



Factors associated with health inequities in access to kidney transplantation in the USA: A Scoping Review



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Background

The kidney is the most needed organ for transplantation in the United States. However, demand and scarcity of this organ has caused significant inequities for historically marginalized groups. In this review, we report on the frequency of inequities in all steps of kidney transplantation from 2016-2022. Search criteria was based on the National Institute of Health's (NIH) 2022 list of health inequity populations. We outline steps for future research aimed at assessing interventions and programs to improve health outcomes.

METHODS

This scoping review was developed following guidelines from the Joanna Briggs Institute and PRISMA extension for scoping reviews. In July 2022, we searched Medline (via PubMed) and Ovid Embase databases to identify articles addressing inequities in access to kidney transplantation in the United States. Articles had to address at least one of the NIH's 2022 health inequity groups.

Figure 1. Flow diagram of study selection

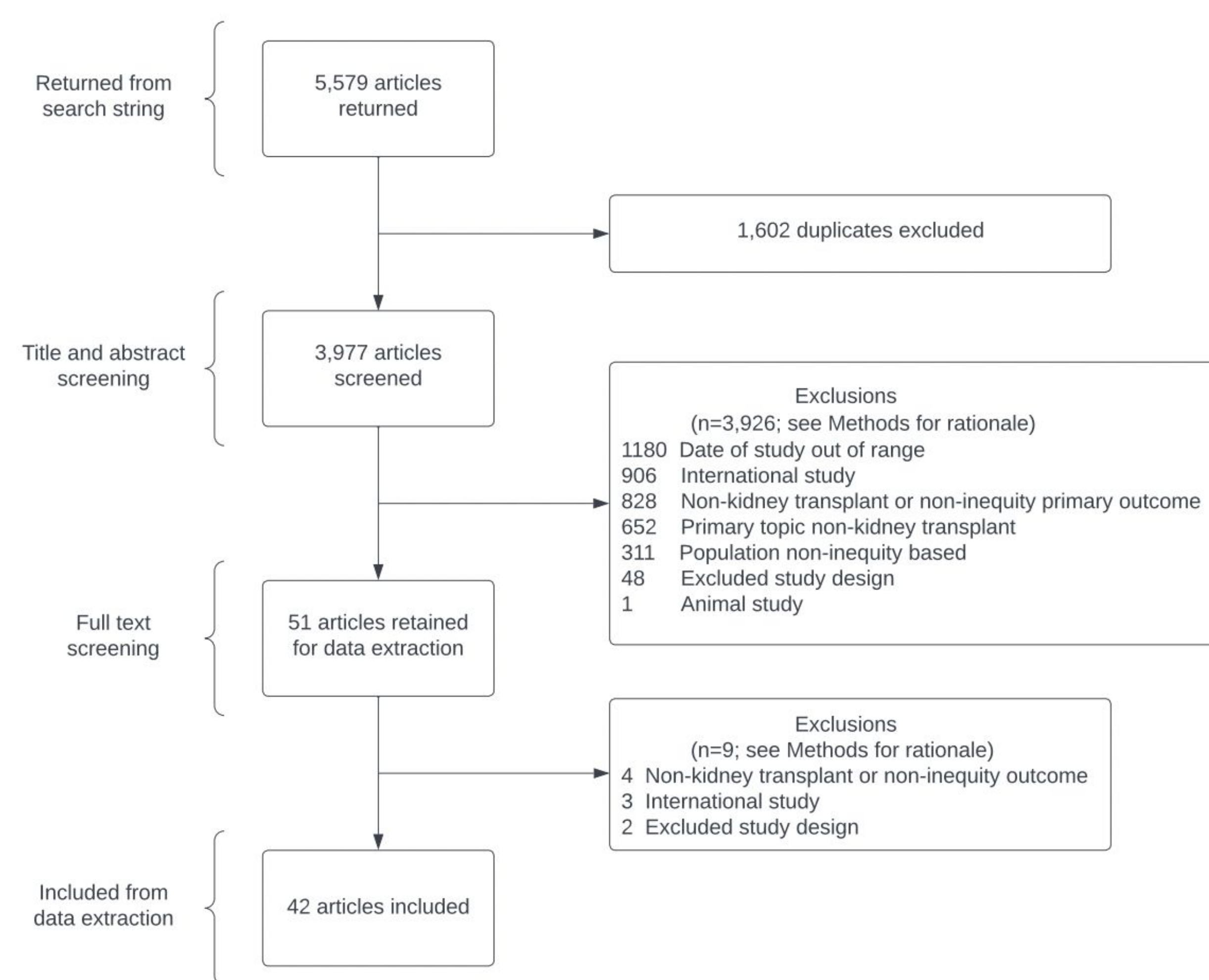
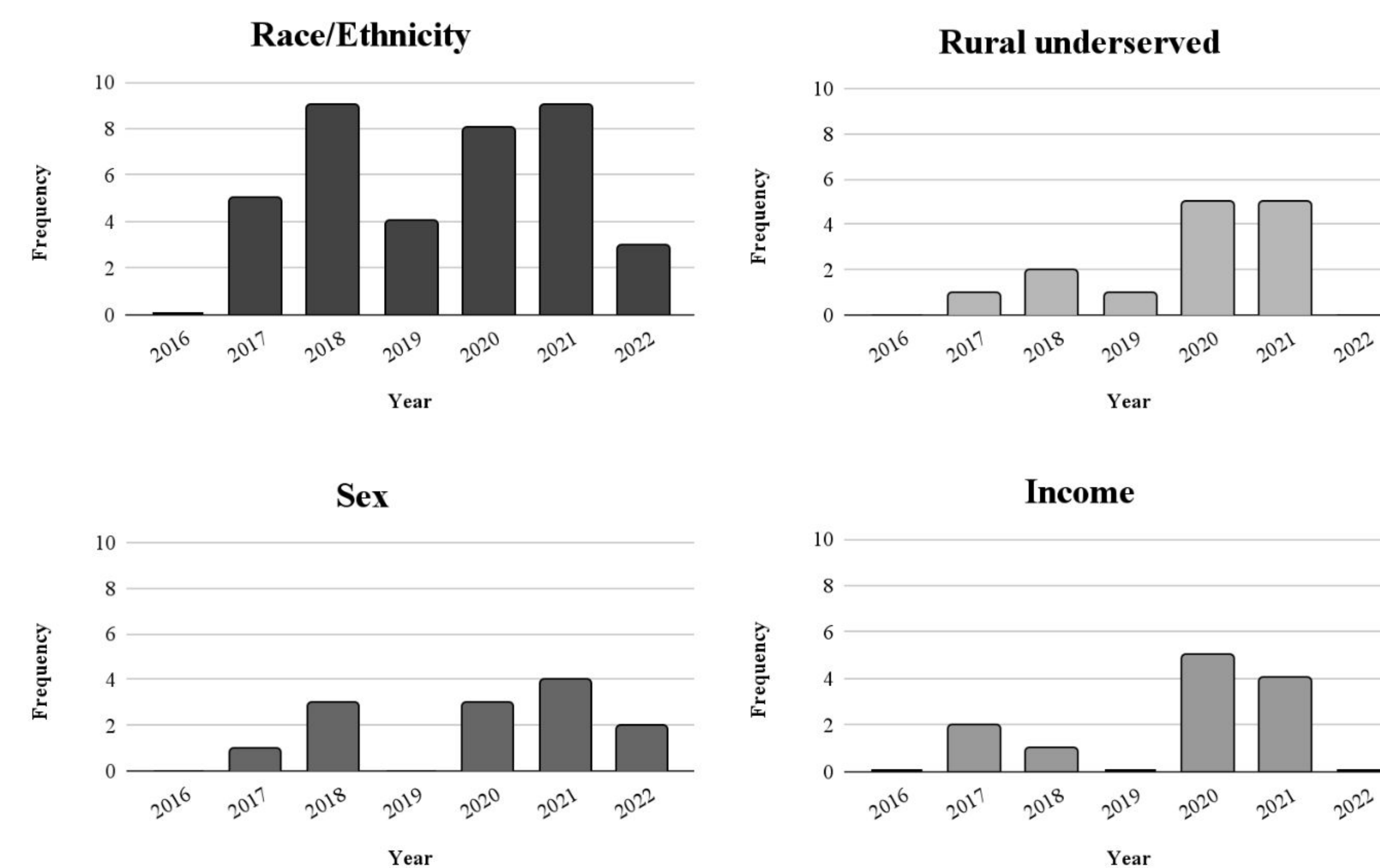


Table 1. Frequencies and Percentages of the Factors Associated with Inequities Among Included Studies

Factors Examined	Frequency (n = 42)	Percentage (%)
Race/Ethnicity	38	90.48
Rural underserved	14	33.33
Sex or Gender	13	30.95
Income	12	28.57
Education	11	26.19
Occupation	5	11.90
LGBTQ+	2	4.76
Study Design		
Retrospective Analysis of USRDS, SRTR, UNOS, OPTN, or Single Institution Data	26	61.90
Prospective Cohort Study	5	11.90
Literature Review	5	11.90
Cross-sectional Analysis	2	4.76
Case-Control	1	2.38
Clinical Trial	1	2.38
Scoping Review	1	2.38
Retrospective Cohort	1	2.38
Study Setting		
US Sample	20	47.62
Multiple State	6	16.67
Single State	5	11.90
Single Institution	5	11.90
N/A*	6	11.90

* Amended Scoping Review and Literature Reviews from "Study Setting"

Figure 2 - Frequency of Inequities Examined over Time



RESULTS

Our sample of 42 studies indicate that Black race, female sex or gender, and low socioeconomic status are negatively associated with referral, evaluation, and waitlisting for kidney transplantation. Furthermore, only two studies from our sample investigated LGBTQ+ identity since the NIH's addition of SGM in 2016 regarding access to transplantation. Lastly, we found no detectable trend in studies for race/ethnicity or sex or gender inequities between 2016-2022

CONCLUSION

Investigations in inequities for access to kidney transplantation for the two most studied groups, race/ethnicity and sex or gender, have shown no change in frequencies. Regarding race and ethnicity, continued interventions focused on educating Black patients and staff of dialysis facilities may increase transplant rates. Studies aimed at assessing effectiveness of the Kidney Paired Donation program are highly warranted due to incompatibility problems in female patients. The sparse representation for the LGBTQ+ population may be due to a lack of standardized data collection for sexual orientation. We recommend this community be engaged via surveys and further investigations.

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