Social distancing, use of face masks and hand washing among participants in the *Brazilian Longitudinal Study of Aging*: the ELSI-COVID-19 initiative

Distanciamento social, uso de máscaras e higienização das mãos entre participantes do *Estudo Longitudinal da Saúde dos Idosos Brasileiros*: iniciativa ELSI-COVID-19

Distanciamiento social, uso de mascarillas e higienización de las manos entre participantes del *Estudio Brasileño Longitudinal del Envejecimiento*: iniciativa ELSI-COVID-19

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Abstract

The aim of the study was to examine the prevalence of social distancing, the use of face masks and hand washing when leaving home among Brazilian adults aged 50 or over. Data from 6,149 telephone interviews were used, conducted between May 26 and June 8, 2020 among participants in the Brazilian Longitudinal Study of Aging *(ELSI-Brazil). Social distancing was defined by not having left home in the last seven days. Only 32.8% of study participants did not leave home during the period considered, 36.3% left between one and two times, 15.2% between three and five times and 15.7% left every day. The main reasons for leaving home were to buy medicine or food (74.2%), to work (25.1%), to pay bills (24.5%), for health care (10.5%), to exercise (6.2%), and to meet family or friends (8.8%). Among those who left home, 97.3% always wore face masks and 97.3% always performed hand washing. Women left home less often than men. Men left home more often to work and exercise while women left home more often to seek healthcare. Men (odds ratio – OR = 1.84), those with higher education (OR = 1.48 and 1.95 for 5-8 and 9 years, respectively) and urban residents (OR = 1.54) left home more frequently to perform essential activities, regardless of age or other characteristics. Results show low adherence to social distancing, but high prevalence in the reported use of face masks and hand washing.*

Coronavirus; COVID-19; Masks; Social Isolation; Aging

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Introduction

The coronavirus 2 (SARS-CoV-2) epidemic is currently the world's most severe public health challenge. The epidemic began in December 2019 in Wuhan, China, and quickly spread to different countries and continents, leading the World Health Organization to declare a pandemic on March 11, 2020 [1]. One week later, Brazil documented community transmission of the virus [2] and, since then, cases have been growing exponentially, without any sign of slowing down. By the end of June, Brazil ranked second in the world, both in the number of confirmed cases (1.37 million cases) and in the number of deaths (58,314 deaths), second only to the United States [3].

Person-to-person transmission of coronavirus 2 occurs primarily through droplets expelled from the respiratory system. Governmental actions, such as total closures (lockdown), prohibition of public events and large gatherings, closing schools, and encouraging social distancing to avoid contact with symptomatic or asymptomatic carriers of the virus, are the principal recommended actions to contain or reduce transmission [4,5,6,7,8,9]. To complement these actions, individual protective measures are also recommended, including voluntary isolation, use of face masks and frequent hand washing [5,10,11,12].

The coronavirus 2 epidemic in Brazil has occurred in a situation of political strife, which led to the replacement of two Ministers of Health in a short period of time. Although the country established early general guidelines for coping with the epidemic (*Law n. 13,979,* February 6, 2020 [13]), it has been the subject of conflicting narratives, with federal authorities denying or diminishing its severity [14]. In the absence of clear and timely guidance at the federal level, the implementation of control and prevention measures has been assumed by governors and mayors and, in some situations, enforced by the judiciary [14]. More recently, some municipalities have eased previously imposed social distancing restrictions, but then had to retreat from this position due to increased case numbers. These uncertainties can have serious consequences for the population's perception of the severity of the situation, potentially leading them to place less emphasis on the importance of adherence to preventive measures.

The symptoms associated with coronavirus 2 infection are more severe in older people and among those with pre-existing chronic diseases, resulting in higher rates of hospitalizations, admissions to intensive care units (ICU), and death [3,14,15]. In Brazil, up until the beginning of June, 86% of deaths from COVID-19 had occurred among people aged 50 or over [15]. According to the Brazilian Institute of Geography and Statistics (IBGE. https://sidra.ibge.gov.br/tabela/5918, accessed on 20/Jun/2020), estimates for the year 2020 show that a quarter of the Brazilian population is 50 years old or more (54 million people, equivalent to the entire population of Italy), and 30 million Brazilians are 60 or more years of age. These figures give a dimension to the challenges faced by society and the national health system, in case the epidemic continues to worsen or new waves occur after periods of relative stability.

To our knowledge, in Brazil there are no nationally representative surveys specifically designed to examine the behaviors of older age groups during the coronavirus 2 epidemic. The ELSI-COVID-19 initiative, via telephone surveys conducted among participants of the *Brazilian Longitudinal Study of Aging* (ELSI-Brazil) [16], aims to fill this gap. In this publication, we present results of the first series of telephone surveys of the ELSI-COVID-19 initiative, aiming to estimate the prevalence of preventive behaviors (social distancing, wearing masks, and hand washing) and examining the association between these measures and socio-economic and demographic characteristics, such as age, gender, education, marital status, home arrangements and area of residence. An additional objective was to examine the association between social distancing and the presence of symptoms related to COVID-19.

Methods

Design of the ELSI-Brazil study

ELSI-Brazil is a longitudinal household-based study, conducted in a national sample representative of the non-institutionalized Brazilian population aged 50 and over. To represent the Brazilian population in the eligible age, the sample was comprised of three stages; municipalities (primary sampling

units), census tracts, and households. Participants are located in 70 municipalities, in all of the five major regions of the country. The baseline survey was conducted in 2015-2016, with 9,412 participants. The second survey wave started in August 2019 but was interrupted on March 17, 2020, due to the SARS-CoV-2 epidemic. The interruption of fieldwork was intended to avoid the potential risk of transmission during the household visit and guided by ethical considerations, given that the cohort population consists of older people. Until the interruption of fieldwork, 9,177 people had been interviewed and had their physical measurements taken. Further details on the ELSI-Brazil methodology can be seen in Lima-Costa et al. [16] and on the study homepage (http://elsi.cpqrr.fiocruz.br/).

All participants in the second wave of ELSI-Brazil were eligible for the telephone survey. The telephone interview was planned to be short, lasting about five minutes. Among those eligible, 6,149 (67%) responded to the interview. The characteristics of participants in the telephone survey were similar to those of the Brazilian population aged 50 or over in relation to all socio-demographic characteristics analyzed, such as age, gender, number of residents in the household, education, region of residence, and urban/rural residence. Further details on the methodology of the telephone interview and the reasons for non-responses can be seen in Lima-Costa et al. [17].

Measures

In this analysis, we considered the following information obtained by telephone interview: frequency of leaving home in the past seven days (did not leave, left between one and two times, between 3 to 5 times, and almost every day); reasons for leaving home when this was the case (to work, to buy food or medicine, to meet friends or family, to get health care, to exercise or walk, to pay bills, or other reasons); frequency of wearing face masks when leaving home (always, sometimes, or never); frequency of hand washing with water/soap or hand sanitizer (always, sometimes, or never) when leaving and returning home, and respiratory symptoms in the last 30 days (fever, persistent dry cough, and/or difficulty breathing). The following reasons for leaving home were categorized as essential: working, buying medicine or food, health care, and paying bills. Reasons considered non-essential were: exercising or walking, meeting friends or family, and other reasons not specified. Those who reported reasons for leaving home that fell into both categories were classified as having left for essential activities. Social distancing was defined as the report of not having left home during the period in question.

Exploratory variables included information obtained from the second wave of ELSI-Brazil, namely: age, gender, marital status, education, number of residents in the household, region of residence, and household location (rural or urban).

Statistical analysis

Results are reported as percentages and their respective 95% confidence intervals (95%CI). In unadjusted analyses, the chi-square test with a Rao-Scott correction was used to examine the statistical significance of differences between proportions. Fully adjusted models, estimated by means of multinomial logistic regression, were used to examine the associations between social distancing (left home for essential activities or left for non-essential activities vs. did not leave) while controlling for all variables that in the univariate analyses showed associations with the outcome at p < 0.20. Multinomial regression was also used to examine how the reasons for leaving home differed by age and gender, by graphing predicted probabilities from the final multivariable models.

All analyses considered the complex sample design and incorporated weights specifically derived for respondents to the telephone interview. These weights were calculated based on the age, gender, and educational level of the respondents to this interview, as described in Lima-Costa et al. [17]. All analyses were performed using the Stata statistical package, version 14 (https://www.stata.com).

ELSI-Brazil and the ELSI-COVID-19 initiative were approved by the ethics board of Oswaldo Cruz Foundation (Fiocruz), Minas Gerais (CAAE: 34649814.3.0000.5091 and CAAE: 33492820.3.0000.5091, respectively).

Results

Among the 6,149 participants of the telephone interview, 6,123 answered questions about preventive behaviors and were included in this analysis. Among these participants, the average age was 63.4 years (standard error = 0.54), 53.4% were women, 59.4% were married and 23.3% lived alone. Residence in the southeast region predominated (40.7%), as did living in an urban area (87.4%). During the previous 30 days, 10.4% of participants had at least one of the following flu-like symptoms: fever, persistent dry cough and/or difficulty breathing. As can be seen in Table 1, 32.8% of study participants did not leave the home in the previous seven days, 36.3% left between one and two times, 15.2% between three and five times and 15.7% went out every day. The reasons for leaving home were as follows: buying medicine or food (74.2%), working (25.1%), paying bills (24.5%), health care (10.5%), meeting family members or friends (8.8%), and exercise (6.2%). Among those who left home, 97.3% reported always wearing face masks and 97.3% always washed their hands when leaving and returning home. Women left home less often than men. For both genders, the main reason for leaving home was to buy food or medicine. Compared to women, men went out more often to work and exercise. Women left more frequently for health care. Although statistically significant, gender differences in the use of face masks and hand washing were fairly small in magnitude.

Table 2 shows results of the bivariate analyses of the association between leaving home in the last seven days (did not leave, left because of necessity, and left for other reasons), socio-demographic characteristics, and reporting flu-like symptoms in the last 30 days. More than half of participants reported having left home to perform essential activities, such as working, shopping, paying bills, or seeking health care (56% of women and 68.1% of men). The following characteristics showed statistically significant differences (p < 0.05) between groups: age (leaving home decreased with age), marital status (widowers left less compared to others), education (those with higher education left home more often), and location (residents in urban areas left home more often). No significant associations (p > 0.05) were observed for number of household residents, geographic region, and flu-like symptoms

Table 3 shows results of multivariate analysis of the association between socio-demographic characteristics and reasons for leaving home. Leaving home for essential activities was reported more frequently by men (OR = 1.84), by those with higher educational level (OR = 1.48 and 1.95 for those with 5-8 and 9 years or more as compared to less than 5 years, respectively), and those residing in urban areas (OR = 1.54). Going out for essential activities was reported less frequently by those who lived in the Central and North regions (OR = 0.61 and 0.54, respectively). Going out to perform non-essential activities was reported more frequently among residents in the southeastern region (OR = 2.85 compared to the southern region) and less frequently among those aged 70 or over (OR = 0.41) compared to younger ages.

Figure 1 and 2 shows the predicted probabilities of the reasons for leaving home, by age (as a continuous variable), with separate graphs for men and women. For both genders, there is a marked decrease with age in the probability of having left the house in the last seven days, with the opposite being true for leaving for essential reasons. Leaving home for non-essential activities did not significantly vary by age.

Discussion

The ELSI-COVID-19 initiative telephone survey was carried out between late May and early June of 2020, when the epidemic was still on the rise in Brazil. The primary objective of our analyses was to determine the prevalence of preventive behaviors in relation to transmission of Coronavirus 2 among older Brazilian adults during the period in question. Results show about 1/3 of study participants had not left their home in the previous week. On the other hand, the prevalence of wearing a mask when leaving home and hand washing were very high (about 97%). Men were more likely to leave home as compared to women, in line with what has been observed in other contexts [18,19].

The definition of social isolation or physical distancing varies between studies and at different time periods, making comparisons difficult both between countries and between groups or individuals in the same country. A telephone survey conducted in Hong Kong, showed high prevalence of

Table 1

Behaviors related to the prevention of infection by coronavirus 2 in the last seven days among participants in the telephone survey of the *Brazilian Longitudinal Study of Aging* (ELSI-COVID-19 initiative), by sex, May 26 to June 8, 2020.

Behaviors	Total % (95%CI)	Women % (95%CI)	Men % (95%CI)	p-value
Frequency of leaving the house (< 7 days)				
Did not leave	32.8 (30.03-5.7)	38.2 (34.3-42.2)	26.3 (22.3-30.8)	< 0.001
1-2 times	36.3 (33.3-39.4)	40.1 (35.1-45.3)	31.9 (28.3-35.6)	
3-5 times	15.2 (12.6-18.3)	11.8 (9.5-14.5)	19.3 (14.8-24.9)	
Nearly every day	15.7 (12.6-19.3)	10.0 (7.7-12.8)	22.5 (17.5-28.4)	
Used a face mask when outside the house				
Always	97.3 (96.2-98.1)	98.9 (98.1-99.4)	95.7 (93.9-97.0)	< 0.001
Sometimes	2.0 (1.3-3.1)	0.7 (0.3-1.7)	3.3 (2.2-5.2)	
Never	0.7 (0.4-1.2)	0.4 (0.2-0.5)	0.9 (0.4-2.1)	
Washed hands with soap and water or hand sanitizer				
Always	97.3 (95.7-98.4)	98.6 (96.6-99.4)	96.1 (93.5-97.7)	0.038
Sometimes	2.0 (1.2-3.4)	0.8 (0.4-1.6)	3.2 (1.8-5.7)	
Never	0.7 (0.2-1.9)	0.7 (0.1-3.7)	0.7 (0.2-1.9)	
Reasons for leaving the house				
To work	25.1 (20.4-30.6)	14.0 (10.6-18.2)	36.2 (29.5-43.6)	< 0.001
To buy food or medicine	74.2 (69.7-78.2)	75.0 (69.0-80.2)	73.4 (67.4-78.6)	0.656
To meet friends or family	8.8 (6.7-11.6)	10.2 (6.8-15.0)	7.5 (5.0-11.0)	0.277
To obtain health services	10.5 (8.5-12.9)	13.5 (10.5-17.3)	7.4 (5.5-9.9)	< 0.001
To walk or do exercises	6.2 (4.5-8.4)	3.5 (2.3-5.2)	8.9 (6.3-12.5)	< 0.001
To pay bills	24.5 (20.7-28.6)	22.5 (17.3-28.7)	26.4 (22.5-30.7)	0.217
Other reasons	10.7 (8.8-13.1)	10.4 (7.7-13.9)	11.1 (8.7-14.0)	0.703
Number of respondents (unweighted)	6,123	3,665	2,458	

95%CI: 95% confidence interval.

p-value: chi-squared test with Rao-Scott correction for difference between groups.

Note: all estimates adjust for the complex sample design and incorporate individual weights.

adults who avoided crowded places (from 61% in January to 85% in March) [20]. In Japan, results of an internet survey conducted among adults in February showed that only 30% of participants always avoided and 12.6% never avoided crowded places [21]. In the United States, an internet survey conducted between March and April showed there was good knowledge about symptoms and preventive measures against coronavirus 2 and that only 4% of adults had left home in the previous three days [18]. In Brazil, a telephone survey among adults participating in the VIGITEL survey (*Risk and Prospective Factors Surveillance System for Chronic Non-Comunicable Diseases Through Telephone Interview*), conducted in April, defined social isolation as having avoided leaving home unless necessary, having avoided crowds of people or very crowded places and having avoided close contact with other people, such as shaking hands or hugging [19]. Based on this definition, the prevalence of social isolation was 91% [19]. In the state of Rio Grande do Sul, results of a population-based survey, conducted in April, showed 20.6% of adults left the house daily and 21.1% had remained at home all the time. Among those aged 60 or over, 35.9% had not left home during the period considered [22]. In the present amalysis, the definition of social distancing was not having left home in the preceding seven days, with a prevalence of 33%. In our analyses, if we consider social isolation as not leaving home or going out only to perform essential activities, the prevalence is over 94%; therefore, similar to that of the aforementioned VIGITEL survey [19]. It is also interesting to note the prevalence of not having left home in our analysis was very similar to that observed among those aged 60 years and over in Rio Grande do Sul [22].

Table 2

Reasons for leaving home in the last week among participants in the telephone survey of the *Brazilian Longitudinal Study of Aging* (ELSI-COVID-19 initiative), by socio-demographic characteristics and reported flu-like symptoms, May 26 to June 8, 2020.

Variables	Reasons for leaving the house % (95%CI)			p-value
	Did not leave	Left for essential activities	Left for non-essential activities	
Gender				
Female	38.2 (34.3-42.2)	56.0 (51.6-60.3)	5.8 (3.8-9.1)	0.001
Male	26.3 (22.3-30.8)	68.1 (63.2-72.2)	5.6 (4.0-7.6)	
Age group (years)				
50-59	22.6 (19.3-26.3)	71.8 (67.0-76.0)	5.6 (3.6-8.8)	< 0.001
60-69	30.0 (26.7-33.6)	64.2 (60.3-68.0)	5.8 (4.1-8.1)	
70 and older	56.1 (50.9-61.1)	38.1 (33.6-42.9)	5.8 (4.0-8.4)	
Marital status				
Single/Divorced	31.1 (27.4-35.2)	62.2 (57.0-67.2)	6.7 (3.5-12.5)	< 0.001
Married	29.1 (25.8-32.7)	65.6 (61.5-69.5)	5.3 (4.0-7.0)	
Widowed	49.7 (43.5-56.0)	44.5 (38.2-50.9)	5.8 (3.6-9.2)	
Education (years)				
Up to 4	46.4 (43.1-49.9)	46.6 (43.4-49.8)	7.0 (5.5-8.8)	< 0.001
5-8	31.4 (27.4-35.7)	64.3 (60.1-68.2)	4.3 (2.9-6.6)	
9 years or more	25.1 (20.8-29.8)	69.1 (63.6-74.2)	5.8 (3.3-10.0)	
Number of household residents				
1	33.2 (26.4-40.8)	59.7 (51.2-67.7)	7.0 (3.4-14.0)	0.574
2	34.0 (30.4-37.7)	60.0 (55.8-64.0)	6.1 (4.4-8.4)	
3 or more	31.2 (26.5-36.3)	64.3 (58.9-69.3)	4.5 (3.3-6.2)	
Household has inhabitant < 20 years old				
No	32.9 (29.7-36.2)	60.9 (57.1-64.6)	6.3 (4.5-8.6)	0.209
Yes	32.3 (25.6-39.9)	64.3 (56.9-71.0)	3.4 (2.4-4.8)	
Region				
North	35.7 (24.7-48.6)	61.3 (49.1-72.2)	3.0 (2.2-4.1)	0.092
Northeast	36.9 (32.8-41.2)	56.6 (53.4-59.8)	6.5 (4.1-10.1)	
Southeast	29.8 (24.8-35.3)	62.9 (56.1-69.3)	7.3 (4.4-11.8)	
South	29.8 (21.2-40.1)	67.6 (57.7-76.1)	2.6 (1.7-4.0)	
Central	36.7 (32.2-41.4)	59.4 (54.5-64.1)	4.0 (2.5-6.2)	
Household location				
Urban	31.1 (28.3-34.1)	63.4 (59.8-66.8)	5.5 (3.9-7.6)	0.001
Rural	44.1 (37.9-50.5)	48.5 (43.8-53.3)	7.4 (4.2-12.8)	
Flu-like symptoms				
No	33.1 (30.2-36.2)	61.1 (57.6-64.5)	5.7 (4.2-7.8)	0.705
Yes	29.5 (20.0-41.2)	65.0 (52.3-76.0)	5.5 (2.7-10.7)	
Number of respondents (unweighted)	2,532	3,242	349	

95%CI: 95% confidence interval.
p-value: chi-squared test with Rao-Scott correction for differences between groups.
Note: all estimates adjust for the complex sample design and incorporate individual weights.

Table 3

Analysis of the associations between socio-demographic characteristics and reasons for leaving home in the last week among 6,123 participants in the telephone survey of the *Brazilian Longitudinal Study of Aging* (ELSI-COVID-19 initiative), May 26 to June 8, 2020.

Variables	Left for essential activities OR (IC95%)	Left for non-essential activities OR (IC95%)
Gender		
Female	1.00	1.00
Male	1.84 (1.37-2.46) *	1.47 (0.83-2.62)
Age group (years)		
50-59	1.00	1.0
60-69	0.69 (0.53-0.89) *	0.77 (0.45-1.33)
70 and older	0.24 (0.17-0.34) *	0.41 (0.25-0.67) *
Marital status		
Single/Divorced	1.00	1.00
Married	1.12 (0.87-1.45)	0.78 (0.37-1.63)
Widowed	0.94 (0.63-1.39)	0.79 (0.46-1.37)
Education (years)		
Up to 4	1.00	1.00
5-8	1.48 (1.12-1.94) *	0.79 (0.48-1.29)
9 or more	1.95 (1.42-2.68) *	1.32 (0.72-2.43)
Region		
North	1.00	1.00
Northeast	0.85 (0.57-1.28)	2.85 (1.31-6.21) *
Southeast	0.61 (0.39-0.96) *	1.23 (0.57-2.62)
South	0.54 (0.30-0.98) *	0.75 (0.32-1.74)
Central	0.67 (0.40-1.11)	1.99 (0.81-4.87)
Household location		
Urban	1.00	1.00
Rural	1.54 (1.06-2.22) *	0.87 (0.44-1.75)

OR: odds ratio; 95%CI: 95% confidence intervals.

Note: OR and 95%CI estimated by the multinomial regression model and adjusted by the variables listed in the table; did not leave the house was the reference category.

The following reasons for leaving home were considered essential: to work, to buy medicine or food, health care, and to pay bills. Reasons considered non-essential were: exercising or walking, meeting friends or family, and other reasons not specified.
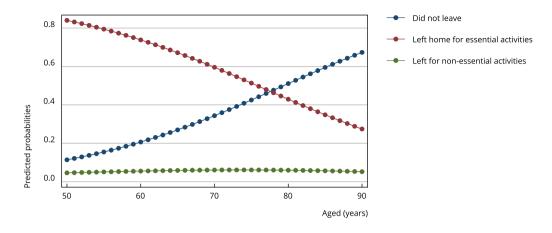
* $p < 0.05$ (Wald test).

In Brazil, there is a debate on whether policies aimed at vertical distancing (restricting contact for older people or those with other vulnerabilities), as opposed to horizontal distancing (for everyone) would be sufficient to contain the spread of the virus and decrease mortality associated with it [23]. A mathematical simulation, based on data from the city of Belo Horizonte, compared three scenarios: no social distancing, vertical distancing (selected), and horizontal distancing (all age groups). Results suggested the adoption of vertical distancing is marginally more effective in reducing transmission than no social isolation. In contrast, the greatest potential for reducing transmission is observed for horizontal distancing [23]. This simulation is in line with international experience, indicating greater effectiveness of horizontal isolation over vertical isolation for flattening the epidemic curve [24,25,26,27,28].

One of the most important findings in our study was the strong inverse association between leaving the house and age. Older people of both genders were much more likely to stay at home compared to younger people. For older people, leaving home due to necessity explains almost the entirety of
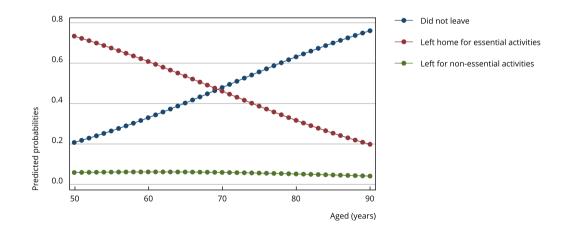
Figure 1

Predicted probabilities of reasons for leaving home in the last week among male participants in the telephone survey of the *Brazilian Longitudinal Study of Aging* (ELSI-COVID-19 initiative), by age, from May 26 to June 8, 2020.

Note: predicted probabilities are adjusted for marital status, education, region of residence and urban/rural residence, as specified in Table 3.

Figure 2

Predicted probabilities of reasons for leaving home in the last week among female participants in the telephone survey of the *Brazilian Longitudinal Study of Aging* (ELSI-COVID-19 initiative), by age, from May 26 to June 8, 2020.

Note: predicted probabilities are adjusted for marital status, education, region of residence and urban/rural residence, as specified in Table 3.

cases. This suggests, with increasing age, there is greater need for and receipt of help from others to purchase basic items such as food and medicines, and this may enable older people to avoid having to leave the house. However, older people who have contacts with others who could bring the infection from the external environment into the older person's home may increase the potential for transmission of coronavirus 2 to older adults. This finding is important because it suggests the proposal for vertical isolation (as opposed to horizontal isolation for all), is not only ineffective [24,25,26,27,28], but also may not be feasible.

When this study was conducted, the highest per capita rates of COVID-19 cases and deaths were observed in the North and Northeast regions of the country and the lowest in the South and Central regions [15]. In absolute numbers, the Southeast region occupied the first position in the occurrence of deaths, followed by the Northeast and North regions of the country. It is important to note, even within the same region, there was (and continues to exist) wide variation between municipalities [16]. Our analyzes were not disaggregated by municipality, but some results suggest preventive behaviors do not necessarily reflect the epidemic picture. Three examples illustrate this situation: (1) the propensity to leave home for essential activities was lower both in the Central region (less affected) and in the North (more affected); (2) the propensity to leave home for non-essential activities was much higher among residents in the Southeast region; (3) residents in urban areas (hitherto most affected by the epidemic) were more likely to leave home out of necessity compared to residents in rural areas.

A worrying finding was the lack of association between flu-like symptoms in the last 30 days and report of social distancing in the previous seven days. Even if the time window differs between the two measures, it was expected people with flu symptoms would stay at home longer, due to the possibility that these symptoms are due to coronavirus 2. Perhaps the similarity of symptoms to those of the flu led people to underestimate their importance. In Brazil, there has been no coordinated educational campaign or other public information effort to indicate where and when people with flu-like symptoms should seek medical advice and tests for the detection of the virus are lacking. This is in spite of the fact that identifying infected people through viral testing and using contact tracing to identify other exposed individuals are highly recommended measures to prevent the spread of the virus [29,30].

There is evidence that the prevalence of coronavirus 2 infection in Brazil is higher among those with lower socioeconomic status [31]. Paradoxically, we observed an inverse association between education and leaving home, that is, those with intermediate and higher educational levels were more likely to leave home out of necessity than those with less education. In a supplementary analysis (data not shown) we observed this association was present only among men with intermediate, but not higher educational levels. Among women, this association was observed for both intermediate and higher educational levels. A possible explanation is that people with a higher level of education, in spite of leaving their home more often, may have the option of traveling in safer environments (such as by private car) and residing in less crowded environments (thus limiting contact with others). Future analyses are needed to confirm or refute this hypothesis.

This study has strengths and limitations. One of the strengths is the possibility of obtaining information about the behavior of older adults in relation to the epidemic, without exposing them to the risk of infection inherent to face-to-face interviews. Other strengths are the large number of participants, residing in different municipalities located in all major regions of the country, as well as the possibility of using a range of information collected among the participants of the cohort in the period immediately prior to the appearance of the epidemic, allowing for comparisons with data collected once the epidemic was already underway. The limitations of the study are those inherent to most research conducted through telephone interview. These include the failure to answer telephone calls, the refusal to provide information through this means and the lack of valid phone numbers, as discussed in an associated publication describing the methodology of the ELSI-COVID-19 initiative [17]. In our analysis, to compensate for non-response, weights specifically derived for telephone survey participants were used, but it cannot be guaranteed that other factors have not affected the results. Another limitation of this and other studies to examine patterns of social distancing is that the epidemic evolves rapidly and inferences based on any results are limited to the period in which the information was collected [18]. Therefore, there is a need for longitudinal studies such as those incorporating subsequent waves of the ELSI-COVID-19 initiative to allow us to examine changes throughout the evolution of the epidemic.

Our results lead to three main recommendations: (1) clear and timely information is needed for the population to understand the risks inherent in the epidemic and increase their adherence to social distancing measures such as staying at home; (2) safe strategies are needed to prevent older adults from having to leave the house to purchase basic items, such as food and medicines, which account for about 2/3 of outings reported here; (3) clear guidelines are needed for patients with flu-like symptoms, for testing and timely treatment, as well as for tracking their contacts with confirmatory tests. These measures are the basis for the control of the coronavirus 2 epidemic and must be adopted urgently in a manner consistent with the epidemiological situation in the country.

Contributors

M. F. Lima-Costa and J. Macinko wrote the first version of the article. J. V. M. Mambrini performed the data analysis. All authors contributed equally to the writing and final revision of the text.

Additional informations

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Resumo

O objetivo do estudo foi examinar a prevalência do distanciamento social, do uso de máscaras e da higienização das mãos ao sair de casa entre adultos brasileiros com 50 anos ou mais de idade. Foram utilizados dados de 6.149 entrevistas telefônicas, conduzidas entre 26 de maio e 8 junho de 2020 dentre os participantes do Estudo Longitudinal da Saúde dos Idosos Brasileiros *(ELSI-Brasil). O distanciamento social foi definido por não ter saído de casa nos últimos 7 dias. Somente 32,8% dos participantes do estudo não saíram de casa no período considerado, 36,3% saíram entre 1 e 2 vezes, 15,2% entre 3 a 5 vezes e 15,7% saíram todos os dias. As principais razões para sair de casa foram comprar remédios ou alimentos (74,2%), trabalhar (25,1%), pagar contas (24,5%), atendimento dem saúde (10,5%), fazer exercícios (6,2%) e encontrar familiares ou amigos (8,8%). Entre os que saíram de casa, 97,3% usaram sempre máscaras faciais e 97,3% sempre higienizaram as mãos. As mulheres saíram menos de casa que os homens. Esses saíram com mais frequência para trabalhar e fazer exercícios. Elas saíram mais para atendimento em saúde. Os homens (odds ratio – OR = 1,84), aqueles com escolaridade mais alta (OR = 1,48 e 1,95 para 5-8 e 9 anos, respectivamente) e os residentes em áreas urbanas (OR = 1,54) saíram mais para realizar atividades essenciais, independentemente da idade e de outros fatores relevantes. Os resultados mostram baixa adesão ao distanciamento social, mas altas prevalências nos usos de máscaras e higienização das mãos.*

Coronavírus; COVID-19; Máscaras; Isolamento Social; Envelhecimento

Resumen

El objetivo del estudio fue examinar la prevalencia del distanciamiento social, uso de mascarillas e higienización de las manos al salir de casa entre adultos brasileños con 50 años o más de edad. Se utilizaron datos de 6.149 entrevistas telefónicas, realizadas entre el 26 de mayo y el 8 junio de 2020 entre los participantes del Estudio Brasileño Longitudinal del Envejecimiento *(ELSI-Brasil por sus siglas en portugués). El distanciamiento social fue definido por no haber salido de casa en los últimos 7 días. Solamente un 32,8% de los participantes del estudio no salieron de casa en el período considerado, 36,3% salieron entre 1 y 2 veces, 15,2% entre 3 a 5 veces y 15,7% salieron todos los días. Las principales razones para salir de casa fueron comprar medicamentos o alimentos (74,2%), trabajar (25,1%), pagar cuentas (24,5%), atención en salud (10,5%), hacer ejercicios (6,2%) y encontrar con familiares o amigos (8,8%). Entre los que salieron de casa, un 97,3% usaron siempre mascarillas faciales y un 97,3% higienizaron siempre las manos. Las mujeres salieron menos de casa que los hombres. Estos salieron con más frecuencia para trabajar y para hacer ejercicio. Ellas salieron más para la atención en salud. Los hombres (odds ratio – OR = 1,84), los con escolaridad más alta (OR = 1,48 y 1,95 para 5-8 y 9 años) y los residentes en áreas urbanas (OR = 1,54) salieron más para realizar actividades esenciales, independientemente de la edad y de otros factores relevantes. Los resultados muestran una baja adhesión al distanciamiento social, pero altas prevalencias en el uso de mascarillas e higienización de las manos.*

Coronavírus; COVID-19; Máscaras; Aislamiento Social; Envejecimiento