

## **COVID-19 lockdown and the behavior change on physical exercise, pain and psychological well-being: an International Multicentric Study.**

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Objective: to evaluate the impact of the COVID-19 pandemic and the following lockdown on physical exercise (PEX) practice, pain, and psychological well-being.

Methods: a cross-sectional multicentric study was performed using a nonrandom convenience sampling from the general population ( $\geq 18$  years-old) of 6 countries (Brazil, Italy, France, Portugal, Germany, and Spain) adopting social isolation (SI). The validated self-administered online survey (PEF-COVID19) was used. The tests T-test and Chi-square with Bonferroni correction were used for statistical analysis and a multivariate logistic regression model ( $p < 0.05$ ).

Results: we included 3194 replies and ~80% of the respondents were in SI. Brazilian sample was highly influenced by the pandemic considering PEX practice and habits, pain, anxiety, and stress ( $p < 0.05$ ). Among the European countries, Italy presented the major changes. The model to predict the non-practice of PEX during SI showed that the variables countries, smoking, SI, and PEX level were significant predictors ( $p < 0.001$ ).

Conclusion: the pandemic changed the PEX practice and habits, and the psychological well-being of populations in different manners. Countries, smoking, SI, and PEX level were predictors for the non-practice of PEX. Public health strategies are suggested to avoid sedentary lifestyles and quality of life decrease.

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