

Examining Associations between Partner Pregnancy Intention and Maternal Mental Health in Oklahoma

Background

The role and importance of fathers in the lives of their children is still an emerging area of study, but researchers have shown that there are clear benefits at multiple life stages. Positive father involvement has been shown to be inversely associated with child problem behaviors over time.¹ Children who grow up with their biological fathers in the home have a reduced risk of illness and lower rates of infant mortality relative to children from single-parent households.² Moreover, women pregnant without the fathers' involvement or presence have been shown to have higher rates of low birth weight, very low birth weight, preterm, and small for gestational age infants.³

Healthy People 2020⁴ notes that some of these same poor outcomes are associated with unintended pregnancies. Additionally, pregnancy intention data are related to various mental health outcomes such as postpartum depression.⁵ The Oklahoma Pregnancy Risk Assessment Monitoring System (PRAMS) collects data regarding the mother's pregnancy intention, which is defined as the measure of her desire to have a child prior to the time of conception.⁶

Yet, there is less research in the United States and in Oklahoma assessing the impact on the mother when the father's desires and feelings regarding pregnancy are known, especially related to mental health. Oklahoma PRAMS also collects data on the husband's or partner's pregnancy intention: whether or not the mother reported that their husband or partner said he did not want them to be pregnant at any time in the year prior to the birth of their child.

This report used 2016-2017 data from Oklahoma PRAMS to examine how a husband's or partner's pregnancy intention is associated with the mother's mental health and related experiences.

Methods

During the 2016-2017 Oklahoma PRAMS surveillance period, a total of 5,737 mothers were sent a PRAMS survey. Of these, 3,467 mothers responded for an unweighted response rate of 60.4%. PRAMS is designed to yield a representative sample. Data weighting procedures and detailed methodology are described elsewhere.⁷ Statistics were calculated using SAS-callable SUDAAN (Version 11.0.3) software. Differences between percentages were assessed using the Cochran Mantel Chi Square test at the $p < 0.05$ level. Cell sizes of $n < 30$ were suppressed.

Mother's pregnancy intention was categorized based on how she responded concerning her feelings about becoming pregnant before the pregnancy occurred. An intended pregnancy is when the mother wanted to be pregnant then or sooner. An unintended pregnancy is when the mother either wanted to be pregnant later or did not want to be

OKLAHOMA FACTS

Overall, 5.9% of mothers reported that their partner said they did not want them to be pregnant. Among these mothers:

- **1.9%** self-reported their pregnancy as intended;
- **7.8%** of mothers were not sure what they wanted at the time of pregnancy (ambivalent);
- **11.6%** of mothers reported that their pregnancy was unintended
- **31.7%** reported six or more stressors;
- **45.4%** reported 3-5 stressors
- **33.9%** self-reported having depression during their pregnancy;
- **24.4%** self-reported having postpartum depression
- **17.2%** experienced physical violence by either a current or previous partner before they were pregnant;
- **16.7%** reported physical violence during their pregnancy



pregnant then (or at any time in the future). An ambivalent pregnancy is when the mother was unsure how she felt about becoming pregnant.

Oklahoma PRAMS also asks mothers a question about things that may have happened during the 12 months before their baby was born (answers are classified as stressors). The husband’s or partner’s pregnancy intention was based on if the mother responded that her husband or partner said he didn’t want her to be pregnant at any time during the 12 months before the baby was born.

Additionally, this report also looked at how other experiences shown in research to be linked with mental health are associated with the husband’s or partner’s pregnancy intention. These include other stressors, depression, intimate partner violence (IPV), and behavioral health visits prior to pregnancy. The stand-alone term “partner” is used to describe either a husband or partner throughout the report. The survey questions used for each domain examined are as follows:

Pregnancy Intention

Question: Thinking back to just before you got pregnant with your new baby, how did you feel about becoming pregnant?

Question: This question is about things that may have happened during the 12 months before your new baby was born. Check No if it did not happen to you or Yes if it did. (My husband or partner said they didn’t want me to be pregnant).

Stressors

Question: This question is about things that may have happened during the 12 months before your new baby was born. Check No if it did not happen to you or Yes if it did.

Depression

Question: During your most recent pregnancy, did you have any of the following health conditions?

Question: Since your new baby was born, how often have you felt down, depressed, or hopeless?

Intimate Partner Violence

Question: In the 12 months before you got pregnant with your new baby, did any of the following people push, hit, slap, kick, choke, or physically hurt you in any other way? (Husband, partner, ex-husband, ex-partner).

Question: During your most recent pregnancy, did any of the following people push, hit, slap, kick, choke, or physically hurt you in any other way? (Husband, partner, ex-husband, ex-partner).

Behavioral Health Care Visits

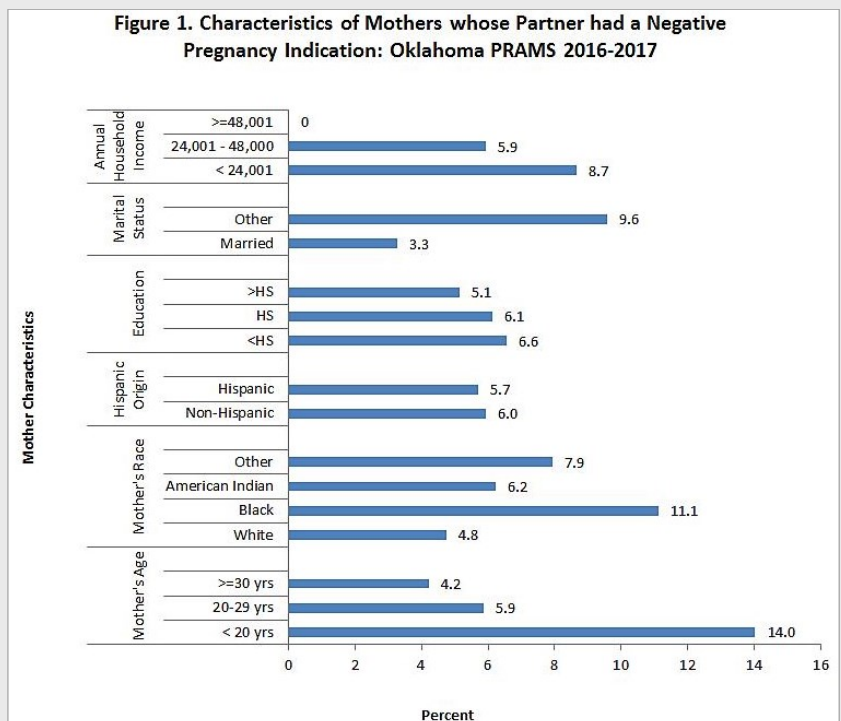
Question: What type of health care visit did you have in the 12 months before you got pregnant with your new baby?

Results

Overall, 5.9% of mothers (n=250) reported that their partner said they did not want them to be pregnant (referred to as “negative pregnancy indication” in this report) while the remaining 94.1% did not make this indication (referred to as “no indication” in this report).

Mothers’ Characteristics

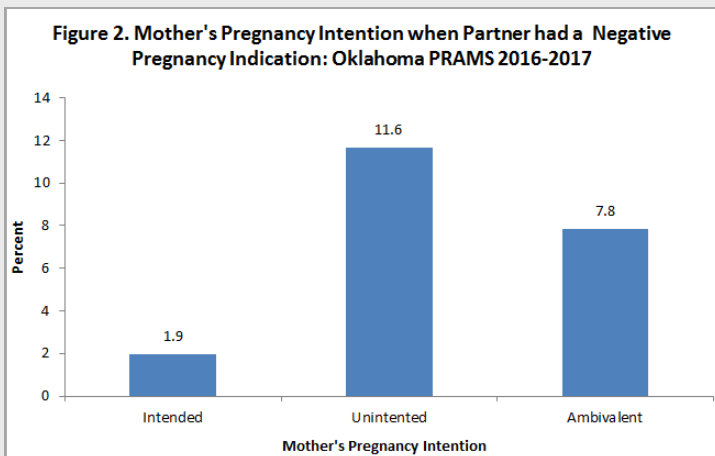
Figure 1 shows that mothers who reported that their partner had a negative pregnancy indication were typically younger than 20 years old (14%), Non-Hispanic (NH) black (11.1%), unmarried (9.6%), and had an annual household income of less than \$24,001 (8.7%). Mother’s age, race, and marital status were all significantly associated with father’s negative intention (p < 0.05).



Pregnancy Intention

Overall nearly 52% of Oklahoma mothers reported their births were intended, 30% unintended, and just over 18% were in the ambivalent category (PRAMS 2016-2017; data not shown).⁸

Figure 2 shows that when their partner had a negative pregnancy indication, 1.9% of mothers reported their pregnancy as intended, 7.8% of mothers were not sure what they wanted at the time of pregnancy (ambivalent), and 11.6% of mothers reported that their pregnancy was unintended.

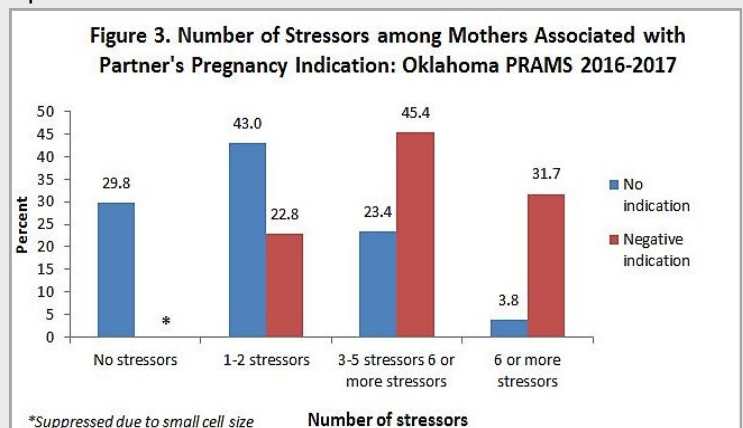


Stressors

In addition to capturing the response from mothers about whether their partner said they did not want them to be pregnant, PRAMS asks about 11 other stressors that may have been present in the mother's life in the 12 months before her baby was born. Table 1 shows these stressors and their association to whether the partner had a negative pregnancy indication or if no indication was made.

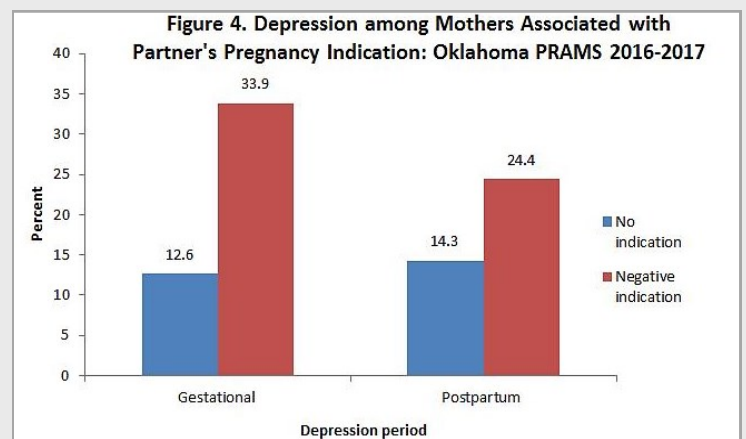
Stressor	No Indication (%)	Negative Pregnancy Indication (%)
Close family member hospitalized due to illness	22.6	32.2
Separated or divorced	6.7	32.0
Moved	40.3	51.2
Partner lost job	13.9	20.1
Mother (self) lost job	9.7	24.1
Separated from partner due to deployment or work	5.1	5.6
Argued more than usual with partner	20.2	64.5
Couldn't pay rent, mortgage, or other bills	18.2	42.4
Partner or self went to jail	4.3	14.7
Close to someone with drug or drinking problem	12.1	34.7
Close to someone who died	19.7	27.3

Figure 3 shows that 31.7% of mothers who said their partner had a negative pregnancy indication reported six or more stressors (compared to 3.8% who did not say this about their partner). Additionally, 45.4% of mothers who said their partner had a negative pregnancy indication reported 3-5 stressors (compared to 23.4% who did not say this about their partner). The number of mothers who said their partner had a negative pregnancy indication and who reported no stressors was too small to include in analysis (although 29.8% of those whose partner made no indication reported no stressors). Mothers who reported their partner made no indication were also higher for 1-2 stressors. These findings are all statistically significant at $p < 0.05$.



Depression

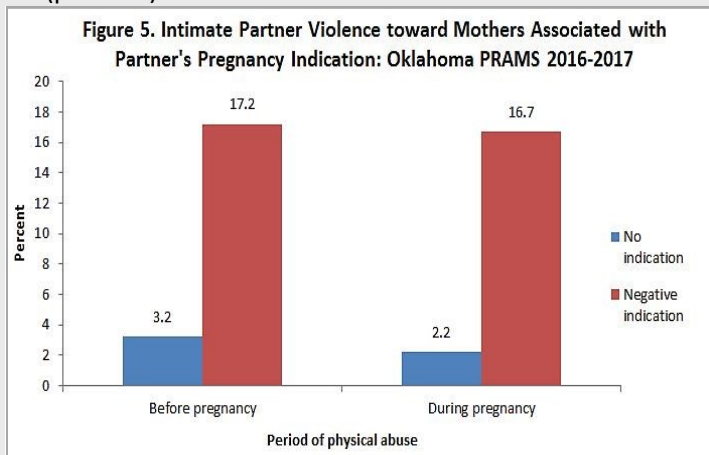
Figure 4 shows that 33.9% of mothers who said their partner had a negative pregnancy indication reported having depression during their pregnancy ($p < 0.05$) and 24.4% reported having postpartum depression ($p < 0.05$) (compared to 12.6% and 14.3% of mothers whose partner made no indication, respectively).



Intimate Partner Violence

Figure 5 shows that in the 12 months before they were pregnant, 17.2% of mothers who reported their partner

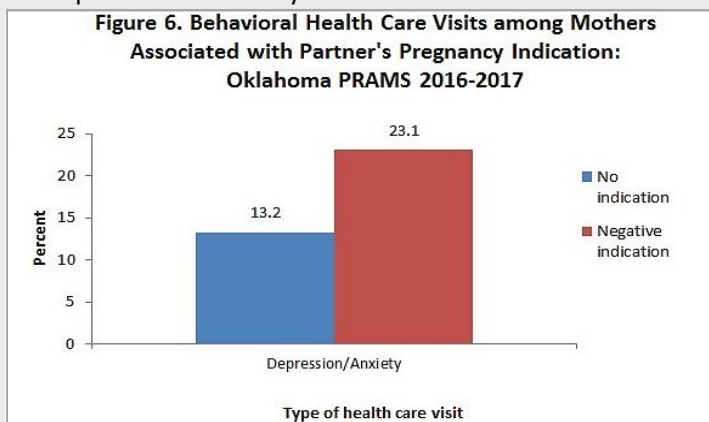
had a negative pregnancy indication said they were pushed, hit, slapped, kicked, choked, or physically hurt by either a current or previous partner. Moreover, 16.7% of these mothers reported this type of violence during their pregnancy by either a current or previous partner. Among mothers who reported that their partner had no indication of not wanting her to become pregnant, 3.2% experienced physical violence in the 12 months before pregnancy and 2.2% experienced physical violence during pregnancy. The association between intention and IPV is statistically significant ($p < 0.05$).



Behavioral Health Care Visits

In the 12 months before getting pregnant, 60.8% of mothers who reported their partner had a negative pregnancy indication visited a health care provider compared to 58% of those whose partner made no indication (PRAMS 2016-2017; data not shown).

Figure 6 shows the rates of behavioral health care visits. For those whose partner had a negative pregnancy indication, 23.1% of these mothers went to a health provider for depression or anxiety. For those mothers whose partner made no indication of not wanting her to be pregnant, 13.2% went to a health provider for depression or anxiety.



Limitations

Potential limitations to this study include:

- A small sample size of mothers who reported that their husband/partner did not want the pregnancy;
- Social desirability bias and recall bias in answering questions;
- Diagnoses and health care visits are all self-reported and unverified by medical reports;
- The husband or partner may or may not have been the father of the child;
- The word “partner” in the survey is not gender-specific and therefore might be interpreted by respondents as either male or female.

Discussion

While some of the literature does describe fathers’ roles in mothers’ mental health^{9,10} this report’s findings are important to address a research gap related to how a partner’s feelings about pregnancy are associated with maternal mental health.

Pregnancy Intention

According to the study data, there are higher rates of pregnancy intention among fathers when the mother also intended the pregnancy. Pregnancy intention has been examined in the literature in regards to topics such as alcohol and substance use, depression, stress, and overall mental health symptoms.¹¹ However, the role of the partner’s pregnancy intention in influencing these behaviors is not well documented. This report provides further development to the topic by demonstrating that a partner’s verbal indication of pregnancy intention is associated with maternal mental health for women of all pregnancy intention statuses.

Stressors

Stressors and their health effects in Oklahoma mothers have been reported in a previous publication by Oklahoma PRAMS.¹² Growing research suggest that psychosocial, cultural, and environmental stressors experienced during pregnancy can affect both maternal and fetal health, including mental health.^{13,14} This study shows that women whose partners have made a negative pregnancy indication may experience a larger number of stressors than those women whose partners did not make this indication. Knowing that certain stressors are

reported at a higher rate among mothers who reported that their partner did not want the pregnancy could lead to improved screenings for women across the perinatal period.

Depression

Similar to stressors, depression can affect maternal and infant outcomes.¹⁴ This study demonstrates an association between self-reported depression in women in the prenatal and postnatal periods and their partner's pregnancy indication. Therefore, examining depression among mothers who report their partner did not want the pregnancy is another way to potentially identify at-risk women.

Intimate Partner Violence

The Centers for Disease Control and Prevention report that about 1 in 4 women (or 25%) have experienced some form of IPV during their lifetime.¹⁵ Yet, many experts agree that IPV is underreported in the U.S. and the small sample size for this measure within the study supports this assertion. In the study, the presence of physical abuse was associated with higher rates of partners indicating they did not want the pregnancy. IPV is more frequently being viewed through the lens of a public health issue – particularly as it relates to sexual and reproductive health.^{15, 16} IPV survivors are at higher risk for diagnoses such as depression or post-traumatic stress disorder and at higher risk for behaviors such as smoking, drinking, and sexual risk behaviors¹⁵ – all of which can have an effect on health and birth outcomes.

Behavioral Health Care Visits

The American Academy of Family Physicians' position is that a mental health assessment should be included in preconception care and that controlling depression or anxiety prior to pregnancy may help prevent negative pregnancy outcomes.¹⁷ The study results show that mothers whose partners had a negative pregnancy indication accessed behavioral health care prior to pregnancy at higher rates than did those mothers who did not make this indication. However, more research is needed to understand the context of these visits in relation to other factors that may play a role in the higher rates of utilization.

Recommendations

Recommendations for addressing these issues include:

1. Increase access to and knowledge of family planning services for men and women to assist in assuring every pregnancy is intended and appropriately spaced for optimal health outcomes.
2. View every interaction with a health care provider as an opportunity for preconception health education.
3. Promote resources that support developing positive skills, abilities, and coping strategies for clients and their families.
4. Provide culturally-competent initiatives that address mental health for women, men, children, and families throughout the life course.
5. Increase the number of social workers and other clinicians available to assist clients in accessing needed services, administer appropriate screenings, and to refer clients for appropriate interventions.
6. Establish more integrated models of care that blend the expertise of mental health and primary care.
7. Provide health education, including safe and healthy relationship skills, in all middle schools and high schools in Oklahoma.
8. Implement comprehensive fatherhood initiatives that engage fathers and enhance the parenting of both parents.

Conclusion

An article by the American Mental Health Counselors Association concludes that biological, behavioral, social and environmental factors all affect women's mental health.¹⁸ Moreover, according to the well-known Centers for Disease Control and Prevention-Kaiser Permanente 1998 study on adverse childhood experiences, or ACEs, children who grow up with household dysfunction (e.g. mental illness, mother treated violently) may have their sense of safety, stability, and bonding affected. ACEs are potentially traumatic events that occur in childhood and are linked to chronic health problems, mental illness, and substance misuse in adulthood.¹⁹ Research has also shown that prenatal environments, including maternal psychological state, can disrupt normal fetal development as well as the architecture of the brain and have sustained effects across the lifespan.¹⁴ Therefore, the role of fathers is critical since it can influence multiple dimensions of health outcomes for both the mother and the child.

The Pregnancy Risk Assessment Monitoring System (PRAMS) is an ongoing, population-based study designed to collect information about maternal behaviors and experiences before, during, and after pregnancy.

Monthly, PRAMS sampled between 200 to 250 recent mothers taken from the Oklahoma live birth registry. Mothers were mailed up to three questionnaires in either English or Spanish seeking their participation. Follow-up phone interviews for non-respondents were conducted.

A systematic stratified sampling design was used to yield sample sizes sufficient to generate population estimates for groups considered at risk for adverse pregnancy outcomes. Information included in the birth registry is used to develop analysis weights that adjust for probability of selection and non-response.

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