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Psychosocial correlates of risk for suicidal ideation: the COVID-19 pandemic as a magnifying glass

Correlatos psicossociais de risco para ideação suicida: a pandemia de COVID-19 como uma lupa

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Abstract

Objective

The effects of the COVID-19 pandemic on suicidal behavior are still the subject of studies. It is hypothesized that the pandemic may have contributed to the development of suicidal ideation by intensifying psychosocial risk factors. Our objective was to investigate such correlated factors in Brazil.

Method

The study used an online and cross-sectional survey encompassing 448 adult participants. Sociodemographic questionnaires and the Self-Reporting Questionnaire were used, and binary logistic regression was employed to identify predictors.

Results

The prevalence of suicidal ideation was 22.3%. The results indicate that people who self-identified as black and brown ($OR = 2.42$), who were part of the risk group for COVID-19 ($OR = 2.41$), and who reported more psychological symptoms ($OR = 1.50$) were more likely to have suicidal ideation.

Conclusion

Public policies to prevent suicidal behavior and promote mental health in the most vulnerable groups might be needed beyond the pandemic context, especially among the black population.

Keywords: COVID-19; Pandemics; Race factors; Risk factors; Suicidal ideation.

Resumo

Objetivo

Os efeitos da pandemia de COVID-19 no comportamento suicida continuam sendo tema de estudos. Hipotetiza-se que a pandemia pode ter contribuído para a ideação suicida ao intensificar fatores de risco psicossociais. Nosso objetivo foi investigar tais fatores correlatos no Brasil.

Método

Este estudo realizou uma coleta de dados online e transversal, englobando 448 participantes adultos. Utilizaram-se questionários sociodemográficos e o Self-Reporting Questionnaire, empregando-se regressão logística binária para identificação de preditores.

Resultados

A prevalência de ideação suicida foi de 22,3%. Os resultados apontam que pessoas autoidentificadas como negros e pardos ($OR = 2,42$), que faziam parte do grupo de risco para COVID-19 ($OR = 2,41$), e que reportaram mais sintomas psicológicos ($OR = 1,50$) tiveram maior chance de apresentar ideação suicida.

Conclusão

Políticas públicas de prevenção do comportamento suicida e promoção de saúde mental nos grupos mais vulneráveis podem ser necessárias para além do contexto pandêmico, sobretudo entre a população negra.

Palavras-chave: COVID-19; Pandemias; Fatores raciais; Fatores de risco; Ideação suicida.

Suicide is considered a public health problem worldwide (Turecki et al., 2019; World Health Organization [WHO], 2015). In Brazil, only in 2019, there were 13,503 deaths by suicide (Bonadiman et al., 2022). In that same year, according to data from the Global Burden of Disease Study, suicide was the third cause of death among men aged 15-34 years and the fourth cause of death among women aged 15-24 years (Bonadiman et al., 2022), which highlights the preponderance of this behavior that affects the lives of individuals, families, and communities. Suicidal ideation, which refers to thoughts, contemplations, desires, and concerns related to death and suicide (Harmer et al., 2022), is even more common, with an estimated 17.1% (95% CI: 12.9-21.2) prevalence in Brazilian community samples (Botega et al., 2009). Several risk factors related to suicidal thoughts and behaviors have been studied, including sociodemographic data, psychopathology, personality traits, physical illnesses, environmental stressors, and social aspects. Although suicidal ideation is a highly heterogeneous phenomenon, which can vary in intensity, duration, and characteristics (Harmer et al., 2022), some predictors have been consistently identified, highlighting previous ideation, hopelessness, diagnosis of internalizing disorders, and a history of psychological and physical abuse (Franklin et al., 2017).

The Coronavirus Disease 2019 (COVID-19) pandemic brought many insecurities related to the preservation of the physical and mental health of all individuals. Several authors have suggested that risk factors circumscribed or intensified by the pandemic could increase suicidal ideation and behavior (Banerjee et al., 2021; Ganesan et al., 2021; Raj et al., 2021), such as loneliness, boredom, the feeling of non-belonging resulting from social isolation, and also fears and uncertainties regarding the contagion of the Severe Acute Respiratory Syndrome Coronavirus (SARS-CoV-2) virus and death from COVID-19. Unemployment, reduced income, uncertainty about the future resulting from the global economic crisis, increased abuse and domestic violence, and the stress linked to drastic routine changes are in the scope of other factors that might influence suicidal ideation and behavior (Banerjee et al., 2021). In addition, the literature pointed to the possible detrimental impact of the pandemic on populations that are already vulnerable biologically (elderly, chronically ill, etc.), socially (poor, unemployed, etc.), or psychologically (individuals with mental disorders, or with harmful use of substances, etc.) (Farooq et al., 2021; Ganesan et al., 2021).

The SARS-CoV-2 virus was confirmed in Brazil on February 25, 2020 (Cimerman et al., 2020). Official data indicate that the country had 688,000 confirmed deaths by the disease by November 2022 (Ministério da Saúde, 2022). While many countries faced the economic consequences of the health crisis with unemployment insurance, formally paid leave, and sick leave, Latin American countries could not provide such income protection for the population (Blofield et al., 2019). In the Brazilian context, in addition to the scarce financial support from the government, factors such as social inequality, precarious housing, lack of basic sanitation, and crowding may have facilitated the circulation of the virus in the country (Werneck & Carvalho, 2020). In addition to the health crisis caused by the COVID-19 pandemic, there was a notable global economic recession in 2022. Frاسquilho et al. (2015) support that stress due to financial losses is a common psychosocial risk in times of economic recession, which can affect the mental health of individuals, increasing, for instance, symptoms of depression and anxiety, as observed in Brazil by Duarte et al. (2020).

In this context of the economic deficit, it is important to highlight that, in Brazil, socioeconomic class is also related to race (Estrela et al., 2020). According to the Instituto Brasileiro de Geografia e Estatística (2022), 75% of people living in extreme poverty self-declare as black or brown. During the pandemic, studies showed that the black population was more vulnerable than ever. Ferreira and Camargo (2021) present data from an evaluation of epidemiological bulletins in June 2020, in which there was a progressive increase both in the hospitalization rate due to acute respiratory syndrome and in the mortality rate for the black population, while for the white population, there was a sustained drop in the same rates. Therefore, these results suggest that race/ethnicity can be one of the determining factors concerning physical and mental health during the COVID-19 pandemic.

Considering that the WHO (2012) proposes the identification of risk and protective factors as crucial components for creating preventive strategies for suicidal thoughts and behaviors, the study's objective was to evaluate the psychosocial factors associated with the risk of suicidal ideation in the Brazilian population during the COVID-19 pandemic. It was hypothesized that variables cited in the literature as risk factors would be associated with increased suicidal ideation, as well as new risk factors resulting from the pandemic, such as social distancing and belonging to the COVID-19 risk group. The study of the factors related to suicidal ideation during the pandemic is relevant to understanding the vulnerabilities that impact the lives of Brazilians beyond emergency periods since such critical times might serve as a magnifying glass for institutional problems that exist independently of the pandemic.

Method

A cross-sectional web-based survey was conducted between 08/04/2020 to 21/05/2021. The disclosure was made through social media and email invitations for individuals 18 years and older. Throughout data collection until May 21, 2021, 15,957,232 cases and 445,642 deaths by COVID-19 were notified to the State Health Departments (Ministério da Saúde, 2022). Non-essential activities were suspended during the pandemic, and governments, schools, and work organizations stipulated social distancing. Vaccination started on January 17, 2021; however, at the end of the study, only 9.6% of the population was vaccinated with the 2nd. dose.

This project was approved by the National Research Ethics Commission, nº 3.959.863, and CAAE 30114520.1.0000.5334. All participants provided written informed consent after reading the research goals and the requirements for participation. Once the survey was finished, participants could access illustrated cards with mental health promotion information. Furthermore, participants

who indicated suicidal ideation were provided an e-mail to contact the research group and the telephone number of the national hotline for suicide prevention.

Instruments

Sociodemographic Questionnaire – Participants answered a sociodemographic questionnaire, including age, sex, employment, income, housing status, and self-identified race/ethnicity. Additionally, questions regarding mental healthcare, psychiatric diagnosis, and COVID-related health questions were included, along with social distancing items.

Self-Reporting Questionnaire (SRQ-20) (Santos et al., 2011) – The Self-Reporting Questionnaire, 20 items, was used as a screening tool for psychiatric symptoms, including suicidal ideation. The SRQ-20 is a widely used and valid tool for screening common mental disorders in community samples (Ali et al., 2016), which has been developed by the WHO to be used especially in developing countries (WHO, 1994). In Brazil, the scale was validated by Santos et al. (2011). It consists of 20 yes-or-no self-reporting items, in which the person indicates whether the symptom was present during the past month. The 17th item asks if the person has been thinking of ending his/her life and was used in the present study as a proxy for suicidal ideation. Also, the SRQ-20 total score is used to indicate psychological distress and risk for common mental disorders.

Participants

The initial configuration of the survey consisted of essential questions to map the mental health of Brazilians at the beginning of the COVID-19 pandemic. As the pandemic situation persisted, new waves of questions were added. Therefore, there is no sample-wide information for all variables. To verify the effects of risk and protective factors on suicidal ideation, only complete responses in all variables of interest were included in the regression analysis, which resulted in 448 (18%) subjects out of the initial 2480.

Data Analysis

Descriptive statistics are presented as frequencies for categorical data and Means (*M*) and Standard Deviation (*SD*) for quantitative variables. Variables with less than ten answers per item choice were excluded. Those who self-identified as “brown” or “black” were grouped into the same category, as commonly done in other research using race/ethnicity in Brazil (Smolen & Araújo, 2017). Likewise, the housing situation was dichotomized into living alone or with someone else. A comparison of those with and without suicidal ideation was made using *t*-tests for continuous variables and χ^2 tests for categorical variables.

The effect of independent variables in predicting positive suicidal ideation was analyzed through binary logistic regression. A hierarchical strategy was chosen to build the regression model, considering two blocks of variables. The first is with variables known in the literature to be associated with suicidal ideation, and the second is with variables related to the COVID-19 pandemic. As a measure of improvement in model fit, the change in -2 log-likelihood was compared, along with the improvement in Nagelkerke R^2 proportion of explained variance. Regression diagnostics were performed to ensure that the assumptions of logistic regression were met, which included a quality check for all variables included, estimation of cook’s distance, linearity of the logit, and multicollinearity. The contribution of each predictor is expressed as an Odds Ratio (OR) with 95%

Confidence Intervals (CI). Also, diagnostic statistics of the final model are reported, including accuracy, sensitivity, specificity, negative predictive value, and positive predictive value. All analyses were performed in R (version 3.6.3) (R Core Team, 2022). The dataset and the code used in the data analysis are available at <<https://osf.io/7xzdt/>>.

Results

A total of 448 participants participated in the study, of which 22.3% ($n = 100$) indicated suicidal ideation in the SRQ-20. Most respondents resided in Rio Grande do Sul (94.4%), while the remaining were from 13 other Brazilian states. The sample mainly consisted of women (66%), young people between 23 and 32 years (75%, $M = 29$, $SD = 8.23$), self-identified as white (78.3%), with a total family income of BRL 1.975,00 to BRL 5.500,00 (75%, median = BRL 3.000,00, $MAD = BRL 2.223,00$). Other descriptive characteristics of the sample are shown in Table 1.

Table 1

Descriptive Characteristics by Positive Suicide Ideation Endorsement ($n = 100$) and Negative Suicide Ideation Endorsement ($n = 348$) in a Brazilian Sample (2020-2021)

Variable	Total ($n = 448$)		Suicide Ideation		No Suicide Ideation	
	n	%	n	%	n	%
Sex						
Male	152	34.9	27	27	125	35.9
Female	296	66	73	73	223	64.1
Race/Ethnicity						
White	351	78.3	68	68	283	81.3
Black	39	8.7	12	12	27	7.8
Brown ^a	58	12.9	20	20	38	10.9
Employment Status						
No	186	41.5	47	47	139	40
Yes	262	58.4	53	53	209	60
Living situation						
Alone	84	18.7	20	20	64	18.4
Family	271	60.5	58	58	213	61.2
Friends	27	6	5	5	22	6.3
Student housing	12	2.7	4	4	8	2.3
Other	54	12	13	13	41	11.8
Current Mental Health Care						
No	276	61.6	55	55	221	63.5
Yes	172	38.4	45	45	127	36.5
Self-reported Mental Disorder						
No	286	63.8	45	45	241	69.2
Yes	162	36.2	55	55	107	30.7
COVID-19 Risk-group ^b						
No	365	81.5	76	76	289	83
Yes	83	18.5	24	24	59	17
Social Distancing ^c						
No	66	14.7	12	12	54	15.5
Yes	382	85.3	88	88	294	84.5

Note: Suicide ideation endorsement was ascertained through the positive or negative answers to item 17 of the Self-Reporting Questionnaire (SRQ-20). ^aThe "Brown" classification is one of the official five categories of race/color in Brazil's Census, corresponding to "Pardo" in Portuguese. ^bCoronavirus risk group (COVID-19) was defined as age over 60 years, diabetes, hypertensive, heart or respiratory problems, and pregnancy. ^cA definition of social distancing was given to participants, which refers to efforts to reduce contacts and physical proximity between people in a population, unless for essential activities such as supermarket, pharmacy, banking, and access to the health system.

The sample mean SRQ-20 score was 11 points ($SD = 4.97$), with a significant difference between people with and without suicidal ideation ($t(279.2) = 14.88, p < 0.001$). Among all people who endorsed the suicidal ideation item, at least seven other symptoms were reported on the SRQ-20, totaling a minimum score of 8 points. The mean was 15.4 ($SD = 2.78$) for those with ideation and 9.8 ($SD = 4.75$) for those without ideation (difference 5.62, 95% CI 4.87-6.36). In addition, there were significant differences between groups for age (with ideation, $M = 27.1(6.8)$, without ideation, $M = 29.7(8.5)$; $t(197.18) = -3.12, p < 0.01$), income (with ideation, $M = \text{BRL } 3.824,90$, without ideation, $M = \text{BRL } 5.080,20$; $t(267.57) = -2.43, p < 0.05$), race ($\chi^2(1) = 7.36, p < 0.01$) and diagnosis of mental disorder ($\chi^2(1) = 18.75, p < 0.001$).

Factors Associated with Suicidal Ideation

A hierarchical logistic regression was performed to investigate the impact of predictors on the outcome of suicidal ideation. The first block, with variables identified in the literature as risk and protective factors for ideation, was able to explain 41% of the risk variance (Nagelkerke $R^2 = 0,41, p < 0.001$). When predictors related to the COVID-19 context were added, the final model had an accuracy of 82.58%, correctly classifying 93.39% of the negative cases of ideation (specificity) and 45% of the positive cases (sensitivity) ($\chi^2(13) = 150.149, p < 0.001$, Nagelkerke $R^2 = 0,43$). Furthermore, the ratio of true negatives to false negatives was 85.52% (Negative Predictive Value), and the ratio of true positives to false positives was 66.17% (Positive Predictive Value).

Table 2 provides the results for the logistic regression estimates and the contribution of each predictor to the suicidal ideation outcome while controlling for all other independent variables. Among the predictors of the first block, identifying as black or brown (grouped) ($OR = 2.42, 95\% CI = 1.29-4.54, p < 0.01$) and reporting more psychological symptoms in the SRQ-20 ($OR = 1.50, 95\% CI = 1.36-1.60, p < 0.001$) were associated with a greater chance of suicidal ideation. Indicating a diagnosis of a mental disorder prior to the COVID-19 pandemic was a statistically significant variable in the first block, yet it remained only marginally significant after the inclusion of the second block of variables ($OR = 1.74, 95\% CI = 0.97-3.12, p = 0.061$). Of the pandemic-related predictors, belonging to the risk group for developing severe forms of COVID-19 increased the risk of suicidal ideation in the sample ($OR = 2.41, 95\% CI = 1.18-4.93, p < 0.05$).

Table 2
Hierarchical Logistic Regression Estimates for Prediction of Suicidal Ideation in a Brazilian Sample (2020 - 2021)

Effect	First Model				Second Model			
	β	SE	OR	95% CI	β	SE	OR	95% CI
Intercept	-6.60	1.06	0.00	0.00-0.00	-6.89	1.16	0.00	0.00-0.00
Age	-0.00	0.02	0.99	0.94-1.03	-0.01	0.02	0.98	0.94-1.02
Income	0.00	0.00	1.00	0.99-1.00	0.00	0.00	1.00	0.99-1.00
Sex (Female)	-0.04	0.30	0.95	0.52-1.76	-0.04	0.31	0.92	0.51-1.78
Race (Black)	0.84	0.31	2.32	1.25-4.31**	0.88	0.31	2.42	1.29-4.54**
Employment (Yes)	-0.02	0.27	0.97	0.56-1.69	-0.02	0.30	0.97	0.53-1.78
Living (Alone)	0.08	0.35	1.08	0.53-2.17	0.05	0.37	1.05	0.49-2.20
Mental Health Care (Yes)	-0.21	0.29	0.80	0.44-1.43	-0.23	0.30	0.79	0.43-1.42
Mental disorder (Yes)	0.59	0.29	1.80	1.01-3.20*	0.55	0.29	1.74	0.97-3.12
SRQ-20 Total Score	0.39	0.05	1.48	1.35-1.64***	0.41	0.05	1.50	1.36-1.68***
COVID-19 Risk-Group (Yes)					0.87	0.36	2.41	1.18-4.93*
Living With COVID-19 Risk Group					-0.32	0.30	0.72	0.39-1.31
Social Distancing (Yes)					0.26	0.44	1.30	0.55-3.24
COVID-19 Diagnosis (Yes)					0.30	0.60	1.35	0.38-4.24

Discussion

Univariable analyses revealed significant sociodemographic and psychological differences between people with and without suicidal ideation during the COVID-19 pandemic. People who endorsed suicidal ideation on the SRQ-20 are younger, have a significantly lower income, have a greater presence of mental disorders and psychological symptoms, and are more often self-identified as black and brown. This result is close to Anselmi et al. (2008), who investigated the determinants of common mental disorders in a cohort of 4,297 adults from Pelotas, Rio Grande do Sul. Using the SRQ-20, the authors found an increased risk for common mental disorders in poor men and women and women identifying as black or brown (Anselmi et al., 2008). However, in the present study's multivariable analysis, the association of income and previous mental disorder diagnosis with suicidal ideation did not remain significant. This is an important finding, as it suggests that the racial effect on mental health goes beyond economic inequalities and might indicate an independent mechanism for the incidence of suicidal ideation in black populations.

The 22.3% prevalence of suicidal ideation is similar to that found in studies conducted during the pandemic with community samples of adults in the United States (17.5%, Ammerman et al., 2021) and in the United Kingdom (18%, Job et al., 2020). Similarly, a prevalence study including more than ten countries and 25,000 participants answered in March and April 2020 found rates of suicidal ideation ranging from 7.6 to 24.9% (Cheung et al., 2021). Although the rate found in the current study indicates a high prevalence, it is comparable to rates of suicidal ideation in the pre-pandemic period in Brazil (18.6%) and worldwide (2.6 to 25.4%) (Bertolote et al., 2005). Furthermore, a review of studies on suicidal behavior during the COVID-19 pandemic did not find consistent results pointing to an increase in the suicide rate during this period (John et al., 2021).

Also, social distancing, initially hypothesized as one of the main variables related to the pandemic with a detrimental effect on mental health, did not present a significant association with suicidal ideation in the present study. Indeed, studies that analyzed the psychological impacts of quarantine found small effects on symptoms of depression and anxiety (Fountoulakis et al., 2022). Also, a meta-analysis of three studies did not find an association between social distancing and suicidal ideation in the early periods of the pandemic (January to June 2020) (Prati & Mancini, 2021). These studies suggest that the distancing imposed by the pandemic does not have uniform effects on the mental health of the population and that confinement may have a particularly unfavorable effect on those who already have mental disorders or attempted suicide before the pandemic. In this regard, the rate of probable depression was 50.79% in individuals with a history of mental disorder and a history of attempted suicide/self-harm who were in complete quarantine, compared to 13.55% in individuals in complete quarantine, but without a history of mental disorder, suicide attempt, or self-harm (Fountoulakis et al., 2022).

On the other hand, belonging to the COVID-19 risk group, that is, being over 60 years old, having diabetes, hypertension, heart or respiratory problems, or being pregnant, doubled the chance of having suicidal ideation in the sample. Other studies also found a higher prevalence of suicidal ideation among individuals with physical comorbidities (Mamun et al., 2021); in addition to a greater risk for ideation among people who indicated more concern for physical safety due to the new coronavirus (Ammerman et al., 2021). Given that individuals in the risk group for COVID-19 are more likely to develop severe forms of the disease, be hospitalized, and die from it (Chen et al., 2020; Dessie & Zewotir, 2021), it can be hypothesized that the fear and uncertainty resulting from being in the risk group increase the stress related to the pandemic and the occurrence of thoughts related to death, which may also lead to suicidal thoughts.

The total score of the SRQ-20, which indicates risk for mental illness, was a predictor of suicidal ideation in the sample, in addition to distinguishing between those with and without ideation, converging with a vast literature on risk factors for suicidal thoughts and behavior before (Franklin et al., 2017) and during the pandemic (Farooq et al., 2021). The same was observed in a Brazilian study with residents of Mato Grosso (Terças-Trettel et al., 2020). Notably, the average SRQ-20 among individuals with ideation was 15.4 points ($SD = 2.78$) out of a maximum of 20, and all people with ideation endorsed at least seven other items of the SRQ-20. That is, suicidal ideation does not occur in isolation but is accompanied by other symptoms of common mental disorders. Likewise, completed suicide is often associated with the presence or risk of mental disorders (Bertolote & Fleischmann, 2002), considering that approximately 90% of suicides occur in people with psychiatric diagnoses (Arsenault-Lapierre et al., 2004; Bertolote et al., 2004).

Finally, the result of the racial factor should be emphasized once it was observed that individuals identifying as black and brown exhibited a greater chance of suicidal ideation during the pandemic than whites. Indeed, the COVID-19 pandemic has disproportionately impacted ethnic and racial minorities, including higher rates of contamination and death from the infection. Data from the Centers for Disease Control and Prevention (2020) revealed that the chances of hospitalizations and deaths from COVID-19 in the United States were, respectively, 2.3 and 1.7 higher in blacks compared to whites. The same occurred in Brazil, where black, brown, and indigenous people had a higher prevalence of antibodies against the SARS-CoV-2 virus, even after controlling for regions of the country and socioeconomic status (Horta et al., 2021). Such differences may be due to structural disparities between groups, such as access to health services and occupation-related exposure to the virus, the distribution of which has historically differed across racial groups. Furthermore, it appears that the discrepancies between the groups are generalized for mental health outcomes as well. Mitchell and Li (2021) compared official suicide mortality data in Connecticut during the first month of the pandemic (March 10 to 20, 2020) with data from the previous six years, identifying that while in the early stages of the pandemic, the suicide rate declined among white people, it rose among non-whites. Similarly, the rate of suicidal thoughts was higher among blacks, Asians, and ethnic minorities in the UK (Iob et al., 2020) and in the rural US (Salt et al., 2023) during the pandemic.

Although race and ethnicity are understudied factors in the suicide literature (Sheehan et al., 2018), studies before the COVID-19 pandemic had already been pointing to an association between suicidal thoughts and behaviors and belonging to marginalized racial groups (Schriver et al., 2020; Xiao et al., 2021; L. Wang et al., 2018). On the other hand, some studies did not find this association (Cheref et al., 2018) or even obtained results suggesting a lower risk in black (Erasquin et al., 2019) and Hispanic (Cheref et al., 2018) populations. The literature, therefore, has been inconsistent (S. C. Jones & Neblett, 2016), thus suggesting the need for further studies, especially in non-WEIRD (Western, Educated, Industrialized, Rich, And Democratic) countries. A review of national studies in Brazil observed a trend toward higher rates of mental disorders in non-white populations (Smolen & Araújo, 2017). Based on this, some mechanisms for the racial impact on mental health have been proposed, such as (i) stress due to discriminatory experiences related to race/ethnicity; (ii) lower access and search for mental health services due to institutional barriers related to race/ethnicity; (iii) emotional sequelae associated with negative self-evaluations based on sociocultural values related to race/ethnicity. Roughly speaking, such mechanisms correspond to the theoretical classification of (i) individual racism, (ii) structural racism, and (iii) internalized racism, proposed by C. P. Jones (2000).

The repercussions of structural racism are particularly worrying in the context of suicidal thoughts and behavior, in which access to mental health care is crucial to prevent negative outcomes (WHO, 2015). Rufino et al. (2021) reviewed studies with adolescents at risk for suicide and concluded that being a member of a racial minority is a risk factor for lower use of mental health treatment; a result replicated in adults (Sheehan et al., 2018). Such disparities in the use of mental health services occurred in the outpatient care of those with suicidal ideation and suicide attempts. However, this difference was not observed in the rates of hospital care (Nestor et al., 2016; Sheehan et al., 2018). This pattern of findings indicates that racial minorities at risk of suicide may delay seeking mental health care until clinical severity demands inpatient services. One of the reasons hypothesized for this is the greater perception of difficulty in accessing services, which can occur due to direct and indirect discriminatory experiences. In Brazil, race and socioeconomic status were strong and independent predictors of difficulty accessing healthcare, a result that remained in the periods of 2008, 2013, and 2019 (Constante & Bastos, 2020). This consistent report of perceived difficulty in accessing health services suggests, as the authors say, that: “the door is open” once Brazil has a public health system, but “not everyone may enter” (Constante et al., 2021, p. 3981).

By understanding the suffering resulting from the pandemic as a collective response, universal interventions are prioritized to promote primary and secondary prevention. In this regard, governmental actions are decisively important to ensure the mental health of the population in the face of natural disasters. Comprehensive national suicide prevention strategies must include (1) social welfare programs to mitigate the impact of mass unemployment and economic hardship; (2) availability of evidence-based mental health treatment and suicide prevention interventions, including crisis helplines and services; (3) ethical media communication about mental health and suicide stigma, which should encourage people to seek help early; and (4) policies to promote social cohesion and combat structural racism (Sinyor et al., 2022). One study about the *Bolsa Família* national cash transfer program and suicide incidence in Brazil showed that, over a 12-year period, program beneficiaries had a lower suicide rate than nonbeneficiaries (Machado et al., 2022). Governmental programs such as *Bolsa Família* might be critical in the context of economic recession resulting from the pandemic, reducing suicidal behaviors at a population level.

In regard to psychological interventions, primary and secondary prevention actions to monitor, reduce and manage the risk of suicidal ideation may include: 1) the promotion of antiracist health practices, which include collaborative care with members and organizations integrated into black communities; training health professionals on racial issues; and identifying and debating internalized racism (Moise & Hankerson, 2021); 2) adaptation of psychological interventions for black and minority ethnic groups (Arundell et al., 2021), including Brazilian indigenous populations, in order to promote culturally sensitive actions; 3) promotion of health literacy and mental health for the entire population in epidemic and pandemic periods, especially groups at risk for infectious diseases, in order to reduce the fear, helplessness, and hopelessness associated with the risk condition; and 4) routine monitoring and referral for specialized psychological treatment of people with suicidal ideation, mental disorders and risk for minor mental disorders as identified by psychological scales or professional assessment.

The present findings must be interpreted in light of their limitations. First, due to the cross-sectional nature of the data, the results of the logistic regression should not be taken as risk factors but as correlates or concomitants of suicidal ideation, which should be further investigated longitudinally to assess its predictive power. Second, using a single-item measure of suicidal ideation might lower the reliability of the assessment, resulting in greater misclassification and

statistical error (Millner et al., 2015). Future studies employing multi-item scales or structured interviews could provide a finer-grained assessment of suicidal ideation. Another bias refers to the online design of the research, considering that individuals in intense psychological distress, older adults, individuals with low education, and those without internet connection may not have access to the survey. Given the sociodemographic characteristics of the sample under study, the results presented may not be generalizable to the entire Brazilian population. New studies are needed to cover diverse sociodemographic groups, especially men, the elderly, indigenous people, and the financially disadvantaged.

Also, it should be emphasized that no diagnostic interviews were carried out in the present study, which may have reduced the statistical power of the self-referred mental disorder diagnosis variable, given that many people with clinically significant impairment do not receive diagnosis and treatment for mental health, especially in developing countries (P. S. Wang et al., 2007). Furthermore, the loss of loved ones due to COVID-19 might be a variable related to suicidal ideation (Drucker et al., 2023) but was not included in the study. Considering the disproportionate mortality rate among the black population, and the negative impact of the pandemic on mourning rituals, complicated grief and the loss of loved ones should be investigated as potential mediators/moderators between race and suicidal ideation. Finally, the factors investigated refer to the specific context of the COVID-19 pandemic, which is not replicable. Despite this, it is believed that the pandemic can serve as a natural experiment for investigating psychological phenomena and informing interventions in emergency periods, including natural disasters, epidemics, and political conflicts.

Considering that sociocultural characteristics may mediate the interaction between risk factors and the trajectories of mental problems, it is recommended that intersectionality be consistently evaluated in the context of suicide research and service implementation. Further research is needed to investigate the racial impact on the development and maintenance of suicidal ideation in Brazilian samples. Despite the limitations mentioned, the importance of the study is evidenced by the scarcity of empirical results investigating race and suicidal behavior in Brazil, in addition to the few studies published in the context of the pandemic about suicidal ideation in non-WEIRD populations (Webb et al., 2022).

Conclusion

The assessment of psychosocial factors potentially associated with the risk of suicidal ideation during the COVID-19 pandemic revealed, in the present study, that race, belonging to the COVID-19 risk group, and the SRQ-20 score are relevant variables for understanding this outcome in the Brazilian population. Although the changes resulting from the COVID-19 pandemic may have an impact on the mental health of all populations, it is expected that most individuals will have adaptive reactions after the initial periods of change. There is undoubtedly great variability in how people react to stress, depending on individual and contextual factors. The results presented by this cross-sectional study suggest that marginalized groups are especially at risk of presenting suicidal ideation and constitute the target population for interventions in emergency periods. In addition, these groups may present psychological reactions that will last after the end of the pandemic, considering that this period intensifies structural problems that may continue to exist after COVID-19. Thus, the study of suicidality during the pandemic serves as a magnifying glass for social problems and gaps in mental health in Brazil.

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