



# Adherence to home care of suspected COVID -19 cases in home isolation

*Adesão aos cuidados domésticos de casos suspeitos de Covid-19 em isolamento domiciliar*

*Adhesión a la atención domiciliar de casos sospechosos de Covid-19 en aislamiento domiciliario*

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## ABSTRACT

**Objective:** To analyze the association between sociodemographic characteristics and adherence to home care of suspected COVID-19 cases in home isolation. **Method:** This is a cross-sectional, analytical study, and data collection took place in a health unit in Ceará, with 50 suspected COVID-19 participants. A sociodemographic, clinical characterization, and care evaluation form regarding home isolation was applied. For statistical analysis, the Mann-Whitney and likelihood ratio tests were used. The ethical principles of research with human beings were followed. **Results:** Most men (57.9%;  $p = 0.010$ ) and people who personally knew someone diagnosed with COVID-19 (92.1%;  $p = 0.040$ ) avoided crowded places, 65.4% of the participants with a partner discarded the garbage properly ( $p = 0.047$ ), and 81.6% of people with less education adhered to washing personal clothes, bedding, and towels with common soap and water ( $p = 0.043$ ). **Conclusions and implications for practice:** Sociodemographic characteristics influenced adherence to specific care, such as avoiding crowded places, treating contaminated waste, and washing personal clothes, bedding, and towels. Home care needs to be more emphasized in consultations and by means of dissemination.

**Keywords:** Population Characteristics; Patient Compliance; COVID-19; Social Determinants of Health; Patient Isolation.

## RESUMO

**Objetivo:** Analisar a associação entre as características sociodemográficas e a adesão aos cuidados domésticos de casos suspeitos de Covid-19 em isolamento domiciliar. **Método:** Estudo transversal, analítico. A coleta de dados ocorreu em unidade mista de saúde do Ceará, com 50 participantes suspeitos de Covid-19. Aplicou-se formulário de caracterização sociodemográfica, clínica e de avaliação dos cuidados em relação ao isolamento domiciliar. Para análise estatística, foram utilizados os testes *Mann-Whitney* e a razão de verossimilhança. Os princípios éticos das pesquisas com seres humanos foram seguidos. **Resultados:** A maioria dos homens (57,9%;  $p = 0,010$ ) e das pessoas que conheciam alguém, pessoalmente, que teve/tem diagnóstico de Covid-19 (92,1%;  $p = 0,040$ ) evitou aglomerações; 65,4% dos participantes com companheiro (a) descartaram o lixo adequadamente ( $p = 0,047$ ); e 81,6% das pessoas com menor escolaridade aderiram à lavagem de roupas pessoais, de cama e toalhas com sabão comum e água ( $p = 0,043$ ). **Conclusão e implicações para a prática:** As características sociodemográficas influenciaram a adesão a cuidados específicos, como evitamento de aglomerações, tratamento de lixo contaminado e lavagem de roupas pessoais, de cama e toalhas. Os cuidados domiciliares precisam ser mais enfatizados em consultas e pelos veículos de divulgação.

**Palavras-chave:** Características da População; Cooperação do Paciente; COVID-19; Determinantes Sociais da Saúde; Isolamento de Pacientes.

## RESUMEN

**Objetivo:** Analizar la asociación entre características sociodemográficas y adhesión a la atención domiciliar de casos sospechosos de Covid-19 en aislamiento domiciliario. **Método:** Estudio transversal, analítico. La recolección de datos se llevó a cabo en una unidad de salud mixta en Ceará, con 50 participantes sospechosos de Covid-19. Se aplicó una forma de caracterización y evaluación sociodemográfica y clínica de los cuidados en relación al aislamiento domiciliario. Para el análisis estadístico se utilizaron pruebas de Mann-Whitney y de razón de verosimilitud. Se siguieron los principios éticos de la investigación con seres humanos. **Resultados:** La mayoría de los hombres (57,9%;  $p=0,010$ ) y las personas que conocían a alguien personalmente que tenía/tiene un diagnóstico de Covid-19 (92,1%;  $p=0,040$ ) evitaron los clusters; el 65,4% de los participantes con pareja (a) descartó la basura correctamente ( $p=0,047$ ); el 81,6% de las personas con menor nivel educativo se adhirió a lavar la ropa personal, la ropa de cama y las toallas con agua y jabón común ( $p=0,043$ ). **Conclusión e implicaciones para la práctica:** Las características sociodemográficas influyeron en la adhesión a cuidados específicos, como evitar aglomeraciones, tratar residuos contaminados y lavar ropa, sábanas y toallas personales. Es necesario hacer más hincapié en la atención domiciliar en las consultas y mediante la difusión de información.

**Palabras clave:** Características de la Población; Cooperación del Paciente; COVID-19; Determinantes Sociales de la Salud; Aislamiento de Pacientes.

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## INTRODUCTION

The COVID-19 pandemic is considered challenging at the present time. In August 2021, the proportion of cases and deaths reached an alarming rate of 213 million cases and 4.46 million deaths worldwide. During the same period, there were 20.6 million cases and 576 thousand deaths in Brazil, occupying third place in the world ranking of these indicators.<sup>1</sup>

Following guidelines adopted in other countries that were successful in some moments in controlling the pandemic, Brazilian states and municipalities began to adopt social distancing measures with the primary objective of controlling the speed of virus transmission.<sup>2</sup> Such measures include encouraging hand-washing practices, isolating patients (suspected or confirmed cases), using masks, and adopting respiratory etiquette — which comprises a set of simple measures to minimize transmission.

The results depend on sociodemographic, political, and health aspects as well as the operational processes in their implementation and patient cooperation.<sup>3</sup> The effectiveness and sustainability of these measures depend on social protection policies and support for vulnerable populations.<sup>4</sup>

In addition to the difficulty in detecting asymptomatic people, the lack of materials for diagnosis, difficulties of access to health services, and the high proportion of cases have raised the need for protection and mitigation measures.<sup>5</sup> It is worth noting that where logistics are fragile and timely access to technology is difficult (e.g., as in numerous Brazilian cities), the role of health monitoring becomes indispensable and strategic.<sup>6</sup>

The Clinical Management Protocol for Coronavirus (COVID-19) in Primary Health Care states that for suspected or confirmed COVID-19 cases, telemonitoring must be done by the nurse in the Family Health Care team. Once the person is referred for home isolation because it is considered a mild case, every 24/48 h, this professional contacts the patient every 24/48 h to perform a health evaluation.<sup>7</sup> Nevertheless, there is no description in this document of support for the maintenance of home isolation.

In addition to the epidemiological issues presented, the need for home isolation of people with respiratory symptoms is a collective health problem. The implications of the behavior, when becoming a suspected COVID-19 case, have repercussions on public health because it causes lifestyle changes, especially regarding the interactions between people due to the recommendations of physical distancing to prevent spreading the illness and controlling the indicators of municipal, state, and national morbidity and mortality rates.<sup>8</sup>

In the context of the care provided by health professionals, especially in Primary Health Care, it is necessary to understand the social aspects of the disease. This allows the professional to gather valuable information that can influence the way people socially organize themselves when faced with the possibility of falling ill and the need for self-care.<sup>9</sup>

Sociodemographic characteristics are considered social determinants of health. However, research data on the association of morbidity and such characteristics are often heterogeneous, and this may be explained by the method employed in the study as there

are various ways described in the literature for this assessment. One example is the analysis of the socioeconomic status, which, despite being an indicator, can be measured by characteristics of the population that include family income, educational level, literacy, social class, employment status, property ownership, and even self-perception of poverty.<sup>10</sup>

Regarding the COVID-19 pandemic, it is important to consider people's sociodemographic characteristics when investigating their behavior regarding the home care recommended for isolation to guide clinical reasoning, guidance on call center services, and in-person consultations. Given this context, this study was designed to answer the following questions: "Have people with suspected COVID-19 adhered to the home care recommended for home isolation? Have the sociodemographic characteristics of these people influenced their behavior in complying with this recommendation?" This study aimed to analyze the association between sociodemographic characteristics and adherence to home care in suspected COVID-19 cases in home isolation.

## METHOD

This was a cross-sectional, analytical, quantitative study guided by the STROBE tool. It was carried out in Acarape, Ceará State (northeastern Brazil). The municipality is 61.8 km from the capital of Ceará, has a population of roughly 15,000 inhabitants, and is considered small.

Data collection took place from February to June 2021 in a mixed health unit, where testing for patients with suspected COVID-19 in the municipality is centralized. For this purpose, the service operates on two days in the morning shift. The collection occurred at this location, as suggested by the Coordination of Primary Care of the municipality.

Since this is a study with participants with respiratory symptoms, the project members were trained in terms of approaching the patients and applying the instrument and following the protocol of sanitary measures to prevent the transmission of COVID-19: use of recommended personal protective equipment, a distance of one meter from the patient, filling out the data collection instrument on a tablet, and sanitizing the hands and device at the end of each approach.

Participants were recruited according to the following eligibility criteria: having received a diagnosis of influenza syndrome (suspected COVID-19/mild case), with an indication of home isolation, and being 18 years or older. No sample size calculation was performed, and sampling was of the non-probabilistic (intentional) type. Hence, all patients who sought the health service on the days and shifts of the service, eligible, and who agreed to participate were included. This type of sampling was chosen because almost all of the people who sought the health service were able to make up the sample provided that they agreed to participate. The sample size was 50 people.

Upon completing the flow of care at the health care facility for people with suspected COVID-19, patients were approached by members of the research team, who invited them to participate. They completed a form to collect sociodemographic, clinical,

and care data regarding home isolation following the onset of symptoms indicative of COVID-19. The form was created using Google Forms, allowing the form to be completed digitally by team members through participants' verbalized responses.

In the instrument, the variables of sociodemographic characterization were gender, age, marital status, education, number of rooms in the residence, cohabitants, and private health insurance. The clinical variables were diagnosed comorbidity and previous COVID-19 diagnosis. The participant was also asked whether they knew someone personally with a diagnosis (current or previous) of COVID-19 and whether they cohabited with people from the risk group.

The items to assess adherence to home care in home isolation were allocated in the last part of the instrument and extracted from the Protocol for Clinical Management of Coronavirus (COVID-19) in Primary Health Care (version 9).<sup>7</sup> There are 18 items that refer to distancing from cohabitants, the use of masks inside the home, mobility between rooms, hand hygiene, cleaning surfaces, disposal of contaminated waste, and care of personal objects. In order not to induce responses, the staff member explained what home care was and asked the participants to freely report what care they had adhered to since their symptoms began. The answers were then marked on the instrument when mentioned and left blank when not reported by the participant.

The data imported from the Excel spreadsheet generated by Google Forms were analyzed using IBM SPSS Statistics software version 25 for Mac. The main variables were the home care implemented in home isolation, which was analyzed in two ways: 1) amount of home care implemented for which mean, standard deviation, and the respective confidence intervals (95% CI) were calculated; 2) calculation of absolute and relative frequency for each of the 18 care protocols. Analyses related to home care adherence were stratified according to sociodemographic characteristics. For the initial characterization of the participants, we calculated frequencies, the measure of central tendency (medians), and dispersion (interquartile range [IQR]) of the sociodemographic variables.

The association between two qualitative variables was tested by applying the likelihood ratio, since the data presented expected frequencies greater than five in over 20% of the cells. To verify the normality of data distribution of continuous quantitative variables, we performed the Kolmogorov-Smirnov (KS) test. The Mann-Whitney U test (non-parametric test) was applied to the intersection of dichotomous and continuous variables when the KS test indicated heterogeneity of distribution of the continuous variable;  $p < 0.05$  values were considered significant for the statistical association.

This study was conducted with data from the study "Evaluation of the effectiveness of intervention with text messages to support home isolation of suspected COVID-19 cases identified in primary care." This study was approved by the Research Ethics Committee of the Universidade da Integração Internacional da Lusofonia Afro-Brasileira (CAAE no. 41375020.0.0000.5576; opinion no 4.514.599) on January 28, 2021. The participants

were informed about the research, and the application of the data collection instrument was preceded by consent and formalized by the informed consent form.

## RESULTS

The survey was conducted with 50 participants. The sociodemographic characterization allowed us to verify that the median age was 30 years (IQR = 16; 18-65 years), the participants lived with a median of four people (IQR = 2; 1-9 people), and the residences had a median of two rooms (IQR = 1; 1-6 rooms). Most participants were female (52.0%), lived with a partner (52.0%), had education corresponding to elementary or high school (80.0%), and did not have private health insurance (84.0%) (Table 1).

Most participants had no comorbidity (76.0%), although, among those who confirmed it, 91.6% mentioned hypertension. Other diagnoses reported were hypercholesterolemia, myocardial infarction, heart failure, diabetes mellitus, and renal failure. A third of the subjects were on their second episode of COVID-19. Most did not reside in a household with a cohabitant considered to be at risk for COVID-19 (56.0%) but knew someone with a current or previous diagnosis of the disease (86.0%) (Table 1).

Analysis of the home care implemented in home isolation since COVID-19 symptoms revealed that participants adhered to about half of the care assessed in this study. No association was found between sociodemographic characteristics and the amount of home care in home isolation (Table 1).

These precautions were individually listed in Table 2. With the onset of symptoms, the participants revealed they most often put into practice isolation in a separate room or distance between beds (72.0%), avoid crowds (76.0%), wash their hands when dirty (76.0%) and with appropriate products (76.0%), and properly wash personal clothes (98.0%) (Table 2).

Nevertheless, some people left their homes after the onset of symptoms (28.0%), although they used a mask on these occasions (34.0%). Little adherence to mask use was also evidenced when going to other rooms in the home (36.0%) and cleaning surfaces frequently touched by people with symptoms (36.0%) (Table 2).

In the analysis of adherence to home care concerning sociodemographic characteristics (Table 3), we identified that men (57.9%;  $p = 0.010$ ) and people who personally knew someone who was diagnosed with COVID-19 (92.1%;  $p = 0.040$ ) were the ones who, proportionally, most avoided crowds, preferring individual transportation or walking when leaving home.

Participants with a partner more often discarded the garbage properly (65.4%;  $p = 0.047$ ). This is the garbage with waste that had secretions (e.g., masks, paper towels, toilet papers) in a sealed bag or with disposable gloves when done by another person. People with less education (elementary and high school) tended to wash personal clothes, beds, and towels with common soap and water (81.6%;  $p = 0.043$ ).

**Table 1.** Amount of care in home isolation reported by the participants according to sociodemographic and clinical characteristics (n = 50). Acarape, CE, Brazil, 2021.

Variables	f (%)*	Mean (SD)**	95% CI**	p-value***
<b>Sex</b>				
Female	26 (52.0)	10.3 (3.3)	9.0–11.7	0.992
Male	24 (48.0)	10.2 (3.1)	8.9–11.6	
<b>Age group</b>				
18–59 years old	48 (96.0)	10.2 (3.2)	9.3–11.2	0.620
60–65 years old	2 (4.0)	11.5 (3.5)	8.9–11.4	
<b>Marital status</b>				
With partner	26 (52.0)	10.2 (2.8)	9.1–11.4	0.830
No partner	24 (48.0)	10.4 (3.6)	8.8–11.9	
<b>Education</b>				
Elementary and high School	40 (80.0)	10.3 (2.9)	9.4–11.2	0.896
Higher and graduate education	10 (20.0)	10.3 (4.3)	7.1–13.4	
<b>Private health insurance</b>				
No	42 (84.0)	10.4 (3.0)	9.4–11.3	0.887
Yes	12 (24.0)	10.0 (4.2)	6.4–13.5	
<b>Diagnosed comorbidity</b>				
No	38 (76.0)	10.4 (3.1)	9.2–11.2	0.430
Yes	12 (24.0)	10.6 (3.6)	8.3–12.9	
<b>Cohabitant of the COVID-19 risk group</b>				
No	29 (56.0)	10.4 (3.2)	9.2–11.7	0.353
Yes	21 (44.0)	10.2 (3.2)	8.5–11.4	
<b>Previous diagnosis of COVID-19</b>				
No	34 (68.0)	10.2 (3.2)	9.1–11.4	0.668
Yes	16 (32.0)	10.5 (3.1)	8.8–12.1	
<b>Do you know someone with a diagnosis (current or previous) of COVID-19</b>				
No	7 (14.0)	9.4 (3.7)	5.9–12.8	0.510
Yes	43 (86.0)	10.4 (3.1)	9.5–11.4	

Source: prepared by the authors, 2021. SD - standard deviation. \* Refers to sociodemographic and clinical characteristics. \*\* Refers to the amount of care in home isolation. \*\*\* Mann-Whitney test.

## DISCUSSION

In this study, there was adherence to roughly half of the recommended household care for suspected cases of COVID-19. This demonstrates participants' difficulty with behavior change in the need for isolation, especially in preventing intradomestic transmission.

One of the reasons for the low adherence to isolation measures is social inequality because the distribution of health and disease in the population is not random. They are in line with social position, which characterizes living and working conditions. It can also be

influenced by cultural aspects and even the political and health care system.<sup>3</sup> Another aspect that must be considered is the age group. Despite there being frequent reports about the difficulty of the elderly to adhere to the behavior of social isolation,<sup>11</sup> we found that the low adherence to the recommended measures occurred even considering that they were young adults (people in the third decade of life).

The living conditions of the persons evaluated may influence their behavior towards the recommendations for the prevention of transmission of infectious diseases, such as COVID-19.<sup>11</sup> Living with many cohabitants, especially when they are elderly or

**Table 2.** Care in home isolation reported by the participants (n = 50). Acarape, CE, Brazil, 2021.

Variables	<i>f</i>	(%)
Isolation in a separate room or distance between beds	36	72.0
Limitation of intra-household circulation	27	54.0
Abstention to receive visits	29	58.0
Abstention to visitation	30	60.0
Leaving home in case of emergency	14	28.0
Avoided crowds	38	76.0
Use of mask when it was necessary to go out	17	34.0
Wearing a mask in the vicinity of a cohabitant	25	50.0
Wearing a mask when going to other rooms in the home	18	36.0
Wearing a mask at all times	31	62.0
Mask replacement when necessary	32	64.0
Hand hygiene when dirty	38	76.0
Hand hygiene after removal of the mask	30	60.0
Hand hygiene with appropriate products	38	76.0
Replacement of damp towel or use of a paper towel to dry hands	21	42.0
Proper waste disposal	26	52.0
Cleaning of frequently touched surfaces	18	36.0
Washing personal clothes properly	49	98.0

Source: prepared by the authors, 2021.

**Table 3.** Significant associations between sociodemographic characteristics and care in home isolation reported by participants (n = 50). Acarape, CE, Brazil, 2021.

Variables	No		<i>p</i> -value*
	<i>f</i> (%)	Yes <i>f</i> (%)	
<b>Avoided crowds</b>			
Female gender	10 (83.3)	16 (42.1)	0.010
Male gender	2 (16.7)	22 (57.9)	
<b>Do you know someone with a diagnosis (current or previous) of COVID-19</b>			
Don't know anyone with a diagnosis (current or previous) of COVID-19	8 (66.7)	35 (92.1)	0.040
Proper waste disposal	4 (33.3)	3 (7.9)	
<b>Washing personal clothes properly</b>			
With partner	9 (37.5)	17 (65.4)	0.047
No partner	15 (62.5)	9 (34.6)	
<b>Higher and graduate education</b>			
Elementary and high school	-	40 (81.6)	0.043
Higher and graduate education	1 (100.0)	9 (18.4)	

Source: prepared by the authors, 2021. \* Likelihood ratio.

children, who have some degree of dependence on the one who presents symptoms, makes adherence difficult as distancing is not always possible to implement.<sup>12</sup>

Additionally, it is important to consider economic aspects, including the ratio between the number of cohabitants and the number of rooms in the home, which also interfere with compliance



with such recommendations.<sup>12</sup> In this study, the number of cohabitants was twice the number of rooms, and there were cases of many residents for few rooms (single room). In these situations, it is practically impossible to avoid close intra-household contact. If associated with the conditions of vulnerability, it becomes even more harmful in communities formed by large families living in households with few rooms, where the possibility of contamination from contacts may be more significant.<sup>3</sup>

A study conducted by the Massachusetts General Hospital in the United States evaluated the risk of COVID-19 transmission among people living in the same house and reported that the probability of transmitting the disease to another individual in such an environment was 10.1%.<sup>13</sup> These considerations must be highlighted because, in clinical management protocols, these situations are not always considered even though they are adversities acknowledged by the Basic Health Units professionals responsible for monitoring patients who are referred for home isolation.

In the analysis of the adherence to each domestic care protocol, we noticed that the highest frequencies corresponded to the information that is more widely broadcast by the media in Ceará and Brazil. The Communication Department of the Health Department of Ceará (SESA/CE), together with the Public Health School of Ceará, plays a strategic role in implementing the State Contingency Plan against SARS-CoV-2, and it is responsible for disseminating notifications of suspected and confirmed cases as well as raising awareness and encouraging society to adopt preventive habits.

The guidelines on home isolation conveyed more frequently by SESA/CE are hand sanitization, staying in an isolated and well-ventilated room, avoiding crowded places, and wearing masks.<sup>14</sup> The need to increase the dissemination of other care protocols (home care) also stands out because they showed the lowest adherence, especially those aimed at symptomatic people who are not always tested, remaining with the generic diagnosis of influenza syndrome.

For almost half of the participants, living with people from the risk group in the same household is also worth mentioning. It is common for professional attention to focus on people with suspected/diagnosed COVID-19 and who have at least one associated clinical condition concomitantly. However, even if the patient does not have it, it is crucial to investigate whether there is cohabitation with people who do because care with home isolation, if not correctly followed, increases the risk of transmission to contacts and the chances of hospitalization for severity. We reaffirm the importance of jointly evaluating these issues, sociodemographic characteristics of the population, and belonging to the risk group, including cohabitants.<sup>15</sup>

Although the amount of home care implemented by participants with suspected COVID-19 since symptoms began was not associated with sociodemographic variables, adherence to some care was proportionally higher according to specific characteristics. The difference in adherence outcome between men and women may be related to symptoms rather than social

behavior. A study in the UK analyzed 19 symptoms of COVID-19 in patients after three days of symptom onset and reported that men suffered more from fatigue, chills, and fever when infected with SARS-CoV-2, while women were more prone to persistent cough and abdominal pain. Shortness of breath was also more frequent among men, while women were more affected by anosmia and chest pain. Hence, it is believed that men, because they have symptoms that debilitate them more, have modified their behavior by restricting them to the home. This generalization, nonetheless, has the limitation of new variants that may cause different symptoms in different people.<sup>16</sup>

Knowing someone with a COVID-19 diagnosis also appears to have acted as an incentive to adhere to home care. Hearing reports or observing the distress of others when afflicted by the disease may motivate following isolation recommendations to avoid transmission within the household and/or to people who are part of one's routine living in other environments.

In addition, adherence behavior is also influenced by living with other people. When surrounded by several individuals who adhere to the prevention behavior, even before being diagnosed, the consequence may be the repetition of this behavior when experiencing a situation that requires such a need. The behavior of individuals who receive certain information and begin to replicate it is popularly called the "herd effect." It is not necessarily a matter of conscious decision-making but following the majority. Passively, one adheres to a collective decision, letting oneself be guided by instinct.

The care with the treatment of contaminated household waste by individuals with a partner responds to findings from before the COVID-19 pandemic, which explains that preventive household care is associated with living at home with a partner. Moreover, this status is referred to in the literature as social capital, which is associated with better adherence to various health behaviors, including preventive actions against complications of clinical conditions and disease transmission.<sup>17</sup>

The treatment of household waste of symptomatic people in isolation must follow some rules due to the risk of contamination from contact with the waste, including safe storage away from children and the elderly, a resistant, washable container covered with a resistant plastic bag that must be replaced when it reaches 2/3 of its capacity or at least once a day, the use of gloves to remove the bag and close it (with a knot) and, if gloves are not worn, hand washing with soap and water after removal, transportation to the disposal site, minimizing the touching of surfaces (garbage and hands), washing of the trash can, and sanitization with sodium hypochlorite.<sup>18</sup>

Washing personal clothes and bed and bathing apparel was a household care adhered to by almost all participants. This result seems to have influenced the association with low education, a characteristic of 80.0% of the participants. In this regard, it is understood that the care with fomites, when it comes to contagious diseases in general, seems to be a behavior adopted by the population as a sanitary measure.<sup>19</sup>

## CONCLUSIONS AND IMPLICATIONS FOR PRACTICE

It was possible to conclude that there is a risk of transmission of the disease between cohabitants because symptomatic participants implemented about half of the intra-household care and had little adherence to transmission precautions to residents. Therefore, it is understood that a household is an important unit of analysis for research on COVID-19 and that there is a gap in the literature in this regard.

People with suspected COVID-19 who participated in this study adhered to the domestic care during home isolation that is often reported in the media: isolation in a separate room or distance between beds, avoidance of crowding, hand hygiene when dirty, and using appropriate products. Some intra-household care has been neglected, such as the use of masks when going to other rooms and the cleaning of surfaces frequently touched by people with symptoms. Thus, with implications for practice, it is recommended that such care be addressed in the guidance given during the care of suspected/confirmed cases of COVID-19. This recommendation stems from the lack of emphasis on them in the mass media.

Furthermore, we also found that sociodemographic characteristics did not influence the amount of care implemented by participants but rather the adherence to specific care, such as avoiding crowds, which was associated with the male gender and knowing someone with COVID-19. In addition, sociodemographic characteristics influenced the attention given to the treatment of contaminated waste (people with a partner) and the washing of personal clothes, bedding, and towels used by the person with symptoms (participants with less education).

The study's limitations are linked to representativeness, arising from intentional sampling, which included more adults with low education, reflecting the population that sought care in the health service where the data were collected. The discussion of the findings was made considering the possibility of influence of this representation on the results obtained. The discussion of the results was based on the influence of sociodemographic characteristics on the population's health behaviors.

Furthermore, the lack of research on the household behavior of suspected or confirmed cases of COVID-19 is mentioned as a challenge in explaining the results. Extrapolations were sometimes made based on the scientific literature prior to the pandemic, which infers people's health behaviors according to their social determinants.

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## REFERENCES

1. Ministério da Saúde (BR). COVID-19 Painel Coronavírus. Painel de casos de doença pelo coronavírus 2019 (COVID-19) no Brasil pelo Ministério da Saúde [Internet]. Brasília (DF): Ministério da Saúde; 2021 [citado 2021 out 1]. Disponível em: <http://covid.saude.gov.br>
2. Aquino EML, Silveira IH, Pescarini JM, Aquino R, Souza-Filho JA, Rocha AS et al. Medidas de distanciamento social no controle da pandemia de COVID-19: potenciais impactos e desafios no Brasil. *Cien Saude Colet.* 2020;25(Supl. 1):2423-46. <http://dx.doi.org/10.1590/1413-81232020256.1.10502020>. PMID:32520287.
3. Natividade MS, Bernardes K, Pereira M, Miranda SS, Bertoldo J, Teixeira MG et al. Distanciamento social e condições de vida na pandemia COVID-19 em Salvador-Bahia, Brasil. *Cien Saude Colet.* 2020;25(9):3385-92. <http://dx.doi.org/10.1590/1413-81232020259.22142020>. PMID:32876242.
4. Kupferschmidt K, Cohen J. Can China's COVID-19 strategy work elsewhere? *Science.* 2020;367(6482):1061-2. <http://dx.doi.org/10.1126/science.367.6482.1061>. PMID:32139521.

5. Chinazzi M, Davis JT, Ajelli M, Gioannini C, Litvinova M, Merler S et al. The effect of travel restrictions on the spread of the 2019 novel coronavirus (COVID-19) outbreak. *Science*. 2020;368(6489):395-400. <http://dx.doi.org/10.1126/science.aba9757>. PMID:32144116.
6. Lu S, Lin J, Zhang Z, Xiao L, Jiang Z, Chen J et al. Alert for non-respiratory symptoms of coronavirus disease 2019 a patients in epidemic period: a case report of familial cluster with three asymptomatic COVID-19 patients. *J Med Virol*. 2021;93(1):518-21. <http://dx.doi.org/10.1002/jmv.25776>. PMID:32190904.
7. Ministério da Saúde (BR). Protocolo de Manejo Clínico do Coronavírus (COVID-19) na Atenção Primária à Saúde - Versão 9 [Internet]. Brasília (DF): Ministério da Saúde; 2020 [citado 2021 out 1]. Disponível em: <http://docs.bvsalud.org/biblioref/2020/05/1095920/20200504-protocolomanejo-ver09.pdf>
8. Do Bú EA, Alexandre MES, Bezerra VAS, Sá-Serafim RCN, Coutinho MPL. Representações e ancoragens sociais do novo coronavírus e do tratamento da COVID-19 por brasileiros. *Estudos de Psicologia (Campinas)*. 2020;37:e200073. <http://dx.doi.org/10.1590/1982-0275202037e200073>.
9. Lima DLF, Dias AA, Rabelo RS, Cruz ID, Costa SC, Nigri FMN et al. COVID-19 no estado do Ceará, Brasil: comportamentos e crenças na chegada da pandemia. *Cien Saude Colet*. 2020;25(5):1575-86. <http://dx.doi.org/10.1590/1413-81232020255.07192020>. PMID:32402018.
10. Costa ÂK, Bertoldi AD, Fontanella AT, Ramos LR, Arrais PSD, Luiza VL et al. Existe desigualdade socioeconômica na multimorbidade entre adultos brasileiros? *Rev Saude Publica*. 2020 dez 12;54:138. <http://dx.doi.org/10.11606/s1518-8787.2020054002569>. PMID:33331530.
11. Mazuchelli LP, Soares MFP, Noronha DO, Oliveira MVB. Discursos sobre os idosos, desigualdade social e os efeitos das medidas de distanciamento social em tempos de Covid-19. *Saude Soc*. 2021;30(3):e200885. <http://dx.doi.org/10.1590/s0104-12902021200885>.
12. Calmon TVL. As condições objetivas para o enfrentamento ao COVID-19: abismo social brasileiro, o racismo, e as perspectivas de desenvolvimento social como determinantes. *Revista NAU Social*. 2020;11(20):131-6. <https://doi.org/10.9771/ns.v11i20.36543>.
13. Metlay JP, Haas JS, Soltoff AE, Armstrong KA. Household transmission of SARS-CoV-2. *JAMA Netw Open*. 2021;4(2):e210304. <http://dx.doi.org/10.1001/jamanetworkopen.2021.0304>. PMID:33635324.
14. Secretaria da Saúde do Governo do Estado do Ceará (CE). Plano estadual de contingência para resposta às emergências em saúde pública - Novo Coronavírus (2019-nCoV). Ceará: Secretaria da Saúde; 2020.
15. Borges GM, Crespo CD. Aspectos demográficos e socioeconômicos dos adultos brasileiros e a COVID-19: uma análise dos grupos de risco a partir da Pesquisa Nacional de Saúde, 2013. *Cad Saude Publica*. 2020;36(10):e00141020. <http://dx.doi.org/10.1590/0102-311x00141020>. PMID:33111839.
16. Canas LS, Sudre CH, Capdevila Pujol J, Polidori L, Murray B, Molteni E et al. Early detection of COVID-19 in the UK using self-reported symptoms: a large-scale, prospective, epidemiological surveillance study. *The Lancet Digital Health*. 2021;3(9):e587-98. [http://dx.doi.org/10.1016/S2589-7500\(21\)00131-X](http://dx.doi.org/10.1016/S2589-7500(21)00131-X). PMID:34334333.
17. Silva SLA, Torres JL, Peixoto SV. Fatores associados à busca por serviços preventivos de saúde entre adultos brasileiros: Pesquisa Nacional de Saúde, 2013. *Cien Saude Colet*. 2020;25(3):783-92. <http://dx.doi.org/10.1590/1413-81232020253.15462018>. PMID:32159649.
18. Conselho Federal de Farmácia (BR). Tratamento do lixo domiciliar contaminado [Internet]. Brasília (DF): Conselho Federal de Farmácia; 2020 [citado 2021 out 1]. Disponível em: <http://covid19.cff.org.br/tratamento-do-lixo-domiciliar-contaminado/>
19. Nelson S. Enfermagem e doenças infecciosas: três lições da história. *Rev Bras Enferm*. 2021;74(3):e740301. <http://dx.doi.org/10.1590/0034-7167.2021740301>. PMID:34287497.