



## Article

# Navigating Emergencies: A Theoretical Model of Civic Engagement and Wellbeing during Emergencies

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**Abstract:** The intensity and impact of emergencies on communities and societies are on the rise. They call for better preparedness, responses, and coping strategies by all those who are involved, especially citizens and the government. This paper introduces the concept of emergency-oriented civic engagement (EOCE), which includes citizens' attitudes and behaviors aimed at influencing the community and government during emergencies. A theoretical framework and model that explore these complex relationships are presented. The paper first explains the differences between emergency-oriented civic engagement and civic engagement during peaceful times. Next, an exploration of a set of variables such as interpersonal trust, feelings of threat, the cost-benefit ratio, and trust in government that may influence emergency-oriented civic engagement is introduced. Finally, the model is illustrated in light of the COVID-19 pandemic that underscored the importance of solidarity and wellbeing among citizens during emergencies.

**Keywords:** civic engagement; emergency engagement; risk; COVID-19; wellbeing; collective action; resilience; trust



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## 1. Introduction

Communities are increasingly recognized as key partners for emergency preparedness and response [1]. They include not only at-risk groups but also other stakeholders who are linked to these populations and who may be able to support their wellbeing during turbulent times [2]. One such event is the COVID-19 pandemic that placed an unprecedented strain on many societies [3,4]. Worldwide efforts to mitigate the spread of the pandemic, while managing its social and economic impacts, illustrated the critical role of the engagement between citizens and the state in shaping responses, policies, and approaches to dealing with the pandemic.

Although there have been instances of swift and effective government responses, the COVID-19 pandemic exposed major deficiencies in the resilience and wellbeing of countries, particularly in the relationship between the state and its citizens. This unprecedented strain also underscored the significance of civic engagement during such large-scale emergencies [5]. Consequently, identifying the drivers of citizens' engagement such as perceptions about threats and political ideology has become crucial in maintaining society's wellbeing during emergencies [4].

To address and alleviate the consequences of such events effectively, governments must understand the public's anticipated response to emergencies [6]. One potential course of action entails actively engaging in endeavors aimed at aiding others or endorsing government policies. Studies note that civil society is crucial in maintaining social cohesion and providing channels for grassroots civic and political engagement during emergencies [7]. Furthermore, the New Public Governance (NPG) approach suggests that a more flexible, inclusive, and adaptive approach to public management is crucial for social cohesion and

citizen wellbeing [8]. Hence, the effective handling of emergencies encompasses not only the implementation of authoritative policies and top-down policies but also the cultivation of genuine civic involvement. These efforts help safeguard communities and improve their resilience in turbulent times [9].

While the COVID-19 pandemic is only one of many crises, disasters, and emergencies that the world has experienced in recent decades, it also brought a new set of dilemmas to the fore [3–5,7]. The pandemic required policymakers to swiftly adopt efficacious measures to contain the infection. In doing so, it raised several major questions: What is the level of risk that societies can live with? Are there more efficient ways to handle emergencies? Can or should the government empower civic initiatives to handle emergencies? And most importantly, how does citizens' engagement in such times evolve and contribute to society's overall wellbeing during emergencies? Connecting civic engagement to wellbeing is crucial because it contributes significantly to various dimensions of wellbeing, encompassing physical, emotional, social, and psychological aspects. The multifaceted nature of the COVID-19 pandemic provides an opportunity to investigate these questions.

These issues are explored by using a bottom-up perspective and shifting the focus from governmental initiatives to civic engagement at the grassroots. We propose a new concept of emergency-oriented civic engagement (EOCE) and identify its potential antecedents. While civic engagement is one of the more studied topics in political science and public administration, it usually deals with citizens' attitudes or behaviors designed to affect the functioning and stability of communities and governments [10]. It has also been identified as a promoter of improved wellbeing [11,12]. Our main argument is that EOCE is manifested in mutual help, the active support of others, and the overall desire to safeguard communities and societies during emergencies and through their recovery.

In the next chapters, a theoretical model that may help us understand EOCE using interdisciplinary knowledge in public administration and management, political economy, and social psychology is proposed. Thus, our goals are (1) to expand the theoretical knowledge on civic engagement and behavior during emergencies as a unique concept, (2) suggest specific factors grounded in theory that drive EOCE, and (3) enrich our understanding of the relationship between citizens and the government during emergencies by pointing to new directions for future studies and practical implications resulting from them.

## 2. Theoretical Basis

### 2.1. Civic Engagement: Definition and Meaning

Civic engagement is a pivotal process by which citizens' knowledge, skills, and voice are conveyed and developed [10]. Civic engagement is frequently defined as citizens' connections to their community [13] or as collective or individual actions and attitudes geared toward improving a community's wellbeing [10,11]. It includes civic skills, knowledge, attitudes, behaviors, and goals and refers mainly to issues of public concern [14,15]. It is also associated with better psychological, physical, and behavioral health and wellbeing [16].

The concept of social capital exhibits certain parallels with civic engagement, as Robert Putnam highlighted in his seminal work "Bowling Alone" [17]. Although Putnam did not refer to civic engagement explicitly, he identified a wide array of activities that contribute to the formation of social capital. Moreover, Putnam contended that social capital encompasses psychological and sociological factors that exert an influence on political functioning [18].

Other scholars have explored the impact of community attributes on the extent of civic engagement, as well as the impact of community initiatives, volunteer work, and other activities that foster collaboration among citizens and strengthen governance [19,20]. At its core, NPG signifies a paradigmatic shift toward more collaborative, decentralized, and participatory governance models [8], wherein the fusion of diverse stakeholders, including government agencies, non-profit organizations, private entities, and engaged citizens, engenders a collective approach to addressing multifaceted challenges [21]. Moreover,

the experience of participating in community projects, volunteering, and engaging in other membership activities reinforces norms of obligation and cooperation, encouraging engagement in community life [22].

Our study adopts Checkoway and Aldana's [10] definition of civic engagement as collective or individual citizen actions and attitudes geared toward improving a community's wellbeing. This definition includes a deeper level of commitment and active involvement in addressing societal issues, good citizenship behavior, advocating for social change, and promoting the common good and the wellbeing of communities.

## 2.2. Civic Engagement in Turbulent Times

Most studies focus on civic engagement in ordinary times and overlook its emergence, evolution, and change in turbulent times. While studies agree that civic engagement includes components similar to collective action and highlight how civic engagement during emergencies helps communities cope with local threats [5,23], knowledge in this field is still scarce. Furthermore, there is no specific reference to its involvement in dealing with emergencies. During emergencies, individuals' active engagement in civic activities, such as volunteering, community collaboration, and cooperation with government entities, takes on heightened significance. In this study, emergency-oriented civic engagement is defined as individuals' purposeful actions and efforts to enhance emergency response and preparedness. This form of engagement can be defined as a mechanism for recognizing emergency situations, evaluating their related risks, and fostering interaction, involvement, and communication among community members. Such engagement not only fosters a sense of empowerment and ownership in the collective response to the emergency but also has positive effects on individuals' mental, emotional, and physical states [24] and improves both resilience and wellbeing in turbulent times. EOCE has the potential to enhance physical and mental wellbeing by contributing to safety and security. For example, EOCE initiatives often involve public health awareness campaigns that educate community members about preventive measures and safety protocols. Throughout the COVID-19 pandemic, community organizations cooperating with local governments engaged in information campaigns to educate citizens about the importance of mask-wearing and handwashing. These initiatives helped reduce the spread of the virus and contributed to the physical wellbeing of the population.

Understanding emergency-oriented civic engagement within the context of NPG is imperative for several reasons. Firstly, emergencies necessitate swift and well-informed decision making, often in contexts of uncertainty and complexity [8,25]. Civic engagement facilitates the rapid dissemination of information, enables real-time feedback loops, and engenders a sense of shared responsibility among citizens and stakeholders, thus enhancing the agility and responsiveness of governance structures. Secondly, it fosters a sense of community resilience and solidarity, galvanizing citizens to proactively contribute to emergency preparedness, response, and recovery efforts [25]. Thirdly, by incorporating citizen perspectives and local knowledge, emergency-oriented civic engagement promotes policies and interventions that are attuned to the specific needs, vulnerabilities, and capacities of affected communities, thereby enhancing the effectiveness and legitimacy of governance responses. In this symbiotic relationship, NPG provides the structural framework for collaboration, while civic engagement serves as the lifeblood that vitalizes and enriches emergency governance, ensuring that it remains adaptive, accountable, and aligned with the wellbeing of the citizenry [26].

Therefore, EOCE reflects the means, potential, and needs of citizens in such situations. Such engagement is also very valuable to governments during emergencies [4]. Recent studies have focused on citizens' engagement in several ways. For example, Denny [27] suggested that civic engagement, such as residents taking an interest in local disasters, trust between residents, and a sense of belonging to the community, could help overcome the effects of disasters.

Emergencies are always accompanied by uncertainty, chaos, fear, and anxiety. In response, people may engage more in helping behaviors and develop original and unconventional methods to support their communities. Thus, while in ordinary times people can go about their personal routines, turbulent times call for more solidarity and cooperation, not only between the government and citizens but also between citizens themselves. For example, Hurricane Katrina made landfall in Texas and Louisiana in August 2017, causing catastrophic flooding and 1,392 deaths. Following Katrina, the U.S. government's assistance alone was insufficient for recovery. Therefore, people banded together to cooperate and provide each other with assistance to try to return to normal life independently of government policies [28]. Other examples from the recent COVID-19 pandemic have shown that the need for solidarity with and support for those at risk has increased [12].

As in previous emergencies, civil society is entrusted with the responsibility of providing social support and mobilizing to help those who are otherwise invisible or out of reach to policymakers [5,29]. The involvement of civilian groups and individuals may not only improve social resilience prior to, during, or after emergencies by providing the opportunity to engage with and understand risks but also make the government's expenditure of resources more effective by creating the opportunity for public discussions and encouraging solidarity. From this perspective, civil society assumes a critical role in upholding social cohesion, enhancing wellbeing, and establishing conduits for grassroots civic engagement.

### *2.3. Governance Efficacy and Emergency-Oriented Civic Engagement*

As stated, one goal of this paper is to expand the theoretical knowledge on civic engagement and behavior during emergencies. While EOCE is important to achieve innovative governance, EOCE, as a concept, extends beyond conventional participatory governance models. EOCE not only strengthens social relations and community preparedness but also enhances the capacity of governments to manage crises effectively. While participatory governance focuses primarily on involving citizens in decision-making processes and policy formulation [25,26,30], EOCE encompasses a broader spectrum of activities. EOCE is rooted in the intrinsic motivation of individuals and communities to enhance their collective capacity to respond effectively to emergencies. It goes beyond consultation and deliberation by actively involving citizens in emergency preparedness, response, and recovery efforts. The concept of EOCE is meant to represent a concept that recognizes the potential of citizens as active contributors to the resilience and adaptability of governance systems. EOCE initiatives, such as community-based emergency preparedness, neighborhood watch programs, and volunteer networks, empower citizens to become stakeholders in their own safety and wellbeing. These initiatives create a more dynamic and cooperative relationship between governments and their constituents during emergencies. Thus, the added value of EOCE to governments lies in its ability to augment their capacity to respond to emergencies efficiently and effectively. EOCE initiatives promote local knowledge sharing, foster community self-reliance, and enhance communication networks. This, in turn, allows governments to tap into the collective intelligence of communities, adapt to rapidly changing circumstances, and allocate resources more effectively during emergencies. Moreover, by actively engaging with citizens in emergency-oriented activities, governments foster a sense of ownership and shared objectives, which can lead to more resilient and responsive governance structures.

### *2.4. The Differences between Emergencies, Crises, and Disasters and Study Operationalization*

The terms emergencies, crises, and disasters are distinct concepts with some similarities. Emergencies are defined as unanticipated yet foreseeable occurrences characterized by their restricted scale, recurrent incidence, and the potential to jeopardize individuals, property, or the environment. Examples include house fires, vehicle accidents, and the release of hazardous materials [31]. On the other hand, Boin and Hart defined a crisis as "a threat that is perceived to be existential in one way or another" [32] (p. 84). Crises can

also be defined as abnormal situations that have the potential to create an economic risk. One example is the Deepwater Horizon oil spill in 2010. This environmental catastrophe, caused by the explosion of an offshore drilling rig operated by BP, resulted in one of the largest environmental disasters in U.S. history. The spill not only posed severe ecological threats to marine life and coastal ecosystems but also had substantial economic implications, particularly for the fishing and tourism industries in the Gulf of Mexico region. Crises may also trigger rapid public policy changes because they attract public and media attention and threaten to undermine public trust in governance [32,33]. Disasters are sudden, unforeseen events such as hurricanes, floods, fires, and other natural catastrophes that can trigger rapid public policy changes because they attract public and media attention and threaten to undermine public trust in the government [27,28]. In recent decades, researchers have regarded disasters as a phenomenon that is socially constructed and associated with the vulnerability of those affected by social change. According to Quarantelli [31], disasters force the adoption of unplanned courses of action to adjust to the disruption and pose a danger to valued social objects.

This paper focuses on large-scale emergencies, which are defined as situations involving exceptional efforts to preserve lives, safeguard individuals, mitigate destruction, and reinstate normalcy. For example, the COVID-19 pandemic, a substantial earthquake, or a severe flood all qualify as large-scale emergencies. In the following discourse, we employ the term “emergency” as a reference to such occurrences. This term also encompasses aspects such as public communication, readiness, and coordination.

During the COVID-19 pandemic, governments worldwide sought to control the spread of the virus through mandatory lockdowns and social distancing. In the wake of these measures, people found new ways to engage, offering help to those in need or encouraging others to help “flatten the curve,” often by means of digital platforms and social networking sites. Consequently, various examples of attitudes and initiatives related to EOCE such as providing alerts and warning systems, signing petitions, donating money, or posting information on the Internet to help limit the spread of the disease [4,34].

Other forms of EOCE also emerged. For example, local communities organized volunteer networks to assist vulnerable populations such as the elderly and immunocompromised individuals. Grassroots movements also actively produced and distributed sanitation supplies to healthcare facilities and frontline workers. These initiatives demonstrated society’s collective resilience and commitment to facing the unprecedented challenges of the pandemic [35].

Research in emergency management has shown that grassroots organizations can strengthen social relations and make local communities better prepared to respond to emergencies [36]. Studies have also argued that a lack of civic action increases the damage that such events inflict on people’s lives, property, and mental health [3,37,38]. Considering that EOCE is based on people’s desire to improve the response to such situations, it can be characterized as a mechanism for recognizing these events and their risks and promoting interactions, participation, and communication among people within each community [39].

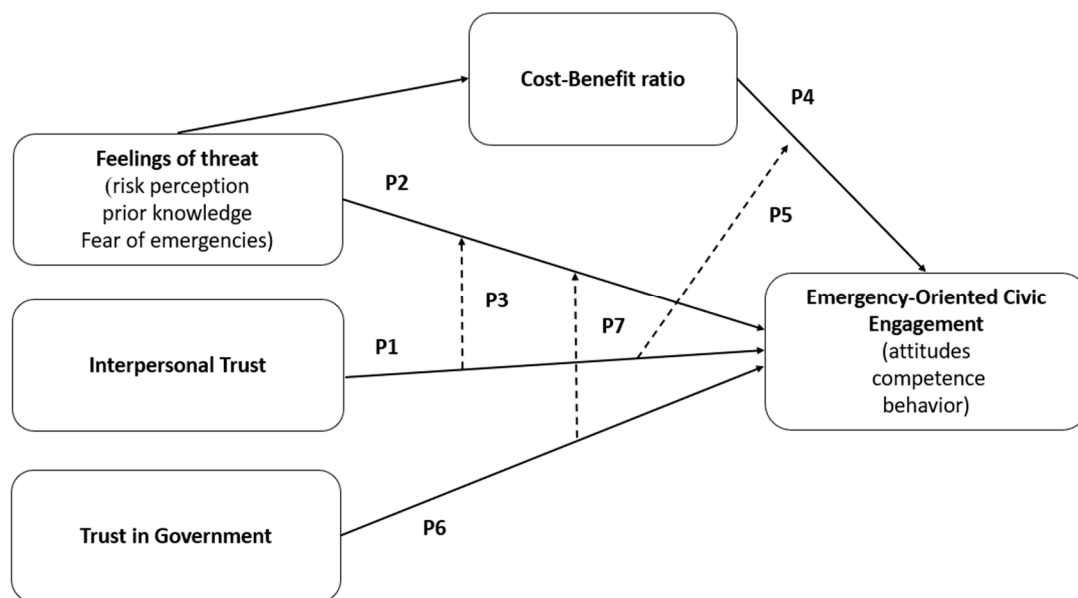
### 3. Materials and Development of Propositions

#### 3.1. EOCE: The Model and Its Rationale

Based on these studies, a model of EOCE is presented. The model refers to EOCE as a subset of civic engagement that focuses on emergency-related activities. Figure 1 illustrates our model.

The dependent variable, EOCE, comprises three dimensions: attitudes toward engagement; competence, meaning the ability to engage; and actual engagement behaviors. Four antecedents are proposed to EOCE: interpersonal trust, feelings of threat, trust in government, and the cost–benefit ratio.





**Figure 1.** The proposed research model.

Civic engagement requires individuals to possess the knowledge, skills, and values essential for making a positive impact. Civic attitudes toward emergencies encapsulate the individual beliefs and emotions pertaining to one's involvement within their community regarding emergencies [40]. Civic competence encompasses the perceptions individuals hold regarding their capacity to effect change within their community in times of emergency [41]. Van Zomeren and Saguy [42] argued that individuals' confidence in their personal competencies fosters civic engagement. They demonstrated that individuals exhibit a greater likelihood of participation when their beliefs about their group efficacy are stronger. Civic behavior refers to actual activities related to emergencies before, during, or after they occur. Instances encompass the initiation or attendance of community forums where individuals can voice their opinions. Feelings of threat indicate the perceptions people have about the risks involved, their level of risk cognition, and their fear of emergencies. The subjective element of feelings of threat is risk perceptions [43] and is often regarded as a factor that mitigates behavior during an emergency [44]. Risk perceptions encompass assessments about the probability that an emergency will occur and perceptions about its possible consequences [45]. Furthermore, risk cognition is the epistemic element of feelings of threat. It includes perceptions about one's knowledge and familiarity with potential emergencies and the degree to which they can be controlled. Finally, fear of emergencies pertains to the emotional instinct concerning a perceived threat. Research has established that it increases people's sense of vulnerability and uncertainty [46].

Next, citizens' trust in government reflects their belief that the authorities are committed to solving their problems and fulfilling their needs [47]. Such beliefs are often a function of these authorities' demonstrable success or failure in ordinary times and much more so during emergencies. Past studies support this observation quite strongly and highlight how poor government performance is associated with greater distrust in government [48,49]. Another important aspect of trust is interpersonal trust, meaning people's confidence in their peers [50]. Those with similar interests, goals, and objectives tend to feel favorably disposed toward others and more trusting of members of their community. The proposed relationships between these factors and EOCE have direct and indirect effects.

### 3.2. The Direct Effect of Interpersonal Trust on EOCE

Interpersonal trust is defined as the willingness to make oneself vulnerable to another person's behavior [51]. Putnam [17] linked trust to the social capital theory and argued that individuals with higher levels of interpersonal trust are more inclined to cooperate

with others. Social trust plays a pivotal role in promoting civic engagement, facilitating cooperation, fostering social harmony, and supporting democratic systems [52,53]. Thus, interpersonal trust serves as the social glue that promotes harmony and collective wellbeing. It is a crucial attribute that societies aim to cultivate for three reasons. First, it allows people to take for granted most of the relationships upon which they depend, reducing complexity while providing a sense of security [54]. Secondly, individuals with a higher level of trust are more inclined to anticipate the participation of others, thereby diminishing perceived risks and uncertainties [55]. Ultimately, trust facilitates the dissemination of information, a fundamental element of mobilization [56].

The question is, in turbulent times, do community members who have higher levels of interpersonal trust become more engaged than others? Are they more motivated to keep their community safe and contribute to the common good? This question is especially timely and relevant, given that the COVID-19 pandemic highlighted the importance of trust among citizens when responding to emergencies. Fell [57] identified interpersonal trust as a vital factor in promoting pro-social behavior. Other evidence comes from grassroots initiatives during the COVID-19 pandemic. One example is the formation of mutual aid networks that were found to improve emotional and psychological wellbeing by promoting a sense of empowerment and control. When citizens actively engage in emergency planning and response, they gain confidence in their ability to cope with emergency situations [23]. This sense of agency and preparedness increases wellbeing by reducing anxiety and stress during emergencies, contributing to emotional and psychological resilience. EOCE initiatives often include training sessions and workshops that empower citizens with practical skills and knowledge to respond to emergencies effectively [22]. For example, community-based CPR and first-aid training programs equip individuals with life-saving skills. When people feel prepared and confident in their ability to assist in emergency situations, it reduces feelings of helplessness and anxiety. Through such grassroots projects, community members came together and relied on trust and cooperation to provide support and assistance to those in need. Such networks emerged in response to governments' inconsistent guidance, policies, and support [49]. More trust promoted effective collaboration, resource mobilization, and the success of grassroots initiatives. This EOCE fostered a sense of solidarity and resilience within the community.

On the other hand, engagement was more fragmented in communities with low levels of interpersonal trust [58]. The lack of interpersonal trust hindered collective action, leading to a reliance on formal institutions and a sense that it was "every man for himself." Engagement tended to be more passive, with individuals primarily following guidelines and directives without actively participating in community-led efforts. The absence of trust limited the opportunities for collaboration, resource sharing, and community resilience.

Therefore, in accordance with the social capital theory, the examples presented above, and past studies, it is argued that interpersonal trust will have a positive and direct impact on EOCE. The first proposition is as follows:

**Proposition 1:** *Interpersonal trust has a direct positive effect on EOCE.*

### 3.3. *The Relationship between Feelings of Threat and EOCE*

The public's perception of emergencies significantly influences civic engagement. Emotional safety, personal investment, and shared community boundaries foster a willingness to participate in civic activities [59]. Feelings of threat can also explain changes in EOCE. The protection motivation theory suggests that a shared sense of risk prompts community members to engage in activities supporting others. Understanding these motivations can help governments improve risk management programs, providing effective emergency responses and better preparedness [60].

The core objective of threat mitigation activities revolves around ensuring people's safety and wellbeing [33]. EOCE strengthens social wellbeing in this sense by fostering a sense of community and social cohesion regarding emergencies. When citizens come

together to engage in emergency-oriented activities, they build social bonds and networks. These connections provide emotional support and a sense of belonging during emergencies, which is vital for social wellbeing. For example, online platforms and social media groups dedicated to emergency information sharing have become vital during the COVID-19 pandemic. Citizens used these platforms to offer help, share resources, and provide emotional support to fellow community members, strengthening social bonds and wellbeing. In policy studies, individual concern for personal safety extends to a heightened caring for community safety through collective action [61]. Collective action refers to efforts aimed at enhancing the status, power, or influence of an entire group, rather than just a few individuals [61]. However, Olson [62] identified one problem of collective action, wherein individuals may benefit from group efforts without actively participating. Such a situation leads to “free riders” who undermine the collective interest. In the context of EOCE, some members may actively contribute to the common good, while others are more passive. Nevertheless, the latter benefit from these activities and become “free riders,” which damages the collective interest.

As mentioned earlier, feelings of threat comprise three factors. The first is risk perceptions, which have proven to be a good predictor of civilians’ attitudes and actions in emergencies [63]. However, people are poorly equipped to assess the risks of large-scale emergencies and have difficulty evaluating the probabilities of the actual potential risks arising from these emergencies [64]. In accordance with the protection motivation theory, risk perceptions prompt people to engage in actions that reduce the potential damage caused by an emergency [65]. Grothmann and Reusswing [66] demonstrated that risk perceptions (measured by people’s level of fear, sense of threat, and their severity) have a positive effect on their motivation to try to protect themselves from floods. The recent COVID-19 pandemic showed how individuals’ beliefs about their likelihood of contracting and transmitting COVID-19 could determine how willing they were to change their behavior. In addition, perceptions about the personal risk of COVID-19 may affect compliance and engagement [67]. These findings highlight the significance of individual protective efficacy and self-efficacy during emergencies.

Risk cognition, as a second influential factor in feelings of threat, pertains to individuals’ prior knowledge about the emergency and its associated dangers. Previous studies have highlighted the significance of this factor in explaining emergency preparedness behavior and community resilience [68]. However, the outbreak of COVID-19 made obtaining accurate information difficult. Particularly during the early stages of the pandemic, individuals faced challenges in accessing definitive statistics, primarily due to the novelty of the disease. This situation contrasts with access to information about more common diseases such as influenza, about which there are readily available and reliable statistics.

However, it remains unclear how these factors may be linked with EOCE. One explanation is that such prior knowledge may be translated into information-seeking behavior. A higher level of knowledge about an emergency may potentially enhance individuals’ willingness to engage in actions designed to mitigate the negative effects of the emergency. According to Wang et al. [69], there was a positive association between people’s exposure to information about the risks posed by COVID-19 and engagement in preventive behaviors. Furthermore, Lanciano et al. [70] found that citizens who considered themselves well-informed regarding COVID-19 actively engaged in news seeking and felt in control and capable of dealing with the emergency. Similarly, people who intend to prepare and see themselves as having sufficient information about an emergency are more likely to prepare for it [71]. Our model suggests that people with a high level of risk cognition are more likely to demonstrate a higher level of EOCE. Hence, the choice to engage or remain passive during emergencies is apt to differ depending on the prior knowledge people have about the risks of the situation.

The third factor influencing feelings of threat is the fear of emergencies, defined as the recognition of impending danger and the consequent emotions of pain or uneasiness [72]. Unlike abstract and knowledge-based risk evaluations, fear is more immediate and context-



related. However, in non-immediate and non-life-threatening situations, people often exhibit rational behavior [44]. The risk-as-feelings hypothesis emphasizes the impact of emotions during decision making [73]. Fear of the unknown or uncertainty can profoundly hinder individuals' responses to emergencies, potentially preventing them from taking action. Conversely, perceived threats can also act as a source of motivation, prompting people to take action [72]. Together, these lines of research suggest that perceived threats are likely to affect EOCE. Based on the rationale suggested so far, our second proposition states the following:

**Proposition 2:** *Feelings of threat have a direct positive relationship with EOCE.*

Earlier, we suggested that interpersonal trust is a meaningful factor motivating EOCE. In accordance with prior research [74] and drawing on the protection motivation theory, we maintain that individuals are more inclined to engage civically when they regard an emergency as severe and believe that their actions can effectively mitigate its impact. Nevertheless, many may be tempted to remain passive and free-ride on the efforts of others. For example, Earle [75] claimed that people are more likely to accept information about potential risks and translate it into action if it comes from trusted communicators. Therefore, the next proposition is as follows:

**Proposition 3:** *Interpersonal trust moderates the relationship between feelings of threat (risk perceptions, risk cognition, and fear of emergencies) and EOCE.*

### 3.4. Cost–Benefit Ratio as a Mediator between Feelings of Threat and EOCE

Studies have found that cost–benefit analyses are integral to human behavior. People's decisions about becoming engaged during emergencies generally involve a cost–benefit assessment of the tradeoffs [76]. According to the rational choice model, people seek to maximize their benefits and minimize their costs [77]. Therefore, incentives to participate in communal projects or initiatives at any time, and especially during emergencies, must include the promise of future returns.

These expectations are also based on the social exchange theory. Homans' [78] original proposition suggests that social exchanges are based on cost–benefit analyses and the comparison of alternatives. Thus, cost–benefit considerations are logically related to citizens' civic engagement. During emergencies, such considerations also include emotions such as feelings of threat and insecurity. Bazzi, Fiszbein, and Gebresilasse [79] showed that collective action against COVID-19 in the United States was hampered by its culture of "individualism". They concluded that individualism weakened the collective response to public health risks, including a lack of civic duty.

As stated above, we believe that the choice to engage or free-ride on the efforts of others includes elements of collective action problems and social exchange considerations. However, in the context of EOCE, the costs and benefits are difficult to determine. Given the public's assumption that it is the government's responsibility to provide safety during emergencies, decisions about whether to engage or remain passive become more complex. Studies have indicated that the capacity to care about other people in society and concern for social causes that may benefit fellow citizens in society correlate with finding meaning in adversity and people's mental wellbeing, both before and during the COVID-19 pandemic [38].

To resolve this difficulty, we suggest using explanations from game theory and public choice theory regarding how people behave as rational players when required to overcome the urge to be selfish. In particular, citizens may increase their sense of civic duty, which is a sense or cognition that an action is beneficial to others. Thus, they may regard such actions as obligatory even though they might prove costly to those engaging in them. However, an empirical examination of this proposed rationale is beyond the scope of this paper. Therefore, our fourth proposition posits that the cost–benefit ratio mediates the relationship

between feelings of threat and EOCE. When feelings of threat are greater, people will perceive a higher cost–benefit ratio that leads them to believe that the benefits of EOCE in terms of their attitudes, competence, and behavior outweigh the costs. Formally, our next proposition is as follows:

**Proposition 4:** *The cost–benefit ratio mediates the relationship between feelings of threat and emergency-oriented civic engagement.*

Interpersonal trust may influence future engagement rates. Trust plays a critical role in social interactions [53] and decision making, particularly in social dilemmas concerning the common good, where individuals must decide on contributions to maintain or enhance collective benefits such as clean air and water, public transportation, schools, or healthcare. Refusal to cooperate due to a lack of trust results in worse outcomes than if everyone had cooperated [80].

During the COVID-19 pandemic, a dearth of interpersonal trust might have led to an increase in unvaccinated individuals who disregarded preventative measures and displayed low levels of engagement [81]. People assess the information they possess about a specific risk to determine the profitability of acting on it in the long run. Scholars propose that trust in others fosters engagement by instilling a sense of security during political activities [17]. Consequently, those with higher trust levels are more likely to anticipate others' engagement, recognizing the significance of reducing perceived risks and uncertainty. Therefore, it is asserted that high levels of interpersonal trust will empower the relationship between the cost–benefit ratio and EOCE because high levels of interpersonal trust emphasize collective benefits and a sense of security. Thus, we propose the following:

**Proposition 5:** *Interpersonal trust moderates the relationship between the cost–benefit ratio and EOCE.*

### 3.5. The Direct and Moderating Effect of Trust in Government on EOCE

Studies have documented the relationship between trust in government and the willingness to become engaged [82]. Nonetheless, the precise nature of this relationship remains somewhat ambiguous. Political trust or trust in government is presumably based on citizens' assessments of the performance of political institutions and officials. The theory of street-level bureaucracy may be meaningful in understanding citizens' behaviors [83] as people make judgments based on the extent to which they feel that the government has produced or can produce desired outcomes [48]. Studies have highlighted the important role of street-level bureaucrats in policy processes and their influence on citizens' lives as they are in direct contact with customers (citizens) [84]. Previous studies have demonstrated that higher levels of trust in government are associated with spontaneous behavior and a greater willingness to follow a range of government recommendations and pro-social behaviors during emergencies, such as getting vaccinated against seasonal influenza [85].

Yet, other studies suggest a reverse relationship where trust in government (in general and during emergencies) may be negatively related to civic engagement. This expectation is based on the comfortable chair idea [86], according to which those who trust the government rely on it to handle crises rather than becoming involved themselves. They feel comfortable and satisfied with the existing policies and believe that their personal engagement is not needed [87].

Arguably, those who trust the government are also more likely to exhibit openness and receptivity to the government's decisions concerning emergency situations. Therefore, they may feel less urgency to become actively engaged and leave decisions to the formal authorities [88]. Support for this contention comes from the self-determination theory. This theory examines the motivations behind human behavior and the factors that influence an individual's decision to engage in a particular activity [89]. Accordingly, we propose the following:

**Proposition 6:** *Trust in government is directly and negatively related to EOCE.*

Note, however, that the negative relationship between trust and EOCE posited in the sixth proposition might also work in the opposite direction. Trust in government can bolster individuals' perceptions of the government's capability to handle emergencies effectively. When citizens believe that their government is competent in managing emergencies, they may be more willing to engage in civic initiatives, as they regard their contributions as meaningful and impactful.

Finally, it is also suggested that trust in government moderates the relationship between feelings of threat and EOCE. This idea is based on public administration research highlighting the value of trust in encouraging participation and commitment [47]. Support for this contention also comes from risk assessment research focusing on the relationship between trust in government and regulations and communication during risky situations [90].

Trust in government may affect feelings of threat and risk perceptions [91]. The effect of feelings of threat on EOCE among citizens with high levels of trust in government will be modest. Trust in government reduces the impact of feelings of threat on such engagement because people feel that the government can compensate for the loss of certainty during emergencies. For example, those who feel strongly that COVID-19 could pose a major danger to them will become more engaged and make a collective effort to reduce the risk and uncertainty. However, if they believe that the government would do everything in its power to protect them from harm, they may be less inclined to become personally involved. As Wong and Jensen [48] noted, the dimension of trust in this example constitutes people's assessment of the government's ability and expertise in understanding and coping with past and future risks. Thus, we suggest a final proposition:

**Proposition 7:** *Trust in government moderates the relationship between feelings of threat and EOCE.*

#### 4. Discussion, Summary, and Road Ahead

This paper focused on EOCE, its potential antecedents, and its centrality for successfully handling turbulent times and maintaining the resilience and wellbeing of communities. Large-scale emergencies, such as the COVID-19 pandemic, are inevitable and call for a better understanding of the mechanisms that citizens and the government use to cope with them. The suggested model of EOCE may promote both the theoretical understanding of and practical policies for coping in such turbulent times.

Four key variables were suggested as possible antecedents of such engagement: feelings of threat, trust in government, interpersonal trust, and the cost–benefit ratio. By doing so, this study follows other studies that highlighted the role of citizens in managing democracies during emergencies [2,34,35]. Our goal was to improve knowledge about communities' wellbeing and resilience during emergencies by presenting a new concept, EOCE, and model. The novelty of our study lies in establishing a theoretical connection between EOCE and emergencies, building upon the well-established notion that civic engagement is a basic pillar of democracy [92]. Its centrality increases sharply during emergencies. By focusing on the concept of EOCE, the authors provide insights into the intricacies of public behavior during emergencies and its subsequent impact on crisis management and response strategies. Recent emergencies, crises, and disasters have highlighted the crucial role of effective and inclusive governance and particularly of the relationship between the state and its citizens, which has been placed under greater pressure and increased scrutiny [5,24]

Our study adds to the public policy literature and policy design literature in several ways. First, it enhances the theory that encouraging EOCE helps create a cooperative administrative culture that can reduce the scale of the welfare state by promoting values such as solidarity between citizens and minimizing government intervention by making room for collective action. From a practical perspective, it is imperative for a successful policy de-

sign to integrate citizens' perceptions into innovative crisis and emergency policies [65,93]. EOCE mechanisms may serve as instrumental tools to facilitate more meaningful communication between citizens and government entities, thereby nurturing mutual understanding and cooperation [94]. Therefore, policymakers should consider the incorporation of EOCE strategies in crisis and emergency policy frameworks, as this can lead to more effective and resilient responses to unforeseen challenges. Furthermore, the incorporation of EOCE into policy design cultivates a heightened sense of civic responsibility and resilience among the populace. As citizens actively participate in emergency-related activities and decision-making processes, they become more informed and prepared, reducing their vulnerability in crisis situations. This not only contributes to individual and collective wellbeing but also alleviates the burden on government agencies during emergencies.

While this paper did not discuss the economic implications of enhanced EOCE. It should be noted that EOCE indirectly supports economic wellbeing by minimizing the economic impacts of emergencies. Communities that are well prepared and actively engaged in emergency response can recover more quickly from disasters, reducing financial burdens on individuals and society at large. EOCE also encourages workforce preparedness, ensuring that individuals have the knowledge and skills needed to maintain employment during and after emergencies. This preparedness helps mitigate income loss and supports economic stability. EOCE initiatives may offer training programs; during the COVID-19 pandemic, organizations that had previously engaged in such initiatives were better equipped to adapt to remote work, reducing disruptions to their economic activities.

Second, our suggestion to consider trust in government as an antecedent to EOCE may advance research on citizens' behavior and governance during emergencies [37,64]. Should trust in government prove to moderate the relationship between citizens' feelings of threat and EOCE, understanding this link would allow policymakers to prioritize initiatives that foster trust-building between government institutions and citizens. So far, only a few studies have done so [48,95].

Furthermore, this research contributes to the risk literature by highlighting the possible relationship between feelings of threat and EOCE and the relationship between people's selfish desire to be safe and their feelings of altruism about the community's safety during emergencies. Preparing for, responding to, and limiting the effects of emergencies are the end products of complex political and civil interactions [9,27]. According to the proposed model, the best way to approach these tasks is to help the public understand the risks and motivate them to help mitigate them. Our model suggests a combination of factors that explain this motivation. Additionally, if it is people's feelings of threat that prompt them to become engaged, we contend that it is not simply the rational cost-benefit analyses of doing so and their ability to contribute to the collective [75] that are responsible for their decision to become engaged. The degree to which they feel threatened also has a direct impact on this decision.

Moreover, our theory and model add to the management literature [74] by introducing the cost-benefit ratio into the rational decision making and actions that people take regarding their EOCE by using game theory and the theory of rational action. Moreover, based on our proposition regarding the mediation of the cost-benefit ratio in the relationship between feelings of threat and EOCE, it is asserted that those who feel more threatened are likely to decide that the benefits of such engagement outweigh the costs. Thus, being more sensitive to the potential risks posed by an emergency increases the perceived advantages of a proactive approach, manifested in high levels of EOCE.

Finally, this paper contributes to the fields of social psychology and emergency management by exploring the relationship between interpersonal trust and EOCE. A large body of research has established the importance of trust in others for explaining civic engagement [17,18]. By shedding light on the crucial role that interpersonal trust might play in promoting civic engagement during emergencies, the authors expand the existing knowledge in these fields by questioning whether the relationship between interpersonal trust and civic engagement might operate differently during emergencies. Finally, this

research enhances our understanding of the social dynamics that contribute to community resilience, wellbeing, and emergency response strategies.

### Limitations

Despite its contribution to the literature, several limitations of our study should be noted. First, our model and propositions should be tested empirically to support the theory and the proposed relationships. Some have already been tested empirically [94]. Second, improvements in our model may include other variables related to government initiatives and policies during emergencies and their outcomes. Examples include participation in decision making, citizens' satisfaction with services during emergencies, and perceptions about the quality of the leadership during emergencies. These and other variables may have a direct relationship with EOCE [87]. Finally, testing our propositions in various cultures and during other types of emergencies beyond COVID-19 may substantiate the model's validity and add to its usefulness. For example, in the Nordic cultures (e.g., Sweden, Norway, Denmark) that place a strong emphasis on egalitarianism, social welfare, and high levels of trust in government, we are likely to see a well-established system of citizen engagement during emergencies. Moreover, the collaborative society model aligns well with their values. Citizens often participate in local emergency preparedness efforts and expect transparency and cooperation from authorities. On the other hand, in the United States, a more individualistic culture, emergency-oriented civic engagement with a focus on collaboration may face challenges. While there are strong community-led initiatives, there may be variations in participation levels and a greater emphasis on self-reliance during emergencies. Hurricane Katrina in 2005 revealed both citizen-led initiatives and coordination challenges in a decentralized system. Cultures with strong collective values and social cohesion are more likely to embrace this model, while those with more individualistic tendencies or centralized governance may face greater challenges in its implementation. However, these dynamics can evolve over time, influenced by changing societal values and experiences in managing emergencies, thus, further examination is necessary.

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