

Impact of Social determinants of Health on New Mothers in Tennessee, 2022

Social determinants of health (SDOH) are conditions where people live, work, and play that significantly influence health and wellbeing. SDOH are a major focus of Healthy People 2030 with an objective to improve health and wellbeing over the next decade.¹

Women around the time of pregnancy are more vulnerable to the negative effects of SDOH due to their physical changes and increased healthcare needs.² Stress from negative SDOH can cause high blood pressure, elevated blood sugar, and an increased heart rate, leading to greater healthcare needs during pregnancy.^{3,4,5} High stress levels can also weaken the mother's immune system and may also lead to developmental problems in the resulting pregnancy, further impacting her health and well-being. Chronic stress during pregnancy may also lead to developmental problems during infancy or childhood.⁵ Understanding the relationship between pregnancy outcomes and SDOH could help improve the health of mothers, infants, and the overall population.

This data comes from the 2022 Tennessee Pregnancy Risk Assessment Monitoring System (PRAMS) SDOH supplement, a population-based surveillance system that collects information from women with a recent (2-6 months) live birth. SDOH responses were classified into risk levels; for more information on how this was done, see page 4.

This factsheet explores negative SDOH among women with a recent with a recent (2-4 months) live birth in Tennessee.

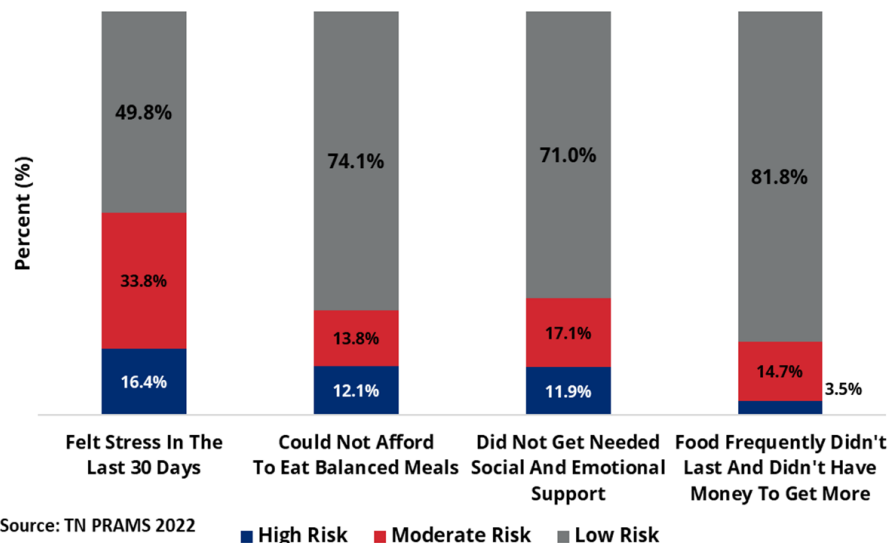
Individual Negative Social Determinants of Health in Tennessee Mothers

Over half (**54.6%**) of women with a recent live birth in Tennessee reported experiencing at least one negative social risk factor that could increase their risk of poor health outcomes in the future.



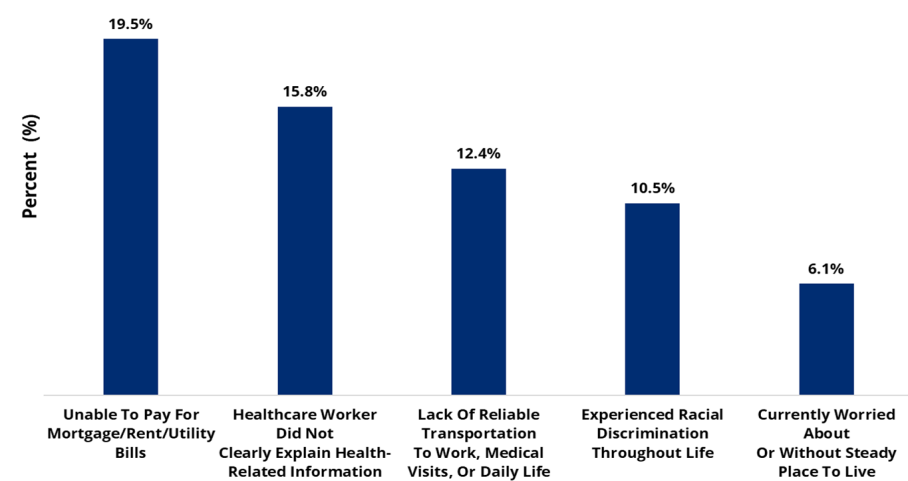
Stress, Healthy Foods and Social and Emotional Support

Figure 1: SDOH among Women with a Recent Live Birth in Tennessee, 2022



Nearly **16.4%** of women with a recent live birth in Tennessee reported being at high risk for frequent stress. Additionally, **12.1%** reported they were at high risk of being unable to afford healthy meals, and **11.9%** felt they did not receive sufficient social emotional support in the past year and **3.5%** reported food didn't last and didn't have money to get more (Figure 1).

Figure 2: SDOH among Women with a Recent Live Birth in Tennessee, 2022



Source: TN PRAMS 2022

Nearly **1 in 5** women reported being unable to pay for mortgage, rent, or utilities/other bills during past year. (Figure 2)

Over **1 in 10** women experienced racial discrimination, **15.8%** women reported not having health-related information clearly explained, and **12.4%** cited a lack of transportation to work or daily life within the past year. (Figure 2)

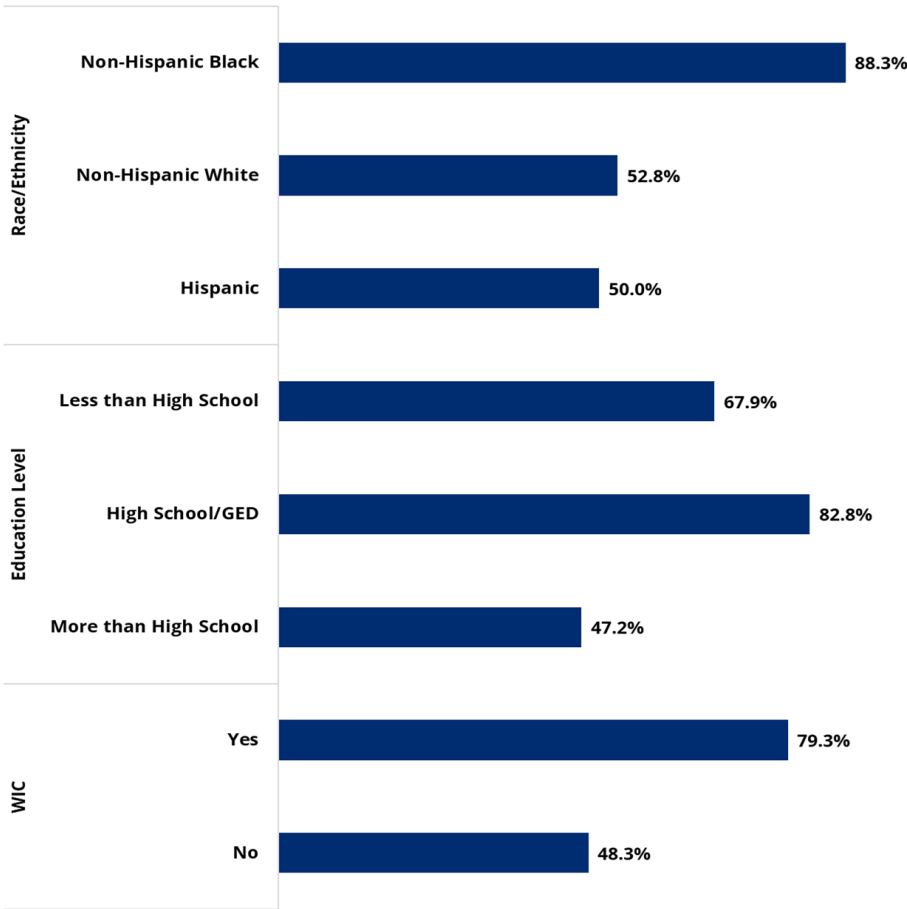
Number of Negative SDOH

Figure 3: Any Negative SDOH by Maternal Demographics among Women with a Recent Live Birth in Tennessee, 2022

Non Hispanic (NH) Black women (**88.3%**) more commonly reported experiencing any negative SDOH around the time of pregnancy in Tennessee in 2022, followed by (**52.8%**) Non Hispanic White women and (**50%**) Hispanic women (Figure 3a).

More women with only a high school diploma or GED (**82.8%**) reported experiencing any negative SDOH compared to those with less than a high school education (**67.9%**) (Figure 3a).

More Tennessee women who relied on WIC* (**79.3%**) reported having any negative SDOH than those who didn't have WIC (**48.3%**, Figure 3a).

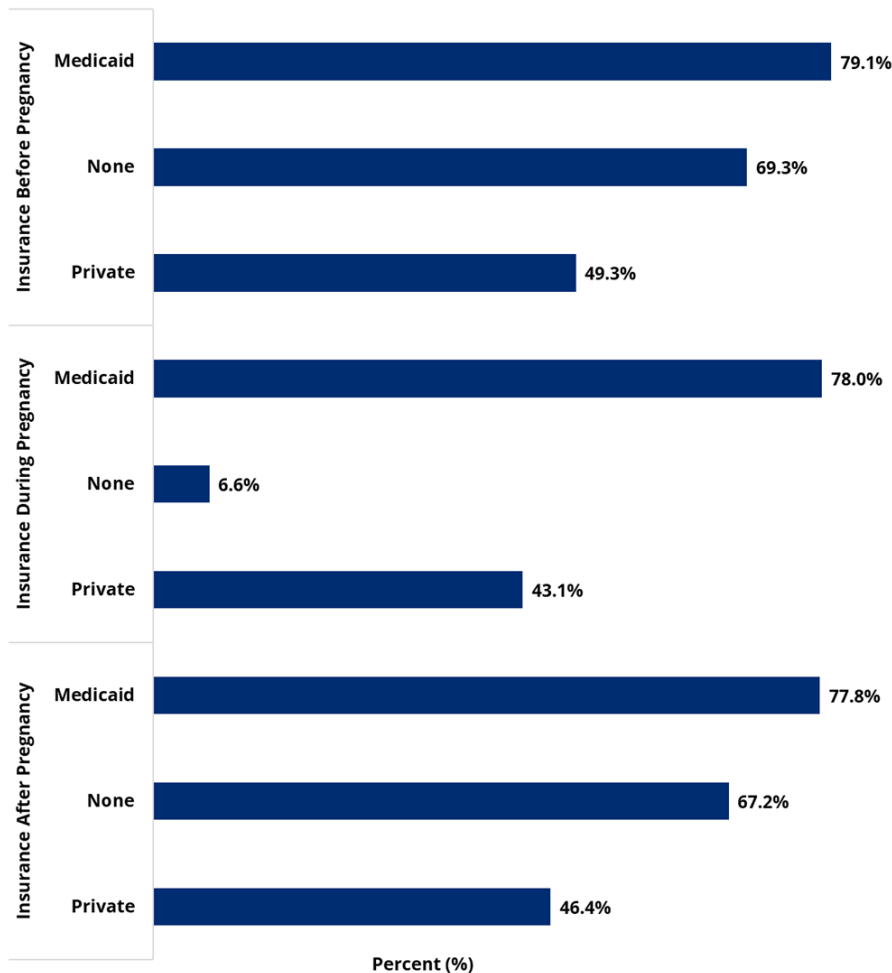


Source: TN PRAMS 2022

Percent (%)

Number of Negative SDOH and Maternal Insurance

Figure 4: Any Negative SDOH by Maternal Insurance Status among Women with a Recent Live Birth in Tennessee, 2022



Women with Medicaid more commonly reported experiencing any negative SDOH before, during, and after pregnancy in Tennessee in 2022 (Figure 4).

Source: TN PRAMS 2022

References

1. *Social Determinants of Health - Healthy People 2030* | [odphp.health.gov](https://odphp.health.gov/healthypeople/priority-areas/social-determinants-health). (n.d.). <https://odphp.health.gov/healthypeople/priority-areas/social-determinants-health>
2. Girardi, G., Longo, M. & Bremer, A.A. Social determinants of health in pregnant individuals from underrepresented, understudied, and underreported populations in the United States. *Int J Equity Health* 22, 186 (2023). <https://doi.org/10.1186/s12939-023-01963-x>
3. Sheng JA, Bales NJ, Myers SA, Bautista AI, Roueinfar M, Hale TM and Handa RJ (2021) The Hypothalamic-Pituitary-Adrenal Axis: Development, Programming Actions of Hormones, and Maternal-Fetal Interactions. *Front. Behav. Neurosci.* 14:601939. doi: 10.3389/fnbeh.2020.601939
4. Stress system malfunction could lead to serious, life threatening disease. (2002, September 9). <https://www.nichd.nih.gov/>. <https://www.nichd.nih.gov/newsroom/releases/stress>
5. Stress and pregnancy. (n.d.). March of Dimes. <https://www.marchofdimes.org/find-support/topics/pregnancy/stress-and-pregnancy>

Additional Notes:

- For figure 1, SDOH variables were classified into risk levels based on responses. *Felt stressed, unable to access balanced meals, food insecurity* were coded as high risk (Always/Usually), moderate risk (Sometimes) , and low risk (Rarely/Never). *Lack of social and emotional support* was inversely coded: high risk (Rarely/Never), moderate risk (Sometimes) , and low risk (Always/Usually). For figure 3, each individual SDOH was rated as “yes” for negative risk factors such as *housing, food insecurity, perceived racial discrimination, lack of social and emotional support, lack of transportation services, trouble paying bills, feeling stressed, and barriers to accessing mental health services*. The number of negative SDOH were counted and then categorized as either “none” or “any”.
- *WIC stands for Special Supplemental Nutrition Program for Women, Infants, and Children.