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# Factors associated to the practice of using masks by the population of Paraíba during the COVID-19 pandemic

Fatores associados à prática do uso de máscaras pela população paraibana durante a pandemia da COVID-19

Factores asociados a la práctica del uso de mascarilla por la población de Paraíba durante la pandemia de COVID-19

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#### ABSTRACT

Objective: To evaluate the practice of using masks by the population of the Brazilian state of Paraíba during the COVID-19 pandemic. Method: Cross-sectional, descriptiveanalytical study conducted with adults living in the state of Paraíba through an online instrument from April to May 2020, through the Face Mask Use Scale of Faculdades Metropolitanas Unidas da Paraíba. Results: The participants amounted to 1,307 (100.0%) individuals, who were predominantly female (78.0%), aged 35 to 45 (32.3%), married (53.3%) and post-graduates (46.9%). The mean score for the practice of using masks was 18.7 (SD = 8.0; minimum 6.00; maximum 30). The use of masks for self-protection scored 9.8 (DP = 3.9; minimum 3.0; maximum 15.0), whereas the score for protection of others was 8.9 (SD = 4.5; minimum 3.0; maximum 15.0). In the comparison between the scores of the practice of using masks, there was a significant statistical difference for gender, education, age group, and income ( $p \le 0.01$ ). The practice of using masks was more frequent in health environments, 7.3 (DP = 3.2). Conclusion: The practice of using masks was predominant among women, people over 35, married, with an income higher than seven minimum wages, and post-graduation. The use of masks for self-protection was higher than for the protection of others and its use in health environments was higher than in the others.

#### **DESCRIPTORS**

Coronavirus Infections; Pandemics; Masks; Communicable Diseases; Security Measures; Public Health.

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# **INTRODUCTION**

Given the pandemic context provoked by SARS-CoV-2 in early 2020, individual and collective protection measures have been broadly disseminated, with the main objective of controlling the propagation and transmission of the virus and the consequent occurrence of COVID-19. This disease was first detected in Wuhan, China, in December 2019<sup>(1-2)</sup>. The pandemic reached Latin America two months after the statement by the World Health Organization (WHO), in São Paulo, Brazil, through a sixty-year-old man who travelled through Italy<sup>(3)</sup>.

As of October 20, 2020, confirmed COVID-19 cases amounted to 40,114,293, with 1,114,692 related deaths. The United States of America presented the highest number of incidence, 8,065,615, followed by India (7,597,063 confirmed cases), Brazil (5,235,344), Russia (1,415,316), and Argentina (989,680)<sup>(4)</sup>.

In Brazil, in the same period, there were registers in all regions and states of approximately 154,176 deaths associated to COVID-19. The national incidence was then of 2,498.6 cases per 100,000 citizens. The Southeast region registered, as of the same date, the highest number of confirmed cases (1,837,514) among Brazilian regions, followed by the Northeast (1,424,549), North (669,311), South (660,908), and Center-West (658,445) regions<sup>(5)</sup>.

Paraíba was the third state of the Northeast with the highest incidence rate: 3,199.2 cases per 100,000 citizens, surpassed only by Sergipe and Piauí, with, respectively 1,031.1 and 999.1 cases per 100,000 citizens<sup>(5)</sup>. The response to the pandemic is understood not to occur linearly and, thus, understanding the behavior of the population of Paraíba regarding preventive measures is the most efficient way so far to contain transmission and improve health indicators<sup>(2,6)</sup>.

The number of cases in Brazil has been avoidable and the pandemic has reached its peak in several regions, including Paraíba<sup>(2,5)</sup>. Considering the transmission of SARS-CoV-2 through the respiratory route, the use of masks was strongly recommended not only in the hospital environment, but also in communities and domiciles<sup>(7-9)</sup>.

Thus, measuring the practice of using masks by the population during the COVID-19 pandemic became a prevention and intervention strategy, mainly when its use is neglected. The Face Mask Use Scale (FMUS) is a reliable instrument to measure the practice of using masks, which enables the identification of objectives and circumstances of its use. Its self-reporting model facilitates the application of populational studies and enables the advancement of educational interventions and preventive measures through the appropriate and efficient use of masks in different circumstances<sup>(10)</sup>.

Considering that there are no studies on theme with the Brazilian population as of the emergence of the COVID-19

pandemic, this study is taken to be one of the first to present data on the practice of using masks and its associated factors. The objective of this study is thus evaluating the practice of using masks by the population of Paraíba during the COVID-19 pandemic.

# **METHOD**

## **DESIGN OF STUDY**

This is a cross-sectional, descriptive-analytical study. It was conducted from April 16 to May 5, 2020, with the participation of individuals from various cities of Paraíba. This study is part of the Multinational Project related to the practice of using masks among the general public during the COVID-19 pandemic.

# POPULATION

For this study, all individuals over 18 of both sexes, and living in Paraíba were considered eligible. No foreigners or people born in Paraíba who were there temporarily were selected.

## **SAMPLE DEFINITION**

Considering the population over 18 of approximately 3,766,528 citizens and meeting a statistical power of 80% (0.80) and a significance level of 5% (0.05), the calculated sample was of at least 385 participants. However, the way it was implemented, the collection phase resulted in 1,327 participants. This total of participants was then adopted, maintaining the planned confidence level.

# **DATA COLLECTION**

In the data collection phase, a duly trained team recruited individuals through digital media (Whatsapp, Facebook, Instagram), by sending a link to virtual documents: the Informed Consent Form (ICF) and the research form. A virtual questionnaire was opted for mainly due to promoting the participation of individuals from diverse cities of Paraíba, and due to observing the social distancing which was recommended in that period.

The data collection form encompassed general information and the Face Mask Use Scale (FMUS). This scale presents satisfactory psychometric features<sup>(10)</sup>. For studies in Brazil, the scale was translated and evaluated for the validity of face and content by experts on the theme and authorized by the original author of the scale and co-author of this study<sup>(10)</sup>. The Brazilian Portuguese (FMU-PB) version was thus used in this study.

The scale comprises six items on the use of masks in public, health, and domicile environments: 1. I wear a face mask in public venues to protect myself against influenza-like illness; 2. I wear a face mask in a doctor's clinic to protect myself against influenzalike illness; 3. I wear a face mask at home when I have symptoms of influenza-like illness; 4. I wear a face mask in public venues when I have symptoms of influenza-like illness; 5. I wear a face mask in a doctor's clinic when I have symptoms of influenza-like illness; 6. I wear a face mask at home when family members have influenza-like illness. The scale comprises also two domains: cautious practices (items 2, 4, and 5) and negligent practices (items 1, 3, and 6). The response options vary in a five point Likert-type scale, in which "never", "rarely", "sometimes", "frequently", and "always" represent the practice of using masks. A 1 to 5 score is attributed to the scale options in ascending order<sup>(10)</sup>.

To measure the practice of using masks, a general score ranging from 6 to 30 is used, in which the highest values, closer to 30, indicate the best practice of use. For the domains, the score ranges from 3 to  $15^{(10)}$ .

In this study, the calculated scores refer to the practice of using masks for self-protection (items 1, 2, and 6) and protection of others (3, 4, and 5) and in the different environments: public (items 1 and 4), health (items 2 and 5) and domiciliary (items 3 and 6), with scores ranging from 3 to  $10^{(10)}$ .

#### **DATA TREATMENT AND ANALYSIS**

The collected data were exported to a spreadsheet in *Microsoft Office Excel*<sup>®</sup> and analyzed with the *IBM*<sup>®</sup> *SPSS* software version 20.0. The sociodemographic characterization of the participants was performed through descriptive statistics with the measures in absolute frequency, relative frequency, and dispersion (standard deviation - SD). The outcome variables (dependent) were the general score in FMUS and its domains. The independent variables were sex, age group, education, family income, marital status, social isolation, and hand washing. To compare the scale scores among the independent variables, hypothesis testing, analysis of variance (ANOVA), and Student's t-test were used. The considered values were p-value  $\leq 0.01$  and p-value  $\leq 0.05$ .

#### **ETHICAL ASPECTS**

The project was approved by the National Commission of Research Ethics (*Comissão Nacional de Ética em Pesquisa* – Conep). All ethical aspects were observed in its conduction, following Resolutions 466/2012 and 510/2016.

## RESULTS

The study participants amounted to 1,327 (100.0%) individuals from the general population. These were predominantly female, 1,035 (78.0%), aged 35 to 44 years old, 428 (32.3%), married, 707 (53.3%), post-graduates, 623 (46.9%), and monthly income of seven minimum wages or more, 392 (29.5%). Regarding the adopted measures to prevent COVID-19, 1,294 (97.5%) practiced hand washing and 1,138 (85.8%) practiced social isolation (Table 1).  
 Table 1 – Participant characterization per individual variables and measures to prevent COVID-19 – Paraíba, Brazil, 2020.

Variables	n (%)
Sex	
Male	292 (22.0)
Female	1,035 (78.0)
Age group (years)	
18 to 24	232 (17.5)
25 to 34	371 (28.0)
35 to 44	428 (32.3)
45 to 54	178 (13.4)
55 or more	118 (8.9)
Marital Status	
Single	535 (40.3)
Married	707 (53.3)
Divorced/separated	70 (5.3)
Widow(er)	15 (1.1)
Education level	
Primary school	7 (0.5)
High school	224 (16.9)
Graduation	473 (35.6)
Post-graduation	623 (46.9)
Family income	
< 1 minimum wage	47 (3.5)
1 to 2 minimum wages	337 (25.4)
3 to 4 minimum wages	329 (24.8)
5 to 6 minimum wages	214 (16.1)
> 7 minimum wages	392 (29.5)
No income	8 (0.6)
Hand washing	
No	33 (2.5)
Yes	1,294 (97.5)
Social isolation	
No	189 (14.2)
Yes	1,138 (85.8)

Note: (n =1,327)

In the analysis of the FMUS-PB items, item 1, on the use of masks in public environments, was answered with "always" by most participants (61.1%). A similar result was obtained for item 2, on the use of masks in the health service, totaling 65.5% for the option "always". On the other hand, item 3, on the use of masks at home, was answered with "always" by only 23.8% (Table 2).

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Table 2 – Free	uency of answers	by partic	ipants to the iter	ms of the Brazilian	Portuguese versior	n (FMUS-PB) –	Paraíba, Brazil, 2020.
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	Never	Rarely	Sometimes	Frequently	Always
Items	n (%)	n (%)	n (%)	n (%)	n (%)
I wear a face mask in public venues to protect myself against influenza-like illness.	247 (18.6)	79 (6.0)	190 (14.3)	0 (0.0)	811 (61.1)
I wear a face mask in a doctor's clinic to protect myself against influenza-like illness	271 (20.4)	64 (4.8)	123 (9.3)	0 (0.0)	869 (65.5)
I wear a face mask at home when I have symptoms of influenza-like illness.	706 (53.2)	163 (12.3)	142 (10.7)	0 (0.0)	316 (23.8)
I wear a face mask in public venues when I have symptoms of influenza-like illness.	460 (34.7)	103 (7.8)	134 (10.1)	0 (0.0)	630 (47.5)
I wear a face mask in a doctor's clinic when I have symptoms of influenza-like illness.	389 (29.3)	81 (6.1)	116 (8.7)	0 (0.0)	741 (55.8)
I wear a face mask at home when family members have influenza-like illness.	747 (56.3)	168 (12.7)	147 (11.1)	0 (0.0)	265 (20.0)

Note: (n =1,327)

The general score for the practice of using masks was 18.7 (SD = 8.0), ranging from 6 to 30. For the cautious practices domain, a score of 10.5 (SD = 4.7) was obtained and the score for negligent practices was 8.2 (SD = 3.9), with 3 as the minimum value and 15 as the maximum. In the evaluation of the use of masks for self-protection, a score of 9.8 (SD = 3.9; minimum 3.0; maximum 15.0) was obtained, whereas that of protection of others was 8.9 (SD = 4.5; minimum 3.0; maximum 15.0). Regarding the practice of using masks in the environments, the score for the health environment was 7.3 (SD = 3.2), the score for the public was 6.9 (SD = 3.1), and domiciliary was 4.4 (SD = 3.0).

Table 3 presents the general and mean scores of FMUS-PB per individual variables and other preventive measures. There was a significant difference in the comparison of the means of the general score among age group, sex, education, marital status, family income, and hand washing. The two domains presented a statistically significant difference for the variables age group, marital status, and hand washing. A statistically significant difference with social isolation was presented by the domain cautious practices (p = 0.04). The scores for the items self-protection and protection of others also presented statistically significant differences among age group, marital status, education, and hand washing (Table 3).

**Table 3** – Distribution of the scores for the practice of using masks per individual variables and preventive measures against COVID-19 – Paraíba, Brazil, 2020.

Variables	f	FMUS	E1	<b>E2</b>	E3	<b>E4</b>
Age group <sup>(2)</sup>						
18 to 24 years	232	16.8	9.5	7.3	8.7	8.1
25 to 34 years	371	18	10.2	7.8	9.5	8.5
35 to 44 years	428	19.7	11	8.7	10.2	9.5
45 to 54 years	178	19.7	10.9	8.7	10.2	9.5
55 or older	118	19.8	10.7	9.1	10.5	9.3
p-value		0.00**	0.00**	0.00**	0.00**	0.00**
Sex <sup>(1)</sup>						
Male	292	17.6	9.6	8.1	9.4	8.2
Female	1,035	19.0	10.8	8.3	9.0	9.1
p-value		0.01*	0.00**	0.47	0.07	0.00**
Education <sup>(2)</sup>						
Primary school	7	19.4	10.1	9.3	10.7	8.7
						continue

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Variables	f	FMUS	E1	E2	E3	E4
High school	224	18	10.1	7.9	9.5	8.5
Graduation	473	17.8	9.8	7.9	9.4	8.4
Post-graduation	623	19.7	11.2	8.5	10.2	9.5
p-value		0.00**	0.00**	0.06	0.00**	0.00**
Marital status <sup>(2)</sup>						
Single	535	17.8	9.9 <sup>b</sup>	7.8	9.4	8.4
Married	707	19.3	10.8ª	8.4	10.1	9.2
Separated/Divorced	70	20	10.9	9.1	10.4	9.6
Widow(er)	15	18.3	9.8	8.5	9.8	8.5
p-value		0.00**	0.00**	0.01*	0.00**	0.01*
Family income <sup>(2)</sup>						
< 1 MW	47	19.3	10.2	9.1	10.5	8.8
1 to 2 MW	337	17.7	9.9	7.7	9.2	8.4
3 to 4 MW	329	18.3	10.3	7.9	9.5	8.8
5 to 6 MW	214	19.2	10.8	8.4	10	9.1
7 MW	392	19.6	10.9	8.7	10.2	9.4
No income	8	21.9	12.7	9.1	11.5	10.4
p-value		0.01**	0.06	0.00**	0.00**	0.06
Hand washing <sup>(1)</sup>						
No	33	14.9	8.4	6.6	7.9	7
Yes	1,294	18.8	10.5	8.3	9.8	8.9
p-value		0.02*	0.02*	0.03*	0.02*	0.02*
Social isolation <sup>(1)</sup>						
No	189	19.2	11.1	8.1	9.9	9.2
Yes	1,138	18.7	10.4	8.2	9.8	8.9
p-value		0.41	0.04*	0.55	0.48	0.39

Note: (n =1,327)

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FMUS: Face Mask Use Scale; E1: Cautious practices; E2: Negligent practices; E3: Use for self-protection; E4: Use for protecting others; MW: Minimum wage

Significant results: \* p-value  $\leq 0.05$ ; \*\* p-value  $\leq 0.01$ 

<sup>1</sup> With Student's t-test; <sup>2</sup> With ANOVA test

In Table 4, which refers to the practice of using masks in the environments, a statistically significant difference is observed among the age group variables. Individuals from 18 to 24 years presented low scores of use for all environments. Regarding the variable sex, women had the highest statistically significant scores for use of masks in health environments (p = 0.00) and use of masks in a public environment (p = 0.01), but not for the use of masks in a domiciliary environment (p = 0.83).

**Table 4** – Distribution of the scores of practice of using masks in the environments per individual variables and preventive measures for COVID-19 – Paraíba, Brazil, 2020.

Variables	f	E5			E6			E7		
		Mean	SD	р	Mean	SD	р	Mean	SD	р
Age group <sup>(2)</sup>										
18 to 24 years	232	6.6	3.38	0.00**	4.0	2.76	0.00**	6.1	3.25	0.00**
25 to 34 years	371	7.3	3.19		4.1	2.78		6.6	3.02	

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			E5		E6				E7		
Variables	f	Mean	SD	р	Mean	SD	р	Mean	SD	р	
35 to 44 years	428	7.3	3.06		4.7	3.08		7.3	3.04		
45 to 54 years	178	7.6	3.28		4.8	3.10		7.3	3.20		
55 or older	118	7.3	3.20		4.9	3.20		7.5	2.84		
Sex <sup>(1)</sup>											
Male	292	6.7	3.33	0.00**	4.4	3.04	0.83	6.5	3.16	0.01*	
Female	1,035	7.5	3.15		4.45	2.96		7.0	3.09		
Education <sup>(2)</sup>											
Primary school	7	6.9	3.24	0.00**	5.1	3.24	0.28	7.4	2.99	0.01*	
High school	224	7	3.28		4.2	2.91		6.7	3.18		
Graduation	473	6.8	3.38		4.3	2.95		6.6	3.20		
Post-graduation	623	7.9	2.97		4.6	3.01		7.2ª	3.00		
Marital status <sup>(2)</sup>											
Single	535	7	3.27	0.02*	4.3	2.89	0.25	6.5	3.16	0.00**	
Married	707	7.6	3.13		4.5	2.98		7.2	3.08		
Separated/Divorced	70	7.4	3.30		4.9	3.45		7.7	2.71		
Widow(er)	15	6.8	3.69		4.3	3.24		7.2	3.03		
Monthly income <sup>(2)</sup>											
< 1 MW	47	7	3.03	0.09	5.3	2.84	0.02*	6.9	2.97	0.00**	
1 to 2 MW	337	7	3.19		4 <sup>b</sup>	2.80		6.6	3.10		
3 to 4 MW	329	7.2	3.31		4.4	2.85		6.7	3.20		
5 to 6 MW	214	7.5	3.08		4.5	3.07		7.1	3.02		
7 MW or more	392	7.6	3.24		4.7 <sup>a</sup>	3.15		7.3	3.06		
No income	8	9	1.51		4.9	2.30		8.0	3.02		
Hand washing <sup>(1)</sup>											
No	33	6.2	3.62	0.08	3.8	2.86	0.17	5.0	3.34	0.00**	
Yes	1,294	7.3	3.20		4.4	2.98		7.0	3.09		
Social isolation <sup>(1)</sup>											
No	189	7.9	2.91	0.00**	4.4	2.90	0.81	6.9	3.12	0.75	
Yes	1,138	7.2	3.25		4.4	2.99		6.9	3.11		

Note: (n =1,327)

MW: Minimum wage; E5: Use in health environments; E6: Use at home; E7: Use in a public area

Significant results: \* p-value  $\leq 0.05$ ; \*\* p-value  $\leq 0.01$ 

In Figure 1, which refers to the distribution of the general score and of other FMUS-PB scores, the domain cautious practices and the use for self-protection present the highest median values (11), whereas the

use in the domiciliary environment presented the lowest median (3). The mean, signaled in the graph with a red dot, and the median are observed to present close values.



Note: (n =1,327)

**Figure 1** – *Boxplot* of the scores of practice of using masks for the general score and the other items in the FMUS-PB scale – Paraíba, Brazil, 2020.

#### DISCUSSION

This study has evaluated the practice of using masks among the population of Paraíba considering cautious and negligent practices, use for self-protection and protection of others in the public, health, and domiciliary environments.

In relation to the sociodemographic characterization of the participants, the participants were mostly constituted by educated adult women with a monthly income of over seven minimum wages. This finding matches that of a study conducted in Hong Kong with 1,020 individuals on knowledge, attitudes, and practices regarding protection measures (use of masks, hand washing, social distancing) against a respiratory infection (A/H7N9), with a predominance of adult women with a higher education level<sup>(11)</sup>.

The practice of using masks by the studied population had satisfactory results. The practice of using masks in this study was higher when compared to that of a study conducted in Egypt, where less than half the studied population used masks, despite more than half of this population believing that this practice protects individuals against diseases transmitted through respiratory route, which corresponds to a negligent practices<sup>(12)</sup>. The practice of using masks, respiratory etiquette, hand hygiene, and social distancing measures are important for the suppression of COVID-19<sup>(2,11,13)</sup>.

The negligent practices regarding the use of masks may be related to the lack of consensus of sanitary authorities and governments regarding the determination or obligation of its use<sup>(14)</sup>. In Brazil, the determination on the use of masks by the general public has been happening in distinct periods in each region based on the epidemiological behavior of COVID-19 and according to the reality of each state and municipality, as per recommendation of the Ministry of Health<sup>(2)</sup>. In this study, young adults presented lower scores regarding negligent practices of the use of masks when compared to the scores of older adults.

Distinct recommendations may have a negative effect and favor negligence towards the use of masks and other preventive measures. In some countries, fake news on COVID-19 and protection and prevention measures (including type and use of masks) are observed to be disseminated in the traditional and social media. Such fact is worsened by the lack of knowledge and understanding of the population on what may be true and appropriate, mainly regarding new and yet unknown situations<sup>(15-16)</sup>.

In this study, an important association regarding COVID-19 preventive measures was observed, since individuals who performed hand hygiene presented the highest score in the Face Mask Use Scale. Systematic reviews and meta-analyses show a significant efficacy of the combination of the practice of using masks and hand washing against the influenza virus in communities<sup>(17-18)</sup>. However, the complexity involving such preventive measures is real, and may be often related to factors such as human behavior, compensation of risk perception, underestimation of individual responsibility, and lack of knowledge, attitudes which may interfere in the adherence to preventive measures<sup>(7,19-21)</sup>.

Scientific evidence on the efficiency of the use of masks by the population during respiratory disease pandemics are scarce and conflicted<sup>(22)</sup>. However, in face of the COVID-19 pandemic, the precaution principle must be applied, encouraging the population to use masks. The period of data collection for this study refers to the moment after the Ministry of Health's decree on the use of fabric masks by the population in public environments<sup>(8)</sup>. The practice of using masks by the Brazilian population was not common and is believed to have never happened before<sup>(2)</sup>, which may compromise the adoption of this measure of precaution.

In the absence of studies to subsidize this research's discussion on the use of masks by the Brazilian population, studies conducted in other countries and municipalities were considered, mainly studies in countries where the practice of using masks has been frequent in face of previous respiratory disease epidemics, such as those in Asia<sup>(2)</sup>.

The study population was more likely to use masks for self-protection than for protection of others, and more likely to use masks in public environments than in health environments or at home. A study conducted in Hong Kong with 399 interviewees has identified that individuals were more likely to use masks in health environments and to protect others than for self-protection<sup>(23)</sup>.

Consequently, masks should be used inside and outside the domiciliary environment, both for self-protection and protection of others, aiming at preventing respiratory contact with asymptomatic or oligosymptomatic strangers<sup>(24)</sup>. In addition, healthy people are infected in public areas<sup>(25)</sup>.

The low frequency of the practice of using masks in the domestic environment is noteworthy. The domiciliary environment is perceived as safe, regardless of whether the respiratory symptoms of the flu are present<sup>(10)</sup>. However, individuals with respiratory symptoms should use masks in domestic environments. Transmission within families is still a concern, since 66% of confirmed cases diagnosed in Hong Kong were disseminated among family members<sup>(18)</sup>. There are potential advantages of the use of masks in public and health environments, either by symptomatic or non-symptomatic individuals, such as the reduction of potential risk of exposure, also observed in domiciliary environments<sup>(18)</sup>.

In general, the practice of using masks and its frequency of use in different environments for the study population were considered positive, except in the domiciliary environment; however, it is emphasized that this practice should be adopted by all the population. Some difficulties - such as the absence of a rapid test for case tracking, a political setting which is hostile against evidence-based decisions, and divergence of information and recommendations among government, states, and municipalities - are believed to have influenced the adoption of appropriate protection and precaution measures against COVID-19<sup>(26)</sup>. However, the perception of an increased risk plays an important role in the use of masks<sup>(19)</sup>. The period of execution of the research corresponded to the peak of the pandemic and the use of masks by the study population is believed to have increased.

Masks are recommended to be used with other nonpharmacological preventive measures, such as social distancing, appropriate respiratory etiquette, and recurrent hand hygiene. Also, the use of masks by the population may convey a false sensation of security, leading the individual to devalue the set of prevention measures in face of the COVID-19 pandemic<sup>(27-28)</sup>.

This study's findings raise important points for reflection on protection measures against COVID-19 adopted by the population, which should be incorporated and implemented through permanent education. Permanent education enables professional development, mainly in the nursing team, favoring the population's and workers' demand for health services in face of the practice of using masks, considering that this is new and requires knowledge based on scientific evidence to incorporate effective and efficient actions for health education, meeting the identified demands of the population in the current epidemiological setting.

Some limitations of this study should be stated: the exclusion of digital illiterates, the impossibility of assisting the participant when a question was not understood and the impossibility of knowing the circumstances in which the questionnaire was answered.

# **CONCLUSION**

The results show that most study participants have practiced the use of masks, which was higher among women, people over 35, married, with a monthly income over seven minimum wages, and post-graduates. The use of masks for self-protection was higher than for the protection of others and its use in health environments was higher than in other environments. However, it should be considered that the use of masks by the population can only be efficient if its use is satisfactory and associated to other preventive measures against COVID-19. This leads thus to the urgency of performing studies which may point out factors that influence the practice of using masks and that enable identifying the relations of cause and effect for prevention and control of COVID-19.

#### **RESUMO**

**Objetivo:** Avaliar a prática do uso de máscaras pela população paraibana durante a pandemia da COVID-19. **Método:** Estudo transversal descritivo-analítico realizado com adultos residentes no estado da Paraíba via instrumento online, no período de abril a maio de 2020, por meio da escala da prática do uso de máscaras das Faculdades Metropolitanas Unidas da Paraíba. **Resultados:** Participaram do estudo 1.307 (100,0%) indivíduos, com predominância do sexo feminino (78,0%), faixa etária entre 35 e 45 anos (32,3%), casados (53,3%) e com pós-graduação (46,9%). O escore médio da prática do uso de máscaras foi de 18,7 (DP = 8,0; mínimo 6,00; máximo 30). A utilização de máscaras para autoproteção obteve o escore de 9,8 (DP = 3,9; mínimo 3,0; máximo 15,0), enquanto o escore de proteção do outro foi 8,9 (DP = 4,5; mínimo 3,0; máximo 15,0). Na comparação entre os escores da prática do uso de máscaras foi maior em ambientes de saúde 7,3 (DP = 3,2). **Conclusão:** A prática do uso de máscaras predominou entre mulheres, pessoas acima

de 35 anos, casadas, com renda acima de sete salários mínimos e com pós-graduação. O uso de máscaras para autoproteção foi maior do que para a proteção do outro e a utilização em ambientes de saúde foi maior do que nos demais.

#### DESCRITORES

Infecções por Coronavírus; Pandemias; Máscaras; Doenças Transmissíveis; Medidas de Segurança; Saúde Pública.

#### RESUMEN

**Objetivo:** Evaluar la práctica del uso de mascarilla por la población de Paraíba durante la pandemia de COVID-19. **Método:** Estudio descriptivo-analítico transversal realizado con adultos residentes en el estado de Paraíba vía instrumento online, en el período de abril a mayo de 2020, mediante la escala de la práctica del uso de la máscara de *Faculdades Metropolitanas Unidas da Paraíba*. **Resultados:** Participaron en el estudio un total de 1.307 (100,0%) personas, predominantemente del sexo femenino (78,0%), en el grupo de edad de 35 a 45 años (32,3%), casadas (53,3%) y con postgrado (46,9%). La puntuación media de la práctica del uso de la mascarilla fue de 18,7 (SD = 8,0; mínimo 6,00; máximo 30). El uso de mascarillas para la autoprotección obtuvo una puntuación de 9,8 (SD = 3,9; mínimo 3,0; máximo 15,0), mientras que la puntuación para la protección de los demás fue de 8,9 (SD = 4,5; mínimo 3,0; máximo 15,0). En la comparación entre las puntuaciones de la práctica del uso de la mascarilla, hubo una diferencia estadística entre el sexo, la educación, el grupo de edad y los ingresos (p ≤ 0,01). La práctica del uso de la mascarilla fue mayor en las áreas de salud: 7,3 (SD = 3,2). **Conclusión**: La práctica del uso de mascarillas para la autoprotección fue mayor que para la protección del otro y el uso en áreas de salud fue mayor que en las otras áreas.

#### DESCRIPTORES

Infecciones por Coronavirus; Pandemias; Máscaras; Enfermedades Transmisibles; Medidas de Seguridad; Salud Pública.

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#### Factors associated to the practice of using masks by the population of Paraíba during the COVID-19 pandemic

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