Maternal demographic patterns in medication use in pregnancy: a Danish nationwide register study

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May 28, 2024

Abstract

Aim More women than ever before use medication during pregnancy. This use of medications is associated with maternal demographic characteristics, but the nature of the associations is not well documented, especially in relation to polypharmacy. This study describes the medication use during pregnancy in relation to maternal age, Body Mass Index (BMI), smoking, parity, ethnic origin, and socioeconomic classification. Methods This was a Danish nationwide registry study comprising 698,447 clinically recognised pregnancies with gestational age [≥] 10 weeks. This study was conducted in the 2008-2018 period. Medication use was estimated based on the prescription redemption during pregnancy and stratified by maternal demographic characteristics. Results Overall, 60.3% of all pregnant women redeemed at least one prescription during pregnancy, and 28.9% redeemed multiple medications. When stratified by maternal demographic characteristics, use of medication was higher among women aged [≥]35 years (65.1%), those with a BMI [≥] 30 kg/m² (68.6%), smokers (66.0%), multipara (62.4%), Black women (64.5%), and those on early retirement (78.8%). A similar pattern was seen for polypharmacy. Anti-infectives were the most frequently used medication in all subgroups. The types of medications used in combination differed with maternal age, BMI, ethnicity, and socioeconomic classification; especially women on early retirement had a different combination pattern. Conclusion Use of one or multiple medications during pregnancy was highest among women above 35 years of age, women with obesity, smokers, Black women, and early retirees. Early retirees had a distinct prescription pattern, which potentially increased their risk of teratogenicity and maternal adverse effects.

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### Population of this study

**All pregnancies with gestational age > 10 weeks in Denmark between 2008 and 2018**
A Top 10 medication redemption during pregnancy

B Socioeconomic classification

Prevalence (%)
Top 10 medication combinations in first trimester

Overall

Prevalence (%)

0 10 20 30

Early retiree

Prevalence (%)

0 10 20 30

In education

Prevalence (%)

0 10 20 30

Self-employed or working spouse

Prevalence (%)

0 10 20 30

Unemployed

Prevalence (%)

0 10 20 30

Wage earner

Prevalence (%)

0 10 20 30

Wage earner – management level

Prevalence (%)

0 10 20 30