

**Music-based intervention in Covid-19 hospitalization: a perspective through Consolidated
Framework for Implementation Research (CFIR)**

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Commentary

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Abstract

COVID-19 patients survive in isolation with stringent measures of infection containment, leading to anxiety, fear, stress, loneliness, and depression. Music is recognized as useful to promote multiple health outcomes, including anxiolytic effects, pain-relieving, and relaxing effects that favour well-being and social interaction in healthcare settings. The Consolidated Framework for Implementation Research (CFIR) allows to implement music in hospital, restricting methodological weaknesses. The importance of exploring the in-patients' preferences, usages, and feelings for COVID-19 before initiating a music-based intervention is crucial.

Keywords: Music-Therapy, Covid-19, Patient preference, Nursing

Introduction

Music represents an interdisciplinary topic, transversal to medicine and human sciences. It constitutes a non-pharmacological intervention aimed at multiple health outcomes, including anxiolytic effects, pain-relieving, and relaxing effects that promote well-being and social interaction in healthcare settings [1,2,3]. Music-based interventions, therefore, can also be used to relieve psycho-social need in COVID-19 patients [1]. Clinical observation has revealed that patients with COVID-19 may experience diarrhea, nausea, decreased appetite, rash, and other adverse reactions during antiviral treatments [1]. Similarly, hospitalized patients survive in isolation with stringent measures of infection containment, leading to anxiety, fear, stress, loneliness, and depression, even to the point of evoking obsessive thoughts; in severe cases these effects compromise prognoses impacting on mortality and adverse events. There is ample evidence of the need for interventions, with greater relevance on health determinants in the community and hospital context, such as loneliness and social isolation that are fundamental for anxiety and depression development. Furthermore, in percentage terms, loneliness is associated with a 50% increase in the risk of developing dementia and a 30% increase in the risk of heart disease and stroke [4]. Since the early 1900s, music has been used as a mean to improve the psychological well-being of people experiencing situations of isolation or detention; this area of interest is currently at the forefront of scientific research.

Discussion

Music is recognized as useful to promote social interactions and emotional regulation, strongly improving people well-being in a pandemic context [5]. To date, research protocols are available in the hypothesis that music can reduce anxiety, depression or improve quality of life in COVID-19 patients [6]. However, to provide scientific evidence, studies are needed to explore patients' perspectives and determine the effects of music-based intervention during

hospitalization. Some authors [7] remark how essential is the compatibility between proposed music pieces and people's preferences, and how these may vary depending on expectations at a specific time, health conditions, or healthcare environment. A crucial aspect in music-based interventions is the proper selection of music pieces. Listening to specific types / genres of favorite music or sounds is likely to have an emotional impact based on patients' clinical condition. Systematic reviews show that patients' music background and listening habits were drastically underestimated, reported in only 7.7% of studies conducted [8]. In only about 25% of the studies, patient feedbacks on music interventions were explored [8]. In UK [9], a scientific framework was used to integrate music in hospital. Through the Consolidated Framework for Implementation Research (CFIR), a protocol has been developed to integrate the patient's preferred music into the care pathway by providing in-ear music players. The CFIR presents five domains that must be satisfied in order to support the implementation of the intervention. Domains include: Characteristics of intervention, Individuals involved, Outer and Inner setting and Implementation process [9].

The CFIR constructs starts from the evidence of efficacy in music-based intervention available in literature, proceeding through its feasibility analysis, considering socio-political, organizational and applicability domains in healthcare setting, through systematic surveys among patients and healthcare professionals. Carter et Al [9], applying CIFR, defined pre-recorded music-based intervention as easy to be implemented in the treatment protocol and sustainable in economic and training terms, through programming with a qualified music expert. Personality variables, cognitive-affective components [10] and the patient's clinical condition, especially respiratory system efficiency and symptom burden, show a close correlation with music preferences [7], stated even before COVID-19 disease. Therefore, the importance of exploring the in-patients' preferences, usages, and feelings for COVID-19 before initiating a music-based intervention is crucial. This knowledge, would allow health and music

professionals to personalize the intervention and to explore important correlations between habitual music preferences and attitudes than those experienced by the patient as result of proposed music listening. Studies uniquely states methodological weaknesses in music-based interventions [8,11]. There is a lack of scientific rigor in music selection, involvement of music experts, and objective reporting and description of the music pieces used [11]. Music, also, was rarely selected to achieve specific effects according to reference frameworks [8,11]. Patients often selected pieces without a scientific rationale, resulting a little directional effect. The opportunity to identify music mechanisms for action would allow researchers to advance beyond basic questions about efficacy and begin to answer questions about how, why, and for whom an intervention works [11].

The implementation of CFIR would also provide a new methodological approach in clinical practice, promoting a personalised music-based intervention, according to the needs of the institutional settings and the patient's preferences. Music promotes early weaning to invasive mechanical ventilation [12], social interaction [13], quality of life and sleep [14,15], mood and well-being in healing environment [16]; reducing procedural stress and the need for anxiolytic and sedative drugs [17,18]. Significant psycho-physical benefits, in condition of clinical stability or instability, represent important outcomes in COVID-19 hospitalization. Relaxation, distraction, entertainment and emotional support of listening to music, according to the patient's preferences through the CFIR framework, can also contribute, with scientific rationale, to cope loneliness, isolation, fear and psychopathological states resulting from COVID-19 disease.

Conflict of interest

The Author declare that there is no conflict of interest.

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