

The impact of hand washing and correlation with anxiety during the COVID-19 pandemic period

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ABSTRACT

Hand hygiene is one of the main measures concerning preventing the transmission of various diseases, among them, COVID-19 stands out here. It is known that its transmission occurs when there is contact of the virus with the mouth, nose, or eyes, through

unwashed hands. It is noted, therefore, that keeping hands clean prevents infection and disease transmission. Considering this information, the present study discusses the impact of hand washing correlating with anxiety during the SARS-COV-2 (COVID-19) pandemic. Of understanding the essential social links that will undoubtedly contribute not only to professionals in the field but also to academics, teachers, and the community in general. As for the methodological criteria, the research was developed by the exploratory method- descriptive, the choice of method was fundamental in terms of data collection, as well as in the treatment of the information obtained, that is, the analysis of the population, and the investigated criteria, a moment in which the research is directed to the examination of the data of analytical and descriptive way.

Keywords: SARS-COV-2 (COVID-19), Handwashing, Psychiatric Symptoms.

1 INTRODUCTION

In the context of coronavirus infection, hand hygiene plays an essential role, being an effective measure concerning preventing transmission of the virus. However, although it is a simple and common habit in everyday life, it requires constancy and adequate technique, in addition to some precautions, so that it can be effective in preventing the disease (Rundle et al 2020).

COVID-19 is a viral infection of the airways, which affects epithelial/alveolar and endothelial cells, resulting in the desquamation of pneumocytes, the presence of hyaline membranes, interstitial formation, and inflammation with lymphocyte infiltration.

Approximately 20% of patients with COVID-19 develop SARS, an acute inflammatory lung injury associated with increased pulmonary vascular permeability and lung density, with loss of aerated tissue, and is associated with many diseases, which result in reduced lung compliance and hypoxemia severe (MENDES et al, 2020).

In more severe forms of COVID-19, the inflammatory cascade results in a "cytokine storm", elevating cytokine levels – including increased IL-2, IL-7, and IL-10 (the cytokine has the function of promoting an immune response and inflammation, through the recruitment of neutrophils and monocytes to the site of infection). The “cytokine storm” is believed to be of utmost importance in the progression of SARS into COVID-19. (Mendes et al, 2020).

In turn, SARS-COV-2 causes fluid exudation with cells and plasma proteins, causing increased permeability between the alveoli and the capillaries that cover them. The process induces a local inflammatory response, with the presence of leukocytes, platelets, and fibrin, which will contribute to the formation of a hyaline membrane and, subsequently, alveolar fibrosis.

SARS-COV-2 results in an intense acute inflammatory response in the alveoli and prevents them from carrying out physiological gas exchanges of oxygen and carbon dioxide, thus causing symptoms such as severe dyspnea and low blood oxygen saturation (Kecojevic et al, 2020).

Also, if there is development and progression of respiratory dysfunction, the consequence may be heart failure of the right chambers of the heart, a condition called “cor pulmonale”, which occurs due to cardiac overload, such as a decrease in the ability of the right heart to function due to hypertension lung, caused by parenchymal fibrosis (Mendes et al, 2020).

Anxiety Disorder, which can also be generated as a consequence of COVID-19, is one of the main causes of suffering and impairment of mental health, presenting fear or worry, chest pain, dizziness, and palpitations as the most frequent symptoms (Abba- AJI; Hrabok, 2020).

Anxiety as a psychological disorder has, in its symptomatic content, disproportionate concerns, such as Generalized Anxiety Disorder (GAD), and those related to panic attacks and phobic avoidance, such as specific phobias, social phobia, agoraphobia, and panic disorder. In turn, recurrent and unexpected panic (anxiety) attacks are, as a rule, accompanied by 1 month of persistent worry (Nancy; Donald, 2009).

To be able to define and diagnose panic attacks, the presence of at least 4 of 13 characteristic symptoms must be noted, such as shortness of breath, dizziness, palpitations, and tremors. Already in phobic disorders, symptoms are noted, such as irrational fear of objects, places, and situations. It appears, in turn, that anxiety disorders, in general, have disproportionate concerns about their occurrence (Kecojevic et al, 2020).

In anxiety disorder, there is an excessive preoccupation with life circumstances, such as financial issues, social acceptance, and job performance. The diagnosis requires the patient to have at least 3 of the 6 symptoms described in the literature, which include feeling restless or nervous, having low concentration, irritability, muscle tension, or poor sleep (Knowles; et al, 2021).

At the beginning of studies of new pandemics, it is common for scientists, clinical managers, and health professionals to focus on the pathogen, on the risk it can cause, in an attempt to understand the pathophysiological mechanisms to propose prevention, containment, and treatment measures (Braz J Psychiatry; 2020).

As for the coronavirus pandemic (COVID-19), it is noted that, in the period of greater social isolation, there was an exponential increase in cases of anxiety. This was largely the result of the change in habits and behavior that society as a whole had to go through. In the early stages of the pandemic (March 2020), coronavirus-related anxiety was higher than flu-related anxiety, and obsessive-compulsive washing symptoms had increased since before the pandemic broke out globally, in the face of medical recommendations that already influenced the media (Knowles et al, 2021).

From this, it is clear that the fear of contamination increases an individual's ability to detect and avoid potential threats of pathogens in their environment. This fear of contamination may be associated with washing and cleaning behaviors that can reduce the risk of infection after potential exposure to the pathogen. (Knowles A.K. et al., 2021).

A study developed by the Associação Brasileira de Psiquiatria, entitled “Pandemic fear” and COVID-19: mental health burden and strategies”, reported that patients infected with or suspected of having COVID-19 may present different emotional and behavioral reactions, such as fear, boredom, loneliness, anxiety, insomnia or anger. (Braz; Psychiatry, 2020).

On the other hand, short-term mental health problems in health professionals are depression, generalized anxiety, insomnia, and Post Traumatic Stress Disorder (PTSD). Lack of rest is the main driver of insomnia, just as mourning the death of friends or loved ones, due to COVID-19, has been the main driver of depression. (Robles et al, 2020).

Considering all this information, the present study sought to understand the impact of hand hygiene and the correlation with anxiety in health professionals, in the context in which the SARS-COV-2 (COVID-19) pandemic brought to discussion the need for the constancy of hand washing as one of the main ways to avoid proliferation and health problems. (Patruno et al, 2020).

2 METHODOLOGY

The study analyzed the impact of hand hygiene and the correlation with anxiety in the context of the SARS-COV-2 (COVID-19) pandemic, which raised the discussion about the need for constant hand washing as one of the main ways to avoid the proliferation of the virus and health problems.

For that, a qualitative and quantitative cross-sectional observational study was carried out, with data collection in the form of questionnaires applied to employees, and hospital receptionists, working at Hospital São Lucas, located in the municipality of Cascavel-PR.

As a starting point for the study, an informative letter was sent to Hospital São Lucas explaining the research objectives. The criteria for inclusion of participants were workers who work at the front door, that is, emergency room, outpatient, and hospital receptions.

After authorization from the hospital, regarding the continuation of the research, the researchers provided access to the questionnaire, which was also made available through digital media. The researchers applied to the participants a Free and Informed Consent Term approved by the Ethics and Research

Committee under Opinion n° 4,989,040, following Resolution 466 of 2012 of the CNS. Exclusion criteria were workers working in other sectors. As for consent, it was collected through the signatures of the Free and Informed Consent Form (TCLE) by the research collaborators.

Thus, it is noteworthy that the data were collected through a questionnaire consisting of 05 objective questions, which was sent online. The survey was applied in the second half of 2021, between September and November. The data collected and analyzed sought to provide the existence and correlation of psychiatric disorders in terms of anxiety.

For the theoretical basis of the research, articles found in PubMed/Medline, Scopus, and Cochrane Library databases were reviewed. In turn, a bibliographical survey was carried out to identify the main articles that sought to explain adherence and the consequences of excessive hand hygiene by health professionals in hospitals during the COVID-19 pandemic.

Finally, the research was developed using the exploratory-descriptive method. The choice of method was fundamental to data collection, as well as the treatment of the information obtained, that is, the analysis of the population and the investigated criteria when the research is directed to the analysis of the data in an analytical and descriptive as to the application of the results of the diagnostic investigation of the pathology and its correlation with anxiety (Gil, 2008).

3 RESULTS AND DISCUSSION

In this topic, systematized, the results of the research are collated, in the form of graphs, through the set of evidence and comparative scientific articles, which seek to identify the main problems that affected health professionals in coping with the COVID-19 pandemic. 19.

There were 28 interviewees, all of whom agreed to spontaneously respond to 100% of the questions raised. Based on the responses presented, the possibility of adopting care and coping strategies for the burden caused by anxiety symptoms is discussed. Likewise, measures are suggested that can be included in health service protocols, to protect and promote the physical and mental health of health workers.

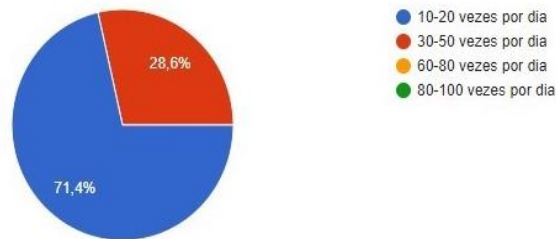
As noted, through the information observed in Graph 02, care with hand hygiene is frequent, since 71.4% of respondents wash their hands between 10 and 20 times a day, and, in turn, 28.6% of respondents washed their hands between 30 and 50 times, which demonstrates an evident concern, but also a high-stress burden for these professionals.

By way of elucidation and comparison, the study entitled “Dealing with the anxiety of the Coronavirus and OCD”, published by the Asian Journal of Psychiatry, in March 2020, written by the authors Ajay Kumare and Aditya Somani, reached the same conclusion, which is the burden of “significant negative impact on people's mental health, especially people with obsessive-compulsive disorder with fear of contamination and excessive hand washing” (2020, p.2). The result of this study is in line with the data included in the present research and, likewise, with the information included in Graph 2 - that is, the finding that fear of contamination influences excessive hand washing and its correlation with anxiety symptoms.

Graph 02 - Hand washing progression

Durante a Pandemia do SARS-COV 2 (COVID 19), você tem aumentado a frequência de higienização das mãos? Por quantas vezes ao dia mais ou menos?

28 respostas



Sources: Authors, 2022.

Subtitle: 10-20 times per way
30-50 times a day
60-80 times a day
80-100 times a day

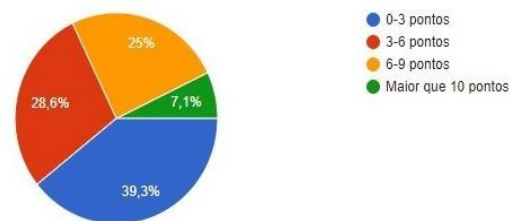
Next, respondents were asked to score from 0 to 10 their levels of increased anxiety in correlation with increased handwashing. It was observed that 7.1%, referring to 2 participants, felt anxious with a score greater than 10. Those who stated that anxiety increased by 6 and 9 points were 25%, referring to 7 participants. Another 28.6%, referring to 8 participants, said that it increased anxiety by 3 to 6 points. Already 39.3%, referring to 11 participants, showed little increase in anxiety, which scored from 0 to 3 points.

Likewise, in a dialectical analysis of the data, as also pointed out by Kumare and Somani (2020), “the fear of contamination and excessive hand washing is probably the most common symptom of OCD”. And now, with so much emphasis on handwashing in health alerts, it's possible that OCD symptoms could get worse. The authors even describe a case report in which an OCD patient, who was in remission with treatment, experienced a relapse of symptoms after the advent of coronavirus disease and related health alerts.

Graph 03 - Anxiety Episodes

Você tem se sentido mais ansiosa (o) neste período com aumento dos cuidados de higienização? Pontue de 0 a 10:

28 respostas



Sources: Authors, 2022.

Subtitle: 0-3 points
3-6 points
6-9 points
Greater than 10 points

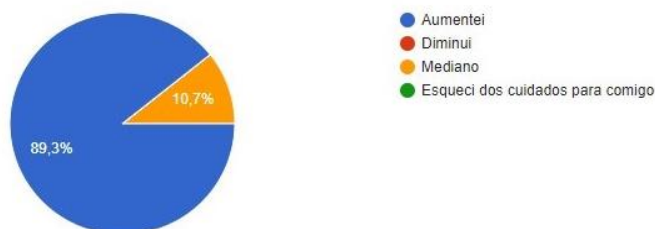
Regarding hand hygiene, participants were asked whether, between the years 2020 to 2021, they increased or decreased the frequency of personal hygiene care. It is observed that 89.3% of the participants (25 participants) increased their hygiene and 10.7% (3 participants) defined the frequency of hand washing as the median.

Taking this information into account, it is important to mention the study conducted by Araghi (et al, 2020), when the authors state that, although hand hygiene is extremely important for the prevention of COVID-19 among professionals In healthcare, regular hand hygiene can also be a challenge, because water, detergents, and disinfectants can predispose health professionals to other problems 4/25 to 5/4/2022 not only related to anxiety, such as dermatitis, for example.

Gráfico 04 – Cuidados de higiene pessoal

No ano de 2020 para 2021 você tem aumentado ou diminuído a frequência dos cuidados com sua higiene pessoal?

28 respostas



Sources: Authors, 2022.

Subtitle: increased
Decreases
Median
I forgot to take care of myself

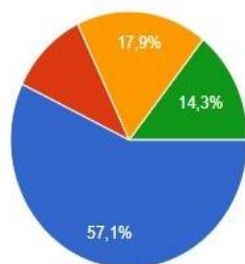
Afterward, the interviewees were asked if, when they arrived at their homes (from their work), they continued to have the same hygiene precautions. It was observed that 10.7% (3 participants) said they had average habits, using only gel alcohol before entering their homes. 14.3% (4 participants) said they did not stay with their habits at home, they just took off their shoes and washed their hands before going in and preferred to shower only when there was time.

Already 17.9% of the participants (5 people) said to take off their clothes when they get home and then take a shower and then go inside. On the other hand, most participants, 57.1% (16 participants), said they increased their care to not contaminate their families.

Graph 05 – Personal hygiene care at home

Na chegada em suas casas (do seu trabalho) você permanece tendo os mesmos cuidados de higienização?

28 respostas



- Sim, aumentei os cuidados para não contaminar minha família.
- Mediano, apenas passo álcool em gel e entro em casa.
- Tiro as roupas do serviço antes de entrar em casa, só entro após ter tomado banho e estar com roupas lim...
- Não, apenas tiro os sapatos e lavo as mãos antes de entrar em casa, tomo banho quando dá tempo.

Sources: Authors, 2022.

Subtitle: Yes, I increased my care so as not to contaminate my family

On average, I just apply gel alcohol and go home

I take off my work clothes before entering the house, I only go in after I have showered and have clean clothes

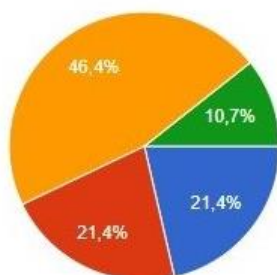
No, I just take off my shoes and wash my hands before entering the house, I take a shower when I have time

In the last question, respondents were asked whether, in the period from 2020 to 2021, there was an increase in anxiety symptoms. As for the question, 10.7% (3 participants) stated that their anxiety decreased and that they are in control, without periods of crisis. In turn, 21.4% (6 participants) responded that their anxiety had increased and that lately, they had had several crises. Another 21.4% of the participants (6) stated that it increased, but that they are under control. Finally, 46.4% (13) of the participants said they were reasonable with anxiety control and that, initially, they felt more anxious, but, with the arrival of the vaccine, they are feeling more controlled.

Graph 06 - Increased anxiety time lapse 2021-2021.

No período de 2020 para 2021 você sente que sua ansiedade aumentou?

28 respostas



- Aumentou muito, tenho tido várias crises de ansiedade.
- Aumentou, mas consigo controlá-la.
- Razoável, no início estava mais ansiosa (o), porém agora está mais controlada com a chegada da vacina.
- Diminuiu, estou super controlada(o). Não tive períodos de crise.

Sources: Authors, 2022.

Subtitle: It has increased a lot, I have had several anxiety attacks

It increased, but I can control it

Reasonable, at first I was more anxious, however, now I am more under control with the arrival of the vaccine

It decreases, and I'm super controlled I didn't have periods of crisis

It is clear, given the data collected and presented, that the burden is evident about the concern with hand hygiene, generated by sanitary measures, in contrast to the risk of contamination with COVID-19 and its psychological consequences for the health of the worker, in particular, as mentioned here, to the health worker.

This concern goes far beyond health workers and only within the national context since it affects society in general. After all, it is like in a study conducted by Xiao et al (2020), in which the author states that “despite the knowledge of medical students about disease control and prevention, their lives were greatly affected by social distancing, especially in the epicenter of Wuhan”, at which point even well-informed students needed psychological support during these extraordinarily stressful times.

In the same vein, Kecojevic (et al 2020) state, in a study that evaluated the factors associated with increased levels of mental health burden in a sample of university students in northern New Jersey, that “the COVID-19 pandemic is causing a significant negative impact on the mental health of college students”. This finding demonstrates the generalization of the negative impacts of the disease on the global community.

Thus, it is noted that the context of the pandemic requires greater attention, in the face of the health worker, also about their health, especially regarding mental health aspects. After all, these are not just simple reports of increased anxiety symptoms, but with these, other problems arise, such as depression, loss of sleep quality, increased use of drugs, and psychosomatic symptoms, in addition to the fear of infection and transmission itself (Ayanian, 2020).

In addition, other devastating consequences for the worker's life can be mentioned, which include a high risk of infection, inadequate protection against contamination, overwork, discrimination, isolation, negative emotions, lack of contact with family, exhaustion, and frustration. (Singh, 2019).

These situations and experiences generate mental health problems that can last for years, often even affecting the ability to make decisions, even for the daily acts of the worker's life, that is, devastating and lasting effects on well-being overall (Ornell, 2020)

Therefore, it is considered essential to develop measures of communication, awareness, psychological and structural support that contribute to the appreciation not only of the SUS, in the broadest sense, but, above all, of professionals and workers, people who fight day and night so that the health and assistance system continues to function and save lives so that society begins to understand and recognize the importance of the work carried out by the health systems and, why not, the health of the worker himself (Araghi et al., 2020).

4 FINAL CONSIDERATIONS

Given the above, it was noticed that maintaining hand hygiene prevents infection and transmission of the new coronavirus. Likewise, prevention routines should be one of the central objectives of public and private health policies, since the implementation of prevention measures and the active participation of

health professionals are related to the reduction of cases of infection.

Thus, concerning the study presented, as well as through the analysis of the collected data, it was possible to perceive the significant adherence to hand hygiene during the pandemic, which even demonstrated the increase in hand washing compared to other pre-pandemic periods.

The research also pointed out the worsening of symptoms in other dimensions and the effects of anxiety, with a worsening of symptoms and compulsive behaviors being observed in the pandemic period. In turn, the results identified that health professionals, who showed worsening symptoms in general, showed an increase in stress, anxiety, and depression. And, this can, among other factors, be explained, because, together with the pandemic period, there was the occurrence of greater social isolation and a change in the routine of most people.

However, it is necessary to point out, as observed in comparative studies presented here, that the increase in obsessive-compulsive symptoms and the correlation of hand washing with anxiety symptoms reached the general population, respecting the varieties, such as location, and stage of the pandemic, especially related to contamination and washing, given that facing the pandemic requires greater rigor concerning cleaning and hygiene.

In this context, the protection of these professionals and the population becomes an imminent measure, intending to not only prevent the transmission of Covid-19 but also protect psychological health. Therefore, it is essential to develop measures of communication, awareness, and psychological and structural support that contribute to the appreciation and health of the worker who is the gateway to health. Thus, it is necessary to adopt infection control protocols and provide adequate attire, including N95 masks, face shields, and gloves, among others.

In addition, it is necessary to promote mental well-being measures for the worker and, likewise, to identify the factors that contribute to the precariousness of mental health, which were aggravated in the context of the pandemic, and to improve the treatment for those who eventually develop disorders. It is also necessary to promote the expansion of access by the population and health professionals to free specialized mental health services.

Lastly, there is a need for a scientific analysis of post-Covid-19 research, to assess how the clinical condition of professionals and patients who presented worsening anxiety in correlation with the exacerbated change in habits regarding handwashing will evolve. hands, which will provide better knowledge regarding the understanding of the cause-effect and possible treatment.

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