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Information and non-pharmacological prevention of COVID-19 in the territory of a family health unit in Pernambuco

Informação e prevenção não farmacológica da COVID-19 no território de uma unidade de saúde da família em Pernambuco

Información y prevención no farmacológica del COVID-19 en el territorio de una unidad de salud de la familia en Pernambuco

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Abstract

Introduction: Knowledge of the magnitude to which the population implements protective measures issued by public health authorities is essential in preventing coronavirus disease 2019 (COVID-19). The effectiveness of non-pharmacological prevention measures (NPM) and public policies aimed at reducing the spread of COVID-19 depends on how well individuals are informed about the consequences of the infection and the measures they must adopt to reduce its spread. The understanding, attitudes, and practices of people in relation to COVID-19 and its prevention are fundamental for understanding the epidemiological dynamics, demanding research on compliance with NPM to prevent contagion in different territories. To this end, in 2020, NPM against COVID-19 were released by various sources, state and private, for most of the Brazilian population, with the aim of guiding behaviors to contain the health crisis. The Family Health Strategy (FHS) teams play a key role in this health education process, as they comprise sociocultural elements of their communities, reaching them both in capillarity and in local adequacy of technical-scientific information. This article covers field research, part of a national multicenter project. **Objective:** To evaluate whether the population of the territory of an FHS unit in the city of Condado, Pernambuco, understands and applies the information it received about NPM prevention in their practices to protect against COVID-19. More specifically, the research aimed to determine what information was received by the respondents, what are their sources, the degree of reliability attributed to these, in addition to their adherence to the NPM and their relationship with sociodemographic variables. **Methods:** The study model was observational and descriptive, with a quantitative approach, based on the collection of primary data with 70 users through face-to-face interviews with a structured questionnaire. **Results:** The results showed that the population received extensive information on disease prevention. **Conclusion:** With varying levels of reliability of the sources, attributing relevant importance to prevention measures and adopted most of them, with the exception of total social isolation.

Keywords: Disease prevention; Health communication; COVID19; Family health strategy; Health education.

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Resumo

Introdução: O conhecimento da magnitude em que a população implementa medidas de proteção emitidas pelas autoridades de saúde pública é essencial na prevenção da doença do novo coronavírus (COVID-19). A eficácia de medidas não farmacológicas de prevenção e das políticas públicas destinadas a reduzir o contágio pela COVID-19 depende de quão bem os indivíduos são informados sobre as consequências da infecção e as medidas que devem adotar para reduzir sua propagação. O entendimento, as atitudes e as práticas das pessoas em relação à COVID-19 e sua prevenção são basilares para a compreensão da dinâmica epidemiológica, demandando a realização de pesquisas sobre o cumprimento de medidas não farmacológicas de prevenção do contágio em diversos territórios. Para isso, em 2020, medidas não farmacológicas contra a COVID-19 foram divulgadas por fontes diversas, estatais e privadas, para a maior parte da população brasileira, com a finalidade de orientar comportamentos para conter a crise sanitária. As equipes da Estratégia Saúde da Família têm um papel fundamental neste processo de educação em saúde, pois compreendem elementos socioculturais das suas comunidades, alcançando-as tanto em capilaridade quanto em adequação local da informação técnico-científica. Este artigo abrange uma pesquisa de campo, parte de um projeto multicêntrico nacional. **Objetivo:** Avaliar se a população do território de uma unidade da Estratégia Saúde da Família da cidade de Condado-PE entende e aplica as informações que recebeu sobre medidas não farmacológicas de prevenção em suas práticas de proteção contra a COVID-19. Mais especificamente, a pesquisa visou determinar que informações foram recebidas pelos respondentes, quais as suas fontes, o grau de confiabilidade atribuído a estas, além da adesão deles às medidas não farmacológicas e sua relação com variáveis sociodemográficas. **Métodos:** O modelo do estudo foi observacional e descritivo, com abordagem quantitativa, a partir da coleta de dados primários com 70 usuários por entrevista presencial com questionário estruturado. **Resultados:** Os resultados mostraram que a população recebeu vasta informação sobre prevenção da doença. **Conclusão:** Com níveis variados de confiabilidade das fontes, atribuindo importância relevante às medidas de prevenção e adotou a maioria delas, com exceção do isolamento social total.

Palavras-chave: Prevenção de doenças; Comunicação em saúde; COVID-19; Estratégia saúde da família; Educação em saúde.

Resumen

El conocimiento de la magnitud con la que la población implementa las medidas de protección emitidas por las autoridades de salud pública es fundamental en la prevención de la enfermedad por coronavirus 2019 (COVID-19). La efectividad de las medidas de prevención no farmacológicas (MFN) y de las políticas públicas dirigidas a reducir la propagación de la COVID-19 depende de qué tan bien se informe a las personas sobre las consecuencias de la infección y las medidas que deben adoptar para reducir su propagación. La comprensión, actitudes y prácticas de las personas con relación al COVID-19 y su prevención son fundamentales para comprender la dinámica epidemiológica, exigiendo investigaciones sobre el cumplimiento de las MNF para prevenir el contagio en diferentes territorios. Con ese fin, en 2020, MNF contra el COVID-19 fueron divulgados por diversas fuentes, estatales y privadas, para la mayoría de la población brasileña, con el objetivo de orientar comportamientos para contener la crisis sanitaria. Los equipos de la Estrategia de Salud de la Familia (ESF) juegan un papel fundamental en este proceso de educación en salud, ya que integran elementos socioculturales de sus comunidades, alcanzándolas tanto en la capilaridad como en la adecuación local de la información técnico-científica. Este artículo aborda una investigación de campo, parte de un proyecto multicéntrico nacional, con el objetivo de evaluar si la población del territorio de una unidad de la ESF en la ciudad de Condado-PE comprende y aplica la información recibida sobre la prevención de MNF en sus prácticas de protección contra el COVID -19. Más específicamente, la investigación tuvo como objetivo determinar qué información recibieron los encuestados, cuáles son sus fuentes, el grado de confiabilidad atribuido a estas, además de su adherencia al MNF y su relación con variables sociodemográficas. El modelo de estudio fue observacional y descriptivo, con enfoque cuantitativo, basado en la recolección de datos primarios con 70 usuarios a través de entrevistas cara a cara con un cuestionario estructurado. Los resultados mostraron que la población recibió amplia información sobre prevención de la enfermedad, con diversos niveles de confiabilidad de las fuentes, atribuyendo importancia relevante a las medidas de prevención y adoptando la mayoría de ellas, con excepción del aislamiento social total.

Palabras clave: Prevención de enfermedades; Comunicación en salud; COVID-19; Estrategia Salud de la Familia; Educación en Salud.

INTRODUCTION

The world faced its largest infectious disease pandemic in decades. More than three years after the World Health Organization (WHO) classified the outbreak of a new coronavirus, which emerged in December 2019, as a Public Health Emergency of International Concern, its end has been declared. This does not mean that the epidemic itself is over, but rather that the global emergency it caused is over for now. A WHO Health Regulations Review Committee, yet to be established, will develop permanent, long-term recommendations for countries on how to manage COVID-19 on an ongoing basis.[1] This pandemic has brought significant repercussions of various natures worldwide in a short span of time.[2] The consequences of this scenario varied across sectors and regions. Locally, each territory's

population must comprehend and engage in safety policies including physical distancing, personal and environmental hygiene, as well as the use of face masks and precautionary measures in schools and workplaces. Communication is vital to ensure trust, cooperation within territories, protection of vulnerable populations, and socioeconomic support.[3] Health communication, ensuring population cooperation, is critical in controlling the pandemic, based on the principles of Universality, Comprehensiveness, and Equity of the Brazilian Unified Health System (*Sistema Único de Saúde* – SUS). The timing and extent of restrictions have varied among countries, reflecting differing responses from national populations. Governments generally base decisions on a combination of infection epidemiology and social-economic consequences of the measures. Whatever combination is chosen, it is imperative that governments are explicit about their objectives, transparent in their decision-making, and adopt measures as part of a clear overall strategy; however, this is not always the case. Ideally, health authorities need to ensure they understand the reality of the situation facing people affected by their decisions.[4] Perception of health risks, whether individual and collective, determine protective behaviors. COVID-19 introduced an unknown risk until the end of 2019. Lack of information, need for accurate communications, and the virus's rapid spread are crucial factors. WHO highlights proactive community communication as a key intervention in response to important public health events. In addition to combating excess unnecessary and false information, the quality of information helps the population to understand the risks to which they are exposed, contributing to more effective community participation in disease control. Good risk communication also allows us to discover how populations are interpreting the information received and guarantees them the exercise of their right to information.[5] The pandemic revealed the necessity for preventive guidelines to align with personal beliefs and worldviews of each population, influenced by historical, cultural, and social factors, so that this communication can generate changes in behavior. In this context, the Family Health Strategy (FHS) plays a crucial role in communicating risks and protective measures at individual, family, and collective levels. The success of preventive non-pharmacological measures (NPM) and policies aimed at reducing the impact of COVID-19 depends on well-informed individuals and their compliance. People's knowledge, attitudes, and practices regarding COVID-19 are fundamental to understanding the epidemiological dynamics of the disease and the effectiveness, compliance, and success of NPM in a territory. Given these considerations, the objective of this study was to evaluate how the population in the territory covered by a Family Health Unit (FHU) in the city of Condado, Pernambuco, understands and applies the NPM for the prevention and control of COVID-19 in daily health practices at individual, family, and collective levels.

MATERIALS AND METHODS

This is an observational, cross-sectional study, with a quantitative approach, developed in the municipality of Condado, Pernambuco, in the territory serviced by a FHU called *Novo Tempo*. The municipality of Condado has an estimated population of 26,755 inhabitants, and its main economic activities are agriculture and the service sector. According to the 2010 IBGE Census, the Municipal Human Development Index was 0.602 (average HDI), ranking seventy-third among Pernambuco cities.[6] The municipality ensures 100% coverage for primary care assistance across its territory.

The research employed non-probabilistic convenience sampling, with consecutive inclusion of families of registered users who attended the FHU within the 90 days preceding the beginning of the research. Users who, despite active search efforts, did not respond to the request to participate in the research were

excluded. A total of 70 families were approached, from which one member of each was selected to answer a structured questionnaire administered in person at the FHU.

Data collection was carried out in March and April 2021. The present work is an excerpt from a multicenter study by the Research and Training Network of the Postgraduate Program in Family Health, focused on addressing COVID-19. The overall project, entitled "Prevention and control of COVID-19: multicenter study on the perception and daily practices of medical-scientific guidelines by the population of the territories covered by Primary Health Care," is coordinated by FIOCRUZ and ABRASCO, along with professors and manages of *ProfSaúde* nationwide. Therefore, the data collection instrument was developed by the coordination of that project.

The questions were read aloud by the researcher, while the interviewees referred to printed copies of the questionnaire. The interviewer input the answers via Google Forms® platform using their cellphone, storing them in a database online.

The primary variable examined in this study was the respondents' perception of the information they received regarding non-pharmacological preventive measures against COVID-19, along with their sources, during the pandemic in 2020 and 2021. Secondary variables included practices associated with the information received (adherence to NPM) and various sociodemographic characteristics of the participants, such as gender, marital status, education, age, income, color/ethnicity, occupation, physical structure of the household, and number of residents in the household.

From an operational standpoint, the perception variable was measured through responses to the following questions: What information did you receive about the coronavirus? (closed question allowing for multiple simultaneous answers: total social isolation; frequent hand washing; use of hand sanitizer; partial isolation; use of a mask when leaving home; other); Are you confident that the prevention and protection measures in relation to Coronavirus adopted by you and your family are sufficient to protect them? (question with single possible answer on a Likert scale: very confident; quite confident; reasonably confident; somewhat confident; not at all confident); What is the possibility of you or your family being infected by the Coronavirus? (question with single possible answer on a Likert scale: very high; high; reasonably high; low; very low); What is your opinion on the disease caused by the Coronavirus? (question with single possible answer on a Likert scale: very serious; serious; reasonably serious; not very serious; not serious); and In your opinion, how important are the following prevention measures adopted to combat Coronavirus? (possible single answer on a Likert scale: isolation and social distancing measures; use of a mask, hand hygiene with washing/use of hand sanitizer; avoidance of crowds).

Adherence to preventive measures in this study was considered based on the responses to the items: Which of the following actions did you and your family adopt to prevent contamination by the coronavirus? (allows more than one answer: Total social isolation; partial isolation; frequent hand washing; use of hand sanitizer; use of a mask when leaving the house; others); and Which of the actions mentioned in the previous question did you consider to be the most important to prevent contamination by the coronavirus? (single-answer question: Total social isolation, partial isolation; frequent hand washing; use of hand sanitizer; use of a mask when leaving home, others), and was analyzed considering the criteria adopted by Schneider et al.:[7] (a) individuals who adhered to one measure; (b) individuals who adhered to two measures; and (c) individuals who adhered to three or more prevention measures against COVID-19, among those listed as response options, regardless of which measure(s) were adopted.

For data analysis, both descriptive and inferential statistics were employed. In the descriptive analysis, simple frequencies and percentages were determined for nominal measurement level variables. Measures

of central tendency (means and medians) and variability (standard deviation, minimum/maximum values, and interquartile range) were determined according to the type of variable. The data were organized in Microsoft Excel spreadsheets for export and subsequent analysis using the Statistical Package for the Social Sciences (SPSS®), version 20.0 for Windows (SPSS Inc., Chicago, IL), and Software R, version 4.1.0. Graphical and tabular representations of the results were generated.

In inferential statistics, the Pearson χ^2 test was used to compare proportions between groups and to investigate associations between two categorical variables. Additionally, the Mann-Whitney U test was employed to compare ordinal and continuous variables between two groups. A significance level of 5% was adopted. The research was approved by the Research Ethics Committee (*Comitê de Ética em Pesquisa* – CEP) of the national coordinating center, led by Prof. Dr. Júlio Cesar Schweickardt, under Opinion number 4.345.618 (CEP of Universidade do Estado do Amazonas – UEA), in accordance with Resolution of the National Health Council No. 466/2012. All research participants signed the Informed Consent, which was facilitated through the Google Docs® application.

RESULTS

From a sociodemographic perspective, the 70 study participants had ages ranging from 18 to 77 years old, with average age of 41.6 years, standard deviation of 14.7, and interquartile range of 20.9. The sample was predominantly comprised of females, of mixed race, with incomplete primary or secondary educational level, married and cohabiting, with a family income of up to one minimum wage. Regarding the infrastructure of the homes, the majority of interviewees had access to water via an artesian well, and waste disposal was primarily through a septic tank in all cases (Tables 1 and 2).

The survey findings indicated a high percentage of respondents who reported having received information about the NPM queried, all with a frequency above 88%, reaching 100% for the use of hand sanitizer. The main sources of information were television newspapers and/or internet, followed by television (other programs), health professionals (including Community Health Agents), and people in the community (friends, neighbors, and relatives), with newspapers and health professionals being deemed the most trustworthy. The government was the second least cited source, garnering the lowest level of trust, as illustrated in Table 3. Additionally, the survey revealed a positive trend in feeling well-informed through mass media channels, with health professionals and the community being central sources, while a negative trend was observed regarding information sourced from social networks (Graphic 1).

The majority of respondents expressed confidence levels ranging from quite confident or reasonably confident in the effectiveness of MNF against COVID-19. However, they assessed the possibility of contamination as high or reasonably high. The disease was considered serious or very serious by the majority of those interviewed.

With regard to the population's adherence to NPM for preventing COVID-19, it was observed that the use of a mask when leaving home was the most widely adopted measure, with 100% of respondents claiming to use it. On the other hand, total social isolation was the NPM with the lowest adherence, registering just 1.4%. The other measures demonstrated high levels of adherence, as shown in Table 4.

When asked about the importance of each NPM, it was observed that all measures — including isolation and social distancing, wearing a mask, using hand sanitizer, and avoiding crowds — were deemed important or very important in combating the coronavirus. Consequently, participants demonstrated awareness of the importance of these measures. However, despite this awareness, they did not consistently

Table 1. Sociodemographic characteristics of the sample of users of the Novo Tempo Family Health Unit in Condado, Pernambuco, from March to April 2021 (n=70).

Characteristics	Frequencies	
	f	%
Gender		
Female	56	80
Male	14	20
Color/race		
Brown	47	67.1
White	14	20
Black	8	11.4
Yellow	1	1.4
Marital status		
Married	29	41.4
Consensual union	23	32.9
Single	13	18.6
Divorced	3	4.3
Widowed	2	2.9
Education		
Incomplete elementary school	29	41.4
High school	23	32.9
Incomplete High School	6	8.6
Incomplete Higher education	5	7.1
Higher Education	4	5.7
Elementary education	2	2.9
Postgraduation	1	1.4
Monthly income		
Up to 1 minimum wage	41	58.6
Up to 2 minimum wages	13	18.6
Up to 3 minimum wages	8	11.4
Up to 4 minimum wages	6	8.6
More than 4 minimum wages	2	2.9
Coresidents in the household		
0	2	2.9
1-3	51	72.9
4-7	17	24.3
Bedrooms (No.)		
2	28	40
3	32	45.7
4-5	10	14.3
Number of bathrooms (No.)		
1	46	65.7
2 or more	24	34.3
Access to water		
Artesian well	55	78.6
Running water	10	14.3
Reservoir	5	7.1
Sanitary sewage		
Septic tank	70	100

Source: primary research data (2022).

Table 2. Descriptive statistics regarding age and ordinal sociodemographic characteristics of the sample of users of the Novo Tempo Family Health Unit in Condado, Pernambuco, from March to April 2021 (n=70).

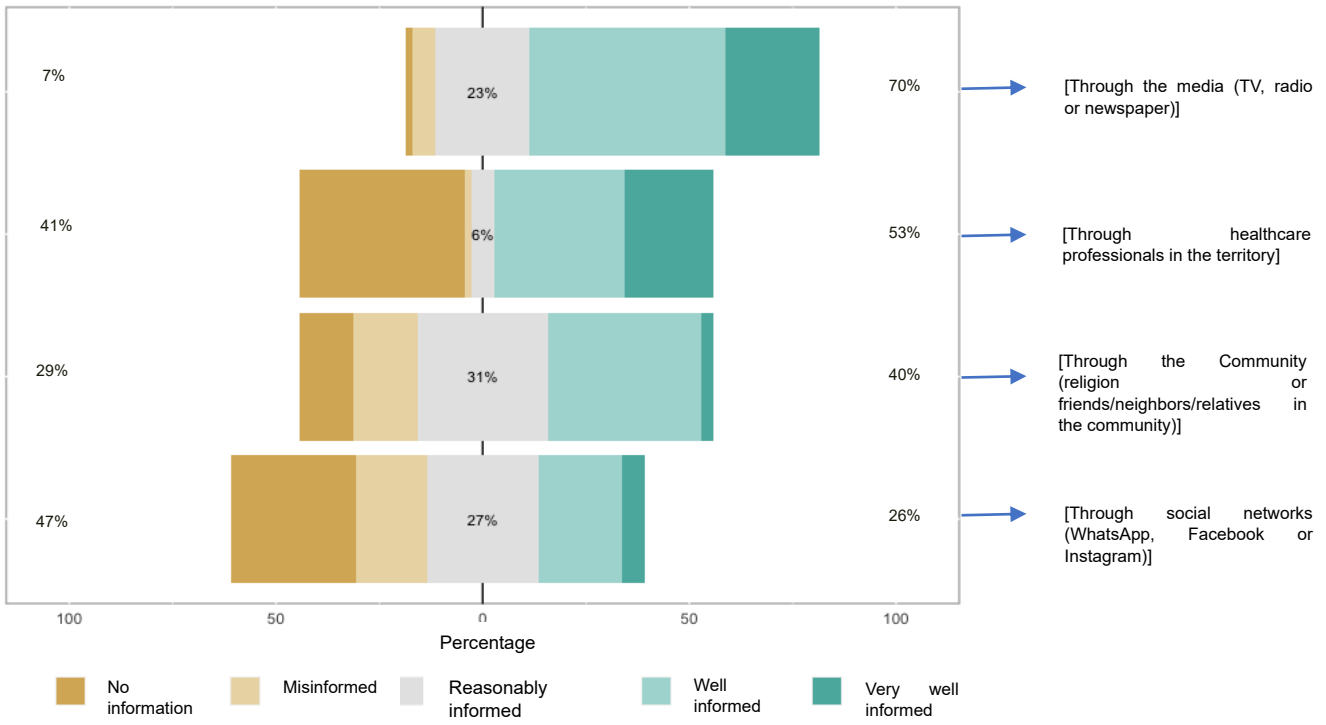
Characteristics	Descriptive statistics		
	Median	Minimum Value	Maximum Value
Age (years)	38.5	18	77
Coresidents in the household	1-3	0	4-7
Bedrooms	3	2	4-5
Number of bathrooms	1	1	≥2
People who leave home daily	1	0	3-4

Source: primary research data (2022).

Table 3. Information, sources of information and degree of confidence in sources of information about non-pharmacological measures to prevent COVID-19 from users of the *Novo Tempo* Family Health Unit in Condado, Pernambuco, March to April 2021 (n=70).

Characteristics	Frequencies	
	f	%
Self-reported NPM		
Mask-wearing when leaving home	69	98.6
Use of hand sanitizer	70	100.0
Frequent hand washing	69	98.6
Partial social isolation	62	88.6
Total social isolation	62	88.6
Information sources		
Health professionals in the territory	42	60.0
Digital social media Instagram	34	48.6
Television	43	61.4
News on TV and/or the internet	62	88.6
Religion	27	38.6
Rulers	17	24.3
Friends/neighbors/relatives	47	67.1
Radio	14	20.0
Digital social media Facebook	32	45.7
Whatsapp messaging app	27	38.6
Trust in information sources		
Health professionals in the territory	33	47.1
Digital social media Instagram	8	11.4
Television	5	7.1
News on TV and/or the internet	41	58.6
Religion	10	14.3
Rulers	2	2.9
Friends/neighbors/relatives	8	11.4
Radio	3	4.3
Digital social media Facebook	7	10.0
Whatsapp messaging app	5	7.1

Source: primary research data (2022).
NPM: non-pharmacological measures.



Source: primary research data (2022).

Graphic 1. Information received regarding the new coronavirus from an information source in the sample of users of the *Novo Tempo* Family Health Unit in Condado, Pernambuco, March to April 2021 (n=70).

Table 4. Non-pharmacological measures to prevent COVID-19 adopted in a sample of users of the *Novo Tempo* Family Health Unit in Condado, Pernambuco, from March to April 2021 (n=70).

NPM adopted	Frequencies	
	f	%
Mask-wearing when leaving home	70	100
Use of hand sanitizer	67	95.7
Frequent hand washing	63	90.0
Partial social isolation	59	84.3
Total social isolation	1	1.4

Source: primary research data (2022).

*NPM: non-pharmacological measures.

adhered to social isolation. It is noteworthy that wearing a mask when leaving home was considered the most important measure to prevent contamination by the coronavirus.

Applying the adherence criteria for NPM as described in the methodology, it was observed that 97.14% of interviewees stated adhering to three or more prevention measures, while 2.86% adhered to only two prevention measures, and none of them reported adopting only one prevention measure.

Upon analyzing the association between each NPM adopted by the respondents and demographic characteristics such as gender, race, marital status, educational level and income, using the χ^2 test, no statistically significant associations were found in any of these variables. Likewise, no statistically significant associations were found between adherence to each NPM and the degree of confidence in its effectiveness, nor between adherence to each NPM and the perceived risk of contracting COVID-19.

However, concerning the perception of the severity of the disease, a statistically significant association was observed with adherence to hand washing, as shown in Table 5.

Table 5. Relationship between NPM adopted against COVID-19 and sociodemographic characteristics in a sample of users of the *Novo Tempo* Family Health Unit in Condado, Pernambuco, from March to April 2021 (n=70).

	Sociodemographic variables				
NPM adopted	**Gender**	**Color/race**	**Marital status**	**Education**	**Family income**
	Inferential Statistics (*p* levels)				
Mask-wearing	0.874	0.564	0.478	0.814	0.587
Use of hand sanitizer	0.555	0.875	0.958	0.925	0.696
Hand washing	0.690	0.548	0.443	0.931	0.442
Partial isolation	0.324	0.861	0.257	0.891	0.909
Total isolation	0.615	0.255	0.349	0.964	0.349

	Subjective variables		
NPM adopted	**Confidence in the effectiveness of NPM**	**Risk perception**	**Perception of gravity**
	Inferential Statistics (*p* levels)		
Mask-wearing	0.935	0.701	0.986
Use of hand sanitizer	0.935	0.701	0.986
Hand washing	0.731	0.263	0.042*
Partial isolation	0.972	0.632	0.391
Total isolation	0.111	0.286	0.686

Source: primary research data (2022).

NPM: non-pharmacological measures; p: level of statistical significance; *statistically significant *p* at 5%.

DISCUSSION

The sociodemographic profile of the studied population closely aligns with the main characteristics of users of primary health care in Brazil: predominantly women, adults, young individuals, of mixed race, married or in a stable union, with limited education and low income.[8] Moreover, it coincides with the profile of the municipality in terms of education, race/color, and income.[6]

The precariousness of basic sanitation conditions also accompanies the situation in the municipality, with only 3.9% of its territory having access to this resource. This represents a crucial factor of social vulnerability and a determinant of health, often associated with the unplanned growth or expansion of cities, as observed in the studied territory.[6,9] Figueiredo et al. noted that COVID-19 initially occurred in large urban centers, subsequently spreading to areas characterized by greater social vulnerability. In these areas, the virus exhibited higher mortality rates, potentially, correlated with the population density of impoverished regions, their challenges in implementing protective measures, and limited access to healthcare.[10]

In the research, it was observed that the information questioned had a significant reach within the sample. Similarly, a research report entitled “Measures to Combat the COVID-19 Pandemic in Brazil in the Perception of the Population Active in Social Media,” by FIOCRUZ, carried out in April 2020, illustrated that the studied population presented a high level of knowledge and awareness regarding COVID-19. This suggests that there was effective dissemination of quality information, outweighing the spread of false information.

Regarding the sources of information received, similar findings were observed in the study by Fonseca et al., in which television emerged as the main medium through which interviewees received information about the COVID-19 pandemic. According to the Continuous National Household Sample Survey (*Pesquisa Nacional por Amostra de Domicílios Contínua* – PNAD) in 2021, 95.5% of Brazilian households owned a television set, and 90% had access to the internet, with cell phones being the most commonly used device (used by 99.5% of internet users).[11,12] Despite significant growth in internet access in recent years, reaching a proportion similar to television, it is important to acknowledge the complexity associated with using these information channels. While a television set can reach all household residents without requiring significant technological skills, a cell phone may be restricted to one or a few residents within the same household, and many may not have sufficient dexterity to use it correctly.

Unlike the study by Fonseca and collaborators, where television and television newspapers were the main sources of information, this study revealed that trust was primarily restricted to newspapers and did not extend to other television programs. In general, it was observed that the level of trust of the people interviewed in this research ranged from low to medium, indicating potential apprehension in attributing credibility to the news, particularly in the context of the infodemic experienced. This observation aligns with findings from a similar study, where a significant majority initially expressed distrust when receiving information on the topic.[13]

It is notable that the government ranked as the second least cited category of information source, second only to radio, and was perceived as the least reliable source. A similar result was seen in the "*Valores em Crise"* survey (2020, 2021), where the majority of respondents expresses little little or no trust in the government during the period from January to February 2021. Moreover, respondents considered the federal government's management of the pandemic to be poor or indifferent, possibly due to what was perceived as a denialist stance by the executive branch.[14,15] However, one cannot overlook the potential influence of traditional media, particularly television newspapers (the most pervasive medium), in shaping public opinion against the federal government due to political bias. Silva suggests that political bias in journalism may result from the directives of media owners and the ideological positioning of reporters when preparing information.[16] Costa and Silva et al. also highlighted that media coverage feeds political agendas and the formation of common sense, directing public opinion and intervening in human conduct and behavior.[17] However, it is also important to emphasize that when applying the questionnaire, it was made clear that the variable "rulers" represented the executive positions of three levels: president, governor, and mayor. In the study location — the municipality of Condado-PE —, pandemic management was guided by the directives of the state government of Pernambuco. From this perspective, the low level of trust in the government may also stem from the the historical dissatisfaction of the Brazilian population with their rulers in general, especially with regard to the administration of SUS. Castro et al. argued that political dissatisfaction generates institutional distrust and is associated with unmet demands or ineffective governance, affecting diverse audiences and interests. Such distrust is challenging to reverse by the institution itself.[18]

Regarding confidence in the effectiveness of NPM against COVID-19 and the perception of contagion by the virus, it was observed that there was no clear inversely proportional trend, as expected. Instead, a significant portion of respondents maintained a high level of concern regarding the risk of contagion. This apparently contradictory finding may indicate that respondents interpreted the question about the risk of contamination independently of their adoption of preventive measures. On the other hand, it suggests that even with adherence to the preventive NPM, individuals maintain a degree of insecurity and fear

concerning the disease. A similar result was found by Alves et al., where respondents expressed confidence in NPM against the disease while harboring fear of contracting it or that a family member will contract it. Likewise, Massarani et al. noted that the youngest age group disagrees that following recommended prevention measures nullifies the risk of contagion.[19,13] In the studies cited, the perception of the severity of COVID-19 was high, and there was widespread agreement that the only way to avoid contagion is by staying home. In other words, confidence in not contracting the coronavirus, in this context, would be associated with adhering to the recommendation of total social isolation. Hence, it is plausible that when questioning the effectiveness of NPM, respondents implicitly acknowledge their exposure to risk. In this scenario, participants may unconsciously exclude total social isolation as a safe prevention alternative.

In the sample universe studied, there is an apparent trend of increasing perception of severity, corroborating the findings from the aforementioned studies and the research by Goulart et al., indicating that the majority of individuals recognize the seriousness of the disease caused by the coronavirus across various Brazilian regions.[20] As highlighted by Ma et al., while mortality from SARS-CoV-2 infection might be lower compared to other conditions caused by coronaviruses like SARS-CoV and MERS-CoV, its higher transmissibility poses a significant challenge to global health security.[21,22] Thus, the large absolute number of infected individuals translates into a higher number of severe cases and deaths, exerting a substantial impact on healthcare systems, people's lives, and societies as a whole. Although severe cases are often associated with specific demographic groups such as the aged, African ethnicity, males, and those with comorbidities like hypertension, diabetes, obesity, chronic kidney disease, and other cardiovascular diseases, frequent exposure to such news may heighten the risk of anxiety and depression, intensifying fears about the disease.[23,24]

The study highlighted that wearing a mask when leaving home was the most widely adopted NPM by the participants and was also deemed the most important. Similarly, the EPICOVID19-BR study also indicated high adherence to this prevention measure.[25] In an integrative review on the use of masks by the populations across various countries, including Brazil, Costa et al. identified significant variability in the adoption of this practice, influenced by factors ranging from sociodemographic profiles to psychological aspects such as anxiety and discomfort associated with wearing masks. However, it was evident that in places and times where mask-wearing was mandatory, adherence to the practice was more widespread.[26] Nevertheless, the review also highlighted instances of incorrect use of the mask, with individuals often adjusting their behavior when being observed. Such findings cannot be directly compared to the current study, as there was no detailed assessment of mask-wearing practices during data collection. This limitation is crucial to acknowledge as it pertains to information directly relevant to the effectiveness of the preventive measures studied.[26]

Another significant finding of the research was the very low adherence to total social isolation. In this regard, it is essential to consider the timing of data collection, which occurred one year after the onset of the pandemic. By this point, there might have been a certain level of fatigue regarding isolation measures, compounded by the relaxation of many restrictions. Additionally, the income profile and employment activities within the community can be crucial factors influencing non-adherence. Pereira et al. noted that social vulnerability is an important contributor to non-adherence to social isolation. They emphasized that besides inadequate living conditions, the need to generate income compelled family providers to leave home, even after the commencement of emergency aid.[27] Furthermore, they highlighted that the types of work performed by the most vulnerable individuals are incompatible with remote work, leaving them with no alternative.[27] In fact, there is a certain coherence between the high adherence to the

use of masks when leaving home and the low adherence to total social isolation, as practicing the former might already compromise the latter. Partial social isolation, coupled with mask-wearing, demonstrated significant adherence (84.3%). The study revealed that the majority of participants reported adhering to at least 3 NPM against COVID-19, consistent with the findings of studies by Acrani et al.[28] and Machida et al.[29] Schneider et al.[7] demonstrated that the adoption of multiple measures concurrently enhances infection control, thus serving as a positive prevention factor.[7] Unlike the findings of studies by Acrani et al.,[28] Jacques et al.[25], and Pereira et al.,[27] perhaps owing to social cohesion in a small town, the lack of a statistically significant association between adherence to NPM and sociodemographic characteristics, confidence in their effectiveness, and the perception of the risk of contracting COVID-19 was observed. This may have been influenced by the small sample size, which is another limitation of the study. However, significance was found in the association between the perception of severity and adherence to frequent hand washing, which corroborates the theories of health behavior decisions, where individuals who perceive greater risks are more motivated to implement protective measures.[30]

CONCLUSION

The present study facilitated the construction of a profile regarding people's understanding and practice concerning information and prevention measures against COVID-19 in the studies territory. It revealed high levels of reception of information from various sources, along with the ability to assess the reliability of these sources. Furthermore, it identified commendable levels of adherence to prevention measures, albeit with the notable exception of total social isolation. This, however, was accompanied by the general perception that all measures are important in combating the disease, implying that restricting the population from total social isolation could pose a challenge.

A high level of consensus was also evident regarding the severity of coronavirus infection. It is crucial to emphasize that despite the declaration of the end of the COVID-19 health emergency by the WHO on May 5th, 2023, studies on health perception and communication profiles remain vital, as they help prepare management and healthcare professionals for future emerging infectious disease situations in the future.

The limitations of the study include the small sample size and the lack of detailed information on how the prevention measures were implemented, factors that could affect the effectiveness of the measures regardless of adherence. However, these limitations do not diminish the importance of the study, which can trigger important reflections on the topic, especially for professionals working in primary healthcare.

CONFLICT OF INTERESTS

Nothing to declare.

AUTHORS' CONTRIBUTIONS

LV, RLSM, IVL: Conceptualization, Data Curation, Methodology. LV: Investigation, Formal Analysis. LV: Project Administration. LV: Writing – Original Draft RLSM: Supervision, Validation. RLSM, IVL: Writing – Review & Editing, Visualização All authors approved the final version and agreed to be accountable for all aspects of the work.

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