

# Music as medicine during the sars-COV-2 (COVID-19) quarantine: spreading art not fear

## Abstract

In December 2019, in Wuhan (Hubei, China), a novel severe acute respiratory syndrome coronavirus could be identified (SARS-CoV-2). The need of home isolation to avoid getting the infection and to avoid its spread, have been associated with fear and other psychological consequences in population of affected countries. Music has demonstrated its positive complementary effect in management and improvement of anxiety, depression, pain and other clinical and social situations associated with negative effects in well-being and quality of life. To date, there are no clinical trials that examine directly the relation between music interventions and improvement of negative emotions for people in quarantine but based on previous research we know that it could be employed as an innocuous and safe complementary intervention to help people to alleviate these feelings. Since the pandemic was declared, musicians have taken different instruments and have even used their own voice to play live music from their balconies or even in the street, showing their solidarity and attempts to encourage their neighbors and other people nearby not to give up against COVID-19.

**Keywords:** covid-19, quarantine, isolation, music

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## Introduction

In December 2019, increasing pneumonia cases of unknown origin appeared in Wuhan (Hubei, China). After the study of several respiratory samples, a novel severe acute respiratory syndrome coronavirus could be identified (SARS-CoV-2), and it started a fast spread around the world in the following weeks. Since the WHO (World Health Organization) declared the *coronavirus disease 2019* or COVID-19 (clinical expression of SARS-CoV-2) a pandemic in March 2020, people in many countries around the world had to change their lifestyle, the way to attend different kind of economic and social activities, and the way to interact with each other.<sup>1</sup> At the end of January 2021, COVID-19 had caused more than 2 million deaths and more than 100 million cases worldwide. At the time this article is written, different vaccines against SARS-CoV-2 have just started to be applied around the world as an initial step to take control of the pandemic.

The need of home isolation to avoid getting the infection and to avoid its spread, and the daily massive diffusion of information and news in social networks about the virus (global implications for health, economy and many other aspects), have been associated with fear, anxiety, depression and other psychological consequences in population of affected countries as shown by some studies. In a Chinese study including 17685 social network profiles, authors analyzed the vocabulary employed by users in posts between January 13<sup>th</sup> and 25<sup>th</sup> of 2020. It was shown that words associated with negative emotions such as anxiety, indignation and depression (basal mean word frequencies of 11.69, 14.87, 1.83 respectively) had increased significantly (mean word frequencies 12.79, 15.27, 1.86,  $p < 0.001$ ) after the declaration of the sanitary warning of COVID-19 by the National Health Institute on January 20<sup>th</sup>.<sup>2</sup> Another study based on a nationwide large-scale survey which analyzed 52730 responses from people of 36 Chinese provinces, reported that 29.29% of the respondents experienced psychological distress classified as mild to moderate, and classified as severe in 5.14% when evaluated by the *COVID-19 Peritraumatic Distress Index* (CPDI). Females respondents

showed higher CPDI scores and psychological distress than males (24.87 vs 21.41,  $p < 0.001$ ). The young adult group (between 18 and 30 years old) and the group above 60 years old were also the most affected with the highest CPDI scores (27.76 and 27.49 respectively).<sup>3</sup>

Music, said Sergei Rachmaninov, is "enough for a lifetime, but a lifetime is not enough for music" as it is one of the greatest manifestations of human beings, and since the last century it has been formally employed as a complementary and alternative therapeutic resource in diverse clinical settings such as pain control (regardless of the etiology), physical recovery after surgery, and even in end-of-life medical care, including patients from premature infants to elderly people.<sup>4,5</sup> There have been diverse mechanisms and hypothesis proposed to explain the effects of music. One of these is the Psycho-Neuro-Endocrine-Immunological (PNEI) framework, in which an acoustic stimulus is recorded and processed by the auditory cortex and the limbic system. This structure establishes direct and indirect connections in a bidirectional way with endocrine, immune and autonomous nervous systems downregulating their activity. The diminished secretion of substances and hormones by these complex systems such as catecholamines, ACTH and cortisol downregulates arterial pressure, pulse and immune and inflammatory responses, in addition, upregulation of endogenous endorphins regulates pain perception and increases well-being and motivation, achieving improved physiologic and psychologic conditions. Music has demonstrated its positive complementary effect in management and improvement of anxiety, depression, pain, dementia, exercise adherence and other clinical and social situations associated with negative effects in well-being and quality of life.<sup>6-9</sup> Therefore, it is suggested that music therapy may be also useful for self-help groups dealing with immune system diseases and that it could be used to help children to regulate their emotions and take care of their immunological health.<sup>10</sup>

In a published document titled "*Mental health and psychosocial considerations during the COVID-19 outbreak*", the WHO recommended to stay connected via telephone, e-mail, social media or video conference for people in isolation,<sup>11</sup> but it was not considered

that natural human tendency to be connected through art was going to emerge rapidly even in this context. As the pandemic started to affect some countries, people looked for other different ways to maintain communication, share feelings, experiences and find support from each other even though they had to be in quarantine, finding other alternatives to fight against negative emotions. To date, there are no clinical trials that examine directly the relation between music interventions and improvement of fear, anxiety and other negative emotions in people in quarantine or isolation, but based on previous research we know that it could be employed as an innocuous and safe complementary intervention to help people to alleviate these feelings. Since the pandemic was declared, musicians have taken different instruments (electronic or acoustic) or only their own voice to play live music from their balconies or even at the street, showing wonderful artistic abilities to perform classical repertoire, or creating amazing versions of diverse popular or traditional songs in a huge variety of styles, most of the time selecting songs which contain messages of hope, faith, fraternity, peace, national identity and motivation in a time of uncertainty, and at the same time showing their solidarity and attempts to encourage their neighbors and other people nearby not to give up against COVID-19. Some representative video examples will be briefly described in following paragraphs, and even though most of them were made in Europe, they represent examples of many others made around the world and actually available in the web (links are included with permission of their authors).

Antoni Lliteres, a tenor singer from Spain, made a great performance in Mallorca of the song “Cielito Lindo”, a Mexican traditional folk song composed by Quirino Mendoza y Cortés in 1882 (Link 1) (Figure 1). The artist used a pre-recorded accompaniment played on a computer while he sang using only his powerful voice without any microphone or other equipment. People enjoyed listening to the song and clapped loudly and enthusiastically at the end of the performance, joining an artistic moment and enhancing resistance against COVID-19. In a similar way many other artists have done their performances from their balconies, some of them using only their acoustic musical instruments without any other sound equipment, and others using electric instruments like guitars or digital keyboards. This is the case of the Irish musician Andrés Mac, who shows us a beautiful performance of John Lennon’s song “Imagine” in Zaragoza, Spain. He sang using a microphone and played his own accompaniment on a Nord™ Electro 4 keyboard (Link 2) (Figure 2). We can appreciate a quiet neighborhood with only few people listening to music from their balconies nearby, however at the end of the song, many other people clap loudly to manifest their gratitude and high appreciation. But not only professional musicians were the protagonists of these incredible performances. As shown in different videos available in the web, people from young to elderly have sung-along different songs even without musical accompaniment, interacting with each other without any previous rehearsal to ensemble their voices.

Music is a universal language, and also in other countries and continents we may find spontaneous musical manifestations in society, regardless of religion, native language, political preferences and other social aspects. In México, the main author of this article could register a similar musical phenomenon in a little neighborhood in Tlalpan, Mexico City (Link 3), where the pianist Eduardo Toral and the singer Maggie Mei opened their windows and started to play and sing different kinds of music to share an artistic moment with their neighbors who demonstrated an enthusiastic response as shown at the end of the video. Beyond its artistic and esthetic nature, now music may also be understood as a social phenomenon during COVID-19 quarantine as shown in the previous examples, regardless if it is played by professional musicians or not. Music therapy is defined

by the *International Association of Music and Medicine (IAMM)* as “the clinical and evidence-based use of music interventions to accomplish individualized goals within a therapeutic relationship by a credentialed professional who has completed an approved music therapy program”, and is then provided by a certified music therapist.<sup>4</sup> However, as music has been employed as medicine in recent years in diverse health care scenarios and by different health professionals, music interventions have been now divided in three main types: 1. Music therapy, provided by a certified music therapist according to the AMTA definition, 2. Music medicine, which employs pre-recorded music to promote specific health goals by health professionals, and 3. Other music interventions, which include other uses of music in activities to reach health-promoting or recreational goals, provided or not by health professionals.<sup>12</sup> More studies are still needed to better define what kind of music is needed to be prescribed and played (one genre over another, live vs pre-recorded etc.) according to the context and therapeutic goals, however, it is expected that all people who listened to the music performed from balconies during COVID-19 quarantine, or those who participated singing or playing any musical instrument got the several beneficial effects of this artistic and social phenomenon.



**Figure 1** Antoni Lliteres during his balcony singing performance in Mallorca, Spain.



**Figure 2** Andrés Mac singing from his balcony, playing his own music accompaniment on a digital keyboard during quarantine in Zaragoza, Spain.

“Let’s spread music and not fear” is the title of a song and digital music collaboration developed by a group of talented musicians from Germany and Austria, with lyrics and music composed by Nico Samitz and Paul Hartinger, and published by the Austrian musician Bernhard Stocker. The title of this song is what better defines the main concept of all of the artistic and social manifestations presented in this brief review (Link 4). We now live in a technological era, and it is not surprising that people from different parts of the world or different geographic areas in the same country can create magnificent projects, using digital or acoustic instruments to record different song parts separately, followed by computer edition to create a unique musical video which can be shared through social media enhancing the scope and power of music worldwide.

## Conclusion

In conclusion, the manifestation of music during COVID-19 quarantine has been an artistic and social phenomenon with many potential physical and psychological benefits. Future research must continue to better understand and demonstrate these benefits in situations that have been less studied such as a quarantine period. The musical phenomenon developed during COVID-19 quarantine described in this article, finally reminds us that we live in the same world and we share the same feelings, that we are all humans and we need support from each other, this time to fight against a virus, but after all we will need ourselves wherever we go and whatever we do in times of adversity.

Video links:

Link 1: <https://youtu.be/1rygxyblurE>

Link 2: <https://youtu.be/mE6coODz3kg>

Link 3: <https://youtu.be/pGtw9gui3kQ>

Link 4: <https://youtu.be/pGtw9gui3kQ>

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## Conflicts of interest

The author declares there is no conflict of interest.

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