

# Impact of psychological stress on Diastolic Blood Pressure and interaction with Coronary Artery Disease: a Multicenter study

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## INTRODUCTION & AIM

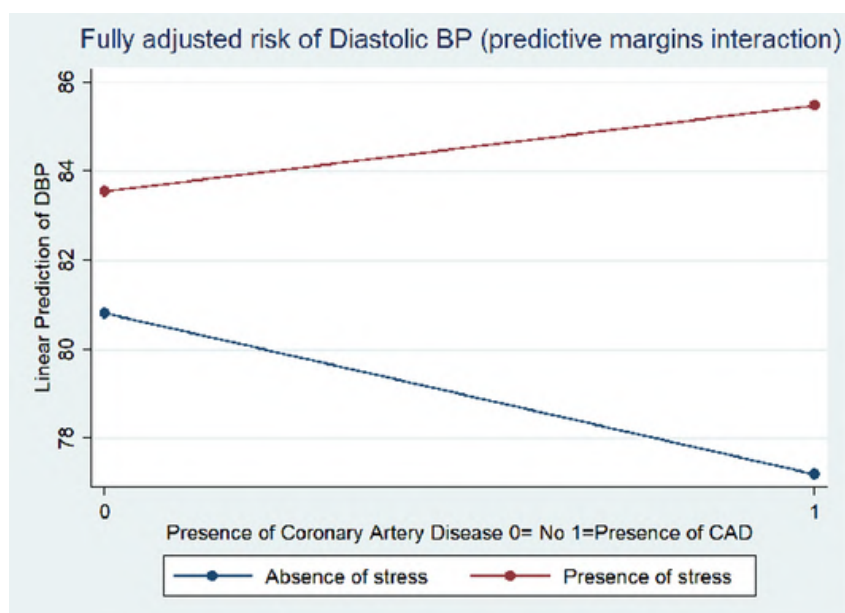
- Psychological stress has emerged as a driver of cardiovascular disease (CVD).
- Quantitative association between stress levels and objective hemodynamic markers remains to be fully elucidated.
- To evaluate the relationship between stress and blood pressure parameters

## METHODS

- **Cross sectional** study
- **681 consecutive cardiological outpatients** from **3 centers** were enrolled
- Stratified into 2 groups according to the presence or absence of stress symptoms based on a self-assessment psycho-emotion questionnaire .
- Blood pressure (BP), heart rate (HR) were assessed twice and compared between groups.
- The data were analyzed using adjusted linear regression models.

## RESULTS

- Mean age was  $64.3 \pm 16.2$  years; 44% were female; 109 (16%) were CAD, 261 (38%) reported psychological stress.
- Mean BP was  $146 \pm 22 / 81 \pm 11$  mmHg and HR  $71 \pm 13$  bpm.
- 2 groups shared most demographic and clinical characteristics
- **Stress** emerged was associated with **increased DBP** ( $\beta = 3.5 \pm 0.8$ ;  $t = 4.2$ ;  $p < 0.0001$ ), whereas neither with SBP nor HR.
- Positive **interaction** between **stress** and **CAD on DBP** ( $\beta = 6.5 \pm 0.23$ ;  $t = 2.4$ ;  $p = 0.01$ ).



## CONCLUSIONS

- **Stress and DBP Relationship:** stress may influence cardiovascular hemodynamics by increasing DBP.
- **CAD patients:** the effect is mainly observed in CAD patients.
- **Stress Screening Importance:** Screening for stress is essential, particularly in patients with **CAD**, due to their heightened hemodynamic sensitivity to psychological factors.

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