ABC Study on Heart Disease Foundation Ets

Physical activity, blood pressure, and anxiety in cardiovascular outpatients: a cross – sectional analysis

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INTRODUCTION & AIM

- Regular physical activity is known to reduce cardiovascular (CV) risk, but its potential role in modulating the impact of anxiety on CV parameters remains underexplored.
- To investigate the role of anxiety and physical activity on cardiovascular parameters.

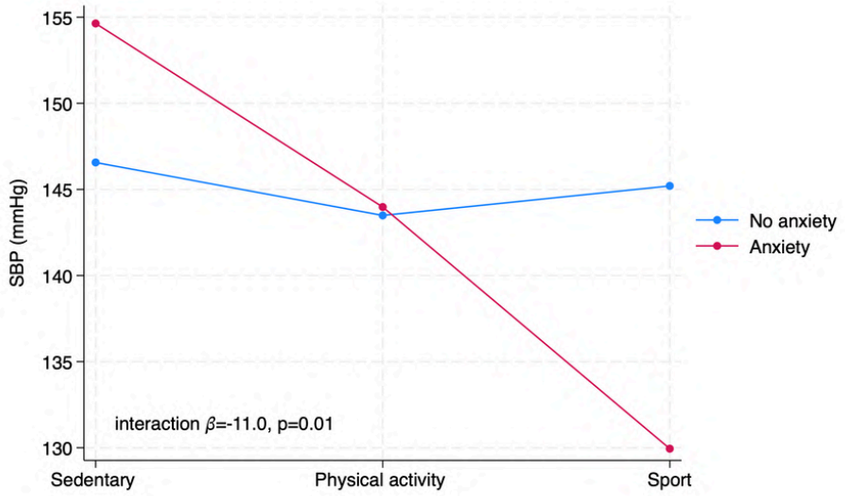
METHODS

- Cross-sectional study
- **203 consecutive** cardiological outpatients were enrolled
- Stratified into **3 groups** according to physical activity levels (sedentary/physical activity/sportive) based on **WHO guidelines** (1)
- Anxiety was assessed using a doctor-administered psycho-emotional questionnaire
- Blood pressure (BP) and resting heart rate (RHR) were assessed twice, 5 minutes apart, and compared between groups
- Data were analyzed using univariable and fully adjusted linear regression models

RESULTS

- Mean age was 62.7 ± 12.5 years; 53% were male; 81 (40%) were hypertensives
- Mean BP was 144±21/84±10 mmHg and RHR 67±12 bpm
- Sedentary: 54 (26%), physical activity: 109 (54%), sportive: 40 (20%); anxiety reported by 68 patients (34%), more frequently in females (χ^2=10.5, p=0.001)
- Physical activity was associated with **lower SBP** (β=–3.8±1.9; p=0.04); anxiety with **higher RHR** (β=4.5±2.0; p=0.02)
- Formal interaction: anxiety was associated with higher SBP (β=10.1±4.8; p=0.03), while physical activity **reduced the impact of anxiety on SBP** (interaction β=–11.0±4.4; p=0.01)
- Data kept similar for second measurement.

1. (Bull FC, Al-Ansari SS, Biddle S, et al World Health Organization 2020 guidelines on physical activity and sedentary behaviour British Journal of Sports Medicine 2020;54:1451-1462.)



CONCLUSIONS

- **Physical activity & SBP**: physical activity is associated with lower SBP values.
- **Anxiety patients**: The protective effect of physical activity is more pronounced in those with psychological anxiety.
- Physical activity might be **recommended** to improve cardiovascular function, particularly in patients with anxiety.

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.