

# Mapping Neighborhood-Level Stigma: A Scoping Review of Geospatial Approaches and Influences on Health

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## Introduction

### Background

- Stigma is a well-documented determinant of adverse health outcomes across identities and experiences including race, gender, sexuality, socioeconomic status, substance use, HIV status, and disability.<sup>3</sup>
- Most stigma research has focused on the individual-level.<sup>3</sup>
- Less is known about **stigma as a structural or contextual feature** of neighborhoods and other localized geographic units.<sup>1,5,7</sup>
- Emerging evidence suggests neighborhoods can become symbolically associated with deviance, disorder, or moral failure.<sup>1,5,7</sup>
- Neighborhood-level stigma** is often operationalized through:
  - Concentrated disadvantage<sup>4</sup>
  - Racialized spatial segregation<sup>2</sup>
  - Crime labeling<sup>1</sup>
  - Environmental neglect<sup>7</sup>
  - Community-level attitudes toward marginalized populations<sup>4,6</sup>
- Geospatial stigma is frequently linked to structural racism, housing policy, and public health disparities.<sup>2,6</sup>
- However, relatively few studies explicitly define or theorize stigma as a structural process.<sup>3</sup>

### Objectives

- Systematically review existing literature on geospatial stigma.
- Focus specifically on neighborhood-level (or equivalent) units of analysis.
- Identify how stigma is defined and measured at localized geographic levels.
- Synthesize evidence on neighborhood-level stigma as a contextual predictor of health.
- Identify gaps in the literature to inform future research and intervention development.

## Methodology

### Design

- Systematic scoping review of literature on geospatial stigma
- Focus on neighborhood-level or equivalent geographic units

### Software

- Covidence used for abstract and full-text screening, tagging, and extraction

### Literature Search Strategy

Search terms included combinations of stigma and geographic unit:

- Stigma-related Terms: “Stigma,” “Violence,” “Hate crimes,” “Discrimination,” “Racism,” “Homophobia,” “Transphobia,” “Biphobia,” “Xenophobia,” “Diabetes stigma” (or synonym)
- Geographic Terms: “Neighborhood,” “Zip code,” “Census tract,” “Census block,” “Street,” “Geospatial clustering,” “Geospatial,” “Ecological unit” (or synonym)
- English-language, peer-reviewed studies with original data

### Screening Process

- Initial search: n = 3,804 abstracts
- Double-screened abstracts and full texts using Covidence
- Full-text reviews prioritized Methods sections for inclusion decisions

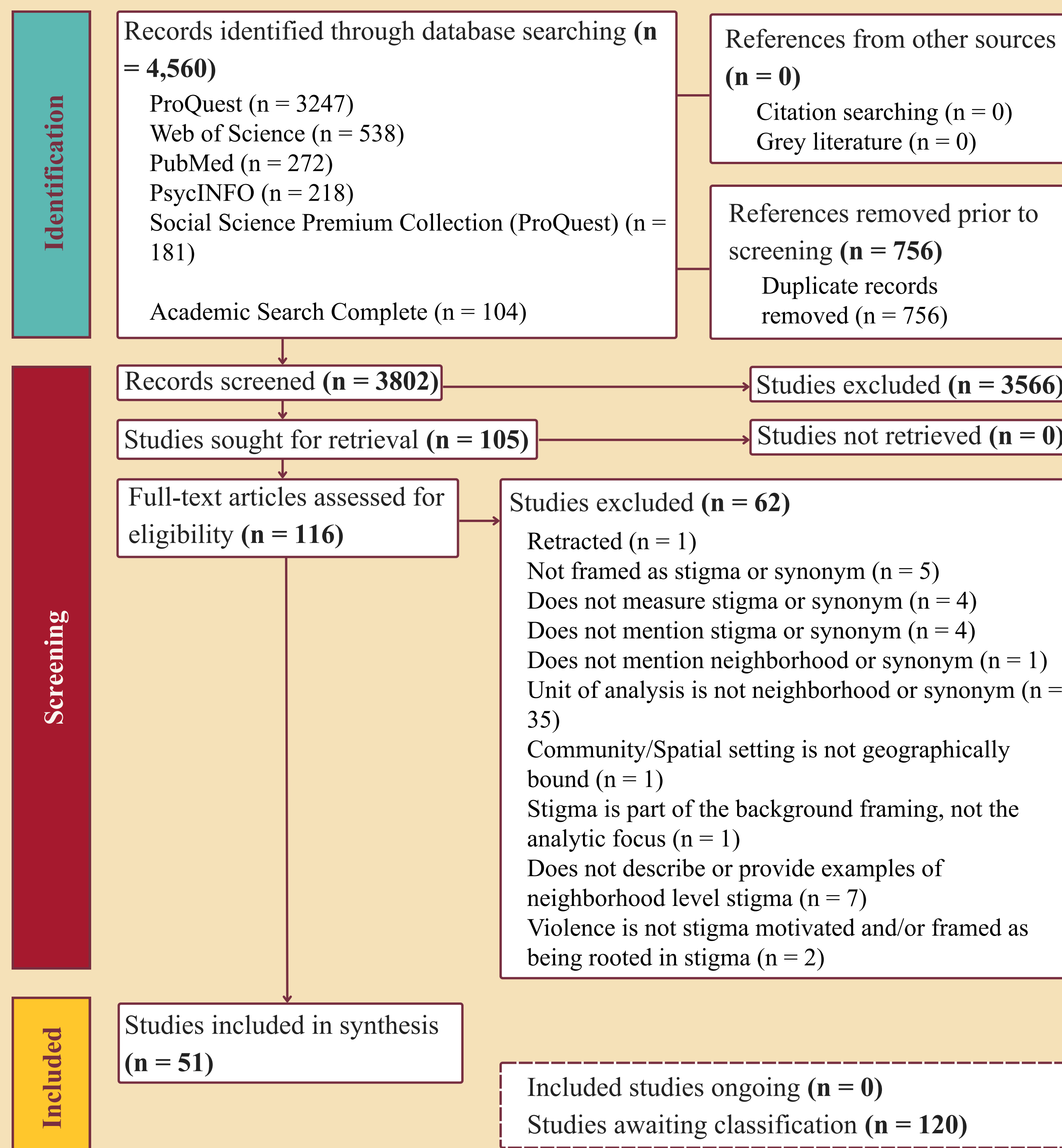
### Final Selection

- n = 237, 6% identified for full text review (n = 83, 35% remaining and n = 37, 15% conflicts awaiting reconciliation)
- n = 51, 22% studies selected for extraction so far
- n = 0 extractions complete

### Data Extraction & Analysis to Follow

- Extraction of geospatial stigma definitions and measures
- Identification of stigma-motivated exposures (e.g., violence)

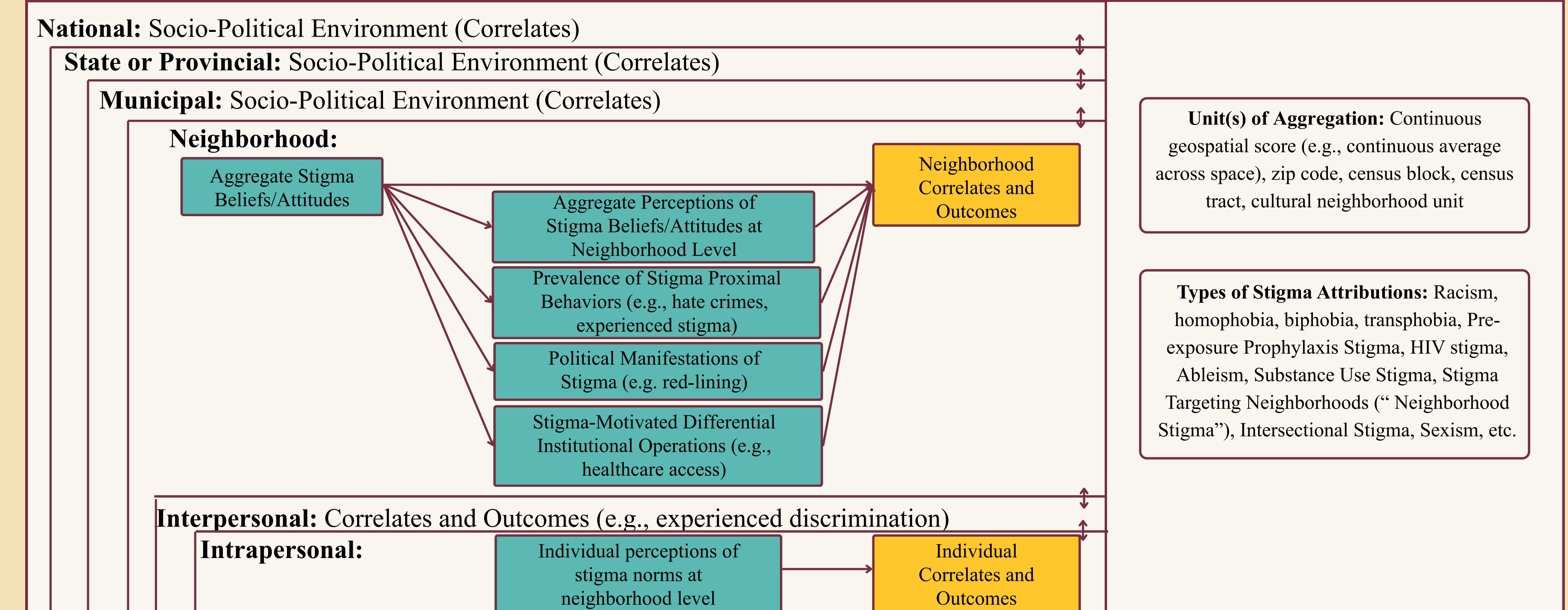
## Flow Diagram



## Inclusion and Exclusion Criteria

	Abstract Review	Additional Criteria for Full-Text Review
<b>Inclusion Criteria</b>	<ol style="list-style-type: none"> <li>In English</li> <li>Original peer-reviewed research (must involve data collection or data analysis either quantitative or qualitative, for example surveys, interviews, “cohort study,” etc.)</li> <li>Stigma (also can be “violence,” “hate crimes,” “discrimination,” “racism,” “homophobia,” “transphobia,” “biphobia,” “xenophobia,” “diabetes stigma” or other synonym.</li> <li>Unit of analysis should be neighborhood or synonym (also can be zip code, census tract, census block, “street,” “geospatial clustering,” “geospatial,”</li> </ol>	<ol style="list-style-type: none"> <li>Geographically bound community/spatial setting confirmed</li> <li>Stigma is directly measured (e.g., neighborhood attitudes, norms) or clearly framed as indirectly measured (e.g., stigma-motivated hate crimes)</li> <li>Violence explicitly motivated by and/or framed as rooted in stigma</li> <li>Violence explicitly motivated by and/or framed as rooted in stigma</li> </ol>
<b>Exclusion Criteria</b>	<ol style="list-style-type: none"> <li>Non-English</li> <li>Commentaries, study protocols, systematic/scoping reviews, narrative reviews, or otherwise not involving data collection.</li> <li>Does not mention stigma or synonym.</li> <li>Does not mention neighborhood or ambiguous synonym.</li> <li>Explicitly states a different level of geospatial analysis (e.g., state, country).</li> </ol>	<ol style="list-style-type: none"> <li>Community not geographically bound (e.g., social media communities, diasporas)</li> <li>Stigma not measured or not framed as stigma-relate</li> <li>Violence not stigma-motivated or not framed as stigma-relate</li> <li>Qualitative studies focus only on internalized or interpersonal stigma</li> </ol>

Figure 1: Conceptual Diagram of Stigma in Neighborhood-level Social Environments



## Results / Next Steps

### Current Progress

- Final results have not yet been obtained. Data extraction and synthesis are still in progress.

### Common Trends & Preliminary Observations

- Where people live shapes what they get: In highly segregated U.S. cities, poverty for Black children reaches 43.7% compared to 14.9% for White children.
- Basic services often fail the people who need them most: In Los Angeles, 28% of unhoused residents have to go to the bathroom outside, and 19% use buckets because bathrooms are not available.
- Problems cluster in specific areas: Examples include Virginia, where policing “hot spots” produced spatial clustering of arrests (Moran’s I up to 0.30), and city services such as elder care showed strong clustering in wealthy neighborhoods (Moran’s I = 0.78).

### Next Steps

- Confirm the final full-text sample of neighborhood-level geospatial stigma studies.
- Complete remaining full-text screening & conflict reconciliation using inclusion criteria.
- Extract and summarize how stigma is defined and measured at the neighborhood level.
- Identify patterns to clarify gaps in neighborhood-level stigma research.

## Conclusion

### Future Steps/Recommendations for Research

- The rest of this project should consist of finalizing full-text screening and extracting relevant information on neighborhood-level geospatial stigma.
- Future research on this topic should **prioritize diverse geographic settings and populations** to better understand how stigma affects all communities.
- Researchers should focus specifically on historically marginalized or excluded groups to **address gaps in neighborhood-level stigma research**.

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## References

