

Background

The opioid epidemic continues to be a major challenge for the US healthcare system and communities. However, medications for opioid use disorder (MOUD) are the most effective treatment for opioid use disorder (OUD), with lower risks of overdose and relapse. Despite this, only 20% of patients with OUD receive MOUD. It comprises methadone therapy, buprenorphine, and naltrexone. Compared to methadone, buprenorphine is safer and easier to prescribe in office-based settings, has a lower risk of abuse and overdose, and has superior neurocognition performance. However, access to MOUD among different racial/ethnic and socio-demographic groups is unequal. Some studies compared the MOUD rates and modes among different racial/ethnic groups. But to our best knowledge, no systematic review evaluated the relevant literature and combined the findings of these studies. The findings of this study can be used not only for recognizing high-risk groups of society who have limited access to MOUD but also in future research priority settings.

Objective

This study aimed to evaluate treatment disparities in access to MOUD among different racial and ethnic groups by conducting a systematic review and meta-analysis of available literature.

Methods

A systematic review was conducted by searching various databases and the reference lists of included full-texts. The study selection was not limited by geographic location. Only studies conducted from 2000 to 2022 were included. The keywords were inequality, inequity, race, ethnicity, disparity, and medications used for MOUD, including buprenorphine, naltrexone, methadone, and opioids, but excluded those related to prescription or overdose. Studies involving children under 12, residential treatment patients, pregnant women, and MOUD during the COVID-19 pandemic were excluded. The papers that only focused on pain treatment, rural vs. urban comparisons or perceived discrimination were also excluded.

The full texts of articles included in the study were evaluated by two independent reviewers using an analytical cross-sectional studies' quality appraisal checklist. Odds Ratios (ORs) comparing MOUDs among racial/ethnic minorities to whites were extracted or estimated from the findings of included studies. Heterogeneity among ORs was assessed by forest plots, I² and Cochrane's Q. Meta-analysis was performed using a random effects model (when there was heterogeneity) or a fixed effect model (when there was no heterogeneity) using STATA 17.

Results

Figure 1. PRISMA Flow Diagram

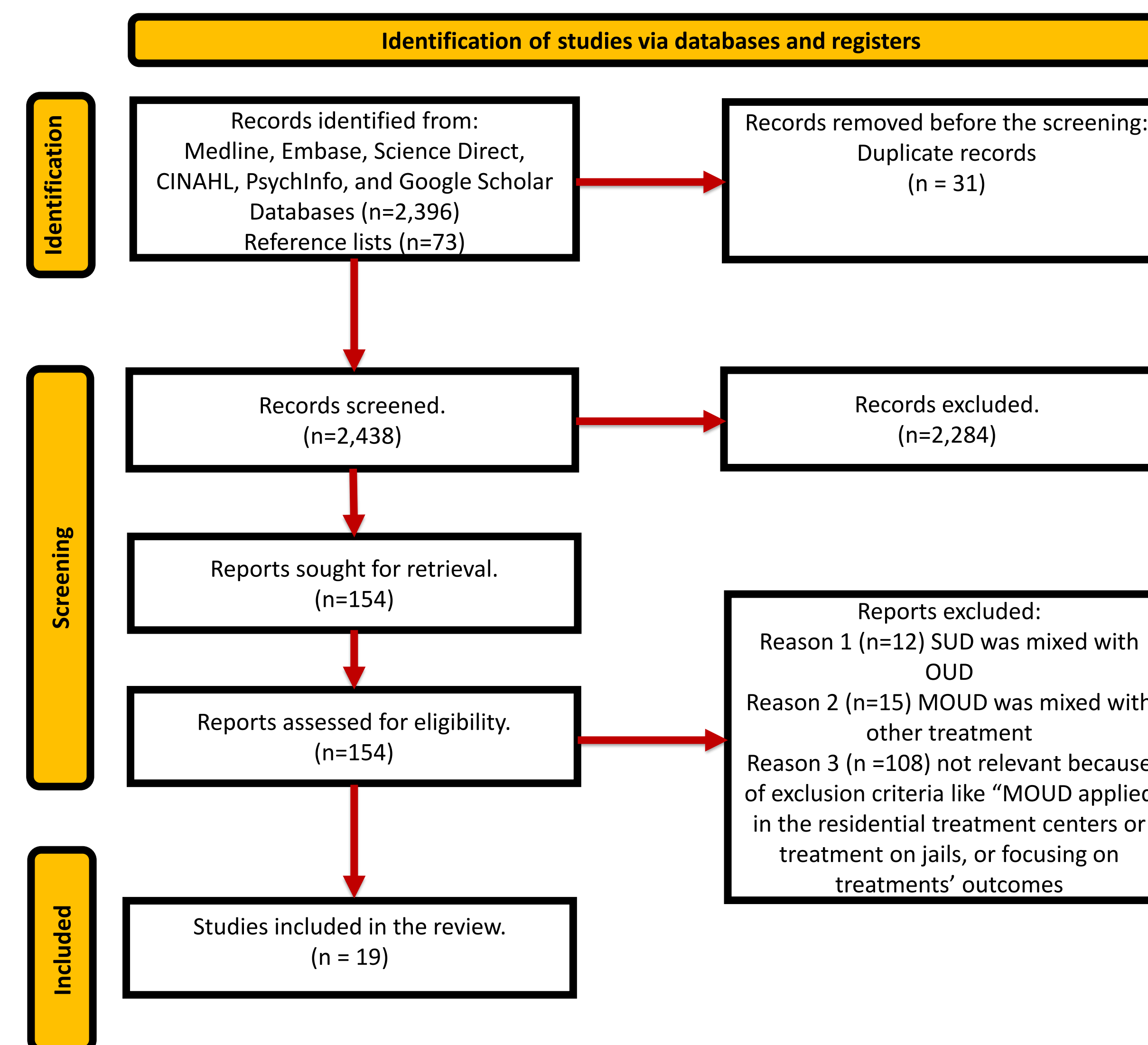
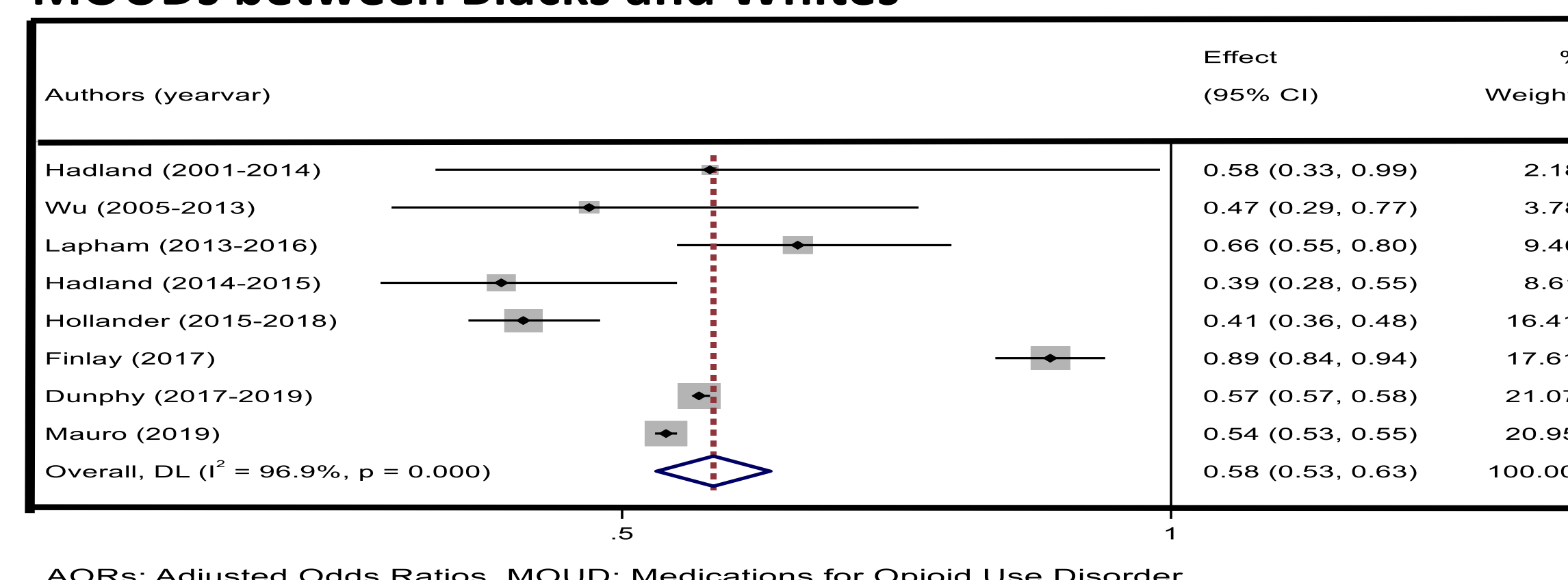
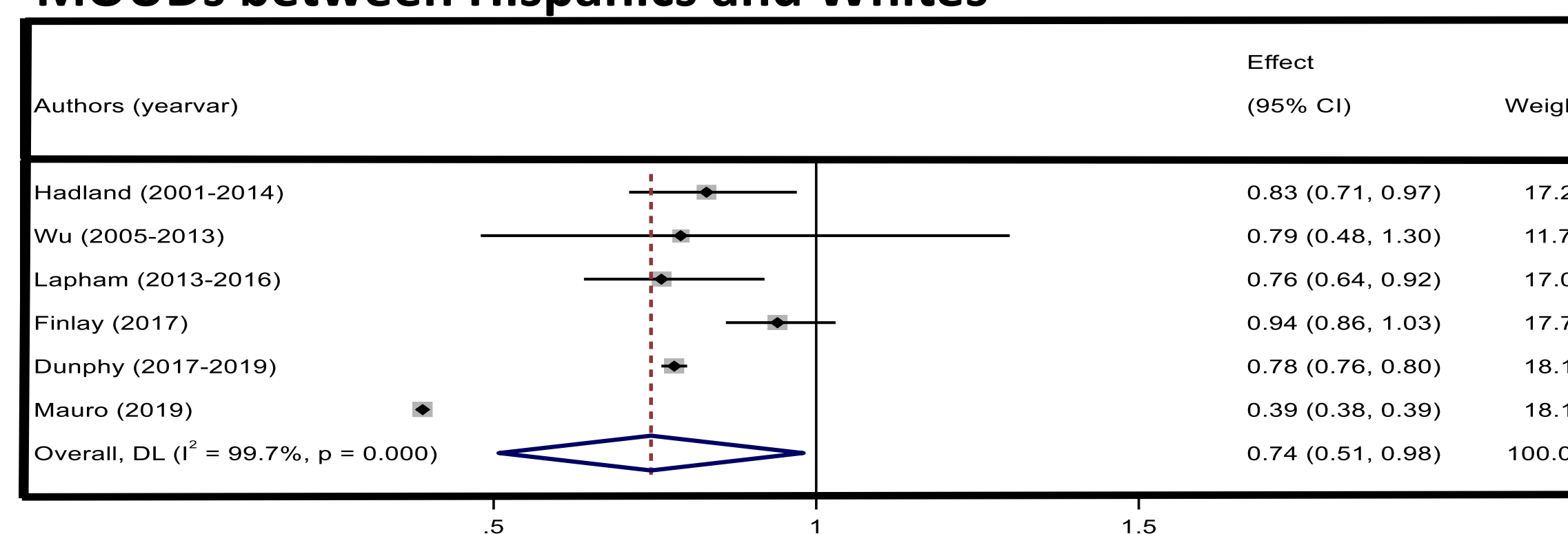


Figure 2. Meta-analysis and Forest plot of AORs that compare MOUDs between Blacks and Whites



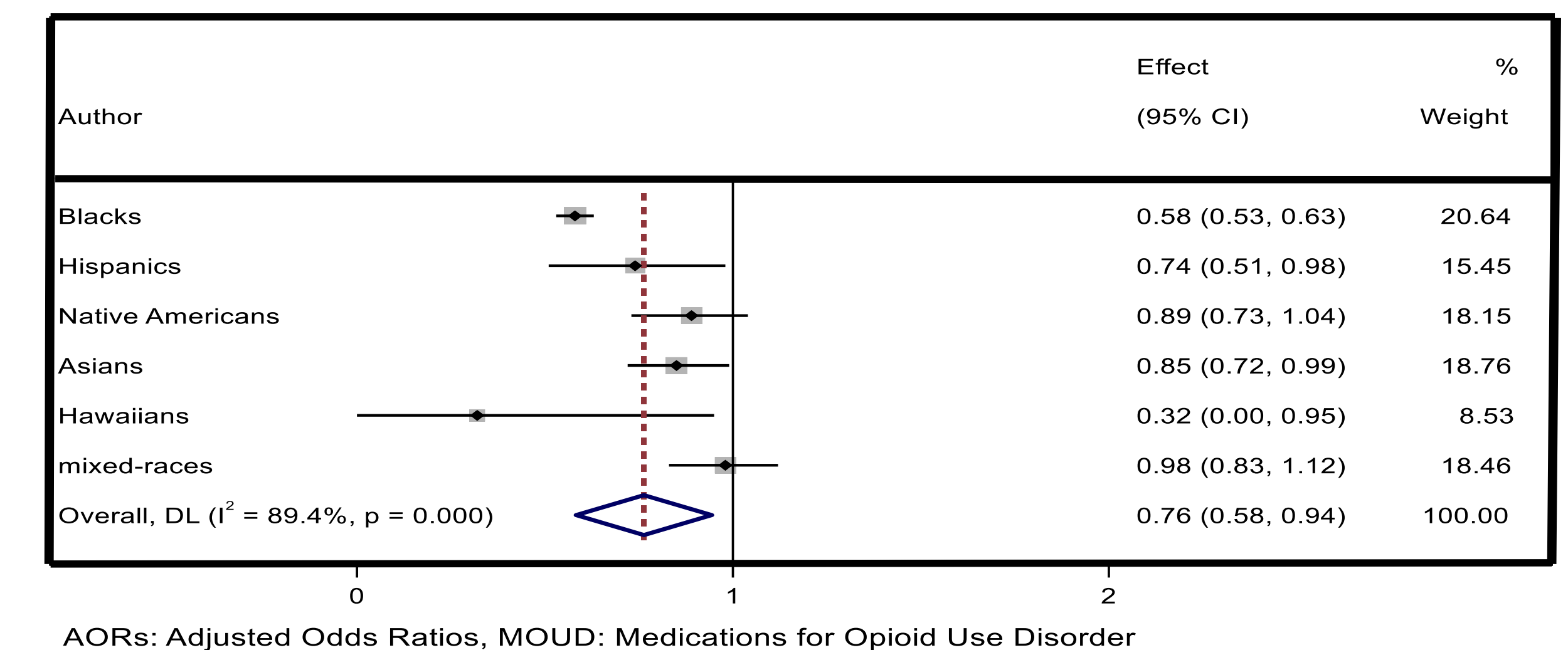
AORs: Adjusted Odds Ratios, MOUD: Medications for Opioid Use Disorder

Figure 3. Meta-analysis and Forest plot of AORs that compare MOUDs between Hispanics and Whites



AORs: Adjusted Odds Ratios, MOUD: Medications for Opioid Use Disorder

Figure 4. Meta-analysis and Forest plot of AORs that compares MOUDs between racial/ethnic minorities and whites



AORs: Adjusted Odds Ratios, MOUD: Medications for Opioid Use Disorder

The correlation coefficient (p Spearman) between the quality scores of independent reviewers was 0.74. Despite no limitations on the study location, all retrieved studies were carried out among the US population.

The meta-analysis on Adjusted ORs (AORs) comparing MOUD among Blacks/African Americans, Hispanics, Asians, and Hawaiians with Whites were 0.58 (95% CI: 0.53-0.63), 0.74 (95% CI: 0.51-0.98), 0.85 (95% CI: 0.72-0.99), 0.32 (95% CI: 0.00-0.95, respectively. The other races' ORs were not statistically significant.

Studies also showed that counties and neighborhoods with more African American, Hispanic, and low-income populations had more methadone-providing facilities. In comparison, counties with a higher rate of White communities had more buprenorphine-providing facilities. The odds of receiving buprenorphine were also less than the odds of receiving methadone and other MOUDs among minorities. Additionally, it has been shown that although the buprenorphine treatment rate increased over time, increase rates were higher in the areas with lower percentages of Blacks/African Americans, Hispanics, and those with lower income.

Conclusions

Compared to Whites, Blacks, Hispanics, Hawaiians, and Asians have limited access to MOUD. However, buprenorphine is more easily accessible to Whites and high-income patients, creating an unfair distribution. The opioid treatment system must be realigned, considering the needs of marginalized populations to ensure fair access to evidence-based treatment for individuals of varying races, ethnicities, and socioeconomic status.