

Study points to remotely-supervised exercise classes as best option during lockdown

July 22 2021, by Maria Fernanda Ziegler



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Researchers at the University of São Paulo (USP) in Brazil investigated the effects of regular exercise on the physical and mental health of 344 volunteers during the pandemic. The study compared the effectiveness

of three techniques: sessions led in person by a fitness instructor, sessions featuring an online instructor but no supervision, and sessions supervised remotely by an instructor via video call.

The two kinds of session with professional supervision had the strongest effects on physical and mental health. According to the researchers, this was due to the possibility of increasing the intensity of the exercises over time. To their surprise, remotely supervised sessions were more effective than face-to-face sessions. Sedentary subjects served as controls.

"The findings underscore the benefits of either approach, with the instructor online or physically present, compared with being sedentary. However, the physical and mental benefits have much to do with a secure and progressive increase in the intensity of the exercises, which occurred only when they were supervised by a professional. What's interesting is that remote supervision by video call was more efficient. The difference was small but statistically significant," Carla da Silva Batista, last author of the study published in *Psychiatry Research*, told Agência FAPESP. Batista is a researcher at the University of São Paulo's School of Physical Education and Sports (EEFE-USP).

The study was supported by FAPESP. Volunteers were selected in different age and income groups and came from different parts of Brazil. Some had symptoms of depression.

The remotely supervised participants, who worked out using Pilates, Crossfit, yoga, dance and aerobics, exercised more intensely than those who lacked supervision.

"Increasing intensity in supervised online sessions was of paramount importance during the pandemic," Batista said. "Around half the participants, or 55%, performed high-intensity exercises before the pandemic, but the proportion fell to 30% once lockdown began."

Other research shows intense exercise increases longevity, reduces the risk of developing Parkinson's disease, and is associated with a [reduced risk](#) of 26 types of cancer.

"We don't know exactly why working out with remote supervision by video call gets better results than when the instructor is physically present," Batista said. "It's probably that the participants felt the discomfort of wearing a mask hindered their performance during the pandemic."

Other reasons could include the possibility that remotely supervised participants were more motivated. "They were doing exercises in safety and at home, but with supervision and without having to wear a mask. They didn't have to worry about spreading the virus, so the instructor may have felt free to increase the intensity of the exercises safely, without risking injury or discomfort," Batista said.

To evaluate the participants' physical and mental health, in July-August 2020 the researchers applied validated online questionnaires known as the International Physical Activity Questionnaire—Short Form (IPAQ-SF) and the Montgomery-Asberg Depression Rating Scale—Self-Rated (MADRS-S). The latter covers nine items: apparent and reported sadness, inner tension, reduced sleep and appetite, concentration difficulties, lassitude, inability to feel, and pessimistic and suicidal thoughts.

The researchers also checked the exercise routines of the participants, who worked out for at least 30 minutes and at most 180 minutes per day, giving a total of between 150 and 900 minutes per week.

"About half were depressed before the pandemic. Our results showed that even these people improved their [mental health](#) score," Batista said.

Previous studies had shown that people who exercised moderately or vigorously for more than 30 minutes every day during lockdown ran less risk of depression and avoided the problems arising from a sedentary lifestyle, such as stress, lack of sleep and obesity, all of which may be associated with metabolic alterations.

"We already knew about the physiological benefits of getting exercise while being forced to stay at home, but our study innovated by evidencing the effectiveness of remotely supervised [exercise](#) classes. This wasn't clear to us before we did the study. The approach proved beneficial, especially for the period we're living in," Batista said.

More information: Acácio Moreira-Neto et al, Can remotely supervised exercise positively affect self-reported depressive symptoms and physical activity levels during social distancing?, *Psychiatry Research* (2021). [DOI: 10.1016/j.psychres.2021.113969](https://doi.org/10.1016/j.psychres.2021.113969)

Provided by FAPESP

Citation: Study points to remotely-supervised exercise classes as best option during lockdown (2021, July 22) retrieved 4 May 2024 from <https://medicalxpress.com/news/2021-07-remotely-supervised-classes-option-lockdown.html>

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