TRUST IN INSTITUTIONS IMPACTING DISTRESS SYMPTOMS IN TIMES OF COVID-19: THE BRAZILIAN CASE

CONFIANÇA EM INSTITUIÇÕES IMPACTANDO SINTOMAS DE ANGÚSTIA EM TEMPOS DE COVID-19: O CASO BRASILEIRO

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A B S T R A C T

This paper provides a retrospective analysis of the impact of trust in institutions in Brazil during the initial wave of Covid-19 on distress symptoms. Capturing data from 571 respondents across all five Brazilian regions during the period of April-May 2020, the study examines the relationship between institutional trust and public health outcomes at the pandemic's onset. Our findings reveal four distinct trust-based groups, reflecting the multifaceted nature of trust amidst the political and misinformation crisis of the time. Notably, our data contradicts the expected norm: the group with the lowest trust in institutions reported fewer distress symptoms, a paradox possibly rooted in a negationist attitude linked to anti-establishment sentiments and the misinformation crisis. In a contemporary context, this study provides historical insights into the dynamics of the pandemic's early days and also offers a reflection point for understanding the long-term implications of institutional trust on public health, especially in times of crisis.

K E Y W O R D S

Trust, Institutions, Distress Symptoms, Covid-19

R E S U M O

Este artigo fornece uma análise retrospectiva do impacto da confiança em instituições no Brasil durante a onda inicial da Covid-19 sobre os sintomas de angústia. Capturando dados de 571 entrevistados de todas as cinco regiões brasileiras durante o período de abril-maio de 2020, o estudo examina a relação entre a confiança institucional e os resultados de saúde pública no início da pandemia. Nossos achados revelam quatro grupos distintos baseados na confiança, refletindo a natureza multifacetada da confiança em meio à crise política e de desinformação da época. Notavelmente, nossos dados contradizem a norma esperada: o grupo com menor confiança em instituições relatou menos sintomas de angústia, um paradoxo possivelmente enraizado em uma atitude negacionista ligada a sentimentos anti-establishment e à crise de desinformação. Em um contexto contemporâneo, este estudo fornece insights históricos sobre a dinâmica dos primeiros dias da pandemia e também oferece um ponto de reflexão para entender as implicações de longo prazo da confiança institucional na saúde pública, especialmente em tempos de crise.

P A L A V R A S - C H A V E

Confiança, Instituições, Sintomas de Angústia, Covid-19

INTRODUCTION

The emergence of Covid-19 pandemic brought critical challenges to humankind that go beyond the health problems. The massive public health campaign to slow the spread of the virus which includes hygiene measures and physical distancing brought social, governance and economic issues with it. The health threat of a disease that has no cure or treatment went beyond those that were directly affected by it (Bavel et al. 2020). In the long run, society would feel the effects of the management of the pandemic. Management of the crisis impacted economic recovery and the return to a "normal life", to prevent the worsening of the situation.

The pandemic and strategies to slow its spread could increase anxiety even in populations that are not directly affected by it (Bavel et al. 2020). Anxiety not only affected life during a pandemic but also made it difficult to recover afterwards by slowing the pace to get to normal. Previous research has shown that distress symptoms have a negative impact in goal attainment and psychological recovery (Clarke et al. 2009). Trust in institutions has a fundamental role in a pandemic, because it can increase the success of applying public health measures and having the population follow them (Morse et al. 2016; Vinck et al. 2019; Blair, Morse and Tsai 2017), on the other hand, the lack of trust may have the opposite effect (Alsan and Wanamaker 2018). In stressful pandemic emergencies, trust is essential (Quinn 2008), because "Trust is likely to be particularly important under circumstances where people feel they have very little personal control over their personal exposure to potential hazards" (Frewer 2004, 393). Our argument is that trust in institutions will lower distress symptoms.

If trust in institutions has a relevant role in mitigate effects of the pandemic, political polarization can have the opposite effect, damaging efforts to coordinate action because different segments of the population can arrive in different conclusions about the threats (Bavel et al. 2020) or do not believe that other groups will act as the health policies demand (Khemani 2020). This effect of polarization may be due to its effect on trust. Banda and Kirkland (2017) argues that polarization has a negative impact in trust in institutions, showing how as polarization increases trusting attitudes declines. Complementing our argument, political polarization will create diverse segments in the population with distinct configuration of trust in institutions leading to different levels of distress symptoms per segment.

Previous research has shown that other variables are predictors of distress during the Covid pandemic, such as Sense of Danger, Individual Resilience and the feeling of being Safe at Home (Kimhi et al. 2020; 2021). Besides that, some socio-cultural characteristics may influence distress in complex situations like this pandemic. Researchers have found similar patterns now (Kimhi et al. 2021; Ballada et al., 2022) as they found during war time (Kimhi et al. 2017). We expect that those variables may have similar effect in Brazil.

The Brazilian case was emblematic. The country was struggling to get out of an economic crisis and at the same time began a political crisis when it was hit by the Covid pandemic. The management of the pandemic by the Brazilian government, during the period of 2020-2022, was considered disastrous. Ex-President Bolsonaro has downplayed the virus, the Minister of Health was replaced twice during the pandemic, and the country has the highest number of cases and deaths in Latin America so far (Burki 2020; Lancet 2020). Brazil was facing some of the most important threats that could make it difficult to handle the pandemic (Bavel et al. 2020; Khemani, 2020): (a) political crisis characterized by polarization and anti-establishment sentiments (Mignozzetti; Spektor, 2019); and (b) misinformation crisis characterized by the development of conspiracy theories, fake news, and polarization and delegitimization of the traditional media (Matos and Formetin 2016; Machado and Miskolci 2019; Vinck et al. 2019).

Political polarization in Brazil, came together with anti-establishment sentiments (Mignozzetti and Spektor 2019). Polarization was limited by the Oligarchy Politics, but the anti-establishment sentiment enhanced the distrust in institutions as a whole and not only in government.

Information is essential in a pandemic, because cooperative action is needed (Bavel et al. 2020; Khemani 2020). Brazil was facing a crisis in the media related with the political crisis (Matos and Formetin 2016; Machado and Miskolci 2019). Conspiracy theories, fake news, polarization and delegitimation of the traditional media in the era of post-truth (Kozinets, Gershoff and White 2020) affected the transmission of reliable information necessary to create cooperative action and change in behavior to fight the pandemic.

Political and misinformation crisis together created a complex context that affected the trust in institutions during Bolsonaro Government. Our challenge is to make sense of it and bring elements that can help us to better understand how this complex environment influenced trust, and the impact of trust in the distress symptoms. Better managing the pandemic could have made the path to recover faster.

In light of these challenges, this paper aims to present a snapshot of Brazil's first wave of Covid-19 and also to underscore the importance of analyzing such critical moments in history. Understanding the interplay between trust in institutions and distress symptoms during the initial wave provides insights for managing future public health crises. As we assessed the complexities of trust in emergent groups, misinformation, and public response in the face of a global health emergency, this study aims to offer insights and reflections that are as relevant today as they were at the start of the pandemic.

BACKGROUND THEORETICAL

Trust in Institutions: A Cornerstone in Pandemic Response

Trust in institutions is pivotal during a public health crisis, as it significantly influences the public's adherence to health guidelines and directives issued by authorities. Trust, or the lack thereof, shapes how information is received and acted upon by the population. In the context of a pandemic, institutional trust encompasses trust in the healthcare system, government bodies, and the media, all of which play critical roles in managing the crisis and disseminating information.

Trust in institutions is a multi-dimensional construct, reflecting the public's confidence in the capability, honesty, and reliability of institutions (Meyer and Ward, 2013). In public health emergencies, trust facilitates cooperation with health measures and compliance with preventive actions (Siegrist and Zingg, 2014). It has been observed that high levels of institutional trust correlate with better health outcomes, as trust promotes adherence to health advisories and vaccination uptake (Bish and Michie, 2010).

The role of trust extends to the processing of information. In times of crisis, individuals are inundated with information, often leading to uncertainty and anxiety. Trust in institutions acts as a filter, influencing which information is deemed credible and which actions are considered appropriate (Luhmann, 2017). When trust is compromised, misinformation can proliferate, leading to resistance against health measures and skepticism towards official guidelines (Van Prooijen and Douglas, 2017).

Trust in Institutions in the Brazilian Context

The Brazilian scenario during the Covid-19 pandemic indeed provides a distinct landscape for examining the interplay between trust in institutions and public response during a health crisis. The country's pre-existing political and economic conditions, characterized by a high degree of volatility and polarization, have significantly influenced the public's trust in institutions. This complex backdrop has profound implications for the effectiveness of public health measures and the overall management of the crisis.

Political and Economic Turbulence: Brazil's political climate prior to the pandemic was marked by instability and controversy, factors which have been found to erode public trust in governmental institutions. The political unrest, characterized by frequent leadership changes and corruption scandals, created a climate of skepticism and uncertainty among the population (Pereira & Teles, 2019). Economic challenges, including high unemployment rates and socio-economic disparities, further exacerbated the public's mistrust and dissatisfaction with institutions (Sott et al., 2022).

Polarization and Public Trust: The impact of political polarization on trust in institutions during the pandemic cannot be overstated. In Brazil, political divisions were intensified by conflicting narratives regarding the severity of the pandemic and the appropriate response measures. This polarization has been shown to undermined the public's trust not only in the government but also in health institutions and the media, thereby affecting compliance with public health directives (Garrett, 2020). Research indicates that in highly polarized societies, individuals are more likely to align their trust in institutions with their political affiliations, leading to a fragmented and uneven response to public health crises (Lazer et al., 2018).

Effectiveness of Public Health Measures: The erosion of trust in institutions due to political and economic instability, coupled with a polarized political landscape, had direct implications for the effectiveness of public health measures. Trust is a crucial component in the public's compliance with health directives. A lack of trust can lead to skepticism towards public health guidelines, resistance to vaccination, and non-compliance with containment measures (Bavel et al., 2020). The Brazilian case has highlighted how diminished trust can lead to mixed messages, confusion, and ultimately, a suboptimal public response to the pandemic (Bargain & Aminjonov, 2020).

In summary, the Brazilian context during the Covid-19 pandemic underscored the significant role of trust in institutions for an effective public health response. The pre-existing political and economic turbulence, along with the heightened state of polarization, has crucially shaped the public's trust and subsequent compliance with health measures. This case offers valuable insights into the dynamics of trust and public health during a crisis and underscores the need for stable, transparent, and consistent communication from institutions to foster public trust and cooperation.

Trust and Distress Symptoms during Covid-19

The relationship between trust in institutions and distress symptoms during Covid-19 is intricate and multi-faceted. Distress symptoms, encompassing anxiety, depression, and stress reactions, can be exacerbated or mitigated by the level of trust in institutions.

Theoretically, trust in institutions should act as a buffer against distress symptoms. Trust can provide a sense of security and predictability in uncertain times, reducing anxiety and stress (Hetherington, 2005). In the context of a health crisis, trust in health institutions and authorities can alleviate fear and panic, as the public feels reassured about the management of the crisis and the reliability of the information received (Quinn, 2008).

However, the findings from the Brazilian case present an anomaly: lower levels of trust in institutions are associated with lower levels of distress symptoms. This counterintuitive result suggests

the presence of underlying factors, such as denialism or a coping mechanism rooted in skepticism towards the establishment and official narratives. The negationist attitude towards the pandemic and the distrust in institutions may lead to a false sense of security or indifference, superficially reducing distress symptoms (Van der Weerd et al., 2011).

Therefore, the interplay between trust in institutions and distress symptoms during the Covid-19 pandemic is complex and influenced by various socio-political and psychological factors. The Brazilian case offers valuable insights into this relationship, challenging conventional assumptions about the role of trust in managing public health crises. Understanding the nuances of this relationship is crucial for devising effective communication strategies and interventions to manage current and future public health emergencies. Further research is needed to unravel the underlying mechanisms of this relationship and to explore the long-term implications of trust dynamics on public health and wellbeing.

METHOD

Participants and Procedure

We conducted a survey to examine our main argument. The sample included 571 respondents from all five Brazilian regions. An online form hosted at the surveymonkey platform was distributed in social media using the snowball method. Data were collected between May 14th and 24th during the year 2020 Brazil had its first confirmed case in 26th February and it is first death in 18th March, 2020 (WHO, 2020). We presented a brief explanation before the questionnaire, informing that participation in the study is voluntary. We analyze our data using SPSS 23 (Cluster Analysis) and Jasp v.011.1.0 (Factorial analysis, Regression, Chi squared Test and Ancova).

Materials

Trust in institutions. We measured the variable with a single item for each institution: Trust in health institutions, Trust in government ability, Trust in the police, Trust in the national congress, Trust in the educational system and Trust in the media. This items were rated by a 5-point response scale ranging from 1 = not trust, to 5 = total trust. The use of the single-item measures is indicated when there are doubly concrete constructs, that is, constructs that have a simple object (e.g., an institution) and a single-meaning attribute (e.g., trust) (Bergkvist and Rossiter 2007).

Distress Symptoms. We measured the level of distress by nine items about anxiety and depression out of the Brief Symptom Inventory (Derogatis and Savitiz 2000). We used a Likert scale ranging from 1 (not suffering at all) to 5 (suffering very much). Following Kimhi et al. (2020), we did not include the item concerning suicidal. Cronbach's alpha is $\alpha = 0.86$.

Sense of Danger. We measure Sense of Danger with a seven-item scale (Solomon and Prager, 1992). Following Kimhi et al. (2020), we modified the threat from security to the COVID-19

pandemic threat (e.g., "To what extent are you worried about the increase of the COVID-19 global crisis?"). Also, we added the item "To what extent are you worried that we will not be able to overcome the COVID-19 crisis before many citizens in our country die from this disease?" The Likert-scale ranging from 1 (not at all) to 5 (very much) was rated to responses. The Cronbach alpha was $\alpha = 0.85$.

Feeling Safe at Home. This issue was examined by a single item: "To what extent do you feel safe at your home?" (Kimhi et al. 2020) in a response scale ranging from 1 = Not safe at all, to 5 = Very safe.

*Financial difficulties***.** This issue was examined by a single item: "Do you or your family currently experience financial difficulties due to the Coronavirus crisis (such as unemployment, reduced business activity and so on)" in a response scale ranging from 1 = Not at all, to 5 = to a very great extent.

Threats perceptions. We examined perceptions of the treats in four subdomains in life during Covid-19 times: economic threat, health threat, security threat and political threat in a response scale ranging from 1 = Not safe at all, to 5 = Very safe.

Demographic Variables. Seven demographic attributes were examined: (a) Age; (b) Gender; (c) Religiosity (assessed by 1-item with a 4-point scale ranging from 1 = secular to 4 = very religious); (d) Income level (assessed by 1-item with a 5-point scale ranging from 1=much above-average to 5 = much below average); (e) Educational level (assessed by 1-item with a 5-point scale ranging from 1 = elementary school to 5 = academic (master's degree and beyond)); (f) Political attitudes (assessed by 1-item with a 5-point scale ranging from 1 = stronger left to 5 = stronger right); (g) Number of children.

RESULTS

Trust in institutions

The anti-establishment sentiment in Brazil was captured by the low level of trust in institutions in the six variables used to measure it (Trust in health institutions [M=2.18/SE=1.01], Trust in government ability [M=1.82/SE=1.07], Trust in the police [M=2.87/SE=1.13], Trust in national the congress [M=1.85/SE=0.92], Trust in the educational system [M=3.04/SE=1.02], and Trust in the media [M=2.48/SE=1.10]). In order to identify latent factors related to trust in institutions, we applied an exploratory factor analysis to the 6 variables used to measure it. We extracted 2 factors, Factor 1 (Trust in health institutions, Trust in government ability, Trust in the police [α = 0.85]) and Factor 2 (Trust in national the congress, Trust in the educational system, and Trust in the media [α = 0.54]). We named Factor 1 Trust in the Government, because it entails variables that are related directly to the Federal Government, Trust in government ability, Trust in health institutions, which in Brazil is represented by the SUS (National Health Service), and Trust in the police, which relates to a fundamental definition of government, the monopoly of the use of violence. The Factor 2 had a low alpha and the variables could not be grouped together.

To capture the different groups with distinct configuration of trust in institutions, we ran a cluster analysis using the four variables. We ran the K-means algorithm with the number of clusters ranging from two to eight. We obtained seven sets of results, and used three indices (SIL, CH, and DB) to determine the suitable number of clusters (Arbelaitz et al. 2013). The SIL and DB indices suggest four optimal clusters, whereas the CH index suggests five clusters. Since two of the three indices favor four clusters, we selected four as the optimum number for clustering.

We created descriptive profiles for groups of participants with different characteristics based on the results of clustering analysis. Specifically, according to lower or higher than the midpoint of the scale for each variable, we extract four groups and name them: (a) Trust in Government (TG), composed of individuals that have high levels of trust in government (the highest level among all groups) and in the educational system, but have low levels in the congress and in the media; (b) Trust in Institutions (TI), composed of individuals that have high levels of trust in the congress, education system and in the media, the higher level of the three variables among all groups; and have lower level of trust in the Government; (c) Trust in Media (TM), with a high level of trust only in the media; and (d) Anti-Establishment (AE), composed of individuals with low level of trust in all four variables, and the lowest in Trust in the congress, education system, and in the media. All mean differences are significant at 95%, except for Trust in the media from TG and AE.

Groups' Comparisons

We used frequency table to compare the four groups among demographic characteristics. Regarding gender, TG group has more male than female, and it is statistically different from AE and TM groups. Concerning educational level, TI and TG groups tend to be less educated. We found no significant difference for age and income.

Concerning religion and political attitudes, TG has more religious individuals than secular, and TM has more secular than religious individuals. In turn, TG and AE have more right-wing than left-wing individuals, and TM and TI have more left-wing than right-wing individuals.

Our main assumption suggests that trust in a particular institution leads people to different interpretations over Covid pandemic threats. Anova test indicated that there is no statistically significant difference in Economic threats and Economic Difficulties among groups. In Health threat, the TM group has a higher perception of the threat than TG group. In Security threat, AE has a higher perception of the threat than TG and TI groups. Finally, in Political threat, AE and TM have a higher perception of threats than TG and TI groups.

Predictors of the Distress Symptoms

Our initial argument was that political polarization will create diverse segments in the population with distinct configurations of trust in institutions leading to different levels of distress symptoms per segment. We hypothesized that:

The mean of Distress Symptoms will be statistically different among the four groups. This difference in Distress Symptoms will be related to the level of trust of the groups. Previous research shows that trust in institutions makes people more willing to follow public health policies (Morse et al. 2016; Vinck et al. 2019; Blair et al. 2017). This reduces the perception of uncertainty that could lead to lower levels of Distress Symptoms. Since the Federal Government is seen as the coordinator of the public health policies in Brazil, we argue that the group with higher level of trust in government (TG) will have the lowest level of Distress Symptoms.

This hypothesis on the predictors of the participants´ COVID-19 distress was examined by multiple linear regression and Ancova test, followed by post hoc test via Bootstrapping. Sense of danger, Individual resilience, Safe at home, Educational level, Age, Children, Financial difficulties and Threat perceptions (economic, health, security and political) were treated as control variables. Table 1 shows that trust in institutions has a significant effect on Distress Symptoms (B=.05; p< .05).

Table 1 - Predictors of Distress Symptoms

	Multiple linear regression		Ancova Test*			
	Beta	**SE**	**Mean Square**	**F**	**p**	**η^2**
(Intercept/Residual)	3.381	0.367	0.450			
Trust in institutions	0.042*	0.025	1.198	2.662	0.047	0.011
Political Attitudes	-0.166**	0.041	4.543	10.095	0.002	0.013
Religiosity	0.002	0.032	2.304e-4	5.121e-4	0.982	0.000
Sense of danger	0.315**	0.050	17.286	38.413	< .001	0.051
Individual resilience	-0.483**	0.050	41.599	92.443	< .001	0.123
Safe at home	-0.029	0.034	0.361	0.802	0.371	0.001
Educational level	-0.037	0.025	0.646	1.435	0.232	0.002
Age	-0.006*	0.002	3.702	8.227	0.004	0.011
Children	-0.101*	0.027	6.081	13.513	< .001	0.018
Financial difficulties	0.079	0.027	3.979	8.841	0.003	0.012
Economic threat	0.074*	0.037	1.855	4.123	0.043	0.005
Health threat	0.001	0.034	0.025	0.055	0.815	0.000
Security threat	0.093*	0.034	3.953	8.783	0.003	0.012
Political threat	0.001	0.030	0.044	0.097	0.755	0.000

NOTE: * P<.05; ** P<.001.

The Ancova test also shows that distress symptoms averages for trust groups differ (F=2.67; p<.05). Bootstrapping post hoc analysis revealed AE (M=2.57/SD=.06) group to have the lower level of distress symptoms comparing to other groups. It is statistically significant lower than TM (M=2.77/SD=.06) and TI (M=2.79=.06) groups. The AE group also has marginal means lower than the TG (M=2.64/SD=.07) group, but does not differ significantly. The other three groups are not statistically different. These results provide partial support for our main hypothesis, but contrary to our expectations, the group AE has the lowest level of distress symptoms when the other variables effects were controlled.

Bootstrapping post hoc analysis for Distress Symptoms and Political Attitudes also revealed that the Left-wing group (M=2.82/SD=.05) has higher distress symptoms than the Center (M=2.71/SD=.05) and the Right-wing (M=2.48=.06) groups. Left-wing and Center groups do not differ significantly from each other, but they do differ from Right group. These results show that the Right-wing group has less distress symptoms.

In addition, regression shows that a higher sense of danger contributed to increasing the Distress Symptoms (B=.31; p <.001), whereas individual resilience contributed to decreasing it (B=-.48; p <.001) in congruence with previous researches (Kimhi et al. 2017; Kimhi et al. 2020). Feeling safe at home had no significant effect (B=-.29; *ns*). Age (B=-.006; p <.05) and the number of children (B=-.10; p <.001), negatively predicted distress, whereas Financial difficulties is positively related to it (B=.08; p <.05). Economic threat (B=.07; p <.05) and security threat (B=.09; p <.05) are positively related to distress.

DISCUSSION

The present study aimed to examine the impact of trust in government and institutions towards decreasing or enhancing anxiety and depression in individuals in Brazil during the Covid pandemic. The first aspect that needed to be discussed was the complexity of the Brazilian political context. Our understanding was that Brazil was facing a political and misinformation crisis along with the health crisis which led to different levels of trust in institutions in different groups in the country and to a political polarization. The analysis of our sample indicated that we had four different groups relating to trust that fit our understanding that they had different patterns of trust which was a result of the political and misinformation crisis.

Our argument is that those four groups help us to make sense of the political and misinformation crisis that Brazil was facing. The AE group had a low level of trust in Government, in spite of having more right-wings individuals. Polarization and anti-establishment sentiment made the political crisis more complex. Together with the TG group, AE had low level of trust in the Media. On the other side of the spectrum, TI and TM were more left-wing and had higher levels of trust in the Media, but different levels of trust in the Education Systems and in the Congress. We predicted that those different perceptions about the institutions would impact the level of distress symptoms in the individuals within the groups. The results partially corroborated our hypothesis, but brought some unexpected results.

Our result showed that differently from expected the group with the lower levels of trust in institutions had the lower level of distress symptoms. We expected that trust in institutions would lead to lower distress symptoms levels, but for the AE group, we found the opposite results. This result may be due to a negationism attitude towards the Covid pandemic related to the anti-establishment sentiment and the misinformation crisis. Anti-establishment sentiment and mistrust in political and social institution took this group to a kind of disillusionment and political anomy (Mignozzetti and Spektor, 2019) mixed with conspiracy theories and fake news that could create room for immediate self-interest and denial about the seriousness of the pandemic. It is important to remember that the data was collected in the middle of May, 2020, a moment when the pandemic was still in the beginning and concentrated in a few areas. On the other hand, TI and TM groups had higher Trust in the media and lower Trust in government levels that led to a situation in which they believed in the seriousness of the pandemic, but had doubts about the ability of the government to handle it, which could lead to a higher level of distress symptoms.

Political polarization was also important. Our results showed that Political Attitude was significant, even when controlling trust in institutions groups, meaning that levels of distress symptoms were lower in right-wing individuals and higher in left-wing ones. Because the Bolsonaro Government had been elected with a discourse emphasizing political polarization, very similar to Trump in the US (Bavel and Pereira, 2018), it increased distrust in the opposing political side. Our findings supported Bavel et al. (2020) argument that polarization could lead to different segments of the population arriving to different conclusions and perceptions about the pandemic which could lead to different levels of distress symptoms.

As previous research has shown (Kimhi et al. 2020), Sense of Danger and Individual Resilience were predictors of Distress Symptoms, the first positively associated with it and the second negatively, in our results. Age and number of children were negatively related to Distress Symptoms. Results are similar to the results of the Jewish sample in the Kimhi et al. (2020) research.

One of the most relevant topics for social and behavioral sciences in this pandemic is to understand how trust in institutions could impact a change in behavior that is necessary to fight the pandemic (Bavel et al. 2020; Khemani 2020). Political polarization and misinformation can be a threat to the implementation of the necessary health policies, because different set of individuals perceiving and responding to it in different ways. Our finds shed light in this issue trying to understand the Brazilian case. We argue that Brazil was facing a political crisis, anti-establishment sentiments and political polarization, as well as a misinformation crisis, with the delegitimation of traditional media, conspiracy theories and fake news. Our data showed four groups with different patterns of trust in government and institution, and these differences predicted different levels of Distress among them. Besides that, political polarization explained different levels of distress too. These differences had an impact in the behavior towards the health policies. Low levels of distress during the pandemic indicated a predisposition to not follow guidelines of social distancing and take risk behavior. On the other hand, high level of distress led to difficulties to go back to normal life, restraining the return of economic and consumption activities.

In a post-truth and post-trust era (Kozinets, Gershoff and White 2020), the impact of a misinformation crisis in the management of the pandemic crisis is critical. Brazil was facing an increase

in number of Coronavirus cases and deaths. Part of the explanation can be due to the polarized trust in the media leading to difficulties to coordinate the implementation of health policies.

Khemani (2020) claims that to mitigate problems of legitimacy during the pandemic; the government should empower its bureaucracy to pursue technical mandates to implement health policies. This is the opposite of what was happening, where the Minister of Health was replaced two times in less than one month due to political interference trying to implement political and not technical decisions. This could increase the effects of anti-establishment sentiment.

Besides that, Khemani (2020) argues that trust in the potential of the government can help to implement health policies, because it would engage people politically, but only if the quality of engagement helps the implementation of those policies. Anti-establishment sentiment in Brazil tends to lead to a political engagement that Khemani (2020) calls "blind ideology", which denied the risks of the pandemic. Historically Brazil faced similar challenges with a health crisis in the early 1900. In an event called Vaccine Riot during the fight against the smallpox epidemic, political polarization and misinformation led to a riot in Rio de Janeiro, at that time the Brazilian capital, in which hundreds of protesters died (Sevcenko 2018). Protesters were fighting against the implementations of health policies, mainly mandatory vaccination. In 2020, we are back to the tragedy of preventable suffering due to the lack of capacity to implement health policies that could mitigate the tragedy of the pandemic.

CONCLUSION

Reflecting on the objectives and findings discussed in this paper, this retrospective analysis provides the identification of four distinct trust-based groups and their corresponding patterns of distress symptoms underlines the multifaceted nature of trust during a time of compounded political, health, and misinformation crises. As we delve into the Brazilian case, we observe a unique juxtaposition where lower levels of trust in institutions, particularly within the AE group, paradoxically correlate with lower levels of distress symptoms. This anomaly, potentially stemming from a negationist attitude and misinformation, sheds light on the ways in which trust dynamics can influence public health outcomes. The study's findings underscore the critical need for addressing misinformation and fostering constructive political engagement to enhance the efficacy of public health policies.

In conclusion, this study offers a detailed exploration of the Brazilian case during the initial wave of Covid-19 and emphasizes the significance of understanding trust dynamics in shaping public response to health crises. The insights gleaned from this research contribute to the broader discourse on managing public health emergencies in an era characterized by misinformation and political polarization. It underscores the urgent need for transparent, accurate communication and cohesive, science-driven policy-making to navigate the challenges posed by such unprecedented global health crises.

LIMITATIONS AND FUTURE RESEARCH

Our study is not exempt from limitations and offers some ways to extend our knowledge about trust in institutions. First, although our snowball survey provided a heterogeneous sample for the five regions of Brazil, and covering all age, education levels, and income groups, our data do not provide a probabilistic representation of the Brazilian population. Future studies with a probabilistic sample collected through an online panel (e.g., Kimhi et al. 2020) may provide generalizable information. Furthermore, although our analysis considers the sense of danger, as some cities are more or less affected by Covid-19, future research can assess whether the willingness to trust in institutions remains in extreme conditions, such as a high mortality rate and the collapse of the health system.

Second, we limited our research to examine how trust in institutions impacts distress symptoms. However, the impacts of trust in institutions extend to other spheres of life (Kozinets et al. 2020). For example, it seems interesting to examine how consumption of sustainable products (e.g., Nuttavuthisit and Thøgersen 2017) or loyalty to brands of flawed systems (e.g., Humphreys and Thompson 2014) differs between trusters vs. anti-establishment groups.

Third, our study offers elements for understanding that trust in institutions is intertwined with the political spectrum. In a post-truth era, in which the "trust is rarely complete or long-lasting" (Kozinets et al. 2020, 131), our study provides a clue to this apparent relativity of trust in institutions: political ideology. Political ideology is a crucial lens for people's perception and decision making (e.g., Kwon and Barone 2020). Our results reveal distinct groups of trust under a government with a right-wing ideological spectrum, admittedly more conservative and a propagator of political polarization. Future studies can expand these findings by exploring how trust in institutions occurs in countries whose current government has a left/liberal ideological position or a central tendency.

Ultimately, how does trust in institutions occur across borders? For example, people that trust in the Brazilian government may also be more willing to trust in governments with the same alignment in the spectrum of right/conservative ideology (e.g., Brazil, USA, and Israel). Given that our era is permeated by post-truth and post-trust (Kozinets et al. 2020), it seems a fruitful future research to explore how trust across borders impacts the image to the brands of their countries of origin.

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REFERENCES

Alsan, M., & Wanamaker, M. (2018). Tuskegee and the health of black men. *Quarterly Journal of Economics, 133*, 407–455.

Arbelaitz, O., Gurrutxaga, I., Muguerza, J., Pérez, J. M., & Perona, I. (2013). An extensive comparative study of cluster validity indices. *Pattern Recognition, 46*(1), 243-256.

Banda, K. K., & Kirkland, J. H. (2017). Legislative party polarization and trust in states legislatures. *American Politics Research, 46*(4), 596-628.

Ballada, C. J. A., Aruta, J. J. B. R., Callueng, C. M., Antazo, B. G., Kimhi, S., Reinert, M., ... & Verdu, F. C. (2022). Bouncing back from COVID-19: Individual and ecological factors influence national resilience in adults from Israel, the Philippines, and Brazil. *Journal of Ccommunity & Applied Social Psychology, 32*(3), 452-475.

Bargain, O., & Aminjonov, U. (2020). Trust and compliance to public health policies in times of COVID-19. *Journal of Public Economics, 192*, 104316.

Bavel, J. J. V., & Pereira, A. (2018). The partisan brain. *Trends in Cognitive Sciences, 22*(3), 213-224.

Bavel, J. J. V., Baicker, K., Boggio, P. S., Capraro, V., Cichocka, A., Cikara, M., ... & Druckman, J. N. (2020). Using social and behavioural science to support COVID-19 pandemic response. *Nature Human Behaviour, 4*(5), 460-471.

Bergkvist, L. I., & Rossiter, J. (2007). The predictive validity of multiple-item versus single-item measures of the same constructs. *Journal of Marketing Research, 44*(2), 175-184.

Bish, A., & Michie, S. (2010). Demographic and attitudinal determinants of protective behaviours during a pandemic: A review. *British Journal of Health Psychology, 15*(4), 797-824.

Blair, R. A., Morse, B. S., & Tsai, L. L. (2017). Public health and public trust. *Social Science & Medicine, 172*, 89–97.

Burki, T. (2020). COVID-19 in Latin America. *The Lancet Infectious Diseases, 20*(5), 547-548.

Clarke, S. P., Oades, L. G., Crowe, T. P., Caputi, P., & Deane, F. P. (2009). The role of symptom distress and goal attainment in promoting aspects of psychological recovery for consumers with enduring mental illness. *Journal of Mental Health, 18*(5), 389-397.

Derogatis, L. R., & Savitz, K. L. (2000). The SCL-90-R and Brief Symptom Inventory (BSI) in primary care. In M. E. Maruish (Ed.), *Handbook of Psychological Assessment in Primary Care Settings* (pp. 297–334). Mahwah, NJ, USA: Lawrence Erlbaum Associates.

Frewer, L. J. (2004). The public and effective risk communication. *Toxicology Letters, 149*(1-3), 391-397.

Garrett, L. (2020). COVID-19: the medium is the message. *The Lancet, 395*(10228), 942-943.

Hetherington, M. J. (2005). *Why trust matters: Declining political trust and the demise of American liberalism.* Princeton University Press.

Humphreys, A., & Thompson, C. J. (2014). Branding disaster. *Journal of Consumer Research, 41*(4), 877-910.

Khemani, S. (2020). An Opportunity to Build Legitimacy and Trust in Public Institutions in the Time of COVID-19. *Research & Policy Briefs, 32*, 1-5.

Kimhi, S., Eshel, Y., Adini, B., Aruta, J. J. B. R., Antazo, B. G., Briones-Diato, A., ... & Marciano, H. (2021). Distress and resilience in days of COVID-19: international study of samples from Israel, Brazil, and the Philippines. *Cross-Cultural Research, 55*(5), 415-437.

Kimhi, S., Eshel, Y., Leykin, D., & Lahad, M. (2017). Individual, community, and national resilience in peacetime and the face of terror. *Journal of Loss and Trauma, 22*(8), 698–713.

Kimhi, S., Eshel, Y., Marciano, H., & Adini, B. (2020). Distress and resilience in the days of COVID-19. *International Journal of Environmental Research and Public Health, 17*(11), 3956.

Kozinets, R. V., Gershoff, A. D., & White, T. B. (2020). Trust in Doubt: Consuming in a Post-Truth World. *Journal of the Association for Consumer Research, 5*(2), 130-136.

Kwon, M., & Barone, M. J. (2020). A world of mistrust. *Journal of the Association for Consumer Research, 5*(2), 206-219.

Lancet. (2020). COVID-19 in Brazil: "So what?". *Lancet, 395*(10235), 1461.

Lazer, D., Baum, M. A., Benkler, Y., Berinsky, A. J., Greenhill, K. M., Menczer, F., ... & Zittrain, J. L. (2018). The science of fake news. *Science, 359*(6380), 1094-1096.

Levi, M., & Stoker, L. (2000). Political trust and trustworthiness. *Annual Review of Political Science*, 3, 475-507.

Luhmann, N. (2017). *Trust and power.* Polity.

Machado, J., & Miskolci, R. (2019). Das jornadas de junho à cruzada moral. *Sociologia & Antropologia, 9*(3), 945-970.

Matos, O. V. H., & Formetin, C. N. (2016). Veja e Carta Capital. *Revista Digital Em Debate*, 16, 15-40.

Meyer, S. B., & Ward, P. R. (2013). Differentiating between trust and dependence of patients with coronary heart disease: Furthering the sociology of trust. *Health, Risk & Society, 15*(3), 279-293.

Mignozzetti, U., & Spektor, M. (2019). Brazil: when political oligarchies limit polarization but fuel populism. In T. Carothers & A. O'Donohue (Eds.), *Democracies divided* (pp. 331-374). Washington, DC: The Brookings Institution.

Morse, B., Grépin, K. A., Blair, R. A., & Tsai, L. (2016). Patterns of demand for non-Ebola health services during and after the Ebola outbreak. *BMJ Global Health, 1*, 1-8.

Nuttavuthisit, K., & Thøgersen, J. (2017). The importance of consumer trust for the emergence of a market for green products. *Journal of Business Ethics, 140*(2), 323-337.

Pereira, C., & Teles, V. (2019). Political and institutional perils of Brazil's COVID-19 crisis. *Lancet, 396*(10248), 367-368.

Quinn, S. C. (2008). Crisis and emergency risk communication in a pandemic: A model for building capacity and resilience of minority communities. *Health Promotion Practice, 9*(4_suppl), 18S-25S.

Sevcenko, N. (2018). *A revolta da vacina*. São Paulo: Editora Unesp.

Siegrist, M., & Zingg, A. (2014). The role of public trust during pandemics: Implications for crisis communication. *European Psychologist, 19*(1), 23-32.

Solomon, Z., & Prager, E. (1992). Elderly Israeli Holocaust survivors during the Persian Gulf War. *The American Journal of Psychiatry, 149*(12), 1707-1710.

Sott, M. K., Bender, M. S., & da Silva Baum, K. (2022). COVID-19 outbreak in Brazil: health, social, political, and economic implications. *International Journal of Health Services, 52*(4), 442-454.

Van der Weerd, W., Timmermans, D. R., Beaujean, D. J., Oudhoff, J., & van Steenbergen, J. E. (2011). Monitoring the level of government trust, risk perception and intention of the public to adopt protective measures during the influenza A (H1N1) pandemic in The Netherlands. *BMC Public Health, 11*, 575.

Van Prooijen, J. W., & Douglas, K. M. (2017). Conspiracy theories as part of history: The role of societal crisis situations. *Memory Studies, 10*(3), 323-333.

Vinck, P., Pham, P. N., Bindu, K. K., Bedford, J., & Nilles, E. J. (2019). Institutional trust and misinformation in the response to the 2018-19 Ebola outbreak in North Kivu, DR Congo. *Lancet Infectious Diseases, 19*, 529–536.

WHO (2020). Brazil. Retrieved from: https://covid19.who.int/region/amro/country/br