

## Community pharmacy users' perception of COVID-19

Rocío Mera-Gallego<sup>1,6</sup> , Laura León-Rodríguez<sup>2,6</sup> , Inés Mera-Gallego<sup>3,6</sup> , Mónica González-Blanco<sup>1,6</sup> , Adrián Acuña-Ferradanes<sup>4,6</sup> , Laura Pérez-Molina<sup>1,6</sup> , Lorena Tenorio-Salgueiro<sup>5,6</sup> , José A. Fornos-Pérez<sup>5,6</sup> , N. Floro Andrés-Rodríguez<sup>6</sup> 

1. Community Pharmacist in Vigo. 2. Community Pharmacist in Ourense. 3. Community Pharmacist in Maella (Zaragoza). 4. Community Pharmacist in Bueu (Pontevedra). 5. Community pharmacist in Cangas do Morrazo (Pontevedra). 6. Berbés Research and Teaching Group.

### KEYWORDS

Community pharmacy, SARS-CoV-2, COVID-19, perception, mood, vaccination

### ABBREVIATIONS

COVID-19: infectious disease caused by coronavirus-19  
HS: health system  
RD: Royal Decree  
SARS-CoV-2: causative agent of severe acute respiratory syndrome caused by coronavirus-2  
WHO: World Health Organization

### ABSTRACT

**Aims:** to assess the pharmacy users' perception on the impact of the COVID-19 pandemic on their health, the knowledge of their possible inclusion in risk groups and their attitude towards a potential vaccine.

**Material and methods:** Randomized, cross-sectional, observational study in pharmacies of Pontevedra and Ourense, from March to June 2020 at the beginning and after movement restrictions.

**Subjects:** users  $\geq 18$  years old who go to the participating pharmacies to purchase medicines and/or hygiene and protection material.

**Procedure:** the user completed an anonymous questionnaire, which was then placed until night in a plastic tray that was disinfected daily. The procedure will be repeated after the confinement has been terminated.

**Results of the first phase:** 706 surveys were conducted. 415 (58.8%) women, aged 48.9 years on average (SD=16.9). 100 participants (14.2%) live alone.

637 (90.2%) believe that COVID-19 is more dangerous than influenza, 189 (26.8%) don't know if they belong to any risk group.

107 (15.1%) say they feel bad or very bad about isolation. The most affected aspects are: familiar 350 (49.6%) and emotional 338 (47.9%).

In 2019/20, 172 (24.4%) were vaccinated against influenza and in 2020/21 243 (34.4%) are planning to get vaccinated. 448 (63.5%) will be vaccinated against COVID-19 when the vaccine is available, whether or not it is financed by the National Health System, and 183 (25.9%) will think about it.

**Conclusions:** respondents consider COVID-19 more dangerous than seasonal influenza. In this first phase, the impact on well-being and health does not seem to be high. A high percentage of people will be vaccinated against COVID-19.

## Introduction

On December 31, 2019, Chinese health authorities reported an outbreak of 27 cases of pneumonia, 7 of which were severe, in the city of Wuhan (Hubei Province, China) of unknown etiology, with symptoms starting on December 8, 2019. On January 7, 2020, a virus of the *Coronaviridae*, called severe acute respiratory syndrome by coronavirus-2 (SARS-CoV-2) was identified as the

causative agent. The genetic sequence was shared by the Chinese authorities on January 12 (1).

The International Health Regulations Emergency Committee declared the current outbreak of the new coronavirus transformed into a global pandemic as a Public Health Emergency of International Importance on January 30, 2020 (2).

In Spain, most authorities and institutions from all fields recommended

Received: 06/16/2020  
Accepted: 06/25/2020  
Available online: 07/22/2020

Funding: none.

Conflicts of interests: none.

Cite this article as: Mera-Gallego R, León-Rodríguez L, Mera-Gallego I, González-Blanco M, Acuña-Ferradanes A, Pérez-Molina L, Tenorio-Salgueiro L, Fornos-Pérez JA, Andrés-Rodríguez NF. Community pharmacy users' perception of COVID-19. *Farmacéuticos Comunitarios*. 2020 Jul 22;12(3):5-13. doi:10.33620/FC.2173-9218.(2020/Vol12).003.02

Correspondence: Rocío Mera-Gallego ([rmeragallego@gmail.com](mailto:rmeragallego@gmail.com)).

ISSN 1885-8619 © SEFAC (Sociedad Española de Farmacia Familiar y Comunitaria). All rights reserved.

or imposed measures to restrict or limit movement, commercial, sports or social activities or travel from risk locations until the state of alert statement on March 15, 2020 (3).

This new global pandemic called by the World Health Organization (WHO) as COVID-19 (infectious disease by coronavirus-19) is causing a huge impact in the population. On the other hand, the measures of drastic restriction of freedom of movement agreed by the Spanish Government after the state of alert statement, although these may be necessary to some extent in order to reduce the spread of the causative agent, involve significant changes in the normal development of private, family, work and social life, which can be reflected in changes in people health and mood, thus generating feelings of insecurity, fear and discouragement (4).

The situation becomes especially relevant taking into account that there is no certainty about its progress or about the possible end of such an exceptional situation, and the psychological impact in the society is very likely to produce high levels of stress, anxiety, fear and loneliness, both in the most exposed groups such as health professionals, and in the most vulnerable groups: the elderly, chronically ill patients, etc. (5-7).

We have decided to carry out this study with the aim of finding out pharmacy users' perception of the seriousness and impact that the pandemic is having on their daily life and health and in order to design possible potential future actions to support the population from community pharmacies, health education on protective measures, awareness about potential vaccination against the causative coronavirus, etc.

## Aims

### General

To assess at two different time points, at the beginning and after the situation of restriction of freedom of movement, the perception of pharmacy users of the impact of the COVID-19 pandemic on their health status and their attitude towards a potential vaccine.

### Specific

- To know their perception of the danger of SARS-CoV-2 and the

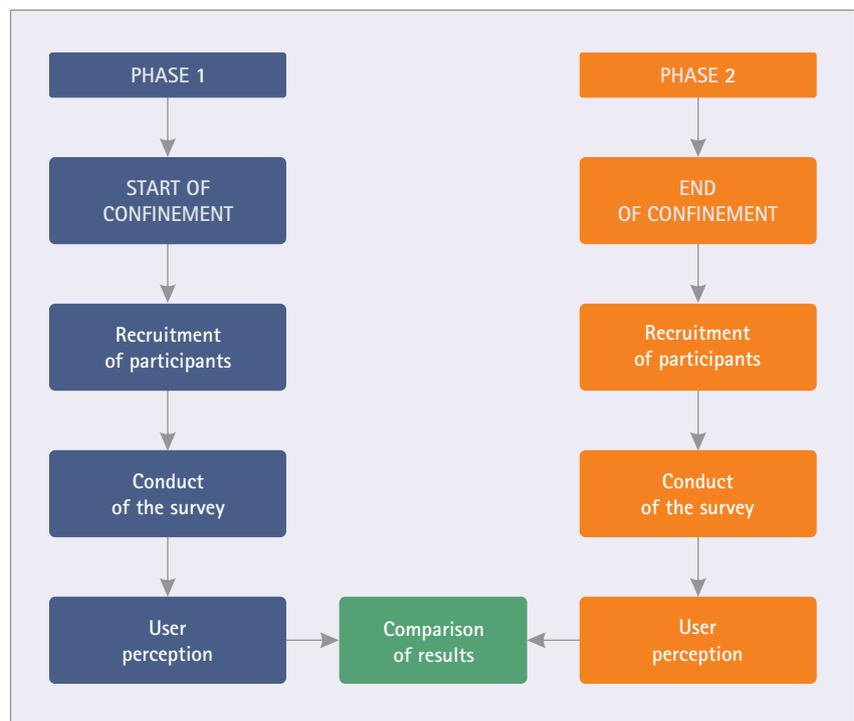


Figure 1 Study design

level of information they have about the likelihood of being part of risk groups.

- To assess the degree of impact that they perceive on their health due to the measures of home confinement and restriction of mobility.
- To find out their attitude towards the medium-term possibility of accessing a vaccine against the causative agent.
- To compare the results between both time points.

## Material and methods

### Design

A randomized, cross-sectional, observational study carried out in pharmacies in the provinces of Pontevedra and Ourense during March to June 2020 in two different time points: at the beginning and after the restriction of freedom of movement.

### Subjects

Users who attend the participating pharmacies to purchase medicines, hygiene and/or protection materials against SARS-CoV-2 were enrolled in the study. All users over 18 years old were invited to participate until the number assigned to each pharmacy was reached.

### Procedure (figure 1)

After explaining the aim of the study and obtaining their consent, the questionnaire was completed, designed *ad hoc* by the research group (figure 2). The questionnaires completed every day were placed, once filled, until the night, in a plastic tray, which was disinfected every day. The questionnaires obtained were collected when the pharmacies close, taking the same safety measures against the spread of COVID-19 established in the protocols for action in the pharmacies. After the Spanish Government removes the mobility restrictions, it is planned to repeat the same procedure described with an equivalent sample in order to check eventual changes in the perception of the participants in both situations. This work shows the results of the surveys carried out at the beginning of the confinement situation, from March 15 to 30, 2020.

### Variables

- Participant's demographic characteristics: age (years), sex (F/M), smoker (Yes/No), lives alone (Yes/No), works during confinement (Yes/No).
- Assessment of the user's perception on the SARS-CoV-2 danger and knowledge of whether or not they belong to a risk group.

		
<b>Date:</b>	<b>Pharmacy:</b>	<b>Register no.:</b>
<b>Demographic data</b> Sex:..... Age:..... Lives alone: Yes <input type="checkbox"/> No <input type="checkbox"/> Smoker: Yes <input type="checkbox"/> No <input type="checkbox"/> Working during the quarantine: Yes <input type="checkbox"/> No <input type="checkbox"/>		<b>REQUESTS</b> 1- Medicines <input type="checkbox"/> 2- Facial masks <input type="checkbox"/> 3 -Alcohol <input type="checkbox"/> 4- Hydroalcoholic gel <input type="checkbox"/> 5- Gloves <input type="checkbox"/> 6- Other <input type="checkbox"/> .....
Q1- Do you think the coronavirus is more dangerous than the influenza virus? Yes <input type="checkbox"/> No <input type="checkbox"/> The same <input type="checkbox"/> Q2- Do you know if you are part of a risk group? Yes <input type="checkbox"/> No <input type="checkbox"/> Which? 1-COPD/respiratory problems <input type="checkbox"/> 4- Cardiac <input type="checkbox"/> 2- Immunosuppression/immunosuppressive treatment <input type="checkbox"/> 5- Diabetes <input type="checkbox"/> 3-Other chronic disease <input type="checkbox"/> Which?.....		
Q3- How do you feel about isolation? 1- Very good <input type="checkbox"/> 2- Good <input type="checkbox"/> 3- Fair <input type="checkbox"/> 4- Bad <input type="checkbox"/> 5- Very bad <input type="checkbox"/> Q4- To what extent does isolation affect you? Values from 0 (nothing) to 10 (completely):..... Q5- In what aspect? In the 1-Physical <input type="checkbox"/> 2-Emotional <input type="checkbox"/> 3-Occupational <input type="checkbox"/> 4-Familiar aspect <input type="checkbox"/> Q6- Do you feel lonely because you can't be with other people?: Yes <input type="checkbox"/> No <input type="checkbox"/>		
Q7- Did you get an influenza vaccine this year? Yes <input type="checkbox"/> No <input type="checkbox"/> Q8- Will you get the influenza vaccine next year? Yes <input type="checkbox"/> No <input type="checkbox"/> Q9- Will you get a coronavirus vaccine when it is available? 1-Yes <input type="checkbox"/> 2-Only if financed by SERGAS <input type="checkbox"/> 3-I'll think about it. <input type="checkbox"/> 4-No <input type="checkbox"/> If you answered <b>NO</b> to 8 (influenza) and <b>Yes</b> to 9 (coronavirus): Q10- Why yes for coronavirus and no for influenza? .....		
<b>Comments</b>		

Figure 2 Questionnaire on the initial perception on the COVID-19 pandemic

- Degree of perceived impact on their health due to the measures of home confinement (Likert scale of 5 possibilities: very good/good/fair/bad/very bad and continuous scale from 0 to 10 points).
- Attitude towards the potential medium-term availability of a vaccine against the causative agent of COVID-19 (intention to vaccinate).

### Sample size

To achieve an accuracy of 5.0% in the estimation of a proportion using a Normal asymptotic confidence interval of 95% bilateral, assuming that the proportion is 50.0%, it was necessary to enroll 384 experimental units in the study. Foreseeing a proportion of 10% of losses, defective or incomplete questionnaires, it was estimated

necessary to enroll a minimum of 427 participants in the study.

### Presentation of results and statistical analysis

The SPSS® 22.0 for Windows® statistical program was used for data analysis. Qualitative data were expressed as percentages and quantitative as mean ± standard deviation. We used the chi-square or Fisher test to analyze qualitative variables, and the Student t test for quantitative variables with normal distribution and the U Mann-Whitney test for quantitative variables with abnormal distribution. The Wilcoxon test was used for paired data analysis. The correlation of quantitative variables was conducted with the Spearman's correlation. Statistical significance was set at p<0.05.

## Ethical considerations

The study was developed in accordance with the International Conference on Harmonization (ICH E6) Good Clinical Practice Guidelines for a study with these characteristics. All the applicable legal requirements were taken into account and, in particular, Law 41/2002 of November 14, on patient autonomy, Law 14/2007 on biomedical research, Royal Decree (RD) 1720/2007 of December 21, RD 1716/2011, RD 1090/2015, the Good Clinical Practice (CPMP/ICH/135/95) guidelines, Regulation (EU) No. 2016/679 on General Data Protection, etc.

### Confidentiality of information

No data was collected in the questionnaire that could identify the participants. The procedure ensures that the completion and collection of the questionnaires and the analysis of the data, characteristics and opinions of the participants were also carried out in a totally anonymous way.

## Results

Results are presented at the beginning of the mobility restriction situation. Six pharmacies in Pontevedra and two in Ourense participated in the study, which carried out 706 surveys.

### Sample characteristics

The characteristics of the participating users are shown in table 1. The percentages refer to the column except for the distribution of the sample by sex (row 1). 96 (94.5%) people surveyed aged 70 years old or over ask for medicines, compared to 453 (73.7%) under 70 years old, p<0.0001. 26 (31.9%) people aged 70 years old or over ask for gloves, compared to 137 (22.3%) under 70 years old, p<0.05. For the remaining items asked for at the pharmacy there are no significant differences.

### Perception of the disease

637 respondents (90.2%) believe that SARS-CoV-2 is more dangerous than the influenza virus, 29 (4.1%) don't believe it and 40 (5.7%) believe it is just as dangerous. This

**Table 1** Characteristics of the participating users

	Women n (%)	Men n (%)	Total n (%)	P-value
Sex	415 (58.8)	291 (41.2)	706 (100)	
Average age (SD) (Range)	49.5 (17.2) (18-90)	48.2 (16.4) (18-86)	48.9 (16.9) (18-90)	0.3770
Age distribution				
18-29	52 (12.5)	36 (12.4)	88 (12.5)	
30-39	88 (21.2)	65 (22.3)	153 (21.7)	
40-49	84 (20.2)	60 (20.6)	144 (20.4)	
50-59	57 (13.7)	55 (18.9)	112 (15.9)	
60-69	79 (19.0)	39 (13.4)	118 (16.7)	
70-79	35 (8.4)	27 (9.3)	62 (8.7)	
80-89	19 (4.6)	9 (3.1)	28 (4.0)	
≥ 90	1 (0.2)	0 (0.0)	1 (0.1)	
Lives alone	63 (15.2)	37 (12.7)	100 (14.2)	0.3550
Smoker	61 (14.7)	53 (18.2)	114 (16.2)	0.2116
Works during confinement	131 (31.6)	109 (37.5)	240 (34.0)	0.1038
Teleworking	17 (13.0)	8 (7.3)	25 (10.4)	
Request in the pharmacy				
Medicines	327 (78.8)	212 (72.9)	539 (76.3)	0.0674
Facial masks	172 (41.4)	121 (41.6)	293 (41.5)	0.9714
Hydroalcoholic gel	115 (27.7)	90 (30.9)	205 (29.0)	0.3540
Gloves	103 (24.8)	63 (21.6)	166 (23.5)	0.3283
Advise	28 (6.7)	17 (5.8)	45 (6.4)	0.6280
Alcohol	17 (4.1)	11 (3.8)	28 (4.0)	0.9598
Thermometer	5 (1.9)	9 (3.1)	14 (2.0)	0.0765
Vitamins	8 (1.2)	2 (0.7)	10 (1.4)	0.1698
Other	33 (8.0)	31 (10.7)	64 (9.1)	0.7123

perception is greater in women, 386 (93.0%), than in men, 251 (86.3%)  $p < 0.01$ . There is no difference based on age, living alone, being smoker, being working, or if they consider to belong to a risk group.

189 (26.8%) do not know if they belong to any risk group, with no differences between sex. 77 (84.6%) users aged 70 years old or over believe they belong to a risk group, compared to 440 (71.5%) under 70 years old who also believe so,  $p < 0.01$ . The risk groups or factors mentioned by the respondents are detailed in **table 2**.

### Mood

The average response to the question "How do you feel about isolation" was 2.8 (SD=0.8) out of 5, 2.8 (SD=0.8) in women and 2.7 (SD=0.8) in men. There was no difference based on age ( $p = 0.7177$ ).

**Table 3** shows the distribution of the answers according to the Likert scale used. There were no differences in the response rating base on the sex, living alone, being smoker, being working during the quarantine, or whether they consider to belong to risk groups. But they do based on age: 50 (55.0%) aged 70 years old or

over felt good or very good with isolation, compared to 229 (37.2%) of those under 70 years old,  $p < 0.01$ .

The average response to the question "To what extent did isolation affected you?" was 5.7 (SD=2.1) out of 10. The response was greater in women than in men: 6.0 (SD=2.1) vs 5.4 (SD=2.1)  $p < 0.0001$ . It was independent of age.

54 (7.6%) respondents, 37 (8.9%) women and 17 (5.8%) men, recognized a high level of impact (9-10 on the scale) and 26 (3.7%), 12 (2.9%) women and 14 (4.8%) men said they did not feel any impact (0-1 on the scale).

**Table 2** Risk factors for complications from COVID-19

Risk factors	Women n (%)	Men n (%)	Total n (%)	P-value
None	68 (16.4)	47 (16.2)	115 (16.3)	0.9339
Age ≥ 70 years old	55 (13.3)	36 (12.4)	91 (12.9)	0.3498
Cardiovascular pathology	67 (16.1)	60 (20.6)	127 (18.0)	0.1276
COPD/Asthma/Respiratory problems	54 (13.0)	34 (11.7)	88 (12.5)	0.5990
Diabetes mellitus	17 (4.1)	20 (6.9)	37 (5.2)	0.1032
Psychopathologies	15 (3.6)	9 (3.1)	24 (3.4)	0.7065
Immunosuppression/immunosuppressive treatment	10 (2.4)	4 (1.4)	14 (2.0)	0.3315
Cancer	5 (1.2)	4 (1.4)	9 (1.3)	0.8967
Allergies	3 (0.7)	2 (0.7)	5 (0.7)	0.9577
Other	10 (2.4)	5 (1.7)	15 (2.1)	0.4581

**Table 3** Answers to the question "How do you feel about isolation?"

	Very good	Good	Fair	Bad	Very bad
Women n (%)	5 (1.2)	152 (36.6)	194 (46.7)	47 (11.3)	17 (4.1)
Men n (%)	5 (1.7)	117 (40.2)	126 (43.3)	33 (11.3)	10 (3.4)
Total n (%)	10 (1.4)	269 (38.1)	320 (45.3)	80 (11.3)	27 (3.8)
P-value	0.8201				

292 (41.4 %) respondents, 195 (47.0%) women and 97 (33.3%) men, said that they were alone because they could not be with other people. Aged 70 years old and over, 53 (58.2%) vs 239 (39.0%),  $p < 0.001$ .

The aspects of well-being that were perceived to be impacted are detailed in **table 4**: 28 (30.1%) people aged 70 and over are less impacted in terms of physical appearance, compared to 267 (43.4%) of those under 70 years old,  $p < 0.05$ ; the same applies to the emotional aspect: 33 (36.3%) vs 305 (49.6%),  $p < 0.05$ ; work 3 (3.3%) vs 197 (32.0%)  $p < 0.0001$ . The familiar aspect 57 (62.6%) vs 290 (47.2%)  $p < 0.01$  and loneliness impacts them more: 53 (58.2%) of people aged 70 years old or over feel lonely compared to 239 (38.9%) of those under 70 years old,  $p < 0.0001$ .

**Table 4** Answers to the question "Which aspects the confinement impact you?"

	Physical	Emotional	Occupational	Familiar
Women n (%)	157 (37.8)	233 (56.1)	105 (25.3)	209 (50.4)
Men n (%)	138 (47.4)	105 (36.1)	95 (32.6)	138 (47.4)
Total n (%)	295 (41.8)	338 (47.9)	200 (28.3)	350 (49.2)
P-value	0.0110	<0.0001	0.0330	0.4420

#### Vaccination

They said they had been vaccinated against seasonal influenza in the previous campaign (2019-2020) 172 (24.4%) respondents, 109 (26.3%) women and 63 (21.6%) men. In greater proportion those aged 70 years old or over: 63 (69.2%) vs 109 (17.7%) under 70 years old,  $p < 0.0001$ . 97 (60.6%) users aged 65 years old or

over compared to 75 (14.7%) under 65 years old,  $p < 0.001$ , also reported to have been vaccinated.

In the next campaign, 243 (34.4%), 149 (35.9%) women and 94 (32.3%) men intend to be vaccinated. From those aged 70 years old and over, 71 (78.0%) vs 172 (28.0%),  $p < 0.001$ , had greater intention. The same was observed for those aged 65 years old

**Table 5** Answers to the question "Will you be vaccinated against COVID-19 when a vaccine is available?"

	Yes	Only if financed by the HS	I'll think about it	No
Women n (%)	174 (41.9)	98 (23.6)	109 (26.3)	34 (8.2)
Men n (%)	106 (36.4)	70 (24.1)	74 (25.4)	41 (14.1)
Total n (%)	280 (39.7)	168 (23.8)	183 (25.9)	75 (10.6)
P-value	0.0731			

and over, 114 (71.3%) vs 129 (23.6%),  $p < 0.0001$ .

The answers to the question "Will you be vaccinated against COVID-19 when a vaccine is available?" are shown in [table 5](#).

Of the 463 (60.9%) participants who do not plan to get the seasonal influenza vaccine in the next campaign, 132 (28.5%) will be vaccinated against COVID-19 when a vaccine is available, 103 (22.2%) would do so only if the vaccine is financed by the health system (HS), 159 (34.3%) will think about it and 69 (14.9%) will neither be vaccinated against the new coronavirus. The reasons why the 235 (33.3% of the total) respondents in the first two groups consider vaccination against COVID-19 to be more important are because: "it is more dangerous", 124 (52.8%); "for not infecting relatives or other persons", 53 (22.6%); "if recommended by the WHO, health authorities or their doctor", 12 (5.1%); "if it would be mandatory", 11 (4.7%); for other reason, 35 (14.9%). No differences based on age.

Among the persons at risk, it is observed that this does not influence the decision to be vaccinated against SARS-CoV-2. 41.1% of those who consider it more dangerous say that they will be vaccinated. 52.5% of those who feel very bad think about being vaccinated, compared to 30.0% of those who feel very good in confinement,  $p < 0.001$ . The decision to be vaccinated increases with the degree of the impact of being isolated: 0: 21.1%, 10: 65.6%.

## Discussion

### Study limitations

One of the possible study limitations is the fact that the type of people surveyed does not correspond to

regular pharmacy users, since this survey was conducted during the state of alert where elderly and/or at-risk people were asked to stay at home. This may be the reason for the low age average of the participating users (under 50 years old), which is lower than that in other studies carried out within the same scope (8,9).

Since this is a study conducted in a new situation, another possible limitation could be the fact that there are few possibilities for comparison with other studies that analyze the perceptions experienced at this time. In addition, depending on the phase in which the surveyed subject is, he/she or a close relative or someone he/she knows have suffered from the disease may change his/her opinion due to fear and the existing uncertainty. In other words, the mental health of the surveyed person may influence his/her perception of the disease (10).

### Sample characteristics

The subjects surveyed are mainly women (58.8%) with an average age of 48.9 years old, lower than the people who usually goes to pharmacies (8,9). However, 42.1% of the people surveyed were between 30 and 49 years old; this age range matches with that of the children of elderly people who are in isolation, an age without major pathologies and therefore less risk of suffering complications from SARS-CoV-2 infection.

As in other studies, the sample is mainly composed of women (8,9). They are the ones who are responsible for the family's health, go to the pharmacy or are concerned about having more protection against the disease (facial masks, gels, etc.). In addition, although it is not statistically significant, probably due to the simple size, their life expectancy is

longer (11) and, therefore, the proportion of those who live alone is greater than that of men (12). As we have observed in the study, 15.2% of women compared to 12.7% of men who have gone to the pharmacy. However, the population studied is not a representative sample of society, in which, according to the data of the National Statistics Institute, 2019, 72.3% of people living alone are women. In our study, they represent 8.9% of the total and men 5.2% of the total users who have gone to pharmacies.

On the other hand, at the time of the survey, among the most requested products during the confinement are medicines (76.3%), with this being greater in people over 70 years old (94.5%), since a greater number of medicines is used by the population in this age range. Among all the other products requested, there is no difference between sexes, but the difference in age in the request for gloves particularly stands out, where there is a higher percentage in the population of 70 years old or over. Probably because of the false perception of additional security they provide.

### Perception of the disease

Understanding the perception of the disease as the cognitive representation that directly influences the emotional response of the patient to his/her disease and his/her behavior in coping with it (13), this work tried to study it regarding different aspects. In all the sections analyzed, we have tried to collect the feelings and emotions that a disease like COVID-19 generates in the population studied and that shape their perception of it.

It was curious to find among the answers that, despite being a study carried out during the first weeks of the alert situation, approximately less than 10% of the population that goes to the pharmacy believes that COVID-19 is as dangerous or less dangerous than influenza, which can be explained by the area where it is carried out, the health space where they go to look for protection and health items. This perception of relative danger is high even at this initial phase, despite the fact that the incidence of COVID-19 was lower in our community, which could indicate the high degree of uncertainty about its future evolution.

It should be noted that among the variables associated with this question such as age, being a smoker, being working or living alone, or belonging to a risk group do not result in significant differences in the answers. The only difference was found in sex, with women (93.0%), considering it to be more serious.

With regard to the knowledge of possibly being part of some risk group regarding the disease (14,15) it stands out that among those over 70 years old, 84.6% of the patients consider themselves to be part of a risk group. From this we conclude that 15.4% of those surveyed over 70 years old are unaware that age *per se* is a risk factor for the disease, as confirmed by the fact that more than 80% of the deceased were people aged 70 years old or over (16). On the other hand, almost 30% of our sample didn't know if they belong to any risk group, which shows us the importance of carrying out campaigns on the disease and its prevention from the community pharmacies, since it was the only health establishment where the population could freely go during this pandemic.

## Mood

Mood was determined using a numerical scale, being the most frequent answer "fair" (score of 2.8 of a maximum of 5, SD=0.8), without significant differences being found except regarding age. 55% of the people over 70 years old said they felt good or very good with isolation, compared to 37.2% of those under 70 years old. This may be due to the fact that confinement caused a large part of the working population to stop working, modifying their daily routine, while people over 70 years old, as most of them are already retired, were not so impacted by this situation.

They were also asked about which aspects the confinement impacted. In our work, 41.4% mentioned to have felt alone, mainly women and people over 70 years old. The World Health Organization (WHO), in a report dated March 26, 2020, considered loneliness to be one of the problems that would arise with confinement (17) and several studies recognize it as a main predictive factor for derived psychopathologies: depression, anxiety and post-traumatic stress (18,19). In the

study conducted by González-Sanguino et al. (19), carried out in Spain through social media, 45% of respondents had felt the lack of company sometimes or often in the week after March 15, also with women reporting a greatest feeling of unwanted loneliness, which notably coincides with our result. On the other hand, there is no match in the age group, since the greatest perception of loneliness in this study (18) is in the 18 to 39 year old group, probably due to the methodological bias, recognized by the authors, of this age group being the one that participates most in the study because it is the one that uses social media the most, and the participation of the older ones in the survey the least.

Therefore, it is possible that by trying to protect the elderly from contagion and the health systems from the subsequent overload through social isolation, serious physical and psychological problems can arise from feelings of unwanted loneliness.

With regard to the variables analyzed, it should be noted that for women, it was the emotional and family components that were most affected in this initial phase of confinement. In contrast, men were more affected in the other of the studied aspects; physical and occupational.

## Vaccination

The influenza vaccination campaign is carried out every year between October and December, with the main purpose of minimizing the impact of the infection by this virus in the number of infected people and the severity of its complications. In Galicia, the coverage rate is increasing, but very slowly, reaching in 2019/20 only 60.4% of the Galician population over 65 years old (20).

In this study, it was observed that only 24.4% of the respondents stated to have had been vaccinated during the 2019/20 campaign. This small percentage may be due to the fact that influenza vaccination is directed and financed by the health system only for risk groups such as people over 65 years old, people of any age living in closed institutions, pregnant women or people with risk pathologies (20). Therefore, given the relatively low average age of the participants in our study, a higher percentage could not be expected.

However, the intention to receive the influenza vaccine in the next campaign increases to 34.4% of the total number of respondents. This increase can be associated with the situation of stress and fear generated by the lack of effective treatment or vaccination against COVID-19 (10). Another possible reason for this increase may be due to the desire of preventing other types of viral infections with a seasonal incidence in winter in view of potential outbreaks of COVID-19 (14).

In people over 65 years old, the intention to be vaccinated in the next campaign achieves 71.3%. These figures are close to the rate recommended by the International Council of the National Health System for the 2020-2021 influenza campaign. They expect to achieve rates above 75% of vaccination in people over 65 years old, 60% in pregnant women and in people that are part of risk groups (21). It would be a good new if this increase in vaccination coverage is actually achieved.

Despite the fact that most of the sample thinks that COVID-19 is more dangerous than influenza (90.2%), only 63.5% (23.8% of which would be conditioned to the health system financing) shows intention to be vaccinated, with women being more prone to this. These data do not match with those from a French study showing an acceptance of the vaccine of 77.4%, with this percentage being higher in men (22). This low proportion in vaccination intention is not surprising, since in the last decade Europe has the highest rates of negative responses in the perception of the importance, safety and efficacy of vaccines (23). It is also noteworthy that the percentage of intention to vaccinate against COVID-19 is not higher, as it has been proven that enthusiasm, or at least a positive attitude towards a vaccine, is usually higher during and after a pandemic situation (24). Probably because the study was conducted at the beginning of the state of alert, the perception of its usefulness was not yet full. In any case, with this proportion of vaccination it would be sufficient to achieve group immunity with some degree of success, in which the rate of necessary immunity is established as between 55 and 82% (25).

On the other hand, at the opposite extreme, skepticism or indecision about vaccination in our study is 10.6% of the sample, compared to 26% of the French sample (22) and 9% in the United States (26). A possible reason, both in this study and in the one carried out in the United States, could be the existence in both of the “I’ll think about it” answer option, which was not present in the French study, the results of which correspond to 25.9% and 15% respectively of the answers (26).

This skepticism may be the first and main barrier to the successful implementation of a future SARS-CoV-2 vaccination campaign when the vaccine becomes available. Therefore, pharmacists and community pharmacies will have a key role in it, participating in health education about the disease and the vaccine, as they have already done for other infections in terms of informing the patients about the pathology and encouraging their acceptance of the vaccination (23,27). However, above all, through a more active involvement, which as pharmacists and patients we claim (23), collaborating effectively in the administration process, which has been shown to be highly effective in achieving high rates of immunization (28).

## Conclusions

Respondents consider COVID-19 more dangerous than seasonal influenza, but more than one-quarter do not know if they belong to any risk group. Women show a higher perception of the danger.

In this first phase the impact on well-being and health does not seem to be high at the moment. People over 70 years old suffer less impact on their mood, although they are more impacted by loneliness, and women to a greater extent than men.

Increases by more than 10% intention to get an influenza vaccine, exceeding 70% in those over 65 years old. A considerable percentage, but less than expected given the situation, of approximately 65%, will be vaccinated against COVID-19 when the vaccine is available.

## Acknowledgments

To all pharmacy users who kindly agreed to answer to our survey and to

the community pharmacists working in the pharmacies that collaborated in the study.

## Bibliographic references

1. Ministerio de Sanidad. Enfermedad por nuevo coronavirus, COVID-19. Información inicial de la Alerta en China. 31/1/2020. [Accessed 12/6/2020]. [https://www.msbs.gob.es/en/profesionales/saludPublica/ccayes/alertasActual/nCov-China/documentos/Informacion\\_inicial\\_alerta.pdf](https://www.msbs.gob.es/en/profesionales/saludPublica/ccayes/alertasActual/nCov-China/documentos/Informacion_inicial_alerta.pdf)
2. World Health Organization. Statement on the second meeting of the International Health Regulations (2005) Emergency Committee regarding the outbreak of novel coronavirus (2019-nCoV). [Accessed 12/6/2020]. Available at: [https://www.who.int/news-room/detail/30-01-2020-statement-on-the-second-meeting-of-the-international-health-regulations-\(2005\)-emergency-committee-regarding-the-outbreak-of-novel-coronavirus-\(2019-ncov\)](https://www.who.int/news-room/detail/30-01-2020-statement-on-the-second-meeting-of-the-international-health-regulations-(2005)-emergency-committee-regarding-the-outbreak-of-novel-coronavirus-(2019-ncov))
3. Gobierno de España. Real Decreto 463/2020, de 14 de marzo, por el que se declara el estado de alarma para la gestión de la situación de crisis sanitaria ocasionada por el COVID-19. «BOE» núm. 67, de 14/03/2020. <https://www.boe.es/eli/es/rd/2020/03/14/463/con>
4. EAE Bussines School. La crisis del coronavirus, la información y los estados anímicos. 1/4/2020. [Accessed 12/6/2020]. Available at: <https://www.eae.es/actualidad/noticias/la-crisis-del-coronavirus-la-informacion-y-los-estados-animicos>
5. Ibáñez-Vizoso JE, Alberdi-Páramo I, Díaz-Marsá M, Perspectivas Internacionales en Salud Mental ante la pandemia por el nuevo coronavirus SARS-CoV-2. Revista de psiquiatría y salud mental (Barcelona). 2020. doi:10.1016/j.rpsm.2020.04.002
6. Cash R, Patel V. Has COVID-19 subverted global health? Lancet. 2020; 395:1687-1688. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7200122/>
7. Ricci Cabello I, Meneses Echávez JF, Serrano-Ripoll MJ, Fraile-Navarro D, Fiol de Roque MA, Pastor Moreno G, et al. Impact of viral epidemic outbreaks on mental health of healthcare workers: a rapid systematic review. medRxiv preprint 2020.04.02.20048892. doi:10.1101/2020.04.02.20048892
8. Fornos-Pérez JA, Andrés-Rodríguez NF, Andrés-Iglesias JC, Mera-Gallego R, Mera-Gallego I, Penín-Álvarez O, et al. Valoración del cumplimiento de los tratamientos hipoglucemiantes y antihipertensivos en Galicia (“CumpleGa”). Farmacéuticos Comunitarios 2017; 9(4):7-15. doi:10.5672/FC.2173-9218.(2017/Vol9).004.02
9. Piñeiro-Abad A, Mera-Gallego R, Andrés-Iglesias JC, Fornos-Pérez JA, Vérez-Cotelo N, Andrés-Rodríguez NF. Análisis del rechazo de dispensaciones en receta electrónica y la relación con el incumplimiento. Pharm Care Esp. 2018; 20(4):247-268. <https://www.pharmacareesp.com/index.php/PharmaCARE/article/view/441>
10. Lozano-Vargas A. Impacto de la epidemia del Coronavirus (Covid-19) en la salud mental del persona de salud y en la población general de China. Rev Neuropsiquiatr. 2020; 83 (1):51-56. doi:10.20453/rmp.v83i1.3687
11. Instituto Nacional de Estadística (INE). Salud. 4.- Esperanza de vida. Updated 5/6/2020. [Accessed 25/6/2020]. Available at: [https://www.ine.es/ss/Satellite?L=es\\_ES&c=INESeccion\\_C&cid=1259926380048&tp=1254735110672&pagename=ProductosYServicios/PYSLayout](https://www.ine.es/ss/Satellite?L=es_ES&c=INESeccion_C&cid=1259926380048&tp=1254735110672&pagename=ProductosYServicios/PYSLayout)
12. Instituto Nacional de Estadística (INE). Encuesta continua de hogares. Personas que viven solas. 2019. [Accessed 29/5/2020]. Available at: [https://www.ine.es/prensa/ech\\_2019.pdf](https://www.ine.es/prensa/ech_2019.pdf)
13. Quiceno J, Vinaccia S. Percepción de enfermedad: una aproximación a partir del Illness Perception Questionnaire. Psicología desde el Caribe 2010; 26:56-83. <https://www.redalyc.org/articulo.oa?id=21315106004>
14. Ministerio de Sanidad. Información Científica-Técnica. Enfermedad por coronavirus, COVID-19. Actualizado 2/6/2020. [Accessed 13/6/2020]. Available at: <https://www.msbs.gob.es/en/profesionales/saludPublica/ccayes/alertasActual/nCov-China/documentos/ITCoronavirus.pdf>
15. Ministerio de Sanidad. Procedimiento de actuación para los servicios de prevención de riesgos laborales frente a la exposición al SARS-CoV-2. 8/6/2020. [Accessed 13/6/2020]. Available at: [https://www.msbs.gob.es/en/profesionales/saludPublica/ccayes/alertasActual/nCov-China/documentos/PrevencionRRL\\_COVID-19.pdf](https://www.msbs.gob.es/en/profesionales/saludPublica/ccayes/alertasActual/nCov-China/documentos/PrevencionRRL_COVID-19.pdf)
16. Ministerio de Sanidad. Datos de fallecidos por COVID-19 por grupos de población. [Accessed 10/6/2020]. Available at: <https://www.msbs.gob.es/profesionales/saludPublica/ccayes/alertasActual/nCov-China/situacion-Actual.htm>
17. OMS. Impacto psicológico de la COVID-19. [Accessed 10/6/2020]. Available at: <https://www.dw.com/es/oms-el-impacto-psicol%C3%B3gico-del-covid-19-en-la-sociedad-no-debe-ser-ignorado/a-52925095>
18. Brooks SK, Webster RK, Smith LE, Woodland L, Wessely S, Greenberg N, et al. The psychological impact of quarantine and how to reduce it: rapid review of the evidence. Lancet 2020; 395:912-920. 10.1016/S0140-6736(20)30460-8. [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)30460-8/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)30460-8/fulltext)

19. González-Sanguino C, Ausín B, Castellanos MÁ, Saiz J, López-Gómez A, Ugidos C, et al. Mental health consequences during the initial stage of the 2020 coronavirus pandemic (COVID-19) in Spain. *Brain, Behavior, and Immunity*. 2020. doi:10.1016/j.bbi.2020.05.040
20. Xunta de Galicia. Dirección Xeral de Saúde Pública. Campaña de vacunación antigripal 2019. [Accessed 9/6/2020]. Available at: <https://www.sergas.es/Saude-publica/Campa%C3%B1a-actual?idioma=es>
21. Ministerio de Sanidad. Vacunación frente a la gripe. Grupos de población a vacunar. Temporada 2020-2021 [Accessed 13/6/2020]. Available at: [https://www.mscbs.gob.es/profesionales/saludPublica/prevPromocion/vacunaciones/docs/Recomendaciones\\_vacunacion\\_gripe.pdf](https://www.mscbs.gob.es/profesionales/saludPublica/prevPromocion/vacunaciones/docs/Recomendaciones_vacunacion_gripe.pdf)
22. Detoc M, Bruel S, Frappe P, Botelho-Nevers E, Gagneux-Brunon A. Intention to participate in a COVID-19 vaccine clinical trial and to get vaccinated against COVID-19 in France during the pandemic. medRxiv 2020.04.23. 20076513; doi:10.1101/2020.04.23.20076513
23. Andrés-Rodríguez NF, Mera-Gallego R, Piñeiro-Abad A, Acuña-Ferradanes A, Mera-Gallego I, García-Rodríguez P, et al. Vacunación antigripal en la farmacia comunitaria: opinión de pacientes y farmacéuticos. *Farmacéuticos Comunitarios*. 2018 Sep 28; 10(3):15-24. doi:10.5672/FC.2173-9218.(2018/Vol 10).003.03
24. Chen RT, Orenstein WA. Epidemiologic methods in immunization programs. *Epidemiol Rev*. 1996;18(2):99-117. doi:10.1093/oxfordjournals.epirev.a017931
25. Schaffer De Roo S, Pudalov NJ, Fu LY. Planning for a COVID-19 Vaccination Program. *JAMA*. 2020. <https://jamanetwork.com/journals/jama/fullarticle/2766370>
26. NBC4. Morning Consult. National Tracking Poll #200395 March 24-25, 2020. Encuesta estratificada sobre vacunación frente a COVID-19. [Accessed 6/6/2020]. Available at: [https://www.nbcwashington.com/wp-content/uploads/2019/09/LX\\_COVID\\_Vaccine\\_Poll\\_crosstabs.pdf](https://www.nbcwashington.com/wp-content/uploads/2019/09/LX_COVID_Vaccine_Poll_crosstabs.pdf)
17. Aparicio C, Climent MT, Baixauli VJ, Rodrigo MJ, Albanell F, Recio MC. Intervención del farmacéutico comunitario en la vacunación de adultos con patología respiratoria. *Farmacéuticos Comunitarios*. 2018; 10(3):5-14. doi:10.5672/FC.2173-9218.(2018/Vol 10).003.02
28. Isenor JE, Alia TA, Killen JL, Billard BA, Halperin BA, Slayter KL, et al. Impact of pharmacists as immunizers on influenza vaccination coverage in Nova Scotia, Canada. *Human Vaccines & Immunotherapeutics* 2016; 12(5):1225-1228. doi:10.1080/21645515.2015.1127490