



**THE TOPIC OF THE THESIS IS "ETHNIC DIFFERENCES IN HYPERTENSIVE DISORDERS IN PREGNANCY AND STRATEGIES TO ELIMINATE THEM"**

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**Abstract**

Hypertensive disorders in pregnancy (HDP), including gestational hypertension, preeclampsia, and eclampsia, represent a significant global health challenge, contributing to maternal and fetal morbidity and mortality. This thesis examines ethnic differences in the prevalence, severity, and outcomes of HDP, with a particular focus on elevated risks among non-Hispanic Black women compared to other groups such as non-Hispanic White, Hispanic, and Asian/Pacific Islander women. Drawing from epidemiological data, the analysis highlights disparities rooted in social determinants of health, genetic factors, and healthcare access. Strategies to mitigate these disparities emphasize primordial prevention, equitable healthcare practices, and innovative interventions like low-dose aspirin prophylaxis, postpartum monitoring, and community-based participatory research. Through a systematic literature review, this work underscores the need for multi-sectoral collaboration to address structural racism and improve maternal health equity. The findings advocate for targeted public health initiatives to reduce HDP-related disparities and enhance long-term cardiovascular outcomes across ethnic groups.

**Keywords:** hypertensive disorders in pregnancy, ethnic disparities, preeclampsia, racial differences, maternal morbidity, primordial prevention, low-dose aspirin, postpartum care, social determinants of health, healthcare equity.

**Introduction**

Hypertensive disorders in pregnancy (HDP) encompass a spectrum of conditions, including chronic hypertension, gestational hypertension, preeclampsia, and superimposed preeclampsia, affecting up to 10-20% of pregnancies worldwide. These disorders are a leading cause of maternal mortality, particularly in the United States, where rates have risen despite global declines in many regions. Ethnic disparities in HDP are well-documented, with non-Hispanic Black women experiencing higher



prevalence, severity, and adverse outcomes compared to non-Hispanic White, Hispanic, and Asian/Pacific Islander women. For instance, Black women have increased odds of chronic hypertension and severe preeclampsia, patterns mirroring broader racial differences in adult cardiovascular disease. These disparities are exacerbated by social and structural determinants of health (sDOH), such as racism, socioeconomic inequities, and limited access to care.

The "Hispanic paradox" and protective factors among Asian/Pacific Islanders suggest lower risks, potentially linked to nativity and cultural factors. However, during events like the COVID-19 pandemic, shifts were observed, with Caucasian women showing higher increases in HDP. Strategies to eliminate these disparities must address root causes through public health approaches, focusing on prevention across the life course and innovative healthcare models. This thesis synthesizes current evidence to propose actionable recommendations for reducing ethnic gaps in HDP outcomes.

### **Materials and Methods**

This thesis is based on a systematic literature review conducted using web-based searches on academic databases and reliable sources, including PubMed, PMC, and peer-reviewed journals. Search queries included "ethnic differences in hypertensive disorders in pregnancy" and "strategies to eliminate ethnic disparities in hypertensive disorders during pregnancy," retrieving 40 results from 2020-2025 to ensure relevance and currency. Inclusion criteria focused on studies addressing racial/ethnic variations in HDP prevalence, risk factors, and interventions, with emphasis on U.S. populations due to pronounced disparities. Exclusion criteria omitted non-English articles and those predating 2014 unless seminal.

Data extraction involved summarizing key findings on prevalence (e.g., adjusted odds ratios), severity, and strategies (e.g., preventive measures). Five key articles were browsed in-depth for abstracts, findings, and references. Qualitative synthesis integrated epidemiological data with intervention recommendations. No original data collection was performed; analysis relied on secondary sources for high accuracy and topicality.

### **Results and Discussion**

Epidemiological data reveal stark ethnic differences in HDP. Non-Hispanic Black women exhibit higher odds of chronic hypertension (AOR=1.43, 95% CI 1.11–1.84), mild preeclampsia (AOR=1.26, 95% CI 1.10–1.45), severe preeclampsia (AOR=1.31, 95% CI 1.10–1.57), and superimposed preeclampsia (AOR=1.98, 95% CI 1.40–2.80) compared to non-Hispanic White women. Globally and in the U.S., Black



women suffer HDP more frequently and with worse outcomes, including higher maternal mortality rates (3-4 times that of White women). In contrast, Hispanic women (AOR=1.22 for normotension, 95% CI 1.12–1.33) and Asian/Pacific Islanders (AOR=1.55, 95% CI 1.31–1.84) show decreased risks. Nativity influences outcomes, with foreign-born women often faring better. These patterns align with adult cardiovascular disparities, suggesting shared pathways like weathering hypothesis and allostatic load.

Strategies to address disparities include community-centered approaches, such as amplifying Black women's voices through participatory research and partnerships with doulas and community health workers. Healthcare practices advocate for treating chronic hypertension to <140/90 mmHg, rebranding low-dose aspirin as "prenatal aspirin" for better uptake (reducing preeclampsia risk by 30-40%), and innovative postpartum models like telemedicine, home blood pressure monitoring, and ssDOH screening. Public health emphasizes primordial prevention from childhood, early prenatal care, exercise, and metrics to evaluate care quality by race. Automated EMR algorithms for rapid hypertension treatment have shown sustained improvements, treating >90% within 60 minutes, potentially reducing biases. Challenges include implicit biases and access barriers, necessitating multi-sectoral efforts.

### **Conclusion and Recommendations**

Ethnic disparities in HDP underscore systemic inequities, with Black women bearing disproportionate burdens. Effective strategies require integrating ssDOH into care, promoting preventive interventions, and leveraging technology for equitable treatment. Recommendations include: (1) Implement primordial prevention programs targeting at-risk ethnic groups from early life; (2) Mandate low-dose aspirin and chronic hypertension management in prenatal protocols; (3) Expand postpartum navigation with community support; (4) Develop race-specific quality metrics and support Black-led research; (5) Foster collaborations between healthcare, public health, and communities to eliminate biases. These steps can reduce HDP disparities, improve maternal outcomes, and advance health equity.

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