

Understanding Preferences for Genetic Testing in Minoritized Populations: A Review of Heterogeneity Analyses in Stated Preference Research

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Introduction

- To advance equitable implementation of genomic medicine, it is important to understand whether and how preferences for genetic testing may differ among racial and ethnic subgroups.
- Objectives: Improve understanding of how often researchers study whether and how preferences differ by racial and ethnic subgroup, and what statistical methods are used to study preference heterogeneity

Methods

- Updated "A Systematic Review of Discrete Choice Experiments and Conjoint Analysis on Genetic Testing" (Ozdemir et al., 2021)
 - Original review did not detail which articles reported the race or ethnicity of the study population nor which articles explicitly looked for preference heterogeneity by race or ethnicity
 - Extended original search to capture articles published March 2021 - November 2023
- Searched databases: PSYCInfo, Embase, Cochrane Library, SCOPUS, Medline, CINAHL, PubMed, Web of Science
- Includes any peer-reviewed article on genetic or genomic testing or pharmacogenomics, that used discrete choice experiments (DCEs) or conjoint analysis
- Excludes systematic reviews, prenatal testing, articles solely focused on genetic counseling, articles with methodology as the main focus, and articles that utilized best-worst scaling

Results

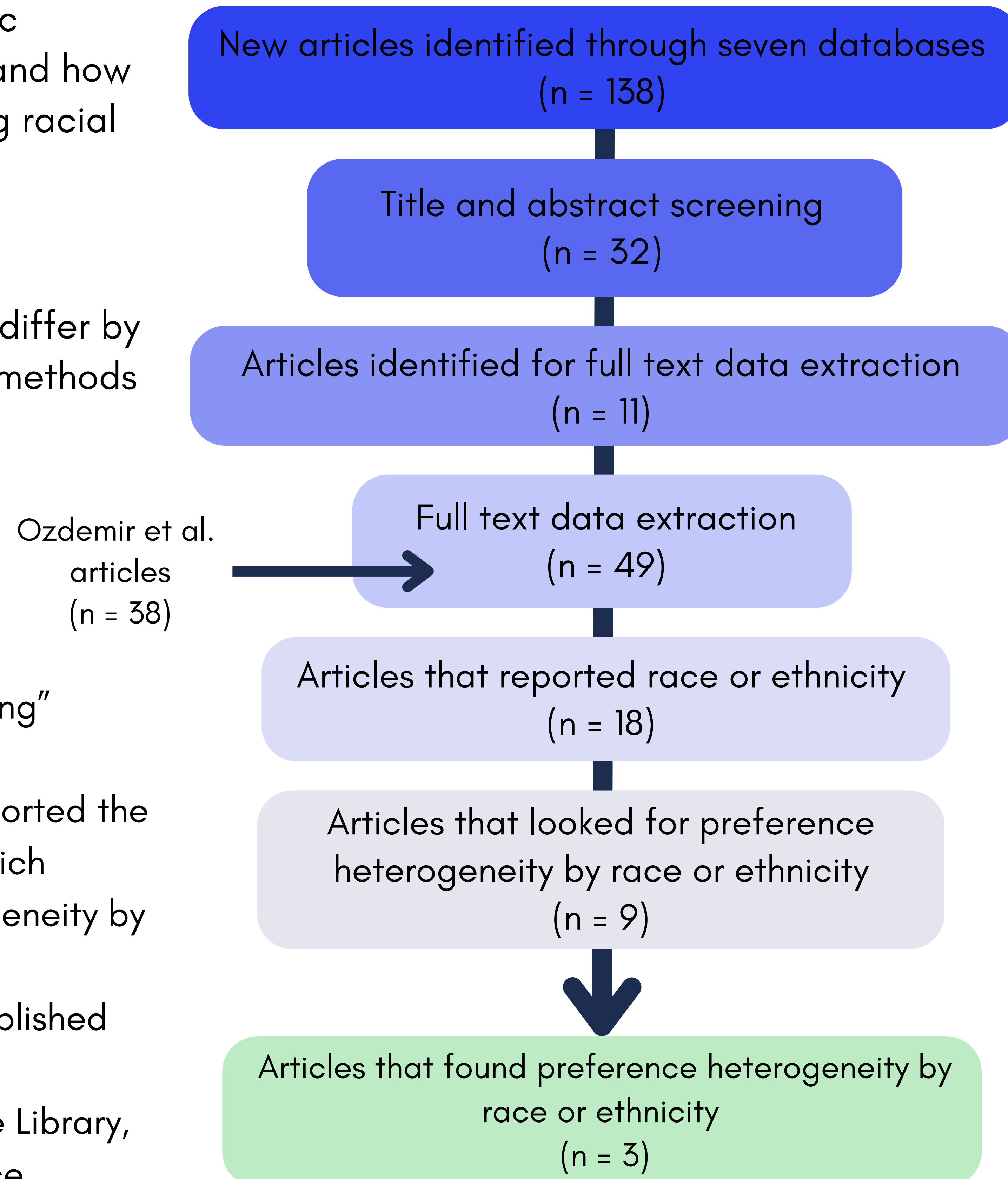


Figure 1. Record inclusion flow chart

- We identified 11 additional articles for inclusion alongside 38 included in original review (Figure 1)
- The majority of studies that reported race and ethnicity did **not** have populations that were representative of the respondent country, with many having over 70% of their population identifying as White
- Many articles used outdated terms for race and ethnicity
- Methods applied to analyze preference heterogeneity in the articles that tested for it by race or ethnicity varied (Table 1)
- Three articles found evidence of preference heterogeneity by race and ethnicity
 - 2 from Singapore, 1 from U.S.
 - All had representative or equal sampling of racial and ethnic groups in the population

Analysis Method	Number
Mixed Logit	3
Conditional Logit	2
Latent Class	1
Linear Regression	2
Hierarchical Bayes	1
TOTAL	9

Table 1. Preference heterogeneity analysis methods

Conclusions

- Overall lack of stated preference data collected for minority populations in genetic testing
- Given the preference-sensitive nature of genetic testing, stated preference methods can be useful for understanding preference heterogeneity but require adequate recruitment of minoritized populations