Brief Communication

COVID-19 and social isolation: the consequences of not exercising for older adults' health

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Abstract: COVID-19 pandemic has required social isolation to prevent the virus from spreading. Initially, the elderly were the most affected by the novel coronavirus. However, the virus spread out worldwide, affecting all age groups. The elderly are commonly affected by several chronic diseases, and as a consequence of social isolation caused by the COVID-19 pandemic, the community-based exercise programs, which usually provide health and well-being to the elderly, have stopped their activities to avoid the virus to spread out; so, the elderly kept taking medicines but stopped exercising, which must impair their health and increase demand from the public health system. In this sense, the physical education professional is essential to providing safe approaches to the elderly who are not able to enroll in community-based exercise programs but need to exercise to improve their health. This article aims to discuss the consequences of not exercising in older adults' health during the social isolation caused by the COVID-19 pandemic; still, we intend to present adjunct strategies to allow the elderly to exercise even socially isolated.

Keywords: exercise; coronavirus; elderly; health.

Introduction

A novel coronavirus has emerged on December 26th, 2019, in Wuhan – China – and, since them, the world has changed its routine. Current data from the World Health Organization has confirmed 28.637.952 cases and 917.417 deaths **around the world** caused by COVID-19 on September 16th, 2020, pointing to Brazil as an epicenter of the crises with one of the highest rates of new confirmed cases (4.282.164) and deaths (130.396) in the world[1]. COVID-19 spreads via direct, contact, and aerosol transmission of respiratory droplets and is associated with several damages in the respiratory system. Once there is no vaccine available for COVID-19, the first guidelines to avoid or attenuate virus spread had suggested the need for social isolation worldwide[1].

Early the spread out, the older adults and those affected by comorbidities were the most vulnerable to COVID-19 with the highest death rates; however, as the virus spread, it got clear that anyone could be infected by the virus and die[1]. With this said, it is known that aging, per si, leads to several impairments in human structure and function[2–4] to attenuate the severity/symptomatology of its impairments, the older adults usually need to adhere to some drug treatment, which may impair public health services as demand increases, despite helping poor people be treated from their diseases[5].

Additionally, the social isolation caused by the COVID-19 pandemic must add serious issues to older adults and the public health system; firstly, because, as it is known, social isolation may lead to psychosocial disturbances such as phycological distress, depressive symptoms, sleep disturbances, reduced self-reported quality of life, anxiety, and fatigue[6,7]; secondly, the increased likelihood of developing several disorders in older adults may harm public health system, once there will be a need of looking for a treatment for the installed diseases, so interventions that target social isolation must be investigated as potential treatments for improving physical/mental/social health of older adults. Also, it is known that the costs increase with age at least until the mid-nonagenarian years before declining in centenarians[8].

As an adjunct to the medicines, physical exercise has emerged as a non-pharmacologic strategy to prevent and treat several diseases, and it has been adopted and applied worldwide to all age groups; thus, older adults are often enrolled in community-based exercise programs spread around the world to improve health status[9–11].

Community-based exercise programs for older adults has become essential in their life because it seems to prevent and treat several physical/psychosocial/behavioral diseases, besides it allows the older adult to feel socialized in the community they live by being connected with their colleagues[12–14]. These exercise programs take the older adults out from their homes and stimulate them to develop their physical, mental, cognitive, social, and behavioral abilities; Still, participate in this type of program is cost-effective to public health once the health care cost with those who exercise is lower compared to those who do

not exercise, and these programs are still considered effective in preventing the progression of frailty and further disability in older adults[15].

The current social isolation forced the older adults to discontinue their participation in the community-based exercise programs where they used to exercise together; so, alternative strategies should be taken to guarantee the older adults' health. The home-based exercise has been recently shown to be effective in improving quality of life (physical and psychological domains), sleep quality, and mental health parameters, such as anxiety, depression, and stress levels in adults[16]. Also, The supervised home-based tele-exercises through digital media emerge as a viable possibility to be run once its intervention has already been shown to be effective in improving older adults' muscular function, and aerobic performance[17], as the physical performance, balance, mobility, and muscle strength[18]; still, it allows real-time interactions between the exercise instructors and the elderly.

Also, the physical education professional must take into account the supervised home-based tele-exercises to be applied post-COVID-19 pandemic in those older adults who are not able to enroll in the community-based exercise programs to keep them healthy and contribute to the public health system. So the importance to physical education professionals to be aware and updated regarding technological advancements to provide the best intervention quality to older adults' while people are not able to be physically present during the community-based exercise programs activities either because of social isolation caused by the COVID-19 pandemic or because any physical limitation that prevents the older adults' presence in these programs type.

Conclusion

While there is no vaccine available for COVID-19 and social isolation seems to be the best strategy to avoid COVID-19 contamination, the older adults must continue to exercise in their homes. The older adults are a risk population and, although it should not be replaced by applications, the physical education professionals must reinvent themselves to provide remote online assistance to keep the elderly exercising as safest as possible and maintain their physical/mental/social health. New strategies as home-based tele-exercises programs should be evaluated about its pertinence and be applied as soon as possible.

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