INTRODUCTION

Since 2020, quarantine and social distance restrictions have been enforced worldwide to reduce the spread of coronavirus disease 2019 (COVID-19). These restrictions were mainly supported by the initial lack of effective drugs and vaccines at that time. The implementation of these measures also occurred in Brazil and other countries in Latin America (Ribeiro et al., 2021). Amongst these restrictions, closing schools and entertainment venues, suspending public transport, restricting public gatherings and imposing intermittent lockdowns were implemented.

Abstract

Quarantine and social distance restrictions have been enforced worldwide to reduce the spread of coronavirus disease 2019 (COVID-19). The effects of these measures on mental health are recognised, but remaining unclear, is whether these effects are a consequence of the virus itself or policies that are enforced to prevent it. The present study investigated the impact of lockdown restrictions on anxiety and depression at two different times in 2020. Data were collected from 118 participants from all regions of Brazil. After easing quarantine restrictions in the second half of 2020, two natural groups were formed. One group included participants who voluntarily remained at home (n = 73). The other group consisted of those who decided to leave home (n = 45). A linear mixed model was used to determine the effects of group and time and their interaction. The McNemar test was used to determine intragroup differences in perceptions and concerns about COVID-19. Logistic regression identified predictors of high and stable depression and anxiety. None of the factors or their interactions was significant. Indicators of depression and anxiety remained stable over time, regardless of whether the participants left home or remained at home. Significantly, a strong and stable agreement with quarantine was found. The participants agreed that COVID-19 was a threat to public health. Political orientation was a predictor of high and stable levels of depression but not anxiety. Participants who self-identified as liberal politically were at a greater risk of developing depression. The results suggest that the lockdown policy did not contribute to disruptions of mental health, which instead was a consequence of the pandemic and virus itself. We also found wide and strong support amongst the participants for lockdown and mandatory stay-at-home policies.

KEYWORDS

anxiety, COVID-19, depression, linear mixed model, longitudinal design, mental health
The consequences of these policies drastically changed people’s lives (Li et al., 2021) and created a debate that is still ongoing. Mixed evidence suggests that these measures were highly effective in decreasing emergency department visits, hospital admissions and deaths, but other studies concluded that the possible beneficial effects of mask requirements (Bundgaard et al., 2021; Jefferson et al., 2020; Mitze et al., 2020) and shelter-in-place policies (Berry et al., 2021) were inconclusive. Public opinion about these policies and their popular endorsement varied during the pandemic (Bjarnskov, 2021), which became commonly debated on social media. Social media platforms became a medium for disseminating information but also became a breeding ground for political extremism, conspiracy theories, disinformation and hateful speech (Cinelli et al., 2020).

Mental health issues that are related to COVID-19 have been reported in the literature. Recent findings indicate that young adults (18–39 years old), women (Ribeiro et al., 2021), people from Latino communities in the United States (Garcini et al., 2022) and citizens who live in Latin America have higher levels of anxiety and depression (Olff et al., 2021). A recent study demonstrated that individuals with prior or current psychological issues experienced worsening of their conditions because of the abrupt cessation of coping mechanisms, activities and routines, creating a risk factor for emotional instability (Singh et al., 2020).

Increasingly more articles on psychological aspects and consequences of the pandemic have recently been published. However, one discussion that captured the attention of the scientific communities and the public at large was whether mental health issues are a consequence of the spread of the virus itself or the implementation of strict public health policies. Because of the scarcity of scientific studies on this issue, much uncertainty remains about whether the costs of responses to COVID-19 have surpassed their benefits (Bendavid et al., 2021; Joffe, 2021; Meyerowitz-Katz et al., 2021).

Both of these factors raise an endogeneity issue and have been inextricably linked. During the pandemic, public policies and the spread of the virus occurred roughly at the same time. Thus, the spread of the virus influenced the implementation of public policies which, in turn, modelling the policies on the risk of the transmission of the virus (Figure 1). To methodologically resolve this issue, studies with longitudinal prospective designs are needed to disentangle the effects of initial lockdown enforcement and its loosening when people could finally leave their homes (Fried et al., 2021).

The present study investigated whether mental health issues were mainly a consequence of the spread of the virus or health policies that were implemented to stop its spread. We employed a longitudinal design, with two waves of data collection in 2020. The first data collection (T1) occurred at the beginning of 2020 when all participants were at home. The second data collection (T2) occurred 6 months later when lockdown restrictions were loosened and some participants were allowed to leave their homes and return to the community but others chose to remain at home. Perceptions of quarantine policies in 2020 and the role of demographic and economic variables that could be significant predictors of depression and anxiety were also explored.

What is known and what this paper adds
- Mental health issues have been associated with COVID-19.
- Unclear is whether effects on mental health are attributable to the virus itself or policies that are implemented to reduce its spread.
- Lockdown policies did not contribute to mental health problems that were associated with COVID-19.
- Political orientation influenced levels of depression but not anxiety.
- Participants who self-identified as politically liberal were at greater risk of developing depression.

![Figure 1](Image)

**FIGURE 1** Theoretical model of potential predictors of mental health during the pandemic.

2 | METHODS

The present study employed an observational, longitudinal design. The study was approved by an Ethical Committee number 31662420.8.0000.5258.

2.1 | Participants

The study began with a sample of 533 participants (in the first phase), but only 118 participants continued with the follow-up (first and second phases). A power analysis indicated that 98 participants would be necessary to maintain sufficient statistical power (1-β) of 80% considering an effect size of 𝜓 = 0.25, two groups with a correlated outcome of 𝜌 = 0.5 Considering 20% sample attrition, 188 participants were defined as the minimum sample size that was needed. The survey was conducted amongst Brazilian individuals. Further details are provided in the Results section below.

2.2 | Procedure

Participants were recruited via multiple social media platforms (Twitter, Facebook, and Instagram) and mailing lists in March and April 2020. Participants who clicked the link that was provided in the posts were redirected to a questionnaire that was hosted by Google Forms. Respondents read the informed consent statement and agreed to participate by clicking ‘I agree to participate.’ They were then asked to complete three sections of the survey consecutively,
in which psychological scales were available along with attitudinal questions and demographic variables.

The participants spent 20–30 min to complete the survey and could register their e-mail addresses and telephone numbers if they agreed to participate in the second phase of the study. These participants were contacted again 6 months apart and asked to log in to the system and complete the same psychological scales and answer the attitudinal questions. The main objective of the second phase of the study was to collect data on levels of anxiety and depression after the loosening of restriction policies to evaluate possible changes in the results between the two phases.

All researchers’ e-mail addresses were available to the participants if they had any questions or concerns, but no events were reported. The online survey was developed and applied partially based on the Checklist for Reporting Results of Internet E-surveys (CHERRIES).

2.3 | Instruments

2.3.1 | Generalised anxiety disorder (GAD-7)

The GAD-7 is a brief scale that maps cases in which symptoms of generalised anxiety disorder are present. This instrument consists of seven items. Each question is answered with regard to the presence of symptoms in the past 2 weeks on a scale from 0 to 3 points. Total scores are computed and range from 0 to 21. Scores ≥10 were considered at risk of developing anxiety disorders (De Lima Schönhofen et al., 2020). The GAD-7 has high internal consistency (α = 0.90), suggesting the high reliability of responses, validation studies of which can be found elsewhere (Ribeiro et al., 2021).

2.3.2 | Center for epidemiologic studies–depression (CES-D)

The CES-D evaluates depressive symptoms via 20 items (Batistoni et al., 2010). Participants evaluate the frequency of depressive symptoms in the last week, indicating whether they occurred rarely (less than 1 day), a few times (1–2 days), sometimes (3–4 days), or almost always/always (5–7 days). After reversing specific items, the responses are converted to a 0–3 scale and summed. Scores ≥16 are preliminarily considered at-risk depression. In the present study, the internal consistency of the CES-D was high (α = 0.92), validation studies of which can be found elsewhere (Ribeiro et al., 2021).

2.4 | Statistics analysis

The data were checked for inconsistencies and outliers. No missing data were found amongst the psychological scale results. Categorical variables are reported as frequencies and percentages. Continuous variables are reported as means and standard deviations.

We defined the contrasting groups according to the participants’ outgoing behaviour (stayed at home vs. left home). During both surveys, we asked the participants to choose the best categorical option that aligned with their outgoing behaviour. Participants who increased their outgoing behaviour (i.e., left home) at the 6-month time point of data collection were assigned to the ‘Left home’ group. The other participants were assigned to the ‘Stayed at home’ group. This strategy was cross-validated by a significant χ² test ($\chi^2 = 67.39, p < 0.001$), indicating that 75.3% of the participants ($n = 55$) in the ‘Stayed at home’ group spent more than 20 h/day at home. None of the participants in the ‘Left home’ group checked this option, whereas 37.8% ($n = 17$) spent between 9 and 12 h at home daily.

To determine whether the group (‘Left home’ vs. ‘Stayed at home’) and time (T1 vs. T2) factors and their interaction impacted the participants’ mental health profile, a linear mixed model (LMM) was fit to the data. This model is suitable for repeated-measures analysis because it deals with correlated measures that arise from paired, repeated or matched designs. The LMM allows the definition of fixed and random effects. In our analyses, a random intercept was assigned to each participant to account for different base rates. Satterthwaite approximation was computed to adjust the significant results (Bates et al., 2015). The equations below were derived by the equimatic R package (Anderson et al., 2022) and describe the model, which is computationally represented as \(\text{lmer} (\text{value} ~ \text{~ factor(group) * factor(time)} + (1|\text{id}), \text{data} = \text{df})\).

\[
\text{Result, } \sim N (\mu, \sigma^2)\\
\mu = \alpha + \beta_1(\text{Time}) + \beta_2(\text{Group}) + \beta_3(\text{Time} \ast \text{Group})\\
\alpha_i \sim N (\mu_\alpha, \sigma_\alpha^2), \quad \forall \text{participant } j = 1, 2, \ldots, J
\]

Perceptions of quarantine were assessed by computing percentages. The McNemar test was performed to determine intragroup differences in perceptions and concerns that were related to COVID-19. For the exploratory analyses, recommended cutoff scores for the CES-D (Vilagut et al., 2016) and GAD-7 (Spitzer et al., 2006) were used to identify participants who were at risk of having subclinical depression and anxiety at both waves (T1 and T2).

Univariate and multiple logistic regressions were fit to the data. The odds ratio (OR) was computed with its 95% confidence interval (CI). All analyses were performed using R 4.1 language with the tidyverse, lme4 and lmerTest packages. Data, codes and notebooks are available in an open science framework repository at https://osf.io/qx6wf.

3 | RESULTS

3.1 | Sample characteristics

The present study relied on data from 118 participants. Women comprised 74.6% of the sample. The mean age of the participants was 38.10 years (SD = 12.69 years). Liberal-leaning was the most
self-identified political orientation, with about 48% of endorsement by the participants. Generally, the participants were highly educated, and 71% had at least a bachelor’s degree. The participants generally agreed that COVID-19 is a major public health concern and followed official recommendations to mitigate or reduce the spread of the virus. No significant differences were found between the two groups (participants who left home vs. participants who remained at home). Table 1 presents the descriptive characteristics of the participants.

3.2 | Depression and anxiety trajectories

The trajectories of depression and anxiety were assessed using a LMM. None of the predictors was significant. The scores on both scales remained stable over time (Table 2; Figure S1).

3.3 | Perceptions of quarantine policies

A significant transition of strong agreement with quarantine policies was seen from the first measure (T1) to the second measure (T2; 73% to 57%, p < 0.001, based on 2000 replicates, Cramer’s V = 0.50). However, in both phases, the majority of respondents endorsed these policies, and the transition occurred between agreement and strong agreement with these policies. This same pattern was found in the perception that COVID-19 was a threat to public health (83% strong agreement in the first phase, 80.5% strong agreement in the second phase, Cramer’s V = 0.61). These results suggest that the participants could have decreased their agreement with quarantine policies, but they mainly agreed with the quarantine strategies and also considered that COVID-19 was a public health concern.

With regard to concerns about social and personal attributes, the percentage of each attribute significantly varied between the two phases of the study ($\chi^2_{24} = 90.963, p < 0.001$, and $\chi^2_{18} = 54.149, p < 0.001$, respectively), with no changes in the prevalence of concern. These findings suggest that some factors raised more concern than others, with stable results in both phases.

Overall, lower concerns were related to food and pharmaceutical drugs (52% and 62% at the two phases, respectively), stock prices (44% and 54% at the two phases, respectively), and children’s academic achievement (39% and 46% at the two phases, respectively). The health of family and friends was a major concern amongst the respondents (91% and 86% at the two phases, respectively; Figure 2).

3.4 | Exploratory analysis

To investigate the role of sociodemographic and contextual variables on depression and anxiety, a logistic regression model was fit to the data. Crude and adjusted ORs were computed, along with 95% CIs and respective p-values. Table 3 presents depression as the main outcome. Table 4 presents anxiety as the main outcome.

4 | DISCUSSION

The COVID-19 pandemic changed people’s lives, their daily relationships and their perceptions of several social subjects, including public health, the economy and civil rights. Previous findings suggested a remarkable impact on mental health (Ribeiro et al., 2021). The pandemic increased psychological distress and worsened mental health, especially amongst those with a history of mental illness (Li et al., 2021). However, unclear is whether these conditions are more related to the spread of the virus itself or policies that have been implemented in response to the pandemic because both factors happened simultaneously. In the present study, we followed a sample of participants at two different moments in time during the pandemic and found no significant effects of loosening the lockdown on anxiety or depression. Depression and anxiety levels amongst the participants remained high, regardless of whether they left home or remained at home when lockdowns were lifted. Our results led us to conclude that people vastly approved the mandatory stay-at-home and lockdown policies, and political orientation was the only significant factor that was related to an increase in levels of depression but not anxiety, although this latter result should be interpreted with caution.

One challenge is determining whether mental health issues are consequences of lockdown policies or the virus itself, mainly because both features co-occur. This policy occurred in response to the pandemic. Many problems that are attributed to the pandemic cannot be easily distinguished from those that are caused by the lockdown itself and vice versa. With regard to health, mortality rate and economic variables, other studies investigated these issues using cross-sectional designs (Duncanson et al., 2021), nationwide data (Bendavid et al., 2021), integrative reviews (Joffe, 2021) and theoretical forecasting (Bavli et al., 2020). At the macro level, no conclusive results are available to date. Some data suggest no clear association between lockdown policies and mortality (Bjørnskov, 2021). Other studies concluded that government interventions are unlikely worse than the pandemic itself in most situations (Meyerowitz-Katz et al., 2021).

Prospective data on mental health impacts are scarce. Most of these studies relied on cross-sectional designs (Ramiz et al., 2021).
## TABLE 1 Descriptive characteristics of the participants

| Variable                              | Left home (n = 45) | Stayed at home (n = 73) | Total (n = 118) | p     |
|---------------------------------------|-------------------|-------------------------|----------------|------|
| Sex                                   |                   |                         |                |      |
| Female                                | 32 (71.1%)        | 56 (76.7%)              | 88 (74.6%)     | 0.497|
| Male                                  | 13 (28.9%)        | 17 (23.3%)              | 30 (25.4%)     |      |
| Age (years)                           |                   |                         |                | 0.435|
| Mean (SD)                             | 36.933 (11.78)    | 38.82 (13.25)           | 38.102 (12.69) |      |
| Range                                 | 19–63             | 18–70                   | 18–70          |      |
| Education                             |                   |                         |                | 0.686|
| Bachelor's degree or higher           | 33 (73.3%)        | 51 (69.9%)              | 84 (71.2%)     |      |
| Other                                 | 12 (26.7%)        | 22 (30.1%)              | 34 (28.8%)     |      |
| Marital status                        |                   |                         |                | 0.753|
| Married                               | 21 (46.7%)        | 39 (53.4%)              | 60 (50.8%)     |      |
| Separated or divorced                 | 3 (6.7%)          | 5 (6.8%)                | 8 (6.8%)       |      |
| Single                                | 21 (46.7%)        | 29 (39.7%)              | 50 (42.4%)     |      |
| Profession                            |                   |                         |                |      |
| Commerce (sales, barber, etc.)        | 4 (9.8%)          | 3 (4.8%)                | 7 (6.8%)       |      |
| Construction (bricklayer, etc.)       | 1 (2.4%)          | 0 (0.0%)                | 1 (1.0%)       |      |
| Education (professor, etc.)           | 8 (19.5%)         | 8 (12.9%)               | 16 (15.5%)     |      |
| Industry (machine operator, etc.)     | 2 (4.9%)          | 1 (1.6%)                | 3 (2.9%)       |      |
| Other                                 | 8 (19.5%)         | 23 (37.1%)              | 31 (30.1%)     |      |
| Health (physician, physiotherapist, etc.) | 12 (29.3%)    | 17 (27.4%)              | 29 (28.2%)     |      |
| Public officer                        | 6 (14.6%)         | 10 (16.1%)              | 16 (15.5%)     |      |
| Tourism and hotel                     | 0 (0.0%)          | 0 (0.0%)                | 0 (0.0%)       |      |
| Missing data                          | 4                 | 11                      | 15             |      |
| Have you been tested for COVID-19?    |                   |                         |                | 0.142|
| No                                    | 40 (88.9%)        | 70 (95.9%)              | 110 (93.2%)    |      |
| Yes                                   | 5 (11.1%)         | 3 (4.1%)                | 8 (6.8%)       |      |
| Do you know someone who has COVID-19? |                   |                         |                | 0.488|
| No                                    | 36 (80.0%)        | 62 (84.9%)              | 98 (83.1%)     |      |
| Yes                                   | 9 (20.0%)         | 11 (15.1%)              | 20 (16.9%)     |      |
| Do you follow official recommendations to mitigate the spread of COVID-19? (T1) |   |                         |                | 0.728|
| No                                    | 1 (2.2%)          | 1 (1.4%)                | 2 (1.7%)       |      |
| Yes                                   | 44 (97.8%)        | 72 (98.6%)              | 116 (98.3%)    |      |
| Do you follow official recommendations to mitigate the spread of COVID-19? (T2) |   |                         |                | 0.58 |
| No                                    | 3 (6.7%)          | 7 (9.6%)                | 10 (8.5%)      |      |
| Yes                                   | 42 (93.3%)        | 66 (90.4%)              | 108 (91.5%)    |      |
| COVID-19 presents a significant risk for public health (T1) |   |                         |                |      |
| Strongly disagree                     | 0 (0.0%)          | 0 (0.0%)                | 0 (0.0%)       |      |
| Disagree                              | 1 (2.2%)          | 2 (2.7%)                | 3 (2.5%)       |      |
| Neither agree nor disagree            | 0 (0.0%)          | 0 (0.0%)                | 0 (0.0%)       |      |
| Agree                                 | 6 (13.3%)         | 11 (15.1%)              | 17 (14.4%)     |      |
| Strongly agree                        | 38 (84.4%)        | 60 (82.2%)              | 98 (83.1%)     |      |
| COVID-19 presents a significant risk for public health (T2) |   |                         |                | 0.172|
| Strongly disagree                     | 2 (4.4%)          | 2 (2.7%)                | 4 (3.4%)       |      |
| Disagree                              | 0 (0.0%)          | 3 (4.1%)                | 3 (2.5%)       |      |
| Neither agree nor disagree            | 2 (4.4%)          | 0 (0.0%)                | 2 (1.7%)       |      |

(Continues)
The present results suggest that lockdown policies did not contribute to worse mental health, which instead was negatively impacted by the pandemic and virus itself. Our data demonstrated the stability of these indicators during 2020. High scores on the CES-D and GAD-7 at the beginning of 2020 were also found after lockdown policies were relaxed later in the year.

The present findings are consistent with Fried et al. (2021), who followed 80 undergraduate students for 14 days and assessed mental health, social contact and COVID-19-related variables. Ramiz et al. (2021) concluded that mental health deteriorated during the lockdown in France in 2020 during the COVID-19 crisis after comparing responses from 1237 previous subjects who were assessed in 2014 in a study that explored home and leisure activities. Daly et al. (2020) compared responses of 14,393 participants from a previous survey that was conducted between 2017 and 2019 and concluded that mental health issues increased in April 2020 and remained elevated in May and June 2020.

In the present study, the participants generally supported the government’s policies that were implemented in response to COVID-19. A strong and stable agreement with quarantine policies was found. The factors that drove these perceptions could be related to the participants’ overall concerns throughout the year. People were highly concerned about health, the economy, food security and social cohesion and mandatory stay-at-home orders.

### TABLE 1

| Variable | Left home (n = 45) | Stayed at home (n = 73) | Total (n = 118) | p  
|----------|-------------------|------------------------|----------------|-------------------|
| Agree | 7 (15.6%) | 7 (9.6%) | 14 (11.9%) |  
| Strongly agree | 34 (75.6%) | 61 (83.6%) | 95 (80.5%) | 0.094  
| The government-mandated quarantine is an adequate policy (T1) | 0.094  
| Strongly disagree | 2 (4.4%) | 0 (0.0%) | 2 (1.7%) |  
| Disagree | 1 (2.2%) | 4 (5.5%) | 5 (4.2%) |  
| Neither agree nor disagree | 2 (4.4%) | 2 (2.7%) | 4 (3.4%) |  
| Agree | 4 (8.9%) | 17 (23.3%) | 21 (17.8%) |  
| Strongly agree | 36 (80.0%) | 50 (68.5%) | 86 (72.9%) |  
| The government-mandated quarantine is an adequate policy (T2) | 0.966  
| Strongly disagree | 2 (4.4%) | 3 (4.1%) | 5 (4.2%) |  
| Disagree | 2 (4.4%) | 4 (5.5%) | 6 (5.1%) |  
| Neither agree nor disagree | 4 (8.9%) | 6 (8.2%) | 10 (8.5%) |  
| Agree | 13 (28.9%) | 17 (23.3%) | 30 (25.4%) |  
| Strongly agree | 24 (53.3%) | 43 (58.9%) | 67 (56.8%) |  
| Political leaning | 0.465  
| Apolitical | 10 (23.3%) | 14 (19.2%) | 24 (20.7%) |  
| Left-wing | 11 (25.6%) | 23 (31.5%) | 34 (29.3%) |  
| Center-left | 8 (18.6%) | 14 (19.2%) | 22 (19.0%) |  
| Center | 6 (14.0%) | 3 (4.1%) | 9 (7.8%) |  
| Center-right | 3 (7.0%) | 8 (11.0%) | 11 (9.5%) |  
| Right-wing | 5 (11.6%) | 11 (15.1%) | 16 (13.8%) |  
| Missing data | 2 | 0 | 2 |  

### TABLE 2

| Source of variation | df (Num) | df (Den) | F | p  
|---------------------|----------|----------|---|---|
| CES (Depression)    | 1 | 116 | 2.26 | 0.14  
| Time                | 1 | 116 | 0.33 | 0.56  
| Group × Time        | 1 | 116 | 0.27 | 0.61  
| GAD (Anxiety)       | 1 | 116 | 0.32 | 0.57  
| Time                | 1 | 116 | 0.6 | 0.44  
| Group × Time        | 1 | 116 | 0.01 | 0.92  

## Table 3

### SS MS df (Num) df (Den) F p

### CES (Depression)

- Group: 159.67 159.67 1 116 2.26 0.14
- Time: 23.51 23.51 1 116 0.33 0.56
- Group × Time: 18.93 18.93 1 116 0.27 0.61

### GAD (Anxiety)

- Group: 4.97 4.97 1 116 0.32 0.57
- Time: 9.42 9.42 1 116 0.6 0.44
- Group × Time: 0.17 0.17 1 116 0.01 0.92
were not viewed as an obstacle, as found by Faria de Moura Villela et al. (2021). In the absence of new data, however, this finding can also be an expected output of the stability of depression and anxiety levels during 2020 (Daly et al., 2020) and be viewed as a minor indication that people emphasise collective health over individual rights (Lu et al., 2021).

Lazarus et al. (2020) conducted a global survey to assess public perceptions of government responses to COVID-19. Their results led them to conclude that the scores of public opinion did not significantly vary across gender, age group, education or income level. However, in their survey, partially in contrast to our findings, Brazil had one of the lowest scores, with results as low as Ecuador and Poland. Based on this conflicting evidence, we cannot conclude that the participants either supported or endorsed all government policies to mitigate the pandemic. Instead, their endorsement may have been more related to mandatory lockdown and quarantines.

In the present study, political orientation appeared to influence levels of depression but not anxiety. There is a growing recognition of the pivotal role of political orientation in shaping public attitudes, behaviours and beliefs about almost all social situations. However, the strict relationship between self-related political orientation and mental health issues is unknown, and further discussions of this issue can easily turn into a maze.

Previous studies suggested that political orientation influenced attitudes about social isolation, in which participants who self-identified as more conservative had more negative attitudes about social isolation in Brazil. However, Lippold et al. (2020) concluded that conservatives were more afraid of coronavirus than liberals in Germany. Bonetto et al. (2021) reported an increase in conservative political parties in France as a consequence of COVID-19.

Partially consistent with our results, Christensen et al. (2020) reported that social distancing behaviours were more common amongst liberals and associated with increases in depressive symptoms. However, it is difficult to draw any definitive conclusions. Several confounding variables that are related to political orientation prevent adequate interpretations of such findings. For example, the “liberal” and “conservative” labels do not necessarily coincide directly with left- and right-wing political orientations in Brazilian politics. Moreover, statistical interactions between predictors were not examined, which could lead to different conclusions.
### TABLE 3 Logistic regression of predictors of depression

|                | Univariate analysis |            |            |            |            | Multiple analysis |            |            |
|----------------|---------------------|------------|------------|------------|------------|-------------------|------------|------------|
|                | Yes (n = 61)        | No (n = 57) | OR         | p          | Adjusted OR | p          |            |            |
| Age            | 34.8 (11.6)         | 41.7 (13.0) | 0.96 (0.93, 0.99) | 0.003 | 0.97 (0.92, 1.02) | 0.247 |
| Sex            |                     |            |            |            |            |                   |            |            |
| Female         | 50 (56.8%)          | 38 (43.2%) | Ref.       |            |            | 0.56             | (0.16, 2) |            |
| Male           | 11 (36.7%)          | 19 (63.3%) | 0.44 (0.19, 1.03) | 0.003 |            |                   |            |            |
| Education      |                     |            |            |            |            | 1.66             | (0.35, 7.94) |            |
| Other          | 20 (58.8%)          | 14 (41.2%) | Ref.       |            |            |                   |            |            |
| Undergraduate  | 41 (48.8%)          | 43 (51.2%) | 0.67 (0.30, 1.49) |            |            |                   |            |            |
| Marital status |                     |            |            |            |            | 0.148             | 0.744     |            |
| Married        | 27 (45.0%)          | 33 (55.0%) | Ref.       |            |            |                   |            |            |
| Divorced       | 3 (37.5%)           | 5 (62.5%)  | 0.73 (0.16, 3.35) | 0.003 |            |                   |            |            |
| Single         | 31 (62.0%)          | 19 (38.0%) | 1.99 (0.93, 4.28) |            |            |                   |            |            |
| Having children|                     |            |            |            |            | 0.021             | 0.351     |            |
| None           | 42 (61.8%)          | 26 (38.2%) | Ref.       |            |            |                   |            |            |
| 1 child        | 10 (50.0%)          | 10 (50.0%) | 0.62 (0.23, 1.69) | 0.79 | 0.17, 3.68 |            |            |            |
| 2 children     | 8 (36.4%)           | 14 (63.6%) | 0.35 (0.13, 0.96) | 0.62 | 0.11, 3.64 |            |            |            |
| 3 children     | 1 (12.5%)           | 7 (87.5%)  | 0.09 (0.01, 0.76) | 0.53 | 0.05, 5.36 |            |            |            |
| Health plan    |                     |            |            |            |            | 0.041             | 0.249     |            |
| No             | 21 (67.7%)          | 10 (32.3%) | Ref.       |            |            |                   |            |            |
| Yes            | 37 (44.0%)          | 47 (56.0%) | 0.37 (0.16, 0.89) | 0.43 | 0.1, 1.85 |            |            |            |
| Cohabitation   |                     |            |            |            |            | 0.287             | 0.936     |            |
| With own family| 36 (46.8%)          | 41 (53.2%) | Ref.       |            |            |                   |            |            |
| With roommates | 2 (50.0%)           | 2 (50.0%)  | 1.14 (0.15, 8.50) | 0.66 | 0.04, 11.58 |            |            |            |
| With parents   | 19 (67.9%)          | 9 (32.1%)  | 2.40 (0.97, 5.98) | 1.27 | 0.18, 8.87 |            |            |            |
| Alone          | 4 (50.0%)           | 4 (50.0%)  | 1.14 (0.27, 4.89) | 0.7   | 0.04, 11.17 |            |            |            |
| Family income  |                     |            |            |            |            | 0.072             | 0.699     |            |
| ≤ R$1908       | 10 (71.4%)          | 4 (28.6%)  | Ref.       |            |            |                   |            |            |
| R$1908-R$2862  | 9 (81.8%)           | 2 (18.2%)  | 1.80 (0.26, 12.3) | 2.84 | 0.25, 32.68 |            |            |            |
| R$2862-R$5724  | 15 (51.7%)          | 14 (48.3%) | 0.43 (0.11, 1.69) | 0.64 | 0.08, 5.26 |            |            |            |
| R$5724-R$9540  | 11 (47.8%)          | 12 (52.2%) | 0.37 (0.09, 1.52) | 0.61 | 0.06, 6.6  |            |            |            |
| R$9540-R$14310 | 7 (46.7%)           | 8 (53.3%)  | 0.35 (0.07, 1.63) | 0.44 | 0.04, 5.46 |            |            |            |
| R$14310-R$23850| 7 (46.7%)           | 8 (53.3%)  | 0.35 (0.07, 1.63) | 0.41 | 0.03, 5.94 |            |            |            |
| > R$23850      | 2 (18.2%)           | 9 (81.8%)  | 0.09 (0.01, 0.61) | 0.19 | 0.01, 4.06 |            |            |            |
| People with health conditions at home | 0.275 | 0.15 |            |            |            |                   |            |            |
| None           | 24 (46.2%)          | 28 (53.8%) | Ref.       |            |            |                   |            |            |
| 1 member       | 25 (59.5%)          | 17 (40.5%) | 1.72 (0.75, 3.91) | 1.98 | 0.56, 7.02 |            |            |            |
| 2 members      | 8 (42.1%)           | 11 (57.9%) | 0.85 (0.29, 2.45) | 0.68 | 0.12, 3.76 |            |            |            |
| ≥ 3 members    | 4 (80.0%)           | 1 (20.0%)  | 4.67 (0.49, 44.6) | 7.56 | 0.5, 115.33 |            |            |            |
| Political orientation | 0.014 | 0.028 |            |            |            |                   |            |            |
| Right wing     | 8 (29.6%)           | 19 (70.4%) | Ref.       |            |            |                   |            |            |
| Apolitical     | 11 (45.8%)          | 13 (54.2%) | 2.01 (0.64, 6.36) | 1.96 | 0.38, 10.01 |            |            |            |
| Neutral        | 4 (44.4%)           | 5 (55.6%)  | 1.90 (0.40, 8.98) | 1.21 | 0.19, 7.83 |            |            |            |
| Left wing      | 37 (66.1%)          | 19 (33.9%) | 4.62 (1.71, 12.5) | 5.37 | 1.43, 20.11 |            |            |            |
| Log-likelihood | = −59.4654          |            |            |            |            | R2 Tjur. = 0.301  |            |            |

Bold represents significant values.
## TABLE 4  Logistic regression of predictors of anxiety

|                      | Univariate analysis |                             | Multiple analysis |
|----------------------|---------------------|-----------------------------|-------------------|
|                      | Yes (n = 40)        | No (n = 78)                 | OR (95% CI)       | p       | Adjusted OR (95% CI) | p       |
| Age                  | 33.7 (10.8)         | 40.3 (13.1)                 | 0.96 (0.92, 0.99) | 0.004   | 0.97 (0.92, 1.03)    | 0.324   |
| Sex                  |                     |                             | 0.97 (0.92, 1.03) | 0.324   |                     |         |
| Female               | 32 (36.4%)          | 56 (63.6%)                  | Ref.              | 0.456   | 0.7 (0.19, 2.62)     | 0.591   |
| Male                 | 8 (26.7%)           | 22 (73.3%)                  | 0.64 (0.25, 1.59) | 0.97 (0.92, 1.03) | 0.213   |
| Education            |                     |                             | 0.97 (0.92, 1.03) | 0.324   |                     |         |
| Other                | 14 (41.2%)          | 20 (58.8%)                  | Ref.              | 0.396   |                     | 0.213   |
| Undergraduate        | 26 (31.0%)          | 58 (69.0%)                  | 0.64 (0.28, 1.46) | 0.213   |                     |         |
| Marital status       |                     |                             | 0.97 (0.92, 1.03) | 0.324   |                     |         |
| Married              | 16 (26.7%)          | 44 (73.3%)                  | Ref.              | 0.396   |                     | 0.213   |
| Divorced             | 1 (12.5%)           | 7 (87.5%)                   | 0.39 (0.04, 3.45) | 0.396   |                     |         |
| Single               | 23 (46.0%)          | 27 (54.0%)                  | 2.34 (1.05, 5.20) | 0.213   |                     |         |
| Having children      | 0.140               |                             | 0.97 (0.92, 1.03) | 0.324   |                     |         |
| None                 | 29 (42.6%)          | 39 (57.4%)                  | Ref.              | 0.140   |                     | 0.873   |
| 1 child              | 5 (25.0%)           | 15 (75.0%)                  | 0.45 (0.15, 1.37) | 0.140   |                     | 0.873   |
| 2 children           | 5 (22.7%)           | 17 (77.3%)                  | 0.40 (0.13, 1.20) | 0.140   |                     | 0.873   |
| 3 children           | 1 (12.5%)           | 7 (87.5%)                   | 0.19 (0.02, 1.65) | 0.140   |                     | 0.873   |
| Health plan          | 0.256               |                             | 0.97 (0.92, 1.03) | 0.324   |                     |         |
| No                   | 13 (41.9%)          | 18 (58.1%)                  | Ref.              | 0.256   |                     | 0.997   |
| Yes                  | 24 (28.6%)          | 60 (71.4%)                  | 0.55 (0.24, 1.30) | 0.256   |                     | 0.997   |
| Cohabitation status  | 0.435               |                             | 0.97 (0.92, 1.03) | 0.324   |                     |         |
| With own family      | 23 (29.9%)          | 54 (70.1%)                  | Ref.              | 0.435   |                     | 0.857   |
| With roommates       | 1 (25.0%)           | 3 (75.0%)                   | 0.78 (0.08, 7.93) | 0.435   |                     | 0.857   |
| With parents         | 12 (42.9%)          | 16 (57.1%)                  | 1.76 (0.72, 4.30) | 0.435   |                     | 0.857   |
| Alone                | 4 (50.0%)           | 4 (50.0%)                   | 2.35 (0.54, 10.2) | 0.435   |                     | 0.857   |
| Family income        | 0.166               |                             | 0.97 (0.92, 1.03) | 0.324   |                     |         |
| ≤ R$1908             | 7 (50.0%)           | 7 (50.0%)                   | Ref.              | 0.166   |                     | 0.389   |
| R$1908-R$2862        | 7 (63.6%)           | 4 (36.4%)                   | 1.75 (0.35, 8.79) | 0.166   |                     | 0.389   |
| R$2862-R$5724        | 11 (37.9%)          | 18 (62.1%)                  | 0.61 (0.17, 2.22) | 0.166   |                     | 0.389   |
| R$5724-R$9540        | 5 (21.7%)           | 18 (78.3%)                  | 0.28 (0.07, 1.17) | 0.166   |                     | 0.389   |
| R$9540-R$14310       | 4 (26.7%)           | 11 (73.3%)                  | 0.36 (0.08, 1.72) | 0.166   |                     | 0.389   |
| R$14310-R$23850      | 3 (20.0%)           | 12 (80.0%)                  | 0.25 (0.05, 1.29) | 0.166   |                     | 0.389   |
| R$23850              | 3 (27.3%)           | 8 (72.7%)                   | 0.38 (0.07, 2.03) | 0.166   |                     | 0.389   |
| People with health conditions at home | 0.313 |                             | 0.97 (0.92, 1.03) | 0.324   |                     |         |
| None                 | 14 (26.9%)          | 38 (73.1%)                  | Ref.              | 0.313   |                     | 0.214   |
| 1 member             | 17 (40.5%)          | 25 (59.5%)                  | 1.85 (0.77, 4.40) | 2.13    | 0.52 (0.07, 3.75)   | 0.113   |
| 2 members            | 6 (31.6%)           | 13 (68.4%)                  | 1.25 (0.40, 3.94) | 2.13    | 0.52 (0.07, 3.75)   | 0.113   |
| ≥ 3 members          | 3 (60.0%)           | 2 (40.0%)                   | 4.07 (0.61, 27.0) | 2.13    | 0.52 (0.07, 3.75)   | 0.113   |
| Political orientation| 0.150               |                             | 0.97 (0.92, 1.03) | 0.324   |                     |         |
| Right wing           | 5 (18.5%)           | 22 (81.5%)                  | Ref.              | 0.150   |                     | 0.113   |
| Apolitical           | 8 (33.3%)           | 16 (66.7%)                  | 2.20 (0.61, 7.99) | 2.13    | 0.52 (0.07, 3.75)   | 0.113   |
| Centrist             | 2 (22.2%)           | 7 (77.8%)                   | 1.26 (0.20, 7.97) | 2.13    | 0.52 (0.07, 3.75)   | 0.113   |
| Left wing            | 24 (42.9%)          | 32 (57.1%)                  | 3.30 (1.09, 9.97) | 2.13    | 0.52 (0.07, 3.75)   | 0.113   |

Log-likelihood = −58.7812

AIC value = 167.5625

R^2_{Tjur} = 0.21
Strengths and limitations of our study deserve comment. Although we used a prospective longitudinal design, our sample was not necessarily representative of the Brazilian population, which is a common caveat of online data collection. Thus, we can only cautiously generalise the findings to the larger population. Moreover, as mentioned above, political orientation is a difficult factor to adequately assess. It is also a dynamic variable, meaning that people’s political orientation can vary over time and in different contexts. Finally, psychiatric conditions were not examined during data collection, which could have contributed to the stable trajectory of both psychological conditions (depression and anxiety) amongst the participants.

In summary, COVID-19 created extreme uncertainty amongst the population, preventing individuals from organising a coherent interpretation of the pandemic that spread worldwide. It is important to differentiate the psychological effects of the virus from the effects of policies that were enforced to prevent its spread and discern overall perceptions about quarantines and the consequences. Further studies are needed to verify the stability of our findings and whether they can be generalised to other populations.

AUTHOR CONTRIBUTION
LA planned the research and its procedures. LA also wrote the first version of the manuscript, performed the statistical analysis and supervised the process. AP wrote the first version of the manuscript. LB collected the data and performed statistical analyses. LM revised the first version of the manuscript, validated the statistical analysis and wrote the revised version of the manuscript. JLF planned the research, helped with the statistical analysis and supervised the process. All authors have read and agreed to this version of the manuscript.

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CONFLICT OF INTEREST
The authors declare that there is no conflict of interest.

DATA AVAILABILITY STATEMENT
Data and codes are available on Open Science Framework.

ETHICS STATEMENT
This study was approved by the Brazilian Ethical Committee. The public number that can be checked is the registration no. 31662420.8.0000.5258.

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