

RESEARCH ARTICLE

# Women's Support Shaken: A Study of Women's Political Trust after Natural Disasters

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## Abstract

Women have unique experiences during natural disasters, including higher risks of death, violence, and socioeconomic decline and an increase in specific reproductive health needs. However, government responses often do not directly address these women-specific needs, which can decrease women's political trust. I investigate women's trust in government institutions when natural disasters have recently occurred and argue that because of their unique experiences and typical government responses, women's political trust will decline when there is a natural disaster more than men's. I find that when there is a high number of disasters and when a larger percentage of the population is affected by disasters, women's political trust decreases significantly, especially institutional trust. These findings are distinct from previous studies that cluster different types of political trust and support the idea that women's experiences in a disaster may influence their relationship with institutions differently than men's.

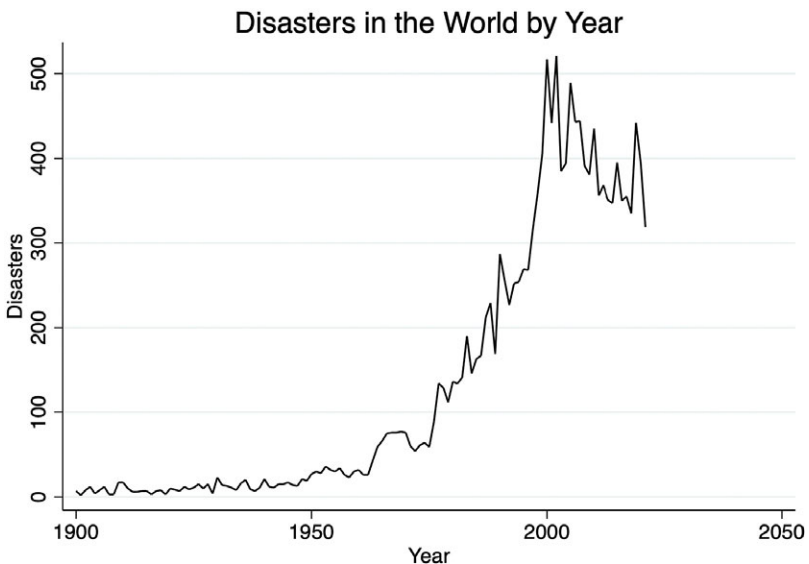
**Keywords:** natural disasters; women's trust; political trust; gender

In 2010, a 7.0-magnitude earthquake ravaged the country of Haiti, killing at least 200,000 people and causing upwards of \$8.5 billion in damages. Millions of people lost their homes, hundreds of thousands were injured, and many were left displaced and dependent on the help of their government. Women in Haiti were already living in a country where they were vulnerable because of their place in the gendered global economy; their limited material assets and income; their lack of state support; and gendered norms, roles, and responsibilities (Horton 2012). In this case, relief and recovery magnified the issues of the women in the state. Women were excluded from disaster relief policies, lost medical services, were victims of increased rates of sexual and gender-based

violence, and had to cope with complex bureaucracies and vague government roles (Horton 2012).

These experiences are not unique to Haiti. Women experience disasters differently than men, and they are often the most vulnerable populations in disaster-affected countries. If state governments are not responding to their constituents, representing them well, or supporting their unique needs, this will have a direct impact on the trust in that relationship. Political trust, which captures citizens' beliefs that the government can perform its jobs well (Reinhardt 2019), is imperative for governments to succeed and for civilians to feel as if they have a voice. When a crisis strikes, people rely on the government not only to handle the crisis quickly and effectively but also to support and care for all in their country. However, this may not be the reaction or perception of all populations within the state, especially those deemed vulnerable.

As shown in Figure 1, natural disasters such as earthquakes, typhoons, and floods have steadily increased since the 1950s. As climate change becomes more severe, and humans remain dependent on fossil fuel resources such as coal and oil, we can expect natural disasters to increase in frequency and severity. Yet the effect of disasters on human populations is felt unevenly across the globe. Women are more likely to experience the worst outcomes in natural disaster situations, such that the gap in life expectancy between the genders has begun to shrink during crises (Neymayer and Plümper 2007). With the continuation and increase of natural disasters, this is an issue for women's safety and survival.



**Figure 1.**

In this article, I examine how natural disasters influence political trust and consider how climate shocks affect men's and women's political attitudes distinctly. I argue that disasters have a disproportionate effect on women's well-being, thereby eroding political trust more than for men. I develop a theory to examine why women's disaster experiences influence political trust. Using multilevel analysis to capture individual and country-level effects and data from the World Values Survey (Haerpfer et al. 2020) and the Emergency Events Database (Guha-Sapir et al. 2021), I find empirically that women have lower levels of overall political, institutional, and organizational trust when natural disasters are present and affect larger percentages of a country's population. I contribute to the current literature by evaluating natural disasters of all types and not just specific natural disasters. Although several articles discuss natural disasters' impact on political support pertaining to cyclones and hurricanes (Ikeda 1995; Reinhardt 2019), few studies focus on all categories of natural disasters. This study also considers different types of political trust and shows that women's institutional trust declines more significantly following disasters than women's organizational trust. Exploring women's specific experiences and their relationship with their government institutions can inform policy makers and government entities about how to address women-specific issues and needs during and after a disaster.

The article is organized as follows: I begin with a review of political trust and studies that connect disasters to trust. Next, I discuss why women are more negatively impacted by disasters than men. This is followed by the theory section, where I connect women's disaster experiences to their trust in government. Finally, I present my research design and empirical findings and conclude with a discussion of the importance of my findings.

## Political Trust and Natural Disasters

Trusting one's political institutions involves constituents having confidence that their officials will have their vested interests in mind, which allows them to make sometimes life-altering decisions for the populace (Hardin 2002; Keele 2005; Miller 1974; Reinhardt 2015). Constituents are giving up their power and autonomy to these institutions and to politicians who will perform on their behalf (Reinhardt 2019). Political trust involves citizens' beliefs that "public officials can and will perform their jobs: A trusts B to do X. Trust grows with the belief that officials are capable...and morally strong enough...to do their job" (Reinhardt 2019, 2569). Trust is an expectation about how others should behave, rather than a behavior (Bauer and Freitag 2016).

Political perceptions, including trust, have been shown to vary by gender. Previous studies have found that women develop lower levels of political knowledge than men (Dolan 2011; Dow 2009), participate in politics at lower rates than men (Sartori, Tuorto, and Ghigi 2017), and trust their governments less than men (Alesina and La Ferrara 2002). However, other findings refute these claims and indicate that gender does not influence political perceptions (Bunting, Gaskell, and Stoker 2021; Fraile 2014; Reinhardt 2015; Schoon and

Cheng 2011). The findings are still mixed on whether gender identity influences a person's political trust. However, most authors find that experiences are the main drivers of political trust, and gender may have an impact in these areas. Scholars have found that political-cultural variables, socioeconomic status, education, race, resources, community, and individual experiences influence political trust in significant ways (Christensen and Læg Reid 2005; Schoon and Cheng 2011; Schoon et al. 2010). I argue that these individual experiences during disasters can influence trust levels toward the responding government.

Newton, Stolle, and Zmerli (2018) find that variation in trust (or distrust) can be attributed to a variety of social causes, such as education, income, background, minority status, and life experiences. The authors find that trust tends to be clustered in two spaces associated with political trust: institutions and organizations. Trust in impartial *institutions* and the state (courts, police, civil service) tends to be stronger than trust in *organizations* of government (cabinet, parliament, political parties). People trust these two entities differently because of their makeup. Rothstein and Stolle (2008) state that civil servants, judges, police, armed forces, and other social services are seen as evenhanded or impartial. Citizens see these institutions in theory as not being ideologically motivated and achieving a certain task to inherently care for the people. Therefore, they will likely have higher trust in institutions than in government organizations, and that trust is less likely to change or be eroded in response to external events like disasters. Rothstein and Stolle also argue that trust in organizations such as political parties is more fluid because politicians that hold government power implement policy based on ideology. Those who agree with said ideology may have higher trust, while those who do not may have lower trust. Changes in which party members hold political office can influence the fluctuation of constituents' organizational trust. The authors state that although this makes it difficult to study trust, it is also helpful to focus on the institutional and organizational trust clusters when evaluating factors that influence political trust.<sup>1</sup>

Levi and Stoker (2000, 476) posit that trust is relational; it involves individuals making themselves vulnerable to groups and institutions that could harm or betray them. Stoyan et al. (2016) argue that citizens are more likely to trust government institutions when they are seen as providing for citizens' well-being. These assessments often deal with economic factors (Kelly 2003; MacKuen, Erickson, and Stimson 1992), as well as assessments of other concerns, including public services, ensuring security, and combating corruption (Stoyan et al. 2016). During times of crisis, citizens may have to entrust their lives to their government, creating the opportunity for these assessments to change. Citizens are imparting this trust in their government to always have their best interests in mind, support them, and feel as if they can represent their ideas and needs. Natural disasters can dramatically impact this political trust. As Reinhardt (2015, 2569) discusses, experiences in disasters can "update beliefs about public officials' competence at preparing for and managing disasters." Natural disasters influence the government's ability to handle vulnerable populations' needs, which can impact their trust. Disasters create opportunities for some governments to demonstrate their competence, increasing citizens' political trust,

while also laying bare the failures of other regimes to assist disaster-affected populations, decreasing people's trust. The effect of disasters on political trust also depends on the government's willingness to provide aid to everyone but emphasize those that need it most. I argue that if this government response does not focus on those in the most need and their unique experiences, then the groups denied access will have lower levels of trust.

Natural disasters put states in vulnerable situations that are difficult to prepare for a priori. Depending on the type and intensity of the disaster, states can experience economic crises, food scarcity, agricultural loss, high volume of death, displacement of entire populations, and destruction of homes, among other wreckage. Climate change and global warming will contribute to more frequent and intense natural disasters in the foreseeable future.<sup>2</sup> Banholzer, Kossin, and Donner (2014) find that in the twenty-first century, heat waves, tropical cyclones, floods, landslides, and the intensity of droughts have increased across the globe. Outbreaks of diseases are also on the rise, including the SARS outbreak from 2002 to 2004, the Ebola outbreak in Africa from 2013 to 2016, and the COVID-19 pandemic from 2019 to the present (CDC 2018, 2021; WHO 2021). Natural disasters can encompass several events, including, but not limited to earthquakes, volcanic activity, extreme temperature, storms, flooding, landslides, wildfires, endemic diseases, and drought (Guha-Sapir, Below, and Hoyois 2021). With this increase in natural disasters comes an increase in the responsibility of governments to protect their citizens, especially their most vulnerable populations (Guha-Sapir, Below, and Hoyois 2021; Paul 2011).

If countries do not respond to their citizens' specific needs, these populations can push back. Chang and Berdiev (2015) find that natural disasters increase the chances that a government will be replaced, while Mitchell and Pizzi (2021) find that poor postdisaster policies can lead to an increase in conflict within a state. Levi and Stoker (2000, 476) explain that citizens' distrust can inspire vigilance in and monitoring of the relationship, uncooperative behavior, and severing of the relationship. This affiliation can be applied to citizens' attitudes toward specific leaders, groups, or institutions and vice versa.<sup>3</sup> During natural disasters, governments can face obstacles such as losing communication with their citizens, entering a state of emergency, or being unable to function as a secure resource for their citizens (West and Orr 2007). If states do not have plans in place to assist their citizens during times of crisis, then they may fail as a government and lose their citizens' trust. People displaced by Hurricane Katrina, for example, were more distrusting of the US federal government, especially if they followed media coverage of disaster response closely (Reinhardt 2015).

States' lack of or poor response can also lead to other organizations taking over government responsibilities. In Haiti after the 2010 earthquake, nongovernmental organizations (NGOs) became the main responders to victims and the main source of funding for on-the-ground services. NGOs and outside government organizations such as the U.S. Agency for International Development, Human Rights Watch, and the United Nations Office for the Coordination of Humanitarian Affairs provided water, search and rescue, food, jobs, sanitation, a coordinated cholera outbreak response, shelter, and even education to those in need (Humanitarian Coalition 2012; USAID 2017). This unforeseen failure of the

government to provide care and necessary resources to citizens could cause the population's trust in their institutions to decline and be placed elsewhere.

### Gendered Disaster Vulnerability

Trust in governments can be shaken by poor responses to natural disasters. Yet the negative repercussions of disasters are not experienced equally by all members of society. Factors such as age, sex, social class, race, gender, and ethnicity increase vulnerability to disasters within countries (Llorente-Marrón et al. 2020). According to the vulnerability approach, inequalities in access, capabilities, and opportunities may systematically disadvantage certain groups, including women, making them more vulnerable to the impact of disasters (Neumayer and Plümpert 2007). Juran and Trivedi (2015) echo this discussion in their research, showing that women and men are affected differently by natural disasters, leading to claims about gendered disaster vulnerability. After catastrophes, women suffer from negative health, socioeconomic, and other consequences that affect their daily lives specifically as women (Jahangiri, Izadkhah, and Sadighi 2014).

Gender roles often solidify in the face of crisis (Goldstein 2003). Therefore, as social role theory discusses, the gendered stereotypes and identities that people hold personally (Van Lange, Kruglanski, and Higgins 2011) increase during threats. Women are often the main caretakers of the household and family, and the expectations of these responsibilities are exacerbated in postdisaster settings, when they are often tasked with collecting and carrying resources to their families and tending to their loved ones (Oglethorpe and Gelman 2008). This was seen by Sohrabizadeh, Sogand, and Khankeh (2016), who describe women walking through unstable rubble to gather resources for their families or cooking inside the ruins of where their homes once stood, demonstrating how women's gender roles can turn dangerous postdisaster. The intensification of gendered expectations can also be seen when disasters negatively impact the health and safety of family members, whom the woman caretaker must tend to or is responsible for, possibly negating her own health (Berndt 2018). Sohrabizadeh, Sogand, and Khankeh (2016) spoke with women after the disasters in 2012 in Iran. One woman described her sister-in-law sacrificing herself to save her children demonstrating the gendered responses to disasters:

During the earthquake, my pregnant sister-in-law passed away with her child in her arms. Her husband ran for cover, but she stayed to save her baby, then, as she approached the door to escape with her child, a column fell on her and she was killed. (P2, 38 years old). (Sohrabizadeh, Sogand, and Khankeh 2016, 985)

Women's reproductive health care needs are often not prioritized during or after natural disasters. Women who are pregnant or nursing have their needs left unprioritized after disasters, creating a further risk of death or diseases for the mother and infant (Sohrabizadeh, Sogand, and Khankeh 2016). Women's

menstrual hygiene is regularly neglected during natural disasters, causing concerns for women's safety and privacy (Krishnan and Twigg 2016). Postdisaster relief programs regularly fail to address the sanitary needs of menstruation in the aftermath (Enarson 2012; Sohrabizadeh, Sogand, and Khankeh 2016). Sohrabizadeh, Sogand, and Khankeh's (2016) discussions led to the understanding that disasters impact menstruating women in unique ways.

After the Rudbar earthquake, I wondered why affected women requested high numbers of birth control tablets. Then, I understood that they faced menstruation disorders because of their severe stress during the earthquake. HD and LD tablets finished soon. (P21, 46 years old). (Sohrabizadeh, Sogand, and Khankeh 2016, 985)

Women also repeatedly experience a surge in violence and sexual assault during disasters (Horton 2012). Fisher (2010) describes incidents of increased sexual and domestic violence against women and girls after the tsunami in Sri Lanka:

Reports included the rape of a young woman by her "rescuer" after being saved from the waves and the gang rape of two women on a beach they visited to view the destruction...In one camp it was reported that male residents purposely triggered a power cut at night and molested women while they were sleeping. (Fisher 2010, 907)

Following the initial aftermath of the disaster, domestic violence was considered by more than 4 out of 5 respondents to be the most prevalent and sustained form of post-disaster violence against women.... Reported incidents in accommodation centers included a man severing his wife's leg with a shovel and another stripping his wife naked in public and attacking her with a broken bottle. (Fisher 2010, 908)

These occurrences lead to an increase in the need for reproductive health care and safety precautions to address serious issues such as HIV, sexually transmitted infections, sexually induced trauma, unplanned pregnancies, and violent partners (Berndt 2018; Hapsari et al. 2009). Options for this specific care are often lacking in postdisaster communities (Berndt 2018).

Disasters also impact the economic independence and well-being of women differently than men. Women are more likely to be living in poverty and have fewer economic alternatives than men (Enarson and Morrow 1998). Women are slower to return to paid work after a disaster, if they can return at all (Enarson and Morrow 1998), and they are often denied government relief because of government assumptions that women are supported by their husbands (Enarson 2000). This loss in economic independence not only puts women's safety and well-being at risk, it also makes them extremely vulnerable to sexual violence and compromises their health even further (Enarson 2012; Enarson, Fothergill, and Peek 2018). This was exemplified in Haiti after the 2010 earthquake, when the economic insecurity of women led to an increase in the sexual exploitation of

women and girls, as they were forced to exchange sexual favors for basic needs and supplies for their families (Horton 2012). Households that are headed by women also see a magnification of the negative effects from disasters (Llorente-Marrón et al. 2020). This was seen in Pakistan during the floods of 2014 when women-headed households were more likely to experience agricultural crop loss than households headed by men (Raza 2017).

Women and girls are also more likely to lose their lives because of natural disasters than men. Neumayer and Plümpert (2007) find that disasters lower the life expectancy of women compared with men, narrowing the gap in life expectancy between the two groups because women generally have a longer life expectancy before disasters occur. They also find that the stronger the disaster, the more the gap in life expectancy shrinks. The authors demonstrate that socioeconomic status impacts women's life expectancy during disasters, lowering the likelihood of death with an increase in status. This was demonstrated in Bangladesh during the cyclone of 1991, when women were reported dead at higher rates than any other group (Ikeda 1995). Gender-specific vulnerability of women is built into the socioeconomic structure of the state and leads to higher mortality rates for women during disasters (Neumayer and Plümpert 2007). This is becoming a more relevant issue, in both a practical and an academic sense, because of the increase in recent years of disasters and those affected by them (Guha-Sapir, Below, and Hoyois 2021; Paul 2011). Women's already susceptible status as a result of gendered expectations and norms puts them in a place of extreme vulnerability before a disaster, and after disaster strikes, women are more likely to experience life-threatening trauma and hardship than the male populations.

Horton (2012) describes the bleak road to recovery women go through after a disaster. Women in postdisaster states can experience violence, exploitation, class, and racial stigmatization, and they may be unable to meet family survival needs. Women who are displaced or injured are put in a space where the government may not respond to their specific issues and help them return to normal. After a disaster, women experience higher levels of death, poverty, displacement, and violence than men in the country of crisis, and they look to their governments to provide the resources for them not only to survive but to find their way back. These experiences demonstrate the severe and unique individual experiences of women during disasters and the risks that are compounded in the postdisaster recovery stage. I argue that these experiences impact women's trust in a negative way that does not influence men's trust levels.

### **Women's Trust After Disasters**

If the women who experience natural disasters are lucky enough to survive, they will depend on their political institutions to support them through the hardship they experience. Government responses to disasters can already be set up for failure before adding in gendered components. Schneider (2008) discusses the failure of the intergovernmental response to Hurricane Katrina because of the



confusion of roles and responsibilities. There can also be an expectations gap between citizens and their bureaucratic governments regarding disaster response (Schneider 1992). During times of catastrophe, which can include conflict, the threat of conflict, disaster, epidemics, and so on, gender roles often solidify, and women's needs are pushed aside for the larger issues of the state (Gardam and Charlesworth 2000). The policies and decisions implemented during threats and conflict are often security based and do not maintain human rights, especially women's rights. Gardam and Charlesworth (2000) demonstrate that to make a difference to women in conflict, decisions about the state must adapt to involve women's specific life experiences. Government reactions are often blanket responses to address the larger issues at hand that affect all citizens, not just women. Women's inequality and unique experiences are shut out of the agenda or the perspective of the government to make way for the larger issue that involves the crisis of the state. Although this may be a justifiable case by the government for resource allocation, this decreases the likelihood that women's issues will be handled appropriately or thoughtfully during times of emergency. Concerns about women's distinctive health care, violence, or other problems will not be discussed, and therefore women will continue to suffer the largest consequences. Without a proper understanding of what these women need, their governments are more likely to fail them and contribute to their diminished livelihood. I argue that this contributes to women's negative experiences and trust in the organizational government, as they will blame those in charge for not responding to their needs.

As discussed earlier, women experience disasters differently than men and suffer more from them (Berndt 2018; Enarson 2000; Enarson, Fothergill, and Peek 2018; Enarson and Morrow 1998; Horton 2012; Ikeda 1995; Juran and Trivedi 2015; Krishnan and Twigg 2016; Llorente-Marrón et al. 2020; Neumayer and Plümpert 2007; Raza 2017). This scholarly evidence that women across the world need specific help when it comes to disasters has yet to reach government policy. If women's issues are repressed or if women feel they have limited political empowerment to discuss their specific needs with government institutions, then this trust will not improve, and women will continue to perish. Reinhardt (2019) shows in her recent work in the United States that disaster experience creates a difference in political trust between women and men. She argues that political trust varies along with gender, race, and class disaster dimensions, and she shows that Black women in the United States are less likely to trust the government than any other group (Reinhardt 2019). Knowing trust differs will allow for the better management of climate events. Without a proper understanding of the differences in experience women have during disasters, women's recovery of their livelihood and political trust will be compromised.

### **A Theory of Women's Political Trust When Natural Disasters are Present**

Natural disasters have an inherent and explicitly different impact on women within the countries that are affected. These disasters create cleavages in the

response that is instituted to the population, where women's specific concerns are often forgotten or ignored in favor of a blanket response of the entire community. Natural disasters can put women in dangerous situations, often without resources to help them recover. Women are disproportionately affected as a group during disasters, as previously stated. Scholarly discussion of women's unique experiences in the face of natural disasters demonstrates women's increased risk to their survival, their health, their socioeconomic status, the gendered roles they take on, and their independent livelihood. If women do survive natural disasters, which Neumayer and Plümpert (2007) find is rarer than for men, they continue to be at a disadvantage. After natural disasters, women are faced with a greater likelihood of homelessness, loss of income, inability to travel to receive health care, inability to support their families, and an existence in a world of gendered violence (Horton 2012).

Government responses during natural disasters are often broad and aim to address the entirety of the population affected. This is to ensure that resources reach and help the most people possible who are in need. Resources are often administered to entire communities and areas in bulk, with no specific emphasis on unique and at-risk peoples. However, there are select populations that need specific responses, including women. During and after these times of crisis, women's specific needs can include menstrual hygiene and reproductive health care (Berndt 2018; Krishnan and Twigg 2016), protection from gender-based violence (Horton 2012), economic help (Berndt 2018), and mental health programs for PTSD (Enarson and Morrow 1998). These issues are often neglected when governments address disasters with blanket responses.

Even states that are working to create a more equitable society for women will most likely put those resources on hold to deal with the larger group at hand. As Gardam and Charlesworth (2000) find, women's experiences are shut out from agenda making to deal with the larger crisis. Women's concerns and needs will not be properly discussed, and they will continue to suffer the maximum costs. This was seen on the ground during the fallout of the 2010 earthquake in Haiti, when human rights, especially women's rights, were seen as an option or a luxury that the state could not afford. The basic need for medicine and medical equipment was so great that there could be no focus on population-specific needs, leaving women and girls open to violence, abuse, and preventable deaths (HRW 2021).

There is little evidence that governments include any gendered responses in their postdisaster agendas (Horton 2012). This leaves women to deal with their disparities on their own. Government responses during natural disasters often determine the extent of suffering that is experienced by the affected population (Cohen and Werker 2008), and without an emphasis on women in these government responses, they are left to suffer at a great expense.

Without a proper response from the government regarding concerns related to women during natural disasters, their political trust will decrease, because the government did not follow through on its promise to serve its women constituents. Without an understanding of what women go through specifically, and how they experience crises within the state differently, their needs may not be discussed or met. Discussion and action for underrepresented and vulnerable

groups matter during the time of crisis. When governments do not have a vested concern in the safety, survival, or needs of a vulnerable population, this can lead to a decrease in government trust from those people. I argue that women's trust wanes more than men's during a disaster because, without a response aimed at the unique issues women experience during natural disasters, women will not have confidence in the government to protect them, fight for them, or play their essential role during said crisis. Therefore, during and following a natural disaster, women's trust in their government will decline.

**H<sub>1</sub>:** In states that experience natural disasters, women's political trust will decline more than men's political trust.

As noted earlier, political trust is different for institutional and organizational government entities. Because of the ideological orientation and partisanship that is inherent in the structure of organizational government, it can be expected that this type of political trust will shift more than those associated with institutions. The political entities associated with organizational trust (political parties, parliament, etc.) are more likely to be seen as the decision makers in disaster responses compared with courts, police, civil servants, and so on. I argue that organizational trust is perceived to have a more direct effect on the response and policies directed toward women after a disaster, which will influence their level of trust accordingly. Therefore, I expect that women's organizational trust will decline when disasters are present.

**H<sub>2</sub>:** In states that experience natural disasters, women's organizational trust will decline.

Police and armed forces are often the entities that must enact the policies and day-to-day operations of government disaster response. These institutional governing entities will have more interactions with women in encampments, rescue, and resource allocation, as exemplified earlier. These interactions can create opportunities for negative experiences including gendered sexual violence, sexual exploitation, and gendered stereotypes of care and the need for resources. I argue that women will hold these institutional entities responsible for their more personal and daily struggles recovering from the disaster and blame them for possible negative repercussions of poor government response and lack of policies put in place to protect them. Therefore, I expect that women's institutional trust will decline when disasters are present.

**H<sub>3</sub>:** In states that experience natural disasters, women's institutional trust will decline.

In sum, I expect women's trust (overall, institutional, and organizational) to decline following disasters. Because of the gendered experiences of women during a disaster, they will have a more negative outlook on all government entities than their male counterparts. Women's gender vulnerability puts them in a unique position to have their physical, economic, reproductive, sexual, and social autonomy compromised. In the next section, I test whether these experiences influence women's political trust.

## Research Design

In this section, I describe the data sets, measures, and models used to test my theory. I adopt a multilevel modeling strategy to capture variation in political trust within and between countries.

### Women's Political Trust

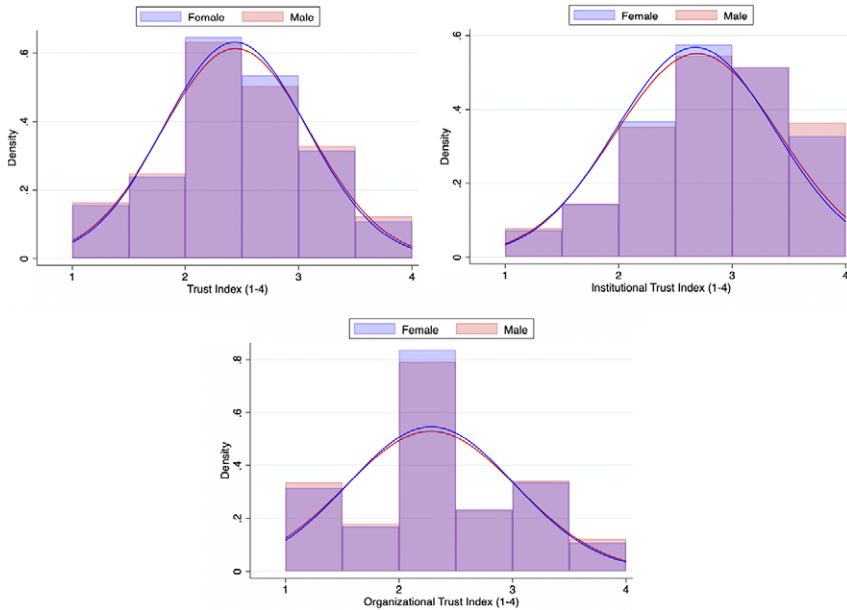
The data set used to construct my dependent trust variables is the World Values Survey (WVS), Waves 1–7, conducted from 1981 to 2020 (Haerpfer et al. 2020). The WVS uses a common questionnaire to create a representative survey conducted in roughly 80 countries. This survey currently includes interviews with around 450,000 respondents. The minimum number of completed interviews in most countries is 1,200 per wave. Samples must be representative of all people ages 18 and older residing within private households in each country, regardless of their nationality, citizenship, or language (Haerpfer et al. 2020). The main method of data collection in the WVS is face-to-face interviews at the respondent's place of residence. Respondents' answers are recorded on a paper questionnaire or by computer-assisted personal interview.

To measure the level of political trust, I create an index that combines five confidence variables as a dependent variable to represent an individual's trust level.<sup>4</sup> In the WVS, citizens are asked multiple questions about their confidence in different areas of their country. The questions use a 1–4 scale, where 1 represents no trust at all and 4 represents a great deal of trust. I selected five questions about citizens' trust in government organizations/institutions, including government, courts, political parties, parliament, and armed forces. Following previous research, I use the ordinal trust variables (1–4 scale) and create an overall index of *political trust* to evaluate individuals' overall trust in the system (Gil de Zúñiga et al. 2019). This measure is created by taking the average of the five variables. I also look at institutional trust and organizational trust as separate indicators to test  $H_2$  and  $H_3$  to determine whether disasters negatively affect women's institutional trust and organizational trust. I follow Newton, Stolle, and Zmerli's (2018) approach in creating an index for each of these variables. For the institutional trust index, I include attitudes toward the armed forces and the courts, while for the organizational trust index, I average trust in the government, political parties, and parliament.

Table 1 and Figure 2 show the average score for females and males in the categories of overall, institutional, and organizational trust on the 1–4 scale. Table 1 shows the average levels of trust across the three types, demonstrating that men and women do not have significant differences in trust levels. Figure 2 provides more perspective on the distribution of trust across each category, by gender. In overall and organizational trust, men and women follow very similar patterns. In institutional trust, men dominate the higher levels of trust, while women stay toward the middle, but they still skew toward higher levels. This demonstrates that, on average, females and males have similar baselines of political trust. Female is measured on a binary scale of male and female-identified from the WVS data set.<sup>5</sup>

**Table 1.** Average Trust Based on Gender

	Overall Trust	Institutional Trust	Organizational Trust	N
<b>Female</b>	<b>2.439</b>	<b>2.674</b>	<b>2.283</b>	<b>210,854</b>
Male	2.444	2.691	2.280	196,283
<i>t</i> -score <sup>16</sup>	2.44	7.53	-1.32	

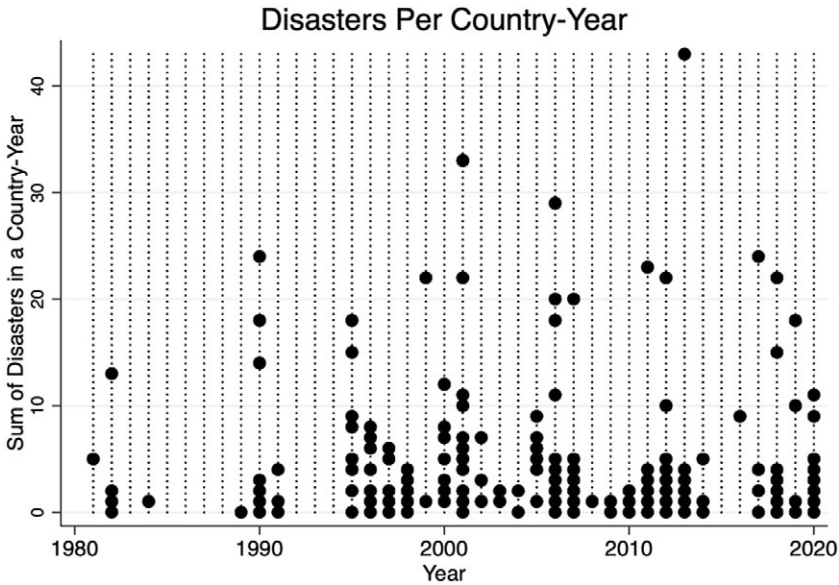


**Figure 2.**

**Disasters**

To measure disasters within countries, I use data on disasters from the Emergency Events Database (EM-DAT) (Guha-Sapir et al. 2021). The EM-DAT contains essential data on the occurrence and effects of more than 22,000 mass disasters in the world from 1990 to the present. The disaster information comes from a variety of sources, including United Nations agencies, NGOs, insurance companies, research institutes, and press agencies (Guha-Sapir et al. 2021). I aggregate disasters within the state for the WVS years to see the impact of the disasters for a given year. If a natural disaster happens,<sup>6</sup> I am interested in the effect on women’s trust in their government. The number of disasters that countries in the WVS experienced varies from 0 to 43. Figure 3 presents the sum of disasters present in a country-year, with a larger variance occurring in the later years of the sample, as expected.

I also capture the severity of disasters by measuring the percentage of the population within a country that was affected by the disaster. “Affected” in the



**Figure 3.**

EM-DAT data set refers to those who were killed, injured, or displaced because of the disaster (Guha-Sapir et al. 2021). Population data are taken from the World Bank (2021). Some disasters may be smaller and have only local effects; thus, capturing the magnitude of a disaster better captures situations in which individuals surveyed in the state would know about the government's response to the disaster and its impact on the nation. Both the disaster and the percentage of population affected variables were lagged by one year to ensure that the WVS respondents were asked about trust in government following the period when the disasters occurred. I also look at whether any disaster was present or any percentage of the population was affected in analyses that subsample WVS respondents into disaster and nondisaster samples.

### Controls

My analysis controls for several variables that have been found to explain variation in political trust in the literature (e.g., Newton, Stolle, and Zmerli 2018). At the individual level, I control for marital status, whether the respondent has children, the highest level of education attained, employment status, and income level. Marital status is coded as married or unmarried, employment status is coded as employed or unemployed, and having a child is coded as having children or not. The highest level of education is coded on a 0–7 scale, as provided by the WVS survey; missing data are imputed at the mean. Income level is coded at 10 levels ranging from “lowest” (first step) to “highest” (tenth step), as provided by the WVS survey; missing data for this variable are imputed at the

mean.<sup>7</sup> Rubin and Shenker (1991) state that imputing missing data at the mean is a viable procedure, especially for variables such as income. This follows previous literature on political trust at the individual level. All these individual-level control variables are captured in the WVS data set (Haerpfer et al. 2020).

At the country level, I control for women's political empowerment, regime type, and gross domestic product (GDP) per capita. These variables are likely to influence country-level political trust. The VDEM (Ziblatt et al. 2021) data set captures women's political empowerment and the measure of democracy. VDEM defines women's political empowerment as "a process of increasing capacity for women, leading to greater choice, agency, and participation in societal decision-making. It is understood to incorporate three equally weighted dimensions: fundamental civil liberties, women's open discussion of political issues and participation in civil society organizations, and the descriptive representation of women in formal political positions" (Ziblatt et al. 2021, 298). Lower scores on this scale demonstrate worse women's political empowerment, while higher scores indicate advancing women's political empowerment. The measure of electoral democracy is the "extent to which the ideal electoral democracy in its fullest sense is achieved" (Ziblatt et al. 2021). This is measured on a continuous scale in which 0 indicates a "closed autocracy" and 1 denotes "democratic." Finally, GDP is measured using data from the Penn World Table (Feenstra, Inklaar, and Timmer 2015) during the appropriate years.

### Methodology

To test my hypotheses, I analyze the effect of natural disasters on women's trust (overall, institutional, and organizational). I estimate a multilevel mixed-effects linear regression model to account for the multilevel structure of the data at the individual and country levels. I control for idiosyncratic country factors by including country-year fixed effects. I estimate the model with unstructured covariance, allowing all variances and covariances to be distinctly estimated. This includes the estimation of random slopes and random intercepts at the country level, allowing for the exploration of individual-level observations (gender, marriage, etc.) with country-level observations (GDP, regime, etc.). Other scholars using the World Values Surveys for multiple waves use models like this to avoid violating the assumption of independent error terms. Therefore, I follow their lead by using this multilevel modeling approach (Solt 2015).

In Models 1–6, I interact the two key variables of interest, natural disaster and female, using a cross-level interaction with random slopes and coefficients. Interacting these two variables estimates the effect of natural disasters on political trust conditional on being female. This allows a comparison of how disasters influence women's political trust compared with men's trust. In Models 7–15, I use subsampling to compare women who have experienced disasters within a country-year and those that have not. Subsampling allows me to break down the groups and assess differences across the variables of interest. Using the variables described earlier, I analyze the impact disasters have on women's political trust after natural disasters.

## Empirical Results

First, I look at natural disasters' impact on women's political trust overall, their institutional trust, and their organizational trust as it pertains to the total number of disasters present per country-year. Then, I follow the same process while looking at the percentage of the population affected per country-year. Table 2 shows the results for the influence of natural disaster counts on trust. The interaction term between *number of natural disaster present* and *female* is statistically significant at the 99% confidence level across Models 1–3. These results indicate that as the number of natural disasters in a country increases, the level of women's trust decreases significantly. This is consistent with my theory that government response is less likely to be directed toward women's postdisaster needs, leading to a decline in women's political trust. These findings confirm  $H_1$ , that women's overall trust will decline more than men's when disasters are present in the state. These findings also support  $H_2$  and  $H_3$ , that when disasters are present, women's organizational trust and institutional trust will decline. The first constitutive term, *number of natural disasters*, indicates the effect of an increasing number of natural disasters when *female* is equal to zero. The positive and significant coefficient for this variable shows that men's political trust increases as the number of natural disasters present increases.<sup>8</sup> The second constitutive term, *female*, indicates women's trust in the absence of natural disasters. The coefficient is significant only in Model 2, showing that women's institutional trust decreases even when no natural disasters are present. This demonstrates a variation in the type of trust among women and shows women already have negative trust in their institutions. However, there is no significant change in overall trust or organizational trust when no disasters occur. These findings show that there is a difference between men's and women's trust when the number of disasters within a country increase.

The marginal effects of *female* on overall, institutional, and organizational trust considering the number of disasters within a country can be seen in Figure 4. The effect reported in the table is substantively small; therefore, a marginal-effects plot is required to get a better idea of the effect across different disaster levels. As demonstrated in Figure 4, there are substantive effects for women across different types of trust.<sup>9</sup> Figure 4 shows a decline in women's trust as the number of disasters increases across each type of trust.<sup>10</sup> The effect size when studying trust is often small, and the effect described in Figure 4 demonstrates that going from 0 to 40 disasters, the difference in trust between men and women is about  $-0.06$ . However, I argue that these graphs do demonstrate a difference between men's and women's trust. It is interesting that the marginal effects of women's institutional trust start lower and decline at a higher rate than organizational or overall and that the marginal effect of organizational trust seems to decline at the lowest rate. These findings counterarguments from the political trust literature that citizens are more likely to blame political organizations such as the government and parliament than institutions that assist citizens after disasters such as the police.



**Table 2.** Influence of Number of Disasters on Political Trust

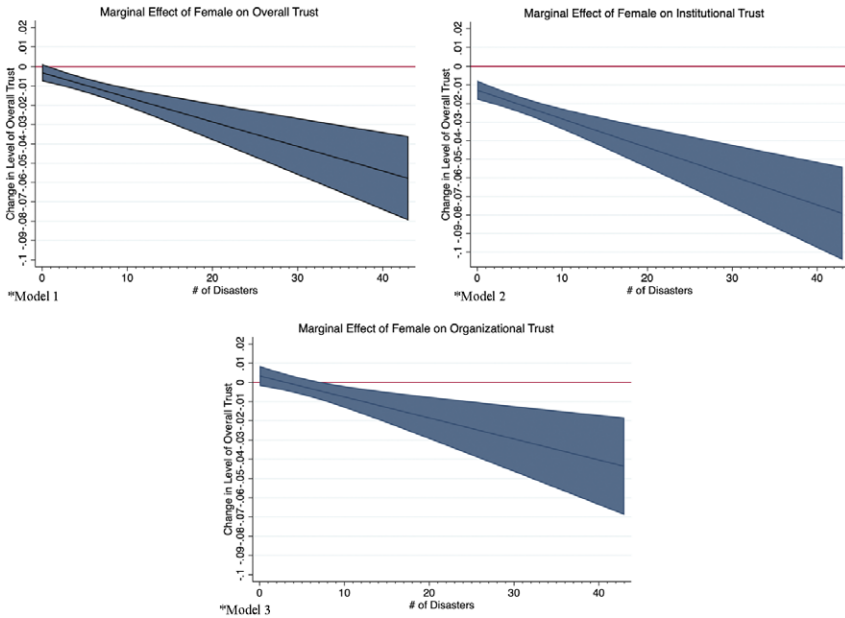
	Model 1	Model 2	Model 3
	Overall Trust	Institutional Trust	Organizational Trust
Number of Disasters Present	0.017*** (0.004)	0.009* (0.004)	0.022*** (0.005)
Female	-0.003 (0.002)	-0.013*** (0.003)	0.003 (0.003)
Female # Number of Disasters Present	-0.001*** (0.001)	-0.002*** (0.001)	-0.001*** (0.001)
Married	0.013*** (0.002)	0.018*** (0.003)	0.010*** (0.003)
Has Children	0.036*** (0.003)	0.041*** (0.003)	0.032*** (0.003)
Education	-0.011*** (0.001)	-0.012*** (0.001)	-0.010*** (0.001)
Employed	-0.037*** (0.002)	-0.039*** (0.002)	-0.036*** (0.002)
Income Level	0.004*** (0.001)	0.003*** (0.001)	0.005*** (0.001)
VDEM	-0.512*** (0.085)	-0.372*** (0.091)	-0.605*** (0.099)
GDP	-0.000 (0.001)	0.000 (0.001)	-0.000 (0.001)
Women's Political Empowerment Index	0.001 (0.104)	-0.203 (0.143)	-0.160 (0.157)
Observations	370,506	370,506	370,506

Standard errors in parentheses

Two tailed significance tests

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ 

Table 3 shows how the severity of a disaster influences political trust. Severity is measured by the percentage of the population killed, injured, or displaced during a disaster. The interaction term between *percentage of population affected* and *female* is statistically significant at the 99% confidence level across Models 4–6. These results indicate that as the percentage of the population affected by natural disasters increases in a country, the level of women's trust decreases. These findings confirm  $H_1$  that women's trust will decline more than men's when



**Figure 4.**

disasters are present in the state.<sup>11</sup> These findings also support  $H_2$  and  $H_3$  that when disasters are present, women's organizational trust and institutional trust will decline. The constitutive term, *female*, is significant in Models 4 and 5, indicating that women's overall trust and institutional trust decreases even when none of the population is affected. However, once again, when no disasters are present, there is no significant change to organizational trust. These findings demonstrate a difference between men's and women's trust when the percentage of the population affected by disasters within the state increases.

The marginal effects of *female* on overall, institutional, and organizational trust regarding the percentage of population affected within a country can be seen in Figure 5. The figure shows a small decline in women's trust (overall, institutional, organizational) as the percentage of the population affected by disasters in the country increases.<sup>12</sup> The effect is significantly different from 0, but the percentage affected seems not to make a difference. One explanation for this occurrence may be that there is a difference in the magnitude of disaster and the occurrence of disasters. If a country experiences more disasters, of any magnitude, that can take a larger toll on the state and the resources/response from the government. However, if there is a large disaster that affects many people, but only once, then the government can respond with more resources in a timely manner, thus having an influence on women's trust.

I was interested in further exploring the differences between countries that experience natural disasters and those that do not, given that some countries are much more disaster-prone than others. I took a subsample of the countries that

**Table 3.** Population Affected Impact on Trust

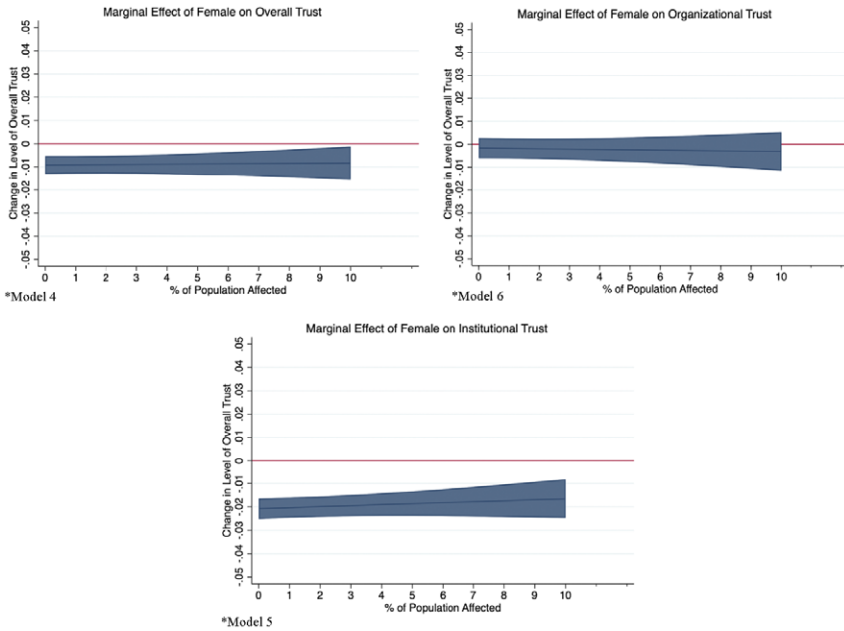
	Model 4	Model 5	Model 6
	Overall Trust	Institutional Trust	Organizational Trust
% Of Population Affected	0.001 (0.001)	-0.001 (0.001)	0.001 (0.001)
Female	-0.008*** (0.002)	-0.019*** (0.002)	-0.001 (0.002)
Female # % Of Population Affected	-0.001*** (0.001)	-0.001* (0.001)	-0.001*** (0.001)
Married	0.013*** (0.002)	0.018*** (0.003)	0.010*** (0.003)
Has Children	0.035*** (0.003)	0.042*** (0.003)	0.031*** (0.003)
Education	-0.011*** (0.001)	-0.012*** (0.001)	-0.010*** (0.001)
Employed	-0.037*** (0.002)	-0.039*** (0.002)	-0.036*** (0.002)
Income Level	0.004*** (0.001)	0.003*** (0.001)	0.005*** (0.001)
VDEM	-0.525*** (0.090)	-0.393*** (0.094)	-0.613*** (0.106)
GDP	0.001** (0.001)	0.001*** (0.001)	0.001* (0.001)
Women's Political Empowerment Index	-0.017** (0.108)	-0.087 (0.113)	0.030 (0.217)
Observations	365749	365749	365749

Standard errors in parentheses

Two tailed significance tests

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ 

experienced one or more disasters in a country-year and compared it with a subsample of countries that experienced no disasters in a given year.<sup>13</sup> I tested these samples' overall, institutional, and organizational trust. As Table 4 indicates, there is a significant change in women's overall, institutional, and organizational trust for the disaster-prone subsample. The estimated parameter for *female* on trust is statistically significant for all three types of trust (Models 8, 11, and 14) in the subsample of countries that have non-zero values for the percentage of people affected by disasters. Therefore, in countries that had a



**Figure 5.**

percentage of the population affected by natural disasters greater than zero, women’s trust in all government entities decreases. We see similar effects for the count measure of disasters (Models 7 and 10), with negative and statistically significant parameters for women in the overall institutional trust models where the number of natural disasters present was greater than zero. We do not see this pattern in organizational trust.

Finally, looking at Model 15, in which there are no disasters present, women have significantly higher levels of organizational trust than men and similar levels of overall and institutional trust as men (Models 9 and 12). These results provide support for my theory and demonstrate that women’s overall, institutional, and organizational trust decline when disasters are present. This shows that outside the context of disasters, women are similarly or more trusting of the government than their male counterparts. Thus, there is something unique about gendered experiences during disasters that influence women’s trust levels. This is also demonstrated in Figure 6. The coefficient plot<sup>14</sup> demonstrates the variation among the subsamples when disasters are and are not present.

These findings provide evidence for the presence of natural disasters having a negative impact on women’s trust, and it is consistent with my theory that disasters have gendered effects on political trust. Countries that experience disasters with some percentage of the population being affected have a decrease in women’s trust across all forms of government, and often those that experience any volume of disasters have negative women’s overall and institutional trust.

**Table 4.** Disasters Impact on Trust

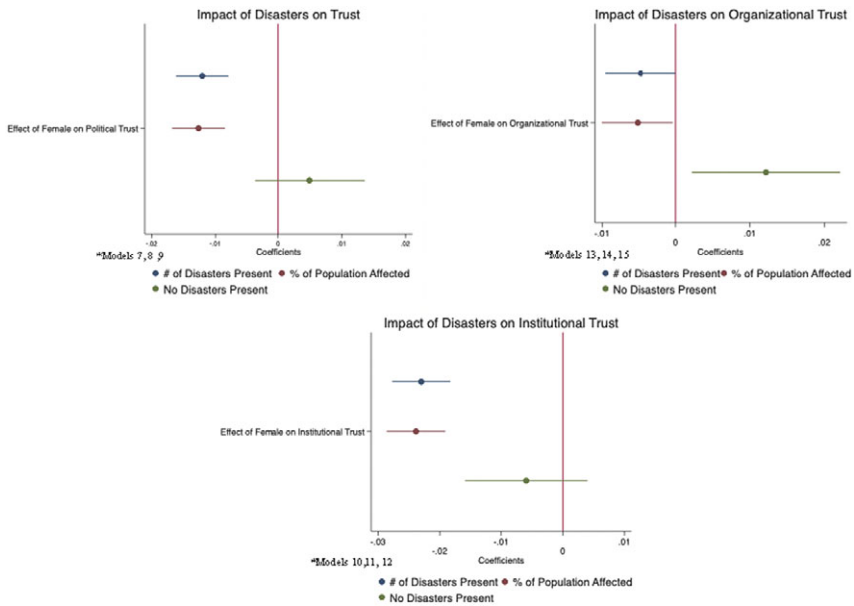
	Overall Trust			Institutional Trust			Organizational Trust		
	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12	Model 13	Model 14	Model 15
	Disasters Present	% Of Population Affected	No Disasters Present	Disasters Present	% Of Population Affected	No Disasters Present	Disasters Present	% Of Population Affected	No Disasters Present
Female	– 0.012***	–0.013***	0.005	– 0.023***	–0.024***	–0.006	–0.005	–0.005*	0.012*
	(0.002)	(0.002)	(0.004)	(0.002)	(0.002)	(0.005)	(0.002)	(0.002)	(0.005)
Married	0.013***	0.013***	0.012*	0.019***	0.019***	0.012*	0.009**	0.010**	0.013*
	(0.003)	(0.003)	(0.005)	(0.003)	(0.003)	(0.006)	(0.003)	(0.003)	(0.006)
Has Children	0.037***	0.036***	0.032***	0.044***	0.044***	0.034***	0.032***	0.031***	0.032***
	(0.003)	(0.003)	(0.006)	(0.003)	(0.003)	(0.007)	(0.003)	(0.003)	(0.007)
Education	– 0.011***	–0.011***	–0.009***	– 0.012***	–0.012***	–0.012***	– 0.011***	–0.011***	–0.008***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Employed	– 0.034***	–0.034***	–0.053***	– 0.036***	–0.037***	–0.051***	– 0.033***	–0.032***	–0.054***
	(0.002)	(0.002)	(0.005)	(0.003)	(0.003)	(0.005)	(0.003)	(0.003)	(0.005)
Income Level	0.003***	0.003***	0.008***	0.003***	0.003***	0.006***	0.004***	0.004***	0.009***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)

(Continued)

Table 4. Continued

	Overall Trust			Institutional Trust			Organizational Trust		
	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12	Model 13	Model 14	Model 15
	Disasters Present	% Of Population Affected	No Disasters Present	Disasters Present	% Of Population Affected	No Disasters Present	Disasters Present	% Of Population Affected	No Disasters Present
VDEM	– 0.553***	–0.585***	–0.384*	– 0.355***	–0.388***	–0.432*	– 0.685***	–0.716***	–0.351
	(0.096)	(0.103)	(0.183)	(0.102)	(0.106)	(0.199)	(0.114)	(0.123)	(0.203)
GDP	–0.001	0.001**	0.001	0.001	0.001***	–0.001	–0.001	0.001*	0.001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Women's Political Empowerment	–0.011	–0.046	0.014	–0.087	–0.103	–0.059	0.041	–0.009	0.063
	(0.119)	(0.124)	(0.216)	(0.126)	(0.128)	(0.235)	(0.141)	(0.148)	(0.240)
Observations	296931	292238	73575	296931	292238	73575	296931	292238	73575

Standard errors in parentheses  
 Two tailed significance tests  
 \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$



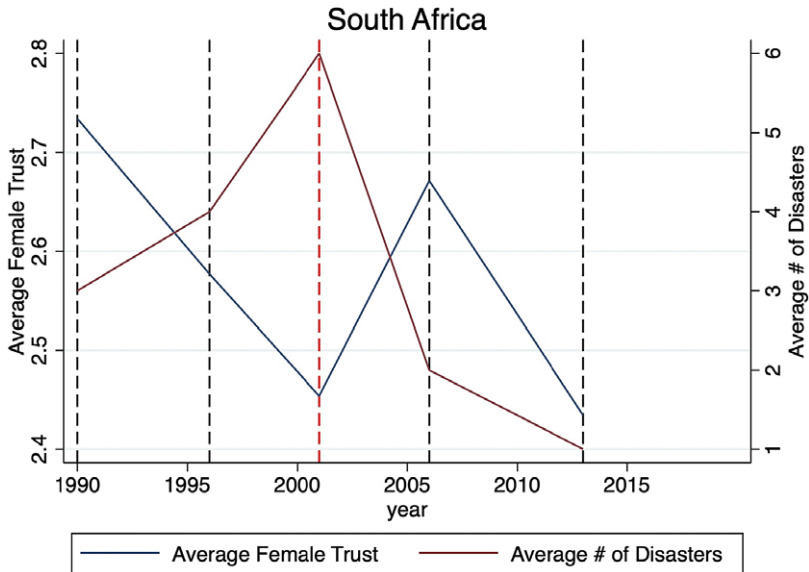
**Figure 6.**

Disasters impact women more negatively than men and when combined with poor government response, women lose faith in their country's political institutions to provide them with the help they need to recover.

Next, I provide additional context for my findings using the case of South Africa.<sup>15</sup> As demonstrated in Figure 7, women's average trust decreases with the increase in the number of disasters within a country. The dotted black line represents the panels the WVS was administered, while the red dotted line shows when many disasters occurred. In South Africa from 1990 to 1999, natural disasters continued to increase and reached an apex of six disasters in 2001. Women's average trust from 1990 to 1999 continues to decrease with the increase in disasters and then shows a sharp decline in 2000 in the presence of six disasters. This demonstrates that women's trust does change over time with the interaction of natural disasters, supporting my theory.

## Discussion

I have demonstrated that natural disasters create unique and vulnerable situations for women that cause their trust in government to decline. When disasters are present, there becomes a gendered vulnerability, and without proper policy and implementation from governments, which Horton (2012) argues does not typically exist, women will suffer. This influences their trust in government entities. I have found support for my three hypotheses and the overall understanding that when disasters are present, women's trust in government declines.



**Figure 7.**

I tested my theory in three ways. The first, represented in Table 2, captures the frequency of disasters. I examined the frequency of disasters within the state and found that as the frequency increases, women's trust (overall, institutional, organizational) declines. I then tested the severity of the disasters, shown in Table 3, and found that as the percentage of the population affected by disasters increases, women's trust (overall, institutional, and organizational) declines as well. Finally, I created a subsample, seen in Table 4, showing a clear side-by-side comparison of states that experience disasters (looking at both severity and frequency) and those that do not. Again, I found support for my hypotheses that when disasters are present, women's trust decreases (overall, institutional, organizational), in contrast to when there are no disasters present, which shows women's trust does not change or even increases in some instances. In each of my measurements, I found continuous support that overall women's trust in government declines when natural disasters occur, even when compared with their male counterparts.

These findings contribute to the current literature and debate on gendered differences in trust. My findings support the argument that women's experiences inform their trust in government entities, but also that women do not have inherently different political trust levels than men overall. This research aids in the discussion of gender vulnerability and the importance of creating women-specific policies when forming disaster relief plans. When governments do not respond with gendered responses and policies to specifically combat women's issues, women will become less trusting.



Across all models, women have negative overall and institutional trust. This goes against Newton, Stolle, and Zmerli (2018) and Rothstein and Stolle (2008), who argued that people are often more trusting of their institutions than of organizations. They argued that organizations should have less trust because of the partisan structure of those specific government entities. In certain models, women's trust increases significantly for organizational government and again, this goes against Newton, Stolle, and Zmerli (2018), who state that this is where trust is more likely to change negatively. I argue that this can be explained by my third hypothesis, that women who interact with institutional entities (police, armed forces, etc.) have negative experiences. This was demonstrated after the 2010 earthquake in Haiti, where Horton (2012) argues that the failure of the Haitian police to provide adequate security in camps created an increase in rape and domestic violence. When government institutions fail women specifically and allow for an increase in gendered violence and insecurity, women will be less trusting of them. This is imperative to the study of political trust because it shows that research should disaggregate trust from an overall factor and explore how citizens interact with each facet of government institutions. It also challenges what we know about organizational and institutional trust as it pertains to gender and opens up the possibility that if previous studies had explored these two separately while looking at gender, they may have found different results. These findings also mean that government institutions matter, and they are a topic that should continue to be looked at under different circumstances, whether it be disasters, conflict, protests, and so on, to see how people feel about the institutions that guide them.

The results of this article also contribute to the idea that responses from governments are not created equal. The way that governments tackle disasters is gendered and benefits the male-identifying people within a state. These responses do not consider women's experiences during disaster or work to make specific accommodations for women that may experience violence or other atrocities in the wake of the disaster. This has policy implications for how governments as well as outside organizations should address and plan to help women in postdisaster situations. Recognizing the unique experiences of women should be implemented into how governments consider how they will respond to natural disasters, and it should be an important aspect of recovery efforts within the country.

Overall, the results demonstrate that women have negative trust in government after disasters. These results go against the common political trust theory regarding institutional and organizational trust and demonstrate that women's trust should be examined more deeply as it relates to different types of government entities when experiences are blatantly gendered. Women's experiences in society are almost always unequal, but when women have specific needs and are put at higher risk of death, economic loss, sexual violence, and other inequalities, there should be policies to focus specifically on these essentials. If women do not get the necessary help, they will have decreased confidence in the government.

## Conclusion

This study has shown that women are less trusting of governments than men after natural disasters occur. These findings support the idea that women's experiences during natural disasters create different levels of trust in government after a disaster than males. This is due to the blanket responses given during disasters that benefit men's needs but do not address women's specific needs, such as gendered sexual violence, domestic violence, responsibilities at home, economic risks, and reproductive health. I argue that women's political support should be explored on its own because of the differences in lived experiences of men and women in the state and because of the links between natural disasters and political trust. It is important to highlight these differences and emphasize that the discussion of women's vulnerability within states needs to change (Arora-Jonsson 2011).

Theoretically, this article contributes to the discussion around women's experiences in disaster being an important topic that can influence other factors within the state including, but not limited to, political trust. Women's experiences are unique and are often left out of the discussion of postdisaster reconstruction of a state, but without a specific focus on women's needs, they will continue to suffer at the greatest expense. This article also contributes to our understanding of differences in male and female trust. Although men and women are similar when there are no disasters present, they do change when there is a climate shock that may elicit a blanket response that benefits men. This finding should be used to explore other issues that involve gendered government responses, including aid distribution in civil wars and pandemic responses. Empirically this article contributed to the disaster and trust literature by demonstrating that women's experiences after natural disasters may be a factor to consider when looking at natural disasters' effects on political trust.

Future research on this topic should find a way to look at individual regions or impacts of natural disasters on women. My analysis uses disaster data aggregated to the country level. Regional variations should be added to this research so as not to assume that every person in the country equally experienced a natural disaster. This could be examined by analyzing geocoded data for both disasters and survey respondents. It would also be advantageous to explore different kinds of disasters as they pertain to political trust. Rapid-onset and slow-onset disasters may have differential effects on political trust given that governments have ample time to prepare for slow-onset events, such as droughts or desertification. Rapid-onset disasters such as earthquakes and typhoons act as sudden shocks and test the government's ability and willingness to assist disaster-affected populations. Future research should also explore where this trust goes. If women lose trust in their government, does this trust move on to NGOs or outside organizations that may be working to fill the government's place during disasters? Does this influence the success of such outside organizations in providing postdisaster aid?

Methodologically, future research could employ a greater methodological diversity to measure trust, rather than using an index created from averages, as I have done in this project. Future research should also explore how women's trust changes in response to disasters in developed and developing states. There

should be a breakdown showing what it is as an aggregate relationship, but then an examination of the fluctuation in political trust across different levels of state development. This could show if different levels of development have an impact on government response to disasters, and therefore varying outcomes on women's experiences and needs being met. This research would also build upon work by Omelicheva (2011) that suggests that current situations in countries have an impact on how natural disasters will affect political instability.

Understanding women's trust in their government is imperative to the journey to strengthen it. Women clearly have negative confidence in their government and do not trust them to be accountable for their livelihood. With this distrust, they will continue to perish and experience negative effects of natural disasters at higher rates than their male counterparts. Natural disasters are deadly for women, and without proper discussion with women and their political institutions, policy and change cannot be implemented to save those lives. This research could lend to the overall narrative of women's political trust and aid one of the most vulnerable populations across the world.

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**Supplementary Materials.** To view supplementary material for this article, please visit <http://doi.org/10.1017/S1743923X22000289>.

## Notes

1. Although Rothstein and Stolle (2008) and Newton, Stolle, and Zmerli (2018) mostly discuss democratic countries in their work, I argue that this can be applied to nondemocratic countries as well. Government performance is still imperative in authoritarian regimes to maintain the public's political trust (Zhai 2019), with economic and political performance influencing citizens' trust in their governments (Mishler and Rose 2001). Support for political trust in authoritarian regimes can be found in China (Zhai 2019), the Philippines (Pernia 2021), and European postcommunist countries (Mishler and Rose 2001). Therefore, I expand the discussion of types of political trust to authoritarian regimes, as past research has demonstrated its importance to these countries' government performance.
2. The Intergovernmental Panel on Climate Change's 2021 report details these connections between disasters and climate change: [https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC\\_AR6\\_WGI\\_SPM.pdf?fbclid=IwAR1dB8nvsK-9ZjyLMFFg9zp8p73Z8imVq6Lwjn9j6yIQFo5dEJfwe1QoCkY](https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM.pdf?fbclid=IwAR1dB8nvsK-9ZjyLMFFg9zp8p73Z8imVq6Lwjn9j6yIQFo5dEJfwe1QoCkY) (accessed August 18, 2022).
3. There is a counterargument in the literature that natural disasters may cause a "rally around the flag" effect, and when disasters strike, regardless of government response, citizens will respond with support and unify around the threat. However, Lee et al. (2022) find that leaders have incentives to divert the public's attention away from poor disaster response by adopting more aggressive foreign policy. This demonstrates that governments create other areas for citizens to focus on instead of disaster, and they do not "rally" around the disaster that is happening.
4. I chose to reverse the scale, which WVS has as 1 representing a great deal of trust and 4 representing none. I did so to reflect a more intuitive relationship of an increasing value indicating an increasing trust level.
5. I acknowledge that gender and sexuality are not synonyms and should not be used as such. I am using the female data that WVS has available to operationalize gender.
6. Natural disasters are described by Guha-Sapir et al. (2021) as geophysical, meteorological, hydrological, climatological, biological, and extraterrestrial disasters. Examples of these include, but are not limited to, earthquakes, volcanic activity, mass movements, storms, extreme

temperature, fog, floods, landslides, wave action, drought, glacial lake outbursts, wildfire, epidemic, insect infestation, animal accident, impact, and space weather.

7. Running the models without imputed variables does not change the results.

8. The coefficient plot for men's trust can be found in Figure 8 in the appendix.

9. There are substantive differences between male and female trust; the marginal effects plots for men's trust can be found in Figure 9 in the appendix.

10. Margins plots with a histogram of observations can be found in Figure 10 in the appendix.

11. Even when disasters are put into categorical levels severity, by number of disasters, women's negative trust still holds. The results of women's institutional trust at different categorical levels of disaster severity can be found in Figure 11 in the appendix.

12. Margins plots with a histogram of observations can be found in Figure 12 in the appendix.

13. Countries that experienced one or more disasters in a country year in Table 4 include Albania, Algeria, Argentina, Armenia, Australia, Azerbaijan, Bangladesh, Belarus, Bolivia, Bosnia and Herzegovina, Brazil, Bulgaria, Burkina Faso, Burma/Myanmar, Canada, Chile, China, Colombia, Croatia, Cyprus, Czech Republic, Ecuador, Egypt, El Salvador, Estonia, Ethiopia, Finland, France, Georgia, Germany, Ghana, Greece, Guatemala, Haiti, Hungary, India, Indonesia, Iran, Iraq, Israel, Italy, Japan, Jordan, Kazakhstan, Kuwait, Kyrgyzstan, Latvia, Lebanon, Libya, Lithuania, Malaysia, Mali, Mexico, Moldova, Montenegro, Morocco, Netherlands, New Zealand, Nicaragua, Nigeria, North Macedonia, Norway, Pakistan, Peru, Philippines, Poland, Portugal, Qatar, Romania, Russia, Rwanda, Saudi Arabia, Singapore, Slovakia, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, Taiwan, Tajikistan, Tanzania, Thailand, Trinidad and Tobago, Tunisia, Turkey, Uganda, Ukraine, United Kingdom, United States, Uruguay, Uzbekistan, Venezuela, Vietnam, Yemen, Zambia, and Zimbabwe.

Countries that had zero disasters in a country year in Table 4 include Armenia, Azerbaijan, Belarus, Bolivia, Bosnia and Herzegovina, Chile, Cyprus, Ecuador, Egypt, Estonia, Finland, Georgia, Guatemala, Hungary, Israel, Jordan, Kuwait, Kyrgyzstan, Latvia, Lebanon, Libya, Lithuania, Malaysia, Moldova, Montenegro, Morocco, Nigeria, North Macedonia, Norway, Poland, Portugal, Qatar, Russia, Singapore, Slovenia, Sweden, Switzerland, Thailand, Trinidad and Tobago, Tunisia, Ukraine, Uruguay, Yemen, and Zimbabwe.

Countries that experienced greater than 0% of the population affected by disasters in a country year in Table 4 include Albania, Algeria, Argentina, Armenia, Australia, Azerbaijan, Bangladesh, Belarus, Bolivia, Bosnia and Herzegovina, Brazil, Bulgaria, Burkina Faso, Burma/Myanmar, Canada, Chile, China, Colombia, Croatia, Cyprus, Czech Republic, Ecuador, Egypt, El Salvador, Estonia, Ethiopia, Finland, France, Georgia, Germany, Ghana, Greece, Guatemala, Haiti, Hungary, India, Indonesia, Iran, Iraq, Israel, Italy, Japan, Jordan, Kazakhstan, Kuwait, Kyrgyzstan, Latvia, Lebanon, Libya, Lithuania, Malaysia, Mali, Mexico, Moldova, Montenegro, Morocco, Netherlands, New Zealand, Nicaragua, Nigeria, North Macedonia, Norway, Pakistan, Peru, Philippines, Poland, Portugal, Qatar, Romania, Russia, Rwanda, Saudi Arabia, Singapore, Slovakia, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, Taiwan, Tajikistan, Tanzania, Thailand, Trinidad and Tobago, Tunisia, Turkey, Uganda, Ukraine, United Kingdom, United States of America, Uruguay, Uzbekistan, Venezuela, Vietnam, Yemen, Zambia, and Zimbabwe.

14. Figure 13 in the appendix provides further context of female in comparison to other significant variables by providing a coefficient plot of all significant variables in the model.

15. I selected South Africa as a case because it was the most prevalent case across the waves of the WVS and would give the most variation.

16. I conducted a t-test to see if male and female trust are significantly different across each category. They are not significantly different for organizational and overall trust, but they are significantly different for institutional trust. However, there is no substantive difference between male and female respondents.

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