Racial Disparities in US Maternal and Infant Mortality Rates

PTSD associated with women's experiences of racism impacts perinatal outcomes. Posted Mar 06, 2020, Psychology Today Blog

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The United States has the highest maternal and infant mortality rates among developed nations. There is a striking disparity in maternal and infant mortality rates between African American women and non-Hispanic white women in the United States. “African American women across the income spectrum and from all walks of life are dying from preventable pregnancy-related complications at three to four times the rate of non-Hispanic white women, while the death rate for black infants is twice that of infants born to non-Hispanic white mothers” (1).

Preterm Birth and Infant Mortality

Recent statistics reveal that African American infants have greater than three times the risk of preterm-related mortality than Non-Hispanic white infants (3). Preterm birth (less than 37 weeks of completed gestation) is the most frequent cause of infant mortality in African American infants (4). 73% of African American infant deaths occur in infants born preterm (5).

Risky Maternal Behaviors Do Not Account for Racial Disparities in Infant Mortality Rates

Risk factors commonly associated with preterm birth include age, education, alcohol and drug use, smoking cigarettes and stress. Smith et al., 2018, explain that there is a common perception that racial disparities in infant mortality rates are primarily associated with these risky behaviors, but “the greater vulnerability of black infants cannot be explained by these factors… Even when risky behaviors are controlled, the black-white infant mortality rate disparity continues to exist" (6).

The Impact of Protective Factors on Preterm Birth and Infant Mortality Rates Differ By Race

Smith et al., (2018) also found that infant mortality rates for African American women are minimally impacted or not at all, by the protective factors that significantly reduce infant mortality rates in the general population (6). Gavin et al., explain that “Socioeconomic class and educational attainment do not protect African American mothers from having higher rates of PTB [preterm birth] than do their white peers; a middle-class, college educated African American woman is more likely than a Non-Hispanic white woman with a high school degree to give birth prematurely” (4).

A study by Din-Dzietham and Hertz-Picciotto found that postsecondary education improves birth outcomes for white women but not African American women. In addition, at every maternal educational level, infants born to African American mothers had a higher risk of dying than those born to white mothers. "Postsecondary education reduced the risk of death among infants born to white mothers by 20 percent but had zero impact on those born to African American mothers" (7).

The Impact of Education Levels on Maternal Morbidity and Mortality Rates Differ by Race

The New York City Department of Health and Mental Hygiene conducted a study that found that black non-Latina women with at least one college degree have higher severe maternal morbidity rates than all other women who never graduated high school (8). These findings suggest that for black women, obtaining higher education doesn't necessarily offer protection from or minimize the likelihood of maternal morbidity and mortality.

Racial and Gender Discrimination Over the Life Course Contribute to Posttraumatic Stress

The failure to find an explanation for the disparity in maternal and infant mortality rates associated with traditional prenatal risk factors has led researchers to consider the impact of exposures to other factors that occur over the life course. The experience of racial discrimination is one life course factor which has been shown to increase the risk of preterm birth in African American women. Studies show that women who report experiences of racism may have as much as a threefold increase in the incidence of adverse birth outcomes, including: low birth weight and very low birth weight babies and preterm birth (9), (10). Experiences of racism may also contribute to disparities in maternal mortality rates in the U.S.

The specific mechanisms that connect racial discrimination and preterm birth are being explored. The psychophysiology of posttraumatic stress disorder (PTSD) associated with experiences of racism suffered by African American women and girls may be one mechanism that contributes to their increased risk of preterm birth and the disparities in maternal and infant mortality between African American and Non-Hispanic white women. An additional life course factor that may be associated with posttraumatic stress psychophysiology is the experience of gender discrimination. Incidents of racial and gender discrimination over the life course trigger women's and girls' defense systems evoking experiences of danger and life threat that may contribute to the manifestation of posttraumatic stress symptoms. African American women describe facing the additional stress of needing to protect their children from racism. Concerns over all aspects of their children's safety before, during and after pregnancy and birth may also contribute to adverse pregnancy outcomes.

As described in my previous blog posts (*Experiences of Safety Enhance Prenatal Maternal-Child Health, July 24, 2018; Trauma Informed Care Needed to Address Obstetric Violence, March 31, 2019*) posttraumatic stress symptoms develop in response to overwhelming

experiences. Through the process of neuroception our nervous system rapidly evaluates our internal and external environment for safety, danger or life threat beneath our conscious awareness (11). These defense system responses may be triggered by moral, social, psychological and physical assaults and injuries suffered over the life course (12), including those experiences that are transmitted intergenerationally and epigenetically (13).

Racial Disparities in Rates of Posttraumatic Stress

African Americans have higher rates of PTSD than other racial/ethnic groups (14). Research shows that the risk of developing PTSD endures throughout the life course for African Americans. Lifetime PTSD rates are highest among African American women and they experience a greater risk of PTSD at an earlier age as compared to Non-Hispanic white women. The risk remains high and extends to a much older age. African American women experience PTSD following trauma at two to three times the rate of African American men (15). The gender difference in susceptibility to PTSD may be in part related to the increased incidence of sexual assault which is associated with one of the highest risks for PTSD (16).

Physiological Impacts of Chronic Stress Related to Gendered Racism Increase Pregnancy Risks

The physiological impacts of perceived racial and gender discrimination increase the pregnancy risks for African American women and are now suspected to contribute significantly to the striking difference in maternal and infant mortality rates between African American women and non-Hispanic white women (24). Racial discrimination results in high levels of chronic stress exposure across the life course and influences physical health outcomes (19). When an individual perceives they have experienced a social stressor such as racial and/or gender discrimination, it may trigger metabolic, cardiovascular and immune systems changes and PTSD symptoms (20). The perception of racial discrimination over the life course has been associated with increased levels of inflammation, systolic and diastolic blood pressure, and stress hormones (21). The pre-pregnancy health impacts of chronic stress exposure contribute to the difference in preterm birth rates and maternal mortality rates between African American women and Non-Hispanic White women (17). Studies demonstrate that active PTSD increases women's odds of suffering spontaneous preterm birth by 35 percent (22).

Historical Trauma Transmitted Over Generations

Racial discrimination over the life course encompasses the transmission of the intergenerational mass trauma of slavery and Jim Crow policies. The epigenetic impacts of these experiences on individuals are carried from one generation to the next. Epigenetics research demonstrates how the activity of genes is altered by interactions between the genes and the environment. Historical trauma theory elaborates on how "the psychological and emotional consequences of slavery, such as PTSD, are transmitted to subsequent generations through biological, environmental and social pathways. Vicarious

traumatization ensues not only by means of collective memory, storytelling and oral traditions, but also becomes 'embodied' in the offspring of subsequent generations by epigenetic and genetic mechanisms" (4).

Medical and Obstetric Racism Past and Present

Experiences of racism in health care settings in the present, resonate with past imprints of trauma resulting from reproductive violence experienced by generations of African American women and girls over 246 years of slavery. As described by Davis, (2018), obstetric racism "includes but is not limited to, critical lapses in diagnosis; being neglectful, dismissive, or disrespectful; causing pain; and engaging in medical abuse through coercion to perform procedures without consent." Davis elaborates, "obstetric racism is not new, but rather, it is entangled with histories that shadow contemporary expressions of medical racism deployed on Black women's bodies. The way that Black women have been demonized, stereotyped, violated and policed in the past, is consistent with contemporary medical interactions and operate as reminders of the past" (23).

Experiences of obstetric racism are likely to trigger African-American women's stress physiology in anticipation of, during and after reproductive experiences negatively impacting maternal and infant outcomes. Davis (2019) comments, "The repertoires of racism exist in the crevices and creases of a conversation, in the space between a comment and a pause. If doctors and nurses give dismissive looks or make a woman feel unworthy, that also constitutes a repertoire of racism. It may involve stereotyping a patient, which can lead to a misdiagnosis, or setting aside a woman's concerns about the fears she has for her health, her newborn's health or the treatment of her partner." (24). p. 203

Acknowledging the Role of Racism in Disparities in Maternal and Infant Mortality Rates

As noted in the report by the Center for American Progress (2019), eliminating disparities in maternal and infant mortality can only be accomplished if African American women and infants are prioritized and inequality and racism within America's structures and institutions are addressed (1).

Davis comments that in order to address medical racism in the medical system that exists today, it is crucial that "medical and health care professionals who have been trained and work in that system be willing to take responsibility for their own behaviors and address biases. They must look racism in the face and question the way that the system within which they work might contribute to racist outcomes, draw from racist discourse or perpetuate racist ideas" (24) p.206.

Acknowledging the experiences of African American women and their developing babies in the medical system is the first step towards identifying and implementing urgently

needed policy and practice changes that can reduce disparities in maternal and infant mortality rates.

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