Geographic Measures of Structural Racism for Health Equity:
A Scoping Review of the State of Play in the Literature

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Background

- The convergence of the COVID-19 pandemic with the 2020 Black Lives Matter protests highlighted the relationship between racism and health inequity.

- It also highlighted the need for tools that measure existing inequality across different geographic levels to mitigate the consequences of structural racism (SR).

- Many states and agencies used the CDC's Social Vulnerability Index (SVI) as a mitigation tool by using it to identify and tailor strategies for vulnerable populations, emphasizing that such measures help address structural racism by enabling the identification of more disadvantaged areas that typically comprise larger shares of minorities.

- However, it is unclear which of the various structural racism measures offers the most helpful benchmark for assessing whether measures such as the SVI can address structural racism. Clarity matters for creating and assessing health equity promotion strategies.

Objective

- To describe measures of SR that enable comparisons of the relative extent of SR across geographic units such as cities, counties, or states, with a focus on the geographic levels evaluated, the domains selected to operationalize racism, and the racial or ethnic groups included in measurement.

- This scoping review is a part of a broader exploration of how statistical measures can be used to promote racial health equity.
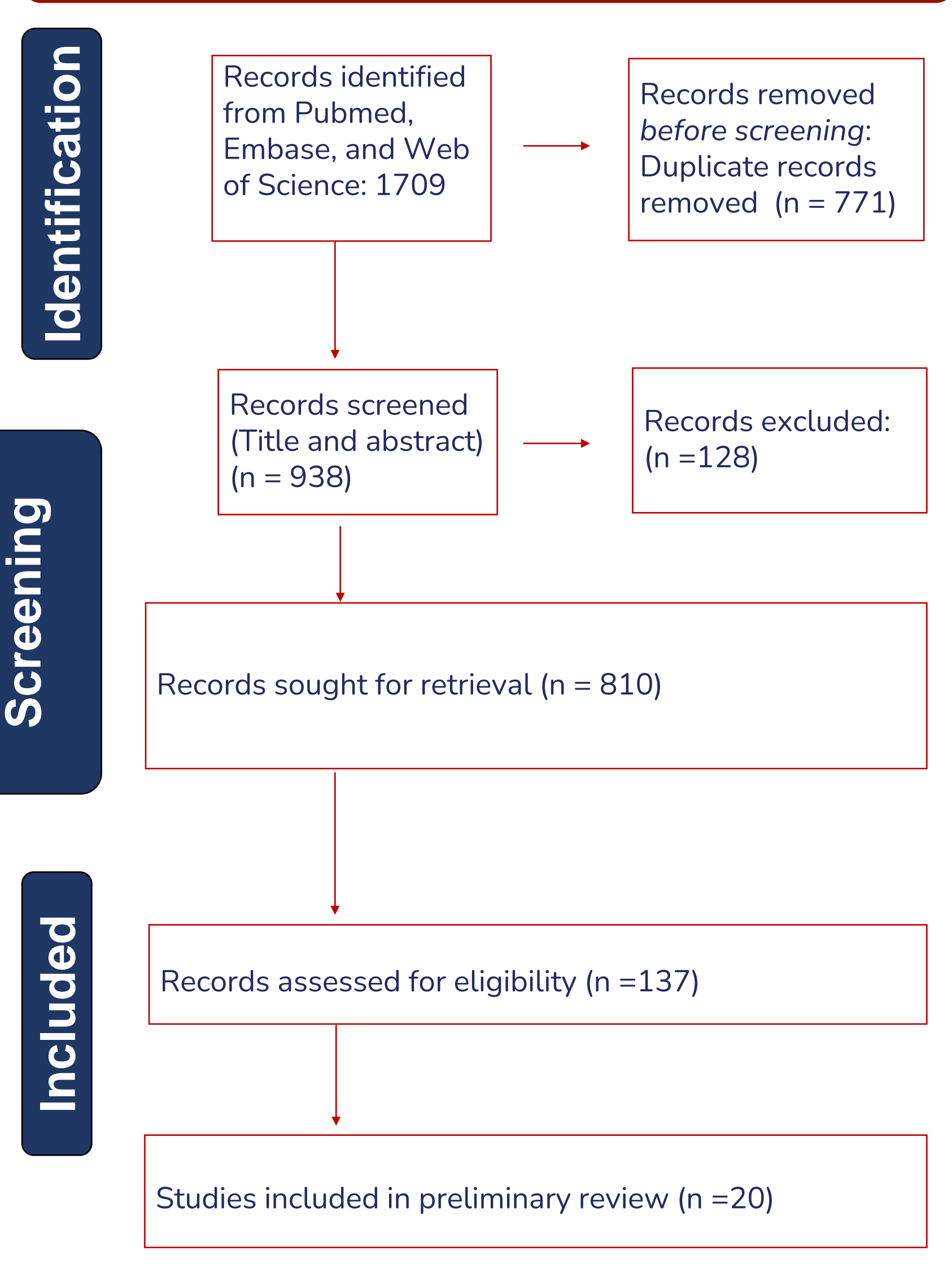
Methods

Search
Embase, Pubmed, & Web of Science
("Systemic racism" OR "structural racism" OR "institutionalized racism" OR "institutional racism") AND (measure* OR scale* OR index* OR "health inequities")
2010-2022

Screen
Title and abstract screened using Covidence
Replicated by A.E.

Extract & Analyze
Full text screened & data extracted and analyzed using Excel
Replicated by A.E.

Findings

- An initial twenty studies were identified as meeting inclusion criteria.

- Measures assessed levels of SR at the neighborhood (N=9), state (N=8), and county (N=4) level.

- Domains included segregation and redlining (N=16), socioeconomic status (N=13), criminal justice (N=8), and political participation (N=2).

- Seven studies operationalized SR solely through redlining or racial residential segregation. Domains comprised of a combination of novel or previously validated indicators (N=7) or indices specifically created for population health research (N=6).

- Most studies (N=15) examined SR affecting Black people; N=5 articles also examined non-Black minorities.

Identification of Studies

Identification
Records identified from Pubmed, Embase, and Web of Science: 1709
→ Records removed *before screening*: Duplicate records removed (n = 771)

Screening
Records screened (Title and abstract) (n = 938)
→ Records excluded: (n =128)

Records sought for retrieval (n = 810)

Included
Records assessed for eligibility (n =137)

Studies included in preliminary review (n =20)

Conclusion

- While state- and city-level policies are major avenues through which SR is sustained, most studies captured racism at lower geographic levels (with lacking clarity regarding the feasibility of aggregating data to higher levels).

- Still, in principle, N=6 measures enable comparing tools such as the CDC's SVI regarding their capture of SR.

- Yet, questions remain regarding the most fitting domains and indicators for measuring SR. Studies largely relied on redlining and residential segregation to quantify structural racism. While these measures are an important concretization of SR, drawing on a wider set of manifestations matters for a more comprehensive assessment.

- The relative lack of measures of SR affecting non-Black minorities is concerning and should be corrected.

- As agencies and policymakers increasingly seek to recognize the various contributors to SR, suitably comprehensive measures must be available to assess the impact of extant policies, design new mitigation strategies, and monitor progress.

Next Steps

The remaining articles collected via a replication search will be assessed for their relevance with findings examined and synthesized as part of this investigation to map out existing measures of structural racism.

Acknowledgements

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