Perception of quality of life after discharge in mild COVID-19 patients

ABSTRACT. Objectives: To identify the perception of the quality of life after discharge in patients diagnosed with mild COVID-19 in the province of Huaral. Methods: The study is of non-experimental design, cross-sectional, correlational level. Data collection was carried out by video call, and the instrument used was the EUROQOL-5D-5L. Population: 506 COVID-19 discharge patients, the sample corresponded to 345, with a 3% error and 95% Confidence Interval. Results: Pain and discomfort is the most frequent limitation (43%) perceived by patients with mild COVID-19 and only 12% perceive an optimal state of health.. Conclusions: It is concluded that a good percentage of high patients recovered from COVID-19 evaluated between week 2 and 22 onset of symptoms, received some limitations regarding their health status and almost most perceived a deterioration in health status.

Keywords: Quality of life post COVID-19, Self-limitation, Self-perception of health status.
INTRODUCTION

This all begins when, in December 2019, an outbreak of severe pneumonia occurs in the city of Wuhan, Hubei Province, China.  

In Peru, on March 6, 2020, the President of the Republic announced the first confirmed case of Coronavirus; corresponding to a 25-year-old male patient with Mild Acute Respiratory Infection with a history of travel to different European countries. On March 11, 2020, the World Health Organization (WHO) declared the Pandemic by COVID-19, due to the high number of cases in 112 countries outside China. This is the first pandemic caused by a coronavirus.  

By Supreme Decree No. 008-2020-MINSA, published in the official journal El Peruano on March 11, 2020, a national health emergency was declared and measures were taken for the prevention and control of the spread of COVID-19. On March 19, the case of coronavirus infection was confirmed in the province of Huaral. From that date on, this province became one of the hardest hit by the pandemic in the Lima region; furthermore, it was observed that as time went by, the number of recovered cases increased. However, in the daily coexistence, it was appreciated that the recovered people continued to present physical and mental health problems, those that are not attended by the sanitary system due to the great demand of acute infections caused by COVID-19. In this context, the research work is developed.

The progression of COVID-19 is variable, ranging from asymptomatic infection to severe pneumonia requiring assisted ventilation, and is often fatal. The asymptomatic and mild forms are more common in children, adolescents and young adults, while severe forms are seen more in those over 65 and in people with chronic conditions such as diabetes, chronic obstructive pulmonary disease (COPD), cardiovascular or cerebrovascular disease, and hypertension, among others.

The Ministry of Health (MINSA) classifies COVID-19 into Mild, Moderate and Severe according to severity of presentation of signs and symptoms, so that mild cases do not require hospitalization and their clinical management is ambulatory. The average time from the onset of symptoms to recovery is 2 weeks when the illness has been mild and 3-6 weeks when it has been severe or critical. The time from the onset of symptoms to the onset of severe symptoms such as hypoxemia is 1 week, and 2-8 weeks until death.

In a study conducted by Carfi A, et al, patients were evaluated on average 60.3 (SD 13.6) days after the first symptom of COVID-19. Only 18 (12.6%) patients were asymptomatic at the time of evaluation; 32% of participants had one or two symptoms and 55% had three or more. A worsening of the life quality was observed in 44.1% of the patients. The most frequent persistent symptoms were fatigue (53.1%), dyspnea (43.4%), joint pain (27.3%) and chest pain (21.7%) and concludes that in patients recovered from COVID-19, 87.4% reported the persistence of at least one symptom in the follow-up after discharge. It is necessary to continue monitoring and long term effects in this group of patients.

Hayes G. identified in a retrospective study of 214 patients hospitalized in Wuhan - China that more than 36% of cases develop neurological symptoms or secondary brain events, being mild headache (8%), fatigue, dizziness and myalgia the most common non-specific and systemic disorders.

Due to the neurotropism, the coronavirus can involve the neurons and glial cells, which can cause symptoms such as headaches, vertigo, ataxia, due to the involvement of the Central Nervous System in 24%, 11,12

Due to the beginning of the pandemic, the health services have had a high impact, mainly the Epidemiology, Emergency and Intensive Care services, so the managers have concentrated their best efforts on these, leaving the other health services in the second place. However, as cases have increased, they have required other professionals, and in the declining phase of the pandemic, it is necessary to address those patients discharged, but who are exhibiting signs and symptoms in the post-acute phase. Furthermore, the experiences related to closely facing death and illness, added to the subsequent disability and post-infection sequelae, create a scenario of fear, uncertainty and uneasiness in the family and the patient.

Adverse psychological impacts were documented in this population, observing that those patients who survived a critical state until after two years may present post-traumatic stress disorder (PTSD) in 22% to 24%, depression in 26% to 33% and anxiety in 38% to 44%, affecting life quality and functionality, being premorbid psychiatric diseases as a risk factor for these conditions.

The U.S. CDC conducted a study that involved telephone interviews with 274 people with symptoms of COVID-19, of whom 175 (65%) said they were able to return to their previous health condition within an average of 7 days from the date of the test; the health of the other 99 people (35%) was not the same as before the infection. This included 26% of young people aged 18-34, 32% of those aged 35-49, and 47% of those aged 50 and over. Moreover, among 18- to 34-year-olds who did not have any chronic diseases, 19% said they could not return to their previous health condition. The authors conclude that COVID-19 can lead to prolonged illness, even among young adults and people with mild outpatient conditions, so public health messages should be directed to everyone, especially young people. About 10% of patients who have tested positive for SARS-CoV-2 remain ill beyond three weeks, and a smaller proportion for months. In the United States, only 65% of people were found to have returned to their previous health level 14 to 21 days after the test.

Arbillaga A, et al. state that the duration of the mild episode leads one to believe that these symptoms do not imply seque-
lae a posteriori requiring a specific intervention by the respiratory physiotherapist.

Wang C. point out that psychological problems that have already been identified in the context of COVID-19 such as anxiety, depression and lack of motivation will also be taken into account as they can affect patients’ behavior. It is evident that negative emotions (anxiety, depression and indignation) and a decrease in positive emotions (happiness and satisfaction) become evident in situations like these, generating erratic behavior among people, which is a common phenomenon, since there is much speculation about the mode and speed of transmission of the disease, currently, without a definitive treatment.

A Chinese study of 1210 people in the early phase of the pandemic found that 13.8% had mild depressive symptoms, 12.2% had moderate symptoms, and 4.3% had severe symptoms. Higher levels of depression were seen in males, uneducated people, people with physical complaints (chills, myalgia, dizziness, coryza, and sore throat), and people who did not trust the ability of doctors to diagnose a COVID-19 infection. Another Chinese study of 52,730 people during the initial phase of the pandemic found that 35% of participants experienced psychological stress, with higher levels in women. In addition, people between the ages of 18 and 30, and those over 60, had higher levels of psychological stress. The higher scores in the 18-30 age groups may be due to their use of social networks as a primary means of information, which can easily trigger stress. On the other hand, given that the highest mortality rate from COVID-19 occurs in older adults, it is not surprising that they are more likely to suffer from stress.

Therefore, this study sought to identify the perception of the quality of life of patients after discharge from COVID-19 in the province of Huaral, in order to have enough information to make effective interventions to patients after medical discharge.

**METHOD**

A quantitative approach study, non-experimental design, cross-sectional, descriptive level was carried out. The population was 506 patients considered “Confirmed Cases” after medical discharge, by symptomatic PCR (according to case definition specified in the corresponding epidemiological alerts), registered in the NOTI-WEB database of the Health Network III - Huaral and Chancay, from March 31st, 2020 to August 10th of the same year. The sample corresponded to 345 patients, with a 3% error and 95% confidence interval. The following steps were considered for selection:

1. Export of the NOTI-WEB Health Network III database - Huaral and Chancay, that is, a total of 8014 patients (discarded, suspected and confirmed).
2. Later, the confirmed cases were filtered, obtaining 3736 people.
3. Of the 3736 confirmed, the following people were selected as being medically discharged, alive and meeting the case definition (signs and symptoms of COVID-19 according to the epidemiological alert) and living in the province.
4. Then the cases diagnosed with Molecular Test (PCR) will be selected.
5. All moderate and severe cases were subsequently eliminated.
6. The simple random sample was then calculated.

The implementation of the study lasted fourteen days, and the instruments were evaluated and applied by means of calls to those patients recovered between week 3 and 22 of the onset of symptoms. Regarding the techniques and instruments for collecting information, the Health Questionnaire EQ-5D-5L EVA (2009) has been used, which was validated by Badia X. et al (1999) and meets the properties of cultural adaptation, validity, reliability and sensitivity to change. Regarding its psychometric properties, the test - retest confidence ranges between 0.86 and 0.90 (Van Agt et al, 2001). The instrument consists of two parts:
1. Assessment of self-perceived health limitations (Mobility, self-care, activities of daily living, pain or discomfort, and anxiety or depression).
2. Evaluation of the visual analogue scale (thermometer with values between 0 as worst health condition, to 100 best possible health condition).

For the analysis of the result, the descriptive statistics were used and the computer system used was the Excel 2016.
RESULTS

The most important findings of the study, regarding self-perception of limitations, reveal that out of a total of 345 people evaluated after discharge from Mild COVID-19, 5% (17) of the cases presented some problem in walking after discharge. On the other hand, 2% (7) of the total have difficulties in personal care. It is also noted that 22% (76) report problems in carrying out their daily activities. Likewise, it has been identified that 43% (149) refer to persistence of pain and discomfort of the body. Pain and discomfort is the most important health condition that people report having after discharge, occupying the highest percentage. In the case of Anxiety and Depression, the results show that 9% (35) are anxious and depressed.

<table>
<thead>
<tr>
<th>CONDITION</th>
<th>FACTORS</th>
<th>TOTAL</th>
<th>PERCENTAGE (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MOBILITY</strong></td>
<td>I have no problem walking</td>
<td>328</td>
<td>95</td>
</tr>
<tr>
<td></td>
<td>I have some problems walking</td>
<td>15</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>I have to be in bed</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL</strong></td>
<td>345</td>
<td>100</td>
</tr>
<tr>
<td><strong>PERSONAL CARE</strong></td>
<td>I have no problems with personal care</td>
<td>338</td>
<td>98</td>
</tr>
<tr>
<td></td>
<td>I have some problems getting up or getting</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>dressed</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>I am unable to get up or get dressed</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL</strong></td>
<td>345</td>
<td>100</td>
</tr>
<tr>
<td><strong>DAILY ACTIVITIES</strong></td>
<td>I have no problems in carrying out my daily</td>
<td>269</td>
<td>78</td>
</tr>
<tr>
<td></td>
<td>activities</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>I have problems performing my daily activities</td>
<td>74</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>I am unable to perform my daily activities</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL</strong></td>
<td>345</td>
<td>100</td>
</tr>
<tr>
<td><strong>PAIN/DISCOMFORT</strong></td>
<td>I have no pain or discomfort</td>
<td>196</td>
<td>57</td>
</tr>
<tr>
<td></td>
<td>I have moderate pain and discomfort</td>
<td>142</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td>I have a lot of pain and discomfort</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL</strong></td>
<td>345</td>
<td>100</td>
</tr>
<tr>
<td><strong>ANXIETY/DEPRESSION</strong></td>
<td>I am not anxious nor depressed</td>
<td>310</td>
<td>90</td>
</tr>
<tr>
<td></td>
<td>I am moderately anxious or depressed</td>
<td>29</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>I am very anxious or depressed</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL</strong></td>
<td>345</td>
<td>100</td>
</tr>
</tbody>
</table>

The study’s findings regarding the self-perception of the health condition of the 345 people affected by COVID-19 after discharge reveal the following: 12% (42) of patients report perceiving an optimal health condition or having fully recovered, while 52% of them state that they perceive 90% recovery. For their part, 76 (22%) patients state that they have recovered to 80% and 47 patients (14.1%) perceive that they have recovered to 70% or less.
To help people describe how good or bad their health is, we have drawn a thermometer-like scale on which we mark the best health condition with a 100 and the worst health condition with a 0 (considering the health condition they had before COVID-19 infection).

We would like you to indicate on this scale, according to your opinion, how good or bad your health condition is today. Please draw a line from the box that says “Your health condition today” to the point on the thermometer that indicates how good or bad your health condition is today, according to your opinion.

Source: EUROQOL-5D Life Quality Questionnaire.
DISCUSSION

46% (158) of discharge patients recovered from COVID-19 evaluated between the third and twenty-second weeks perceived some limitation regarding their health condition (Mobility, Personal Care, Daily Activities, Pain/Discomfort, Anxiety/Depression), with Pain/Discomfort being the most important limitation in 43% of those evaluated. In this regard, the U.S. CDC conducted a study which consisted of telephone interviews with 274 people with symptoms of COVID-19, 175 (65%) of them said they were able to return to their previous health condition within an average of 7 days from the date of the test; the health of the other 99 people (35%) was not the same as before the infection. In addition, it was found that only 65% of the people had returned to their previous level of health 14 to 21 days after the test. 18, 19

88% of the discharged patients recovered between the third and the twenty-second week evaluated present a deterioration or worsening of the life quality, 52% of them refer to have recovered to 90%, 22% in 80%, while 14% found their life quality deterioration below 70%. These data largely exceed what was proposed in a study by Carfi A, et al. (8) who observed a worsening of the life quality in 44% of the patients. Finally, it is proposed that it is necessary to continue monitoring the long-term effects in this group of patients.

It is concluded that a good percentage of the patients of high recovered of COVID-19 evaluated between the week 2 and 22 of onset of symptoms, perceived some limitation referring to their state of health and almost the majority perceived a deterioration of the health condition.

Conflicts of Interest: The authors state that there are no conflicts of interest.
BIBLIOGRAPHIC REFERENCES


