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HADS-A in White Coat Hypertension: Limitations and Future Directions

LETTER TO THE EDITOR

To the Editor,

The recent study by Güler et al[1] published in your journal was read with great interest. In this study, the researchers applied the Hospital Anxiety and Depression Scale-Anxiety (HADS-A) score to explore the relationship between white coat hypertension (WCH) and anxiety. The findings of this investigation provide valuable insights into this connection. However, several issues remain concerning the methodologies and interpretations employed in this study. These challenges necessitate further investigation.

Addressing these limitations will improve the capacity to interpret the research findings with enhanced accuracy and offer valuable guidance for future studies.

SELECTION BIAS AND UNIVERSALITY

The study excluded individuals who already had anxiety disorders. This led to a critical selection bias. It is known that long-term anxiety disorders can make autonomic reactivity stronger. They may also exacerbate the short-term increases in blood pressure (BP) within a clinical setting.[2] Since the study left out these patients, it probably underestimated the connection between anxiety and WCH. This connection is especially obvious in a certain subgroup.

In the real world, a substantial proportion of hypertensive patients also experience anxiety disorders, with estimates ranging from approximately 20%-30%. Excluding such patients from the study would result in conclusions that are applicable only to individuals who are "free of anxiety disorders," thereby failing to offer valuable insights for the clinical management of those with comorbid conditions.[3,4]

To execute a more in-depth review of the risk associated with WCH, future studies should incorporate a diverse sample population and employ statistical methods, such as multivariate regression, to adjust for the effects of anxiety disorders. This approach will facilitate a more accurate understanding of the impact that anxiety disorders have on WCH.

AMBIGUITY IN CROSS-SECTIONAL DESIGN AND CHRONOLOGICAL ORDER

The cross-sectional design has an inherent limitation as it restricts causal inference. The authors said there's a positive link between HADS-A scores and WCH. However, the chronological relationship is not clear. Does anxiety make people more likely to get WCH? Or does stress in certain situations, like in medical settings, raise both anxiety and BP for a short time? Long-term studies, like the PAMELA (a population-based study using ambulatory blood pressure monitoring to define hypertension phenotypes) cohort, show that it is important to check BP and psychological states repeatedly over time to figure this out.[5]

Dynamic changes. When dynamic BP monitoring is combined with real-time anxiety measurements (like ecological momentary assessments), one can better figure out whether anxiety comes before or after BP peaks in clinical settings.

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CLINICAL RELEVANCE OF HOSPITAL ANXIETY AND DEPRESSION SCALE-ANXIETY DIFFERENCES

Although the difference in HADS-A scores between the WCH group (9.0 ± 2.9) and the persistent hypertension (SustHT; hypertension confirmed in both clinic and daily life) group (6.6 ± 2.6) is statistically significant, its clinical relevance is still questioned. The specificity with a cutoff value greater than 6 is relatively low (53.6%). This means that more than half of non-WCH patients may still be wrongly classified as WCH just based on their anxiety scores.

This overlap might show unmeasured confounding factors. For example, there is socioeconomic stress and the chronic disease burden. These factors are separately related to anxiety and hypertension. Economic pressures and limited healthcare access can heighten situational anxiety during clinic visits. These factors may also lead to persistent hypertension by promoting unhealthy stress-coping mechanisms, such as poor diet and inactivity. By including these variables in a multivariate model, one can better understand the specific impact of anxiety on WCH.

CONCLUSION

While Güler et al[1] commendably highlight the interplay between anxiety and WCH, the study's limitations underscore the need for methodological refinements. Prospective designs and rigorous control for socioeconomic and behavioral confounders are essential to advance this field. Caution is urged in interpreting HADS-A as a standalone diagnostic tool for WCH and encourage the authors to explore these avenues in future work. Such efforts will not only clarify the anxiety-WCH relationship but also inform targeted interventions to mitigate cardiovascular risks in vulnerable populations.

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