Determining the Impact of Gender and Racial Inequality on Diversity within Academic Anesthesiology and Surgery

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Review question / Objective: The aim of this systematic review is to determine the method of assignment of gender, race, ethnicity in studies of inequalities within academic anesthesiology and surgery.

Rationale: We are hoping to highlight the variability in gender, race, and ethnicity assignment in studies of professional diversity for the purposes of characterizing the strength of the evidence of such studies.

Study designs to be included: Any original research including case series, cohorts, systematic reviews, etc. (Does not including commentary).

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 27 January 2022 and was last updated on 27 January 2022 (registration number INPLASY202210129).
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**Condition being studied:** N/A.

**METHODS**

**Search strategy:**
- **a. Databases searched:** SCOPUS and PubMed
- **b. Concepts to be searched:** race, ethnicity, gender, professional achievement, anesthesia, surgery
- **c. Both natural language and controlled language were used**
- **d. SCOPUS Search Strategy**
  - i. Identity: (cultural diversity) OR sexism OR (gender equity) OR (gender equality) OR diversity OR (sex factors) OR racism OR (racial groups) OR ethnicity
  - ii. Discipline: (surgery OR anesthesiology)
  - iii. Professional Achievement: (authorship OR biomedical research) OR (academic medicine) OR (leadership) OR achievement OR department OR promotion or (efficiency)
- **e. PubMed Search Strategy**
  - ii. Discipline: AND ("specialties, surgical" [mh] OR "anesthesiology" [mh])
- **f. Filters:** in the last 5 years, English
- **g. Sort by:** Most Recent.

**Participant or population:** Population of interest includes anesthesia and surgery professionals with terminal degrees (e.g. D.O., M.D., PhD, or equivalent).

**Intervention:** N/A.

**Comparator:** N/A.

**Study designs to be included:** Any original research including case series, cohorts, systematic reviews, etc. (Does not including commentary)

**Eligibility criteria:** Search will pull papers in all languages but only extract those in English. Search will pull papers from everywhere in the world but extract studies in the United States. Papers have to be published with full text available. Papers must be peer reviewed. Abstracts that have not been published as full manuscripts will be excluded.

**Information sources:** a. SCOPUS b. PubMed.

**Main outcome(s):** Method(s) of gender, ethnicity, and race assignment.

**Additional outcome(s):** Study setting, study size, study focus (e.g. Diversity in editorial board membership), reported missing assignment of gender, ethnicity, and race.

**Data management:**
- **a. The number of reviewers to be involved:** 2
- **b. How disagreements will be handled:** A third reviewer will adjudicate
- **c. Softwares to be used for screening and extraction:** Covidence
- **d. Statistical analyses to be performed:** none
- **e. References:** EndNote

**Quality assessment / Risk of bias analysis:** The quality assessment is not relevant because we are characterizing the methods used in each of the studies rather than the outcomes.

**Strategy of data synthesis:** Use descriptive statistics to assign various race, ethnicity, and gender.

**Subgroup analysis:** N/A.

**Sensitivity analysis:** N/A.
Language: Only articles published in English will be extracted.


Keywords: Gender, Race, Ethnicity, Professional Achievement, Identity, Surgery, Anesthesiology.

Dissemination plans: Submitting scientific abstract to a meeting and a peer-reviewed manuscript for publication.

Contributions of each author:
Author 1 - Varun Yarabarla - Author 1 will be responsible for the development and screening of the search strategy. Author 1 will also help draft and edit the manuscript. Email: varunya@pcom.edu
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Author 3 - Meghan Lane-Fall - Author 3 will adjudicate any discrepancies in the search strategy based on the initial screening done by Authors 1 and 2. Author 3 will also help draft and edit the manuscript. Author 3 serves as the principal investigator of this study. Email: meghan.lanefall@pennmedicine.upenn.edu