

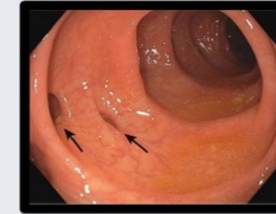
Stress in Diverticular Disease: A Comparative Study

Mercer University Physician Assistant Program

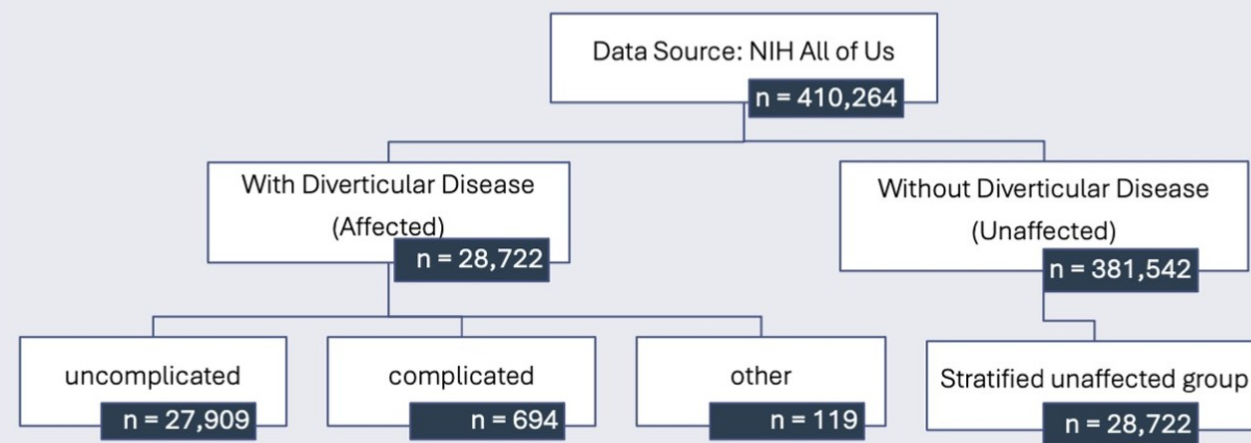
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INTRODUCTION

- Diverticulosis is the formation of pouches in the colonic wall, and when inflamed, it becomes diverticulitis, characterized by abdominal pain, fever, and bowel changes and is influenced by age, weak colonic walls, low fiber intake, and stress.¹
- As with other chronic inflammatory intestinal diseases, most patients experience higher levels of distress.²
- Stress is a known aggravating factor in diverticular disease,³ yet little research has explored its relationship with race/ethnicity. This study examines the impact of stress and racial disparities in patients with diverticular disease.



METHODS



- Study Population: 28,722 individuals with diverticular disease and matched controls (stratified by age) from the NIH All of Us Research Program (2017–2022).
- The 10-item Cohen Perceived Stress Scale (PSS) assessed mean stress levels.
- Analysis Approach:
 - Within-group: Compared stress levels in affected individuals (uncomplicated vs. complicated cases, based on ICD-10 codes).
 - Between-group: Compared participants with and without diverticular disease.
- Statistical Test: Two-way ANOVA examined the effects of disease status and race on stress levels.

RESULTS

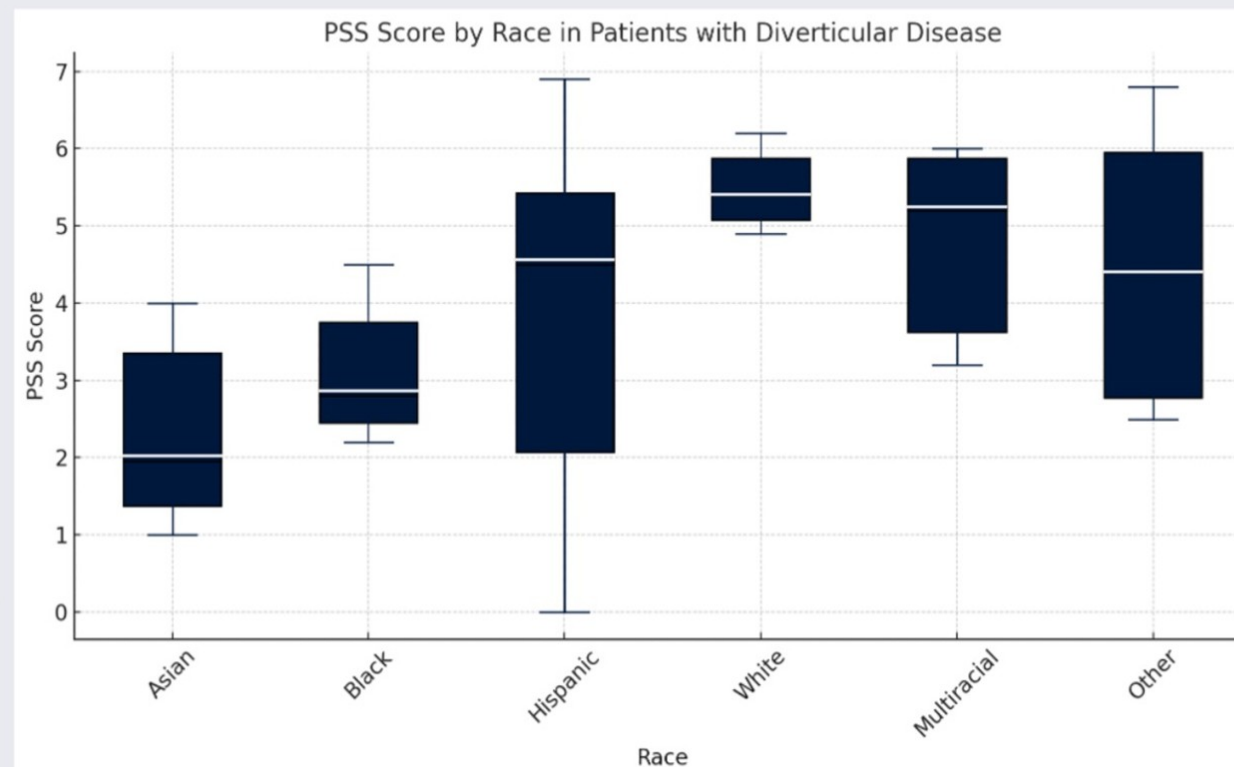
The study highlights the complex link between race/ethnicity and perceived stress:

Patients with diverticular disease reported significantly higher stress levels than those without ($p < 0.05$).

No significant difference in PSS scores was found between complicated and uncomplicated cases ($p = 0.91$).

However, significant differences in perceived stress were observed across racial groups ($p < 0.01$, across groups)

- White participants reported the highest median PSS scores (median: 5.4), indicating greater perceived stress.
- Asian participants had the lowest median scores (1.9), suggesting lower overall stress levels.
- Hispanic participants showed the greatest variability in PSS scores, reflecting a broad range (range: 6.9) of stress experiences.
- Those identifying as multiracial had elevated stress levels, with a median (5.2) just below that of White participants (5.4).



DISCUSSION

This study highlights the psychological impact of diverticular disease (DD), showing significantly higher perceived stress (PSS) in diverticular disease patients compared to those without, aligning with prior research on chronic GI conditions and emotional distress.^{5,6} Notably, stress levels did not vary with disease severity, suggesting that the diagnosis itself may be psychologically taxing.

Racial and ethnic differences in stress were observed. While studies typically show higher stress in Black and Hispanic populations due to systemic inequities^{7,8}, White participants reported the highest median PSS scores. This may reflect healthcare expectations, disease perception, or socioeconomic factors.⁹ Hispanic participants exhibited high variability in stress, likely due to cultural and socioeconomic diversity. Multiracial individuals also showed elevated stress, consistent with research on the challenges of navigating multiple racial identities.¹⁰

The cross-sectional design captures only a snapshot of stress, without accounting for disease duration or coping over time. Additionally, imbalances in group sizes and the lack of exploration of social factors such as income, education, or access to care may have influenced the patterns of perceived stress observed. Despite these, the findings underscore the need for addressing both medical and psychosocial needs, particularly in racially diverse chronic illness populations.

CALL TO ACTION

Given the role that stress plays in exacerbating both the physical and emotional challenges of this disease, it is essential to address stress management as part of a holistic treatment plan to improve overall patient outcomes:

Provide
Screening for
Stress Levels

Regular use of validated mental health screening tools is recommended for patients with chronic conditions like diverticular disease, as studies show stress and reduced quality of life are common and screening improves patient-reported outcomes.¹¹

Encourage
Interdisciplinary
Care and Tailored
Referrals

Building interdisciplinary teams that include culturally competent mental health professionals improves patient engagement and outcomes, particularly in diverse populations experiencing high stress.¹²

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