GENDER AND REPRESENTATIVE BUREAUCRACY:

OPPORTUNITIES AND BARRIERS IN LOCAL

EMERGENCY MANAGEMENT AGENCIES

By

Alyssa L. Provencio

Bachelor of Science in Hotel and Restaurant Management
Kansas State University
Manhattan, Kansas
2008

Master of Public Service in Public Service
University of Arkansas Clinton School of Public Service
Little Rock, Arkansas
2012

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Dissertation Approved:

Dr. Tristan Wu

Dissertation Adviser

Dr. Haley Murphy

Dr. Marten Brienen

Dr. Rebecca Sheehan

DEDICATION

To my niece, Summer, my tiny feminist – you light up my life with your attitude, charisma, and intelligence. Never forget that you are powerful and capable of greatness. Fill up rooms by being bold and by being kind. Embrace those that are not like you. Travel. Remember that when you were four, you responded to being told that you were bossy by saying "thank you". I can't wait to see the woman you will become. This work is for you and for other tiny feminists who, by their presence alone, will change the world.

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Name: ALYSSA L. PROVENCIO

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Abstract: This study examines the perceptions and experiences of women working in local emergency management agencies through the frame of representative bureaucracy utilizing a nation-wide survey. The two research objectives are (1) to understand the degree to which female emergency managers perceive themselves as representing the needs of women facing disasters and (2) to explore the opportunities and barriers that female emergency managers encounter as employees of local emergency management agencies. Variables include employee discretion, minority role representation, work/life balance, career progression, and workplace harassment. The research confirms that the professionalization of emergency management has given women more of an opportunity to gain entrée, though not in ways equal to their male peers. For example, there is a division of labor between operational versus support positions. Additionally, the study contributes new data on discretion and minority role representation, adding emergency management to the literature on public agencies and representative bureaucracy. Finally, the organizational barriers that contribute to limited career progression and the pervasiveness of harassment in local emergency management agencies are highlighted. Future researchers should consider conducting comparative studies (e.g., for other levels of government), as well as qualitative studies to clarify and elaborate on the results found.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

Throughout the history of social sciences research, androcentric perspectives have prevailed. Also true in disaster and emergency management research, the foremost understandings of how the public experiences emergencies, disasters, and catastrophes, in theory and practice, have largely ignored or excluded evaluation and consideration of gender (Bolin, Jackson, & Crist, 1998; Enarson & Morrow, 1998). Mainstream field practice, humanitarian assistance, and academic research have failed to significantly address issues and opportunities of gender, though some have sought to fill the knowledge gap (Bradshaw, 2004b; Enarson & Meyreles, 2004). Existing gender research in disaster and emergency management has mainly focused on how disasters affect women as victims (Bolin et al., 1998; Bradshaw, 2004a; Fordham & Ketteridge, 1998; Morrow & Enarson, 1994; Neumayer & Plümper, 2007). By understanding how women are affected by emergencies and disasters differently than men, emergency managers, regardless of gender, have begun to adapt their approaches in order to accommodate the needs of women. However, emergency management has long been male-dominated (Wilson, 1999) and its agencies would benefit from hiring more women (Enarson & Fordham, 2000).

The theory of representative bureaucracy suggests that bureaucracies should reflect the community they serve – both in demographic composition and in diversity of thought – in order to influence the nature, scope, and implementation of public policies (e.g., Dolan, 2004; Kingsley, 1944; Meier, 1985, 1987). Accordingly, emergency management agencies should strive to employ women and other

minority groups to better address the needs of these respective groups before, during, and after disasters. However, few studies provide an examination of women's contribution to informal and formal emergency management organizations (e.g., Phillips, 1990; Wilson, 1999). Emergency management has, historically, been a male-dominated occupation due to its military roots in Cold War civil defense agencies and has only recently began professionalizing, thus increasing the avenues though which women may enter the field (Wilson, 1999; Wilson & Oyola-Yemaiel, 2001). A significant gap exists in disaster and emergency management literature, and consequently, in our understanding of women's roles and experiences in formal emergency management agencies.

Though only a starting point, the presented research begins to fill this gap and contribute to our understanding of women employed by local emergency management agencies in the United States. The studies' aims are two-fold. The first objective was to understand the degree to which female emergency managers perceive themselves as representing the needs of women facing disasters (active representation). The second objective was to explore the opportunities and barriers that female emergency managers encounter as employees of local emergency management agencies (gender barriers). By extending agencies' abilities to recruit, retain, and promote women in the field, it is hoped that policies and procedures will further improve and address the outcomes for women that are affected by emergencies and disasters.

CHAPTER II

REVIEW OF LITERATURE

This review of literature will begin by introducing feminist theories and how they apply to disaster and emergency management research. The next section will thoroughly examine the available gender literature in emergency management, including how women experience each of the four phases of emergency management differently than men. The third section of the literature review will describe representative bureaucracy and create a link between the theoretical construct and its applicability to emergency management agencies. The last section of the literature review will discuss gender barriers that exist in male-dominated occupations, such as emergency management. Finally, the study's research questions and hypotheses will be introduced.

2.1 Feminist Theories in Emergency Management

In early disaster and emergency management research, most scholars assumed a gender neutral tone; that experiences between genders are similar or that men's experiences are universal (DeVault, 1999). Often gender is a variable captured alongside other social vulnerability measures, such as age, race/ethnicity, health, income, etc. – "social factors that influence or shape the susceptibility of various groups to harm and that also govern their ability to respond" (Cutter, Boruff, & Shirley, 2003). Thus, if gender is considered, it is usually regarded as an additional variable and as an afterthought, not as a central point of inquiry (Bolin et al., 1998; Enarson &

Morrow, 1998; Hewitt, 1995). Feminist scholarship seeks to raise "new questions and/or formulate theory that furthers our understanding of… social science… in such a way that girls and women… are brought to the center of scholarship" (Glassick, 1999, p. 5 as cited in Enarson & Phillips, 2008).

In their overview of feminist thought, Enarson and Phillips (2008) describe key theories that have guided sociological inquiry in women's studies. In addition, the authors offer examples for each theory in existing disaster and emergency management literature and suggest opportunities for exploration. Several of the theories are highlighted in the following section – the most prominent and the most pertinent to this study. These theories – liberal feminism, socialist feminism, radical feminism, multicultural/global feminism, and eco-feminism – are briefly explained and suggestions for how they apply to gendered research in disaster and emergency management are given below.

Liberal feminist theory, associated with first wave feminism[1], is rooted in the idea that women are fully human persons and that in order for women to be equal to men, they must be afforded the same social, political, and legal opportunities. Liberal feminists emphasize the socialized nature of inequality – that male bodies are privileged over female bodies only because of gendered culture, not biology (Tong, 2013). This theory can be applied to disaster research in several ways.

[1] First wave feminism roughly refers to the period between 1830-1920, which culminated in the passage of the 19th amendment. Though liberal feminist thought guided suffragettes' fight for full citizenship rights and, thus, the right to vote, liberal feminist theory extends beyond the concept of the first wave (Tong, 2013).

For example, it explains why women in caregiving roles (traditionally feminine roles) are more at risk than those who are not (Miyano, Jian, & Mocizuki, 1991). Furthermore, liberal feminism rationalizes why women's participation in preparedness or mitigation activities are limited by their social status and/or education (Neal & Phillips, 1990; E. H. Turner, 1997).

Exploitation, not discrimination, is the basic premise of socialist feminist theory. Socialist feminists argue that capitalism and men benefit from the patriarchal systems that gender-based labor is founded on (Tong, 2013). This theory stresses the racial and gendered nature of poverty, which is compounded through disaster (Morrow & Enarson, 1994). Of those living in poverty globally, 70% are women; this is referred to as the "feminization of poverty" (Wiest, Mocellin, & Motsisi, 1994).

Though radical feminist theorists consider discrimination and exploitation, their focus is on oppression (Tong, 2013). Radical feminism, often associated with second wave feminism[2] alongside socialist feminism, contends that "men seek power and control over women… the natural world, non-human species, and other men." In addition, radical feminists believe that their "struggle is for self-determination in the face of male domination" (Enarson & Phillips, 2008). For example, women situated outside patriarchal systems may not have equal access to resources following a disaster (Enarson & Phillips, 2008).

[2] Second wave feminism began around 1960 and though it continued to emphasize the importance of equality, second wave feminists also questioned traditional assumptions about gender and sexuality (Tong, 2013). Much like liberal feminist theory and first wave feminism, socialist and radical feminist theories are commonly associated with second wave feminism, but their applicability can exist outside of this time frame.

Multicultural/global feminist theory, often associated with third wave feminism[3], recognizes the importance of differences between women's experiences. Also called intersectional feminism, it posits that power and privilege play an important role and that race, ethnicity, caste, class, education, etc. make a difference in determining the needs of women, individually (Tong, 2013). In a list taking up an entire paragraph, Bradshaw (2004b) enumerates a number of different social groups that are the hardest hit after a disaster. The list includes those who are incarcerated, immigrants, non-English speakers, those in poverty, person with access and functional needs, etc. At the very end of the list is "women". Women can identify as several of the other listed identities and therefore be at risk in different ways. An example of this comes from Morrow and Enarson's (1994) work following Hurricane Andrew, where the authors found Latinas were humiliated during the response because they were mistaken for migrant workers rather than long-term residents. Enarson and Meyreles (2004) find that intersectional analyses of gender in disaster are rarely explored in studies of highly-developed nations and only occasionally in studies of less-developed nations. Additionally, Enarson and Phillips (2008) point out that in feminist sociology (and thus, disaster and emergency management research), race and class are undertheorized. Not only is it important to recognize that gender exists among broader social contexts and cannot be viewed as autonomous, but also that there are regional and cultural differences that determine how gender is experienced. Women's experiences should be analyzed not as singular, but situated within larger, more dynamic circumstances.

[3] Third wave feminism emerged in the early 1990s, which stresses diversity of thought. It should be noted that multicultural/global feminist theory began to take hold in the 1980s amongst women who felt marginalized by mainstream white feminism. So, though multicultural/global/intersectional feminism is often conflated with third wave feminism, the theory applies to thought outside of this context (Tong, 2013).

Feminist ecology theory, with roots in radical feminism, strives to combine intersectional feminism and gender's role in environmental degradation (Tong, 2013). Feminist ecologists, like intersectional feminists, reject the idea that women can be categorized as a single group, acknowledging that gender interacts with class, ethnicity, economic status, etc. What is more, feminist ecologists also consider how these identities shape individuals' constructions of their roles alongside environmental concerns (Enarson & Phillips, 2008). Feminist ecology looks at gender as a central tenet to understanding issues of the environment in a holistic, long-term way. Also called eco-feminism, theorists and advocates highlight the negative impacts associated with environmental degradation, climate change, and the conditions they create, including the resulting increase in disasters (Banford and Froude, 2015). Studies where feminist ecology theory has been applied include women's roles in drought (Wangari, Thomas-Slayter, & Rocheleau, 1996), grassroots organizing against rainforest degradation (Agarwal, 1997), and advocating for toxic waste removal (Krauss, 1993).

2.2 Gender in Emergency Management

Rivers (1982) – by examining the fatalities of the Russian earthquakes of 1948 and 1966 and the Bengal famine of 1943 – was the first in disaster and emergency management research to consider and find gender differences. In all three disasters, women were more likely to die than males. Despite this enlightening observation, a body of literature on gender in disaster did not start to emerge until the 1990s.

Wiest et al. (1994) provided one of the first comprehensive overviews of issues confronting women in disasters. The authors assess sources of gender bias in disaster and emergency management research, examine how disaster impacts women in diverse social locations, and identify gender-based vulnerabilities as a priority concern in disaster planning and response. In addition to this formative report, a number of studies have emerged highlighting gender

differences throughout the four-phase cycle of emergency management; key findings are described below.

2.2.1 Risk Perception and Preparedness

Cutter, Tiefenbacher, and Solecki (1992) found that women and men understand risks differently. Specifically, they assert that men can generally be categorized as "risk takers" and women as "risk avoiders". J. Flynn, Slovic, and Mertz (1994) found that women were more likely to perceive something as dangerous compared to men. In addition, the authors suggest female persons of color may perceive threats as riskier because of their place in society; one that generally lacks power and control relative to that of white persons.

Women in Lagos, Nigeria interviewed about their perception of flooding believed that a hazard generally would affect both men and women equally, though they did acknowledge the role of poverty, residence, and livelihood (Ajibade, McBean, & Bezner-Kerr, 2013). The researchers express concern about the women's acceptance of social norms, writing "women's silence about gendered vulnerability in disaster speaks to deeply embedded gender roles in the Nigerian society which led most women to conclude that flood impacts were natural rather than socially constructed" (p. 6).

Fothergill (1996), in her overview of literature, suggests that because of their "heightened perception of risk," women may be more likely to prepare for disasters, for which there is some indication (Leik, Leik, Ekker, & Gifford, 1982; R. H. Turner, Nigg, & Paz, 1986). Regarding preparedness activities, Morrow and Enarson (1994) found that women are generally responsible for gathering supplies and preparing the household, while men tended to care for the exterior of the home (e.g., boarding windows prior to a hurricane), which follow the cultural stereotypes of gender roles (Eagly, 1987).

2.2.2 Response

Drabek (1969) found that due to their social networks, women are more likely to hear warnings than men. In addition, women internalize and personalize the warning more than men (R. H. Turner, Nigg, Paz, & Young, 1979, 1981). Furthermore, women are more likely to respond to warnings (Beady & Bolin, 1986; C. B. Flynn, 1979; Neal, Perry Jr, & Hawkins, 1982; Wilkinson & Ross, 1970), including taking cover (Goltz, Russell, & Bourque, 1992) and evacuation (Beady & Bolin, 1986; Drabek, 1969; Wilkinson & Ross, 1970).

Contrary to common notion of saving "women and children first", researchers have found higher morbidity rates for women over men (Rivers, 1982), perhaps due to their role in protecting and caring for children and elderly family members (Miyano et al., 1991). Another explanation could be "due to discriminatory preferential treatment by male-dominated workers (Wiest et al., 1994, p. 39)."

Researchers have claimed that women are often victims of post-disaster violence, particularly family-based violence (i.e., spousal abuse and child abuse), which increases following a disaster (Dobson, 1994; Honeycombe, 1993; Morrow & Enarson, 1994; Williams, 1993). Few have attributed the cause of violence to stressors such as overcrowded shelters, pent-up frustrations, loss of control, fragmented support systems, etc. (Dobson, 1994; Honeycombe, 1993). However, there has not been any examination of whether it is the instances of violence or instances of reporting that increase. It may be that the reporting increases due to the proximity of either authorities (e.g., police) or assistance (e.g., Red Cross), not the actual occurrence of domestic violence.

In addition to death, injury, and physical harm, psychological trauma may also result from disaster, which disproportionately affects women. Following the Loma Prieta earthquake, Anderson and Manuel (1994) reported that more females expressed more stress than males. Traditional female roles, like caregiving, also seems to be a factor contributing to emotional

trauma (Honeycombe, 1993). However, some suggest that women do not actually experience greater psychological stress or trauma, only that females are more likely to report the psychological impacts, resulting in reporting error (i.e., that men may not feel comfortable sharing their true psychological status) (Anderson & Manuel, 1994; Moore & Friedsam, 1959).

Disaster displacement also often results in a lack of shelter or temporary shelter, there are not only physical concerns (e.g., exposure to extreme heat or cold), but also concerns regarding protection from others and loss of privacy. Ariyabandu (2006) describes gender-insensitive toilet and bathing areas in the temporary camps in Sri Lanka after the Indian Ocean tsunami. She also cites media reports of sexual abuse against women occurring in these areas. Adequate shelter may reduce the instances of violence against women. Lastly, taboos against women and their bodies are prevalent in many developing nations. The loss of privacy may result in greater humiliation amongst women, one of many variables that could affect post-disaster trauma.

2.2.3 Recovery

Because women are more likely to be dependent on a male head-of-household, they, along with their dependent children, are adversely affected when their social relationships are disrupted. Many women seek assistance via both formal disaster assistance and kinship networks (Honeycombe, 1993), whereas men may view these processes as emasculating and in opposition to their role as breadwinner. However, once assistance is sought, displaced female heads-of-households may find it difficult to access and/or receive it. Not only is the mobility and visibility of women less than that of men, aid agencies may be structured within patriarchal systems that provide relief through male heads-of-households (Palmer, 1981), particularly in developing countries. Thus, women may seek assistance, yet they generally have a more difficult time accessing limited resources immediately following a disaster (Rivers, 1982).

Gender bias is also present in the delivery of assistance programs. While not necessarily overt, the systemic biases against women creates a "double-barreled" victimization – first through the disaster impact and then through the recovery process (Wiest et al., 1994). Assistance programs are only one example that demonstrates the gendered biases that are present in most social structures – in fact, Wiest et al. (1994, p. 15) found that "many researchers indicate that discrimination on the basis of sex is implicit in most social systems and at the heart of systematic bias in social science." In addition, Ariyabandu (2006) describes women's deprivation of resources after the Indian Ocean tsunami, directly attributing it to the absence of women in planning and management, which continued into the recovery phase, where "women's knowledge, skills, and capabilities" were downplayed.

A number of studies have advocated for the inclusion of women in recovery efforts and in community-based disaster risk reduction activities that occur post-disaster (Ikeda, 2009; Iqbal, Baig, Sadia, Khurshed, & Saleem, 2013; Shah, 2012). In addition, a study by Shah (2012) indicated that humanitarian organizations implementing recovery projects were not employing women. The staffing patterns he observed included mostly men and, in some projects, *only* men were recruited. In his analysis, Shah concludes that men were seen as more competent, especially in engineering tasks. He goes on to acknowledge that these organizations "take such gendered practices for granted, (p. 256)" giving the example of a field interview in which the respondent from a local organization stated that when making hiring decisions for building shelters, men were preferred over women as the task is considered technical.

2.2.4 Mitigation

While the overview of literature did not reveal any studies related specifically to women's roles in mitigation, policy and participation are essential parts of non-structural mitigation. Dann and Wilson (1993) suggest "that women are markedly absent in the decision-making position,

leadership roles, and higher levels of [emergency management organizations]." Enarson and Fordham (2000) propose that it would be beneficial for emergency management agencies to hire women, people of color, and other people who are members of socially marginalized groups in order to better represent the communities they serve. Though not explicit, the representation that the authors seek is best explained by the theory of representative bureaucracy.

2.3 Representative Bureaucracy

At its core, representative bureaucracy is the notion that governments should represent the population that they serve (Kingsley, 1944). The Constitution of the United States calls for a representative democracy, which requires both popular sovereignty and representative bureaucracy, that is, those designated to carry out the functions of the government to serve the people. Meier (1985) suggests that the theory of representative bureaucracy satisfies the requirement laid out in our Constitution of "by the people, for the people."

Weber's theory of bureaucracy (Weber, 1946) postulates that in order for bureaucracies to function efficiently and effectively, bureaucrats should have little power or discretion. Conversely, representative bureaucracy relies on the foundation that bureaucrats are people with unique backgrounds and perspectives which allows them to make decisions on behalf of others like them. Kingsley (1944), credited with championing the idea of representative bureaucracy, believed that government bureaucrats have influence in creating and determining public policy; though depending on the position, the influence may be less or more than others. Regardless of individual effectiveness, in general, scholars agree that the discretion bureaucrats have in decision-making shapes policies that affect the public (e.g., Chaney & Saltzstein, 1998; Lipsky, 1979; Maynard-Moody & Musheno, 2003; Rourke, 1969; Sowa & Selden, 2003 as cited in Bradbury & Kellough, 2010). Power to shape policy is an enormous responsibility and with that

comes the expectation, especially in governments based on democratic principles, that those chosen to represent the people will exercise the will of the people.

2.3.1 Types of Representation

According to theory, improving representativeness will result in "bureaucratic policy processes becom[ing] more inclusive, and the power of the bureaucracy…better reconciled with the requirements of democracy" (M. Bradbury & Kellough, 2010, p. 158). That is, if more members of government look like[4] the aggregate populous, it is assumed that the government better embodies the ideal of "rule by the people" – the literal translation of the word democracy. The assumption then relies on two claims – 1) that the government should employ individuals who look like underrepresented groups and 2) that employing these individuals will result in policies that are more inclusive of those groups. These claims of representativeness are best described by the concepts of passive representation and active representation.

Though others considered policy implications (Long, 1952), Mosher (1968) was the first to fully theorize Kingsley's work, which included the distinction between passive and active representation. The first assumption of representative bureaucracy – that governments should employ individuals that look like underrepresented groups – is explained by passive representation. Passive representation is conceptualized as demographic or descriptive in nature and occurs when an organization or agency employs individuals from specific groups – most commonly underrepresented ones, such as racial and ethnic minorities and women – in proportion

[4] The term "look like" is used metaphorically. There may be instances where gender or race may be apparent by "looking" at an individual. However, gender is a social construction; therefore, a person may identify as a gender that they do not present as. In addition, race and ethnicity are difficult constructs to deconstruct, particularly when considering bi/multi-racial or bi/multi-ethnic individuals. Lastly, other traits, such as ability or sexual orientation, may not be apparent.

to that of the community For example, to achieve passive representation for gender, a 50-person agency would have to employ 25 women if their jurisdiction is comprised of 50% women; essentially, the demographic composition of the agency should very closely match the demographic composition of the public they serve.

The second assumption of representative bureaucracy is explained by active representation. Active representation occurs when a bureaucrat "press[es] for the interests and desires of those whom [s/]he is presumed to represent" (Mosher, 1968, p. 11). For example, women working in an agency may be more likely to advocate for the needs and interests of women in the general population than men that work for the same agency. M. Bradbury and Kellough (2010) succinctly summarize the concept:

> It implies that bureaucrats will act, either consciously or unconsciously, to see that the interests of individuals who share their group identities are not overlooked when policy-relevant decisions are made. Active representation occurs, it is theorized, because bureaucrats share core attitudes, values, and beliefs with the social groups from which they are drawn. Their views are the product of common socialization experiences shaped in important ways by, for example, racial, ethnic, and gender identities. (p. 158)

Active representation, then, may be a product of passive representation. Despite recent interest in this theory, particularly in its effectiveness, there is still much to learn about the link between passive and active representation (Andrews, Ashworth, & Meier, 2014; Andrews, Boyne, Meier, O'Toole, & Walker, 2005; M. D. Bradbury & Kellough, 2008; Peters, Schröter, & von Maravić, 2013) as empirical studies are limited. The goal of many contemporary scholars who study representative bureaucracy is to find links between passive and active representation, as well as to determine which qualities and traits may predict active representation.

Hindera (1993) and Selden (1997) found that links can be made for race, but their findings were null regarding gender. Keiser, Wilkins, Meier, and Holland (2002) found that links can be found for gender but that two conditions must be true: (1) women must have discretion in their positions and (2) the policy issue at hand must be salient and relevant to women. The first is that the "bureaucrats must have discretion in how they carry out their jobs" (p. 556). On discretion, Sowa and Selden (2003), say "from street-level bureaucrats who make decisions about the direction provision of services, to administrators within agencies who must translate vague legislative mandates into organizational procedures, discretion is often a crucial part of public administrators' job descriptions" (p. 700). The second condition is that "the policy issue must be salient to the demographic characteristic in question" (p. 556), which relies on the notion (for gender) that the policy is important to or affects women as a class or group.

Other findings regarding gender include that women may be broadly represented at local and state agencies, but are not represented in federal positions. In addition, for those at local and state levels, the positions women occupy are not those with high levels of discretion (Dolan, 2004). Keiser et al. (2002) demonstrated that active representation was more likely to happen if women were employed in high-level positions and that it was also more likely to occur in less hierarchical organizations. However, bureaucracies are masculine institutions and even if women achieve positions of importance that are associated with high levels of discretion, systemic bias may not allow them to achieve equal discretion to that of a man in a similar position (Dolan, 2004).

2.3.2 Representative Bureaucracy and Gender in Emergency Management Agencies

Uniformed first responders – firefighters and police officers – have been the subject of empirical studies related to representative bureaucracy; however, there is not a significant body of literature that addresses either of these public sectors (Andrews et al., 2014; Theobald & Haider-Markel,

2009). It should be noted that though firefighters and police officers work with emergency management agencies, these agencies do not interact with the public in the same ways. Andrews et al. (2014) explain the myriad activities firefighters perform and the level of discretion related to each. He argues that firefighting activities are highly regimented and require little discretion, while other community-based activities allow for more discretion, where the authors "expect representation to be especially important" (p. 3). These highly discretionary activities may more closely align with activities performed by emergency management agencies.

The activities of emergency management agencies highly affect the public. Creating planning documents, preparedness education, and community outreach during recovery are all examples of activities that affect fatalities, injuries, property damage, and recovery time. By employing women, as well as racial/ethnic minorities, members of the LGBTQ+ population, those with access and functional needs, and non-native English speakers, emergency management agencies may be more attune to the needs of unique populations. These are the populations that are most commonly overlooked and the ones that emergency management agencies need to be able to reach out to and plan for; however, the literature addressing the role of women as emergency managers is limited.

The role of women in emergency management agencies has only barely been explored. Nehněvajsa (1989) found that women are more likely to volunteer and more willing to be trained for emergency management related activities. In addition, Neal and Phillips (1990) found that women were more likely to participate, be members of, and lead emergency organizations. Enarson and Morrow (1998), through stories from disaster survivors, volunteers, and responders, highlight women's roles as participants in preparedness, response, and recovery. These studies widened the gender discourse in disaster and emergency management research by moving beyond stereotypes of women as victims. They also indicate that while women may be more active in

informal roles as volunteers or in individual homes, they may not hold positions of authority in formal emergency management agencies.

Wilson's (1999) study of women in local emergency management was the first to explicitly explore gender within the professionalization of the emergency management field. She uses the historical context of emergency management to explain the low percentage of women employed by local agencies. Emergency management evolved from Cold War Era civil defense agencies. The people employed by these agencies were, in large part, previously affiliated with the military or law enforcement, which resulted in a majority white, male workforce. The transition from a militaristic command-and-control response model of emergency management to a pro-active, collaborative four-phase cycle of emergency management model came through the professionalization of the field during the past several decades. This professionalization, Wilson (1999) argues, offers hope for more gender-balanced employment via higher education and alternative forms of field experience. However, barriers for women exist in many male-dominated occupations and may pose difficulties for those trying to enter or currently employed by emergency management agencies.

2.4 Gender Barriers in Male-Dominated Occupations

Male-dominated occupations/fields pose barriers to entry for women as work itself is traditionally thought of as masculine. Historically, women were not expected to do the same type of work as men or excel in masculine tasks (Epstein, 1970). Instead, they were expected to be homemakers or employed in feminine occupations. Standley and Soule (1974) explain the distinction between feminine and masculine careers:

> There are two major distinctions between ‘feminine’ and ‘masculine careers’ (1) the sex ratio of the occupation, i.e. whether men or women predominate numerically among its workers and (2) the nature of the work role, i.e. whether the usual activities of the

> vocation are thought to be more compatible with approved feminine or masculine attitudes, skills, and values. In the case of women in a male-dominated field, such classification usually implies restriction of women's access to the field and of their potential for achievement and recognition in it. (p. 245)

Historically, women who entered masculine fields were thought of as deviants (Epstein, 1970). Because of this, many women do not consider masculine jobs as a possible profession; thus, they often self-restrict based on perceptions of the field. For example, women may not consider emergency management as a career because they think it is similar to a first responder position, such as the fire service or law enforcement, which are considered to be predominantly male, and therefore unfeminine. The following studies examine gender barriers in masculine organizations and systemic bias that they may have against women in three areas: (1) work/life balance, (2) career progression, and (3) harassment.

Work/life balance in this context refers to women choosing traditionally feminine jobs because they are more complementary to their home life. In addition, women may choose fields that are less penalized for childbearing and childrearing activities, often with flexible schedules (Eccles, 1994). Male-dominated professions often do not consider work/life balance a priority, which may pose challenges for women with families (Eccles, 1994). In order to address issues of work/life balance, many government agencies began "mommy tracks", which essentially slows down the career path of a woman, allowing for part-time, flexible schedules. This, though initially thought to be helpful in retaining female talent, actually, in many cases, caused career derailment, which led to many women quitting the workforce altogether (Doherty, 2004). It is these types of organizational factors that may influence the success of not only spouses and mothers, but all women.

In her famous "Men and Women of the Corporation", Kanter (1977) examines organizational barriers. This theory refers to the idea that in most fields, women occupy "flat jobs," that is, jobs without much opportunity for advancement and without much empowerment. Being employed in a flat job, Kanter says, would have an impact on any employee's attitude, regardless of gender. However, because women are more often in these positions, they may have poor attitudes disproportionate to that of men in the same organization. This causes others to deem them not suited for specific types of work or for leadership positions. Kanter (1977) was the first to emphasize the importance of mentoring on advancement. Mentoring has since been highlighted as essential to career development in a number of fields in addition to business, including psychology, nursing, and higher education. More recent meta-analysis supports the notion that individuals with a mentor have an advantage over those without, including promotion (Allen, Eby, Poteet, Lentz, & Lima, 2004).

Social role theory (Eagly, 1987) proposes that all gender traits are learned through social and culture norms. For example, in the United States, women were traditionally thought of to be nurturing, caregiving, and sensitive; whereas men are thought to be independent, ambitious, aggressive, and tough. These traits are then taught (again, intentionally or unintentionally) to children, who then perpetuate them. Women may not believe they can do certain jobs or excel in certain fields because of what they perceive to be their social role. Gender-centered barriers refer to the work of Fagenson (1990). This theory suggests that there are intrinsic differences between men and women. Over time, masculine traits (e.g., ambition, aggression) have become legitimized as desirable traits for leadership, therefore devaluing traits that are innate to women, making them unfit for leadership.

In addition to systemic issues related to career progression, Rosell, Miller, and Barber (1995) describes how sexual harassment pervades male-dominated occupation, stating "[m]ale resentment ranges from subtle discrimination in job assignments, performance evaluations, and

promotions to overt hostile treatment… Sexual harassment, whether demeaning verbal comments and jokes, touching, sexual propositioning, or acts of violence, is an occupational hazard for women working in male-dominated occupations."

All of these gender barriers pose weighty obstacles to women entering male-dominated occupations. Poor work/life balance, limited career progression, and harassment all have the ability to deter women from entering or staying in the field of emergency management. If these barriers are significant in emergency management, then reaching desired representativeness via gender may be difficult.

2.5 Summary

This literature review began by introducing feminist theories and how they apply to disaster and emergency management research. Gender literature in emergency management, including how women experience each of the four phases of emergency management differently than men, was also examined. It described representative bureaucracy and created a link between the theoretical construct and its applicability to emergency management agencies. Finally, gender barriers associated with male-dominated occupations were discussed.

If emergency management policies and plans are created to better reflect the needs of the people who are the most vulnerable, the overall resilience of a community facing emergencies and disasters could be improved. However, there is limited research, both in emergency management and representative bureaucracy literature, that establishes a link between hiring women and better outcomes for women. Also, as demonstrated, there are significant gaps in the literature regarding the hiring, retention, and promotion of women in the emergency management field. This study seeks to explore active representation between female emergency managers and the public that they serve, as well as understand the gender barriers facing women in the field of emergency management at the local level.

Using this existing literature, nineteen (19) research questions and seven (7) research hypotheses addressing active representation (discretion, minority role representation, traditional role representation) and gender barriers (work/life balance, career progression, and harassment)[5] in local emergency management agencies were developed.

Representation (active)[6]:

Discretion

RQ1: What are the correlations among discretion, minority role representation, and career progression variables?

RQ2: Are discretion and minority role representation (MRR) predictors of length of service in the field?

RQ3: Are discretion and MRR predictors of length of service in an agency?

RQ4: Are discretion and MRR predictors of length of service in a position?

RQ5: Does the level of discretion differ between two types of primary job assignments (operational and support) in emergency management agencies?

RQ6a: What are the correlations among discretion and demographic variables?

RQ6b: Does the level of discretion differ base on respondents' demographic characteristics?

RH1: Female emergency managers will have a higher level of discretion if their immediate supervisor is a female.

Minority Role Representation

RQ7: Does the level of adherence to minority role representation differ between two types of primary job assignments (operational and support) in emergency management agencies?

RQ8: Does the level of adherence to minority role representation differ based on respondents' demographic characteristics?

RH2: Female emergency managers will have higher level of adherence to minority role representation if their immediate supervisor is a female.

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[5]We were limited to assessing active representation; passive representation was unable to be determined as the number of persons who answered the question related to the agency they were employed was only 58% (N=51).

[6] Instead of referring to gender in each question, the following research questions and hypotheses are measuring active representation of female emergency managers.

RH3a: Female emergency managers will have higher level of adherence to minority role representation if they indicate that they would recommend emergency management as a career to other women.

RH3b: Female emergency managers will have higher level of adherence to minority role representation if they indicate that they have tried to recruit women into emergency management.

Traditional Role

RQ9: How do female emergency managers adhere to traditional bureaucratic standards differently?

Gender barriers:

Work/life balance:

RH4: Female emergency managers will have less work/life balance if they have children.

RH5: Female emergency managers will have less work/life balance if they have a significant other.

Career progression[7]*:*

RQ10: What are the correlations among the career progression and harassment variables?

RQ11a: What are the correlations among demographic variables and mentoring variables?

RQ11b: Does mentoring importance differ by respondents' political ideology?

RQ12: How do women in emergency management personally advance their careers?

Harassment:

RQ13: How do harassment and addressing harassment variables correlate with mentoring variables?

RQ14: How do harassment and addressing harassment variables correlate with gender-related job experience variables?

Experiencing harassment:

RQ15a: What are the correlations among demographic variables and harassment variables?

RQ15b: Do respondents' harassment experiences differ by their demographic characteristics?

[7] Instead of referring to gender in each question, the following research questions and hypotheses are measuring mentoring importance for female emergency managers.

RQ16: Are there differences between the frequency of different types of harassment experiences such as experiencing social isolation, sex or gender discrimination, sexual harassment, and violence/physical assault?

RQ17: How do women in emergency management experience harassment?

RH6: The mean of experiencing harassment will be lower if female emergency managers' immediate supervisor is a female.

Addressing harassment:

RQ18: What are the correlations among demographic variables and addressing harassment variables?

RQ19: What are the correlations among harassment variables and addressing harassment variables?

RH7: The mean of harassment complaints being positively addressed will be higher if female emergency managers' immediate supervisor is a female.

CHAPTER III

METHODOLOGY

3.1 Research Design Strategies

Traditionally, feminist research calls for the use of qualitative methods. There is a history of criticism of positivist quantitative methods in the feminist academic community (Miner-Rubino & Jayaratne, 2007). This criticism mostly stems from how women's voices were excluded from traditional science, which was intended to serve the patriarchal, ruling class (Miner-Rubino & Jayaratne, 2007). Feminist scholars were instrumental in "pointing out how subtle (and sometimes not so subtle) factors continued to bias research in favor of the 'male perspective'" (Miner-Rubino & Jayaratne, 2007, p. 298).

However, other feminist scholars contend that the tools used in quantitative methods should not be excluded from feminist inquiry. DeVault (1999) suggests that it is "not the method, per se, is at issue but the commitment to finding women and their concerns… to provide a fuller and more accurate account of society." Other feminist researchers, Miner-Rubino and Jayaratne (2007), who utilize survey methodology, explain the following:

> Although we both conduct research, which stems from the positivist tradition, we also distinguish ourselves from this tradition in that we do not agree with positivism's underpinning that there is an objective truth 'out there' that is truly accessible. Nor do we believe that scientific research can or should be completely impartial. At the same time, we also recognize the

> importance of conducting research in such a way as to reduce bias (error) as much as possible, whether that bias emanates from a sexist or feminist perspective (or any other ideology) (p. 298).

Building on this idea, the authors explain of advantages of conducting feminist quantitative methods (Miner-Rubino & Jayaratne, 2007):

1. "Quantitative survey methods can provide a vehicle for feminists to introduce sexism, racism, classism, heterosexism, and other social justice issues into mainstream discussion" (p. 303). The authors point out that those who are not likely to sympathize with feminist values may "distrust" qualitative data.

2. "Second, the brevity of statistics make them easy to remember and comprehend, and thus easy to communicate with others (Reinharz & Davidman, 1992)" (p. 303).

3. "Third, quantitative methods are helpful for determining the best course of action in implementing social change for women because such techniques help use to identify patterns of gender oppression and reveal how oppression operates" (p. 303).

4. "Finally, survey methods allow the researcher to assess the experiences or opinions of large numbers of individuals (rather than much smaller numbers, as is often the case of qualitative research)" (p. 303).

Kelly (1978) suggests that a feminist perspective is the most important during two points of the research process – 1) the development of the research questions and 2) the interpretations of the findings. These steps are taken regardless of which method is used. To be considered feminist research then, research questions should explore issues that are salient to the well-being of women and the interpretation of findings should consider how the results positively or negatively impact women. The method used, as with any research, should be reflective of how best to

answer the research questions being asked. It is for the reasons described above that quantitative methods were the primary mode of survey analysis, though supplementary qualitative methods were used. Quantitative methods were used to analyze close-ended survey questions, while qualitative methods were used to analyze open-ended survey questions.

3.2 Sampling and Data Collection

3.2.1 Sampling Method

The population for this study consisted of female emergency managers in local emergency management agencies in the United States. These agencies include stand-alone emergency management agencies at the city or county level and emergency management departments housed in fire departments or law enforcement agencies. Since a complete list of female emergency managers in the United States was not available and the population size was anticipated to be small, using random sampling process to collect data was not feasible[8].

Therefore, the study used snowball sampling techniques to recruit a homogenous purposive sample – female emergency managers. Russo (2013) and Ge (2013) are recent examples that utilized this sampling technique for web-administered surveys. Purposive sampling results in a non-probability sample, where participants are recruited based on specific characteristics determined by the goals and objectives of the study, making it appropriate to use in this case. Snowball sampling is a technique where existing participants recruit others. Its implementation

[8] Because the target sample for this study is women working in local emergency management agencies, sampling and recruiting participants was a difficult process. Because it is gender specific and nation-wide, it was thought that partnering with a women's organization would be the best avenue to reach the intended population. Though the partner agency, the International Network of Women in Emergency Management (inWEM) has approximately 2,500 members, there are many members who work in emergency management at the international, federal, and state levels who were not eligible to take the survey.

allowed those who completed the questionnaire to refer the researcher to others who might be willing to take the survey. For example, other women who participants know are currently working in emergency management in the same or different jurisdiction.

3.2.2 Data Collection

Because of the widely-dispersed geographical locations of the respondents, a web-based self-administered questionnaire was used (Russo, 2013). The questionnaire was designed considering all of the principles for the design of web surveys (Dillman & Bowker, 2001; Dillman, Smyth, & Christian, 2014; Dillman, Tortora, & Bowker, 1998). The principles consist of including elements such as a welcome screen, avoiding differences in display due to utilizing different web browsers, and providing specific instructions, amongst others.

The questionnaire was comprised of both closed and open-ended questions and developed using similar surveys (Russo, 2013; Sowa & Selden, 2003) and relevant literature (Enarson & Phillips, 2008). Preliminary conclusions from Provencio & Wu (2016) were also used; an overview of these findings is included in Appendix A.

After a draft questionnaire was finalized, it was pilot tested by staff/faculty at the Mid-Atlantic Center for Emergency Management and the founder/president of the International Network of Women in Emergency Management (inWEM). These participants were asked to comment on word choice, clarity, ease of understanding, length to completion, as well as feedback about the online interface. Open-ended comments were also requested. This feedback was considered and incorporated into the final questionnaire, which can be found in Appendix B.

Initially, cooperation from the International Network of Women in Emergency Management (inWEM) was sought in order to gain entrée and access to their membership e-mail listserv; please see Appendix C for the e-mail sent. After several e-mail exchanges and a phone conversation, the founder/president of the organization agreed to support the survey distribution

and sponsorship (Dillman et al., 2014) was achieved. Through these discussions, it was found that the organization did not have an e-mail listserv and that the only method of contacting members was by posting in the LinkedIn group's message board. The first recruitment message was posted by the president of the organization on August 8, 2017. According to Dillman et al. (2014) having an internal contact post messaging would help increase legitimacy, thereby maximizing the likelihood of a recipient to respond. However, two weeks after the initial call for participation there were only 49 respondents. Due to this low response, an IRB modification was approved to expand the scope of recruitment. In addition to posting two more calls for participants in two- to three-week increments on the inWEM message board, calls for participation were also posted in the members-only International Association of Emergency Managers (IAEM) LinkedIn and Facebook message boards and a public Facebook message board by the name of Emergency Management Issues, which is an online gathering place for receiving information about current events in emergency management. These supplementary recruitment avenues[9] also received three total announcements, posted in two to three week increments according to Dillman et al. (2014). Additionally, a call for participation was sent through the Oklahoma State University Department of Political Science Fire and Emergency Management Administration program's e-mail listserv. This listserv reaches current students of the Master and Doctoral programs, many of whom are women working in local government emergency management agencies. Lastly, an e-mail was sent to women who were personal contacts known to be working in emergency management at the local level. These recipients were also asked to forward the link to anyone who might be eligible and interested in being a participant. The entire data collection process spanned from

[9] Though attempts were made to get sponsorship for both organizations, neither was achieved. IAEM requested to alter IRB protocol and Emergency Management Issues does not have formal leadership.

August 8, 2016 to November 3, 2016. 100 completed questionnaires were received during the process; 88 of them were usable.

3.3 Institutional Review Board Approval and Confidentiality

Because this research required human subjects to respond to a survey tool, Institutional Review Board (IRB) approval was necessary. What is more, feminist research calls for a heightened awareness of the relationship between the researcher and the participants (Miner-Rubino & Jayaratne, 2007). Respondents were made aware of the purpose and intent of the research, as well as the types of questions that may be asked. Per IRB standards (and also a personal commitment to ethical research), all answers were confidential and participation were voluntary. Participants were made aware that they could choose to leave the study at any time during the survey, as well as any time after. Because of the sensitive nature of gender discrimination, harassment, and violence, respondents were made aware that no identifying information will remain in the findings (e.g., if a participant includes the name of the agency she works for re: discrimination, the name or any identifying characteristics will be removed). The use of Google Forms ensured the anonymity of the IP addresses and identities of the participants.

Questions regarding sensitive subjects such as sexual harassment, discrimination, assault and/or violence were identified as a risk for psychological distress. As such, trigger warnings were used within the questionnaire to alert the reader to potentially distressing content, as well as an additional question of consent before the questionnaire "Harassment" section.

3.4 Measurements

3.4.1 Quantitative Measures and Coding

The measures in this section, the variable number, type of measure, and coding values are outlined in the code book, which can be found in Appendix D. In addition, these measures, with

associated research questions/hypotheses, dependent/independent variables, questionnaire question number, and statistical tests can be found in Appendix E.

Personal characteristics. The questionnaire collected data on respondent's demographic characteristics. They included gender (*Male* = 1, *Female* = 2), age (in *Years*), race/ethnicity (*Caucasian, Black/African-American, American Indian or Alaska Native, Asian, Hispanic or Latino/a, Prefer not to answer, Other*), sexual orientation (*Straight, Gay/lesbian, Bisexual, Prefer not to answer, Other*), marital status (*Single (including divorced, separated, and widowed), Couple (married or partnership), Prefer not to answer, Other*), care-giving responsibilities for children (*Yes* = 1, *No* = 0), political ideology (*Democrat, Republican, Independent, I don't care about politics, Prefer not to answer, Other*), formal education level (*High school diploma/GED, Technical/vocational training, Associate degree, Bachelor degree, Master degree, Doctoral degree, Other*), type of degree obtained, and annual income range (*Less than $25,000, $25,000-$45,000, $45,001-$65,000, $65,001-$85,000, More than $85,000*). Age, education, and salary were measured as scale variables. Race/ethnicity (*Caucasian* = 1, *Other* = 2), sexual orientation (*Heterosexual* = 1, *Other* = 2), marital status (*Single* = 1, *Couple* = 2), and political ideology (*Democrat* = 1, *Republican* = 2, *Other* = 3) were recoded. The options for ethnicity and race reflected options from the United States Census. In addition, the questionnaire requested information related to the number of years the respondent has been in the field, their agency, and their current position (all in *Years*) and the type of job position the respondent holds (*Communications, Community outreach, EOC facilities, Planning, Training and exercise, Administrative, Emergency response/operations*). Primary job assignment was later recoded (*Traditional EM roles* = 1, *Non-traditional EM roles* = 2).

Agency characteristics. The questionnaire also collected data on agency characteristics. These include the name of the agency, size and type of agency (*Stand-alone agency* = 1, *Other* = 2), the number of women working for the agency, and the number of women working in supervisory

roles for the agency. Aside from the name of the agency and type, all of these were open-ended scale variables. The gender of the participant's immediate supervisor (*Male* = 1, *Female* = 2) was also requested.

Active representation. There are four ways that contemporary representative scholars measure representativeness in an attempt to link passive and active representation. The first is attitudinal congruence between minority bureaucrats and the minority public. The second is determining difference between bureaucrats (e.g., men vs. women). The third is whether bureaucrats advocate on behalf of segments of the population that are similar to themselves. The fourth, and last, is to explore whether active representation results in better policy outcomes (Leland & Read, 2013). The third way of measurement was used, due to time and resource constraints.

For active representation to occur, (1) women must have discretion in their positions and (2) the policy issue at hand must be salient and relevant to women (Keiser et al., 2002). In order to establish discretion, the indices were adapted from Sowa and Selden (2003), which quantifies administrative discretion, minority role acceptance, traditional role acceptance, and control variables. The index used to assess discretion asked a series of thirteen (13) Likert scale (*No discretion* = 1 to *Complete discretion* = 5) questions regarding gender salient job activities, which can be found in Appendix B (p. 103). These activities were derived from "Policy and Planning Direction from Feminist Theories" by Enarson and Phillips (2008, p. 70). The minority role acceptance index (MRR) measures whether or not the respondent believes they should accept the role of advocate for women. The index used to assess minority role representation asked a series of seven (7) Likert scale (*Disagree* = 1 to *Agree* = 5) questions, which can found in Appendix B (p.104). The traditional role adherence index measures whether or not the respondent believes they should remain neutrally competent in performing their job duties. The index used to measure traditional role acceptance asked a series of three (3) Likert scale questions (*Disagree* = 1 to *Agree* = 5), which can be found in Appendix B (p. 104).

Gender barriers. The questionnaire posed questions related to three areas where gender barriers may be apparent: (1) work/life balance, (2) career progression, and (3) harassment. The first area, work/life balance, was measured with the question: "How well do your working hours fit in with your (a) family or (b) social commitments?" (Lunau, Bambra, Eikemo, van der Wel, & Dragano, 2014). These were both measured via Likert scale (*Not well* = 1, *Extremely well* = 5). In addition to questions created based on guiding literature and previous interviews conducted with female emergency managers (Provencio & Wu, 2016), the questions for the last two areas, career progression and harassment, were adapted from the questionnaire used by Russo (2013), who surveyed female firefighters.

Gender-based experiences related to career progression were measured using binary questions (*No* = 0, *Yes* = 1) that included "I have experienced different treatment because of my gender" (EDT), "My gender has created barriers to my career advancement" (GBA), "Males and females are treated the same during orientation, training, and probationary periods" (GTE), "Promotions are decided upon fairly" (Fair Promotion), "Personnel in my agency are treated differently because of their sexual orientation" (TD), "The hiring process in my department fairly selects and hires applicants" (Fair Hiring), and "I have received coaching/mentoring from senior personnel in my agency" (Mentoring). A series of binary questions related to personally recommending or recruiting other women into the field of emergency management was also asked (*No* = 0, *Yes* = 1). These questions were, "Would you recommend emergency management as a profession to other women?" (RecomEM_W), "Have you tried to recruit other women into emergency management?" (Recruit_W), and, "Have you had success recruiting women into emergency management?" (Succ_Recruit). Lastly, mentoring importance was measured by a series of Likert scale questions (*Not important* = 1, *Extremely important* = 5); these were "How important is it to you to receive mentoring" (M_important), while the following differentiated between mentoring

importance from a senior female colleague (M_female) and from a senior male colleague (M_male).

Finally, experiences related to harassment and how well harassment has been addressed in the workplace were measured using Likert scale questions. The questionnaire section on harassment was divided into four (4) types of experiences: social isolation (H_SI), sexual harassment (H_SH), sex or gender discrimination (H_SGD), and violence/physical assault (H_V); these were measured where *Never* = 0 and *Extremely Often* = 4. The questionnaire section on addressing harassment utilized binary questions (*No* = 0, *Yes* = 1) to measure whether or not participants' supervisors address complaints related to gender issues (AH_SAC). Additionally, respondents were asked if they had filed a grievance or complaint (AH_FG) and/or taken legal action (AH_TLA) and whether or not the grievance/complaint (AH_GR) or legal action had been resolved to their satisfaction.

3.4.2 Quantitative Data Analysis

To analyze the data, four primary statistical tests were used: correlations, t-tests, analysis of variance (ANOVA), and regression analysis. To see which test was used to analyze the data for each research question/hypothesis, please see Appendix E. The statistical tests are described below.

The Pearson correlation coefficient, or Pearson's *r*, were used to measure correlations between two variables (independent vs. dependent), particularly when both variables are interval-ratio. The possible ranges of results fall between -1 (perfect negative relationship) and +1 (perfect positive relationship), with 0 indicating no association between the two variables. Though simplistic, this value can tell us a lot of about the nature of the variables' relationship. In addition, these values can be tested for statistical significance (Healey, 2005). However, there are limitations of Pearson's *r*, which include, (1) Pearson's *r* does not take into consideration whether

the variable is a dependent variable or independent variable, (2) Pearson's *r* only determines correlation, not causality, (3) Pearson's *r* does not measure non-linear relationships, and (4) Pearson's *r* does not indicate the fit of the line, meaning that it does not determine for every unit of decrease/increase of one variable impacts the unit of increase/decrease for the other variable.

T-tests were used to compare two groups' (categorical independent variables) means, as well as whether this difference is likely to have occurred because of random chance. T-tests' statistical significance denotes whether the difference between the averages is likely to represent an actual difference between the categories and the effect size indicates whether the difference is large enough to be meaningful. An important limitation is that the t-tests only examine means and have virtually nothing to say about individual scores; conclusions are about means, not about individuals (Healey, 2005).

Since many of this study's independent variables are categorical and consisted of more than two categories, analysis of variance (ANOVA) was used. For ANOVA, the null hypothesis assumes that the means calculated from each category should be roughly equal. To reject the null, large enough variance between the categories' means must be reached, but with homogeneity within categories (low standard deviation). In addition, only one category's mean needs to be different to reject the null. The decision to reject or fail to reject the null is based on a comparison of the obtained F ration with the critical F ratio. It should be noted that though a t-test could be used between each of the categories, ANOVA allows you to compare the means within and between each (Healey, 2005). However, limitations of ANOVA include (1) ANOVA requires roughly equal numbers in each of the categories of the IV, which may be difficult to achieve; however, it can "tolerate some deviation from it model assumptions" (Healey, 2005, p. 265), and (2) with ANOVA, when the null is rejected, the alternative is supported; ANOVA only indicates that one mean is different, not which differences are significant. This can be solved by using additional testing (Healey, 2005, p. 265).

Lastly, regression analysis was used to determine possible predictors for the length of service variables. Regression analysis focuses on determining the impact of one or more independent variable, with significance, on a dependent variable. An important limitation of regression analysis is that one can only determine the relationships between variables and not causality.

When estimating the sample size needed for statistical analysis, a researcher must conduct a power analysis to establish the number of observations needed for statistical significance. Cohen (1992) provides a table for social science researchers to choose an effective size based on the statistical test to be used and the levels of visibility of an effect. The author identifies three levels of effect size—small, medium and large—stating "*a medium effective size represents an effect likely to be visible to the naked eye of a careful observer…. the small effective size to be noticeably smaller than medium but not so small as to be trivial, and the large effective size to be the same distance above medium as small was below it*". The survey questions that are used in the study are quite clear and easy to read; the survey respondents should have been able to easily distinguish one question from another. Therefore, the effective size for each analysis is medium.

As mentioned earlier, F-ratio and t-tests are two statistics that will be used to determine the statistical significance. *G*Power*, a free statistical Power Analyses tool that was developed by the Department of Psychology, Heinrich Heine Universität, Düsseldorf, Germany, was used to detect statistical power and sample size needs. This study followed the conventional levels of the critical values for α (.05) and 1-β (.80). *G*Power* analysis concluded that at least 34 observations are needed for independent sample t-tests (actual power .81). For ANOVA, *G*Power* analysis concluded that at least 72 observations are needed (actual power .82) for F-tests. Finally, *G*Power* analysis concluded that at least 31 observations are needed (actual power .80) for F-tests and t-tests using regression analysis. Since there were 88 returned questionnaires, the sample size provided enough power to detect difference among the groups.

3.4.3 Qualitative Coding

Three open-ended questions were manually coded. These questions are, (1) What have you personally done to advance your career?; (2) If you selected any of the above, please describe the experience below (this was in reference to the previous question about social isolation, sexual harassment, sex or gender discrimination, and violence/physical assault); and, (3) Are there any additional comments you would like to make regarding this questionnaire?

The researcher utilized the "in vivo" method during the first cycle of coding, which refers to a short word or phrase taken from the exact language the participant used. During second-cycle coding, focused coding was used, which requires the researcher to identify the most frequent and significant initial (first-cycle) codes. These second-cycle codes were used to develop themes within the data.

CHAPTER IV

RESULTS

4.1 Descriptive Statistics

Tables 1 and 2 present the descriptive statistics for selected variables from the 88 responses to the survey; the following results highlight some of the these.

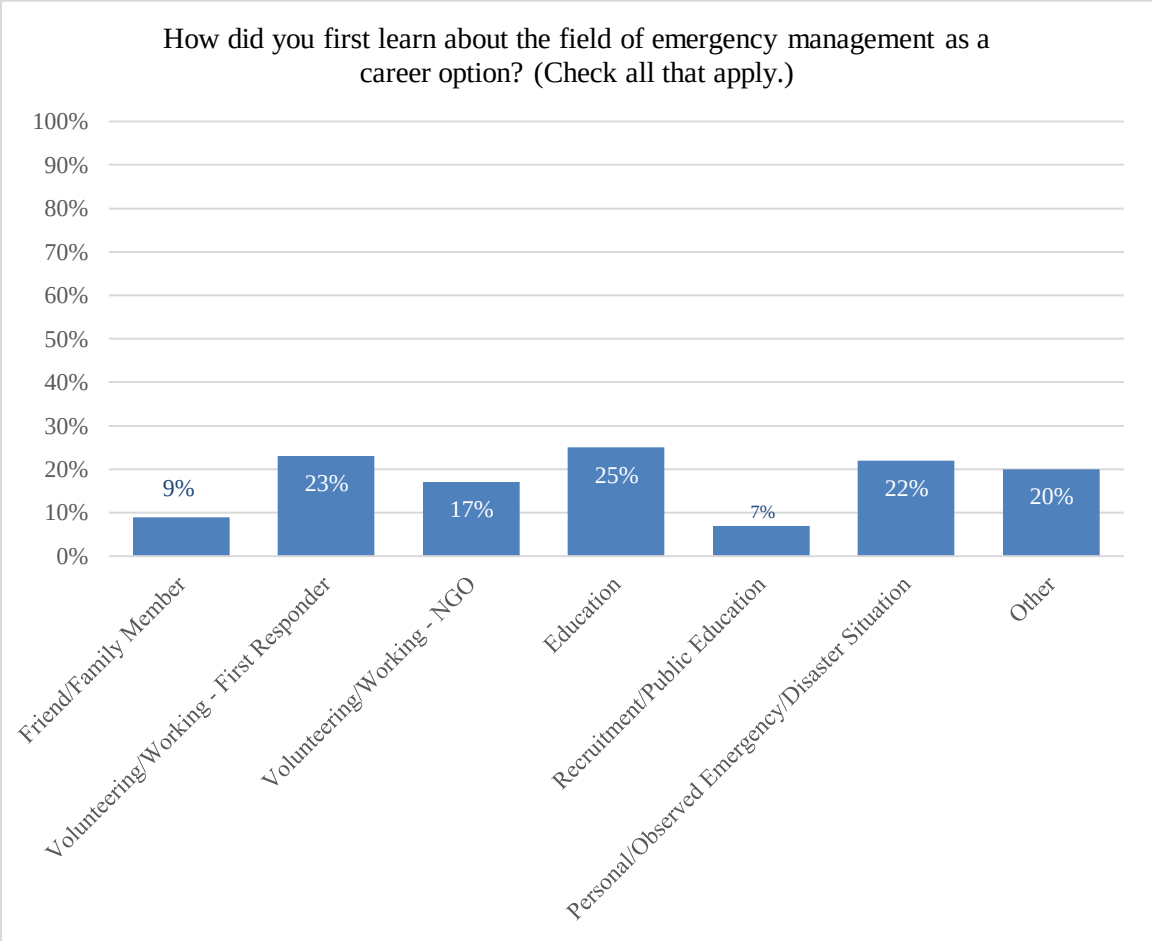
Personal characteristics. The average age of the female respondents was 39.9 and their ages ranged from 21 to 61. Most respondents (80%) were White and 85% identified as heterosexual. More than half (60%) indicated that they were in a partnership (married or otherwise), but only 27% had care-giving responsibilities for children. 43% of respondents were Democrat and 17% were Republican. Regarding formal education, 36.4% had a Bachelor's degree, while 54.0% had a Master's degree or higher. Among the 88 responses the most prevalent degrees were Emergency Management (30), Homeland Security (10), Public Administration (10), and Political Science/Public Policy (9). Following these, English/Linguistics/Communications (7), Public Health (5), Psychology (5), and Business (5) were the most frequent; some respondents listed more than one degree, which were counted in the above numbers. Of those that responded to the survey, 47.7% made less than $65,000 per year, while the balance (52.3%) made $65,0001 or more.

Table 1. Demographics and Agency Characteristics Descriptive Statistics

Variable	N	Missing Value %	Mean	Standard Deviation	Minimum	Maximum	Cronbach's α
Demographics							
Age	87	1.14%	39.90	10.58	21.00	61.00	
Race/Ethnicity - white	85	3.41%	.80	.40	.00	1.00	
Sexual Orientation – heterosexual	88	0.00%	.85	.36	.00	1.00	
Marital Status – single	87	1.14%	.40	.49	.00	1.00	
Marital Status – couple	87	1.14%	.60	.49	.00	1.00	
Care-giving Responsibilities	88	0.00%	.27	.45	.00	1.00	
Political Ideology - Democrat	88	0.00%	.43	.50	.00	1.00	
Political Ideology - Republican	88	0.00%	.17	.38	.00	1.00	
Formal Education – Bachelor's	88	0.00%	.36	.48	.00	1.00	
Formal Education – Master's	88	0.00%	.51	.50	.00	1.00	
Current Salary – less than $65,000	88	0.00%	.48	.50	.00	1.00	
Years of Service							
Time in Field (years)	87	1.14%	10.39	7.61	.50	40.00	
Time in Agency (years)	86	2.27%	6.30	6.13	.17	30.00	
Time in Position (years)	87	1.14%	4.61	5.50	.08	30.00	
Agency Characteristics							
Type of Agency – stand-alone	88	0.00%	.51	.50	.00	1.00	
Supervisor Gender – male	83	5.68%	.72	.45	.00	1.00	
Job Characteristics							
Primary Job Assignment - operational	82	6.82%	.43	.50	.00	1.00	
Primary Job Assignment - support	82	6.82%	.57	.50	.00	1.00	
Discretion Index	87	1.14%	3.43	1.00	1.00	5.00	.950
Minority Role Representation Index	86	2.27%	4.07	.89	1.86	5.00	.954

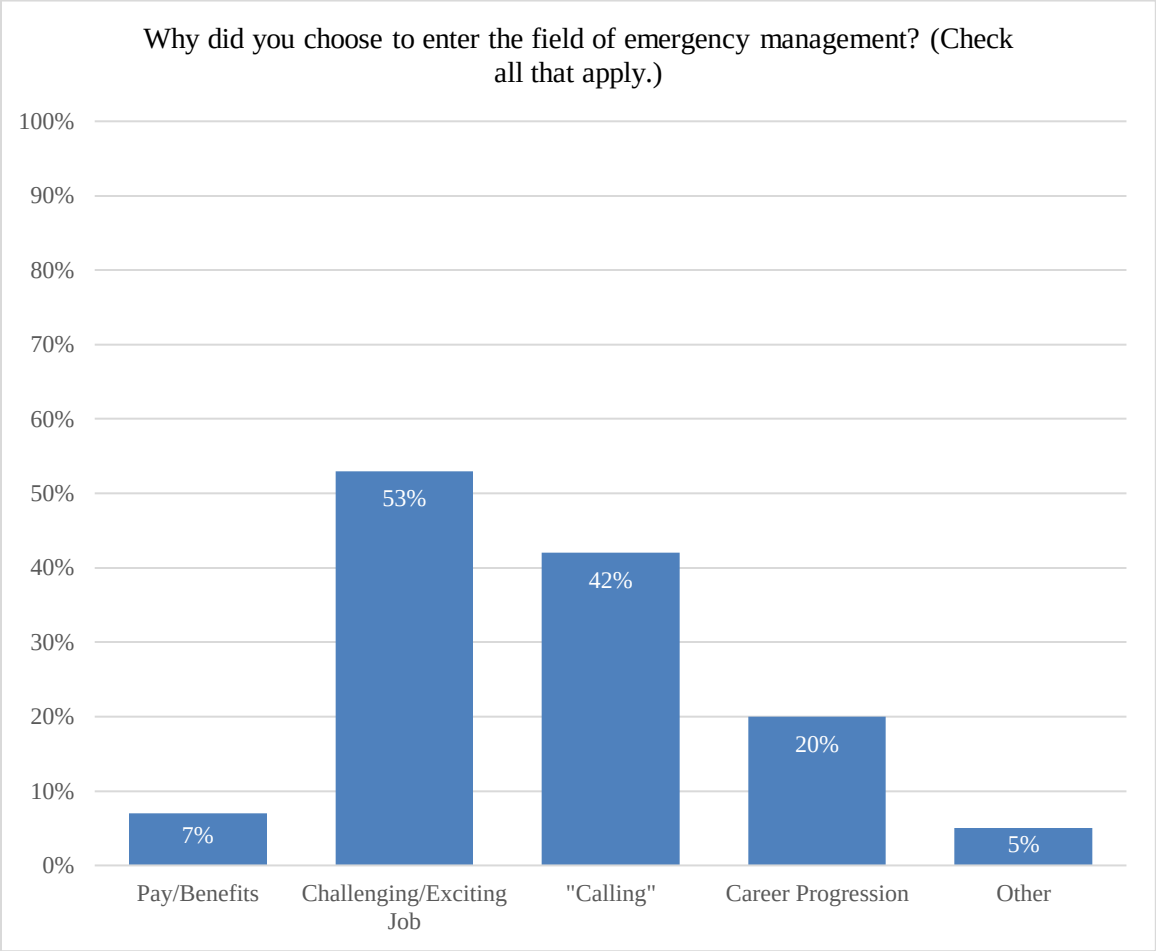
As shown in Figure 1, most respondents indicated that they learned about emergency management as a career option through education (25%), volunteering or working as a first responder (23%), or by experiencing a personal disaster or observing a well-known disaster event (22%).

Figure 1 Point of Entry - Q2



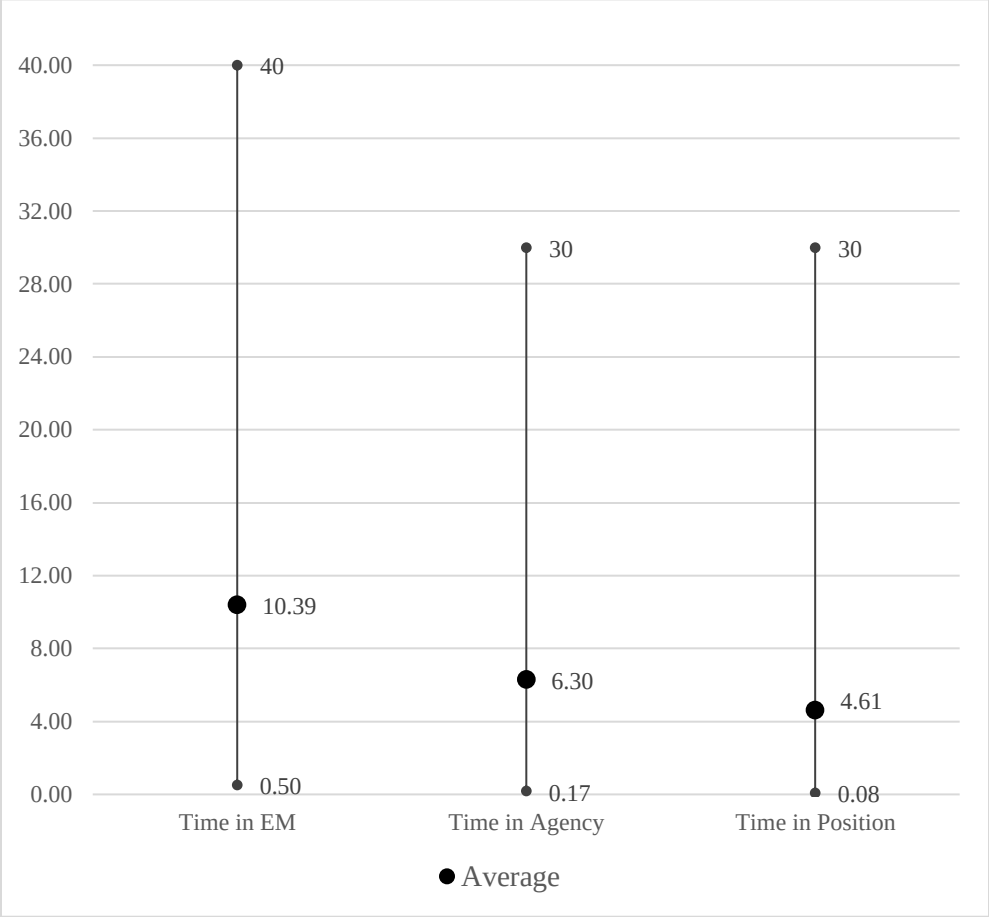
Furthermore, the decision to enter the field of emergency management as a career was based on the ideas that it would be an exciting and/or challenging job (53%) and that it was a "calling" (42%). Only 20% indicated that it was due to a natural career progression and 7% chose to enter the field for the stability of pay and benefits (Figure 2).

Figure 2. Point of Entry - Q3



The average length of time employed in the emergency management field was 10.39 years, with a minimum of 6 months and a maximum of 40 years. The respondents were employed by their current agency for an average length of 6.30 years (minimum of 2 months, maximum of 30 years) and in their current position for an average of 4.61 years (minimum of 1 month, maximum of 30 years); this is illustrated in Figure 3. Of those who responded, 43% reported their primary job assignment to be operational (e.g., Emergency Operation Center facilities, planning, training and exercise, and emergency response/operations), while the remaining (57%) reported to serve in support roles (e.g., communications, community outreach, administrative, other).

Figure 3. Length of Service (years)



Agency characteristics. Fifty-one percent (51%) of respondents worked for stand-alone agencies, rather than in a division of another organization such as the fire service or law enforcement. The average agency size (non-supervisory and supervisory positions) was 49.73 persons, with a maximum of 700 and a minimum of 1, while the average number of women in these agencies was 9.16. Lastly, when asked about the gender of their supervisor, 72% indicated theirs was male.

Discretion and representation. Averaging thirteen items representing discretion, which is defined as the freedom to decide what should be done in a particular situation, yielded an index (Cronbach's $\alpha = .95$) with $M = 3.43$, where 1 indicates no discretion and 5 indicates complete discretion. A mean slightly higher than the midpoint (3) intimates that the participants have moderate discretion in their position, possibly setting the stage for active representation to occur.

Similarly, seven questions related to minority role representation were averaged as another index (Cronbach's α = .95) with M = 4.07, where 1 indicates low minority role acceptance and 5 indicates high minority role acceptance. The minority role acceptance index measures whether or not the respondent believes they should accept the role of advocate for women. That the mean is above the midpoint (3) suggests that respondents believe that they should advocate on behalf of women in their positions.

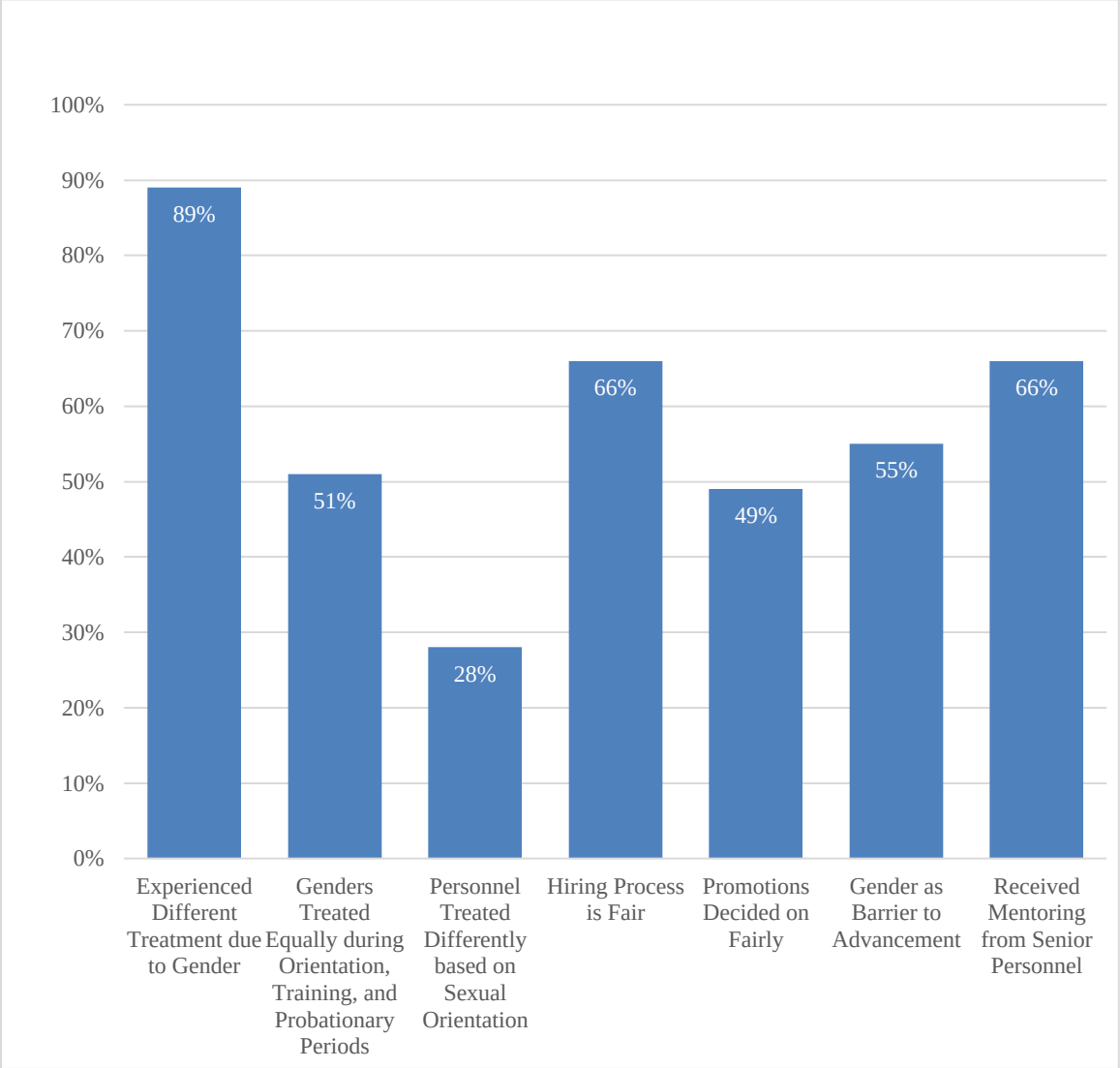
Work/life balance and career progression. When asked to rate how well their working hours fit into family and social commitments, participants responded with means of 3.53 and 3.57, respectively, where 1 was not well and 5 was extremely well. Regarding promotion, most respondents have seen advancement in their current agency (50%), while 39.8% have received 1 or 2 promotions and 8% have received 3 or 4. When asked whether they felt as if less-qualified applicants were promoted ahead of them, 65% indicated no, while 23% believed that less-qualified male applicants were. An overwhelming 79% of participants felt that they had to move to another agency in order to advance their career. By creating a ratio statistic of the number of agencies per number of years in the field, it was shown that respondents are employed by one agency every three years, on average.

Respondents were asked series of questions related to treatment, promotions, and mentoring based on gender; the results can be found in Figure 4. 89% believed that they experienced different treatment because of their gender and 55% believed that their gender was a barrier to advancement; however, 66% believed that their agencies hiring processes were fair and 49% believed that promotions were decided on fairly. 66% reported to have received coaching and/or mentoring from senior personnel (gender not indicated). When asked about what they have done personally to advance their careers, participants returned myriad responses, which are discussed further in section 4.3.1.

Table 2. Experiences and Perceptions of Work/Life Balance, Career Progression, and Harassment

Variable	N	Missing Value %	Mean	Standard Deviation	Minimum	Maximum
Experiences and Perceptions						
Work/Life Balance						
Work/Life Balance – family	86	2.27%	3.53	1.25	1.00	5.00
Work/Life Balance – social	86	2.27%	3.57	1.19	1.00	5.00
Career Progression						
Less Qualified Promoted – no	88	0.00%	.65	.48	.00	1.00
Less Qualified Promoted – yes, male	88	0.00%	.23	.42	.00	1.00
Move Agencies for Advancement – yes	82	6.82%	.79	.41	.00	1.00
Experienced Different Treatment	87	1.14%	.89	.32	.00	1.00
Gender as Barrier to Advancement	87	1.14%	.55	.50	.00	1.00
Genders Treated Equally (orientation, training, probationary periods)	85	3.41%	.51	.50	.00	1.00
Promotions Decided on Fairly	85	3.41%	.49	.50	.00	1.00
Personnel Treated Differently (sexual orientation)	85	3.41%	.28	.45	.00	1.00
Hiring Process is Fair	85	3.41%	.66	.48	.00	1.00
Received Mentoring from Senior Personnel	87	1.14%	.66	.48	.00	1.00
Recommend EM to Women	86	2.27%	.94	.24	.00	1.00
Tried to Recruit Women	83	5.68%	.75	.44	.00	1.00
Success Recruiting	68	22.73%	.69	.47	.00	1.00
Mentoring – importance	86	2.27%	4.27	1.03	1.00	5.00
Mentoring – from female	87	1.14%	3.61	1.35	1.00	5.00
Mentoring – from male	87	1.14%	3.28	1.26	1.00	5.00
Harassment						
Harassment – Social Isolation	68	22.73%	.76	.43	.00	1.00
Harassment – Sexual Harassment	83	5.68%	.59	.49	.00	1.00
Harassment – Sex or Gender Discrimination	84	4.55%	.49	.50	.00	1.00
Harassment - Violence/Physical Assault	86	2.27%	.07	.26	.00	1.00
Addressing Harassment						
Supervisor Addresses Concerns	50	43.18%	.74	.44	.00	1.00
Filed Grievance	79	10.23%	.10	.30	.00	1.00
Taken Legal Action	64	27.27%	.02	.13	.00	1.00

Figure 4. Gender-based Treatment, Promotions, and Mentoring



On a 1 (not important) to 5 (extremely important) Likert scale, mentoring was deemed very important (M = 4.27), while it was only slightly more important for the mentor to be a senior female colleague (M = 3.61) than a senior male colleague (M = 3.28). Overall, 94% of respondents said they would recommend emergency management as a profession to other women, while 75% of them said that they have actively tried to recruit other women into the field. Of those who have recruited women, 69% said that their effort has been successful.

Harassment. Regarding gender-based harassment, 76% women have experienced social isolation, 59% have experienced sexual harassment, 49% experienced sex or gender discrimination, and 7% have experienced violence or physical assault. Sex or gender discrimination and sexual harassment were both defined in the questionnaire. However, among those who responded, 74% believe that their immediate supervisor addresses concerns about gender-related issues (it should be noted that 43.18% of respondents did not answer this question), 10% have filed a grievance or formal complaint, and only 2% have taken legal action. Further analyses of harassment experiences are discussed in section 4.3.2.

4.2 Addressing the Research Questions and Hypotheses

4.2.1 Representation

Correlation analysis was used to answer question RQ1 *(What are the correlations among discretion, minority role representation, and career progression variables?)*; the results are presented in Table 11. Those with more discretion were more likely to believe that their agencies hiring processes are fair (*Fair_Hiring*) ($r = .270$, $p < .05$). In addition, those with higher MRR indices were more likely to believe that personnel are being treated differently based on sexual orientation *(TD*) ($r = .22$, $p < .05$). Furthermore, women with higher MRR were more likely to indicate that mentoring from a senior female colleague (*M_female*) was important to them ($r = .299$, $p < .01$).

Multiple linear regression was used to test RQ2 *(Are discretion and MRR predictors of length of service in the field?)*, RQ3 *(Are discretion and MRR predictors of length of service in an agency?)*, and RQ4 *(Are discretion and MRR predictors of length of service in a position?)* The results (Table 3) indicate that discretion is a significant predictor of length of service in the field and in a position, but not in an agency. MRR was not a significant predictor of any length of service.

Table 3. Regression Analysis - Length of Service

Model	Length of Service - Field	Length of Service - Agency	Length of Service - Position
(Constant)	2.983	.432	-3.098
Discretion	2.227**	1.581*	2.057**
MRR	-0.87	.124	.177
Statistics	$F_{(2,82)} = 4.031$ $p = .021$* $R^2 = .090$	$F_{(2,81)} = 2.862$ $p = 0.63$ $R^2 = .066$	$F_{(2,82)} = 6.679$, $p = .002$** $R^2 = .140$

*The regression coefficient is significant at .05 level

**The regression coefficient is significant at the .01 level

An independent-samples t-test was used to test RQ5 *(Does the level of discretion differ between two types of primary job assignments (operational and support) in emergency management agencies?)*; this test compared the discretion index (Table 4) for those in operational positions and those in support positions. There was a significant difference in the level of discretion for operational jobs (M = 3.7, SD = .945) and support jobs (M = 3.2, SD = 0.993) ($t(79) = 2.03$, $p < .05$). These results suggest that type of job does impact discretion. Specifically, that those in operational positions have more discretion than those in support positions.

Table 4. Independent-Samples T-test – Discretion Index vs. Primary Job

	Primary Job						95% CI for Mean Difference	t	df
	Operational			Support					
	M	SD	n	M	SD	n			
Discretion Index	3.704	.945	35	3.260	.993	46	.009, .878	2.03*	79

* $p < .05$.

Correlation analyses were used to test RQ6a (*What are the correlations among discretion and demographic variables?*). Independent-samples t-tests were used to test RQ6b *(Does the level of discretion differ base on respondents' demographic characteristics?)*. Demographics included were age, race/ethnicity, sexual orientation, marital status, care-giving responsibilities, political

ideology, education, and salary.[10] Based on these results, only salary was positively correlated with discretion (r = .272, p < .05). RQ6b compares the level of discretion between those making $65,000 or less versus those making $65,001 or more (Table 5). There was a significant difference in the discretion indices for those with salary was $65,000 or less (M = 3.2, SD = 1.17) and those making $65,001 or more (M = 3.6, SD = 0.773) (t(70) = -2.01, p < .05). These results suggest that the higher salary you have, the more discretion you have.

Table 5. Independent-Samples T-test – Discretion Index vs. Salary

	Salary								
	Less than or equal to $65,000			$65,001 or more			95% CI for Mean Difference		
	M	SD	n	M	SD	n		t	df
Discretion Index	3.209	1.17	42	3.640	.773	45	-.858, -.003	-2.01*	70

* p < .05.

RH1 *(Female emergency managers will have a higher level of discretion if their immediate supervisor is a female.)* was not supported; the resulting t-tests were not significant.

Similarly, RQ7 *(Does the level of adherence to minority role representation differ between two types of primary job assignments (operational and support) in emergency management agencies?)*, did not yield significant t-test results.

To answer RQ8 *(Does the level of adherence to minority role representation differ based on respondents' demographic characteristics?)*, independent-samples t-test were used to compare MRR indices by demographics including age, race/ethnicity, sexual orientation, marital status, care-giving responsibilities, political ideology, education, and salary. Table 5 demonstrates the

[10] Only age, education, and salary were included in the correlation table (Table 11) because they are continuous scale variables.

results from the independent-samples t-tests performed when comparing the MRR index (Table 6) and political ideology. There was a significant difference in the MRR indices when comparing Democrats (M = 4.2, SD = .746) and Republicans (M = 3.6, SD = 0.969) ($t(50) = 2.63$, $p < .05$). These results suggest that political ideology does impact whether or not a woman is more likely to advocate on behalf of women in their agency. Specifically, that women who identify as Democrats are more inclined to advocate on behalf of women in their role at a local emergency management agency.

Table 6. Independent-Samples T-test - MRR Index vs. Political Ideology

	Political Ideology						95% CI for Mean Difference		
	Democrat			Republican					
	M	SD	n	M	SD	n		t	df
MRR Index	4.218	.746	38	3.551	.969	14	.158, 1.176	2.63*	50

* p < .05.

RH2 *(Female emergency managers will have higher level of adherence to minority role representation if their immediate supervisor is a female.)* was not supported; the resulting t-test was insignificant.

While RH3a *(Female emergency managers will have higher level of adherence to minority role representation if they indicate that they would recommend emergency management as a career to other women.)* was not supported, RH3b (*Female emergency managers will have higher level of adherence to minority role representation if they indicate that they have tried to recruit women into emergency management.*) was supported. There was a significant difference (Table 7) in the MRR index means for those who have tried to recruit women into emergency management (M = 4.16, SD = .870) and those who have not (M = 3.75, SD = 0.866) ($t(80) = -1.85$, $p < .10$).

Table 7. Independent-Samples T-test - MRR Index vs. Recruitment

	Have you tried to recruit other women into EM?						95% CI for Mean Difference		
	Tried to Recruit			Have Not Tried to Recruit					
	M	SD	n	M	SD	n		t	df
MRR Index	4.162	.870	61	3.755	.866	21	-.844,.031	-1.85*	80

* p < .10; because this is an exploratory study, there is precedent for accepting significance at the 10% level.

Repeated-measure ANOVA was used to test RQ9 *(How do female emergency managers adhere to traditional bureaucratic standards differently?)*. There were three questions (variables) that were measured against each other: (1) limiting concern to efficiently carrying out departmental programs and duties (M = 2.33, SD = 1.384), (2) limiting concern with how programs and services are implemented and, in particular, to the efficient execution of departmental duties (M = 2.37, SD = 1.320), and (3) actively advocating in favor of hiring and promotion of individuals with a focus on equal opportunity and merit ((M = 4.29, SD = 1.027). This difference was found to be significant (Wilks' Lambda = .040, F (3,83) = 662.248, p < .01). When comparing means the largest difference is between the first (1) and third (3) variables and the second (2) and third (3) variables, suggesting that the third measure does not align with the first two measures.

4.2.2 Gender Barriers

RH4 *(Female emergency managers will have less work/life balance if they have children.)* and RH5 *(Female emergency managers will have less work/life balance if they have a significant other.)* were not supported; the resulting t-tests were not significant.

Correlation analysis was used to answer question RQ10 *(What are the correlations among the career progression and harassment variables?)*; the results are presented in Table 11. Among the career progression variables, recommending EM profession to other women (*RecomEM_W*) is

positively correlated with (*Mentoring*), regardless of the mentor's gender ($r = .243$, $p < .05$); respondents were less likely to recommend emergency management as a career (*RecomEM_W*) to other women if they also indicated that gender is a barrier to advancement (*GBA*) ($r = -.226$, $p < .05$). Experiencing sex or gender discrimination (*H_SGD*) ($r = .240$, $p < .05$) and experiencing sexual harassment (*H_SH*) ($r = .225$, $p < .05$) were both positively correlated with attempting to recruit women (*Recruit_W*).

Correlations and independent-samples t-tests were used to test RQ11a *(What are the correlations among demographic variables and mentoring variables?)* and RQ11b *(Does mentoring importance differ by respondents' political ideology?)*. Demographics included were age, race/ethnicity, sexual orientation, marital status, care-giving responsibilities, political ideology, education, and salary. Age is negatively correlated with the importance of mentoring (*M_important*) ($r = -.276$, $p < .05$) and it is also negatively correlated with mentoring by a senior female (*M_female*) ($r = -.296$, $p < .01$). Table 8 demonstrates the independent-samples t-tests when comparing how important mentoring is to political ideology. There was a significant difference in the means for the importance of mentoring for Democrats (M = 4.4, SD = .970) and Republicans (M = 4.8, SD = 0.426) ($t(48) = -2.15$, $p < .05$). These results suggest that mentoring is more important to women who identify as Republican.

Table 8. Independent-Samples T-test - Mentoring (importance) vs. Political Ideology

	Political Ideology						95% CI for Mean Difference		
	Democrat			Republican					
	M	SD	n	M	SD	n		t	df
Mentoring - importance	4.37	.970	38	4.79	.426	14	-.808, -.027	-2.15*	48

* $p < .05$.

Correlation analysis was used to answer question RQ12 *(How do harassment and addressing harassment variables correlate with mentoring variables?)*; the results are presented in Table 11. Experiencing social isolation *(H_SI)* was negatively correlated with whether or not the respondent

had received mentoring from senior personnel (*Mentoring*) (r = -.306, p < .05). Experiencing sex or gender discrimination was negatively correlated with believing that mentoring from a senior male colleague is important (*M_male*) (r = -.247, p < .05). Experiencing violence/physical assault (*H_V*) was negatively correlated with believing that mentoring from a senior colleague, male (*M_male*) (r = -.230, p < .05) and female (*M_female*) (r = -.219, p < .05) was important. Also, that an immediate supervisor addresses complaints (*AH_SAC*) is positively correlated with having received mentoring from senior personnel (*Mentoring*) (r = .375, p < .01) and believing that mentoring from female supervisor personnel is important (*M_female*) (r = .282, p < .05).

Correlation analysis was used to answer question RQ13 *(How do harassment and addressing harassment variables correlate with gender-related job experience variables?*); the results are presented in Table 11. Experiencing social isolation (*H_SI*) was positively correlated with experiencing different treatment due to gender (*EDT*) (r = .361, p < .01), indicating that gender is a barrier to advancement (*GBA*) (r = .365, p < .01), and the belief that personnel are treated differently on the basis of sexual orientation (*TD*) (r = .298, p < .05). It was negatively correlated with the belief that promotions are decided on fairly (*Fair Promotion*) (r = -.330, p < .01) and that the hiring process is fair (*Fair Hiring*) (r = -.258, p < .05). Experiencing sex or gender discrimination (*H_SGD*) was positively correlated with experiencing different treatment due to gender (*EDT*) (r = .241, p < .05) and indicating that gender is a barrier to advancement (*GBA*) (r = .311, p < .01). Experiencing sexual harassment (*H_SH*) was positively correlated with experiencing different treatment due to gender (*EDT*) (r = .332, p < .01), indicating that gender is a barrier to advancement (*GBA*) (r = .501, p < .01), and the belief that personnel are treated differently on the basis of sexual orientation (*TD*) (r = .439, p < .01). Experiencing sexual harassment was also negatively correlated with the belief that genders are treated equally during orientation, training, and probationary periods (*GTE*) (r = -.293, p < .01), that promotions are decided on fairly (*Fair Promotion*) (r = -.395, p < .01), that the hiring process is fair (*Fair Hire*)

(r = -.345, p < .01). Experiencing violence/physical assault (*H_V*) was positively correlated with believing that their agencies hiring process is fair (*Fair Hire*) (r = .267, p < .05).

Table 11 also shows that the respondent's immediate supervisor addresses complaints (*AH_SAC*) is positively correlated with believing promotions are decided on fairly (*Fair Promotion*) (r = .478, p < .05) and that the hiring process is fair (*Fair Hiring*) (r = .501, p < .01). It is negatively correlated with believing gender is a barrier to advancement (*GBA*) (r = -.320, p < .05), that personnel is treated differently based on sexual orientation (*TD)* (r = -.541, p < .01).

Having filed a formal complaint or grievance (*AH_FG*), having a grievance resolved (*AH_GR*), and having taken legal action (*AH_TLA*) were not correlated with any gender-related job experience variables.

Correlations and independent-samples t-tests were used to test RQ14a *(What are the correlations among demographic variables and harassment variables?)* and RQ14b *(Do respondents' harassment experiences differ by their demographic characteristics?*) Demographics included were age, race/ethnicity, sexual orientation, marital status, care-giving responsibilities, political ideology, education, and salary. Most of the demographic variables are not significantly correlated with harassment variables, however, experiencing violence/physical assault (*H_V*) was positively correlated with age (r = .224, p < .05) and salary (r = .217, p < .05).

Table 9 shows the result from the independent-samples t-tests performed when comparing the means for having experienced sexual harassment and marital status. There was a significant difference in the means between those who were single, divorced, separated, or widowed (M = 1.18, SD = 1.24) and those who were married or in a partnership (M = .65, SD = 0.903) (t(56) = 2.10, p < .05). These results suggest that single, divorced, separated, and widowed women experience sexual harassment more frequently than women who are in a marriage or partnership.

Table 9. Independent-Samples t-test - Sexual Harassment vs. Marital Status

	Marital Status						95% CI for Mean Difference		
	Single, Divorced, Separated, Widowed			Married/Partnership					
	M	SD	n	M	SD	n		t	df
Sexual Harassment	1.18	1.24	34	.65	.903	49	.025, 1.022	2.10*	56

* $p < .05$.

Repeated-measure ANOVA was used to answer RQ15 *(Are there differences between the frequency of different types of harassment experiences such as experiencing social isolation, sex or gender discrimination, sexual harassment, and violence/physical assault?)*. The results showed that there were differences between frequency of experiencing *social isolation* (M = 1.45, SD = 1.186), *sex or gender discrimination* (M = .89, SD = 1.106), *sexual harassment* (M = 1.29, SD = 1.343), *and violence/physical assault* (M = .12, SD = .484)*?* This difference was found to be significant (Wilks' Lambda = .371, F (4,61) = 25.387, $p < .01$).

RH6 *(The mean of experiencing harassment will be lower if female emergency managers' immediate supervisor is a female.)* is partially supported. While having a female supervisor does not seem to impact social isolation, sex or gender discrimination, and sexual harassment, experiencing violence/physical assault is impacted. Table 10 shows the result of means of incidents of violence/physical assault when comparing supervisor genders, male (M = .10, SD = .357) and female (M = .00, SD = 0.000) (t(58) = 2.18, p <.05), for which there was significance. The results indicate that women are more likely to be victims of violence/physical assault in the emergency management field if their supervisor is male.

Table 10. Independent-Samples T-test - Violence/Physical Assault vs. Supervisor Gender

	Supervisor Gender						95% CI for Mean Difference	t	df
	Male			Female					
	M	SD	n	M	SD	n			
Violence/ Physical Assault	.10	.357	59	.00	.000	24	.009, .195	2.18*	58

* $p < .05$.

Correlation analysis was used to answer RQ16 *(What are the correlations among demographic variables and addressing harassment variables?)*. Demographics included were age, race/ethnicity, sexual orientation, marital status, care-giving responsibilities, political ideology, education, and salary. Salary was positively correlated with the belief that their supervisor addresses gender-related issues ($r = .299$, $p < .05$) and negatively correlated with having filed a grievance ($r = -.246$, $p < .05$).

Similarly, correlation analysis was used to answer RQ17 *(What are the correlations among harassment variables and addressing harassment variables?)*. Table 11 shows that the respondent's immediate supervisor addresses complaints (*AH_SAC*) is negatively correlated with having experienced social isolation (*H_SI*) ($r = -.475$, $p < .01$), sex or gender discrimination (*H_SGD*) ($r = -.357$, $p < .05$), sexual harassment (*H_SH*) ($r = -.486$, $p < .01$), and violence/physical assault.

Having filed a formal complaint or grievance is positively correlated with having experienced social isolation ($r = .339$, $p < .01$), sex or gender discrimination ($r = .325$, $p < .01$), sexual harassment ($r = .503$, $p < .01$). Having taken legal action (AH_TLA) is positively correlated with having experienced sexual harassment ($r = .263$, $p < .05$), and violence/physical assault ($r = .361$, $p < .01$).

It should also be noted that indicating that the respondent's immediate supervisor addresses complaints is negatively correlated with having filed a formal complaint or grievance (r = -.286, p < .05). In addition, filing a formal complaint or grievance is positively correlated with taking legal action (r = .333, p < .01).

RH7 *(The mean of harassment complaints being positively addressed will be higher if female emergency managers' immediate supervisor is a female.)* was not supported; the resulting t-tests were not significant.

Table 11. Correlations among Variables

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Demographics	1Age	-																									
	2. Education	-.03	-																								
	3. Salary	.08	**.27**	-																							
4. Discretion		.19	.00	**.24**	-																						
5. MRR		-.17	.12	-.04	-.02	-																					
Career	6. EDT	.10	.02	.07	-.06	.18	-																				
Progression	7. GBA	.05	-.04	-.17	-.10	.13	**.40**	-																			
	8. GTE	-.15	-.15	**-.25**	.11	-.13	**-.22**	**-.25**	-																		
	9. Fair Promotion	-.09	.03	.14	.20	-.07	**-.22**	**-.37**	.17	-																	
	10. TD	.02	-.02	**-.24**	-.20	**.22**	**.23**	**.32**	**-.28**	**-.35**	-																
	11. Fair Hiring	-.13	-.08	.10	**.27**	-.12	**-.26**	**-.26**	.20	**.53**	**-.36**	-															
	12. Mentoring	-.07	-.02	-.04	.01	-.04	-.19	**-.31**	**.26**	**.27**	-.21	.16	-														
	13. RecomEM_W	-.01	-.04	.11	-.02	-.03	-.09	**-.23**	.05	.05	-.18	.14	**.24**	-													
	14. Recruit_W	.10	.01	.14	.17	.20	.13	.04	-.20	.09	.16	.04	-.02	.09	-												
	15. Succ_Recruit	.05	.01	.15	.11	.13	-.21	-.19	.01	.21	.13	.21	.13	.11	**.46**	-											
	16. M_important	**-.27**	.02	-.08	-.03	.10	-.15	-.04	.09	-.17	-.01	-.07	-.09	-.08	.10	.08	-										
	17. M_female	**-.30**	-.02	-.04	-.11	**.30**	-.05	.03	.05	.00	.08	.06	-.03	.00	-.12	.03	**.38**	-									
	18. M_male	-.08	-.03	.00	-.02	.18	-.04	-.06	-.09	.02	.04	.04	.08	-.02	-.08	.08	**.42**	**.77**	-								
Harassment	19. H_SI	.19	.13	-.18	.02	.18	**.36**	**.37**	-.19	**-.33**	**.30**	**-.26**	**-.31**	.07	.12	-.22	-.07	-.12	-.15	-							
	20. H_SH	.09	-.05	-.08	.11	.15	**.24**	**.31**	-.07	-.14	.20	-.11	-.03	-.03	**.24**	.01	-.04	-.08	**-.25**	**.45**	-						
	21. H_SGD	.15	.00	-.16	-.16	.09	**.33**	**.50**	**-.29**	**-.40**	**.44**	**-.35**	-.18	-.18	**.23**	.01	-.01	-.09	-.12	**.51**	**.58**	-					
	22. H_V	**.22**	**.22**	-.02	.06	.06	.09	.11	-.08	-.03	**.27**	-.12	-.16	-.05	.15	.05	**-.22**	**-.23**	-.14	.21	.21	**.27**	-				
Addressing	23. AH_SAC	-.18	.23	**.30**	-.18	-.06	-.18	**-.32**	.25	**.48**	**-.54**	**.50**	**.38**	.23	-.01	.21	-.07	**.28**	.10	**-.48**	**-.36**	**-.49**	**-.34**	-			
Harassment	24. AH_FG	.11	-.03	**-.25**	.04	-.03	.12	.12	-.15	-.07	.06	-.10	.09	-.08	.11	-.04	-.02	**-.33**	-.19	**.34**	**.33**	**.50**	.05	**-.29**	-		
	25. AH_GR	-.51	.18	-.06	.29	.06	c	-.51	.51	.33	-.22	.27	.22	.11	.11	.22	.27	.40	.35	c	.33	.00	-.17	.32	.17	-	
	26. AH_TLA	.19	-.06	.05	.02	.13	.04	.11	-.12	-.14	.20	-.19	-.16	**-.43**	.08	.11	.10	-.24	.08	c	-.10	**.26**	**.36**	-.32	**.33**	-.11	-

Bold Correlations are significant at 0.05 level or smaller (2-tailed).

c = Cannot be computed because at least one of the variables is constant due to pairwise deletion of missing data

MRR = Minority Role Representation, EDT = Experienced different treatment, GBA = Gender as barrier to advancement, GTE = Genders treated equally during orientation, training, and probationary periods , TD = Treated differently based on sexual orientation, Mentoring = Received mentoring, RecomEM_W = Recommend EM to women, Recruit_W = Tried to recruit women, Succ_Recruit = Success recruiting women, M_important = Mentoring is important, M_female = Mentoring from senior female is important, M_male = Mentoring from senior male is important, H_SI = Harassment – Social Isolation, H_SGD = Harassment - Sex or Gender Discrimination, H_SH = Harassment – Sexual Harassment, H_V = Harassment – Violence/Physical Assault, AH_SAC = Addressing Harassment – Supervisor Addresses Complaints, AH_FG = Addressing Harassment – Filed Grievance, AH_GR = Addressing Harassment – Grievance Resolved, AH_TLA = Addressing Harassment – Taken Legal Action

4.3 Qualitative Results

The outcomes of the qualitative analysis for the three open-ended survey questions add important contextual details to the quantitative findings. These questions were, (1) What have you personally done to advance your career?; (2) If you selected any of the above, please describe the experience below (this was in reference to the previous question about social isolation, sexual harassment, sex or gender discrimination, and violence/physical assault); and, (3) Are there any additional comments you would like to make regarding this questionnaire? After coding, it was found that most comments prompted by the third open-ended question (3) were related to the second open-ended question (2), which asked the respondent to expand on their experiences of social isolation, sex or gender discrimination, sexual harassment, and violence/physical assault. For that reason, the results are presented in two sections; the first swill address how the women who responded to the survey take action to advance their careers, while the second will explain how the women have experienced harassment in the emergency management field.

4.3.1 Career Progression

RQ12 *(How do women in emergency management personally advance their careers?)* was analyzed using the qualitative coding techniques described in Chapter III. The concepts derived from participant comments about how they personally have sought to advance their careers can be summarized by three main ideas – *building knowledge*, *building relationships*, and *building reputation*. *Building knowledge* encompasses training and education. Training refers to professional certifications, such as seeking the International Association of Emergency Management's Certified Emergency Manager credential, taking the Federal Emergency Management Administration's Independent Study or Emergency Management Institute courses, as well as state-, local-, and agency-specific training. Education refers to seeking out higher education opportunities in emergency management or a related field; for example, a Master's

degree in Disaster Science and Management at an accredited institution. *Building relationships* includes activities such as mentoring and networking. The comments which referred to mentoring encompassed seeking mentors within or outside their agency, as well as mentoring others. Networking includes online networking (e.g., groups on sites like LinkedIn), at professional meetings and conferences, and with others who work for agencies that the person regularly interacts with.

Finally, *building reputation*, refers to ideas such as proving work ethic, advocating for oneself, taking on leadership roles, and volunteering for assignments outside defined scope of work. Many respondents, however, suggest that a combination of the above tactics should be used. For example, one respondent says, "[I] seek training, delve deep into each project, take projects I don't necessarily want for the greater good, refine collaboration skills to build strong networks, mentor others, participate in conferences, and became a board member for an [emergency management] association." Another says, "[I] take advantage of opportunities to expand my role and experience, including taking on job responsibilities outside of the scope of my job description, [network] with others in the field, and work hard." Finally, "[I] earned a graduate certificate in emergency management, [completed] continuous training in person and online through FEMA, [sought] IAEM's CEM credential, volunteer to serve on the executive board of our local emergency managers association, network with other professionally regionally and statewide, [and] volunteer to deploy in statewide disasters." These examples all demonstrate the perception of the need to pursue several avenues for career advancement.

4.3.2 Experiencing Harassment

RQ17 *(How do women in emergency management experience harassment?)* was analyzed using the qualitative coding techniques described in Chapter III. The concepts derived from participant comments about how they experienced harassment in the field of emergency management were

also grouped into three categories – *overt actions, covert actions,* and *outside actions. Overt actions* refer to obvious sex or gender discrimination, sexual harassment, inappropriate touching, physical assault, and violence. One woman comments that she experienced "direct statements of sexual content from a supervisor," while another explains that, "being the only female, men would assume I was available to approach on a sexual basis." Yet another respondent says about her work environment, "During work they [men] are professional, but ultimately at some point you get hit on. It doesn't happen to men in the field, just the women. Usually in a more casual setting like driving around for situational awareness, at a lessons-learned BBQ, or when in the command trailer with few witnesses."

Covert actions refer to systemic issues that make it difficult for women to participate in agency culture, are exclusionary, and create barriers to promotion and/or advancement. Phrases such as "boys' club", "locker room", and "man's profession" were used to describe an atmosphere in which women are often socially isolated. For example, "I have never experienced sexual harassment from a boss but many of my [emergency management] jobs have definitely had more of 'firehouse/boys' club' mentality." Another describes her experience, as "more on the level of awkward to inappropriate comments, stories, and situations… It's like working in a football locker room. As the only woman, you deal with having to hear and see behavior that's not directed at you in particular, but is, in general, degrading to women." Lastly, a respondent says, "I feel that often male colleagues in my current agency will speak to one another and make eye contact with one another and not include me in discussions – even when it's on a subject very relevant to my position."

Other participants indicate an environment where there are barriers to promotion/advancement, which are not explicit, yet have implications for women seeking career progress. One participant says, "At a former workplace, males were the only employees who were promoted. I started working there with more knowledge and experience than any other officer, yet I was never

promoted. I was highly regarded by my supervisor, but I was never considered for promotion." Another says, "Promotions are always given to men with engineering backgrounds, rarely to women with public administration backgrounds." One more barrier is the elimination of civilian positions in favor of those with fire service backgrounds. For example, "In my previous agency, a sergeant was brought in to the [emergency management] office as a deputy director, with no emergency management training. There was no opportunity to compete." Another indicates that, "the promotable position was eliminated in favor of placing a battalion chief. Without starting over my career through the fire academy, that change made it impossible to qualify as an emergency manager. There were no female battalion chiefs." Lastly, a participant says, "I think females can easily break into the field of emergency management; the tough part is make the leap to becoming a director. Many agencies will recruit from law enforcement or the fire department, because fields are considered experts in ICS [incident command system] and emergency response. Often times, these individuals have just retired and emergency management is their second career. Very few have had a planning background. Since these fields [law enforcement and fire services] are heavily male-dominated, it's rare to have a female director in a relatively large agency (at least that is what I have noticed)."

Often many of the actions described above work in concert. One woman summarizes this compounding effect:

> "Though men are the demographic minority in the office, they comprise a majority of leadership roles, receive preferential treatment in travel and training opportunities, and act more like a frat house than professionals at times. They rely on traditionally 'masculine' activities and topics of conversation that exclude women, even when women share interest in those topics. They make disparaging jokes about their wives, are condescending, [make] sexist jokes, [have] patronizing attitudes about women's capabilities, [and assume] that women are interested in children."

Lastly, *outside actions* refers to isolation or harassment that comes from outside of the agency, often from working partners. One participant explains, "The real harassment comes from outside my agency, from personnel that I have to work with and build relationships with in order to get my job done for my jurisdiction. Fire, law enforcement, military… these are the sources." Another backs this claim up saying, "It is only when we work with external partners, especially other government jurisdictions, that I've ever felt like the odd person out. There are many meeting and events that I attend where I am the only, or one of a few, women." Yet another says, "There are often times when I am the only female in the room, especially when we are meeting with traditional first responder/uniformed agencies." Finally, a participant gives a detailed description of an encounter she had following a response operation, writing, "One of the executives from a local non-profit once said, 'you are about as useful as a bull with teats.' It not only took me a second to figure out what he was saying, but why, since the conversation was about providing him free PPE [personal protection equipment] and training for his muck out and mold remediation jobs." These examples all demonstrate that even if the local emergency management agency that a person works for is supportive and does not tolerate harassment of any kind, a woman working in the field is still at risk for feeling isolated, harassed, and discriminated against.

CHAPTER V

DISCUSSION

The purpose of this research was to understand the degree to which women in emergency management perceive themselves as representing the needs of women before, during, and after disasters. The secondary purpose was to explore the issues that face women as employees of local emergency management agencies. Analysis of the data collected via online survey revealed new findings, in addition to supporting and, in some cases, refuting previous studies. In this chapter, the results from Chapter IV are discussed in detail.

5.1 Representation

To reiterate, active representation occurs when a bureaucrat "press[es] for the interests and desires of those whom [s/]he is presumed to represent" (Mosher, 1968, p. 11). Previous gender and representative bureaucracy studies have found that for active representation to occur, (1) women must have discretion in their positions and (2) the policy issue at hand must be salient and relevant to women (Keiser et al., 2002). By adapting the indices used by Sowa and Selden (2003), levels of discretion, adherence to a minority representative role, and adherence to traditional roles were used as the bases for nineteen (19) research questions and seven (7) research hypotheses. The index used to measure discretion asked a series of Likert scale questions regarding gender salient job activities (Enarson & Phillips, 2008, p. 70). The minority role acceptance index measured whether or not the respondent believes they should accept the role of advocate for women (minority role representation – MRR). The traditional role acceptance index measured

whether or not the respondent believes they should remain neutrally competent in performing their job duties, in other words, fulfill their duties without discretion per Max Weber's theory of bureaucracy (Weber, 1946).

The correlations for discretion, MRR, and career progression variables (RQ1) showed that those with more discretion were more likely to believe that their agencies hiring processes are fair. Since discretion was also dependent on salary (RQ6), it may be that those with higher salaries are involved in hiring decisions and thus, tend to think of them as fair. Furthermore, women with higher MRR indices were more likely to indicate that mentoring from a senior female colleague was important to them. Accordingly, women who believe they should actively advocate for women also believe that the gender of the mentor matters.

Analysis of RQ2, RQ3, and RQ4 – whether or not the amount of discretion or adherence to a minority role (MRR) was able to predict the length of service – determined that discretion is a significant predictor of length of service in the field and in a position, but not in an agency. This may be explained by the fact that 79% of participants felt that they had to move to another agency in order to advance their career and that, on average, an individual moves to another agency once every three years. MRR was not a significant predictor of any of the three, which suggests that minority role adherence is dependent on the individual and not based on the position or agency the person is in.

Because of the variety of tasks in emergency management, it was important to understand whether or not a person's primary job assignment had an impact on discretion (RQ5) and MRR (RQ7). There was a significant difference in the discretion indices for operational jobs and support jobs; the results suggest that those in operational positions have more discretion than those in support positions. The discrepancy between types of positions may be due to operational jobs' inherent reliance on spontaneous decision-making during response. Type of job, however,

does not yield significance for MRR. Once again, this suggests that minority role adherence is dependent on the individual and not the type of position the person holds.

Though I suggest that minority role adherence may be more dependent on the individual, only political ideology was significant after analyzing demographic variables and MRR (RQ8); other variables included age, race/ethnicity, sexual orientation, marital status, care-giving responsibilities, education, and salary. These results suggest, specifically, that women who identify as Democrats are more likely than those who identify as Republican to advocate on behalf of women in their role at a local emergency management agency. The mean MRR index score amongst all respondents was 4.07, where 1 indicates low minority role acceptance and 5 indicates high minority role acceptance. Democrats' mean MRR index score was 4.22, while Republicans' was 3.55. This is not surprising given that Wolbrecht (2010) says the following about the nature of party affiliations and policies affecting women: "For women's rights and the American political parties, the lines are now drawn with considerable clarity. The Republican party has largely adopted an opposing position, distancing itself from feminism and siding with those who prefer more traditional women's roles. The Democratic party has placed itself at the other end of the women's rights spectrum, generally supporting public policies that assist in the expansion of social, political, and economic roles for women." That said, the means for both parties being past the midpoint (3) suggests that gender itself may be an indicator of minority role representation; however, because this survey only requested participation from female respondents, gender variance could not be tested. Previous studies have found mixed results for gender's impact on active representation with some findings that were null (Hindera, 1993; Selden, 1997) and others that found a link (Keiser et al., 2002; Wilkins, 2007).

Wilkins (2007) study finds that female supervisors have different priorities than their male counterparts leading to active representation for the agency. However, neither of this study's

hypotheses regarding the impact of supervisor's gender on discretion (RH1) or MRR (RH2) were supported.

Lastly, it was suggested that women who had higher MRR scores would be more likely to recommend emergency management to other women (RH3a) and recruit other women into emergency management (RH3b). However, only RH3b was supported; those who have attempted to recruit women into emergency management have higher MRR scores than those who have not. That "recommendation" was not significant, but "recruitment" was, may be due to the nature of recommendation versus recruitment. The latter suggests a more active effort to bring women into a specific position or agency, while the former may be a more passive act. If MRR is truly measuring whether or not a person is more or less likely to advocate on behalf of a specific population, then it would make sense for those persons to be more inclined to take active steps, such as recruitment. However, it must be noted that recommendation and recruitment may also depend on a variety of other factors, such as personal experience in the field. These experiences are discussed, in detail, below.

5.2 Gender Barriers

5.2.1 Work/Life Balance

Wilson's (1999) qualitative examination of gender in local emergency management asks, "how are emergency management organizations [going to be] impacted by work and family conflicts as increasing numbers of women come on board (Enarson 1997)? In addition, Eccles (1994) claims that male-dominated professions often do not consider work/life balance a priority, which may make it difficult for women with families. This study shows that of those who responded, 27% have care-giving responsibilities for children and 60% are in a relationship. The hypotheses which address the issue of work/life balance, RH4 *(Female emergency managers will have less work/life balance if they have children.)* and RH5 *(Female emergency managers will have less*

work/life balance if they have a significant other.) were not supported. In addition, the mean differences for work/life balance between support roles and operational roles were not significant, suggesting that the type of position may not have a bearing on the work/life balance of emergency managers. Despite this lack of support concerning traditionally masculine fields' responsiveness to work/life balance, it is possible that the percentage of female emergency managers with families in this survey was not well-represented.

5.2.2 Career Progression

Wilson (1999) identifies the professionalization of emergency management as an opportunity for women to be able to gain entrée to the field. This prospect was fueled by the increasing availability of training and education at the time, particularly in the growth of higher education programs, in addition to an increasing number of paths leading to emergency management. Indeed, 36.4% of those surveyed had a Bachelor's degree or higher and 54.0% had a Master's degree or higher, with degrees in such fields as Emergency Management, Homeland Security, Public Administration, and Political Science/Public Policy. Moreover, of those who responded, education (25%), volunteering/working as first responder (23%), experiencing or observing an emergency/disaster situation (22%), and volunteering/working at a non-governmental organization (NGO) (17%) were among the sources for learning about the field of emergency management as a career option; the military accounted for only a small percentage included in the "Other" category. The high percentage of those with a four-year degree or more and the dispersion of points of entry to the field, particularly with the inclusion of education and volunteering/working with an NGO, suggests that Wilson's predictions were correct.

Despite this progress, her observation that "full integration [of women] appears to be slow and uneven (Wilson, 1999)" is still pervasive in the field. She cites examples of women being absent from high-ranking positions and attributes this to a number of causes. These causes include

"leftover" attitudes towards women from the origins of emergency management in civil defense and the military and a division of labor, where women working in the field tend to be in positions that are related to special needs, mass care, or human services, not in operational positions, such as planning, training and exercise, and/or emergency response (Wilson, 1999). Of those that responded, 43% reported their primary job assignment to be operational, while the remaining (57%) reported to serve in support roles (e.g., communications, community outreach, administrative, other). It is not possible to determine the percentages of men in each of these types of positions because no comparative data exists; however, the qualitative data collected provides context for the still imbalanced integration of women in the field. For example, one respondent says, "My agency is divided into 'response' and 'support'. The response side (special [operations], emergency coordinators, watch center) is mostly male, the support side ([human resources], finance, training) has more women." And even when women are filling "operational" positions, they may still be asked to complete traditionally "feminine" tasks. For example, one woman recalls, "the females in my office are constantly assigned the more traditional female roles (as an Emergency Management Specialist I have been assigned to take meeting notes even when a male admin[istrative] assistant was in the meeting)." These types of actions can be described as *covert actions*, or systemic problems, that emergency management agencies face.

The environments of public organizations traditionally dominated by men are well-documented, particularly in transportation, corrections, sanitation, and more recently in the fire service (Rosell et al., 1995). These atmospheres perpetuate a "locker room" mentality and encourage behaviors that exclude women. Informal discussion, jokes, and relying on activities that are traditionally masculine are amongst the actions that create such an environment. This environment is described in more detail in the next section; however, it is important to note that the informal relationships fostered through exclusion feed into more formal processes, which results in the perception of preferential treatment of men in the field. A respondent says, "It is a man's profession, so

sometimes I have felt isolated from my male supervisor and colleagues at meetings, during workshops/conferences, and training[s].” Two other simply stated, they are “often ignored by male colleagues or directors” and “I know I have been passed over due to my gender, but could not adequately prove it.” This behavior is not limited to targeting women who are in low-ranking positions. One high-ranking female emergency manager says, “Because my supervisor is male and former [law enforcement] he takes credit for everything even though I am doing most of the paperwork; publicly, he treats me as an [administrative assistant] at times but I'm Deputy Director.” Not all women even have the ability to ascend to higher-ranking positions. Preferential treatment may also include the structural barriers in place that deter or constrain women from achieving high-ranking positions.

Qualitative analysis revealed that a significant structural barrier to career advancement includes limiting qualifications for high-ranking positions. For example, seeking outside candidates from first-responder agencies, eliminating civilian positions, and favoring science educations (e.g., engineering) over social science educations (e.g., public administration). All of these limiting factors are derived from the notion that emergency management agencies should reflect a “command and control” management style, which emphasizes strict environments and prioritizes “areas that are considered ‘more masculine’ such as radiological or other hazardous materials, terrorism, communication, transportation, and mass evacuation (Wilson, 1999, p. 114).” However, for over 20 years, academics and practitioners alike have recognized the need to move beyond this approach to serve the needs of the public before, during, and after disasters in a more holistic way (Neal & Phillips, 1995; Neal & Webb, 2006). Thus, requiring qualifications for high-ranking positions in emergency management rooted in traditional, paramilitary mindsets is outdated. More importantly, these limiting factors may be excluding appropriately qualified applicants regardless of gender, who are just as, if not more, capable of filling high-ranking positions and better serving the public.

Another structural barrier to advancement is stagnant intra-agency mobility. Seventy-nine percent (79%) of women felt that they had to move agencies in order to advance their career. There is no existing comparative data to determine whether or not men experience this phenomenon at different rates. However, Russo (2013) found that women in fire departments "either had to move to a new department for promotional opportunities or regret not having done so (p. 119)." More information is needed to determine whether advancement by moving to another agency is due to what one respondent called "a tight market" and affects both genders equally or if women are disproportionately affected.

Kanter (1977) was the first to suggest that mentoring was an important element for career progression and definitive consensus exists (Allen, Eby, Poteet, Lentz, & Lima, 2004). Mentoring may also impact whether or not a person has a positive experience in the workplace. Accordingly, three research questions sought to understand the impact of mentoring on respondents and their perceptions of its importance (RQ10-RQ12). The findings suggest that women who receive mentoring were more likely to recommend emergency management as a career to other women. However, the would be less likely to do so if they believe that their gender has been a barrier or if they have sought legal action for sexual discrimination or harassment. These findings are unsurprising as they suggest that positive and negative experiences impact whether or not a person is likely to recommend the field as a career option. If recommendation is an avenue of increasing the number of women in the field of emergency, personal experiences *are* relevant to recruitment.

Furthermore, women who received mentoring (from either gender) were less likely to report social isolation; however, those who experienced discrimination were less likely to believe that mentoring from a senior male colleague was important. This finding is in alignment with concerns over cross-gender mentoring; suggesting that power dynamics between older, higher-ranking, experienced men and women may lead to exploitation (Wright & Wright, 1987). Lastly,

women who have received mentoring (either gender) were more likely to report that their immediate supervisor addresses concerns over harassment. This finding may suggest that mentoring by senior personnel leads to stronger bonds where gender-specific issues are taken more seriously.

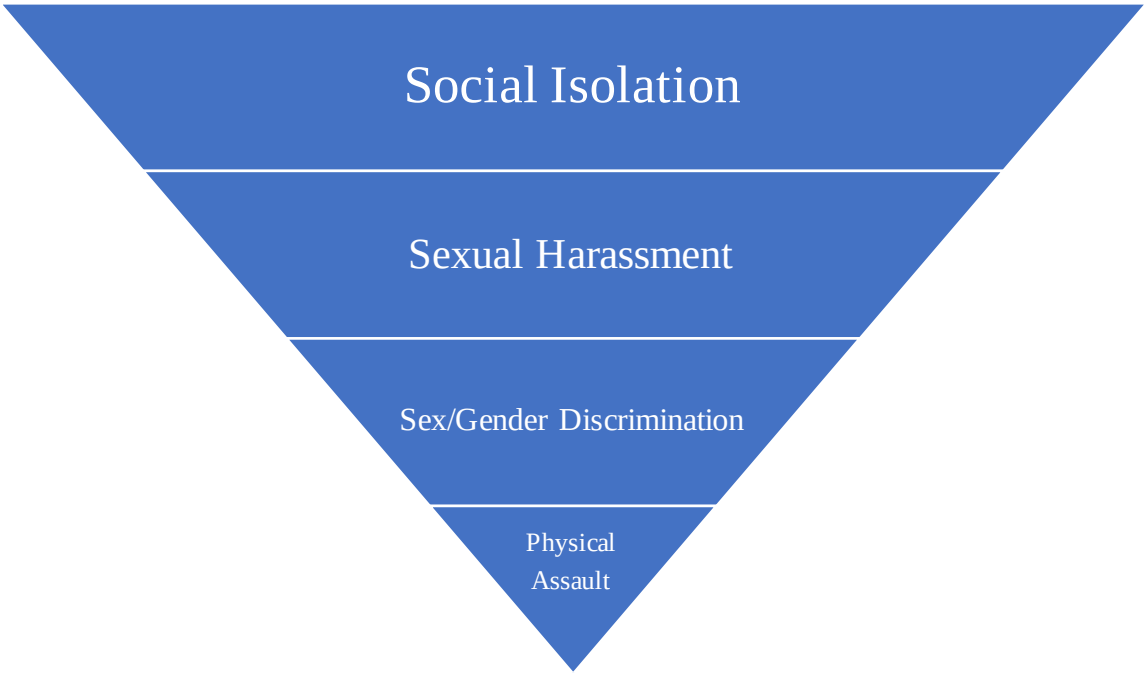
Mentoring importance was also explored through examining demographics such as age, race/ethnicity, sexual orientation, marital status, care-giving responsibilities, political ideology, education, and salary. Wright and Wright (1987) suggest that mentoring relationships for young professionals, particularly women and minorities, is salient for not only career progression, but also professional development; the findings align. For younger respondents mentoring was deemed more important than with older participants and even more important when received from a senior female colleague. Interestingly, there was a significant difference in the means for the importance of mentoring for Democrats (M = 4.4, SD = .970) and Republicans (M = 4.8, SD = 0.426). These results suggest that mentoring is significantly more important to women who identify as Republican; though both means are well above the mid-point (3). No explanatory literature on mentoring and political ideology exists to account for this difference.

5.2.3 Sexual Harassment

Male-dominated occupations, particularly blue-collar jobs, sanitation, law enforcement, the military, and fire services have long posed significant occupational hazards to women (Rosell et al., 1995). These hazards range from indirect and veiled isolation and discrimination to *overt actions*, such as sexual harassment and physical assault or violence. No empirical research exists on the frequency of experiencing harassment in the emergency management profession, consequently, there is also no research on the mitigating factors. Accordingly, six (6) research questions and two (2) research hypotheses were developed to investigate personal and organizational factors' impact on experiencing and addressing harassment. The results of RQ16 yielded the frequencies of experiencing different types of harassment, which are demonstrated in

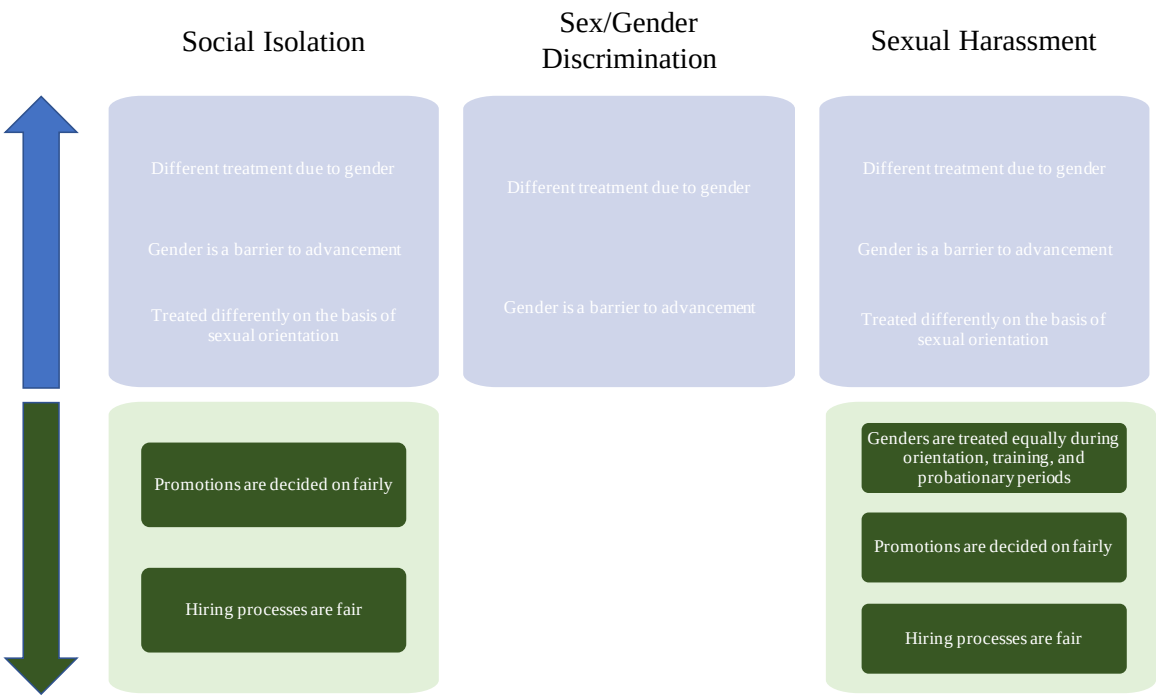
Figure 5. That sexual harassment is reported to be experienced more often than sex or gender discrimination may be explained by the overt nature of harassment and the covert nature of discrimination. For example, a person could bear witness to lewd sexual jokes made in the office, but perhaps not know, in certain terms, if they were passed over for a promotion.

Figure 5. Frequency of Harassment



RQ13 examined the correlations for types of harassment and gender-based experiences; Figure 6 summarizes the findings for all aside from violence/physical assault.

Figure 6. Correlations for Harassment and Gender-based Experiences



The findings demonstrate that experiencing harassment is related to feeling that a person has received different treatment due to gender, perceiving that gender is a barrier to advancement, to believing that sexual orientation is a basis for harassment, and that hiring, training, and promotions are not equal between genders. Experiencing violence/physical assault was positively correlated with believing hiring processes are fair and the demographic variables (RQ15a) age and salary. This result is likely because those who have experienced violence/physical assault are older, experienced, and high-ranking participants, who now have a hand in the creation of hiring practices. These physical altercations may have taken place during a time when male-dominance was even more pervasive than it is today; however, it is impossible to confirm this explanation.

The only other significant demographic variable was marital status. Previous studies have demonstrated that single, unattached women are targeted more often than their married counterparts (Gruber, 1998; Gruber & Bjorn, 1982). The findings are in alignment with this literature; there were significant differences between the means for having experienced sexual

harassment between single women and those in a marriage or in a partnership. These results suggest that single, divorced, separated, and widowed women experience sexual harassment more frequently. It should be noted that difference did not apply to social isolation, discrimination, or violence/physical assault.

RH6 hypothesized that the means of experiencing harassment will be lower if female emergency managers' immediate supervisor is a female. While having a female supervisor does not seem to impact social isolation, sex or gender discrimination, and sexual harassment, experiencing violence/physical assault is impacted. The results indicate that women are more likely to be victims of violence/physical assault in the emergency management field if their supervisor is male. Previous literature indicates that in workplaces where leadership is more proactive in preventing harassment, such as speaking against it or creating policies that address it, have fewer problems with harassment; however, supervisor gender is not discussed (Gruber, 1998; Gruber & Bjorn, 1982). It may be that female supervisors are more attune to addressing problems before they occur or that exploitation of power by female supervisors is not as likely. Unfortunately, this finding may also mean that male supervisors are not taking actions to deter assault or that they are the perpetrators. That said, RH7, which hypothesized that female supervisors would be more likely to positively address harassment was not supported. This suggests that supervisor gender may not impact positive outcomes as much as workplace and organizational culture.

There are actions that can be taken to reduce harassment and, consequently, create a more positive work environment for women (RQ19). Indicating that the respondent's immediate supervisor addresses complaints is positively correlated with believing promotions are decided on fairly and that the hiring process is fair. It is also negatively correlated with believing gender is a barrier to advancement, that personnel is treated differently based on sexual orientation, having experienced social isolation, sex or gender discrimination, sexual harassment, and violence/physical assault, as well as filing formal complaints or grievances. These findings all

align with previous finding about supportive work environments and cultures (Gruber, 1998; Gruber & Bjorn, 1982)

Unsurprisingly, having filed a formal complaint or grievance was positively correlated with having experienced social isolation, sex or gender discrimination, and sexual harassment. Additionally, taking legal action is positively correlated with having experienced sexual harassment and/or and violence/physical assault. Therefore, those who experience harassment are more likely to file formal complaints or take legal action. However, the number of persons reporting harassment is likely lower than those who have experienced harassment (Ilies, Hauserman, Schwochau, & Stibal, 2003), as seeking "institutional/organizational relief" is the least frequent of coping mechanisms (Fitzgerald, Swan, & Fischer, 1995). Because of the low number of respondents, we were unable to determine whether or not these complaints and legal actions were resolved to the satisfaction of the person who took the actions.

CHAPTER VI

CONCLUSION

Though the body of literature on the impacts of emergencies and disaster on women is rich, there is scant research on women's roles in formal emergency management agencies. This research sought to contribute to our understandings about the contributions and experiences of women in local emergency management agencies in the United States. There were two main objectives for the study; (1) to understand the degree to which female emergency managers perceive themselves as representing the needs of women facing disasters and (2) to explore the opportunities and barriers that female emergency managers encounter as employees of local emergency management agencies. By gaining this knowledge, agencies' abilities to recruit, retain, and promote women in the field will be improved and extended, which, as a byproduct, will further improve policies and procedures that affect women's outcomes in emergencies and disasters. In order to address these two research objectives, nineteen (19) research questions and seven (7) research hypotheses were considered. These questions and hypotheses were operationalized into an online survey, which was distributed via social media forums targeting women in local emergency management agencies. Quantitative methods were used to analyze close-ended survey questions, while qualitative methods were used to analyze open-ended survey questions**.** This chapter discusses the resulting conclusions, implications for practice, study limitations, and opportunities for further research.

6.1 Conclusion

Representative bureaucracy is the notion that governments should represent the population that they serve (Kingsley, 1944). Kingsley (1944), credited with first developing representative bureaucracy, believed that government bureaucrats have influence in creating and determining public policy; though depending on the position, the influence may be less or more than others. Regardless of individual effectiveness, in general, scholars agree that the discretion bureaucrats have in decision-making shapes policies that affect the public (e.g., Chaney & Saltzstein, 1998; Lipsky, 1979; Maynard-Moody & Musheno, 2003; Rourke, 1969; Sowa & Selden, 2003 as cited in Bradbury & Kellough, 2010). Keiser et al. (2002) found that links can be found for gender but that two conditions must be true. The first is that "bureaucrats must have discretion in how they carry out their jobs" (p. 556). On discretion, Sowa and Selden (2003) say "from street-level bureaucrats who make decisions about the direction provision of services, to administrators within agencies who must translate vague legislative mandates into organizational procedures, discretion is often a crucial part of public administrators' job descriptions" (p. 700). The second condition is that "the policy issue must be salient to the demographic characteristic in question" (p. 556), which relies on the notion (for gender) that the policy is important to or affects women as a class or group. The first objective of the study was to understand the degree to which women in emergency management perceive themselves as representing the needs of women before, during, and after disasters. To address this objective, the concepts of discretion and policy salience through minority role representation were used.

Discretion is an important factor to consider when determining whether or not female employees have the ability to represent the needs of women in their position. The findings suggest that, overall, women have slightly higher than average discretion for all positions. This may be due to the less hierarchical nature of most emergency management agencies. Furthermore, the findings indicate that discretion is most prevalent in operational positions and women may face difficulties

accessing these types of positions. Of those who responded, 43% reported their primary job assignment to be operational, while the remaining are employed in support roles. In addition, many respondents claim that a division of labor still exists.

The second factor of representation explored was minority role adherence/representation (MRR); MRR refers to the idea that a person is likely to actively advocate for women through their work. The mean MRR index score for all respondents was well past the midpoint; this indicates that gender itself may be a predictor of minority role representation; however, there is currently no comparative data. Additionally, political ideology played a role in determining MRR. Specifically, that women who identify as Democrats are more likely than those who identify as Republican to advocate on behalf of women in their role at a local emergency management agency. We can conclude then that gender may not be enough, on its own, to determine MRR in emergency management agencies; ideology also matters.

If a representative bureaucracy via gender is the goal of public service organizations, then traditionally male-dominated organizations, like emergency management, must seek to hire, promote, and retain women in their agencies. The second objective of this research was to understand the opportunities and barriers women have in local emergency management agencies. The areas considered were (1) work/life balance, (2) career progression, and (3) harassment.

The literature suggests that working women, particularly those with spouses and children, face difficulties balancing work and home life. However, none of the findings suggest that that work/life balance is a problem for those working in local emergency management agencies. The percentage, 27%, of respondents with care-giving responsibilities for children, is only slightly lower than the average, where 32% of all workers have a child under the age of 18 (*Employment Status of the Population by Sex, Marital Status, and Presence and Age of Own Children Under 18, 2012–2013.*, 2014).

Career progress by women in emergency management has likely improved over time with the professionalization of the field, allowing more women to enter via experience in higher education and non-governmental organizations. However, significant barriers still exist; specifically, (1) perceived preferential treatment of men in mentoring, training, and promotion, and (2) limited internal promotion opportunities fed by a tight market and by agencies limiting the qualifications for high-ranking positions. Mentoring from senior personnel, in addition to other mitigating factors to be described in detail in the next section, may help to alleviate these issues.

The pervasive nature of discrimination and harassment in male-dominated organizations is undeniable. The atmosphere is normalized through the historical context of the field, where women are expected to fit into "gendered" roles thought to be more compatible with approved feminine attitudes, skills, and values. Experiencing harassment can be summarized by *covert actions, overt actions,* and *outside actions,* and through forms such as social isolation, sex/gender discrimination, sexual harassment, and/or violence/physical assault. Experiencing harassment is related to feeling that a person has received different treatment due to gender, perceiving that gender is a barrier to advancement, and to believing that hiring, training, and promotions are not equal between genders. However, working in a supportive work environment, including believing that their immediate supervisor adequately addresses gender-based issues, is related to fewer problems with harassment in addition to fewer formal complaints and lawsuits.

Women in emergency management have the potential to actively advocate for better policies and procedures based on higher than average discretion, particularly those in operational positions, and high MRR indices. However, barriers related to career progression and harassment pose obstacles to the recruitment, hiring, retention, and promotion of women in the emergency management field. These barriers are not roadblocks if they can be addressed through improvements to workplace and organizational culture.

6.2 Practical Implications and Recommendations

There are many practical implications for this research, particularly in the ability to improve the conditions of the work environments in local emergency management agencies for women. To improve discretion for women, organizations must seek to close the gap in the division of labor between operational and support roles. This means that more qualified women should be hired into positions that are based in running Emergency Operation Center facilities, planning, training and exercise, and emergency response/operations, rather than in communications, community outreach, or administrative positions.

However, hiring based on gender is not enough; as it would only satisfy passive representation and not whether that person was likely to be an advocate for women. That there were significant differences between political ideology helps us to understand that values and attitudes toward gender-based policies matter. Hiring a woman with the expectation that she will be an active representative of other women's interests is not sufficient; in order for representation to occur, other factors must be considered. Active representation occurs, it is theorized, because bureaucrats share core attitudes, values, and beliefs with the social groups from which they are drawn. Their views are the product of common socialization experiences shaped in important ways by, for example, racial, ethnic, and gender identities. Intersectionality, however, tells us that these experiences interact and are not isolated. In this case, women who are liberal perceive themselves as advocating on behalf of women more than their conservative counterparts.

Other implications for local emergency management agencies include reducing barriers to career progression, capitalizing on the on-going personal efforts of women to advance their own careers, and addressing harassment. Changing organizational culture is a difficult task and one that must have buy-in from all levels of an organization in order to succeed. However, structural

mechanisms such as developing policies and procedures, may create a shift in attitudes over time, particularly if the efforts are initiated by agency leadership.

Recommendations to reducing barriers to career progression include implementing formal training and promotion schedules and revising job descriptions for high-ranking positions to be more inclusive of diverse experience and backgrounds. Formal training and promotions schedules may ensure that men and women are receiving equal consideration for training and for promotion opportunities. In addition, revising job descriptions to reflect the modern needs of emergency management agencies and not relying on old stereotypes of the qualifications for command-and-control leadership could open additional pathways to higher-ranking positions for women.

Women in emergency management are already making significant efforts to advance their own careers. These include *building knowledge* through training and education, *building relationships* through mentoring and networking, and *building reputation* through proving work ethic, advocating for oneself, taking on leadership roles, and volunteering for assignments outside defined scope of work. As such, these efforts should be encouraged and capitalized on by the leadership of local emergency management agencies. Examples include offering time off for outside training opportunities or agency-supported training or developing regional networking events. Mentoring relationships for young professionals, particularly women and minorities, has been shown to be an important component for career development and advancement (Wright & Wright, 1987). Informal and formal mentoring programs should be developed, with senior female personnel mentoring young entry-level women, if possible.

Lastly, the prevalence of covert and overt harassment must be addressed. Rosell et al. (1995) offer the following strategies for addressing sexual harassment in fire departments. Some or all of these strategies could be used to address the same issues found in emergency management departments. They include:

- Publicizing management commitment through a policy statement that clarifies the unacceptable behaviors, spells out the penalties and disciplinary process for violations, and holds supervisors responsible for conduct in their units through the performance appraisal system.
- Efficient and responsive complaint channels that take allegations seriously, process them as violations of the law, protect the victim, and provide counseling for the involved parties.
- Effective enforcement imposing penalties against the perpetrators and those who knowingly allow the behavior.
- Ongoing and required sexual harassment awareness training for supervisors and all employees that educates them in how to keep the workplace free from sexual harassment and how to handle and report complaints, and, just as important, provides them with opportunities for informally communicating and sharing their perceptions about appropriate behavior between the genders in the workplace.
- Periodic monitoring of the workplace through anonymous and confidential surveys of all employees with results posted, distributed, discussed in sexual awareness training sessions, and monitored by management. (p. 348)

Though these recommendations are time intensive and require buy-in from all levels of an organization, they may help to protect all employees from discrimination and harassment, as well as safeguard the agency from litigation. While policies and procedures such as these are important, changing organizational culture does not happen quickly, nor without pushback. By making diversity and inclusion a priority, in addition to handling concerns effectively, emergency management agencies will necessarily improve the environments for women working for them.

6.3 Study Limitations and Opportunities for Future Research

This study, as with all empirical studies, had limitations. Because the target sample for this study was women working in local emergency management agencies, sampling and recruiting participants was a difficult process. Because it is gender specific and nation-wide, it was thought that partnering with a women's organization would be the best avenue for reaching the intended population. Though the partner agency, the International Network of Women in Emergency Management (inWEM), has approximately 2,500 members, there were many members who work in emergency management at the international, federal, and state levels who were not eligible to take the survey. Due to low response rates following the first wave of participant recruitment, the study was modified to enlist participants from other sources including online (Facebook and LinkedIn) discussion boards and an online listserv. Because of the disparate sources, there was no way to predict a representative sample. Despite the extensive recruitment effort, only 100 surveys were received, with 88 of them usable. The small sample size limited the study's statistical power to detect small correlations and statistically significant differences. It also eliminated the ability to assess passive representation, as the number of persons who answered the question related to the agency they were employed was only 58% (N=51). Future research should seek alternative ways to recruit women in emergency management that would lead to larger sample sizes.

The second significant limitation was demographic representativeness. Though the type of agency was well represented, in addition to age, political ideology, marital status, and care-giving responsibilities, race and sexual orientation were under-represented. The experiences that women face likely depend on these other identifying characteristics. It is important and essential to understand the nuances faced by Black and Latina women, as well as those who identify a gay, lesbian, bisexual, and/or transgender. More targeted studies related to the experiences of intersectional identities need to be undertaken in order to understand the distinctions and connections between how women of different races/ethnicities, sexual orientations, gender

identities impact the likelihood of representation and the unique issues they face in emergency management agencies.

Lastly, because this research was exploratory, the measures used were adapted from previous studies on gender issues in business, the fire service, law enforcement, and other public agencies. Though considerable effort and care was taken to tailor the ideas to the field of emergency management, it is likely that there were oversights and additional questions need to be asked. Future researchers may want to consider conducting a comparative study that examining men in local emergency management and representative bureaucracy and their perceptions of discrimination and harassment based on gender. Additionally, the presented concepts could be applied to future studies on gender in state or federal emergency management agencies in the United States, or in emergency management agencies internationally. Finally, qualitative studies over the broad concepts found here need to be conducted to clarify and elaborate. For example, examining work/life balance, its definitions, and how these concepts interact with gender would be helpful to understand why neither hypothesis related to work/life balance were supported. Additionally, ideas related to career progression and mobility should be studied to determine how gender affects movement in an agency. Lastly, harassment could be further investigated to understand the causes, current mitigation measures, and potential solutions in more detail. This study was the first to widely examine the experiences of women working in formal emergency management agencies; there is much work to be done in order to understand how gender (and its various intersections) can help to improve disaster outcomes for women and other populations most at risk.

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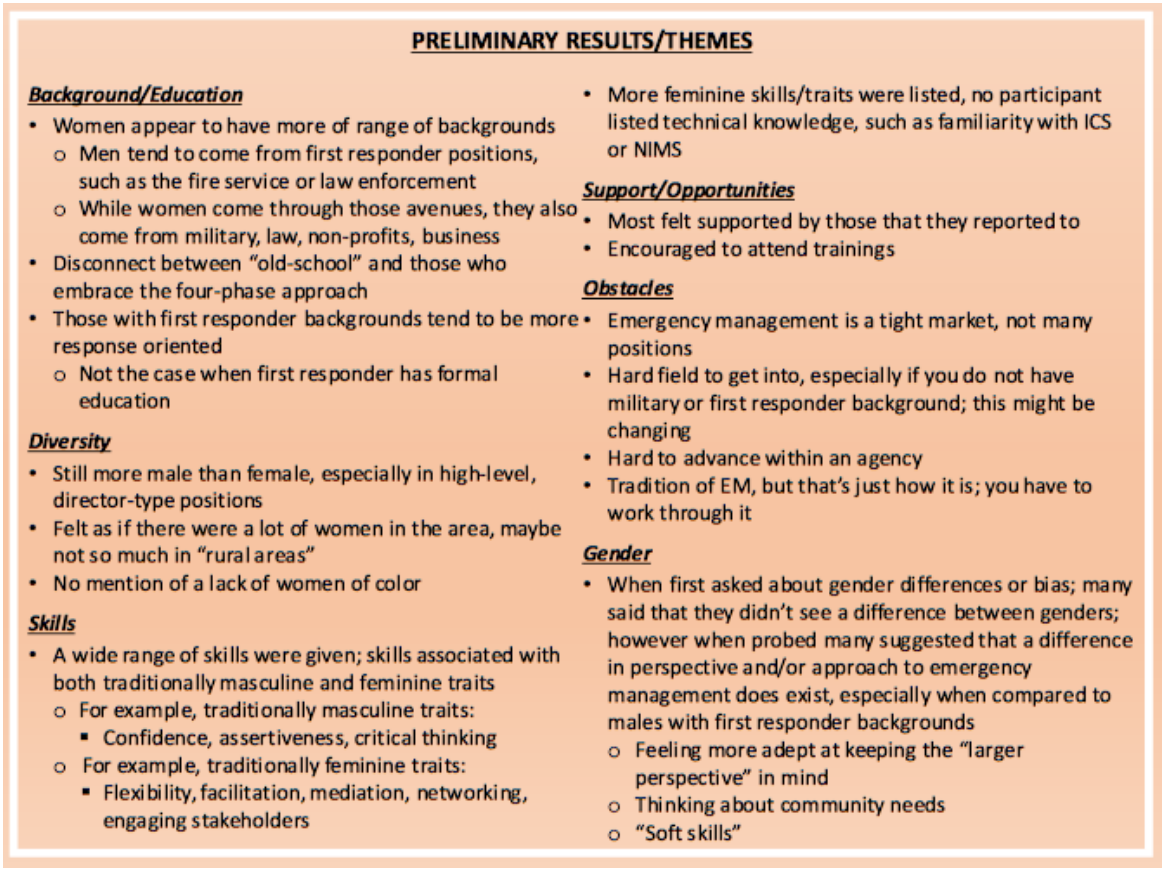
APPENDIX A – Interview Results

Preliminary results and themes from interviews conducted with female emergency managers in Colorado, Summer 2015 by Tristan Wu and Alyssa Provencio:



PRELIMINARY RESULTS/THEMES

Background/Education

- Women appear to have more of range of backgrounds
  - Men tend to come from first responder positions, such as the fire service or law enforcement
  - While women come through those avenues, they also come from military, law, non-profits, business
- Disconnect between "old-school" and those who embrace the four-phase approach
- Those with first responder backgrounds tend to be more response oriented
  - Not the case when first responder has formal education

Diversity

- Still more male than female, especially in high-level, director-type positions
- Felt as if there were a lot of women in the area, maybe not so much in "rural areas"
- No mention of a lack of women of color

Skills

- A wide range of skills were given; skills associated with both traditionally masculine and feminine traits
  - For example, traditionally masculine traits:
    - Confidence, assertiveness, critical thinking
  - For example, traditionally feminine traits:
    - Flexibility, facilitation, mediation, networking, engaging stakeholders
- More feminine skills/traits were listed, no participant listed technical knowledge, such as familiarity with ICS or NIMS

Support/Opportunities

- Most felt supported by those that they reported to
- Encouraged to attend trainings

Obstacles

- Emergency management is a tight market, not many positions
- Hard field to get into, especially if you do not have military or first responder background; this might be changing
- Hard to advance within an agency
- Tradition of EM, but that's just how it is; you have to work through it

Gender

- When first asked about gender differences or bias; many said that they didn't see a difference between genders; however when probed many suggested that a difference in perspective and/or approach to emergency management does exist, especially when compared to males with first responder backgrounds
  - Feeling more adept at keeping the "larger perspective" in mind
  - Thinking about community needs
  - "Soft skills"

APPENDIX B – Online Questionnaire

Women's Experiences in Local Emergency Management

PARTICIPANT INFORMATION
OKLAHOMA STATE UNIVERSITY

Title: Gender and Representative Bureaucracy: Establishing Active Representation and Exploring Barriers in Local Emergency Management

Investigator(s): Alyssa L. Provencio, MPS, PhD Candidate, Department of Political Science, Oklahoma State University; Tristan Wu, PhD, Faculty Advisor, Department of Political Science, Oklahoma State University

Purpose: The purpose of the research study is to understand the contributions, experiences, opportunities, and obstacles of women that work for local emergency management agencies. There is limited research that establishes a link between hiring women and better outcomes for women in emergencies and disasters. Also, there are significant gaps in the literature regarding the hiring, retention, and promotion of women in emergency management field. This study will be first to attempt to do both – establish representation between female emergency managers and the public that they serve, as well as understand the gender barriers that face women in the field of emergency management at the local level. You must be 18 years or older to participate.

What to Expect: This research study is administered online. Participation in this research will involve completion of a questionnaire. The questionnaire will ask for your experiences working in emergency management, including work/life balance, career progression and its barriers, and harassment. You may skip any questions that you do not wish to answer. You will be expected to complete the questionnaire once. It should take you about 20-30 minutes to complete.

Risks: There has been every effort to reduce risks and discomforts associated with this study; however, there is a risk for psychological distress related to sexual harassment, discrimination, assault and/or violence which may be triggering to survivors.

Benefits: There are no direct benefits to you. However, you may gain an appreciation and understanding of how research is conducted.

Compensation: You will not be compensated for your participation.

Your Rights and Confidentiality: Your participation in this research is voluntary. There is no penalty for refusal to participate, and you are free to withdraw your consent and participation in this project at any time.

Confidentiality: This study utilizes Google Forms, which is automatically set to capture submissions anonymously. In addition, the records of this study will be kept private. Any written results will discuss general findings and will not include information that will identify you. Research records will be stored on a password protected computer in a locked office and only researchers and individuals responsible for research oversight will have access to the records. Data will be destroyed three years after the study has been completed.

Contacts: You may contact any of the researchers at the following addresses and phone numbers, should you desire to discuss your participation in the study and/or request information about the results of the study: Alyssa L. Provencio, MPS (316-650-8570; alyssa.provencio@okstate.edu) or Tristan Wu, PhD (405-744-4425; tristan.wu@okstate.edu), 227 Murray Hall, Department of Political Science, Stillwater, OK 74078. If you have questions about your rights as a research volunteer, you may contact the IRB Office at 223 Scott Hall, Stillwater, OK 74078, 405-744-3377 or irb@okstate.edu.

If you choose to participate: Please, select YES if you choose to participate. By clicking YES, you are indicating that you freely and voluntarily and agree to participate in this study and you also

acknowledge that you are at least 18 years of age.

It is recommended that you print a copy of this consent page for your records before you begin the study.

* Required

1. **Do you consent and agree to take this survey?** *
   Mark only one oval.

   ◯ YES
   ◯ NO *Stop filling out this form.*

Point of Entry and Years of Service

2. **How did you first learn about the field of emergency management as a career option? Please check all that apply.**
   Check all that apply.

   ☐ Friend
   ☐ Family member
   ☐ Volunteering or working as a first responder (e.g., fire service, law enforcement, emergency medical services)
   ☐ Volunteering or working in a non-governmental organization (e.g., American Red Cross, Catholic Charities, Save the Children)
   ☐ High school education
   ☐ Higher education (e.g., community college, four-year university, graduate school)
   ☐ Recruitment tool (e.g., online job posting, job fair)
   ☐ Public education program (e.g., community fair, public awareness campaign)
   ☐ Experienced an emergency response personally
   ☐ Through a nationally recognizable disaster event (e.g. 9/11, Hurricane Katrina)
   ☐ Television or movie portrayals of emergency situations
   ☐ Other: _____

3. **Why did you choose to enter the field of emergency management?**
   Check all that apply.

   ☐ Pay
   ☐ Benefits
   ☐ I thought it would be a challenging job
   ☐ I thought it would be an exciting job
   ☐ I felt it was a "calling"
   ☐ It was a natural career progression from my previous position
   ☐ Other: _____

4. **How long have you been in the field of emergency management?**

5. **How long have you been in your current agency?**

6. **How long have you been in your current position?**

Your Agency

7. **Please name the jurisdiction you cover. Please remember that this data is confidential and will not be shared with anyone or named in any reporting documents. (e.g. City of Los Angeles)**

8. **What best describes the type of agency do you work for?**
Mark only one oval.

- ◯ Stand-alone emergency management department
- ◯ Emergency management division within another department (e.g., fire service, law enforcement, public health)
- ◯ Perform emergency management work as a part of a larger department or agency (e.g., fire service, law enforcement, public health)
- ◯ Other: _____

9. **What is the total number of personnel dedicated to emergency management roles (non-supervisory AND supervisory)?**

10. **How many women are assigned to work in emergency management roles (non-supervisory AND supervisory)?**

11. **What is the total number of personnel dedicated to supervisory roles?**

12. **How many women are assigned to work in supervisory roles?**

_____

13. **What is the gender of your immediate supervisor?**
Mark only one oval.

- ◯ Male
- ◯ Female
- ◯ Other: _____

Your Job

14. **What is your primary job assignment?**
Mark only one oval.

- ◯ Communications
- ◯ Community outreach
- ◯ EOC facilities
- ◯ Planning
- ◯ Training and exercise
- ◯ Administrative
- ◯ Emergency response/operations
- ◯ Other: _____

15. **How much discretion do you have in the following tasks? (Discretion is defined as the freedom to decide what should be done in a particular situation.)**
Mark only one oval per row.

	0 - No discretion	1	2	3	4 - Complete discretion	Does not apply to my job position
Creating emergency/disaster public education programs.						
Publicizing emergency/disaster public education programs.						
Communicating via social media and with traditional news outlets about emergency/disaster preparedness.						
Communicating via social media and with traditional news outlets about emergency/disaster response.						
Communicating via social media and with traditional news outlets about emergency/disaster recovery.						
Creating planning documents.						
Conducting emergency/disaster response operations.						
Determining who receives individual assistance after a disaster event.						
Interpreting policies.						
Implementing policies.						
Recommending policies.						
Hiring personnel.						
Making promotion decisions.						

16. **To what extent do you agree or disagree with the following statements?**
Mark only one oval per row.

	1 - Disagree	2	3	4	5 - Agree
I should seek to provide information to policy makers to assist them in making decisions concerning the needs of women and their perspectives.					
I should recommend or actively advocate in favor of policies which address the needs and concerns of women.					
I should be supportive of procedures which may result in greater and more equitable access to programs and services for women.					
I should actively advocate in favor of a more equitable distribution of program services to women including recommending procedural service delivery alternatives when necessary.					
I should recommend and/or actively advocate in favor of institutional changes which may result in greater governmental responsiveness to women.					
I should specifically encourage and recruit qualified women for employment in my agency.					
I should actively advocate in favor of hiring and promotional practices which may result in greater representation of women in my agency.					

17. **To what extent do you agree or disagree with the following statements?**
Mark only one oval per row.

	1 - Disagree	2	3	4	5 - Agree
Regarding program implementation, I should limit my concern to efficiently carrying out my departmental programs and duties.					
I should limit my concern with how programs and services are implemented and, in particular, to the efficient execution of my own departmental duties.					
I should actively advocate in favor of hiring and promotion of individuals with a focus on equal opportunity and merit.					

Your Experience and Perceptions

Work/Life Balance

18. **How well do your working hours fit in with your...**
Mark only one oval per row.

	1 - Not well	2	3	4	5 - Extremely well
...family commitments?					
...social commitments?					

Career Progression

19. **How many promotions have you received in your current agency?**
Mark only one oval.

- 0
- 1-2
- 3-4
- 5-6
- 7 or more

20. **How long did it take to receive your first promotion after your initial appointment with your current agency?**

_____

21. **In your opinion, have less-qualified applicants been promoted ahead of you based on gender?**
Mark only one oval.

- Yes, the person was male
- Yes, the person was female
- No
- Other: _____

22. **How many different emergency management agencies have you worked for in your career?**

_____

23. **Have you ever felt like you had to apply and move to another agency in order to advance your career?**
Mark only one oval.

- Yes
- No
- Other: _____

24. **Please answer the following questions about mentoring.**
Mark only one oval per row.

	1 - Not important	2	3	4	5 - Extremely important
How important is it to you to receive mentoring?					
How important is mentoring from a senior female colleague?					
How important is mentoring from a senior male colleague?					

25. **What have you personally done to advance your career?**

_____

_____

_____

_____

_____

26. **Please answer the following statements.**
Mark only one oval per row.

	Yes	No
I have experienced different treatment because of my gender.		
My gender has created barriers to my career advancement.		
Males and females are treated the same during orientation, training, and probationary periods.		
Promotions are decided upon fairly.		
Personnel in my agency are treated differently because of their sexual orientation.		
The hiring process in my department fairly selects and hires applicants.		
I have received coaching/mentoring from senior personnel in my agency.		

27. **Please answer the following questions.**
Mark only one oval per row.

	Yes	No	N/A
Would you recommend emergency management as a profession to other women?	◯	◯	◯
Have you tried to recruit other women into emergency management?	◯	◯	◯
Have you had success recruiting women into emergency management?	◯	◯	◯

Harassment

TRIGGER WARNING: The next section contains questions about sexual harassment, discrimination, assault and/or violence which may be distressing to survivors.

28. **Would you like to continue to the next section?** *
Mark only one oval.

◯ YES
◯ NO *Skip to question 32.*

Harassment

TRIGGER WARNING: This section contains questions about sexual harassment, discrimination, assault and/or violence which may be distressing to survivors.

29. **In your emergency management career, how often have you experienced any of the following?**
Mark only one oval per row.

	Never	Not often	Often	Very often	Extremely often
Social isolation					
Sexual harassment (As defined by the EEOC: Unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature constitutes sexual harassment when submission to or rejection of this conduct explicitly or implicitly affects an individual's employment, unreasonably interferes with an individual's work performance or creates an intimidating, hostile, or offensive work environment.)					
Sex or gender discrimination (Sex discrimination occurs when employment decisions such as selection, evaluation, promotion, or reward allocation are based on an individual's sex or gender rather than on productivity or qualifications)					
Violence/physical assault					

30. **If you selected any of the above, please describe the experience below.**

31. **Please answer the following statement and questions.**
Mark only one oval per row.

	Yes	No	Unsure	N/A
My immediate supervisor addresses complaints concerning gender-related issues.				
Have you ever filed a grievance or formal complaint within your agency for gender-related issues?				
Was the grievance/complaint resolved to your satisfaction?				
Have you ever taken legal action against your agency for gender-related issues?				
Was the legal issue resolved in your favor?				

You

32. **What is your gender?**
Mark only one oval.

- Male
- Female
- Other: _____

33. **What is your age?**

_____

34. **Which of the following do you identify as? (The options below are listed in accordance with the 2010 U.S. Census.)**
Check all that apply.

- Caucasian
- Black, African-American, or Negro
- American Indian or Alaska Native
- Asian
- Hispanic or Latino/a (Per the 2010 U.S. Census, “Hispanic or Latino” refers to a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin.)
- Prefer not to answer
- Other: _____

35. **Which sexual orientation do you most identify with?**
Mark only one oval.

- ◯ Straight
- ◯ Gay/lesbian
- ◯ Bisexual
- ◯ Prefer not to answer
- ◯ Other: _____

36. **Which best describes your marital status?**
Mark only one oval.

- ◯ Single (including divorced, separated, and widowed)
- ◯ Couple (married or partnership)
- ◯ Prefer not to answer
- ◯ Other: _____

37. **Do you have care-giving responsibilities for children?**
Mark only one oval.

- ◯ Yes
- ◯ No

38. **Which best describes your political ideology?**
Mark only one oval.

- ◯ Democrat
- ◯ Republican
- ◯ Independent
- ◯ I don't care about politics
- ◯ Prefer not to answer
- ◯ Other: _____

39. **What is the highest level of formal education that you've obtained?**
Mark only one oval.

- ◯ High school diploma/GED
- ◯ Technical/vocational training
- ◯ Associate degree
- ◯ Bachelor degree
- ◯ Master degree
- ◯ Doctoral degree
- ◯ Other: _____

40. **If relevant to your degree, what was your major or concentration?**

_____

41. **In what range does your current salary fall?**

Mark only one oval.

- ◯ Less than $25,000
- ◯ $25,000-$45,000
- ◯ $45,001-$65,000
- ◯ $65,001-$85,000
- ◯ More than $85,000

42. **Are there any additional comments you would like to make regarding this questionnaire?**

_____

_____

_____

_____

_____

APPENDIX C – Initial Sponsorship E-mail

From: **Alyssa L. Provencio** alyssa.provencio@okstate.edu
Subject: International Network of Women in EM - Dissertation assistance?
Date: May 17, 2016 at 1:49 PM
To: drjmcbride@yahoo.com

Good afternoon Dr. McBride,

My name is Alyssa L. Provencio, a PhD candidate in the Fire and Emergency Management program at Oklahoma State University. I believe that I was introduced to you at a past EMI Higher Education conference and, last year at the same conference, Kathy Francis recommended that I reach out to you regarding a unique opportunity for the International Network of Women in Emergency Management. I have been following inWEM for the past couple of years via LinkedIn and appreciate the efforts the organization has put forth in promoting women in emergency management.

My dissertation is going to examine the opportunities and obstacles that women have in emergency management agencies, particularly at the local level. I want to understand the unique circumstances that women face in this historically segregated and male-dominated field. I recently received University support in the the form of a Summer Dissertation Fellowship, but in order to gather my ideal data, I am going to need a little assistance from the Network, if possible.

First, I would like to know if it feasible to distribute a call for members to participate in an online survey. This would likely happen mid-summer, once my research clears IRB at OSU. The Network is such a valuable resource for women in emergency management and I feel that is my best opportunity to gather the most accurate and complete data possible. I am willing to share my survey questions with you in advance, if necessary.

Second, if you are open to helping me out, it would be great to get a rough estimate of current membership numbers so that I can include it in my IRB proposal.

Any assistance that the Network can provide to help support my research effort would be greatly appreciated. If you have any further questions, please feel free to email me back or call me on my cell at 316-650-8570. In addition, here is a link to my LinkedIn page, should you want to know more about me: https://www.linkedin.com/in/aprovencio

Thank you for your time and consideration,

Alyssa

Alyssa L. Provencio, MPS
PhD Candidate and Graduate Teaching Associate
Fire and Emergency Management Program
Department of Political Science
Oklahoma State University
alyssa.provencio@okstate.edu

APPENDIX D – Code Book

Category		Variable	Measure (Type)	Value
Survey ID		ID	Nominal (numeric)	1-100
Consent		Q1	Nominal (numeric) (binary)	0 = no; 1 = yes
Field of EM - Career Option		Q2.1	Nominal (numeric) (binary)	0 = unchecked; 1 = checked
		Q2.2		
		Q2.3		
		Q2.4		
		Q2.5		
		Q2.6		
		Q2.7		
Field of EM - Reason to Enter		Q3.1	Nominal (numeric) (binary)	0 = unchecked; 1 = checked
		Q3.2		
		Q3.3		
		Q3.4		
		Q3.5		
Years of Service	Field of EM - Length in Field	Q4	Scale (numeric)	Open-ended
	Field of EM - Length in Agency	Q5	Scale (numeric)	Open-ended
	Field of EM - Length in Position	Q6	Scale (numeric)	Open-ended
Agency Characteristics	Jurisdiction	Q7	Nominal (string)	Open-ended
	Type of Agency	Q8 (recoded)	Nominal (numeric)	1 = stand-alone agency; 2 = other
	Total # Personnel in EM Roles	Q9	Scale (numeric)	Open-ended
	Women Personnel in EM Roles	Q10	Scale (numeric)	Open-ended
	Ratio - Women/Total in EM Roles	Ratio10 9)new(	Scale (numeric)	Ratio
	Total # Personnel in Supervisory Roles	Q11	Scale (numeric)	Open-ended
	Women Personnel in Supervisory Roles	Q12	Scale (numeric)	Open-ended
	Ratio - Women/Total in Supervisory Roles	Ratio1211 (new)	Scale (numeric)	Ratio
	Supervisor Gender	Q13	Nominal (numeric)	1 = male; 2 = female
Job Characteristics	Primary Job Assignment	Q14 (recoded)	Nominal (numeric)	1 = traditional EM roles; 2 = non-traditional EM roles
	Discretion	Q15.1	Ordinal (numeric)	
		Q15.2		

Category		Variable	Measure (Type)	Value
		Q15.3		1 to 5 (no discretion to complete discretion); n/a
		Q15.4		
		Q15.5		
		Q15.6		
		Q15.7		
		Q15.8		
		Q15.9		
		Q15.10		
		Q15.11		
		Q15.12		
		Q15.13		
	Discretion Mean - Index	Q15Mean (new)	Scale (numeric)	Mean of Q15
	Minority Representative Role	Q16.1	Ordinal (numeric)	1 to 5 (disagree to agree)
		Q16.2		
		Q16.3		
		Q16.4		
		Q16.5		
		Q16.6		
		Q16.7		
	Minority Representative Role Mean - Index	Q16Mean (new)	Scale (numeric)	Mean of Q16
	Traditional Role Adherence	Q17.1	Ordinal (numeric)	1 to 5 (disagree to agree)
		Q17.2		
		Q17.3		
Work/Life Balance	Work/Life Balance - Family	Q18.1	Ordinal (numeric)	1 to 5 (not well to extremely well)
	Work/Life Balance - Social	Q18.2	Ordinal (numeric)	1 to 5 (not well to extremely well)
Career Progression	Promotions	Q19	Nominal (numeric)	0 = 0; 1 = 1-2; 2 = 3-4; 3 = 5-6; 4 = 7 or more
	First Promotion - Current Agency	Q20	Scale (numeric)	Open-ended
	Less Qualified Promotion	Q21	Nominal (numeric)	0 = no; 1 = yes, male; 2 = yes, female
	# of Agencies Worked For	Q22	Scale (numeric)	Open-ended
	Move Agencies - Career Advancement	Q23	Nominal (numeric) (binary)	0 = no; 1 = yes
	Mentoring	Q24.1	Ordinal (numeric)	1 to 5 (not important to extremely important)
		Q24.2		
		Q24.3		
	Things Done to Advance Career	Q25	Nominal (string)	Open-ended
	Gender Experience	Q26.1	Nominal (numeric) (binary)	0 = no; 1 = yes
		Q26.2		
		Q26.3		
		Q26.4		

Category		Variable	Measure (Type)	Value
		Q26.5		
		Q26.6		
		Q26.7		
	Recommend/Recruit Women	Q27.1	Nominal (numeric) (binary)	0 = no; 1 = yes
		Q27.2		
		Q27.3		
Consent		Q28	Nominal (numeric) (binary)	0 = no; 1 = yes
Harassment	Social Isolation	Q29.1 (recoded)	Scale (numeric)	0 to 4 (never to extremely often)
	Sexual Harassment	Q29.2 (recoded)	Scale (numeric)	0 to 4 (never to extremely often)
	Sex or Gender Discrimination	Q29.3 (recoded)	Scale (numeric)	0 to 4 (never to extremely often)
	Violence/Physical Assault	Q29.4 (recoded)	Scale (numeric)	0 to 4 (never to extremely often)
	Describe Above Experience	Q30	Nominal (string)	Open-ended
Addressing Harassment	Supervisor Addresses Complaints	Q31.1 (recoded)	Nominal (numeric) (binary)	0 = no; 1 = yes
	Filed Grievance/Complaint	Q31.2 (recoded)	Nominal (numeric) (binary)	0 = no; 1 = yes
	Resolved Grievance/Complaint	Q31.3 (recoded)	Nominal (numeric) (binary)	0 = no; 1 = yes
	Legal Action	Q31.4 (recoded)	Nominal (numeric) (binary)	0 = no; 1 = yes
	Resolved Legal Action	Q31.5 (recoded)	Nominal (numeric) (binary)	0 = no; 1 = yes
Demographics	Gender	Q32	Nominal (numeric)	1 = male; 2 = female
	Age	Q33	Scale (numeric)	Open-ended
	Race/Ethnicity	Q34 (recoded)	Nominal (numeric)	1 = Caucasian; 2 = other
	Sexual Orientation	Q35 (recoded)	Nominal (numeric)	1 = heterosexual; 2 = other
	Marital Status	Q36 (recoded)	Nominal (numeric)	1 = single; 2 = coupled
	Care-giving Responsibilities	Q37	Nominal (numeric) (binary)	0 = no; 1 = yes
	Political Ideology	Q38 (recoded)	Nominal (numeric)	1 = Democrat; 2 = Republican; 3 = other

Category		Variable	Measure (Type)	Value
	Formal Education	Q39	Nominal (numeric)	1 = high school diploma/GED; 2 = technical/vocational training; 3 = associate degree; 4 = bachelor degree; 5 = master degree; 6 = doctoral degree; 7 = other
	Major/Concentration	Q40	Nominal (string)	Open-ended
	Salary Range	Q41	Nominal (numeric)	1 = less than $25,000; 2 = $25,000-$45,000; 3 = $45,001-$65,000; 4 = $65,001-$85,000; 5 = more than $85,000
Additional Comments		Q42	Nominal (string)	Open-ended

APPENDIX E – Statistical Tests

*Significant

Measuring	#	Variable Category	Dependent Variable	Question #	Variable Category	Independent Variable	Question #	Test Done
Active representation	RQ1	Job Characteristics	*Correlation*					
Active representation	RQ2		Field of EM - Length in Field	#4	Job Characteristics	Discretion index, MRR index	#15, #16	Regression*
Active representation	RQ3		Field of EM - Length in Agency	#5		Discretion index, MRR index	#15, #16	Regression
Active representation	RQ4		Field of EM - Length in Position	#6		Discretion index, MRR index	#15, #16	Regression*
Active representation	RQ5		Discretion index	#15		Primary job assignment	#14	t-test*
Active representation	RQ6a RQ6b		Discretion index	#15	Demographics	Age	#33	t-test, Correlation
Active representation						Race/ethnicity	#34	t-test
Active representation						Orientation	#35	t-test
Active representation						Marital Status	#36	t-test
Active representation						Children	#37	t-test
Active representation						Political Ideology	#38	t-test
Active representation						Education	#39	t-test, Correlation
Active representation						Salary	#41	t-test*, Correlation
Active representation	RH1		Discretion index	#15	Job Characteristics	Supervisor gender	#13	t-test

Measuring	#	Variable Category	Dependent Variable	Question #	Variable Category	Independent Variable	Question #	Test Done
Active representation	RQ7		MRR index	#16		Primary job assignment	#14	t-test
Active representation	RQ8		MRR index	#16	Demographics	Age	#33	t-test, Correlation
Active representation						Race/ethnicity	#34	t-test
Active representation						Orientation	#35	t-test
Active representation						Marital Status	#36	t-test
Active representation						Children	#37	t-test
Active representation						Political Ideology	#38	t-test*
Active representation						Education	#39	t-test, Correlation
Active representation						Salary	#41	t-test, Correlation
Active representation	RH2		MRR index	#16	Job Characteristics	Supervisor gender	#13	t-test
Active representation	RH3a		MRR index	#16	Career Progression	Recommend other women	#27.1	Correlation
Active representation	RH3b		MRR index	#16		Recruit other women	#27.2	Correlation
Active representation	RQ9		Traditional Role Adherence	#17.1-17.3	n/a			ANOVA
Work/life balance	RH4	W/L Balance	W/L balance - family	#18.1	Demographics	Children	#37	t-test
Work/life balance			W/L balance - social	#18.2		Children	#37	t-test
Work/life balance	RH5		W/L balance - family	#18.1		Couples	#36	t-test
Work/life balance			W/L balance - social	#18.2		Couples	#36	t-test

Measuring	#	Variable Category	Dependent Variable	Question #	Variable Category	Independent Variable	Question #	Test Done
Career progression	RQ10	Career Progression	*Correlation*					
Career progression	RQ11a RQ11b		Mentoring	#24.1	Demographics	Age	#33	t-test, Correlation
Career progression						Race/ethnicity	#34	t-test
Career progression						Orientation	#35	t-test
Career progression						Marital Status	#36	t-test
Career progression						Children	#37	t-test
Career progression						Political Ideology	#38	t-test
Career progression						Education	#39	t-test, Correlation
Career progression						Salary	#41	t-test, Correlation
Career progression			Mentoring	#24.2	Demographics	Age	#33	Correlation
Career progression						Race/ethnicity	#34	t-test
Career progression						Orientation	#35	t-test
Career progression						Marital Status	#36	t-test
Career progression						Children	#37	t-test
Career progression						Political Ideology	#38	t-test
Career progression						Education	#39	Correlation

Measuring	#	Variable Category	Dependent Variable	Question #	Variable Category	Independent Variable	Question #	Test Done
Career progression						Salary	#41	Correlation
Career progression			Mentoring	#24.3	Demographics	Age	#33	t-test, Correlation
Career progression						Race/ethnicity	#34	ANOVA & t-test
Career progression						Orientation	#35	ANOVA & t-test
Career progression						Marital Status	#36	t-test
Career progression						Children	#37	t-test
Career progression						Political Ideology	#38	t-test
Career progression						Education	#39	t-test, Correlation
Career progression						Salary	#41	t-test, Correlation
Harassment	RQ12	Harassment	*Qualitative*					
Harassment	RQ13		*Correlation*					
	RQ14		*Correlation*					
Harassment	RQ15a RQ15b		Social Isolation	#29.1	Demographics	Age	#33	t-test, Correlation
Harassment						Race/ethnicity	#34	ANOVA & t-test
Harassment						Orientation	#35	ANOVA & t-test
Harassment						Marital Status	#36	t-test
Harassment						Children	#37	t-test
Harassment						Political Ideology	#38	t-test

Measuring	#	Variable Category	Dependent Variable	Question #	Variable Category	Independent Variable	Question #	Test Done
Harassment						Education	#39	t-test, Correlation
Harassment						Salary	#41	t-test, Correlation
Harassment			Sexual Harassment	#29.2	Demographics	Age	#33	t-test, Correlation
Harassment						Race/ethnicity	#34	t-test
Harassment						Orientation	#35	t-test
Harassment						Marital Status	#36	t-test*
Harassment						Children	#37	t-test
Harassment						Political Ideology	#38	t-test
Harassment						Education	#39	t-test, Correlation
Harassment						Salary	#41	t-test, Correlation
Harassment			Sex or Gender Discrimination	#29.3	Demographics	Age	#33	t-test, Correlation
Harassment						Race/ethnicity	#34	t-test
Harassment						Orientation	#35	t-test
Harassment						Marital Status	#36	t-test
Harassment						Children	#37	t-test
Harassment						Political Ideology	#38	t-test
Harassment						Education	#39	t-test, Correlation
Harassment						Salary	#41	t-test, Correlation
Harassment			Violence/Physical Assault	#29.4	Demographics	Age	#33	t-test, Correlation*
Harassment						Race/ethnicity	#34	t-test

Measuring	#	Variable Category	Dependent Variable	Question #	Variable Category	Independent Variable	Question #	Test Done
Harassment						Orientation	#35	t-test
Harassment						Marital Status	#36	t-test
Harassment						Children	#37	t-test
Harassment						Political Ideology	#38	t-test
Harassment						Education	#39	t-test, Correlation*
Harassment						Salary	#41	t-test, Correlation
Harassment	RQ16		Harassment	#29.1-#29.4				ANOVA
Harassment	RQ17		*Qualitative*					
Harassment	RH6		Social Isolation	#29.1		Supervisor gender	#13	t-test
Harassment			Sexual Harassment	#29.2		Supervisor gender	#13	t-test
Harassment			Sex or Gender Discrimination	#29.3	Demographics	Supervisor gender	#13	t-test
Harassment			Violence/Physical Assault	#29.4		Supervisor gender	#13	t-test*
Harassment						Age	#33	t-test, Correlation
Harassment						Race/ethnicity	#34recode	t-test
Harassment						Orientation	#35	t-test
Harassment						Marital Status	#36	t-test
Harassment	RQ18	Addressing harassment	Supervisor Addresses Complaints	#31.1recode	Demographics	Children	#37	t-test
Harassment						Political Ideology	#38	t-test
Harassment						Education	#39	t-test, Correlation
Harassment						Salary	#41	t-test, Correlation*

Measuring	#	Variable Category	Dependent Variable	Question #	Variable Category	Independent Variable	Question #	Test Done
Harassment			Filed Grievance/Complaint	#31.2recode	Demographics	Age	#33	t-test, Correlation
Harassment						Race/ethnicity	#34	t-test
Harassment						Orientation	#35	t-test
Harassment						Marital Status	#36	t-test
Harassment						Children	#37	t-test
Harassment						Political Ideology	#38	t-test
Harassment						Education	#39	Correlation
Harassment						Salary	#41	Correlation*
Harassment			Resolved Grievance/Complaint	#31.3recode	Demographics	Age	#33	t-test, Correlation
Harassment						Race/ethnicity	#34	t-test
Harassment						Orientation	#35	t-test
Harassment						Marital Status	#36	t-test
Harassment						Children	#37	t-test
Harassment						Political Ideology	#38	t-test
Harassment						Education	#39	t-test, Correlation
Harassment						Salary	#41	t-test, Correlation
Harassment			Legal Action	#31.4recode	Demographics	Age	#33	t-test, Correlation
Harassment						Race/ethnicity	#34	t-test
Harassment						Orientation	#35	t-test
Harassment						Marital Status	#36	t-test
Harassment						Children	#37	t-test
Harassment						Political Ideology	#38	t-test

Measuring	#	Variable Category	Dependent Variable	Question #	Variable Category	Independent Variable	Question #	Test Done
Harassment						Education	#39	t-test, Correlation
Harassment						Salary	#41	t-test, Correlation
Harassment			Resolved Legal Action	#31.5recode	Demographics	Age	#33	t-test, Correlation
Harassment						Race/ethnicity	#34	t-test
Harassment						Orientation	#35	t-test
Harassment						Marital Status	#36	t-test
Harassment						Children	#37	t-test
Harassment						Political Ideology	#38	t-test
Harassment						Education	#39	t-test, Correlation
Harassment						Salary	#41	t-test, Correlation
	RQ19		*Correlation*					
Harassment	RH7		Supervisor Addresses Complaints	#31.1	Demographics	Supervisor gender	#13	t-test
Harassment			Filed Grievance/Complaint	#31.2		Supervisor gender	#13	t-test
Harassment			Resolved Grievance/Complaint	#31.3		Supervisor gender	#13	t-test
Harassment			Legal Action	#31.4		Supervisor gender	#13	t-test
Harassment			Resolved Legal Action	#31.5		Supervisor gender	#13	t-test

VITA

Alyssa L. Provencio

Candidate for the Degree of

Doctor of Philosophy

Thesis: GENDER AND REPRESENTATIVE BUREAUCRACY: OPPORTUNITIES AND BARRIERS IN LOCAL EMERGENCY MANAGEMENT AGENCIES

Major Field: Fire and Emergency Management Administration

Biographical:

Education:

Completed the requirements for the Doctor of Philosophy/Education in Fire and Emergency Management Administration at Oklahoma State University, Stillwater, Oklahoma in May, 2017.

Completed the requirements for the Master of Public Service in Public Service at University of Arkansas Clinton School of Public Service, Little Rock, Arkansas in August, 2012.

Completed the requirements for the Bachelor of Science in Hotel and Restaurant Management at Kansas State University, Manhattan, Kansas in May 2008.

Experience:

Instructor/Edu-Innovator, University of Central Oklahoma Department of Political Science, 2016-Present

Graduate Teaching/Research Associate, Oklahoma State University Department of Political Science, 2013-2016

Graduate Intern, City of Los Angeles' Emergency Management Department, Summer 2014

Director of Information and Logistics, CQM Systems LLC, 2012-2013

Consultant, Clinton Foundation – CGSGI, Summer 2011

Volunteer Program Officer, Rebuilding Together New Orleans, 2009-2010

Professional Memberships:

International Association of Emergency Managers

American Society for Public Administration, Section on Emergency and Crisis Management