the free bus pass.

Daily Survival. This focused code encompasses the advice that participants would provide to new individuals experiencing homelessness in order to survive while living on the streets. Here are some examples of their advice: Participant #3 “Get a job and hurry up and get out the streets”,

Participant #12
You are on the streets, you got leave certain things behind you, you got to. Get a job. Get a job. You have money. You have time off this week. You have 8 hours, eight, 9 hours off the streets. You get money, you get shelter, you get a job. That's the first thing. You don't want to be in the street 24 hours.

Participant #13:
I'd try to send them to a place to be in, and the quicker you can get on your feet and get them out here. Get on it. Get them out of here. Everybody

experience is different. But when its homeless, buckle down, do what you got to do and get back in your place.

Participant #29,

I'll tell them, If you got somewhere to go, go. If you have an option to go somewhere, you go. If you out here for drugs, go get help".I'd recommend if you got somebody because most of the time when someone first gets out, they have options. It's generally drugs. Go get help as soon as possible. Get the fuck from out of here. Staying here will not get better. The longer you stay the worse it gets. Eventually, if you got somewhere to go, man, go. If you got a shelter if you got somewhere to go, go back. You got to bite your tongue, swallow your pride, go back. Getting high is not worth the rest of your life. Getting high is about ruining the rest of your fucking life. It's not worth it. After a while, you looking back, you're mad at the fucking world and it was your fucking fault.

Disaster Advice. In this component, participants' advice on disaster survival led to the emergence of focused codes such as "come with me" and "shelter information."

The questions inquired about the type of advice participants would offer to new PEH on how to survive if a disaster or extreme weather event occurred while living on the streets. Much like daily advice, the participants' responses in this section prominently featured concepts related to social capital.

Research on disasters has consistently shown that networks and social resources are essential in the recovery process following a disaster (Aldrich, 2010). Meyer (2017) characterized these social networks as immediate lifelines, composed of "friends, family, and neighbors" (p. 49). For PEH, their immediate lifelines often consist of those in their close-knit community, primarily other PEH. Consequently, the participants' responses in this focused code highlight a sense of community and humanity, where many individuals look out for each other, despite their limited resources and their disconnect from mainstream society.

The responses in this section illustrate PEH helping other PEH take protective actions, such as making evacuation decisions by encouraging them to come along or

providing them with information. This sense of mutual support among PEH underscores the importance of social relationships, even within a marginalized community, especially during times of crisis.

Come with Me. The responses from this focused code were characterized as caring towards others, to the point of bringing other people with them to seek shelter: Participant #10 stated, “Well, when I find out where I’m going, I say you come on, go with me, man. If you want to”, Participant #13 mentioned,

Bring them in where I’m at and I’ll try to protect them. The more people you help, the more people gonna help me. No, I can’t. I can’t take care of four or five people, I am homeless myself. One, one person yes, I could probably help them out or her out. Five and four, no, I’m homeless myself. I got to worry about me. Seek shelter, go to the police station, go to fireplace. Find out where you can go and get in the shelter until this is over.

Participant #16 said,

I know there's a website that I can go. Even in Broward, when I looked it up, they list some schools that I can go. Let's go to a shelter. We can't stay out here. I'm going here. Let's go. I've always been like that.

Shelter Information.

Participant #11 remarked,

Hey, I try to tell them get to the task force to the shelters because they open the shelters when the storm stuff come on or when it's real cold. So, I just tell them how to get there, you know, that’s all I can do. Try to get to the nearest shelter, that's okay, I guess, you know. You don’t want to be in the street, you know.

Participant #22 added,

I’ll tell them to go to the salvation army. For emergency shelter. Or I’ll take them with me. No, no, no. Tri-tail you can sleep, but not when there’s a hurricane. Because Tri-rail is wide open.

Participant #3 emphasized,

Get shelter, please get shelter. The cops catch you out during that time. Then now they're going to, like, try to mess with you permanently and try to put you in jail for that. You didn't abide by the law when they did mandatory evacuation. So basically, you're going to get treated like a looter.

As mentioned earlier, the participants' responses in this component showed a humanized experience highly embedded in the social networks within the homeless community. Fogel's (2017) participant focus group responses showed similar findings, where "resilience to the threats and challenges of the impending disaster" was reflected in seeking protective actions (evacuating) with others (p. 218). In this study, participants' responses showed that PEH intend to help others with daily and disaster survival efforts. Therefore, social capital within homeless communities combines daily interactions that share protective actions and can enhance during disaster events. A similar concept was explained by Uekusa et al. (2022), where tight-knit communities that were socially disadvantaged coped well during disasters due to their pre-existing social capital, also referred to as a "major base for disaster social capital" (p.67).

Theme - Daily Cycle

In this section, participants' responses emerged from questions regarding their daily routines and the places where they sleep at night. Consequently, the emerging focused codes were *routine* and *stay* (see Table 22). The purpose of this section is to provide insight into how PEH perceive the living spaces where they stay during the night and how they navigate a typical day in their lives. This section integrates receiver characteristics of PEH, which were examined in Chapter 4, and elements described in other components related to the challenges and efforts to create protective responses.

In disaster research, scholars have referred to some of the challenges faced by PEH as the "everyday hazards" they encounter, characterizing their living conditions as a "persistent nature of precarity and vulnerability" (Gaillard et al., 2019, p. 338). Similarly, Vickery (2018) described how vulnerabilities to everyday hazards affect PEH by diminishing their level of concern for disaster preparedness because, for them, every day is a disaster. Consequently, understanding how PEH make daily choices is essential in determining whether this population might consider protective actions or evacuation before a disaster or extreme weather event.

Table 22. *Focused Codes and Categories within Homeless Cycle*

Component	Focused Code	Category	Core Theme
PADM on Living	Routine <ul style="list-style-type: none"> • Wakeup – Shower – Eat – Bus - Library - Terminal - Sleep 	<ul style="list-style-type: none"> • Street Survival Cycle 	Daily Cycle
	Stay <ul style="list-style-type: none"> • Open Area • Around People 	<ul style="list-style-type: none"> • Open Concept 	

Routine. In this component of the study, participant responses consisted of descriptions of a typical day from the moment they woke up to when they went to sleep. Some of these routines centered around searching for a job, while others focused on obtaining food, taking a shower, or finding shade and a cool place to spend time. Some participants also described specific waking up and sleep times. Although the examination of their routines was not the primary focus of this dissertation, the responses provided by the participants offer an overview of the series of decisions they make to survive. These responses reveal a set of protective actions they regularly take.

Furthermore, Lindell and Perry (2004) explained that immediate hazard information is more likely to be disseminated during individuals' dominant day-to-day activities. Therefore, for unsheltered PEH who lack a fixed residence, understanding their daily cycle can be instrumental in identifying opportunities when planning evacuation responses for disasters or extreme weather events.

Wakeup – Shower - Eat-Bus-Library - Bus (terminal) – Sleep. This focused code aims to illustrate the participants' responses regarding how they mobilize during a typical day in their lives. While the responses vary, they share many similarities. As previously discussed in the literature, the challenges faced by PEH in their day-to-day lives place them at higher risk of hazard exposure and present more obstacles to navigate during disasters (Settembrino, 2017; Sundararaj, 2021). Therefore, understanding their daily experiences can provide valuable insights into making evacuation decisions for this population.

Here are descriptions of the daily routines of some participants: Participant #14, “My daily routine is whatever I need to do as opposed to what I want to do”, Participant #9, “I panhandle. Go to churches. I usually hang out where I'm staying at”,

Participant #10

From the day start. Right now, I have no money, so I have to go to places that feed food. I leave. I leave and I go take me a shower and then I find out what places give and get me something to eat. Maybe I go eat, maybe then I go to the library. I read. I read a book or something, or whatever.

Then I ride back go to sleep, cause start I fall asleep this time <laughing>. I go back to the park where we have known, where I sleep at. Nah, I say I probably start getting back around nine, 2'oclock at night.

Participant #12

I wake up and I go to a co-op in the morning. It's a facility that feeds, that feeds the homeless. It provides showers, they provide shelter, they provide food, clothing. So, I go there in the morning, and then... I mean, there's a line, but it still provides me time off the streets, provides me a place where

I could have shelter. They have tents, you get a shower, you can get food there, you get clothing, you know. And then after that. I usually I try to look for a job and then I go to the library. Go do some, watch movie, charge my phone. After the library, I try to find another feeding place where they're giving out food. I go there, get some food for the rest of the night, snacks and then I call it a night.

Participant #16 described how her daily plans depended on the information provided by other PEHs regarding available resources:

Sure. I woke up today, 5:30 I was out. I went to LifeNet, which they provide food and a case manager. They also provide showers. The doors open up at 7:30. I was there. I ate something. The case manager wasn't there today. Then after that, I met with a gentleman here who told me about this place, and we all asked the bus driver if we can come, and this is where I'm at right now. After this, I plan on going to the library and continue applying for jobs.

Participant #21's daily routine revolved around work, where she was sent to a different job every day:

Four o'clock in the morning, Monday through Sunday. I go get ready, wait for the first bus at five o'clock, and then I go to the Labor pool, then I go to work. To the Labor pool, agency. They send you different job locations, construction, clean up, sweeping, demotion, all that. You go to different jobs every day.

Participant #3 described his daily routine and how he sustains himself by donating plasma and participating in medical research studies:

One day for me is basically wake up, go to the co-op and get something to eat breakfast. Or either come here and take a shower, get something to eat.

Participant #34's daily routine included income generation through plasma donation and participation in medical research studies:

6:00, 7:00 wake up, take a shower, change my clothes, and I come down here to get some need. Trying to do something to get money. I go to plasma. This is research place. They do research studies, like alcohol tests, smoke studies, do energy drink studies. They do a lot of different stuff.

Stay. The focused codes *open area* and *around people* emerged from the participants' responses regarding where they currently sleep at night. During the interviews, I inquired about their current living situation, and their responses largely centered around where they find a place to sleep at the end of the day. Consequently, the concept of 'a place to stay' evolved into the specific locations where they sleep during the night. This shift reflects the impermanence and volatility of their current living conditions.

Furthermore, these responses characterized a 'sleeping space' not as a traditional, sheltered concept, but rather as a place where they can lay down for hours without the fear of being attacked, robbed, or forcibly removed. In the context of disasters, Fothergill and Peek (2004) have explained that individuals experiencing poverty are more vulnerable due to their living arrangements, which can contribute to their increased social exclusion and marginalization within the community.

Open Area. The following are some of the participants' responses when describing where they sleep at the end of the day: Participant #13, "It's big, it's open, where they come in at the front and the back is secure. Big, big bricks. No, you can bathroom outside, I'm not gonna sugar coat it", Participant #29, "I sleep outside. I try to sleep outside every night. There's really not too much available. I was on a bus bench in the middle of highway",

Participant #15

It's a big park. Yes, they got a big tent, a huge tent. It's not a tent. It's just the protection from the rain and it's huge. They got two of them on each side and they have a gazebo in the middle, so if you really come down, you can go and sit at the picnic table.

Participant #18:

It's nine acres of land, wooded, wild and open, there's a park next door that I built a long time ago, and the ranger knows me. At night, between the hours of 8:30 till 6:00 in the morning, I could plug in power.

Participant #4:

I sleep on Broward and 11th avenue. In my tent. Me, my daughter, and my big mama. Sometimes me and my daughter, sometimes my big mama come by. Yeah, there are more tents. They have more every day.

No, no. I got heavy bins and my clothes, it's inside of my tent so it won't go away. If I'm not in there, my tent sits still. I got bins and trash bag of clothes.

Around People. The following are some of the participants' responses when describing the people who surround them where they sleep at the end of the day:

Participant #21, "Yes, there's a lot of people where I live. There's a train station, everybody lives there", Participant #22, "The tri rail? Probably like seven or eight. Ten people",

Participant #26

I like being by myself, but there's always people there. When we hang around, but when it's time for me to go to bed, I'm normally by myself. I sleep inside behind the clinic. There'd be people like 20 feet out, 30 feet out around me. Basically, I don't have any friends. We never get that close, lay down and talking before we sleep.

Participant #11:

At airport, homeless, I'm homeless. I stay here and there. No, it's always full. Is the airport now. People always there. No, you can't stay there. I mean, it's humanly you know, I was trying to save money out here and there, you know, try to get in place. And then I went through city hall. They got me, you know, for housing and stuff like that. So.

The participants' responses describing their daily cycles and places of sleep during the night provide valuable insights into how PEHs make daily decisions to ensure their survival. Strahan et al. (2019) emphasized the importance of incorporating 'ongoing social routines' in understanding the factors that influence individuals in making evacuation decisions (p. 9). Similarly, Tierney et al. (2001) stressed the significance of

understanding social routines in comprehending evacuation processes. They noted that 'an evacuation order, no matter how clear, scientifically-based, specific, urgent, and authoritative, nevertheless is embedded in a particular social context and influenced by social-structural factors and ongoing social routines' (p. 112).

In this study, the choices made by the participants regarding where they stay and how they mobilize daily highlight their decision-making processes to protect themselves in their daily lives. Gaillard et al. (2019) underscored the high vulnerability of PEHs to natural hazards due to their 'lack of power to control processes that shape their everyday lives' (p. 332). However, the participants' responses in this study demonstrate how they actively make a series of protective decisions throughout the day. These daily decisions offer valuable insights for further exploration into how these protective actions can

Theme – Shelter Antithesis

In this section, codes were developed inductively based on responses to questions related to shelter evacuation, including follow-up questions. The emerging focused codes are observed to be related to the decisions made by PEH regarding seeking daily shelter or emergency shelter (see Table 23). The focused code "daily shelter" contains several sub-codes that reflect participants' responses regarding their perceptions of seeking daily shelter.

Table 23. Focused Codes and Categories within Shelter Antithesis

Component	Focused Code	Category	Core Theme
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PADM on Shelters	Daily Shelter		Shelter Antithesis
	• Too Many Rules	• Negative Experiences	
	• Mental State	• Fear of Injury	
	• Treatment	• Mistrust	
	• Social Discomfort	• Difficult Access	
	• Hard to Get In		
	Emergency Shelter		
• More Flexible	• Flexible and Accessible		
	• Temporary		

Daily Shelter Refusal. Responses in this section were related to questions about why participants choose to live unsheltered and their perceptions of daily shelters. The emerging codes for this section include *too many rules*, *mental state*, *treatment*, *social discomfort*, and *hard to get in*. As mentioned in Chapter 2, many PEHs opt not to seek daily shelter (Brookfield & Fitzgerald, 2018; Corburn, 2020; Donley & Wright, 2012; Fogel, 2017). Some reasons cited are "feelings of estrangement from the community, fear of authority figures, and hesitancy to leave behind belongings and/or a pet" (Edgington, 2009, p. 17). The literature offers inconclusive results explaining why some PEHs choose shelter while others do not (Donley & Wright, 2012).

In this dissertation, the questions aimed to elicit responses about participants' perspectives and experiences of using daily shelters, primarily from a disaster-focused perspective. However, the narratives revealed why they opt not to seek daily shelter, often accompanied by negative remarks and experiences, rather than providing a generalized opinion on the functions or services offered by shelters.

Too Many Rules. Within this focus code, participants reported that shelters were often characterized by having too many rules. A dominant characteristic expressed by several participants was related to time, often expressed as "a certain time," concerning arrival, stay duration, or departure.

Participant #13:

More rules. A disaster shelter they're just putting you up to the storm path. Big difference. There's too many rules. Come in a certain time. Go out a certain time. You can't work a certain time. You want to work to meet.. A lot of rules. They got too many rules. I tried to get in while I never was able to get in one. God probably didn't want me in there, and I'm strongly planning with God and Jesus strong. I lean on their knowledge and not mine.

Participant #7

Oh, no, it's, it's not easy to be in a shelter. Umm, it's just a lot of rules and regulations from the start, you know, just too many rules and regulations.

Participant #26 responded:

I go eat at some of the shelters, but I don't stay in. I like being free, I like doing what I want to do. Not necessarily, but I could have no rules towards having rules. Oh, too many rules.

Participant #21 expressed that going to a daily shelter would not work because of their job schedule, saying, "Oh, because I work. So I'm not going to a daily shelter. In contrast, Participant #34 expressed that having a job was necessary to be able to get into a daily shelter, stating:

It's just too much stress. You have to be in at a certain time. It's just too much. You have no freedom. Right now, I'm not working, so I can't go.. You have to have a job to be in a shelter. Well, you have to have source of income.

Mental State. participants expressed their sentiments toward daily shelters based on their mindset. They provided direct and concise answers, indicating their personal dislike for shelters or stating that shelters didn't align with who they are as individuals. Here are some of the responses: Participant #8, "No, just watching, it don't suit me personally. Yeah. Yeah"; Participant #17, "I just I just don't participate in that"; Participant #27, "I don't want to. I don't care for shelters that much. Like I told you, I'm not a shelter-type person. I'm in a different mindset"; and Participant #28, "I just don't go to shelters".

Participant #4 was very emotional in their response, describing how he felt at the moment and acknowledging that he was not ready to accept his current state of not having a permanent place to stay. He stated:

Like I've been homeless for seven months, but I'm still not accepting the word homeless. I know I'm displaced right now. I'm very displaced, I am homeless, I don't have a kitchen in my own place. But, I'm saying, that's not going to keep me from.. I'm like, I'll put it this way. Like I'm displaced, homeless. But at the same time, I don't fall back on the shelter, you know what I'm saying? My, my pride. My inner self, I don't. I know I am better this. So, I know that's not going to be my first call for rescue or help, that's not going to be my first thought.

Treatment. As discussed in Chapter 2, PEH reported feelings of being misunderstood, uncomfortable due to authoritarian figures, and experiencing careless treatment by shelter providers. While these experiences are individual, they align with the broader theme of mistrust that exists between public service providers and the reluctance of PEH to seek refuge in shelters (Corburn et al., 2020; Every & Thompson, 2014; Gaillard et al., 2019). In this focused code, two participants expressed a similar sentiment in detail regarding how they felt about their treatment when considering daily shelter options. Participant #14 vividly recalled his sentiments based on past experiences while staying at a shelter:

No. I don't trust shelters. I've seen too much. And they. They put people that are really, really mentally ill. I've seen people getting stabbed in their sleep. I've seen people getting bust in their head in their sleep, they do not screen these people and will put you in anybody and you won't know just too late. So, I don't stay in shelters. It's about, well, I can't say any shelter, but the two I've experienced in Baltimore and here, Baltimore, Maryland and here in Florida, are the only two shelters that I have experienced.

Well, would you feel safe if you was placed in a room for a person that was mentally ill. And when you didn't find out this, that's if you wake up to your brains is half on the floor, and you've been stabbed. And then they tell you that's.. Well, he's got mentally ill. He's got a mental illness. A fine time for you to tell me! You know, these officials that they have running this, as far as I'm concerned, my own personal experiences, they are in it for money,

they don't give a damn about you. Well, you have people there that forget that is a job. It's not their own personal business. And a lot of them run it like it's their own personal business. And they include rules and regulations and procedures that aren't part of the rules and regulations and of the house, because they've been there ten years and they feel like, well, they well own influence over you. And then when you start to question the rules, regulations and procedures, that's their booklet with something, then you really have a hard time because if this person and that person working together, they say 10-15 years damned rules, regulations and procedures, cause of what he or she say. And then if you push, down, get you put out.

When asked by the interviewer if he felt any pressure regarding this experience that caused upset, Participant #14 replied, "Pressured? I felt insulted. I felt like I was receiving inhumane treatment. And that's all I ask for. You know, humane treatment. But they treat you pretty much any way. You receive inhumane treatment". Similarly, when asked how he felt other People Experiencing Homelessness (PEH) were treated during the time he stayed at the shelters, he expressed, "I don't know Miss about other people. I'm talking about me <upset>. I've seen them get beaten. I seen the workers, the employees, three or four of them, fight with the people they are supposed to help".

Participant #40 expressed his sentiment towards staying at a daily shelter.

This participant focused more on their feelings about the treatment in general, stating:

I wouldn't go to the shelter. I'd rather sleep on the beach somewhere or somewhere outside. No. I wouldn't do that. I'm a little paranoid. I prefer not a lot of people around me. I feel as though they talk down to you instead of talking to you. You see like you and him, I feel comfortable talking to you and the same thing to co-op, but to the shelter place.. You have to bring your head here and there were some people are.. These people are already upset before they come in there. They feel as though your condition they could talk down to you. I put a stone they talk down to you. Like, I'm better than you or you're this and you're that, and I just feel like it'll give me no inspiration and no hope. I don't trust in people, I already have a dog.

Social Discomfort. In this focused code, participants expressed their perceptions regarding not seeking daily shelter based on their discomfort with being around people. Participant #10 stated, “Because I can't get along with people. That's why I don't seek shelter”; Participant #17 expressed, “It's just that I don't like being surrounded by a lot of people. I'm normally by myself. I just don't like it”; and Participant #24 also shared, “Because I don't like to be with a house like that. It might be too many people for me. I don't like to be around a bunch of people”.

Furthermore, in this focused code, participants described that one of the main reasons they do not seek daily shelter is because they have experienced theft from other individuals staying in the shelters. While the literature often focuses on the distrust of PEH towards service providers, the participants in this study expressed more distrust towards other PEH while staying in shelters. Participant #30 explained, “Yes. They separate you and you can't have your dog and you got to leave in three days and people steal from you.” Additionally, Participant #31 also shared their experience,

Yes, because they steal from you, harass you. You got to worry about human trafficking. They can get you drugged up and stealing you. Meanness, because there's people all there. Some people, mentally want to fight all the time. I don't want to be around all that. You're at more a chance to catch a bug in there than you are out in clean air. No. Not a shelter. I went to a Woman's Distress, but I had a bad experience there, so I'll never do that again either.

Participant #32 expressed, “Because I don't like how people steal at it and beat you up in the shelter. They stabbed one of the dudes in there and robbed him, so that's why I left. That's why I became homeless.” Similarly, Participant #9 shared, “Shitty. I don't like shelters. I don't like the people. Cause shelters got

nothing but homeless people steal, stink, and lie and cheat. Because people are bad. Really bad.”

Furthermore, other participants mentioned their refusal to seek daily shelter due to the occurrence of physical assaults and the risk of injury if they stayed there.

Participant #15:

No, I don't go to a shelter. I refuse to go to one, unless when necessary, but that's not what I like. I go home to one of my family's houses, stay with them for a day or two until it clears. No, I don't like to be around people that fight and argue and take personal items that belong to you. Because they're not the most honest people. These people have-- No, I won't go to a daily shelter. No way.

Participant #8:

I don't like daily shelters. Emergency I'd go cause something might happen and I might get hurt. I don't like. Like I said, I'll go to my daughter's house before I go to any of them. It's too crowded, know what I'm saying, I don't really have to.

Hard to Get In. This focused code emerged from the responses of participants who stated that the reason they would not go to a daily shelter was because they are hard to get into. Participant #25 explained, “Because it's hard to get in, and then by the time you get there, the line too long, maybe down the street, and then you have to sign register. It's no easy.” Participant #37 shared a similar experience, saying, “I never got picked. They always tell me, "Come back the next day. There's no more space.” Additionally, Participant #39 expressed, “No, because they don't have any space, and they don't have unemployment for housing or anything.”

Participant #11:

Because you can't go to a daily shelter like that, man. You got to be in to it. You got to be in the program. No, no. You got to be in the program. No, it's just their way. You gotta go through task force to get in there. You just can't walk up to them. And ask to go in, you can't just do that. No, no, not really at this particular moment. No, I am in no situation to get no task force. I'm a man, woman, I deal myself with 17 years in prison, anything I get it is good to me. So, I can deal with it.

Participant #12:

Right now it is hard to get in the shelters. I mean, because there's a long waiting list. Well, usually when I work, I if I get money, I just pay for a hotel. I provide my own shelter. I can't wait on a waiting list, so I'll go get money and then I'll get a hotel or a girlfriend lets me in the house, you know. However, I. However, I can do it.

Emergency Shelters. In this component, the term "emergency" refers to the participants' perception of emergency shelters. The responses were primarily based on their perspective in comparison to their thoughts on daily shelters. Overall, the use of emergency shelters did not have a negative connotation for the participants. In fact, many participants expressed openness to seeking shelter in emergency situations if there were no other options available to them. When asked if they had ever evacuated to an emergency shelter in the past, many participants replied with a simple "no." Some participants stated that they went to a family member's house, but they did not consider it an act of evacuation; rather, they viewed it as going to stay with family. This information highlights the participants' willingness to consider emergency shelters as a viable option in times of crisis, demonstrating a more positive perspective compared to their views on daily shelters.

More Flexible and Temporary. This focus code emerged from the responses that conveyed a perception of emergency shelters as more flexible, especially when compared to their perspective on daily shelters. As previously mentioned, the responses regarding seeking protection in an emergency shelter were generally not negative. Participant #8 stated, "I don't like daily shelters. Emergency I'd go cause something might happen and I might get hurt." Similarly, Participant #10 expressed, "Where the difference, the difference, you you you know, I'm trying to find safety for my life." Participant #30

shared, “The people that run it and the people that go there. Then the emergency shelter is like arena. It’s more like widespread. It’s not organized the same way.”

Additionally, Participant #3 stated,

Oh, yeah, if it's like at a school or something like that, then yeah. Shelter shelter, noo, I wouldn't. Because it's a lot more smaller and it's cramped. And, you know, you got a lot of stuff going around. I'd rather be in a bigger, a bigger area. Like when they open up one like hurricane shelter or something like that, I would go to that, you know, more room for everybody, still got to socially distance. No, it's like a school. I'll go there. I'm not going to the Salvation Army, the HAC, BOC. I'm not going to places like that.

Participant #15:

Yes, of course, there is. Because one is temporary, and one is like, you have to sign in. Temporary shelter for evacuation, everybody comes, get a cot, get a blanket, get in a corner. Here's water, here's soda, here's juice, here's a meal. Relax. Now, let's wait out the storm. And of course, not all were open to going to an emergency shelter.

As previously mentioned, this section primarily focuses on the participants' perceptions of daily shelters. Their responses align with the findings of Donley and Wright (2012), who identified key reasons why PEH refuse to use homeless shelters, including concerns about “the location of facilities, safety, prior negative experiences, desire for companionship, and a need for freedom” (p.295).

In contrast, when it comes to emergency shelter use during disasters, participants expressed a more positive attitude, indicating a willingness to utilize these services for evacuation purposes. This sentiment is supported by Settembrino's (2016) research, which highlighted positive experiences of PEH actively engaging in community recovery efforts after the devastation caused by Hurricane Sandy. It's important to note that these perceptions differ from those reported by some PEH who felt that the use of emergency shelters exacerbated stress responses (Fogel, 2017).

Ultimately, various factors contribute to the lived experiences of shelter use for PEH. This study's findings underscore the significant differences in perceptions between seeking daily shelter versus emergency shelter. In the context of disasters, participants are more inclined to consider evacuating to an emergency shelter due to the flexibility and temporary nature of their services.

Chapter VI: Data Analysis and Interpretation – Third Stage of the PADM and the COVID-19 Pandemic

In this chapter, I discuss the data analysis and interpretation of the Third Stage of the Protective Action Decision Model (PADM): Behavioral Response, Situational Facilitators, and Impediments. Each stage of the PADM is presented with the participants' responses, accompanied by the emerged focused codes, categories, and themes. Subsequently, I explore the data analysis and interpretation of the COVID-19 pandemic component. This section also includes the participants' responses, as well as the emerged focused codes, categories, and themes. In the context of the Third Stage, the focus is on Situational Facilitators and Impediments.

Theme - Facilitators and Impediments

The questions in this section were related to past evacuation experiences and specific factors affecting evacuation decisions during disasters or extreme weather events. The participants' responses provided straightforward answers regarding factors that helped or inhibited their capacity to seek a protective response or evacuate before a disaster. Some participant responses were similar to other components, such as reasons for refusing shelter and the everyday challenges of living unsheltered on the streets. However, the participants' responses to situational facilitators and impediments offered a more direct insight into a solutions-based approach. Identifying these specific factors provides an understanding of evacuation behaviors and the particular factors that can facilitate individuals to evacuate.

For the Third Stage of the model, I included Behavioral Responses as a component, which included questions regarding past evacuations or potential evacuation decisions. Unfortunately, the responses did not reflect answers that addressed specific evacuation behaviors or outcomes. As previously mentioned in the literature, the behavioral response component includes information research, protective response, and emotion-focused coping, as proposed by the PADM by Lindell and Perry (2012). I could not obtain participant responses for this component because several participants have yet to evacuate to an emergency shelter. Another reason was that when asked about the potential of evacuating to an emergency shelter, the answers were concise, with yes or no answers. When exploring the "no" responses, they were straightforward, as individuals mentioned going to a family member's home.

Moreover, several participants could not recall details or even the names of events from previous years. The inability to remember details about specific disasters provoked stress and frustration in some participants, leading them to shut down during this part of the interview. Therefore, more carefully crafted questions should consider this specific component, such as exploring this response using a hypothetical scenario or when discussing an actual event that the participant experienced in the past. For this reason, I decided to continue and explore the remaining components of the Third Stage, which would better guide me toward answering the factors that affect the evacuation decisions of people experiencing homelessness, as posed by my main research question.

Furthermore, several participants were unable to recall specific details or even the names of events from previous years. This difficulty in remembering particular disasters caused stress and frustration for some participants, leading them to withdraw during this

part of the interview. Consequently, more carefully crafted questions should consider this specific component, such as exploring this response using a hypothetical scenario or when exploring an actual event that the participant experienced in the past. For this reason, I chose to continue exploring the remaining components of the Third Stage, which would provide better insights into the factors influencing the evacuation decisions of people experiencing homelessness, as posed by my main research question.

Situational Facilitators. Participant responses in this section pertained to questions about what made it easier to go to an emergency shelter during a disaster or extreme weather event. The focused codes that emerged included *transportation*, and *access and comfort*, leading to the emergent category 'ease of access' (see Table 24). Most participants provided straightforward responses. Some simply answered 'nothing,' indicating that they would go to an emergency shelter during a hurricane or extreme weather without specific facilitators. However, for some participants, the question about factors facilitating their mobilization or stay at the shelter was not entirely clear; instead,

Table 24. *Focused Codes and Categories within PADM’s Facilitators and Impediments*

Component	Focused Code	Category	Core Theme
Situational Facilitators	<ul style="list-style-type: none"> • Transportation • Access and Comfort 	<ul style="list-style-type: none"> • Ease in Access 	Facilitators and Impediments
Situational Impediments	<ul style="list-style-type: none"> • Too Many People • Location 	<ul style="list-style-type: none"> • Crowds and Distance 	

they focused on their decision to seek shelter.

Transportation. Within the category of facilitators, the focused code 'transportation' collectively described a key factor that facilitated their decision to evacuate to an emergency shelter. Some responses were straightforward, such as Participant #2 stating, “Transportation,” and Participant #39 explaining, “Well, if I had

my own transportation, that would be a lot easier.” Others provided more detailed insights into how transportation would make their evacuation decisions easier.

Participant #3 stated:

When they issue that warning over or whatever system they issue it over, you see there's no traffic on the road and that's easier. They got busses coming around picking up people. Yeah, I know it's time to go. Yeah it's easy, because it's going to be like a school bus, something like that. For Hurricane Sandy, they were using city busses. City busses, school busses.

Participant #31 mentioned,

If I knew they'd come and pick me up directly, a direct pick up. Then of course, not be packed in like sardines in a tin can and my stuff is safe and then it wouldn't be hot”. One participant expressed transportation in terms of receiving assistance to get there using his own vehicle.

The literature on emergency and evacuation planning often identifies PEH as one of the most vulnerable populations during disasters, primarily due to their lack of access to transportation or car ownership (Drabek, 1999; Eisenman et al., 2007; Hess & Gotham, 2007; Renne et al., 2011). In this study, one participant reported living in his van, which served as his primary mode of transportation. The remaining participants relied on public transit for transportation.

Overall, the majority of participants expressed awareness of the available transportation options for evacuating to an emergency shelter. While some participants were unsure about the specifics of how these systems operated, they knew of their existence and indicated that, in a worst-case scenario, they would seek assistance from others in locating a pickup spot. Additionally, some participants mentioned using city buses in previous evacuations to emergency shelters and reported having positive experiences with this mode of transportation.

Access and Comfort. Another facilitator that emerged as a focused code was access and comfort within an emergency shelter. For some participants, increasing the number of open shelters would be helpful for their decision to evacuate. Participant #6 stated, “They should open more shelters,” and Participant #15 mentioned, “Getting early access and leaving early.”

Other participants highlighted the importance of comfort as a facilitator for their evacuation decision. Some described physical comfort measures, while others emphasized comfort related to rest and respect for other people, including fellow PEH and shelter personnel. Participant #37 remarked, “A pillow and some comfort. Give me a pillow and a blanket, and I'd be all right.” Participant #9 mentioned, “Food, clothes, water.” When asked what would make it easier to go to an emergency shelter, Participant #40 answered, “They make it pretty easy. You just have to come to a shelter or a pickup point.”

Situational Impediments. Responses in this section were related to the question asking if there were any factors that made it more challenging for them to go to an emergency shelter. In this component, two focused codes emerged: *too Many People* and *location*. The responses in this component were contrary to the shelter accessibility theme previously reported.

Too Many People. This focused code emerged from participants expressing that the presence of a large number of individuals at emergency shelters made their decision to evacuate to such shelters more challenging. Here are some participant statements: Participant #17, “It's just that I don't like being surrounded by a lot of people. I'm

normally by myself”; Participant #24, “It might be too many people for me. I don't like to be around a bunch of people”; and Participant #34:

I just hear a lot of problems. You have to sleep by people, people stay stuff. It's just a lot of negatives, more than positives. You have bigger the positives. Some of them help you get a spot and stuff, but I don't want to go through the stuff that come with it.

These concerns may not have made much sense if we look back 35 years ago when Sorensen and Mileti (1988) suggested,

Many officials worry about shelter capacity despite the overwhelming evidence that most people do not go to an official shelter, capacities are rarely exceeded. Although sheltering should not be ignored, it should not be a focus of concern during an emergency (p. 207).

The impediments described by participants highlighted the increased challenges faced by PEH during the early stages of the pandemic. While some participants expressed a preference for sleeping away from other PEH, many shared that they often had to sleep in close proximity to others, putting them at a higher risk of contracting infectious diseases. Therefore, staying at a shelter, particularly for PEH who typically live in isolation, was reported as concerning. During the pandemic, these concerns were exacerbated by crowded spaces and congregated living settings that were conducive to the spread of the virus and other infectious diseases (Bhat et al., 2020).

Location. Within this focused code, participants' responses indicated that the location of the emergency shelter influenced their decision to evacuate to them. Here are some participant statements: Participant #14, “Miss, if I didn't have to go in in the first place. And depends on where the shelter is. It depends”; Participant #6, “The distance where it's located. And basically, what's going on that day. Because I may be somewhere

and I can't get to the shuttle because they stopped the busses. So, it would be day by day on that”; and Participant #35 stated that depending on the type and location of the emergency shelter, this participant would consider going, “Because they might split me and my kids up. If that happens, then I've got to leave”. These responses reflect how the specific location and circumstances surrounding the emergency shelter played a crucial role in participants' evacuation decisions.

COVID-19 Pandemic

Theme - Informed Hopeless/Helpless

In this section, the interview questions centered around how the COVID-19 pandemic impacted the participants' evacuation decisions during disasters. The questions explored the direct effects of the pandemic on the participants, how it influenced their evacuation choices, and how they received initial and updated information about the pandemic. This section presents participants' responses within four main components, which led to the emergence of focused codes and categories (see Table 25).

Table 25. *Focused Codes and Categories within Informed Hopeless/Helpless*

Component	Focused Code	Category	Core Theme
Affected	<ul style="list-style-type: none"> • Loss of a Job • Loss of a Home • Loss of Family 	<ul style="list-style-type: none"> • Generalized Loss 	
Decision to Seek Shelter	<ul style="list-style-type: none"> • Distancing • Placement 	<ul style="list-style-type: none"> • Isolation Measures 	Informed Hopeless/Helpless
Initial Information	<ul style="list-style-type: none"> • News • People • Death • Shutdowns 	<ul style="list-style-type: none"> • Informed and Personal Experience 	

Latest Information	<ul style="list-style-type: none"> • News • Phone • Community 	<ul style="list-style-type: none"> • Informed and Community Resources
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Affected. Responses to how the pandemic affected them led to the emergence of focused codes related to the *loss of a job, a home, or a family member*. In some cases, participants mentioned becoming homeless because of the pandemic. Those who were already experiencing homelessness before the pandemic expressed feeling a loss in the stability of their current living situations due to the distancing and isolation measures implemented during that period. The loss of a family member or friend was described as a result of becoming sick with the virus, which led to their death.

Loss of a Job. This focus code emerged from participants' responses concerning job loss. Here are some participant statements:

Participant #12
 The pandemic I lost my job. That's how I found out, as soon as the pandemic hit, they relieved, my restaurant, I'm a chef, as soon as the pandemic hit, my restaurant closed. So I lost my job. They didn't bring me back because they wanted me to take a pay cut. I went on unemployment, and I collect unemployment.

Participant #29
 Yes, it did. I lost my job. I lost everything. No. I just had a furlough. Had furlough. My job laid me off in a severance. I lost \$95,000 a year.

Participant #18:
 Well, the face mask thing and we had to wear 'em when I was working at the time. We had to wear 'em on the job and we had no air conditioning. It was hot. Yes, I was at work and nobody liked it, but we did it anyways. They shut down a job a few times because a couple of people tested positive.

Loss of a Home. As mentioned in the literature, the COVID-19 pandemic resulted in people facing the risk of losing their homes, becoming homeless, or experiencing displacement (Pixley et al., 2021). Some participants described these unfortunate

consequences: Participant #30 “Yes, we got homeless because of it. Then they jacked up the rent and everything and kicked everybody out. Even though we paid the rent, they still kicked us out”, and

Participant #6:

I'm homeless because of COVID 19. I was, okay. I was both because I had COVID. Well, let me start back over. You know, COVID started in February, March 2020. My roommate lost his job when they shut, when everybody shut down and he couldn't pay his half of the rent. So he moved out and I couldn't pay \$1500 by myself. So I ended up on the streets. They were telling me call organizations for help with rent and I kept getting the runaround. There was no organizations yet to help with rent. I even went to the property manager stating, look, I'm stuck because of COVID. He was telling me there was nothing he could do. That was March. And then in July I had COVID for 2-weeks.

Other participants who were already experiencing homelessness before the pandemic described changes in their living situations and stability: Participant #10, “Yeah, they came, you know, they, they came and got people, putting them up in your hotel, they said six months, but then they only let us stay for two months”, and

Participant #26,

They didn't vaccinate. They came around testing often. Once every 2- weeks they came out testing. I took a couple of them, and I start taking the test because I figured I didn't have anything to do. They didn't open up the shelters at first. They shut down everything first. By then they had us in tents. After a couple of months, then they started offering shelters like hotels and things like that. I was also working at the local community store. I didn't really want to go to the hotel once I had my tent. After the tests they were doing around the community, pretty much nobody, it wasn't a danger for us in the little area because no one-- I couldn't say it really did, but just had to have.. I was off for a year. The country was shut down for a year. I was in my tent for a year. It wasn't a negative effect, but I guess I wouldn't say it was a positive effect because there is nothing good about it.

Loss of Family. The COVID-19 pandemic also led to participants experiencing the loss of family members or close friends. Participant responses included:

Participant #25,

I don't know just, I lost my brother. I lost my brother. I lost my auntie, grandma. It just chewed away half of my family. Then I lost my sister on Saturday. I didn't even know. I'm in the streets. Can't bury my own step-sister Saturday. This Saturday, or back. No. Just died. They don't know. All of a sudden, she just died. What the hell? I don't know. It didn't make it hard. It made it worse. It made it terrible. I lost everything. My family. That's terrible. No weather, no shelter.

Participant #38:

Literally, I know a lot of people that died from COVID-19. There's Monkeypox. I just found out that Monkeypox is out here, and I didn't find out that Monkey Pox was out here till I was on Facebook. A lot of stuff—.

Some participants expressed being affected because most of their family members contracted the virus: Participant #24, “Yes, because most of my family members had it before, but not me”. While others found some positive aspects during the pandemic, such as reconnecting with family:

Decision to Seek Shelter. In this section, participants were asked how the pandemic affected their decision to seek shelter. The emerged focused codes primarily relate to how the pandemic influenced participants' choices in seeking shelter, with a particular focus on *distancing* and *placement*. This led to the emergence of isolation measures as a category. It's worth noting that Fujita et al. (2020) described many of these measures aimed at preventing virus transmission as unrealistic within the homeless community. Some participants shared their personal experiences and the measures they adopted to prevent acquiring the virus.

Distancing. Some participants reported practicing self-distancing from others. For example, Participant #18 stated, "No, I distanced myself from people." Another participant expressed fear about the possibility of contracting the virus and the hesitation to seek shelter, as illustrated by Participant #17's remark: "Yes, I am afraid that if I get around people who have COVID or something, I could probably catch it."

Brown and Edwards (2021) have described similar concerns regarding the heightened risk of virus transmission among the homeless community due to their challenges in practicing proper social distancing. Additionally, the literature has indicated that PEH are at a higher risk of contracting the virus due to their vulnerability to communicable diseases (Pixley et al., 2021; Venter & Heese, 2022).

Placement. Some participants recalled their experiences of being initially distanced and placed into hotels, motels, and other shelter-like facilities. In Broward County, hotels were repurposed as shelters to contain virus transmission among individuals with limited resources (Whytlaw et al., 2021). Similarly, cities like Fort Lauderdale, San Francisco, and Chicago implemented hotel-based COVID-19 isolation and quarantine strategies to protect PEH and the community (Fuchs et al., 2021; Kennedy & Rathke, 2021; Preidt, 2021). Participants shared their experiences:

Participant #10,

Yeah, they came, you know, they, they came and got people, putting them up in your hotel, they said six months, but then they only let us stay for two months. Yeah, I can't remember what's the name of the hotel. It was 441 and commercial boulevard.

Participant #26:

After a while they did, but I didn't want to go to the hotel. They didn't open up the shelters at first. They shut down everything first. By then they had us in tents. After a couple of months, then they started offering shelters like hotels and things like that. I was also working at the local community store. I didn't really want to go to the hotel once I had my tent.

Other participants mentioned that their decisions regarding shelter changed when quarantine and isolation measures were no longer in effect: Participant #6, "They're full. It's gotten worse", Participant #12, " Oh, no. Actually, it enhanced my shelter because I had no place to go to work. And now I'm one of streets lonely", and

Participant #16

Yes, in terms of, there's a lot of restrictions around, so you just have to work around them. No. Only because I didn't have anywhere else to go. I just had to. I did get vaccinated, I didn't want to, but because of the shelter, they wanted you to. Other than that—.

Initial Information. Participants' responses regarding how they initially received information about the pandemic led to the emergence of focused codes, including *news*, *people*, *death*, and *shutdowns*. Within these codes, categories of informed and personal experience also emerged.

News. The majority of participants reported that their initial information about the pandemic came from news sources, making "news" the primary focus of this code. News outlets played a crucial role in disseminating information about the novel COVID-19 virus. This aligns with the principles of the Public Awareness and Disaster (PADM) model and is consistent with how participants gather information about disasters or extreme weather events. Here are some participant responses related to this focused code: Participant #10, "How did I find out? Through the news! Yeah, the news on CNN", Participant #20, "I was in jail and heard it on the news", Participant #2, "By news. Channel seven. Library", and Participant #19, "On the computer. I was keeping track of it, and then it got bad. The computer".

Some participants provided additional details about their news sources: Participant #11, "On the news, my phone. You know, just seeing people generally talking about it. When I first heard about Corona, I thought they were talking about death"; Participant #31, "Oh, well, that was a time when we did have a place temporarily. We saw it on the news and all that and of course, people talking in the stores saying you can't come"; and Participant #15, "How did I find out? I was listening to Dr. Fauci and the President and the CDC and they are the ones that informed us about this". Additionally,

specific news channels like CNN and local news outlets were frequently mentioned by some participants as their primary sources of information.

People. The focused code *people* encompasses responses related to family and individuals in participants' surroundings who initially informed them about the pandemic. Many of these responses were straightforward. For instance: Participant #41 mentioned, "My mom"; and Participant #25 stated,

It was on the news worldwide. It was in China, then it came here.

One of my family members had to come by, so I had a phone, sayin' "Hi, how're you doing?" Then they had said, "The disease out there, COVID out here.

Participant #8, who reconnected with his daughter because of the pandemic, stated that he heard about the pandemic from her first. He added, "I moved, I got a room at my daughter's house, you know what I'm saying".

Although he explained this move as temporary, "No, like I said. I chose to be out here, you know what I'm saying. Do what I do. Sometimes I go home for months, sometimes I be out here for weeks of whatever I feel like".

Death. Some participants mentioned that they first learned about the pandemic from news related to death or from having the virus: Participant #23, " My sister had COVID and stuff, and so she got a watch out and I'd seen a lot of people get COVID", and Participant #38 stated,

I found out there was COVID-19 because I heard it on the news, and then I heard it on the radio, and then my uncle. My uncle was working out there in Sawgrass. I didn't think it was that serious down here until Marco called me and said one of my auntie's passed away from it.

Shutdowns. Several participants mentioned that they became aware of the pandemic by witnessing the shutdowns and closures happening in their surroundings.

Traditionally, in disaster research, observations of shutdowns and business closures have been associated with signals of impending hurricane threats (Huang et al., 2012; Lindell et al., 2005; Lindell & Prater, 2008). However, the experience of the global pandemic has expanded the context, affecting various aspects of daily life. PEH were not exempt from its effects, and some shared their initial awareness of the pandemic in the following ways: Participant #12, “The pandemic I lost my job. That’s how I found out, as soon as the pandemic hit, they relieved, my restaurant, I’m a chef, as soon as the pandemic hit, my restaurant closed” and Participant #35, “Everybody was talking about it and then stuff started getting shut down”.

One participant offered a comprehensive account of how he initially became aware of the pandemic. He recounted that his first knowledge of it came from conversations with other people, although he initially held doubts. However, as he witnessed an increasing number of shutdowns and closures happening around him, he gradually began to accept the reality of a pandemic unfolding. Participant #26 shared his experience:

Actually, people started talking. Friends we'll meet, not friends, but the neighborhood. You hang out, you go outside, somebody ask for a soda, he said, "Man, it's a new virus going on out there. I don't want to share my soda." I didn't hear anything about it until later, and then a week later, they shut down everything. I was shocked. I was shocked, saying like, Wow, that virus is really serious! Then the masks. They didn't open up the shelters at first. They shut down everything first. By then they had us in tents. After a couple of months, then they started offering shelters like hotels and things like that. I was also working at the local community store. I didn't really want to go to the hotel once I had my tent. After the tests they were doing around the community, pretty much nobody, it wasn't a danger for us in the little area because no one--They gave us tents. They gave us masks. Downtown Miami, Overtown Miami. They didn't want us just outside. We were homeless, they gave most of the tents. Everybody had a tent. It was like one-man tents or two-man tents. Basically, everybody had a tent. They stayed in there. If you didn't have a girlfriend, you will be in your tent by

yourself. All year. They took it away after COVID. After the COVID, they took it away. Once it started, I was in there for a year.

Latest Information. Responses regarding how participants obtained the latest information about the pandemic mirrored some of the focused codes related to initial information sources. These responses led to the emergence of focused codes such as *news*, *phone*, and *community*, with the subsequent categories of being informed and community resources.

News. This focus code emerged from participants who reported obtaining the latest information about the pandemic from news sources. Some of their responses included: Participant #13, “Channel Seven News on the phone”; Participant #15, “I’ll listen to the radio and they’ll tell me or just go online and go to the CDC, Center for Disease Control. They’ll tell you”; Participant #18, “Channel 4 News”; Participant #19, “Computer. Library”; Participant #20, “Watch TV”; and Participant #36, “Online. The news”.

Phone. Several participants mentioned obtaining the latest information directly from their phones. Their responses were concise: Participant #9, “On the phone”; Participant #11, “From my phone pretty much”; Participant #21, “The phone”; Participant #22, “In my phone”; Participant #35, “My phone or the library”; Participant #16, “Google it”; and Participant #38, “Sometimes I google it”.

Community. The focused code *community* emerged from the participants' responses regarding how they obtained the most up-to-date information about the pandemic. In comparison to when they initially received information about the pandemic, the latest information had a stronger sense of community involvement, as evidenced by the following participant responses: Participant #25 stated, “Through you. Through y'all.

Through people like y'all that help people"; Participant #31 mentioned, "Our church gives the tests away"; Participant #33 shared, "There's people come out here in the park and they give out the test for you"; Participant #41 explained, "I go to the hospital"; and Participant #26 said, "I wait for people to come around like it happened the last time."

Overall, these focused codes capture the participants' perspectives on their access to information about the virus, which contributed to their increased awareness and reduced uncertainty about how to respond and protect themselves during the pandemic. The initial widespread shutdowns limited community involvement due to concerns about virus transmission. As a result, information sources such as news, phone, and community resources served as a lifeline for People Experiencing Homelessness (PEH) in obtaining the most up-to-date information about the pandemic. These sources helped PEH make informed decisions about the best ways to protect themselves and take necessary protective actions.

Chapter VII: Contributions and Implications

The purpose of this research was to gain a deeper understanding of the evacuation decisions made by PEH during disasters, utilizing a protective action theoretical model. To achieve this, I aimed to identify the factors influencing the behavior and decision-making processes of individuals experiencing homelessness during disasters. By examining PEH's lived experiences, I wanted to uncover potential opportunities that would facilitate their evacuations and could also benefit researchers and practitioners in expanding their knowledge and processes within the fields of emergency management, public administration, and homelessness research.

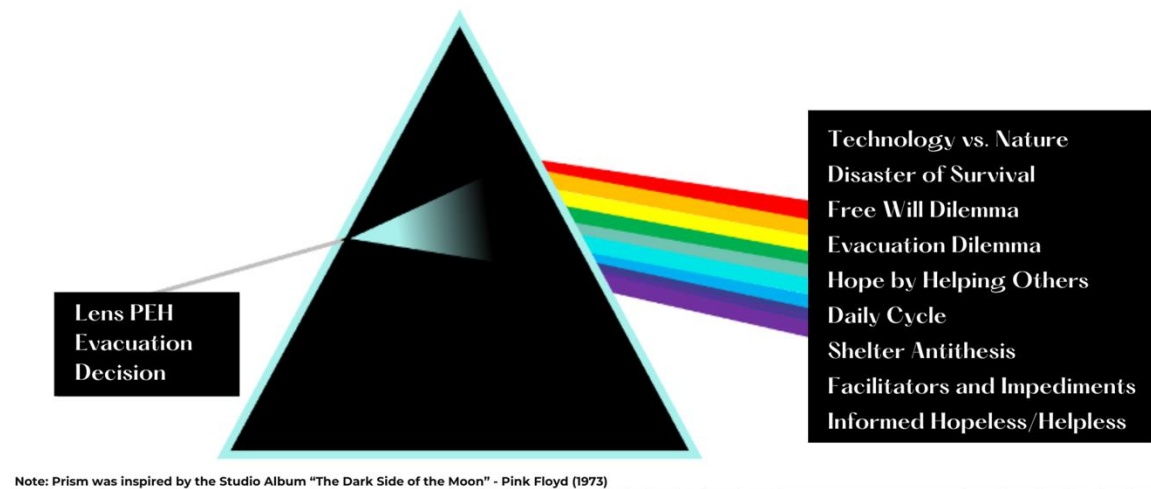
From the moment I crafted the interview questions to the culmination of the interviews, the purpose of this dissertation evolved significantly. Initially, my aim was to gain insights into the evacuation decisions of PEH. However, as I progressed, the purpose expanded beyond research. I aimed not only to understand PEH's evacuation choices but also to provide a platform for this marginalized population to openly express their innermost thoughts and experiences. This arose from the awareness that sometimes, there is no one available to listen to them.

During every interview, I noticed that many participants hadn't talked to anyone in a long time. They hadn't had a chat without expecting something in return or fearing they might get hurt or yelled at. They just wanted someone to listen to them and have a conversation. These discussions naturally flowed, including times when we laughed, cried, were cautious, or frustrated with life. As a result, the interviews felt more like

friendly conversations with people who had stories to share and needed someone to listen.

In this dissertation, the participants' responses revealed nine key themes that shed light on the factors influencing the evacuation decisions of people experiencing homelessness (PEH). To answer the research questions, I will use a metaphorical prism. Imagine the left side of this prism as a PEH's perception, and when you shine light through the prism, which represents their life, you can observe the light dispersing in various directions on the right side of the prism. This dispersion symbolizes the diverse factors that shape their decisions (see Figure 4). It's important to note that each factor within this prism may vary because everyone sees the world through their unique circumstances and experiences.

Figure 4. Prism – Lens of PEH on evacuation decisions - Themes



Question 1. What factors influence the evacuation decisions of a person experiencing homelessness (PEH) to seek shelter or to evacuate when a natural disaster occurs?

To answer this question, I identified eight themes that emerged deductively and inductively. These themes emerged as a result of applying the PADM to the lived experiences of participants who have experienced homelessness while living on the streets. The emerging themes were *Technology vs. Nature*, *Disaster of Survival*, *Free Will Dilemma*, *Evacuation Dilemma*, *Hope by Helping Others*, *Shelter Antithesis*, and *Facilitators and Impediments*. Each theme is discussed below.

Question 2. How has the COVID-19 pandemic influenced the decision of a PEH to evacuate or seek shelter?

To answer this question, the theme *Informed Hopeless/Helpless* emerged deductively from the responses, drawing on the perceptions and experiences of PEH during the early stages of the COVID-19 pandemic. This theme is discussed below.

In this dissertation, I interpreted the emerging themes as the identified factors influencing the evacuation decisions of PEH. As previously explained, these themes developed through a combination of deductive and inductive approaches. The deductive aspect was rooted in the application of Lindell and Perry's (2012) Protective Action Decision Model (PADM). This phase focused on extracting and analyzing the factors that influence evacuation decisions for PEH during disasters and extreme weather events.

Conversely, the inductive phase arose from various responses that delved into the lifestyle, challenges, and shelter perspectives of PEH. Both the deductive and inductive findings played a crucial role in addressing the research questions posed in this dissertation. The inductive themes provided additional context and insights,

complementing the deductive-based themes and contributing to a more comprehensive understanding of the participants' responses.

Answering Research Questions

Research Question #1.

What factors influence the evacuation decisions of a person experiencing homelessness (PEH) to seek shelter or to evacuate when a natural disaster occurs?

Technology vs. Nature

The responses from participants regarding how they initially receive information about disasters align with the components proposed by Lindell and Perry's (2012) PADM. These components include environmental cues, social cues, information sources, and warning messages. Interestingly, these responses shed light on the significant role of technology in the lives of PEH and its influence on their evacuation decisions.

In this study, the primary source of information for PEH before a disaster or extreme weather event was news obtained through their cellphones. This reliance on technology challenges the notion that technology necessarily marginalizes this population. Instead, it serves as a critical means of accessing information for them. This observation raises important questions about access to technology and services within the homeless community.

While technology, especially cellphone news, was the most common source of information, some participants also mentioned interpreting physical manifestations of the weather. This introduces a fascinating aspect of how intuition can influence evacuation decisions among PEH. It raises questions about the balance between technology and natural intuition in shaping these decisions.

Official warning messages, a component of the PADM, were not frequently mentioned as the initial source of information. This may be because not all participants had a working cellphone. Within the homeless community, having a cellphone or being near someone with one was crucial for accessing news about disasters or extreme weather events. This highlights how a PEH with a cellphone becomes a gatekeeper of information, wielding both power and responsibility in guiding and protecting lives.

While social cues were not the primary means of obtaining initial disaster information, those with cellphones and the ability to interpret weather information placed trust in various news sources and weather-related applications. Therefore, for PEH, news through technology becomes the most common way to stay updated about the weather, playing a significant role in their evacuation decision-making process.

Sensory cues and intuition were also factors mentioned by some participants in recognizing impending disasters or extreme weather events. They relied on physical cues, animal behaviors, and sensory perceptions of weather changes. However, this reliance on sensory cues can potentially lead to delayed evacuation decisions, as it might underestimate the speed at which a disaster event can unfold. This aligns with previous research on homeowner's wildfire evacuation decisions (McCaffrey et al., 2017), where relying on physical cues delayed evacuation decisions. It's important to note that, in contrast to the homeowner context, PEH's evacuation decisions were not driven by the need to protect property.

In summary, the responses of PEH regarding their sources of disaster information highlight the intricate interplay between technology and natural intuition in shaping their evacuation decisions. The findings emphasize the significance of technology as a lifeline

for information access within this community while acknowledging the potential challenges associated with relying solely on sensory cues and intuition for protective actions during disasters or extreme weather events.

Disaster of Survival

The questions asked during the interviews naturally delved into the unique nature of homelessness, leading to an exploration of various aspects of their lives, including their surroundings, challenges, the impact of weather, and available resources. This in-depth examination aimed to uncover the factors that influence the evacuation decisions of PEH.

PEH's physical world is largely confined to their immediate environment, limited mobility, and the few possessions they have. Consequently, their responses regarding the factors affecting evacuation decisions were deeply intertwined with how they manage their personal belongings, transportation options, interactions with others, and their places of stay. Additionally, the numerous challenges and stressors they face significantly shape their evacuation decisions, often mirroring the decisions they make on a daily basis to ensure their survival.

In Chapter 4 of the dissertation, each of these elements was discussed in detail, illustrating how the daily decisions required for survival are often analogous to the decisions they must make when faced with evacuation scenarios. This underscores the idea that the daily lives of PEH are, in many ways, akin to living through a continuous natural disaster. This notion is encapsulated in a participant's response when asked about experiencing disasters, where they humorously remarked that aside from being homeless, everything else was okay.

Therefore, the emergence of the theme *Disaster of Survival* encompasses all the elements described by participants, reflecting the harsh realities and struggles faced by unsheltered PEH living on the streets. As mentioned earlier, these responses emerged inductively, piecing together the fragments of their lives, including their meager belongings, the challenges they encounter, the harsh weather conditions they endure, the complex considerations of pet ownership, and the daily struggle to access the essential resources they need. All of these factors collectively shape their decision-making processes when it comes to evacuating during a disaster or extreme weather event.

Free Will (perception) Dilemma

The pre-decision processes outlined in the PADM encompass three crucial elements: exposure, attention, and comprehension (Lindell & Perry, 2012). These elements collectively determine whether information about a disaster is not only received but also understood well enough to prompt a protective action. Within the homeless community, various factors can hinder the effective transmission of disaster-related information, potentially influencing the decision-making process related to seeking protection during a disaster or extreme weather event.

Several elements may impede the transmission of disaster information within the homeless community. These include reduced cognitive ability, living in hard-to-reach areas, or physical disabilities. Any factor that interferes with the proper communication of information can impact the decision-making process, potentially leading to a failure to take protective actions. Interestingly, continuous environmental noises in their surroundings, such as those near bus terminals or train tracks, were not reported as impediments to receiving information.

Participants reported a better understanding of information received in person from various public service officials, regardless of whether it was provided at their place of stay or at resource centers they frequented. In terms of the pre-decision process of attention, some participants expressed regret over past instances where they consciously ignored disaster-related information, resulting in them finding themselves in perilous situations.

It's worth noting that while this study cannot generalize the perceptions and evacuation behaviors of all people experiencing homelessness, the participants appeared to be awake, alert, and oriented, capable of answering questions and thinking critically about the topics discussed. Some participants also disclosed underlying mental health issues like anxiety and paranoia. However, based on the interviewer's perception, the participants demonstrated a clear awareness of the daily dangers of street life and the potential risks associated with not evacuating during a disaster or extreme weather event.

By applying Lindell and Perry's (2012) PADM's pre-decisional processes (exposure, attention, and comprehension), this study established a baseline understanding of how people experiencing homelessness perceive disasters. The responses indicated a level of awareness and insight into the meaning of disaster-related information. Decision-making in the context of seeking shelter and self-protection was characterized as a *Free Will Dilemma*, reflecting the conscious nature of these decisions and the choices made by individuals within this community.

Evacuation Dilemma

There was a notable level of awareness and understanding among the participants regarding the physical threats posed by disaster events, especially when living

unprotected on the streets. However, this awareness and understanding appeared to be somewhat distorted and influenced by their perceptions of previous sheltered living situations. For instance, their threat perceptions of a hurricane were largely based on the intensity and the perceived level of danger associated with the physical manifestations of the disaster.

Participants tended to base their decisions to evacuate on their interpretation of the hurricane's intensity. A category 4 or 5 hurricane was generally considered worth evacuating from, while categories 1, 2, or 3 were often viewed as manageable outdoors. Many participants made their evacuation decisions based on whether the place they stayed could withstand the intensity of extreme winds and rain, without necessarily considering the potential hazards of lower-category hurricanes. This distortion or misconception could be problematic, as it might lead to underestimating the dangers posed by lower-intensity winds, particularly when living unprotected and unsheltered.

This perception of threat intensity echoes findings from Huang et al.'s (2017) study, which applied the PADM to household hurricane evacuation decisions. In that study, participants also exhibited misconceptions regarding threat perception, with a focus on wind damage intensity. They perceived wind damage as more dangerous, based on the intensity scale, than the deadly storm surges and inland flooding that had historically caused the most deaths during hurricanes (Huang et al., 2017). Therefore, responses in this study suggest that the basis for threat perceptions often hinges on wind intensity, potentially overlooking other critical factors associated with disaster events.

In this study, protective actions were commonly associated with extreme life-or-death situations in the context of seeking shelter from a severe threat. Participants

frequently referred to the concept of survival when describing how and when they would protect themselves during a disaster. Applying the PADM framework to assess protective action perspectives among PEH revealed that the loss of personal belongings was not a significant factor influencing their decisions to evacuate, in contrast to PADM research based on households, where evacuations are often strongly influenced by the desire to protect property (McCaffrey et al., 2017).

The role of stakeholders, such as authorities and formal sources of disaster information, was characterized as a form of authority and formal confirmation of disaster or extreme weather-related information. However, trust in stakeholders varied among participants, with some expressing hesitation based on previous negative experiences in their daily interactions on the streets. Nevertheless, regarding disaster and extreme weather information specifically, responses generally indicated trust in stakeholders and their guidance on evacuation processes. However, this trust did not necessarily emerge as the sole decisive factor motivating people experiencing homelessness to take protective actions.

In summary, threat and protective action perceptions among people experiencing homelessness are intertwined and primarily driven by the overarching goal of protecting their lives. Stakeholders represent the voice of authority guiding and facilitating protective actions. Consequently, an *Evacuation Dilemma* arises when seeking protective action through evacuation, particularly when factors like intensity and the sense of danger are subjectively perceived.

Hope by Helping Others

In this theme, humanization emerged as participants expressed their willingness to offer advice and assistance to newcomers or strangers experiencing homelessness. This assistance extended to providing guidance on safeguarding their lives, particularly in the context of disaster-related advice. Participants went beyond advice and actively participated in the evacuation process, even going as far as accompanying others to shelters.

While there was a distinction between advice related to daily survival on the streets and disaster preparedness, participants unanimously emphasized the importance of protecting others by sharing knowledge and actively participating in the process of seeking safety. This sentiment was a powerful demonstration of their shared humanity and solidarity.

The responses highlighted how individuals experiencing homelessness seek to humanize their experiences by offering support and assistance to others, despite the challenges they themselves face. It was notable that most participants displayed genuine concern and empathy toward their fellow homeless individuals, whether in the context of daily life or disaster preparedness. When participants expressed hesitation in helping others, it was often rooted in their own struggles to meet their basic needs.

The collective voice that emerged from the responses underscored a strong commitment to assisting and protecting others, regardless of the personal difficulties and daily challenges they grapple with. This shared sentiment served as a powerful testament to their resilience and determination to support one another, regardless of societal perceptions.

It's important to acknowledge that these sentiments may vary among different groups of people experiencing homelessness in other locations. However, the responses from this particular group provided a poignant glimpse into their shared humanity and their unwavering commitment to showing compassion and support for others, irrespective of their individual circumstances or how society may have treated them.

Daily Cycle

This theme emerged from the perceptions of PEH regarding their living space and daily routines. Participants' choices and decision-making processes reflected how they navigate a series of protective actions throughout the day to address their daily challenges. In disaster research, these challenges are often referred to as "everyday hazards" that PEH face due to the persistent precarity and vulnerability of their living conditions (Gaillard et al., 2019).

Vickery (2018) also noted that these vulnerabilities to everyday hazards can reduce PEH's concern for disaster preparedness because, in their view, every day presents its own set of challenges and difficulties, similar to a continuous disaster. Therefore, understanding how PEH make daily decisions is crucial in determining whether this population would consider protective actions or evacuation before a disaster or extreme weather event.

Regarding the concept of "stay," it became evident that the term should not be interpreted in the traditional sense of a permanent home or dwelling. Instead, for PEH, their "place of stay" is where they sleep or attempt to sleep during the night, until some external factor disrupts this moment. In this study, all participants slept on the streets, except for one who mentioned staying at the Salvation Army.

Descriptions of their nightly resting places were based on their perceived quality of sleep. Factors such as the presence of other people, the risk of being forced to leave early in the morning, and the availability of shade or ventilation influenced their sleep quality. Participants also highlighted the challenges they faced while trying to sleep, such as vigilance over their belongings and concerns for their safety. For example, one participant expressed fear about sleeping alone on the streets, particularly as a woman, due to the perceived risk of being attacked.

Although the daily routines of each participant were unique, there were common stages shared by many. The choice of where to sleep at night was a significant part of this daily cycle, as it marked the beginning and end of their day for most participants. This location was also where they exchanged a lot of information through word of mouth.

Understanding the homeless cycle described in this research sheds light on how many PEHs structure their lives around daily survival. The choice of their nightly resting place is influenced by factors related to safety and minimal comfort. All the survival strategies and instincts developed from their daily routines and the places they sleep contribute to their decisions to seek shelter when a disaster or extreme event is imminent.

This theme emerged organically from conversations with PEH and provides valuable insights into the factors influencing the initiation of protective actions during disasters or extreme weather events, which are deeply intertwined with their daily survival challenges and living conditions.

Shelter Antithesis

Daily, most of the participants chose not to sleep at a shelter. With a few exceptions— one woman staying at The Salvation Army, two who wanted to go to a

shelter but stated that they were always full, and one who did not have an ID to be allowed inside—the remaining participants expressed their refusal to sleep at a shelter. It is unknown if their refusal stems from an unwillingness to live under a set of rules similar to those adhered to by other members of society on a daily basis. Although the refusal of daily shelter by PEH was not the primary focus of this dissertation, responses from the participants led to its indirect examination. When I asked participants to elaborate on the “too many rules” responses, a sense of discomfort and tension was observed, often culminating in responses like “you know what I mean.” The only direct answer to this was related to having to be there at a “certain time”; otherwise, silence followed.

It was interesting and puzzling that very few participants would elaborate on the consistent and frequent response of "too many rules." Despite it being such a repetitive response, it remained a mysterious or unspoken list of rules they would not discuss during the interview. This brings me to the stigmatization of PEH previously discussed in the literature by Fogel (2017), Settembrino (2017), and Vickery (2017), where assumptions and generalizations regarding their circumstances can further marginalize them.

In the social services and medical fields, it is a common assumption that PEH's daily shelter refusal is due to the use of alcohol or drugs. However, during each interview, there were no comments or responses that provided more information related to these assumptions. Although this dissertation's focus was not on exploring alcohol or substance abuse by the participants, nor the reasons for their chronic state of homelessness, none of the responses mentioned alcohol or drugs as one of the rules or reasons associated with refusal of daily shelter. With this, I am not implying or denying

the participants' use of either, but simply that it was not explored in this dissertation. However, the question remains whether the reasoning behind the "too many rules" is the stigmatization of their use of alcohol and drugs, or if there are other unspoken reasons behind their solid resistance to seeking daily shelter.

In contrast, going to an emergency shelter was associated with safety and life protection. Therefore, a protective action of going to a shelter only comes to mind if there is a belief in impending extreme weather or disaster. Because the responses seemed contradictory to me, or at least they were in some instances, I had to go back and clarify the circumstances with the participants to understand the reasoning behind the shelter concept for them. From the responses, there was no question that participants were aware of the street hazards and their exposure to physical and emotional threats. I also observed a general awareness of the increased danger and risk to their lives by living unsheltered on the streets, except for those who have served time in prison. Moreover, when asked about survival advice for a new person living on the streets, the immediate advice was to seek protective action, such as going to the shelter and sharing resources. Therefore, there is a subjective awareness of the dangers in the streets to oneself and to others, where there is a concern for wanting to protect others. However, they will not protect themselves by following their advice to seek daily shelter. These thoughts led to the emergence of the theme of *Shelter Antithesis* as an essential factor in the evacuation decision of PEH.

Facilitators and Impediments

This theme emerged from the responses outlining the factors reported by PEH that either facilitated or hindered their ability to evacuate during a disaster event. As detailed

in Chapter 6, the facilitators for evacuating to an emergency shelter were mainly technical and straightforward, focusing on ease of mobilization and access to the emergency shelters. Conversely, the impediments mentioned in response pertained to the structural aspects of the shelter itself, encompassing factors like shelter capacity, location, and shelter type. Unlike other components of the PADM, the responses in this section lacked depth and descriptive detail necessary for a comprehensive examination of protective actions during a disaster. Participants' responses were succinct and lacked nuanced expressions.

These findings diverged from the results obtained by Lechner and Rouleau (2019) in their application of the PADM to study evacuation decision-making during a volcanic eruption. In their study, participants reported situational impediments linked to "health/physical abilities" and situational facilitators tied to "having a safe place to go" as crucial factors in evacuation decisions (Lechner & Rouleau, 2019, p.11). However, in the present study, situational facilitators and impediments were not viewed negatively in the context of evacuating to emergency shelters during a disaster. On the contrary, most participants expressed awareness and a willingness to evacuate as long as they had access to transportation and some degree of privacy at the emergency shelters.

Research Question #2.

How has the COVID-19 pandemic influenced the decision of a PEH to evacuate or seek shelter?

Informed Hopeless/Helpless

This section provided insight into how PEH responded to creating protective actions during the early stages of the COVID-19 pandemic. As discussed in Chapter 6,

participants primarily relied on news sources for initial information about the novel COVID-19 virus, aligning with their responses in the first stage of the PADM outlined in Chapter 4. In contrast, environmental cues played a less prominent role, likely due to the unique nature of the COVID-19 pandemic, which lacked the visible, physical manifestations typical of natural disasters or extreme weather events. Similarly, official warnings were primarily disseminated through televised and web-based advisories, rather than through text messages as previously mentioned.

In this context, protective actions consistently revolved around preventing virus acquisition to safeguard lives. Within the homeless community, protective measures centered on how individuals could maintain social distance and isolate while still accessing their daily resources. Responses indicated that protective actions stemmed from arrangements with family members to return home or from various quarantine measures implemented by local governments. As a marginalized and vulnerable population, the novel virus introduced numerous uncertainties. Participants described many of these uncertainties as stemming from experiencing losses (such as jobs, homes, or family) due to the COVID-19 pandemic. Additionally, the temporary nature of isolation measures meant some individuals feared seeking shelter, as they worried about potentially contracting the virus due to reduced shelter capacities.

Overall, the responses in these sections highlighted that PEH gathered information from various news sources about the pandemic. While their evacuation decisions were influenced by the COVID-19 pandemic, a key factor shaping their protective responses was the feeling of having access to information, more so than

considerations of isolation measures or other forms of physical protection. The emerging theme based on these responses was a sense of *Informed Hopeless and Helpless*.

PADM Theoretical Framework Contributions and Implications

Lindell and Perry's (2012) PADM framework has primarily been applied to research on household evacuations using quantitative research designs (Chen et al., 2021; Huang et al., 2012, 2017; Lechner & Rouleau, 2019; McCaffrey et al., 2017; Strahan & Watson, 2019; Strahan et al., 2019). This research represents the first examination of evacuation decisions among PEH using the PADM framework while incorporating a qualitative research design. The findings indicate that the multistage PADM can effectively be applied to analyze evacuation decisions among PEH. In contrast to this qualitative study, previous quantitative applications of the PADM often involved selecting a few variables and adapting them into a model. For the homeless population, the most beneficial approach appears to be applying most, if not all, the stages and components proposed by the model. Hence, this study makes a theoretical contribution by applying the PADM to investigate the evacuation decisions of a hard-to-reach, marginalized, and unsheltered population through a qualitative research design.

According to the PADM, network relationships play a crucial role in protective action decision-making, observed both in the social context as social/information sources (Lindell, 2018; Lindell & Perry, 2004; 2012) and in the receivers' characteristics as social resources (Lindell & Perry, 2012). The findings in this study indicate that the creation of protective action decisions by PEH is influenced by humanization elements characterized by helping other PEHs with their daily and disaster survival. These network relationships for survival embody the concept of bonding social capital (Aldrich, 2010; Aldrich &

Meyer, 2015; Kapucu, 2011). It is worth noting that the social context as a source of information was not described by most participants as an influence on creating a protective action during a disaster. Similarly, the receivers' characteristics as social resources did not emerge as a significant factor in the participants' creation of an evacuation decision. In contrast, bonding social capital emerged as an influential factor in creating a protective action through network relationships. Thus, these research findings also emphasize the importance of integrating social capital theory into the First Stage of the PADM as a distinct humanization element to explore the homeless community's shared physical and social living conditions.

Implications of the PADM for the evacuation decisions of unsheltered PEH during a disaster include the model's appropriateness for studying an unhoused and resourceless population. Applying the PADM using the lived experiences of PEH allowed for the examination of various factors influencing their behavior. This comprehensive examination is a strength of the PADM, as each stage enables the exploration of different aspects of PEH's thought processes leading to the creation of protective actions during a disaster event. Moreover, examining every stage of the model facilitated the exploration of common evacuation decision steps, which proved helpful when interviewing individuals who might easily get distracted or display guarded demeanor at times. Therefore, the strength of the PADM, when applied to a population's lived experiences, lies in its ability to comprehensively investigate behavior guided by a sequence of steps, helping to answer research questions and understand the likelihood of individuals creating protective responses.

Evacuations and Homelessness Literature Contributions and Implications

This study makes a significant contribution to disaster research by shedding light on the evacuation decisions of homeless populations (PEH), an often-neglected aspect of disaster planning (Brookfield & Fitzgerald, 2018; Brown et al., 2013; Every & Thompson, 2014; Settembrino, 2017). It delves into the vulnerabilities faced by this group (Gaillard et al., 2019; Gin et al., 202; Sundareswaran et al., 2015; Vickery, 2018; Walters & Gaillard, 2014) and their shelter usage patterns (Donley & Wright, 2012; Every et al., 2019; Fogel, 2017), providing valuable insights into their unique needs and perceptions when making evacuation decisions.

One key contribution of this research is its exploration of the challenges faced by transportation-limited or carless populations during evacuations, particularly unsheltered PEH (Drabek, 1999; Eisenman et al., 2007; Hess & Gotham, 2007; Renne et al., 2011). It emphasizes the importance of recognizing the diversity within vulnerable populations and tailoring disaster preparedness strategies to address their specific challenges and needs (Drabek, 1999; Gaillard et al., 2019; Kusenbach, 2017; Settembrino, 2017; Vickery, 2018). Failure to do so can exacerbate the difficulties faced by unsheltered PEH during disasters, making them more vulnerable.

Moreover, the study highlights the role of technology, particularly cell phones, as a critical tool for PEH in accessing disaster information (Asgary et al., 2015; Glover, 2019; Gui et al., 2016; Jennings et al., 2016; McInnes et al., 2015; Rhoades, 2017; Watson et al., 2018). It shows how technology and environmental cues are the primary drivers of their initial evacuation responses. This finding underscores the need for disaster planners and responders to leverage technology to reach and assist this

population effectively, especially in providing timely information about available shelters and evacuation resources.

Additionally, the study's examination of the experiences of PEH during the COVID-19 pandemic offers valuable insights into the significance of information access. While the pandemic may not have directly influenced their evacuation decisions, it highlighted the importance of continuous communication channels and information access for PEH during disasters, even for those who choose to live on the streets. The participants consistently emphasized the value of accessing news regarding the pandemic, despite their desire to continue living outdoors. This underscores the need to ensure that this population can access critical information during crises.

In terms of implications, this qualitative research humanizes the experiences of PEH by giving them a voice in disaster research. By considering their opinions on natural disasters, extreme weather events, and their willingness to create protective action responses, it recognizes their agency in the face of adversity. Furthermore, the study suggests using technology as a means to provide access to disaster and weather information, including details about pick-up points and available shelters for PEH in need of evacuation. This approach can open broader communication channels to support this vulnerable population during disasters. However, it also highlights the challenges associated with technology use, such as access to working cell phones, charging facilities, and the ability to understand online information sources. Policies that ensure continuous cellphone access and charging options for PEH are crucial for facilitating their evacuation decisions.

Finally, the research emphasizes the importance of cell phones as a vital means of communication and information access for PEH. It underscores the high value of cell phones for receiving critical information about disaster events and the need for policies that ensure uninterrupted access to this essential resource. Cell phones, with internet access, offer practical and accessible ways for PEH to stay informed during disasters, making them an invaluable asset for survival. In summary, this study provides a comprehensive understanding of the evacuation decisions, vulnerabilities, and shelter use patterns of PEH during disasters. It offers insights and practical implications to enhance disaster preparedness and response efforts for this marginalized population.

Public Administration Contributions and Implications

Public administration plays a crucial role in providing services to the homeless community, both on a daily basis and during disasters. In Broward County, these services are delivered through collaborative governance structures like Continuums of Care (CoC), which involve partnerships between local governments and nonprofit sectors, supported and funded by the HUD (Kim & Sullivan, 2023). Homeless individuals, or PEH, are recipients of these HUD-funded services, primarily aimed at supporting homeless-serving facilities and affordable housing.

While this study did not evaluate the local service delivery and funding structure of the CoC in Broward County, it focused on examining the lived experiences of PEH as service recipients and highlighted factors influencing their evacuation decisions to emergency shelters, both in daily life and during disasters. For public administration, the findings presented illustrate the complexities surrounding PEH's perceptions of the public shelter system. Notably, the persistent refusal of daily shelter by PEH provides

opportunities for further research and practice aimed at addressing issues related to shelter-related operations and the street-level bureaucrats who manage them. Although PEH in this study did not specify the exact reasons for their refusal to seek daily shelter, they exhibited a marked difference in their perception of using an emergency shelter, which was viewed as more flexible and temporary.

One of the implications for public service delivery to the homeless community lies in the lack of consistent, inclusive, and clear terminology to describe PEH. Often, local and state government evacuation plans categorize the homeless community under the broader umbrella of vulnerable or special needs populations. The term "special needs" typically refers to individuals with medical or impairment needs for evacuation and shelter assistance in many jurisdictions. Moreover, special needs populations often require advance registration on the state or local special needs registry. It's essential to recognize that not all governments have the capacity, partnerships, and personnel to secure funding from HUD through coalitions, which, in turn, affects PEH by limiting their access to shelter services or emergency shelters during disasters. In such cases, collaboration between counties becomes crucial to meet the HUD's funding requirements and provide services to support homeless communities.

For public administration, this research contributes to the existing literature on public service delivery for the homeless community, particularly in the context of collaborative governance (Hafer, 2018; Kim & Sullivan, 2023; Provan & Lemaire, 2012). It sheds light on PEH as service recipients (Humphries & Canham, 2021) and as service-worthy clients (Marvasti, 2002). Furthermore, the findings also contribute to academic and scholarly research on homelessness and the public service delivery responses of

street-level bureaucrats during the COVID-19 pandemic (Afkhamiaghda & Elwakil, 2020; Benavides & Nukpezah, 2020; Brocious et al., 2021; Brown & Edwards, 2021; Marcus et al., 2020; Shadmi et al., 2020; Thomas et al., 2020; Whytlaw et al., 2021). By reflecting on the lived experiences of PEH during the early stages of the pandemic, this research also contributes to various bodies of literature on public administration's provision and continuity of services to the homeless community.

Practical Recommendations for Emergency Management and Public Service

Delivery

Evacuation planning for unsheltered PEH during disasters and extreme weather events requires consideration of the unique challenges and needs that homeless communities face. The planning process should commence by recognizing that PEH live precariously, in a constant state of survival due to their lack of housing and shelter. For some participants, their life is considered a disaster, leading them to navigate a day-to-day existence focused on making protective action evacuation decisions for survival. This research highlighted that PEH's day-to-day survival commonly revolves around a consistent daily cycle of utilizing public resources (such as the transit system and public libraries) and the resources provided by nonprofit organizations.

This research emphasized the value and importance of technology and information in PEH's daily lives and during disasters. This presents an opportunity to integrate measures for accessing services and information for this community as part of emergency planning. Access to Wi-Fi services and charging stations at various locations in cities or counties is vital for individuals who rely on mobile phones for survival information and guidance. Many participants reported visiting public libraries or fast-

food establishments to access these services. However, during a disaster, these locations are likely to be closed, and the duration of closure is uncertain.

Another fundamental component is access to information specific to their community (city, county, or state). The findings in this study revealed that PEH sought weather and disaster information on websites such as the Weather Channel, local news, and national news outlets. While these sources provide an overview of current weather or disaster conditions, they often focus on the housed population's needs and preparations. Additionally, disaster information is also disseminated by homeless outreach teams in the community, which have established trust and credibility with the homeless community. However, PEH are typically dispersed throughout the community, and some individuals prefer not to interact with other members of society. Therefore, creating a local government online dashboard with up-to-date information on weather, disasters, and available resources for the homeless community would complement existing efforts. The online dashboard should include up-to-date information on the following:

- Shelter information: Interactive maps, times of service, current capacity, pet allowance, belonging allowance, and recommended bus routes.
- Transit system: Interactive map of bus routes to shelters, pick-up points, and specific service times.
- Warning messages: Updates on important messages to the homeless community about disaster evacuations.
- Service stations: Information with locations to access Wi-Fi service and charging stations before and after a disaster.

- Cooling and water stations: Information on areas to cool off from extreme heat and free water stations in the community.

Access to the local government online dashboard for the homeless community can be facilitated through the emergency management county website or by using QR codes available at information hubs at libraries, public transportation facilities, and nonprofit organizations frequently visited by PEH. Homeless outreach teams and emergency service providers can introduce this online dashboard information before disaster events. It is essential to acknowledge that local governments may lack the resources or capacity to create a dedicated disaster planning effort for the homeless community. However, by considering how local jurisdictions collaborate on a common Comprehensive Emergency Management Plan (CEMP) to cover tri-county or multicounty emergency planning responses, the implementation of an online dashboard could follow a similar model. In these cases, information about available resources for the homeless communities could be more comprehensive and still provide options for safe evacuation decisions.

The historic flash flood event in Fort Lauderdale occurred in areas with significant homeless populations, such as the public library and the downtown bus terminal. The extensive flooding disrupted public services for hours and days. As mentioned earlier, these services serve as a lifeline for unsheltered PEH and significantly influence how they make decisions to protect themselves in their daily survival. Similarly, the COVID-19 pandemic presented specific challenges to the unsheltered homeless community, such as limited access to shelters due to social distancing and quarantine measures. Moreover, the uncertainty surrounding the virus limited the number of outreach individuals and service providers willing to make close contact due to the

uncertainties of virus transmission. Recent disasters and disruptive events have shown that PEH can easily become disconnected and further marginalized during disaster events. Integrating an online dashboard would provide an additional lifeline to unsheltered PEHs, offering resources specific to their needs in the community.

Lastly, disaster planning policies for the homeless community require collaboration between emergency management and homeless service providers to address the specific needs of service recipients. As mentioned earlier, for disaster research and planning to move beyond the one-size-fits-all approach to evacuation plans, researchers and practitioners need to integrate measures to facilitate access to services and information before and after disasters occur. It is crucial to recognize that subgroups within the vulnerable populations' evacuation umbrella have different needs and challenges during disasters. Addressing such differences in future emergency plans may facilitate evacuation decisions for PEH during disasters.

Limitations

This study had several limitations in its implementation. Among these limitations was the absence of an assessment of a specific or recent disaster that participants could recall when asked about their shelter experiences. Additionally, this study did not investigate the impact of participants' perceptions of what occurs after a disaster has passed, such as leaving the emergency shelter and reintegrating into the community. It should be noted that while some participants reported staying with their families during the COVID-19 pandemic, they chose to return to living on the streets once the social distancing restrictions were lifted.

Another limitation was the omission of an exploration into chronic diseases, mental health disorders, and substance abuse within this population. Although there was an opportunity to investigate these factors related to shelter refusal in some cases, many participants became guarded, and their demeanor changed when asked about these topics. As a result, the interview questions in this study primarily focused on addressing the main research questions related to protective actions against disasters.

Future Research

The findings of this research underscore the ongoing need to investigate and comprehend the factors that discourage PEH from using daily public shelters. In contrast, most participants expressed willingness to stay at an emergency shelter during a disaster. Therefore, it is essential to delve into the relationship between PEH and the shelter organizations that provide homeless services. Moreover, studies on evacuations and public shelter use should encompass the gray areas of evacuations where there are no mandatory evacuation policies in place for the homeless community by local and state governments.

Future research could also focus on examining the experiences of PEH who have evacuated to an emergency shelter during a disaster. These firsthand experiences could shed light on and deepen our understanding of their evacuation decision-making process, from receiving initial information to mobilizing toward the shelters, and their experiences during their stay. Equally significant would be an examination of the process of leaving the shelter and the post-disaster community relocation of PEH. Similarly, research could center on evaluating whether existing plans and measures by homeless services and

emergency management are in place to facilitate the transition of PEH out of shelters after a disaster.

Conclusion

This dissertation has highlighted the factors influencing the evacuation decisions of unsheltered People Experiencing Homelessness (PEH) during disasters or extreme weather events. Utilizing the experiences of PEH and the Protective Action Decision Model (PADM) framework, I examined the unique factors that shape their evacuation decisions in the face of natural disasters or extreme weather events. The analysis of the COVID-19 pandemic underscored how PEH's access to information and technology reduces their marginalization and empowers them to make informed evacuation decisions. The findings presented in this study lend support to the idea of human agency, as PEH demonstrated their awareness of community disasters and their humanizing approach to protecting other subcommunity members by taking protective actions during disaster events. Additionally, the research highlighted that the prioritization of evacuation decisions among this population may depend on their perception of a disaster relative to their daily struggle for survival on the streets.

It's important to recognize that homelessness is a multifaceted issue. While this research did not delve into chronic homelessness, social inequities, or the effectiveness of homeless services, it's crucial to acknowledge that the evacuation decisions of PEHs are inextricably linked to their persistent and precarious state of homelessness. In Broward County, public service delivery to this population is primarily facilitated by organizations supported by HUD's homeless coalitions and donations from community-based organizations. Consequently, PEHs are recipients of HUD-funded services, with a

primary focus on supporting facilities catering to the homeless and affordable housing. Access to an evacuation shelter is vital for this community during a disaster, but daily access to public services is equally crucial for their survival. Interruptions in these services during disasters can also impact their survival and resilience. While this research primarily sought to understand behavior and facilitate evacuation processes during disasters, it's important to stress that access to stable housing remains a pivotal factor in reducing the vulnerability of PEHs to disasters and extreme events.

Despite the existence of well-known government services such as the shelter system within the homeless community, more than half of the population continues to opt for daily unsheltered living on the streets. Although this study did not center on evaluating government services provided to the homeless community, participants' responses showed that homeless services are not being used by most of the intended service recipients. Considering the recent surges in unsheltered PEHs locally and nationwide in recent years, this is problematic and can potentially increase the risk of injury and death among unsheltered PEHs during disasters and extreme weather events. For public administration and emergency management, this creates an opportunity to develop policies focused on facilitating evacuations for unsheltered PEHs, especially in cases where government disaster policies lack mandated evacuation orders.

Implementing focused and integrated evacuation plans for unsheltered PEHs is a complex process. The unfortunate reality is that policy recommendations for organizations serving PEHs during disasters add to their workload with limited funding and personnel to execute them. Moreover, the circumstances surrounding homelessness also make this population challenging to serve and understand. Nonetheless, this study

provided insight into how human agency and humanization are enhanced in this marginalized population by their ability to access public services and information during disasters. The evacuation decisions of unsheltered PEHs are individual choices for survival, no different from their daily protective action decisions. Ultimately, the evacuation decisions of PEHs are influenced by access to information, their relationship with local government service providers, and their sense of freedom to make their own decisions.

Appendices

Appendix A

Florida Atlantic University Institutional Review Board Approval



Institutional Review Board
Division of Research
777 Glades Rd.
Boca Raton, FL 33431
Tel: 561.297.1383
fau.edu/research/researchint

Patricia Maslin-Ostrowski, Ed.D., Chair

DATE: June 10, 2022

TO: Alka Sapat, PhD
FROM: Florida Atlantic University Social, Behavioral and Educational Research IRB

PROTOCOL #: 1920191-1
PROTOCOL TITLE: [1920191-1] Examining Evacuation Decisions of People Experiencing Homelessness During Natural Disasters Using the Protective Action Decision Model (PADM)

SUBMISSION TYPE: New Project
REVIEW CATEGORY: Exemption category # 2

ACTION: DETERMINATION OF EXEMPT STATUS
EFFECTIVE DATE: June 10, 2022

Thank you for your submission of New Project materials for this research study. The Florida Atlantic University Social, Behavioral and Educational Research IRB has determined this project is EXEMPT FROM FEDERAL REGULATIONS under 45 CFR 46.104 (Exempt Category). Therefore, you may initiate your research study.

Principal Investigator (PI) Responsibilities: The PI assumes the responsibilities for the protection of human subjects in this study as outlined in Human Research Protection Program (HRPP) Manual Section 8-1, Exemptions.

Continuing Review: Exempt Studies do not need to be renewed.

Modifications: In general, investigators are not required to submit changes to the Florida Atlantic University Social, Behavioral and Educational Research IRB once a research study is designated as exempt as long as those changes do not affect the exempt category or criteria for exempt determination (changing from exempt status to expedited or full review, changing exempt category) or that may substantially change the focus of the research study such as a change in hypothesis or study design. If the study is modified to add additional sites for the research, please note that you may not begin the research at those sites until you receive the appropriate approvals/permissions from the sites.

Please contact the HRPP office if you have any questions about whether a change must be submitted for IRB review and approval.

Reportable Events: If issues should arise during the conduct of the research, such as unanticipated problems that may involve risks to subjects or others, or any problem that may increase the risk to the human subjects and change the category of review, notify the IRB office promptly. Any complaints from participants that may change the level of review from exempt to expedited or full review must be reported to the IRB. Please report new information through the study's workspace and contact the IRB office with

Appendix B

Recruit of Participants Flyer



HELP US TO BETTER SERVE THE COMMUNITY
Enroll in a Research Study to Examine Evacuation Decisions during Disasters.

Qualified Participants:

Must be 18 years or older and Live Unsheltered for most part of the year.
Will receive a care package for compensation for their time.

Contact: evacuationdecisions@gmail.com
(954) 489-8686

Appendix C

Interview Structure and Script

Interview Structure

A. Recruitment

- 1) Brief introduction of interviewer and purpose of interview. Conversational.
- 2) Explanation of informed consent procedures and consent form. Give copy of consent.

B. Opening

- 1) Introduction and significance of the study. Conversational.
- 2) Explanation interview procedures.

Script

Welcome and thank you for your participation today. My name is Andrea, and I am a graduate student at Florida Atlantic University conducting my evacuation decisions study in partial fulfillment of the requirements for the degree of Philosophy in Public Administration. Thank you for completing the surveys, and this follow-up interview will take up to 45 minutes and will include # questions regarding your experiences and what might affect your life when making decisions to seek shelter during a disaster. I would like your permission to record this interview, so I may accurately document the information you convey. If at any time during the interview you wish to discontinue the use of the recorder or the interview itself, please feel free to let me know. All of your responses are confidential. Your responses will remain confidential and will be used to develop a better understanding of how you and your peers view your life satisfaction and what might influence it. The purpose of this study is to increase our understanding of evacuation decisions of individuals who lived unsheltered during a disaster.

I am the responsible investigator, specifying your participation in the research project. Your participation in this interview is completely voluntary. If at any time you need to stop, take a break, or return a page, please let me know. You may also withdraw your participation at any time without consequence. Do you have any questions or concerns before we begin? Then with your permission we will begin the interview.

C. Evacuation Decision Questions

D. Optional Questions

Appendix D

Verbal Consent Form



Informed Consent for Participation in an Exempt/Minimal Risk Research Study Waiver of Documentation

Study Title: Examining Evacuation Decisions of People Experiencing Homelessness During Natural Disasters Using the Protective Action Decision Model (PADM)
Principal Investigator: Dr. Alka Sapat
Consent Version and Date: Protocol Version 1.0, May 25, 2022
FAU IRB# 1920191-1

Contact for Questions about the Study	Contact for Questions about your Rights as a Research Participant, concerns or complaints that are not answered by the research team, or if you wish to talk to someone independent of the research.
PI/ Contact name: Dr. Alka Sapat Phone Number: (954) 489-8686 Email: asapat@fau.edu	Florida Atlantic University Research Integrity Office (561) 297-1383 Researchintegrity@fau.edu

You are invited to participate in a research study under the direction of Dr. Alka Sapat of the School of Public Administration, Florida Atlantic University (FAU). Taking part in this research is entirely voluntary.

The purpose of this study is to examine the factors that affect your decisions to seek shelter during a disaster.

Some important reasons that you might choose to participate in this study is to express your experience during disasters. These results could collectively benefit by identifying factors that can facilitate your ability to seek shelter and protection when a disaster occurs.

You will not benefit directly from your participation in the study. The benefits to science and humankind that might result from this study are the creation and implementation of measures that facilitate the evacuation process of people experiencing homelessness.

Some reasons you might not want to participate in the study are if you are not comfortable sharing your experiences during disasters or adverse weather events.

If you choose to take part in this study, you will express your experiences and opinions when deciding to seek shelter or evacuate during a disaster or extreme weather event. The total amount of time you will spend in connection with this study is up to 45 minutes. You may refuse to answer any of the questions and you may stop your participation in this study at any time.

Every effort will be made to keep your information confidential, however, this cannot be guaranteed. Your name or other personal identification will not be collected, and a name or pseudonym of your choice will be utilized with your answers. If results of this research study are reported in journals or at scientific meetings, the people who participated in this study will not be named or identified.

Your signature is not required, unless you prefer to sign it. Your willingness to participate in this research study is implied if you proceed. *Please keep a copy of this document in case you want to read it again.

FAU Office of Research Integrity
B_Exempt and Minimal Risk Waiver of Documentation Consent
V5_23March2022

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