An Analysis of Risk Perception, Crisis management, Economical Threat, Compliance to Guidelines, Spokesperson Credibility and Source of Information Reliability Surrounding COVID-19: An Online Survey of the Israeli Public's Response to the Government's Emergency Instructions Against the Pandemic

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Abstract

Background: On March 11, 2020, the WHO officially declared COVID-19 a pandemic. The declaration of a pandemic posed challenges to many countries, prominent among them communication with the public to gain its cooperation. What singles out Israel's management of the COVID-19 crisis from other countries is that Israel is in the midst of a deep constitutional crisis that impacts its management of the health crisis.

Objective: To examine the Israeli Public's response to the Israeli government's emergency instructions against the pandemic in terms of correlations between: (1) overall risk perceptions and crisis management, (2) overall risk perceptions and economic threat, (3) crisis management and the compliance to behavioral guidelines, (4) crisis management and economic threat, and comparisons between (1) crisis management and spokesperson credibility, and (2) crisis management and source of information reliability.

Methods: The sample was planned using a Qualtrics XM online survey that provided the quick and effective distribution of an online questionnaire during the COVID-19 crisis. Self-selection online survey method of nonprobability sampling was used to recruit participants (n=1056) through social network posts calling on the general public (18+) to answer the survey.

Results: Respondents aged 65+ perceive higher personal risk compared to ages 18-30 (mean difference 0.33, 95% CI 0.04-0.61) and compared to ages 46-64 (mean difference 0.38, 95% CI=0.12-0.64). Significant correlations were found between: (1) overall risk perceptions and the attitudes towards crisis management ($r=0.19$, $p<0.001$), (2) overall risk perceptions and economic threat ($r=0.22$, $p<0.001$), (3) attitudes towards crisis management and the compliance to behavioral guidelines ($r=0.15$, $p<0.001$), (4) attitudes towards crisis management and economic threat ($r=-0.15$, $p<0.001$).
Respondents for whom the prime minister is the most reliable spokesperson evaluate the crisis management significantly higher than all other groups. Significant lower evaluation of the crisis management was expressed by respondents for whom infectious diseases specialists are the most reliable spokespersons.
Respondents for whom the MOH website is the most reliable source of information evaluate the crisis management higher than all other groups. Respondents for whom the scientific articles are the most reliable source of information evaluate the crisis management less than those who trust mostly WHO/CDC websites or HMO/Hospital websites & HCWs.

Conclusions: The higher the public's trust and evaluation of the crisis management, the more the public complies with the guidelines. It was also found that the crisis management and information cannot be approached in the same way for the whole public. Furthermore, unlike other epidemic crises, the COVID-19 crisis has widespread economic and social consequences and therefore it is impossible to communicate and focus only on the health risk without communicating the economic and social risks as well.

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Respondents for whom the prime minister is the most reliable spokesperson evaluate the crisis management significantly higher than all other groups. Significant lower evaluation of the crisis management was expressed by respondents for whom infectious diseases specialists are the most reliable spokespersons.

Respondents for whom the MOH website is the most reliable source of information evaluate the crisis management higher than all other groups. Respondents for whom the scientific articles are the most reliable source of information evaluate the crisis management less than those who trust mostly WHO/CDC websites or HMO/Hospital websites & HCWs.

Conclusion: The higher the public's trust and evaluation of the crisis management, the more the public complies with the guidelines. It was also found that the crisis management and information cannot be approached in the same way for the whole public. Furthermore, unlike other epidemic crises, the COVID-19 crisis has widespread economic and social consequences and therefore it is impossible to communicate and focus only on the health risk without communicating the economic and social risks as well.

Keywords: COVID-19 ; Risks Perceptions ; Crisis management, Economical Threat, Compliance to Guidelines, Spokesperson Credibility; Source of Information Reliability; Online Survey.

Introduction

On January 30, 2020, the World Health Organization (WHO) declared the coronavirus outbreak an international emergency Public Health Emergency of International Concern (PHEIC) [1]. The virus continued to spread and cross borders, and on March 11, 2020, the WHO officially declared coronavirus disease a pandemic [2,3]. The declaration of a pandemic posed challenges to many countries, prominent among them communication with the public to gain its cooperation [4,5].

We have seen over and over again, despite awareness of the centrality and importance of emerging infectious disease (EID) communication, and the numerous guidelines and reports written by the WHO about the importance of risk communication, that there are still many communication failures globally and locally surrounding the successive pandemic outbreaks, such as the Mad Cow Disease, SARS, H1N1, Zika, Ebola [6,7].

Studies have indicated that mistrust in the authorities, lack of information transparency, and failure to customize the information to different subpopulations, are the main reasons for the failures of emerging infectious disease (EID) communication over the years [8,9].

Public trust in government institutions and leaders is considered essential in any country that seeks to impose its authority on the public and to maintain order. If citizens do not place trust in the authority, the character of the country as well as its political, economic and social stability are liable to be harmed [10]. Research shows that the degree of trust has a major impact on public willingness to receive health instructions and to seek out the services offered [11,12]. Lack of cooperation and low levels of trust are liable to cause the public to distance itself from the health system, thus exposing individuals and society to medical complications, such as disease outbreaks, poor health, and the inability of various population groups to function due to health problems [13]. Trusting an institution implies that individuals believe the entity is generally competent, able to fulfill its obligations toward its constituents, and acts in responsible ways [11]. In decision-making during health crises, individuals must trust the information they receive from the organization, and trust the organization and its spokespersons who communicate the information [14,15]. Trust of information sources is

another element that influences the public's behavior during health crises. Conveying the information and communicating the risk to the public during the COVID-19 crisis are becoming complicated issues because of the ongoing uncertainty surrounding the source and spread of the virus and the absence of a vaccine [16-20].

During a health crisis, policymakers need to state the uncertainty and share all of the existing information with the public, while addressing and customizing the information to different populations, in order to earn public trust [9]. Several studies conducted during pandemic crises such as the Ebola in the US [21] and the polio crisis in Israel [22] indicated that the public is impatient and does not cooperate when the authorities provide partial or selective information.

On the individual level, the WHO and health authorities issued instructions to the public on how to avoid contracting COVID-19. The main instructions are frequent handwashing with soap and water or sanitizing with an alcoholic solution, keeping a distance of at least 1 m' from a person who has a cough or sneeze, avoiding the touching of one's face, covering one's nose when sneezing or coughing, staying at home, avoiding smoking or activities that weaken the lungs, and refraining from unnecessary travel or congregating [3].

On the state level, the COVID-19 has created national emergencies. Each country has decided on its own policy to manage the epidemic [23,24]. Measures have ranged from the strident to the lax: China enacted extreme measures including a general curfew, shutting down air and land travel between cities and states, prohibiting any form of public gathering, building hospitals for COVID-19 patients, and hiring healthcare personnel; South Korea enacted diverse measures, including a combination of monitoring and careful screening based on increasing the number of tests (drive-through testing centers) and using electronic surveillance systems to monitor patients [25-27]; and some countries changed their approach in the middle of the global crisis from a lenient approach to a stringent one, such as the US and the UK [28].

Israel is one of the countries that responded to the crisis early. On February 27 the first COVID-19

case was confirmed in Israel. Since then schools were shut down, gatherings were prohibited, electronic surveillance measures were introduced by the government to monitor citizens, and emergency regulations were enacted, including imposing a curfew and allowing exit from homes only for critical needs (such as food shopping, receiving medical care and buying medicine) [29].

As of April 12, 2020, the number of confirmed COVID-19 cases in Israel was 10,878, an infection rate of 1,257 cases per million citizens. There were 103 deaths, which is 12 per one million citizens. Relative to 210 countries and territories worldwide, Israel ranked 47th regarding the number of deaths per million, and 25th regarding the number of confirmed cases per million. In addition, the number of tests for coronavirus in Israel was 13,577 per million citizens [30].

What singles out Israel's management of the COVID-19 crisis from other countries is that Israel is in the midst of a deep constitutional crisis that impacts its management of the health crisis. “The spread of the coronavirus has created a multi-dimensional crisis in Israel. Internally, the epidemic is endangering public health, undermining economic and social resilience, challenging effective governance, and even providing cover for processes that could potentially harm democratic values [31].”

Currently the crisis in Israel is being managed by an interim prime minister operating under three criminal indictments, with an interim government, after three election cycles in which there was no clear victor. Israel’s parliament stopped functioning normally [32]. Prime Minister Netanyahu made critical decisions during the COVID-19 crisis, such as to shut down the court system and to use surveillance to monitor patients, without bringing the decisions to the cabinet [32]. Some critics argue [33] that some of Netanyahu's decisions were motivated by personal interests (such as closing the courts and thereby postponing his trial), and political considerations, such as the decision to delay the lockdown of centers of contagion like the ultra-Orthodox communities [33-35]. The COVID-19 crisis in Israel is being managed by Netanyahu, the director general (DG) of the Ministry of Health

(MOH) who is an economist, and the head of public health services (PHS) at the MOH [36]. Most of the decisions are made by a small team set up by Netanyahu [37]. Health Minister Yaakov Litzman (who is not a medical professional) was involved in the decision-making process only at the beginning of the crisis, and refused to take measures against the ultra-Orthodox community, which is his constituency. During the crisis, hospital directors, physicians and scientists criticized its management [37-39], and called for the replacement of the MOH DG and minister Yaakov Litzman, by healthcare professionals [40,41]. There was also criticism of the shortage of testing kits [42] and protective equipment for medical workers [43], as well as of the way conflicting information was communicated to the public.

In light of the unique confluence in Israel of the health crisis and the constitutional crisis, this study seeks to examine the Israeli Public's response to the Israeli government's emergency instructions against the pandemic in terms of correlations between: (1) overall risk perceptions and crisis management, (2) overall risk perceptions and economic threat, (3) crisis management and the compliance to behavioral guidelines, (4) crisis management and economic threat, and comparisons between (1) crisis management and spokesperson credibility, and (2) crisis management and source of information reliability.

Methods

Sampling and data collection

The sample was planned using a Qualtrics XM online survey that provided the quick and effective distribution of an online questionnaire (see appendix X) to our research population (the general public in Israel). We used the self-selection online survey method of nonprobability sampling [44] to recruit participants through social network posts calling on the general public (18+) to answer the survey. The rationale for using this sampling method has to do with the fact that the general public including the researchers in Israel was under movement restrictions at the time of the study, and

therefore distribution of the questionnaire on the social networks was more accessible and quicker.

The survey was distributed to the public using three main social media platforms: Facebook, WhatsApp, and Instagram. In the first stage, intensive sampling was used through social networks and social media platforms. The second stage was snowball sampling [45] to reach broader circles in the Jewish and Arab communities. In the third stage, after a summary meeting and evaluation of the breakdown of the sociodemographic variables, it emerged that the number of respondents from the Arab community was higher than from the Jewish community. Another effort was focused on dissemination through diverse community circles in the Jewish community such as community forums, official community Facebook pages, and internal diffusion circles that expanded to broader circles.

A total of 1348 respondents participated in the survey using the Qualtrics XM platform. However, 292 (27.65%) questionnaires were not completed until the end, including questionnaires who were filled out by participants under 18 years old age. Those questionnaires were taken out of the sample, leaving a total of 1056 eligible participants

The study was approved by the Faculty of Social Welfare and Health Sciences Ethics Committee for research with human subjects at the University of Haifa (Approval no. 20/088).

Research tools

A quantitative questionnaire was designed to test the following variables: risk perceptions, crisis management, compliance with directives imposed on the public (report of behavioral intentions), and information sources. The questionnaire was based on previous questionnaires culturally accommodated to populations in Israel, accommodated to the characteristics of the COVID-19 crisis and the measures taken in its wake [46-50].

Credibility and validity

Before the questionnaire was distributed, a content validation process was undertaken by a pilot study of 20 participants in a limited sampling of the researchers' narrow circles. The respondents

were asked to provide feedback on the wording of the questionnaire, time of questionnaire filling, etc., and changes were made accordingly. The questions were written in Hebrew and translated into Arabic and subsequently changes were made in the wording while culturally accommodating it to the specific research population (for instance explanations were given to certain statements to focus the respondents and prevent information bias).

Questionnaire structure and variable design

In the first part of the questionnaire (Multimedia Appendix 1) the participants were asked to fill out demographic information. The second part included an index of questions about risk perception: (1) Personal fear of contracting coronavirus such as “How serious do you perceive COVID-19 to be?”. The personal risk perception index is the average of 2 questions (Cronbach α=0.76), and (2) Fears about different age groups, such as “To what extent do you think the following populations are at high risk of contracting the COVID-19?”. The overall risk perception index is the average of 17 items (Cronbach =0.91).

The third part included an index of 14 questions (statements) on a Likert scale from 1 (Not at all) to 5 (very) about behavior according to the guidelines given to the Israeli public as a whole. For example: “During the COVID-19 crisis, to what extent do you think you can give up the following behaviors: handshaking, hugging, kissing, not attending social gatherings, etc.?” Or, “How hard is it for you to follow the guideline against leaving home to the following destinations?” Compliance to behavioral guidelines was calculated as the average of all 14 items (Cronbach α=0.83).

The fourth part was an index of questions about perceptions of the crisis management, such as “I think that the measures taken by the state so far to prevent the spread of the covid-19 have been” or “ I think the Prime Minister’s Office and the Ministry of Health are communicating the COVID-19 crisis to the public in a way that is.”

Attitudes on the crisis management index were calculated as the average of 3 questions after recoding the values of each question into 3 levels of evaluation: 1.5 for poor management, 3 for

moderate and 4.5 for good management (3 items, Cronbach =0.60).

The fifth part included a question about economic security "Beyond the health threat the COVID-19 poses for the public, to what extent does it threaten your economic security?" (1- It is no threat at all, 5 - It is a very major threat)

The sixth part included questions about the credibility of the spokesperson and credibility of the source of information, such as "What do you think is the most credible source of information on the COVID-19?" (respondents were asked to mark one information source out of a list of sources), or "Do you feel you are receiving fully transparent information from the MOH? " (1- Not at all – 5 - I receive extremely transparent information).

Analysis

Step 1: Testing the specific differences among age groups was done by post-hoc comparisons using Tukey's honestly significant difference (HSD) Test**.** A comparison of the personal risk perceptions between age groups was tested using an ANOVA model, where the dependent variable is the risk perceptions and the independent variable is age (4 age-groups). A significant difference between age groups was detected $F_{3,1050}$=5.14 (P=.002). Means and standard deviations of personal risk index for the 4 age groups are presented in Table 1:

Table 1: A comparison of the personal risk perceptions between age groups using an ANOVA model (n=1056).

Age	Mean	SD
18-30	2.76	0.55
31-45	2.84	0.67

Age	Mean	SD
46-64	2.70	0.74
65+	3.08	0.94

Step 2: Correlation between overall risk perceptions and attitudes towards crisis management and correlation between overall risk perceptions and economic threat were tested using the Pearson correlation coefficient.

Step 3: Correlation between attitudes towards crisis management and compliance with behavioral guidelines, and correlation between attitudes towards crisis management and economic threat were tested using the Pearson correlation coefficient.

Step 4: Testing the specific differences among the six groups was done by post-hoc comparison using Tukey's (HSD) Test. The relation between preferred spokesperson and attitudes towards crisis management was tested using an ANOVA model, where the dependent variable is crisis management and the independent variable is spokesperson (6 groups excluding family doctors or other).

A significant difference was detected between respondents who trust different spokespersons in their attitudes towards crisis management $F_{5,981}$=43.16 (P<.001). Means and standard deviations of attitudes towards crisis management for the six trusted spokespersons are presented in Table 2.

Table 2: The relation between the preferred spokesperson and the attitudes towards crisis management using an ANOVA model (n=1056).

Preferred spokesperson	Mean	SD
Israel Prime Minister	3.84	0.4

Preferred spokesperson	Mean	SD
		4
MOH DG	3.58	0.49
Head of PHS	3.49	0.45
Israel Minister of Health	3.33	0.34
Infectious diseases specialists	2.92	0.68
Journalists	2.87	0.45

Step 5: Testing the specific differences among the six groups was done by post-hoc comparisons using Tukey's (HSD) Test.

Results

A total of 1056 eligible participants filled out the online questionnaire (Table 3). 219/1056 (20.74%) men and 837/1056 (79.26%) women. The age of the respondents varies from 18 to 95, with a mean age 38. 423/1050 (40.29%) respondents are Jews and 627/1050 (59.71%) Arabs. 395/1028 (38.42%) respondents are secular, 443/1028 (43.09%) traditional and 190/1028 (18.48%) religious. The level of education of the respondents is as follows: 118/1056 (11.17%) respondents have Secondary education, 102/1056 (9.66%) Post-secondary, 413/1056 (39.11%) BA, 331/1056 (31.34%) MA,

49/1056 (4.64%) PhD and 43/1056 (4.07%) other types of education.

Table 3: Sociodemographic characteristics (n=1056).

Sociodemographic characteristics and category	n (%)
Gender	
Male	219 (20.74)
Female	837 (79.26)
Age (years)	
18-30	356 (33.78)
31-45	414 (39.28)
46-64	224 (21.25)
65+	60 (5.69)
Education	
Secondary	118 (11.17)
Post-secondary	102 (9.66)
BA	413 (39.11)
MA	331 (31.34)
PhD	49 (4.64)
Other	43 (4.07)
Ethnicity	
Jews	423 (40.29)
Arab	627 (59.71)
Religiosity	
Secular	395 (38.42)
Traditional	443 (43.09)
Religious	190 (18.48)

Since the ethnicity distribution of the sample is not proportional to the distribution of the general population, a weighting index was calculated. The ethnicity distribution after weighting the data is 19% Arabs and 81% Jews, according to the distribution of ages 18+ in the general population. In order to reduce biases, weighting was applied to the data on all statistical inferences (the socio-demographic details presented in Table 3 are based on raw data, with no weighting applied).

Risk perceptions

A significant difference was found between respondents aged 65+ and respondents aged 18-30 or 46-

64. Respondents aged 65+ perceive higher personal risk compared to ages 18-30 (mean difference 0.33, 95% CI 0.04-0.61) and compared to ages 46-64 (mean difference 0.38, 95% CI=0.12-0.64). There is no significant difference between respondents aged 65+ and respondents aged 31-45 in the perception of their personal risk (Table 4).

Table 4: Tukey's HSD test for difference between personal risk perception and age group (n=1056).

Age group (years)	Difference between means
65+ - 31-45	0.25, 95% CI -0.01-0.50
65+ - 18-30	0.33, 95% CI 0.04-0.61[a]
65+ - 46-64	0.38, 95% CI 0.12-0.64[a]
31-45 - 18-30	0.08, 95% CI -0.13-0.29
31-45 - 46-64	0.14, 95% CI -0.04-0.32
18-30 - 46-64	0.05, 95% CI -0.15-0.27
[a] Statistically significant at $\alpha = 0.05$	

A significant positive correlation (Pearson) between overall risk perceptions and attitudes towards crisis management was found (r=0.19, $p<0.001$). As risk perceptions increase the evaluation of the crisis management tends to increase as well.

A significant positive correlation was found between overall risk perceptions and economic threat (r=0.22, $p<0.001$). As risk perceptions increase the evaluation of the economic threat tends to increase as well, and vice versa – higher economic threat is associated with higher risk perception.

Crisis management

A significant positive correlation was found between attitudes towards crisis management and compliance with behavioral guidelines (r=0.15, $p<0.001$). Higher evaluation of crisis management is associated with higher compliance.

A significant negative correlation was found between attitudes towards crisis management and economic threat (r=-0.15, p<0.001). Higher economic threat is associated with lower evaluation of the crisis management.

Spokesperson credibility

Respondents for whom the prime minister is the most reliable spokesperson evaluate the crisis management significantly higher than all other groups (Table 5). Significant lower evaluation of the crisis management was expressed by respondents for whom infectious diseases specialists are the most reliable spokespersons, compared to those who trusted the DG of the MOH, the head of PHS, or the minister of health the most. Respondents for whom journalists are the most reliable spokespersons evaluate the crisis management significantly lower than those who rely mostly on the DG of the MOH or the head of PHS.

Table 5: Tukey's HSD test for difference between preferred spokesperson and the attitudes towards crisis management (n=1056).

Spokesperson comparison	Difference between means
Prime Minister	
MOH DG	0.26, 95% CI 0.03-0.48[a]
Head of PHS	0.35, 95% CI 0.09-0.61[a]
Minister of Health	0.51, 95% CI 0.11-0.90[a]
Infectious diseases specialists	0.92, 95% CI 0.70-1.14[a]
Journalists	0.97, 95% CI 0.48-1.45[a]
MOH DG	
Head of PHS	0.09, 95% CI -0.13-0.31
Minister of Health	0.25, 95% CI -0.12-0.62
Infectious diseases specialists	0.66, 95% CI 0.49-0.83[a]
Journalists	0.71, 95% CI 0.24-1.19[a]
Head of PH Services	
Minister of Health	0.15, 95% CI -0.24-0.55

Spokesperson comparison	Difference between means
Infectious diseases specialists	0.57, 95% CI 0.35-0.78[a]
Journalists	0.62, 95% CI 0.13-1.11[a]
Minister of Health	
Infectious diseases specialists	0.41, 95% CI 0.05-0.78[a]
Journalists	0.46, 95% CI -0.11-1.04
Infectious diseases specialists	
Journalists	0.05, 95% CI -0.42-0.52
[a] Statistically significant at α = 0.05	

Source of information reliability

Respondents for whom the MOH website is the most reliable source of information evaluate the crisis management higher than all other groups (Table 6).

Respondents for whom scientific articles are the most reliable source of information evaluate the crisis management less than those who trust mostly WHO/CDC websites or HMO/Hospital websites & HCWs.

Table 6: Tukey's HSD test for difference between source of information and the attitudes towards crisis management (n=1056).

Source of information comparison	Difference between means
MOH website	
WHO/CDC websites	0.38, 95% CI 0.20-0.56[a]
HMO/Hospital websites + HCWs	0.42, 95% CI 0.20-0.65[a]
Google / Social networks	0.44, 95% CI 0.02-0.87[a]
Media (TV/Newspapers)	0.55, 95% CI 0.17-0.93[a]
Scientific articles	0.74, 95% CI 0.49-0.99[a]
WHO/CDC websites	
HMO/Hospital websites + HCWs	0.04, 95% CI -0.18-0.26

Source of information comparison	Difference between means
Google / Social networks	0.06, 95% CI -0.37-0.49
Media (TV/Newspapers)	0.16, 95% CI -0.21-0.54
Scientific articles	0.36, 95% CI 0.11-0.61[a]
HMO/Hospital websites + HCWs	
Google / Social networks	0.02, 95% CI -0.42-0.47
Media (TV/Newspapers)	0.13, 95% CI -0.27-0.52
Scientific articles	0.32, 95% CI 0.04-0.60[a]
Google / Social networks	
Media (TV/Newspapers)	0.10, 95% CI -0.44-0.64
Scientific articles	0.29, 95% CI -0.17-0.76
Media (TV/Newspapers)	
Scientific articles	0.19, 95% CI -0.23-0.61
[a] Statistically significant at $\alpha = 0.05$	

Discussion

This study conducted in during March 2020 in Israel (at the beginning of the first measures of the crisis) sought to examine the public's risk perceptions concerning the COVID-19 and its assessment of the policymakers' crisis management. The findings indicate that interviewees who belong to the 65+ age group are much more concerned (higher risk perception) of contracting the coronavirus than the two younger age groups. This finding is consistent with the scientific facts indicating the older age group is at higher risk than the other groups as to the severity of the illness and fatality rate [51]. That understanding by the older age group indicates that its fears are science-based and are not false concerns. Likewise, the other two age groups are less afraid in consistence with their relative risk compared to the older age group.

The findings of the present study also indicate that the greater the research interviewee's personal risk perception (perceives the disease as serious and is concerned of it), the better that individual's evaluation of the crisis management, and the lower the individual's risk perception, the worse their evaluation of the crisis management. An explanation of this finding can be that people who are very concerned of the coronavirus are in such a high level of fear that they view any action taken by the

policymakers to confront and combat the virus as reasonable. Furthermore, the actions Israel took such as requiring people returning from abroad to enter quarantine since the beginning of the crisis before there were any fatalities in Israel; the grounding of flights, the cancellation of public events and gatherings, surveillance and phone tracking of patients, and a curfew on the entire public, were perceived by people very afraid of the sickness as appropriate and not as excessive measures. To reinforce this interpretation, it was found in studies that higher levels of perceived susceptibility are associated with greater intention to change behavior in the manner recommended in the fear appeal message, and are a strong determinant of intentions and behavior, even in the face of weak arguments [52]. On the other hand, people whose perceived susceptibility is lower evaluate the crisis management as less good, possibly for the opposite reason: they view the draconian measures taken by Israel, which drew public criticism [38,53], including an arbitrary curfew on the entire population (including subpopulations that were not at risk) and a curfew on geographical areas where contagion was low, as excessive and disproportionate.

Another finding of the study is a positive significant correlation between overall risk perceptions and economic threat. As risk perceptions increase, the evaluation of the economic threat tends to increase as well, and vice versa – higher economic threat is associated with higher risk perception.

This finding indicates that the health crisis caused by the COVID-19 pandemic had far-reaching consequences for the global, national and personal economy, so that interviewees are afraid not only of the health threat but also of the inherent economic threat. It was also found that higher economic threat is associated with lower evaluation of crisis management.

It is likely that people who feel a high personal economic threat feel that the government is not managing the crisis well if it is allowing their economic resilience to be harmed. The feeling that the crisis management is causing fatal harm to the Israeli economy also arises from the conversation on the social networks and the Israeli media, where it has been argued that the high economic and political price that Israel is paying is even more dangerous than the COVID-19 [54].

Another key finding from this study is a positive significant correlation between attitudes towards crisis management and compliance with behavioral guidelines. Higher evaluation of the crisis management is associated with higher compliance with behavioral guidelines.

Studies in literature indicate that public trust in government institutions and leaders is considered essential in any country that seeks to impose its authority on the public and maintain order. A high evaluation of the authorities' functioning and trust therein impacts on the public's behavior [11,12]. In the context of this study, the interviewees' high evaluation of the crisis management in Israel affected the public's high compliance with the guidelines during the pandemic. This finding reinforces the importance of trust in the healthcare system especially during a crisis, when the public is asked to change its routine behaviors and habits, as is happening during the coronavirus crisis.

Furthermore, the findings of this study indicate that respondents for whom the prime minister is the most reliable spokesperson evaluate the crisis management as significantly better than all other groups. Significantly worse evaluation of the crisis management was expressed by respondents who perceive infectious disease specialists as the most reliable spokespersons, compared to those who trust most the MOH DG, the head of the PHS, or the minister of health. These findings indicate the importance of spokespersons during epidemic crises [55].

Selecting appropriate spokespersons to communicate with the public during and after a crisis is a strategic decision that can have far-reaching results [56-58]. The spokesperson is perceived as the representative of the establishment managing the crisis [55,59,60]. The higher the credibility of the spokesperson, the greater the chance the audience will be open to receiving the messages and complying with the guidelines.

Interviewees who viewed Prime Minister Netanyahu as a credible spokesperson evaluated the crisis management as good, because Netanyahu functioned under "two hats:" both as the manager of the crisis and as its spokesperson. Throughout the crisis, Netanyahu appeared at dozens of press conferences and delivered the guidelines to the public himself. Conversely, interviewees who viewed

the infectious disease specialists as more credible spokespeople had a lower evaluation of the crisis management. The reason is apparently that in Israel the crisis was managed over all the period since the COVID-19 crisis began, by a very narrow and centralized team including Netanyahu, the DG of the MOH, and the head of PHS (the health minister was hardly involved) [37]. This team was harshly criticized by certain elements in the healthcare system and the general public. The criticism focused on the insufficient number of public health and medical experts on the team. Due to the criticism, during the crisis hospital directors and physicians called for the firing of the director general of the MOH, who is an economist, and of the health minister, who is not a health professional, and their replacement with professionals [40,61]. In epidemic/pandemic crises in the new media age, it is important not only for the spokesperson but for the information sources to be perceived by the public as credible [62-65]. The findings of this study indicate that those who perceive the health ministry as the most credible, also perceive the crisis management as the most favorable, contrary to those who perceive academic articles as the most critical and perceive the crisis management as less favorable.

It is likely that the participants who perceive the MOH website as credible, which is to say the website that represents the body managing the crisis, also perceive the crisis management as good. Thus, they are exposed to the information on the MOH website, backing up its management decisions with findings and testimonies, which apparently impacts their view of the crisis management as optimal. Conversely, people who read academic articles and are not exposed only to informative materials provided to them by the MOH, are likely to be highly literate (capable of reading academic articles), and therefore it is likely to assume that they are exposed to other materials and findings that are not consistent with the MOH guidelines. Experts have raised the argument that the Israeli MOH guidelines are contradictory. At the beginning of the COVID-19 crisis, the Israeli MOH claimed there is no need for masks although they were already used in other countries according to recommendations and prior knowledge [66], however later the guideline was

changed to require the public to use masks. This oscillation was widely criticized .

In another example of conflicting information, due to the PPE shortage for its employees, the MOH initially issued a statement at a press conference in mid-March, saying that HCWs do not need to wear PPE regularly, but rather in certain situations [67]. Following the MOH statement, senior doctors from across the country claimed that the MOH statement was an excuse to cover up the inadequacy of the Israeli healthcare system, of which the PPE shortage is only one example according to the last State Comptroller and Ombudsman of Israel report [68].

Also, it was found in the literature that hesitant groups (concerning vaccines) who show skepticism towards the establishment are publics that are exposed to academic articles and do not rely only on government information [49]. Follow-up studies can examine the association between the phenomenon of hesitancy and the way hesitant groups perceive the COVID-19 crisis management.

Limitations

The study limitations are that this is not a representative study. This study used nonprobability sampling procedures and measuring. Despite the nonprobability sampling, the sample included a high total number of participants. Secondly, since the research was conducted during the COVID-19 crisis and it was important to examine the public's positions towards the crisis management, by decision to to distribute the survey online on the social networks to reach a broad circle of people in a short time. Furthermore, during the COVID-19 crisis the public was required to maintain social distancing, therefore an online survey was the most suitable tool. Nonetheless, the sociodemograpic statistics presented suggest that a diverse sample was reached, based on sociodemographic variables. Since the ethnicity distribution of the sample was not proportional to the distribution of the general population, a weighting index was calculated. The ethnicity distribution after weighting the data was 19% Arabs and 81% Jews, according to the distribution of ages 18+ in the general population. In order to reduce biases, weighting was applied to the data on all statistical inferences

Conclusions

This study suggests that it is critical to establish the public's trust in the decision makers. The higher the public's trust and evaluation of the crisis management, the more the public complies with the guidelines. It was also found that the crisis management and information cannot be approached in the same way for the whole public. The decision makers need to address and communicate the risks differently to different subpopulations, that have different risk perceptions and different levels of health literacy. Furthermore, unlike other epidemic crises, the COVID-19 crisis has widespread economic and social consequences and therefore it is impossible to communicate and focus only on the health risk without communicating the economic and social risks as well.

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Conflicts of Interest

The authors declare they do not have any conflicts of interest.

Multimedia Appendix 1

The online survey questionnaire.

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Abbreviations

CDC: Centers for Disease Control and Prevention

DG: Director General

EID: Emerging Infectious Disease

HCWs: Healthcare Workers

HMO: Health Maintenance Organization

MOH: Ministry of Health

PHEIC: Public Health Emergency of International Concern

PHS: Public Health Services

Tukey's HSD: Tukey's Honestly Significant Difference

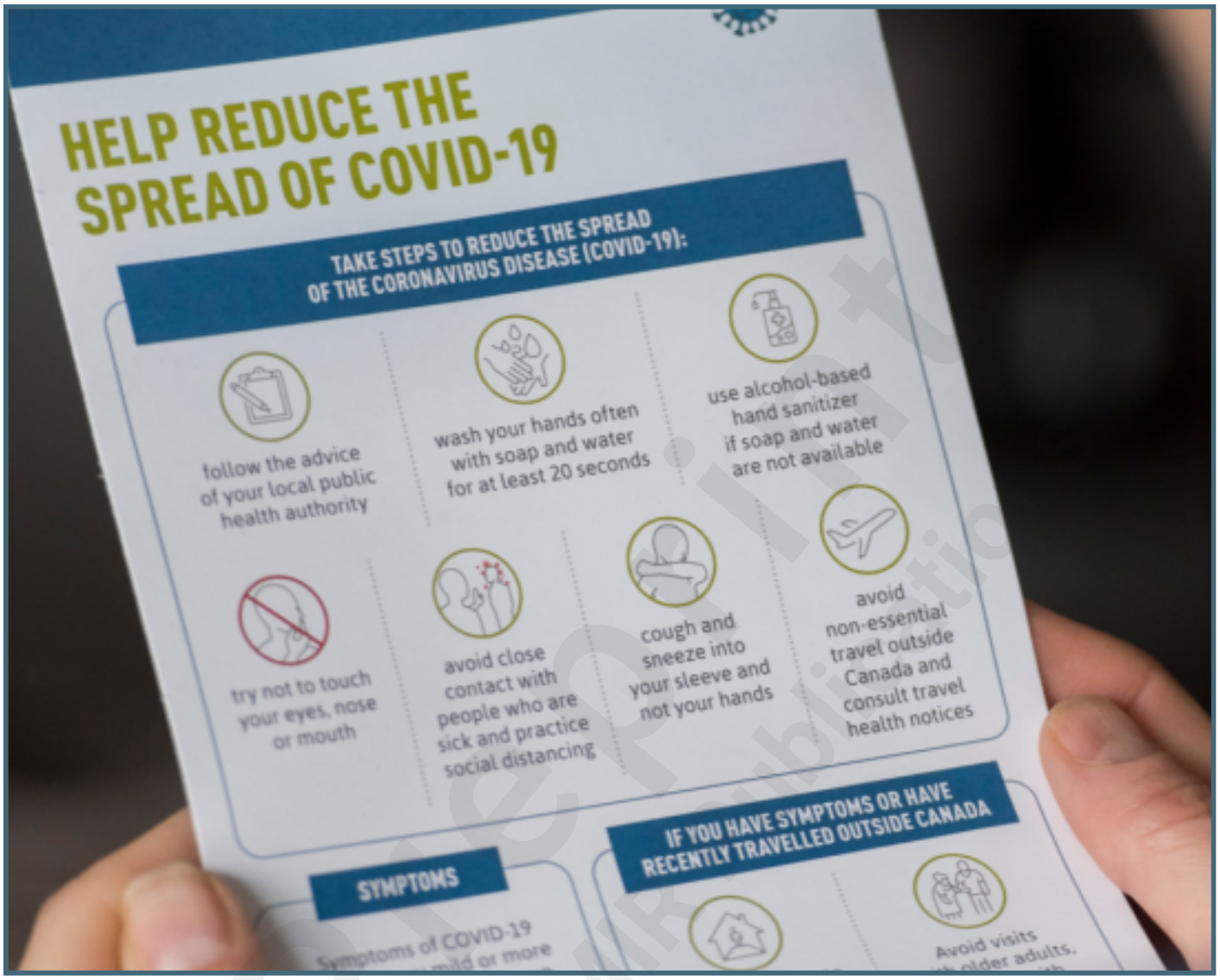
WHO: World Health Organization

Supplementary Files

Multimedia Appendixes

The online survey questionnaire.
URL: https://asset.jmir.pub/assets/850fe84ef6d8116ffd61a34fedce6b70.docx

TOC/Feature image for homepages


HELP REDUCE THE SPREAD OF COVID-19
TAKE STEPS TO REDUCE THE SPREAD OF THE CORONAVIRUS DISEASE (COVID-19):
follow the advice of your local public health authority
wash your hands often with soap and water for at least 20 seconds
use alcohol-based hand sanitizer if soap and water are not available
try not to touch your eyes, nose or mouth
avoid close contact with people who are sick and practice social distancing
cough and sneeze into your sleeve and not your hands
avoid non-essential travel outside Canada and consult travel health notices
SYMPTOMS
IF YOU HAVE SYMPTOMS OR HAVE RECENTLY TRAVELLED OUTSIDE CANADA
Avoid visits