

Assessment of the Stress, Anxiety, and High-Mood (SAHM) scale in evaluating the influence of psychological state on cardiovascular function

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Background

- Psychological disorders are known to affect cardiovascular (CV) function, but a measure of their cumulative impact on CV health is still lacking.

Purpose

- To investigate the association between psychological state and its effect on CV functional state, by using a new score “SAHM” considering:
 - stress
 - anxiety
 - high-mood

Methodology

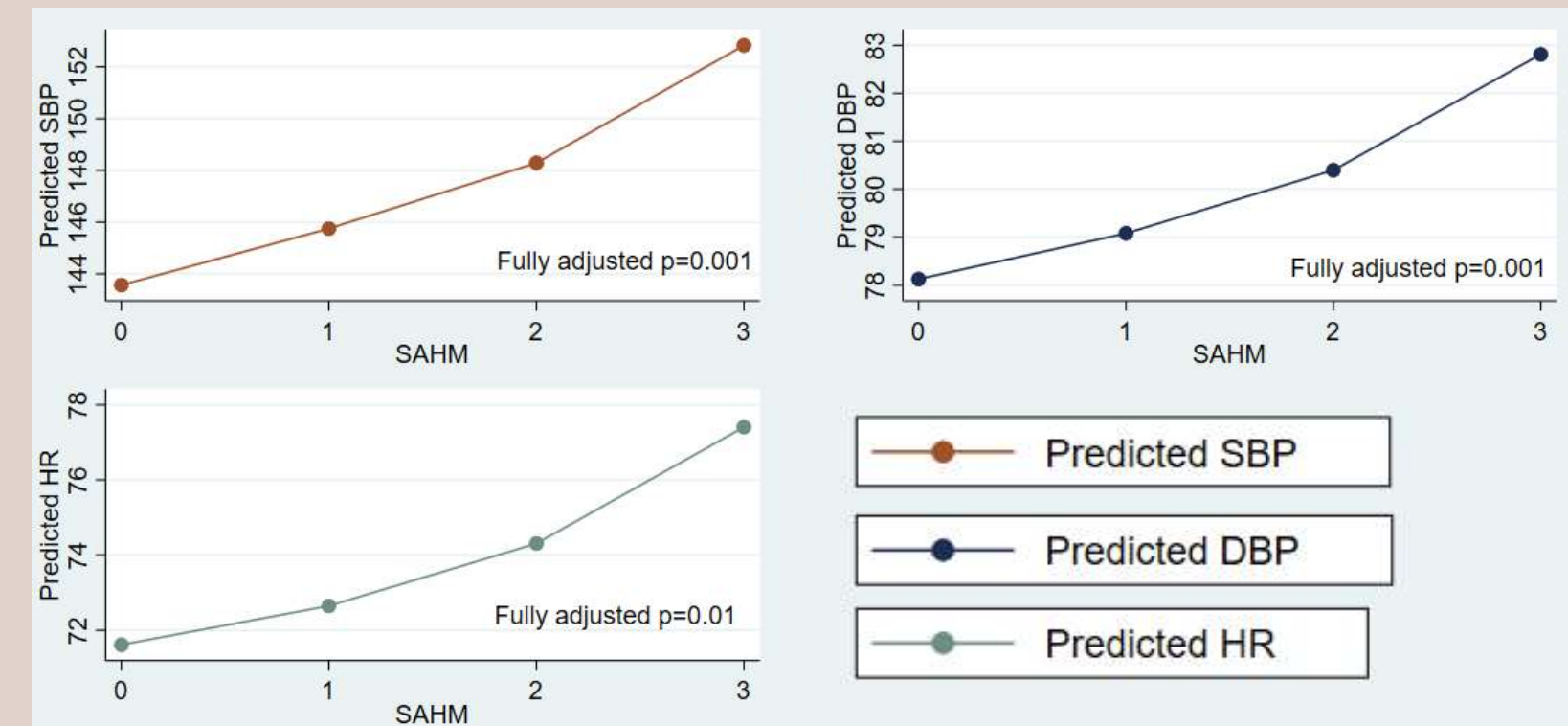
- A total of **434** consecutive clinical outpatients over the past 6 years were included.
- Patients were grouped by presence/absence of stress, anxiety, or high-mood based on a **doctor-administered psycho-emotion questionnaire**.

- Symptoms lasting from at least 3 months were classified as “exposed”; past or absent symptoms formed the control group.
- A composite **SAHM score (0-3)** was calculated by summing the presence (1) or absence (0) of each disorder: stress, anxiety and high-mood.
- CV function parameters were assessed and compared between groups.

Results

- Mean age was 66 ± 17 years and 56% were female.
- Mean blood pressure was $147 \pm 22 / 79 \pm 11$ mmHg; mean heart rate was 73 ± 14 bpm.
- Stress was reported in 38%, anxiety in 53%, high-mood in 24%. Demographic and clinical characteristics were similar between exposed and unexposed, though psychological symptoms were more frequent in women.

- At multivariable linear regression, the SAHM score was significantly associated with: increased systolic BP ($\beta \pm SE = 3.3 \pm 1.0$, $p=0.001$), diastolic BP ($\beta \pm SE = 1.7 \pm 0.5$, $p=0.001$), heart rate ($\beta \pm SE = 1.7 \pm 0.6$, $p=0.01$).
- Findings were consistent on repeated CV measurements.



Conclusion

Higher **SAHM scores were positively associated with increased SBP, DBP, and HR**, indicating a significant impact of psychological conditions on CV functional status.