









The contribution of human sciences to educational processes associated with COVID-19

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The coronavirus disease 2019 (COVID-19), an infectious disease caused by a newly discovered biological agent, has turned into a devastating pandemic (Wu et al., 2020). Social and behavioral factors have played a fundamental role in its rapid spread:

- a. poor hygiene habits;
- b. business traveling/commuting and tourism;
- c. inadequate training and discipline to prevent similar cases;
- d. uncontrolled economy and overconsumption;
- e. governmental extremism (The Lancet, 2019; The Lancet, 2020);
- f. disbelief of scientific findings, negationist or antiscientific views;
- g. individualism and lack of community spirit;
- h. anti-ecological behaviors and environmental devastation. In addition, social health inequities represent an important barrier to the development of public health systems (including health surveillance), limiting access to health services, the degree of pathological knowledge, and consequently, self-perception of health.

Furthermore, the COVID-19 has aroused social stigma (OPS, 2020), which stems from three overlapping factors:

1. It is a novel;
2. fear of the uncertain;

3. induced fear of mingling with people (OPS, 2020). Human behavior can help contain the transmission and prevent more serious consequences (Nature Human Behavior, 2020), and minimize the onset of a social crisis.

The human sciences, focusing on educational processes, can contribute to human behavior congruent with public health recommendations (Bavel et al., 2020). In this sense, this paper aimed at I) identifying guidelines and procedures in recently published scientific studies on COVID-19 and II) reflect on the articulations for the human science challenges and educational and behavioral studies associated with COVID-19.

For the identification and evaluation of COVID-19 guidelines and procedures, the following databases were consulted: World Health Organization (WHO), Centers for Disease Control and Prevention (CDC), and American College of Sports Medicine (ACSM) for the time period leading up to May 2020. The inclusion criterion was adopted from documents of renowned health institutions related to COVID-19, recommendations, and orientations about the disease. The guidelines and procedures were classified and randomly described in Table 1.

The database analysis revealed that studies on guidelines and procedures to develop new educational processes associated with human behavior are scarce as yet; however, research on this topic is critical; once it can play a significant

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Conflict of interests: nothing to declare. **Funding:** nothing to declare.
Received: 02/03/2021. Accepted: 04/02/2021.

role in minimizing inappropriate actions of specific groups of individuals and provide elements for efficient responses to curb the pandemic. It is important to note that family relationships and communication are not included in these educational processes.

With regards to the human science challenges, two demands are potentially needed to stimulate some reflection about the consequences of COVID-19:

- The first demand is related to the symptomatic, asymptomatic, and pre-symptomatic manifestations

Table 1. Categories and references regarding COVID-19 procedures and guidelines.

Category	References
1 – Infection prevention and control	World Health Organization (WHO) WHO — Country and Technical Guidance — Coronavirus disease (COVID-19) (Country & Technical Guidance, 2020). La estigmatización social asociada a la COVID-19.
2 – Signs and symptoms	World Health Organization (WHO), Centers for Disease Control and Prevention (CDC) e American College of Sports Medicine (ACSM) WHO — Country and Technical Guidance — Coronavirus disease (COVID-19) (Country & Technical Guidance, 2020) La estigmatización social asociada a la COVID-19 (OPS, 2020). What to Do If You Are Sick (Centers for Disease Control and Prevention [CDC], 2020). A Call to Action: Physical Activity and COVID-19 (Sallis & Pratt, 2020) Keeping Children Active during the Coronavirus Pandemic (American College of Sports Medicine [ACSM], 2020).
3 – Equipment supervision and cleaning/disinfection	World Health Organization (WHO), Centers for Disease Control and Prevention (CDC) WHO — Country and Technical Guidance — Coronavirus disease (COVID-19) (Country & Technical Guidance, 2020). Recommendations to Member States to improve hand hygiene practices to help prevent the transmission of the COVID-19 virus (WHO, 2020).
4 – Information released to the population	World Health Organization (WHO) e American College of Sports Medicine (ACSM) COVID-19: Materiais de comunicação à população (Pan American Health Organization [PAHO], 2020). A Call to Action: Physical Activity and COVID-19 (Sallis & Pratt, 2020). Keeping Children Active during the Coronavirus Pandemic (ACSM, 2020).
5 – Pregnancy and breastfeeding procedures	World Health Organization (WHO) COVID-19: Materiais de comunicação a população (PAHO, 2020).
6 – Physical activity in the context of COVID-19	American College of Sports Medicine (ACSM) A Call to Action: Physical Activity and COVID-19 (PAHO, 2020). Keeping Children Active during the Coronavirus Pandemic (Sallis & Pratt, 2020).
7 – Smoking procedures	World Health Organization (WHO) COVID-19: Materiais de comunicação a população (PAHO, 2020).
8 – COVID-19 and public health issues	World Health Organization (WHO) Recommendations to Member States to improve hand hygiene practices to help prevent the transmission of the COVID-19 virus (WHO, 2020).
9 – Face masks protocols	World Health Organization (WHO) COVID-19: Materiais de comunicação a população (PAHO, 2020).
10 – Procedures for the end of quarantine or lockdown	Centers for Disease Control and Prevention (CDC) What to Do If You Are Sick (CDC, 2020).
11 – Parental guidance — relationship between parents and children	World Health Organization (WHO) e American College of Sports Medicine (ACSM) COVID-19: Materiais de comunicação a população (PAHO, 2020). Keeping Children Active during the Coronavirus Pandemic (ACSM, 2020).
12 – Guidelines for managing and using local, state, and national parks	Centers for Disease Control and Prevention (CDC) Guidance for Administrators in Parks and Recreational Facilities (WHO, 2020).
13 – Information to promote daily preventive actions	Centers for Disease Control and Prevention (CDC) Guidance for Administrators in Parks and Recreational Facilities (WHO, 2020).
14 – Procedures to prevent social stigma	World Health Organization (WHO) La estigmatización social asociada a la COVID-19 (OPS, 2020).

of the virus (He et al., 2020) and the evaluation of risky behaviors. Understanding such dynamics is of utmost importance to mitigate the devastating effects of the disease (Bavel et al., 2020), especially to manage occasions when individuals need to gather up in public places, such as gyms, schools, clubs, and sports facilities, after the end of the quarantine period. Thus, further studies are needed to establish guidelines and procedures to evaluate and monitor risky behavior using diagnostic records on a daily basis, including environmental and mobility factors, habits, and behaviors during the COVID-19 pandemic. Moreover, medical evaluations and specific tests constitute a potential educational instrument and provide ground decision-making elements regarding incidental contagions.

- The second demand is associated with studies and dynamics involving educational processes, communication, and dissemination of scientific knowledge to interfere in the social and behavioral issues described herein, aiming at improving human behavior, and consequently, the ongoing scenario.

Isolation is a necessary measure and recommendation to protect public health and avoid disseminating the virus in society. However, as mentioned by Mataruna-Dos-Santos (2021), each country addressed the strategies to slow down the pandemic, and some cities sometimes used a different scheme from the national government. Mataruna-Dos-Santos (2020) and Mataruna-Dos-Santos et al. (2020) proposed innovation for promoting physical activities, education, health, and commercialization during the crises to follow the general orientation of WHO and assure an individual social responsibility among citizens. How each nation addresses the pandemic reflects directly on the collective thinking of its inhabitants. Countries that were slow to adopt international health measures have, in turn, presented greater difficulties in dealing with the health crisis. This also affects the perception of citizen responsibility in these territories. However, results alert about modifying physical activity and eating behaviors in a compromising health direction (Ammar et al., 2020a; Ammar et al., 2020b).

Therefore, considering these findings, the scientific community is expected to meet the human science demands and invest in strategies and/or educational processes to evaluate human behavior and sociocultural matters, contributing towards the mitigation of the new coronavirus and possible future pandemics.

As a possible limitation of the present paper, it is relevant to highlight that since it is an infectious disease, which changes its epidemiological profile every day, the orientations/guidelines observed in this work could undergo drastic changes, depending on its epidemiological behavior in each territory. In this way, the information discussed herein should not be taken in a static way, rather through a chronological review.

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