

Racial Disparity in Chemical Exposure and Uterine Fibroids: A Scoping Review

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Corresponding author:

Anuli Njoku

njokua3@southernct.edu

Author Affiliation:

Southern Connecticut State University.

Njoku, A; Sawadogo, W; Pierce, T; Plummer, F; Al-Hassan, M; Tohura, S; Ibrahim, N; Sirko, A.

ADMINISTRATIVE INFORMATION**Support** - No support.**Review Stage at time of this submission** - Data extraction.**Conflicts of interest** - None declared.**INPLASY registration number:** INPLASY202670056**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 16 July 2026 and was last updated on 16 July 2026.**INTRODUCTION**

Review question / Objective To systematically review and summarize the literature on chemical and everyday material risk exposures that may contribute to the racial disparity in uterine fibroids (UF) occurrence that disproportionately impacts Black individuals and how the racial disparity has been studied to date.

Background Harmful chemicals may contribute to numerous adverse health outcomes, including uterine fibroids. There is inequitable exposure to chemicals among communities of color and low income. Uterine fibroids occurrence disproportionately impacts Black individuals. This encourages the need to examine the role of disparate exposure to chemicals and their potential link to the development of uterine fibroids.

Rationale These chemicals, also found in personal care products (e.g; hair relaxers and dyes), plastics, and food packaging, often mimic hormones, promoting tumor growth and reducing

cell death in uterine tissue. There are racial disparities in uterine occurrence. There is inequitable exposure to chemicals among communities of color and low income; can racial disparities in uterine fibroid incidence be explained by inequitable exposure to chemicals?

METHODS

Strategy of data synthesis The following databases will be searched from inception to present: MEDLINE (PubMed), Embase (Ovid), Web of Science and Scopus. No language restrictions will be placed on the search. Additionally, a manual search will be performed.

Eligibility criteria Condition or domain being studied
Racial disparity in uterine fibroids

Population

Inclusion criteria:

1-studies that quantified the association between chemical exposures and racial disparity in uterine fibroids

2-studies that quantified the association between everyday material exposures and racial disparity in uterine fibroids
3-female (biological female)
4-peer reviewed articles
5-written in English

Exclusion criteria:

1-without Black participants
2-experimental studies
3-nonhuman subjects (animals or lab studies)
4-duplicate studies or overlapping data
5-article without full-text available or abstract-only papers or conference proceedings
6-reviews, commentaries, expert opinions, books.

Source of evidence screening and selection

Medline (PubMed), Embase(Ovid), Web of Science, Scopus and manual search.

Data management Three reviewers will independently screen the articles and extract the relevant information according to the PRISMA guidelines. Any disagreements were resolved via discussion to reach a consensus. The following information was extracted: the study details (title, location, publication journal, and year); study characteristics (design, participants, sample size, type of analysis); uterine fibroids (UF) occurrence, covariate-adjusted for, measures of effect, findings, and limitations.

Language restriction English.

Country(ies) involved United States.

Keywords Uterine fibroids; race/ethnicity; racial disparity; health disparity; chemical exposures; material exposures; toxins, environmental health; reproductive health.

Contributions of each author

Author 1 - Anuli Njoku.
Email: njokua3@southernct.edu
Author 2 - Wendemi Sawadogo.
Email: sawadogow1@southernct.edu
Author 3 - Taryn Pierce.
Email: piercet5@southernct.edu
Author 4 - Fabian Plummer.
Email: plummerf1@southernct.edu
Author 5 - Mousa Al-Hassan.
Email: alhassanm1@southernct.edu
Author 6 - Sharaban Tohura.
Email: tohuras1@southernct.edu
Author 7 - Alexandra Sirko.
Email: sirkoa1@southernct.edu
Author 8 - Nuha Ibrahim.
Email: ibrahimn2@southernct.edu