

# Post-Covid era and cardiovascular outpatients: a multivariable evaluation of blood pressure, heart rate, physical activity and stress

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## INTRODUCTION & AIM

- The COVID-19 pandemic's long-term impact on cardiovascular health and behavior.
- To examine the association between the post-COVID period and changes in blood pressure (BP), physical activity, and stress status in a real-world outpatient setting

## METHODS

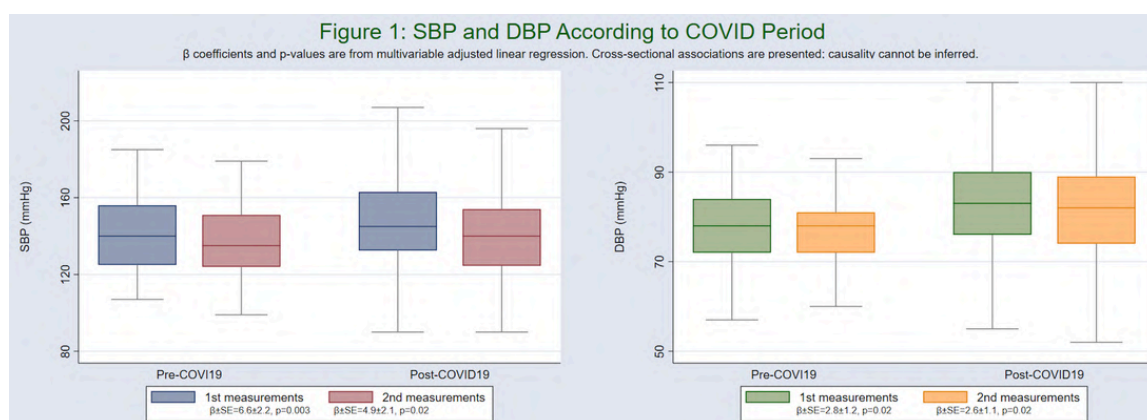
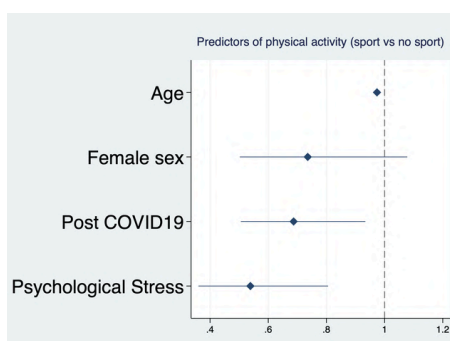
- Study Population: **472** cardiovascular outpatients (2018–2024), divided into:
  - **Pre-COVID group:** n=130
  - **Post-COVID group:** n=342
- Measured Outcomes: Resting heart rate (RHR), Systolic (SBP) and Diastolic (DBP) blood pressure (two timepoints), physical activity status, and stress status.
- Statistical Analysis: multivariable linear and logistic regressions adjusted for age, sex, and antihypertensive therapy (beta-blockers, calcium channel blockers, ACE inhibitors)

## RESULTS

- Mean age was  $66.7 \pm 15.5$  years, 44% were females.
- Compared to the pre-COVID group, post-COVID patients had significantly **higher blood pressure** in fully adjusted models (SBP:  $\beta \pm SE = 6.6 \pm 2.2$  mmHg,  $p = 0.003$ ; DBP:  $\beta \pm SE = 2.8 \pm 1.2$  mmHg,  $p = 0.02$ ).
- Physical activity frequency decreased from **68% to 53%** ( $p = 0.002$ ; OR = 0.51).
- Lower physical activity, at logistic regression, was also **independently associated** with higher stress perception (OR = 0.64,  $p = 0.03$ ).
- No significant differences in heart rate were observed.

## CONCLUSIONS

- The post-COVID period was **independently associated** with increased blood pressure and reduced physical activity.
- **Reduced physical activity** was linked to increased stress status.
- These findings highlight the long-lasting physiological and behavioral impact of the pandemic and the importance of restoring healthy lifestyle habits in at-risk populations.



**Acknowledgments:** we would like to thank AULSS 2 Marca Trevigiana (Veneto Region, Italy) for its institutional support and Noi x Noi Associazione di Mutuo Soccorso ETS with Banca Prealpi SanBiagio Credito Cooperativo (Tarzo, Treviso, Italy) for their economical and logistics support.