

Research Article

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How Well Do They Manage a Crisis? The Government's Effectiveness During the COVID-19 Pandemic

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Abstract: *The COVID-19 pandemic clearly highlighted the importance of effective crisis management and its relationship with citizens' willingness to cooperate with the government in such turbulent times. We develop a theory and hypotheses about the impact of citizens' experiences on their perceptions of the government's effectiveness during times of crisis. We do so with data collected at two points in time: in late March 2020 during the first peak of the COVID-19 crisis in Israel, and in October 2020 when Israel was exiting from a second lockdown. The findings demonstrate that during crises citizens focus on the short term and seek immediate results in terms of readiness and preparedness. During such times, the government's responsiveness and transparency, as well as the public's participation in decisions, seem even more important than their trust in the government. Implications and practical recommendations follow.*

Evidence for Practice

- In times of crisis, public officials and policy makers are expected to become more responsive to the public by demonstrating fairness and transparency in decisions and trying to include citizens in these decisions.
- The public sector should invest in providing ongoing, quality services at all times, because citizens' satisfaction with public services contributes to effective crisis management.
- Governments should improve the managerial skills of emergency organizations, particularly with regard to the readiness and flexibility of healthcare organizations, which are at the forefront of handling crises.

Major crises such as pandemics may be inevitable. However, social resilience and the response of the government determine the scope, magnitude, and impact of such crises on our lives. The COVID-19 pandemic clearly highlighted the importance of effective emergency management, as well as its connection with the willingness of citizens to cooperate with governments in such turbulent times (Boin, Ekengren, and Rhinard 2020a; Christensen and Læg Reid 2020). Once again, it made clear that trust between governments and the people is vital to the functioning of our modern society (Robinson et al. 2020). The legitimacy of government to make and implement effective policies that minimize the damage to the democratic system, its economy, and public health is strongly related to the attitudes of citizens toward these policies. This study focuses on these attitudes and suggests a model that may help us explain perceptions about the government's effectiveness during a crisis.

The literature on crisis management defines a crisis as composed of three main components: great danger to people lives, uncertainty, and urgency (Rosenthal, Charles, and t' Hart 1989, 10). Although this

literature views crises as primarily social phenomena, it tends to underestimate citizens' views regarding the effectiveness of crisis management and the factors that may influence these evaluations (Boin, Hart, and Kuipers 2018, 27). Our goal is to fill this gap by integrating rationales from the areas of public management, policy evaluation, and crisis management and propose an integrative, testable model that explains citizens' perceptions about the effectiveness of the government's crisis management during the COVID-19 pandemic.

It is clear that effective crisis management should try to reduce risks and minimize costs for society. We suggest that citizens' evaluations of the government's response to such crises are crucial for building trust between the players, which later promotes the willingness to comply with and participate in government efforts to handle the issues that the crises bring in their wake (Boin, Ekengren, and Rhinard 2020a; Robinson et al. 2020). Hence, our research question is: What factors explain citizens' evaluations of the government's effectiveness in handling the COVID-19 pandemic and the crisis it triggered in Israel?

The field study is based on original data collected during the first peak of the COVID-19 crisis in Israel when most of the economy had been shut down for almost six weeks (mid-March to the end of April 2020). Like others, the Israeli government was caught by surprise and had no clear strategy for handling the crisis. Using our model, we then compare this first dataset with information from another survey distributed in October 2020 when Israel was exiting from a second lockdown during September 2020.

Citizens' Evaluations of the Government's Crisis Management: Theoretical Setting

One common definition of a crisis is "a threat that is perceived to be existential in one way or another" (Boin, Hart, and Kuipers 2018, 24). Crisis researchers typically focus on a temporal slice of the process through which a crisis emerges and eventually fades. They are mostly interested in the phase where intervention can still limit the effects of an emerging or escalating incident.

This approach brings together ideas of vulnerability, risks, threats, triggers, processes, responses, and outcomes (Rosenthal, Charles, and Hart 1989, 10). More specifically, three dimensions are essential: perceptions (about threats), information, and time. Furthermore, the approach does not identify specific factors that may cause a crisis, but, rather, proposes that escalating issues undermine a social system's capacity to cope with disturbances (Boin, Hart, and Kuipers 2018, 27). The ultimate cause of a crisis lies in the incompetence of a system to deal with the disturbance.

The COVID-19 pandemic can be characterized as a slow-burning or creeping crisis, which means "a threat to widely shared societal values or life-sustaining systems that evolves over time and space, is foreshadowed by precursor events, subject to varying degrees of political and/or societal attention, and impartially or insufficiently addressed by authorities" (Boin, Ekengren, and Rhinard 2020a, 122). Boin et al. (Boin, Ekengren, and Rhinard 2020a) stress that such crises may significantly undercut the legitimacy of public institutions mainly because there may be gaps between politicians, public officials, and citizens in identifying the crisis and the ways to handle it. In democratic systems, there is a constant search for a balance whereby citizens' evaluations serve as an input into government decisions (Cashore and Howlett 2007). A creeping crisis may disturb the possibility of achieving such a balance, thereby weakening the legitimacy of public institutions. Thus, citizens' evaluations of the effectiveness of the government's crisis management can indicate whether such a balance exists, and the extent to which the public regards the crisis management policies as legitimate. The more legitimacy they grant the government, the more willing they are to cooperate with it in handling the crisis. Therefore, explaining citizens' views regarding the public sector and their evaluation of the government's crisis management may help governments determine how to gain the public's cooperation.

Moreover, we try to go beyond the influence of the crisis itself on the relations between citizens and government and look at the variables related to the functioning of the public sector in general. Studies suggest various insights into the factors that may influence citizens' evaluations of the government's activities. However, they usually focus on evaluations of public sector performance in routine times, rather than the effectiveness of policy measures in crises

(Vigoda-Gadot and Mizrahi 2014). This is exactly where rationales related to public management and policy evaluation converge with crisis management research. We will therefore explore the factors related to citizens' evaluations of the government's effectiveness during an extreme crisis such as the COVID-19 pandemic.

Model and Hypotheses

The centrality of the government's effectiveness in managing crises is clear in explaining citizens' perceptions about the government in general. There are two reasons for this centrality. First, citizens' perspectives provide a valuable subjective evaluation of the effectiveness of the government's crisis management. Second, such views indicate their willingness to cooperate with the government and the legitimacy they accord the government's crisis management.

In measuring public attitudes, the public management literature tends to focus on citizens' evaluations of the performance of the public sector or specific agencies, their satisfaction with its operation, and their trust in institutions and public administrators (Bouckaert 2012; Cooper, Gibbs Knotts, and Brennan 2008; Vigoda-Gadot and Mizrahi 2014). Usually, these measures are not specific to particular events and policies, but rather express the public's overall view about the public sector (Chanley, Rudolph, and Rahn 2000; Keele 2007; Khan 2016). Citizens primarily refer to their experience with the public sector and the information they receive about its operation in formulating their attitudes toward the public sector. Consequently, most studies focus on the relationships between citizens' perceptions about public sector performance, their satisfaction with the public sector, their perceptions about their participation in decision-making, and their trust in the public sector (Vigoda-Gadot and Mizrahi 2014; Wang and Wart 2007).

What factors might be related to citizens' evaluations of the specific mechanisms and policies used in crisis management? Rationally, citizens evaluate specific policies based on cost-benefit calculations and develop positive views about policies that they believe bring them the greatest benefits at the least cost (Bali, Capano, and Ramesh 2019). However, given the uncertainty, urgency, and costliness of mistakes during a crisis, citizens probably have great difficulty assessing the impact of policies on their benefits and costs. Therefore, we assume that to formulate their evaluations, they refer to familiar mental models and base their assessments on their general view about the public sector.

Four major variables affect citizens' views about the public sector. Two relate to current or predicted outcomes of the public sector, and two relate to the main managerial processes customary in the public sector (Bouckaert 2012; Chanley, Rudolph, and Rahn 2000; Khan 2016; Van de Walle and Bouckaert 2003; Vigoda-Gadot and Mizrahi 2014). Citizens' experience with and information about the public sector allow them to evaluate their satisfaction with its operation (Cooper, Gibbs Knotts, and Brennan 2008; Wang and Wart 2007). Thus, we expect that citizens who have positive assessments of the overall output of the public sector will also be those who hold positive opinions about the effectiveness and efficiency of the crisis management during a crisis. They simply use previously known information in their immediate reactions to the crisis (Keele 2007; Khan 2016; Lin 2015).

Another factor is trust in government, as it is embedded in the mental models through which citizens assess reality (Bouckaert 2012; Hardin 2006; Sønderkov and Dinesen 2016; Vigoda-Gadot and Mizrahi 2014). Trust in government reflects the extent to which citizens are confident that public officials will promote the public interest in the long term (Citrin and Muste 1999; Nannestad 2008). The expectation is that citizens who trust the government will also think that its crisis management methods are effective and efficient. Furthermore, a series of studies indicates that citizens' satisfaction with the public sector is related to trust in government (Boateng and Cox 2016; Cooper, Gibbs Knotts, and Brennan 2008; Grimmelikhuijsen and Knies 2017; Mizrahi, Vigoda-Gadot, and Cohen 2019; Van de Walle and Bouckaert 2003; Vigoda-Gadot and Mizrahi 2014). This relationship may imply that trust in government mediates the relationship between citizens' satisfaction and perceptions about the effectiveness of its crisis management. Thus, we propose three hypotheses.

Hypothesis 1: Citizens' satisfaction with the government is positively related to their evaluation of the effectiveness of the crisis management.

Hypothesis 2: Citizens' trust in the government is positively related to their evaluation of the effectiveness of the crisis management.

Hypothesis 3: Citizens' trust in the government mediates the relationship between their satisfaction with the government and their evaluation of the effectiveness of the crisis management.

Beyond satisfaction and trust as outcome measures, procedural measures are also important. Numerous studies have found that citizens maintain that participation in decision-making and transparency are extremely important in their relations with public officials (Irvin and Stansbury 2004; King, Feltey, and O'Neill 1998; Vigoda-Gadot and Mizrahi 2014; Wang and Wart 2007). Such channels strengthen accountability and public responsibility, and hence, democratic legitimacy as well (Mizrahi and Minchuk 2018; Rawls 1971). They are closely related to trust in government because the more citizens participate in decisions, the more they share responsibility with public officials and therefore may also trust them more. Hence, citizens who feel involved in the government's decision-making will most likely share responsibility for the choices made in crisis situations and therefore may have more positive views of the effectiveness of the government's crisis management.

The second process variable that citizens often consider important in their relations with the government is the performance of the public sector as expressed in its overall effectiveness, leadership, ethical standards, innovation, and technological advancement. Studies indicate that these process variables may be related to outcomes variables such as satisfaction with and trust in the public sector (Vigoda-Gadot and Mizrahi 2014). The rationale implies that effective managerial standards and procedures most likely lead to good results (Schomaker and Bauer 2020). Thus, we hypothesize that citizens' perceptions about public sector performance will be positively related to their perceptions about the effectiveness of the

government's crisis management. Thus, we propose three additional hypotheses.

Hypothesis 4: Perceptions about participating in decision-making are positively related to citizens' evaluations of the effectiveness of the crisis management.

Hypothesis 5: Perceptions about public sector performance as effective are positively related to citizens' evaluations of the effectiveness of the crisis management.

Hypothesis 6: Perceptions about participating in decision-making mediate the relationship between perceptions about public sector performance as effective and citizens' evaluations of the effectiveness of the crisis management.

To anchor our model more firmly in the crisis management literature, we also incorporated some unique features of pandemics. In such situations, healthcare services and emergency organizations comprise a specific category of organizations that citizens evaluate. Therefore, we included several additional variables that we treated as control variables: 1) satisfaction with healthcare services, 2) trust in healthcare services, and 3) trust in emergency organizations. We will test whether they have any independent influence on the relationships we suggested.

The public management literature emphasizes that governments and public organizations must engage in strategic planning to increase their effectiveness (Moynihan 2008). To realize this goal, specific policies must be created, and implementation tools should be coordinated while mobilizing resources (Mizrahi 2017). These factors become even more critical in preparing for crisis situations. Studies in crisis management emphasize the centrality of planning ahead and detail how experience and learning can improve readiness (Boin and Bynander 2014; Boin, Hart, and Kuipers 2018). For example, prior experience with pandemics in East Asia undoubtedly prompted planning and readiness that eventually helped these countries deal with the pandemic more effectively (Boin, Lodge, and Luesink 2020b).

Thus, we maintain that citizens are most likely to associate the readiness of the public sector for a crisis and the effectiveness of its response. Furthermore, personal situations and the risks associated with the crisis may also affect their evaluation of the government's response. Due to the high level of uncertainty during a crisis, citizens who feel that they are at great risk tend to develop critical and suspicious views regarding government actions because they fear they have more to lose if things go wrong (Roharmann 2008). Crises related to a global pandemic such as COVID-19 are fraught with confusion and uncertainty for most people. Hence, we argue that citizens' perceptions will guide their decisions about whether to take action, or avoid, adapt to, or even ignore risks. There are indications that people's assessments of their own preparedness for a crisis correlate with their perceptions about risks. Those who feel prepared will regard the risks as lower than those who believe they are not prepared (Donahue, Eckel, and Wilson 2014; Sattler, Kaiser, and Hittner 2000). Consequently, citizens who feel ready for a crisis are more likely to feel there is less risk than those who are unprepared and will therefore also be less critical of the government's crisis management. Thus, our last two hypotheses deal

with the role of perceptions about readiness to meet a crisis.

Hypothesis 7: Perceptions about institutional readiness for emergencies are positively related to citizens' evaluations of the effectiveness of the crisis management.

Hypothesis 8: Perceptions about personal readiness for emergencies are positively related to citizens' evaluations of the effectiveness of the crisis management.

Figure 1 illustrates the research model and the full set of hypotheses. We also control for demographic variables.

Method

The Empirical Setting

The study was conducted in Israel using an online survey distributed at two points in time: (1) during late March-early April 2020, which was the first peak of the COVID-19 pandemic spread in Israel when most of the economy was shut down and illness rose exponentially (970 respondents), and (2) in October 2020 when Israel was exiting a second lockdown after a second peak during September 2020 (750 respondents). By comparing the findings of the two panel surveys, we can track perceptual trends and test for the consistency of the analysis and the relationships found.

Due to historical, political, social, and international reasons, Israeli citizens have experienced emergency situations for many years, and also expect to experience them in the future (Gesser-Edelsburg and Zemach 2012). In fact, the Israeli government declared an emergency situation during the establishment of the State in 1948 and this situation has been legally renewed ever since (Tzur 1999). Most of these situations have involved security threats. Consequently, Israeli citizens live in a constant high-risk situation, ever conscious that they or their family members could be involved in a terror attack. These feelings are part of the public and political discourse (Cohen and Eid 2007). The sense of emergency is thus deeply rooted in society but its appearance in daily life is relatively muted. Israeli society is also characterized by the strong inclination to avoid uncertainty (Hofstede 2016), which is a main characteristic of the COVID-19 pandemic. Given this situation, we would expect to find strong feelings of personal threat and good personal and organizational readiness to deal with emergencies even

in a healthcare crisis. However, at the same time, Israelis' trust in the public sector in general and their evaluation of its performance have always been relatively low (Vigoda-Gadot and Mizrahi 2014).

The Israeli healthcare system, which handles many aspects of the COVID-19 crisis, has been relatively effective and highly rated among developed countries (OECD 2015). It includes elements that are mainly public. Israeli citizens pay a national healthcare tax to the government, which allocates a budget to four national health insurance companies that provide health services to all Israeli citizens. The Ministry of Health is responsible for the planning and supervision of healthcare and for preventive medicine, but it also runs hospitals and psychiatric services. Historically, Israeli citizens have evaluated the performance of the healthcare system very positively, and have a great deal of trust in it (Mizrahi, Vigoda-Gadot, and Cohen 2019; Vigoda-Gadot and Mizrahi 2014). We therefore test whether such positive evaluations also impact the evaluation of the effectiveness of the government's crisis management.

Sample and Procedure

Our sample included 970 Israeli citizens. To verify that the sample was not underpowered, we used the GPower software (link: <http://gpower.hhu.de>). It indicated that power in the size of 0.95 with five predictors for a regression test could be achieved with 470 participants. Hence, our sample was not underpowered. We used a close-ended questionnaire and a procedure that has been used and validated among similar populations in Israel since 2001 as well as in the US at the state and federal levels (Mizrahi, Vigoda-Gadot, and Van Ryzin 2010; Vigoda-Gadot and Mizrahi 2014).

Our participants came from iPanel, an Israeli public opinion institute with over 100,000 members. Participants in this panel, which has some similarities to Amazon's mTurk, answer profiling surveys containing 70 questions on a variety of consumer-related fields, and provide demographic details such as educational level, income, and marital status. The management system assigns panel members to each survey based on a number of conditions such as suitability. After assigning panel members to the sample, they are invited to participate through an email specifying any technical requirements for accessing the questionnaire and the number of points they will earn for completing the survey. Points are given based on the survey's length and complexity, and can be redeemed for various gifts and vouchers. Each sample request is examined based on the ratio between the number of people required for the sample and the existing number of panel members as well as the response rate.

Panel surveys have many advantages, but also have disadvantages such as panel selection bias and panel attrition (Lohse, Bellman, and Johnson 2000). To compensate, the sample was designed so that it represented the Israeli population in most dimensions. Anonymity was assured, and the response rate was 70 percent.

The demographic characteristics of the sample largely corresponded with the population. Overall, 48 percent were men and 52 percent were women, and average age was 41.4 years (SD = 15). To verify that the sample's distribution corresponded to the distribution among the overall Israeli population, we conducted a chi-square test for statistical differences for gender, age, income, education, and ethnic origin. The test indicated a good fit ($p = .001$) in the

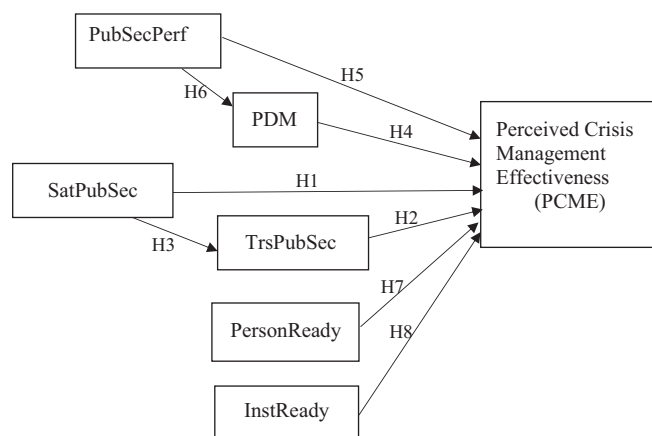


Figure 1 The Research Model

distribution of gender, income, and age, while for education and ethnicity the fit was not significant. For education, the sample included more highly educated people than in the general population, while in the ethnic dimension the sample was somewhat biased toward the Jewish population. Thus, throughout the analysis we controlled for education and ethnicity to see whether these relative biases influenced the results.

In the second survey that we conducted in October 2020 there were 750 respondents. A chi-square test for statistical differences indicated a good fit for all of the demographic parameters. Comparing the results of the two surveys may also indicate whether the biases mentioned above had any impact on the results.

Measures

We used established measures previously tested and well validated (FEMA 2009; Grimmeliikhuijsen and Knies 2017; Mizrahi, Vigoda-Gadot, and Cohen 2019; Redlener et al. 2007; Sacks and Larizza 2012; Vigoda-Gadot and Mizrahi 2014). We used confirmatory factor analyses (CFA) to assess construct validity, and Cronbach's α . For each of the latent variables we checked how the various items loaded and considered those factors that indicated low loadings. Participants indicated their responses on a scale ranging from 1 (disagree) to 6 (agree). See Appendix A for the list of items.

Perceptions about the effectiveness of the crisis management (PCME) was measured by the statement: "I feel that the government response during the emergency is effective and efficient."

Satisfaction with the public sector (SatPubSec) was measured by 11 items indicating the extent to which respondents were satisfied with the services provided by the education system, the court system, the Ministry of the Interior, the Ministry of Labor, the police, the Ministry of Transport, bus companies, Israeli rail, Israeli Post, the local municipality, and the electricity company (Vigoda-Gadot and Mizrahi 2014). The variable was calculated for each respondent as the mean value of trust among the 11 items ($\alpha = .87$). Based on the CFA, we eliminated several items but kept most of the dimensions to produce a holistic evaluation of the public sector.

Satisfaction with the healthcare system (SatHealth) was measured by three items indicating the extent to which respondents were satisfied with the services provided by the Ministry of Health, public hospitals, and their local healthcare provider during the COVID-19 crisis ($\alpha = .82$).

Trust in the public sector (TrsPubSec) was measured by 16 items indicating the extent to which respondents trusted the education system, the higher education system, the court system, the Supreme Court, the State Attorney, the Attorney General, the national cyber defense system, the army (IDF), the General Security Service, the Israeli undercover intelligence organization (the Mossad), the prison service, the Ministry of Transport, the Ministry of Communications, the state comptroller, the treasury and tax authorities, and the Israel Central Bank ($\alpha = .92$) (Vigoda-Gadot and Mizrahi 2014). Based on the CFA, we eliminated several items but kept most of the dimensions to produce a holistic evaluation of the public sector.

Trust in the healthcare system (TrsHealth) was measured by three items indicating the extent to which respondents trusted the Ministry of Health, public hospitals and their local healthcare provider during the COVID-19 crisis ($\alpha = .81$).

Trust in emergency organizations (TRSEmergency) was measured based on Mizrahi, Vigoda-Gadot, and Cohen (2019) by five items indicating the response to the questions: "Rate the extent to which you trust: 1) the National Emergency Management Authority, 2) the fire department, 3) Magen David Adom (the Israeli equivalent of the Red Cross), 4) the Home Front Command and local emergency crews, and 5) the police." ($\alpha = .86$).

Perceptions about participation in decision-making (PDM) was measured by five items indicating to what extent the respondents thought that public organizations: 1) are interested in the public participating in the making of important decisions, 2) are open to criticism and suggestions that come from citizens, 3) respond quickly to public demands, 4) develop reasonable channels to communicate with the public, and 5) are subject to significant monitoring by citizens ($\alpha = .86$).

Perceptions about public sector performance (PubSecPerf) was measured by five items indicating the extent to which respondents agreed with the following statements. 1) "The operation of the public sector is professional and not politically biased," 2) "I think that the Israeli public sector has a positive image," 3) "Public officials are professional and skillful," 4) "In the Israeli public sector there is a professional and responsible leadership," and 5) "The Israeli public sector promotes initiatives and ideas that improves citizen lives." ($\alpha = .89$).

Perceptions about the readiness of emergency organizations (InstReady) was measured by eight items indicating the extent to which the respondents thought that emergency organizations (police, fire and rescue departments, health emergency organizations, emergency units in the army, local government, the Ministry of Health, the National Emergency Authority, and civil society organizations) were ready for emergency situations ($\alpha = .90$).

Perceptions about one's personal readiness for emergency situations (PersonReady) was measured by six items indicating the extent to which the respondents thought that they were ready to defend themselves in emergency situations. The situations are natural disasters, pandemic, war, terror attacks, cyber-terror attacks, and accidents related to hazardous materials ($\alpha = .82$).

Data Analysis

The analysis was carried out using SPSS software. It included a zero-order correlation, a standard multiple regression analysis (OLS), and Hayes' (2013) conditional PROCESS analysis. We chose this advanced method because it allowed us to work with larger samples and a variety of different variables. The analysis also controlled for age, gender, ethnicity, income, and education.

Findings

Table 1 presents the descriptive statistics and zero-order correlations (Pearson's r) for the research variables as measured during the first peak in late March 2020. A t -test revealed that there was a sharp

Table 1 Multiple Correlation Matrix (Pearson's *r*) and Descriptive Statistics for the Research Variables

	Mean (SD)	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Perceived crisis management effectiveness	3.25 (1.3)													
2. Satisfaction with the public sector	3.7 (.82)	.49***												
3. Trust in the public sector	3.84 (.89)	.43***	.69***											
4. Participation in decision-making	2.85 (.92)	.48***	.54***	.55***										
5. Perceived public sector performance	3.08 (.97)	.47***	.58***	.59***	.83***									
6. Readiness of emergency organizations	4.11 (.98)	.56***	.56***	.56***	.51***	.51***								
7. Personal readiness for emergency	2.85 (.94)	.27***	.25***	.23***	.25***	.25***	.28***							
8. Satisfaction with healthcare services	4 (1.02)	.48***	.61***	.53***	.49***	.51***	.55***	.23***						
9. Trust in healthcare	3.95 (1.05)	.50***	.61***	.63***	.52***	.53***	.54***	.21***	.78***					
10. Trust in emergency organizations	4.34 (.95)	.46***	.62***	.77***	.47***	.50***	.63***	.23***	.56***	.64***				
11. Income (low = 1–5 = high)	2.78 (1.28)	NS	NS	NS	NS	NS	NS	.22**	NS	NS	.11**	-		
12. Gender (1 = Women)	1.52 (.50)	NS	.08**	NS	NS	NS	NS	-.10**	NS	NS	NS	NS	-	
13. Age (years)	41.4 (15)	NS	.10**	.14**	NS	NS	.09***	NS	NS	NS	NS	.12*	-.14**	-
14. Education (1–6)	4.12 (1.3)	NS	NS	NS	-.10**	-.10**	-.10**	NS	NS	NS	NS	.29**	.12**	NS

Note: N = 970.

* $p < .05$; ** $p < .01$; *** $p < .001$. Scale 1–6 unless otherwise stated.

decline in citizens' perceptions about the effectiveness of the crisis management between March and October (from 3.25 to 2.70; $p < .001$), and a medium decline in satisfaction with and trust in the public sector (from 3.7 and 3.84 to 3.5 and 3.65, respectively; $p < .001$) and in participation in decision-making (from 2.85 to 2.55; $p < .001$). Evaluations of the other variables were quite similar in the two surveys. This comparison indicates that Israelis became increasingly critical of the government's management of the crisis.

As Table 1 illustrates, most of the inter-correlations hold in the expected directions. All of the independent variables, except personal readiness, were correlated with the dependent variable at the level of $r = .43$ – $.56$. This result holds for the three independent variables that we used as controls in the model (satisfaction with healthcare services, trust in the healthcare system, and trust in emergency organizations). The model remains stable when controlling for demographic variables as well.

However, there are potential problems of multicollinearity among some of the variables. The inter-correlation between participation in decision-making and perceptions about public sector performance exceeded the maximum level of 0.70, reaching 0.83. This result means that the respondents did not distinguish between the variables. However, this result is also consistent with the literature where the responsiveness and participatory culture of the public sector is considered a significant dimension of public sector performance (Vigoda-Gadot and Mizrahi 2014). Such mechanisms may provide practical methods to handle the pandemic; hence our focus on it. Thus, we will consider the variable of public sector performance in the further analyses below but will be careful in analyzing its relations with the variable of participation in decision-making. As a result, we expect that Hypotheses 5 and 6 will probably not be supported by the data.

Table 2 Multiple Regression Analysis for the Direct Effect of the Independent Variables on Perceived Crisis Management Effectiveness (Non-standardized and Standardized Coefficients)

Variable	Perceived Crisis Management Effectiveness <i>B</i> (SE)	Perceived Crisis Management Effectiveness β
Constant	-1.06 (.39) **	
1. Satisfaction with the public sector	.23 (.10)*	.15*
2. Trust in the public sector	-.05 (.11) ^{NS}	-.03 ^{NS}
3. Participation in decision-making	.28 (.11)**	.20**
4. Perceived public sector performance	-.10 (.11) ^{NS}	-.08 ^{NS}
5. Readiness of emergency organizations	.38 (.07)***	.30***
6. Personal readiness for emergency	.18 (.06)**	.13**
7. Satisfaction with healthcare services	.01 (.09) ^{NS}	.01 ^{NS}
8. Trust in the healthcare system	.15 (.09) ^{NS}	.12 ^{NS}
9. Trust in emergency organizations	.15 (.10) ^{NS}	.12 ^{NS}
10. Income (low = 1–5 = high)	-.06 (.04) ^{NS}	-.06 ^{NS}
11. Gender (1 = Women)	-.16 (.10) ^{NS}	-.06 ^{NS}
12. Age (years)	.00 (.00) ^{NS}	.01 ^{NS}
13. Education (1–6)	.06 (.04) ^{NS}	.06 ^{NS}
<i>R</i> ²	.49	.49
Adj <i>R</i> ²	.47	.47
<i>F</i>	24.68***	24.68***

Note: N = 970; NS, not significant.

* $p < .05$; ** $p < .01$; *** $p < .001$.

Table 2 presents the results of the multiple OLS regression analysis (standardized and non-standardized coefficients) of perceptions about the effectiveness of the crisis management (PCME). The table shows that four of our independent variables are directly related to PCME: satisfaction with the public sector ($\beta = .15$, $p < .05$); participation in decision-making ($\beta = .20$, $p < .01$); readiness of emergency organizations ($\beta = .30$, $p < .001$); and personal readiness ($\beta = .13$, $p < .01$). These findings support H1, H4, H7, and H8. However, trust in the public sector and perceptions about public sector performance are not related to PCME, contradicting H2 and H5.

We adopted a conservative strategy analysis that makes sure multicollinearity will not affect our results. Therefore, we eliminated public sector performance from the analysis. It follows that H6 is also not supported by the data. In addition, the variables that measure attitudes toward the organizations that were deeply involved in managing the pandemic on the ground (i.e., satisfaction with healthcare services, trust in the healthcare system and trust in emergency organizations) are not related to PCME. Furthermore, none of the demographic control variables is significantly related to PCME. As for the ethnic dimension, we conducted a *t*-test for both the variables and the regression model, which indicated that there were no significant differences between Israeli Arabs and Jews. The explained variance (adjusted R^2) of these independent variables is .47, which is quite high and meaningful.

To explore these relationships further, we conducted a mediation analysis to test H3. Since the regression analysis indicated that trust in the public sector is not directly related to PCME, while satisfaction with the public sector is, we reversed the mediating relationships proposed in Hypothesis 3 and tested whether satisfaction mediates the relationship between trust in the public sector and perceptions about the effectiveness of the crisis management. Using PROCESS model 4 (Hayes 2013), the results depicted in Table 3 show that there is a strong, direct, significant relationship between trust in the public sector and PCME ($\beta = .43$; $p < .001$). However, these relationships weaken significantly when satisfaction with the public sector is included in the equation ($\beta = .17$; $p < .001$). The explained variance rises from $R^2 = .18$ to .25. The confidence interval for satisfaction with the public sector is above zero, meaning that the mediation is significant. Thus, whereas the data do not support the original H3, they do confirm the reverse relationship of H3. Figure 2 presents the findings as a flow chart and Table 4 summarizes the relationships supported by the data.

Finally, we tested the hypotheses again, this time using the second survey conducted in October 2020. The findings were quite similar to those presented above. Thus, although citizens' evaluations regarding most aspects of the public sector's performance declined between March and October 2020, the relations between the variables remained stable, indicating the consistency of our model, findings, and possible generalizations.

Discussion

The COVID-19 pandemic poses great challenges for societies and government around the world. One of the major challenges is the relationship between governments and citizens in times of crisis, and the implications of the crisis for the future of these relationships.

We used original data collected in Israel during the pandemic to learn more about these core relationships. We analyzed the way citizens evaluate the effectiveness of the government's response to the pandemic and the factors that may be related to this evaluation. Such evaluations are important because public opinion has a positive effect on trust in government and the willingness to cooperate and obey regulations (Boin, Hart, and Kuipers 2018, 27; Mizrahi 2020; Rosenthal, Charles, and t' Hart 1989, 10). The feedback received from citizens about the government's ability to handle crisis situations is also valuable for understanding the interplay between the government's decisions and policies in turbulent times and its impact on citizens. This understanding may also help improve crisis management in the future.

Indeed, the literature emphasizes that in large-scale crises the coordination of efforts based on trust and transparency is the key to an effective response, especially in creeping crises such as the COVID-19 pandemic (Alexander 2018; Boin, Ekengren, and Rhinard 2020a; Boin, Hart, and Kuipers 2018, 27; Schomaker and Bauer 2020). At the starting point of a creeping crisis, these relationships significantly influence the scope, damage, and time frame of the crisis, and also have a strong impact on how it evolves and its scope and length.

Studies suggest various insights into the factors that may influence citizens' evaluations of the government's activities. However, they often focus on evaluations of public sector performance in routine times rather than on the effectiveness of policy measures and management in times of acute crises (Mizrahi, Vigoda-Gadot, and Cohen 2019). At the same time, research emphasizes that the public sector and social players usually tend to be conservative and maintain the status quo (Jabotinsky and Cohen 2020). An acute crisis may shake up these habits but the adaptation to new situations is usually slow and very gradual. Thus, in rapidly evolving

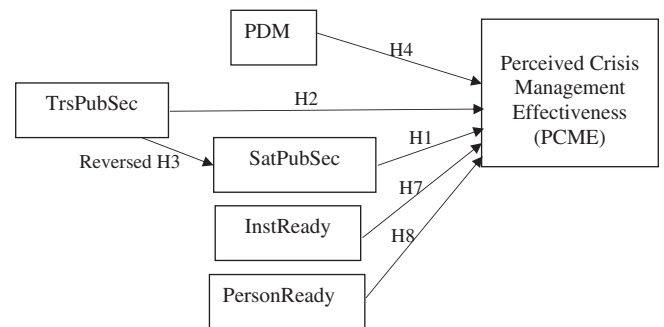


Figure 2 A Revised Model: Flowchart of the Findings

Table 3 Mediation Analysis (PROCESS Model #4) of Indirect Effects through Satisfaction with the Public Sector with Trust in the Public Sector (H3)

Coefficient	I: Equation predicting mediator: Satisfaction with the public sector	II: Equation predicting dependent variable: Perceived effectiveness of crisis management	III: Equation predicting dependent variable: Perceived effectiveness of crisis management
	$R^2 = 0.49^{***}$	$R^2 = 0.18^{***}$	$R^2 = 0.25^{***}$
Constant	1.23***	.85***	.13
Trust in the public sector	.69***	.43***	.17***
Satisfaction with the public sector	—	—	.39***
Confidence interval of the mediating variable: Satisfaction with the public sector LLCI = .46; ULCI = .70			

N = 970. * $p < .05$; ** $p < .01$; *** $p < .001$.

Table 4 The Study's Hypotheses and Summary of Findings

H1	Citizens' satisfaction with the government is positively related to their evaluation of the effectiveness of the crisis management.	Supported by the data in the two surveys
H2	Citizens' trust in the government is positively related to their evaluation of the effectiveness of the crisis management.	Supported by the data in the two surveys
H3	Citizens' trust in the government mediates the relationship between their satisfaction with the government and their evaluation of the effectiveness of the crisis management.	Reversed relations supported by the data in the two surveys— <i>Satisfaction with the government mediates the relationship between their trust in government and their evaluation of the effectiveness of the crisis management</i>
H4	Perceptions about participating in decision-making are positively related to citizens' evaluations of the effectiveness of the crisis management.	Supported by the data in the two surveys
H5	Perceptions about public sector performance as effective are positively related to citizens' evaluations of the effectiveness of the crisis management.	Not supported by the data in the two surveys
H6	Perceptions about participating in decision-making mediate the relationship between perceptions about public sector performance as effective and citizens' evaluations of the effectiveness of the crisis management.	Not supported by the data in the two surveys
H7	Perceptions about institutional readiness for emergencies are positively related to citizens' evaluations of the effectiveness of the crisis management.	Supported by the data in the two surveys
H8	Perceptions about personal readiness for emergencies are positively related to citizens' evaluations of the effectiveness of the crisis management.	Supported by the data in the two surveys

crisis situations, traditional methods of operation persist, as do the relationships between the public sector and citizens (Boin, Hart, and Kuipers 2018). Therefore, our approach suggests analyzing the present by looking at the past to try to learn about the future.

In explaining the factors related to citizens' evaluations of the government's crisis management, our framework integrated rationales from the fields of public management, crisis management, and policy evaluation. The framework focused on two types of variables—those that measure the conditions related to the crisis situation and those that relate to the relationships between citizens and the public sector. Thus, we included variables that measure the typical characteristics of the relationship between citizens and the public sector, assuming that they also have a role in times of crisis.

Our findings demonstrate that Israeli citizens evaluated the effectiveness of the crisis management during the first peak of the pandemic as very modest. This assessment declined sharply following the second peak in October 2020. They rated the readiness of emergency organizations relatively high but their personal readiness as relatively low. The findings show that both types of variables are related to perceptions about the effectiveness of the crisis management. In terms of readiness, both institutional and personal readiness are related to perceptions about the effectiveness of the crisis management, and the readiness of emergency organizations has the strongest impact of all of the variables.

The analysis of the relationship between citizens and the public sector depicts a complex picture. We found that only two variables were directly related to perceptions about the effectiveness of the government's crisis management (citizens' satisfaction with the public sector and perceptions about participation in decision-making). This finding is in line with previous studies in the field (Vigoda-Gadot and Mizrahi 2014; Wang and Wart 2007). Yet, contrary to findings in routine times, trust in various organizations appears to be less relevant for these evaluations. Trust in the public sector is only indirectly related to perceptions about the effectiveness of the crisis management through satisfaction with public services. Citizens express this satisfaction based on past and present experience with these services or information they receive about them.

The dominance of satisfaction over trust in explaining the results is interesting. It may imply that, when evaluating the government's effectiveness in crisis management, citizens primarily refer to short-term considerations such as satisfaction, rather than long-term expectations such as trust. At the same time, trust is related to perceptions about the effectiveness of the crisis management only by mediation, which means that it has an impact on satisfaction. This insight differs from the common rationale suggested in the public management literature where satisfaction relates to trust rather than vice versa (Vigoda-Gadot and Mizrahi 2014; Wang and Wart 2007). We thus propose that in crisis situations involving a great deal of uncertainty and risk, people may think about the immediate, satisfactory short-term outcomes they want rather than longer range expectations.

A similar rationale evolves regarding the perceptions about public sector performance. We divided this aspect into two variables—1) internal managerial mechanisms and processes in the public sector and 2) the interaction between the public sector and citizens through the former's responsiveness and transparency and the latter's participation in decision-making (Vigoda-Gadot and Mizrahi 2014). Citizens' attitudes toward the first variable are based on their ongoing experience with and information about the public sector that allows them to evaluate its responsiveness and transparency and their ability to participate in decisions about it. Our findings show that in evaluating the effectiveness of the government's crisis management citizens marginalize long-term performance indicators but expect the system to be responsive, transparent, and open to their participation. Thus, once again, in evaluating the effectiveness of crisis management and its outcomes, citizens think about immediate, short-term results.

The study seeks to contribute to the understanding of crisis management in general and the COVID-19 pandemic in particular in various respects. First, we incorporate rationales from research about public management, crisis management, and policy evaluation. In doing so, we enrich the views about the COVID-19 pandemic while also showing how managerial ideas may not hold under extreme conditions. Second, we incorporate three main insights regarding crises into a framework that delves into the core of such situations. These insights emphasize that crisis situations are primarily social

phenomena, that the quality of the crisis management and leadership is critical for achieving good results and that in large-scale crises the coordination of efforts based on trust and transparency is the key to an effective response. Third, we demonstrate that in times of crisis citizens prioritize immediate, short-term results. Fourth, trust appears to be relatively marginal in such times, whereas responsiveness, participation, and transparency are important for citizens. These factors are important not because they increase trust but rather because they influence the ways citizens interpret the government's response. We assume that if citizens regard that response in a positive light, they will be ready to cooperate with collective efforts, and obey and even initiate ideas of their own in order to manage the pandemic effectively. Fifth, the public expects emergency organizations to be prepared and ready to meet crises because they understand how these factors contribute to effective crisis management.

Despite its contribution to the literature, several limitations of our study should be noted. First, there is potential common source bias, an issue that public administration scholars have debated in recent years (Favero and Bullock 2015; Meier and O'Toole 2013). Common source bias is a systematic error variance that is a function of using the same method or source (Richardson, Simmering, and Sturman 2009). Meier and O'Toole (2013) argue that citizens' surveys of government performance often contain valuable information that can be gathered in no other way. Segmentation according to individual characteristics showing that these factors distribute normally can solve most of the problems in such surveys (Gormley and Matsa 2014). Indeed, in this research we guaranteed a normal distribution according to gender, age, education, and income, which are the most relevant individual characteristics for the research setting. Second, the findings are limited to the Israeli population. However, we explained that in responding to the COVID-19 pandemic Israeli society and government faced similar challenges to those in other countries. Furthermore, our October 2020 survey reconfirmed our previous findings, indicating that they are consistent throughout the stages of the crisis and allowing possible generalization. Third, in such a deep crisis, social solidarity, interpersonal trust, and social trust may affect the research variables. Thus, cooperation or conflicts at the societal level may influence the effectiveness of the government's crisis management. However, these aspects are beyond the scope of this research.

The study has several practical implications for crisis management and policy making. First, the main resource governments have for effective crisis management is the citizens' cooperation and willingness to contribute to collective efforts. In order to utilize it, public officials and policy makers should focus on being responsive to the public by being fair and transparent in their decisions and including citizens in these decisions. Coordination of efforts based on trust and transparency is the key to an effective response. Adopting this approach is likely to motivate citizens to contribute to collective efforts and even initiate their own ideas. As a result, the public will also share in the accountability and responsibility for the results.

Second, the public sector should invest in providing ongoing, quality services at all times, because citizens' satisfaction with public services contributes to effective crisis management. Although during times of crisis the public sector tends to focus its efforts on reducing the direct damage such situations inflict, it should not neglect the

other services that citizens need. Satisfactory service provision will encourage citizens' cooperation.

Third, governments should not rely on public trust in emergency organizations or healthcare organizations in the case of a pandemic, because they are not directly related to citizens' evaluations about the effectiveness of the crisis management. Instead, they should emphasize the readiness and capabilities of emergency and healthcare organizations, and/or try to improve them. Such readiness and abilities may reduce citizens' fears, sense of uncertainty, and perceptions about risks, thus strengthening social resilience.

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Appendix

The Questionnaire

Perceptions About the Effectiveness of the Crisis Management (PCME)

Rate your agreement (1–6) with the statement: I feel that the government response during the emergency is effective and efficient.

Satisfaction with the Public Sector (SatPubSec). Rate your satisfaction (1–6) with: the education system, the court system, the

Ministry of the Interior, the Ministry of Labor, the police, the Ministry of Transport, bus companies, Israeli rail, Israeli Post, the local municipality, and the electricity company.

Satisfaction with the Healthcare System (SatHealth). Rate your satisfaction (1–6) with: the Ministry of Health, public hospitals, and your local healthcare provider.

Trust in the Public Sector (TrsPubSec). Rate your trust (1–6) in: the education system, the higher education system, the court system, the Supreme Court, the State Attorney, the Attorney General, the national cyber defense system, the army (IDF), the General Security Service, the Israeli undercover intelligence organization (the Mossad), the prison service, the Ministry of Transport, the Ministry of Communications, the state comptroller, the treasury and tax authorities, and the Israel Central Bank.

Trust in the Healthcare System (TrsHealth). Rate your trust (1–6) in: the Ministry of Health, public hospitals, and your local healthcare provider.

Trust in Emergency Organizations (TRSEmergency). Rate your trust (1–6) in: the National Emergency Management Authority, the fire department, Magen David Adom (the Israeli equivalent of the Red Cross), the Home Front Command and local emergency crews, and the police.

Perceptions About Participation in Decision-Making (PDM).

Rate your agreement (1–6) with the statements: Public organizations: 1) are interested in the public participating in the making of important decisions, 2) are open to criticism and suggestions that come from citizens, 3) respond quickly to public demands, 4) develop reasonable channels to communicate with the public and 5) are subject to significant monitoring by citizens.

Perceptions About Public Sector Performance (PubSecPerf). Rate your agreement (1–6) with the statements: 1) The operation of the public sector is professional and not politically biased, 2) I think that the Israeli public sector has a positive image, 3) Public officials are professional and skillful, 4) In the Israeli public sector there is a professional and responsible leadership, and 5) The Israeli public sector promotes initiatives and ideas that improves citizen lives.

Perceptions About the Readiness of Emergency Organizations (InstReady). Rate your evaluation (1–6) of the emergency readiness of: police, fire and rescue departments, health emergency organizations, emergency units in the army, local government, the Ministry of Health, the National Emergency Authority, and civil society organizations.

Perceptions About One's Personal Readiness for Emergency Situations (PersonReady). Rate (1–6) your personal readiness for: natural disasters, pandemic, war, terror attacks, cyber-terror attacks and accidents related to hazardous materials.