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Racial and ethnic differences in contraception use and obstetric outcomes: A review

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ABSTRACT

In the United States, racial and ethnic minority women experience higher rates of contraceptive non-use, failure, unintended pregnancy, and lower use of long-acting reversible contraception (LARC), compared to whites. Simultaneously researchers have found that unintended pregnancy is associated with poor pregnancy outcomes and pregnancy behaviors, including pre-term birth and late initiation of prenatal care, respectively. Due to the association of pregnancy intention and obstetrical outcomes, public health efforts have focused on the increase in contraception use among these populations as a way to decrease poor pregnancy outcomes. In this review, we present the current literature on unintended pregnancy and contraception use by racial and ethnic minorities in the United States and the association of pregnancy intention and obstetrical outcomes and place these associations within the social and historical context in which these patients live and make their reproductive choices.

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Unintended pregnancy in the United States

Unintended pregnancy has been a marker of reproductive health of our society since the first surveys evaluating unwanted fertility in 1941.[1] The current definition of unintended includes pregnancies that are mistimed and unwanted. The national prevalence of this commonly used reproductive health indicator is derived from the National Survey of Family Growth (NSFG). The NSFG is a nationally representative in-person survey that collects information on pregnancy and childbearing. The survey results are used by the U.S. Department of Health and Human Services to plan health services and health education programs.[2]

For the first time in several decades, the United States is experiencing a decline in unintended pregnancy, with fewer than half of pregnancies (45%) reported as unintended in 2011 compared to 51% in 2008. This decrease was observed in all demographic groups, including those that traditionally have higher rates of unintended pregnancy, namely poor women, cohabitating women, and black and Latina women. However, the differences between groups remained fixed.[3] Specifically, when we look at unintended pregnancy by race and ethnicity,

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white women had an unintended pregnancy rate of 33 per 1000 among women aged 15–44, whereas Latina women had a rate of 58 per 1000 and Black women 79 per 1000. Even when stratified by income, the same racial and ethnic differences are still present, with blacks and Latinas experiencing unintended pregnancy at significantly higher rates compared to whites. Poor black women have the highest unintended pregnancy rates (~130 per 1000 women aged 15–44), or triple the national rate.[3]

Contraception use and discontinuation by race and ethnicity

An unintended pregnancy, as currently defined,[1,4–6] is usually the result of contraception non-use or contraceptive failure. There are differences in the use, discontinuation and type of contraceptive based on race and ethnicity. Most recent data, gathered in 2011–2013, demonstrate that approximately 62% of women aged 15–44 were currently using contraception. When stratified by race, 58% of black and Latina women surveyed were using contraception compared to 65% of white women.[7]

There are differences not only in overall use, but also in the type of contraception used by race and ethnicity. In the United States, the most common reversible method among all current contraceptive users aged 15–44 is the oral contraceptive pill (16%). Condom use is second at 9% and long-acting reversible contraception (LARC), which includes intrauterine devices (IUDs) and contraceptive implants, is used by 7% of contracepting women.[5,7] When stratified by race, white women had relatively higher use of the pill compared to Latina and black women (approximately 19%, 11% and 10%, respectively). Condom use as a primary method of contraception was relatively similar across women of all races (9.4%, 9.3%, and 8.6%, respectively). Differences in the use of LARC methods was notable, with approximately 9% of Latina women using these methods compared to 7% of white and 5% of black women.[7]

Contraceptive failure and discontinuation rates also vary along race and ethnicity, even when comparing among users of the same method type. The latest data on contraceptive failure from the NSFG comes from their 2002 survey and focuses on oral contraceptives, the contraceptive injection and the male condom, which at that time of data collection were the three most popular forms of reversible contraception. Over a 12-month period, 12% of women experienced a contraceptive failure. By method, the male condom had the highest probability of contraceptive failure (17%), with oral contraceptive having a 9% failure rate and the contraceptive injection having the lowest failure rate (7%). When looking across all three methods, stratification by race and ethnicity demonstrates a clear trend, with black and Latina woman having a higher probability of contraceptive failure compared to white women (21.3%, 15%, and 10.1%, respectively).[8] One of the largest datasets examining LARC failure rates comes from the Contraceptive CHOICE Project. This prospective cohort study of approximately 10,000 women in the St. Louis region was designed to promote the use of LARC as a means of reducing unintended pregnancy. Patients were counseled using a tiered effectiveness approach and then received the method of their choice at no cost for the duration of the 3-year study period. Overall, women who used oral contraceptives, the contraceptive patch or the contraceptive ring experienced higher rates of pregnancy compared to those that used LARCs (9.4% vs. 0.9%, $p < 0.001$, respectively). LARC failure, by race and ethnicity was not reported.[9]

Much like with contraceptive failure rates, discontinuation rates also appear to vary somewhat by race and ethnicity, with black women being more likely to discontinue oral contraceptives (hazards ratio 1.2) compared to whites.[10] These trends are not present in diverse samples of women using LARC methods, where women of different races and ethnicities have similarly low discontinuation rates.[11] As part of the aforementioned CHOICE Project, follow-up telephone interviews were conducted to determine which patient characteristics were associated with LARC discontinuation. At 6 months, 93% of participants were still using their baseline LARC methods. Discontinuation rates were similar over type of LARC device (levonorgesterol IUD, copper IUD, and contraceptive implant). Bivariate analysis initially revealed that discontinuation was associated with unmarried status (29% compared to 36%, $p = 0.01$) and black race (55% compared to white race 48%, $p = 0.04$). However, after adjusting for age, race, material status, SES, and history of STI they found that only material status was associated with early LARC discontinuation in their study population.[12]

Race-based differences in pregnancy intention and pregnancy outcomes and birth spacing

Racial and ethnic disparities exist in pregnancy outcomes in the United States, with black women experiencing higher rates of pre-term birth, fetal demise, and maternal mortality compared to whites.[13] Latina women are more likely to experience neural tube defects, obesity, and diabetes compared to whites.[13] Pregnancy intention appears to have an association with both pregnancy and neonatal outcomes. In a prospective study published in 2000 evaluating the possible association between pregnancy intention and pre-term birth, over 900 low-income, pregnant black women in Maryland were surveyed regarding the intention of their current pregnancy. After controlling for clinical and behavioral predictors of pre-term delivery, including smoking, pre-eclampsia, alcohol and drug use, chronic medical disease, poor weight gain, and previous pre-term birth, they found that a woman with an unintended pregnancy had almost twice the risk of pre-term birth (adjusted RR = 1.82 [1.08–2.08]) compared to a woman with an intended pregnancy.[14] Women with an unintended pregnancy were also more likely to smoke,[15,16] use alcohol[16] and initiate prenatal care late,[16,17] and were less likely to breastfeed[17] and take folic acid.[15]

Current guidelines in pre-conception health recommend adequate birth spacing (≥18 months from birth of one pregnancy to conception of another) to prevent adverse birth outcomes specifically pre-term birth.[18] Although interpregnancy

[1] Many researchers and women's health advocates have recently called into question how we define unintended pregnancy.

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