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SPECIFIC IMPACT OF A COVID-19 INFECTION ON TRAINING MODALITIES OF ENDURANCE TRAINED ATHLETES

Covid-19 infection induces lung inflammation

↳ functional impairment of lung at rest but also during exercise

↳ adaptations to exercise compromised after a Covid-19 infection (Stavrou et al., 2022)

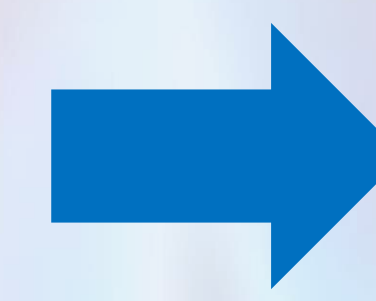
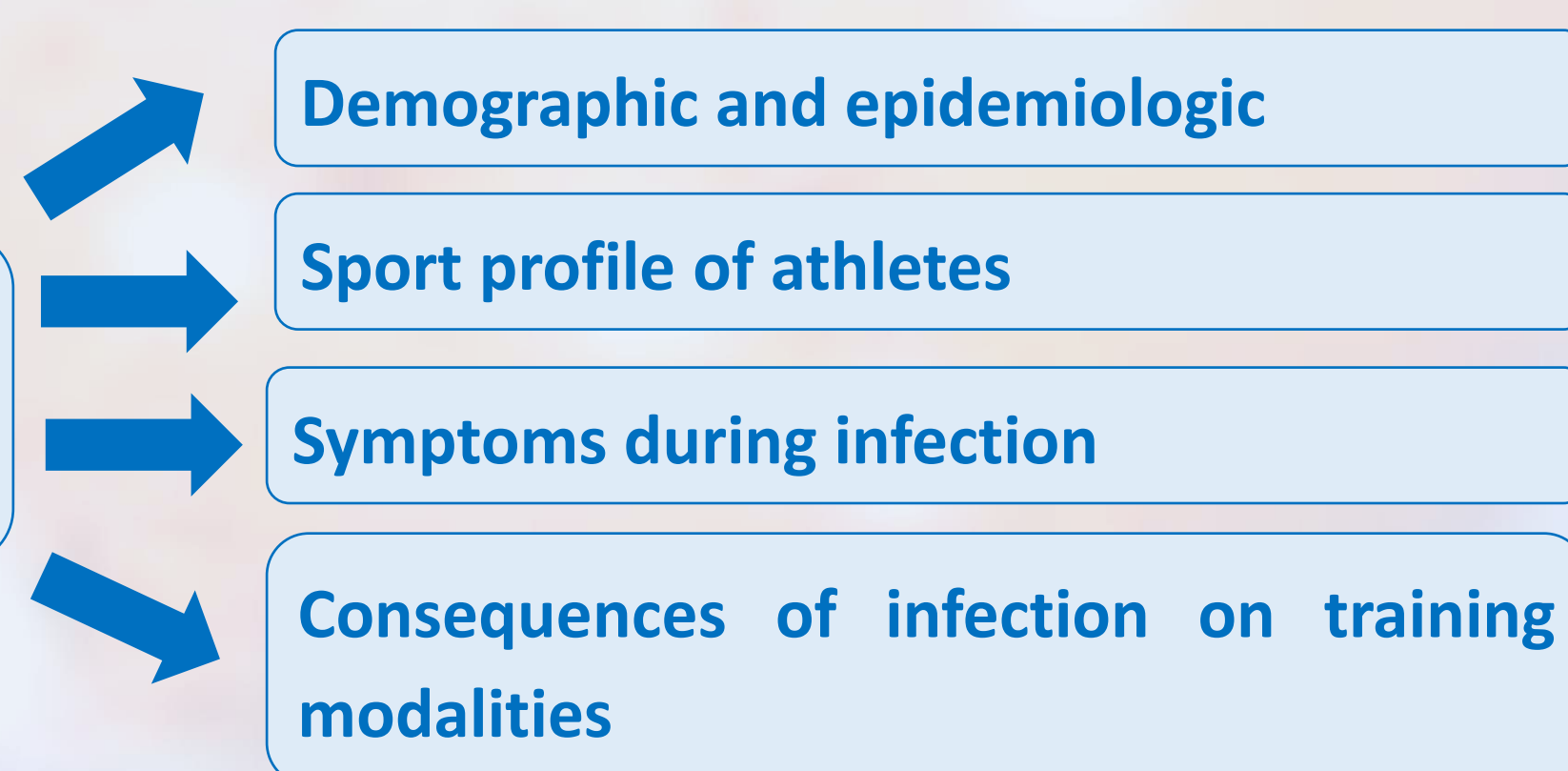


Endurance trained athletes report high levels of training => specific modalities could impair the balance between demand and capacity of the pulmonary system

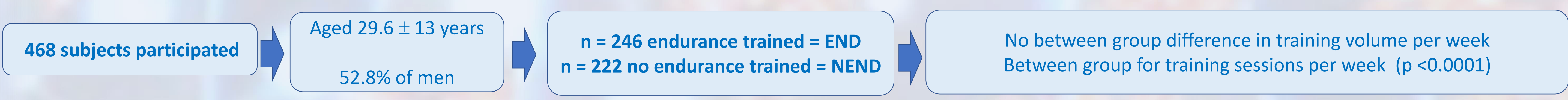
↳ some athletes reach and overstep their capacity, leading to pulmonary constraint (Amann et al., 2012)

➔ We hypothesized that endurance athletes present more difficulty to return to training after a Covid-19 infection and if so, have to modify their training modalities.

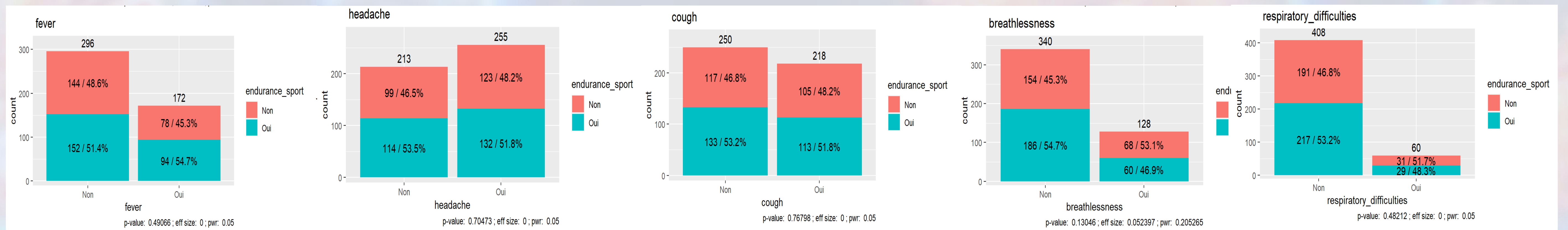
- Online questionnaire
- Distributed via social media platforms, sport teams and federations



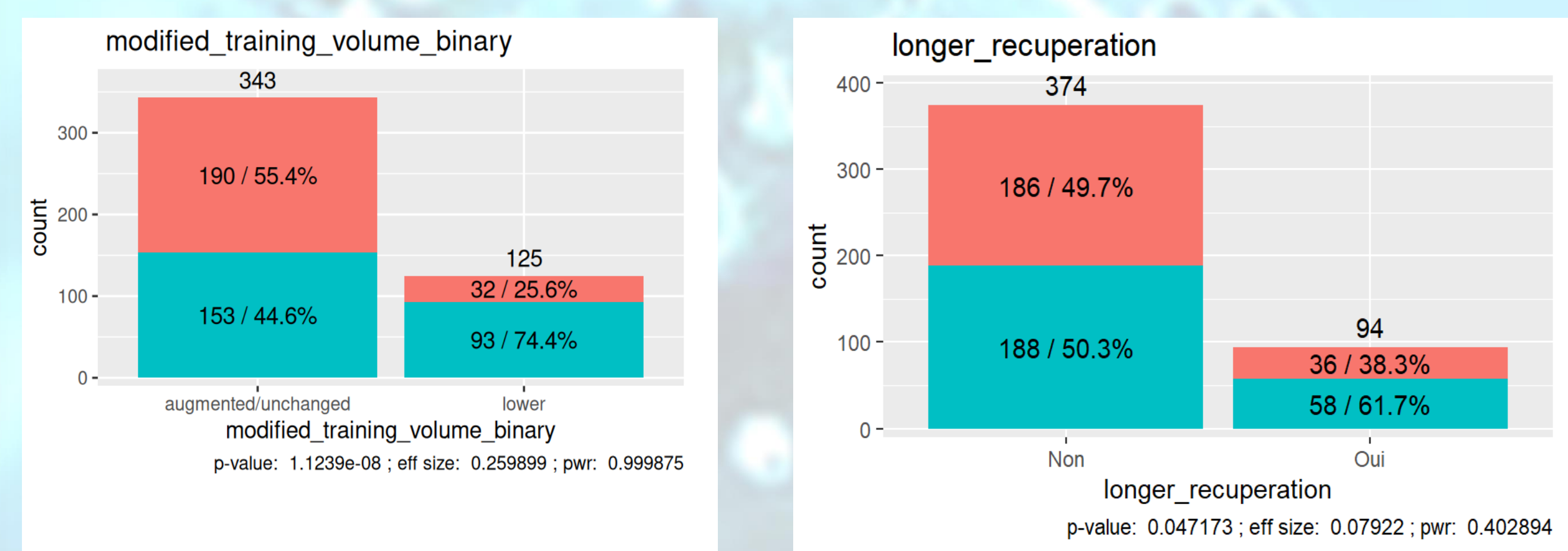
- Criteria for inclusion were:
- Person infected by Covid-19
 - Screened by PCR or antigenic test
 - Aged 18 years and more



Classic symptoms of Covid-19 infection were found in equal proportion between END (blue) and NEND (red)



No between group difference for persistence of symptoms and difficulties related was found when training resumed



When volume training is decreased => the decrease in END is significantly greater compared to NEND (p<0.001)

When longer recuperation is needed after training sessions=> END need a longer recuperation compared to NEND (p<0.05)

Our results highlight that a Covid-19 infection induces specific changes in the training modalities of endurance trained athletes compared to non endurance trained athletes.

If the exact contribution of the respiratory system needs further investigations, it seems necessary to adapt the training after a Covid-19 infection especially in endurance athletes.

1.Stavrou, T. V., Kyriaki, A., Vavougiou, D. G., Fatouros, G. I., Metsios, S. G., Kalabakas, K., Karagiannis, D., Daniil, Z., Gourgoulidis, I. K., & Basdekis, G. (2022). Athletes with mild post-COVID-19 symptoms experience increased respiratory and metabolic demands : A cross-sectional study. *Sports Medicine and Health Science*

2.Amann, M. (2012). Pulmonary system limitations to endurance exercise performance in humans: Pulmonary system and exercise performance. *Experimental Physiology*, 97(3), 311-318.