

Background

- **Psychosocial stressors** affect maternal health and could lead to increased maternal morbidity and mortality.^{1, 2}
- These stressors include **major life events, abuse, discrimination, financial strain, neighborhood safety, and work strain.**^{3, 7, 8}
- Several studies found an increased risk for poor obstetric outcomes such as **infant mortality, low birth weight, and preterm birth** due to stress, such as psychosocial stress^{6, 9, 10}
- Behaviors such as poor nutrition, **smoking**, and a variety of other unhealthy habits are associated with **increased maternal psychosocial stress**. These behaviors are also **risk factors** for **preterm birth** and have shown an association between **maternal stress** in pregnancy and **congenital heart defects**^{4, 11}.

Research Questions

1. What are the **smoking behaviors** of women who experienced **psychosocial stress** measured by **major life events** in 5 PRAMS states, and how do they relate to **maternal morbidity**?

Methods

PRAMS Data Rationale

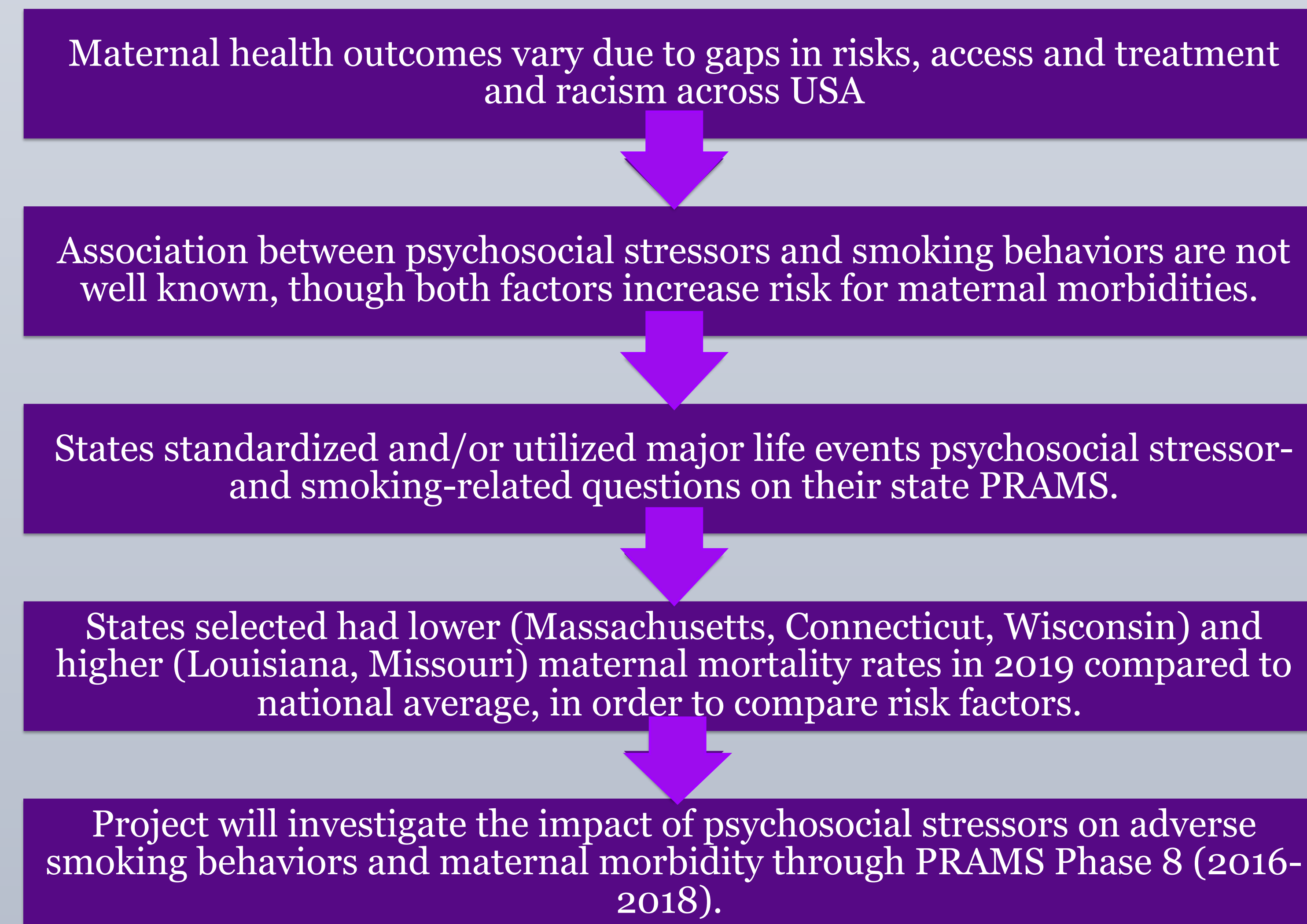


Figure 1. Flow-chart of rationale for requesting and utilizing multi-state PRAMS data.

Results

Regression Analysis Of Smoking During Last Three Months And After Pregnancy And Stressors

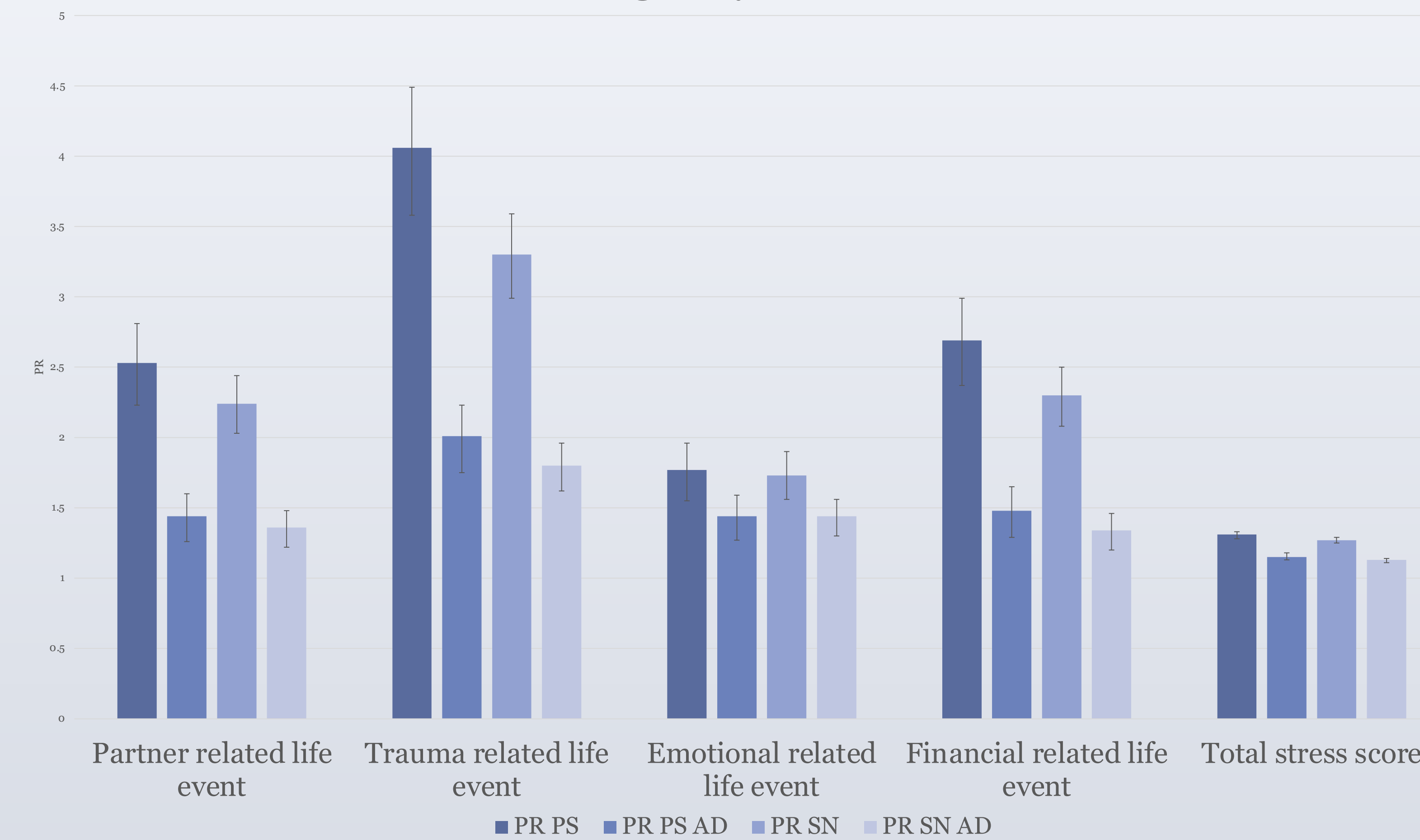


Figure 2. Adjusted and unadjusted prevalence ratios for major life stressors during and after pregnancy

Smoking Among Respondents Who Have Faced Major Life Event

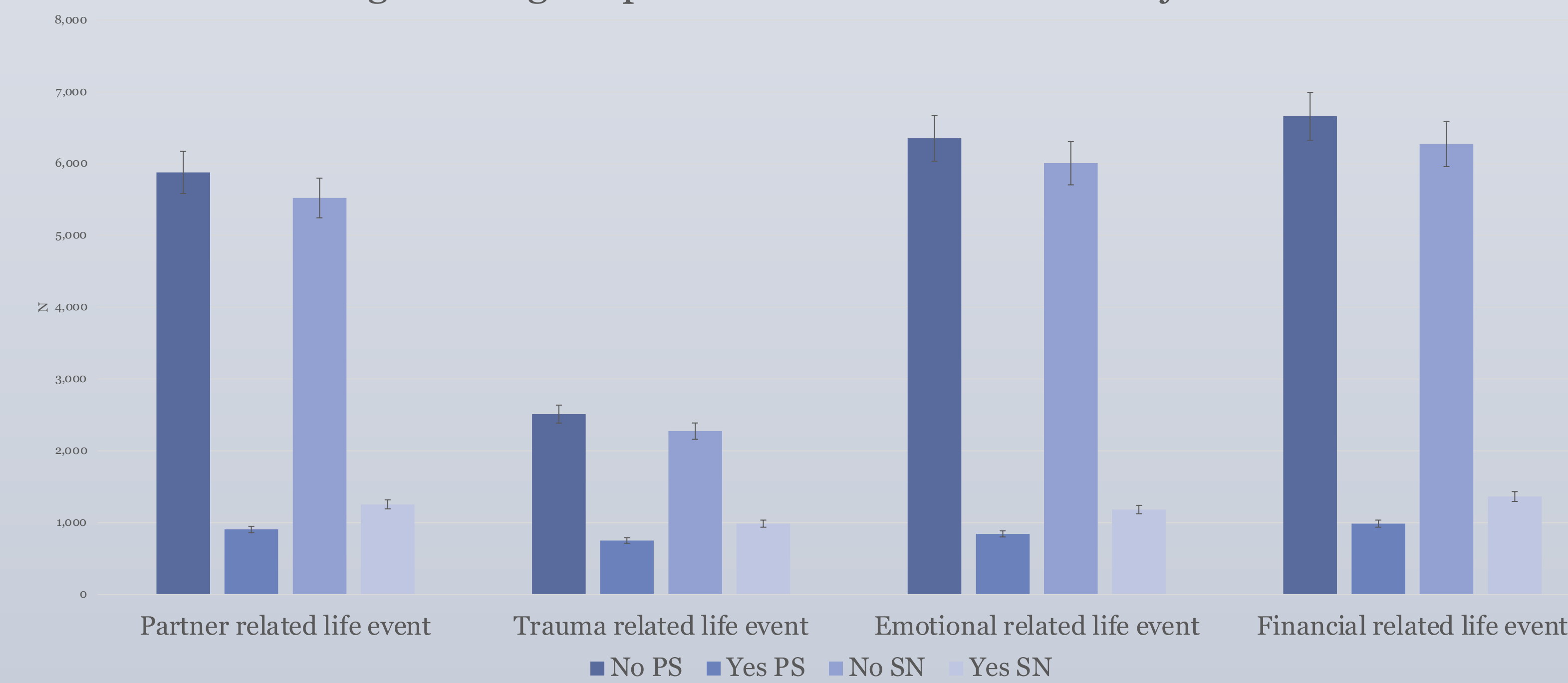


Figure 3. Of those who have faced major life events, the vast majority are non-smokers, though differences can be noted between the categories of major life event stressors

Major Life Event Stressors Experienced by Smokers

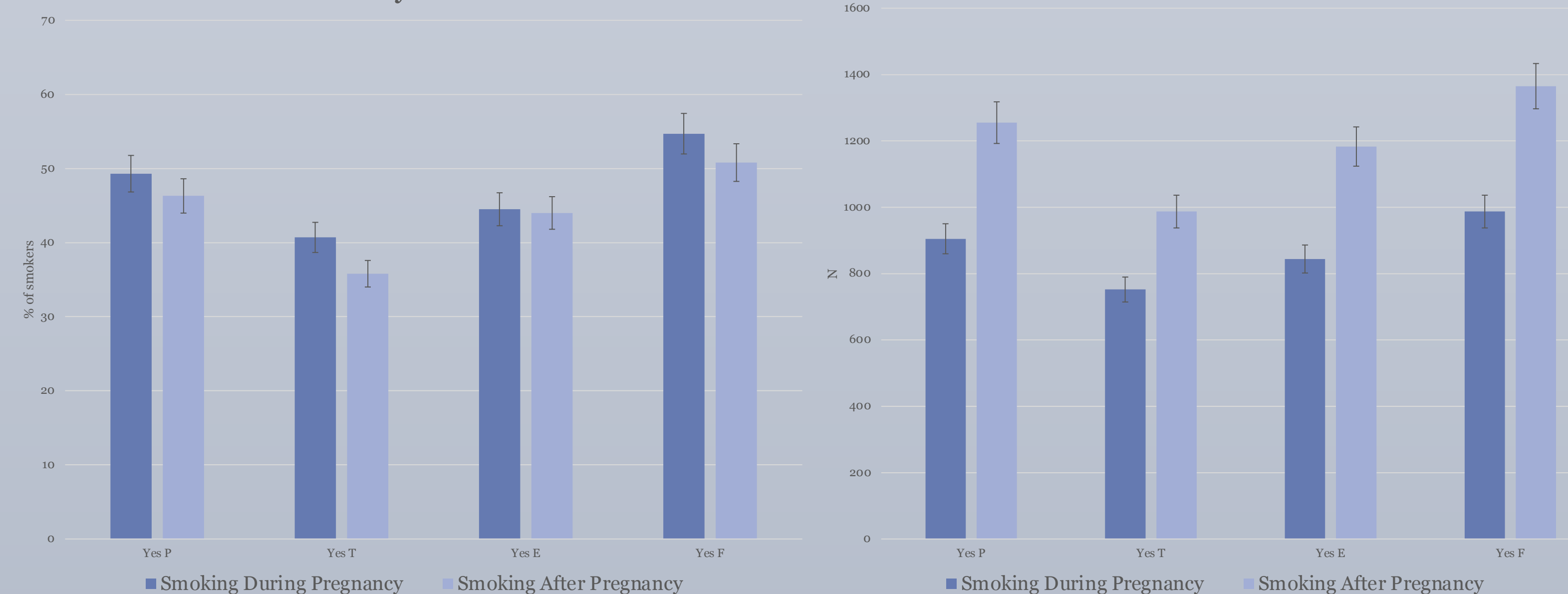


Figure 4a (left) & 4b (right). Distributions of smokers and the major life event stressors they have faced

Discussion

- After adjusting for ethnicity, maternal age, marital status, WIC, parity, abuse, insurance, and education, there is a **significant association between stressful life events and smoking during and after pregnancy**. This indicates women are more likely to smoke during and after pregnancy when they are dealing with stressful life events.
- The trauma-related life event stressor increased the likelihood of smoking the most. We can observe this as all the life stressor prevalence ratios (PR) increased, however the PR for trauma was the highest (Figure 2,3).
- More than 75% of women who smoked during and after pregnancy were **married**. There was about an even split of smokers who faced a **partner related** life event during and after pregnancy. About 40% of smokers faced a **trauma-related** life event during and after pregnancy. About 45% of smokers faced an **emotional-related** life event during and after pregnancy. One major partner, trauma, and emotional-related life psychosocial stressor is **partner abuse**. This study found that of those who had an abusive partner during pregnancy, 30% smoked, whereas of those who had an abusive partner after pregnancy, 35% smoked. These high percentages are **concerning** (Figure 4a).
- During and after pregnancy, more than half of smokers faced a financial-related life event. Most smokers were also enrolled in Medicaid, a public insurance program for low-income individuals, indicating that there may be a **socio-economic relation to smoking as a coping mechanism for stress**. Smoking is a coping mechanism for financial stress, so this finding is like what past literature has cited.

Conclusions & Future Work

- The percentage of smokers who faced major life events in all four categories during pregnancy decreased after pregnancy (Figure 4a). This is interesting as the general trend of pregnancy and postpartum smoking is that individuals who smoke during pregnancy will usually continue smoking, or those individuals who quit smoking during pregnancy relapse postpartum as we can see in Figure 4b.
- Based on **significance of results** and patterns determined in the data, a **manuscript** is currently being developed.

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