Experiencing Family Incarceration during Childhood: Implications for the Next Generation

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Abstract

The experience of parental incarceration has been linked to increased risk for developmental and health problems. For children, parental incarceration is associated with further cumulative risk for additional adverse exposures. Most studies on parental incarceration focus on global mental and physical health during childhood, but there is scant research on adults who experienced parental incarceration during childhood. Perinatal stress, especially pregnancy-specific stress, has been linked to pre-term delivery, post-natal depression and child neurological development. This study examines the association between parental incarceration during childhood and pregnancy-specific stress.

Introduction

In the general population, parental incarceration rates are low: 3-5% (Glaze and Maruschak, 2008; Wildeman and Western, 2010). Roughly 10% of Oklahoma children experience parental incarceration (Annie E. Casey Foundation, 2016). Parental incarceration during childhood is linked with a variety of mental and physical outcomes in young adulthood, including: depression, anxiety, asthma, and migraines (Lee, Fang, and Luo, 2013).

Children who experience parental incarceration have on average 5 times more ACEs than children who did not experience parental incarceration (Turner, 2018).

While much less research has been done that looks specifically at the impact of specific ACEs, one study found that the incarceration of a household member had the strongest relationship with adolescent pregnancy (Hillis et al., 2004). Furthermore, experiencing parental incarceration during childhood increases the risk of alcohol use during pregnancy (Chung et al., 2010). Few studies have examined maternal mental health during pregnancy and exposure to parental incarceration.

Research Questions:

1. What effect does parental incarceration during childhood have on pregnancy specific stress?
2. Is it important to consider other adverse childhood experiences when examining the role of parental incarceration during childhood for maternal mental health during pregnancy?

Methods

Sample

- Data for the current study come from a longitudinal clinic-based cohort study conducted in 2016-2017 of 177 pregnant women (aged 15-40) recruited from two perinatal clinics in Tulsa. The participating clinics serve a racially diverse, socioeconomically disadvantaged and medically-underserved patient population. Analytic sample includes 153 women with complete data.

Measures

- *Pregnancy Specific Stress:* 12-item scale measuring pregnancy related stress (i.e. concerns about diet, exercise, pregnancy symptoms, & delivery), scores ranged from 14-56.
- *ACEs Measures*
  - *Family member incarceration:* (Did a household member go to prison?)
  - *Family member mental illness:* (Was a household member depressed or mentally ill or did a household member attempt suicide?)
- *Depressive Symptoms:* Center for Epidemiologic Studies Depression Scale (20 items) measuring depressive symptomology.
- *Control Variables:* Protective Compensatory Events (PACEs), Total number of pregnancies, Pregnancy timing, Age, Education & Minority status

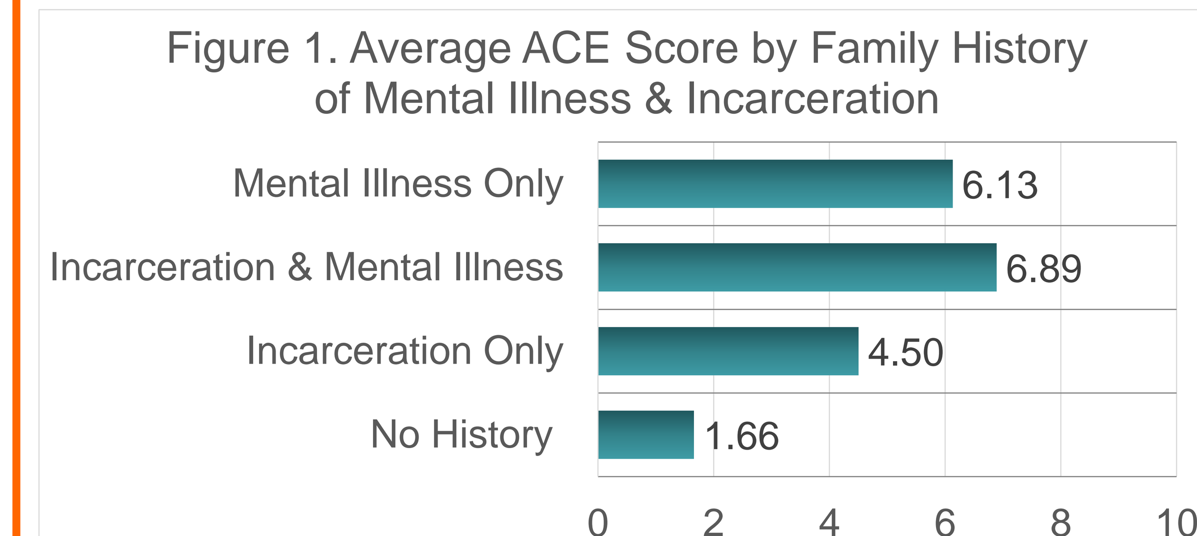
Analytic Strategy

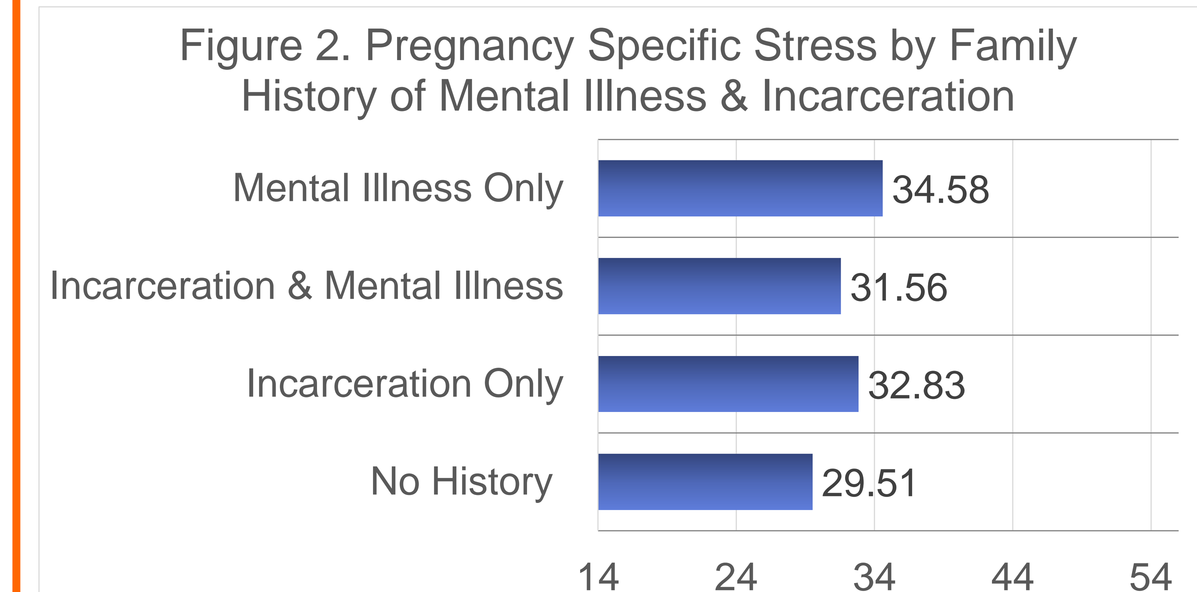
- First, we used the 4 category composite variable to examine overall ACEs score. Next, we conducted OLS regression analysis to examine the association between the composite incarceration/mental illness variable and Pregnancy Specific Stress.

Results

Descriptive statistics (not shown):

- About 69% of the sample had no family history of mental illness or incarceration. 5% reported incarceration only, 19% mental illness only, and 7% reported a family history of incarceration and mental illness.
- Average Pregnancy Specific Stress score = 30.78
- Demographics: Avg. Age= 25 years old, 56% Minority, 77% had a high school diploma or less.





OLS Results Predicting Pregnancy Specific Stress

	Family Incarceration & Mental Illness History		Family Incarceration & Mental Illness History + CES-D	
	b	SE	b	SE
Incarceration & Mental Illness History				
No Incarceration or Mental Illness				
Incarceration Only	6.69*	(2.93)	5.03	(2.54)
Incarceration & Mental Illness	.75	(2.41)	.81	(2.08)
Mental Illness Only	4.50**	(1.56)	1.96	(1.40)
CES-D			.39***	(.06)
PACEs	-.87***	(.23)	-.57**	(.21)
Total number of Pregnancies	-.71	(.57)	-1.03*	(.49)
Mistimed	2.79*	(1.22)	.93	(1.09)
Age	-.29	(.16)	-.22	(.14)
HS degree or less	-2.19	(1.66)	-2.40	(1.43)
Minority	-2.12	(1.30)	-3.24**	(1.13)
Intercept	46.44***	(4.68)	39.77***	(4.17)
N	153		153	
adj. R^2	.216		.417	

Summary of Results:

- Model 1: the full model adjusted for covariates.
  - Compared to respondents with no family incarceration AND no family mental illness history, those whose family have a history of incarceration only, or mental illness only, had significantly higher levels of stress.
- Model 2: the full model + CES-D
  - CES-D positively associated with pregnancy specific stress & mediates family incarceration and mental illness history.

Conclusions

- Parental incarceration matters for maternal psychological well-being during pregnancy.
- A family history of incarceration or mental illness are both associated with higher ACEs scores.
- The pathways between a family history of incarceration and mental illness is complex, there is likely a combination of shared biological and social factors likely influence pregnancy specific stress and depressive symptoms.
- We should consider that adverse childhood events may be clustered. Simply using ACE scores may not capture nuances, nor does examining one ACE without considering others.

Implications:

- Behavioral and physiological fetal exposures are important for long-term infant socio/emotional and cognitive development.
- More research is needed to understand intergenerational implications of maternal ACEs.
- Prenatal health care providers might consider screening for ACEs at health care (including prenatal and gynecological) visits.
- If ACE scores are high, interventions may be needed to tackle the long-term effects of early adversity.

References

Annie E. Casey Foundation (2016) A shared sentence: The devastating toll of parental incarceration on kids, families and communities. Report, Baltimore, MD, June.

Chung, E. K., Nurmohamed, L., Mathew, L., Elo, I. T., Coyne, J. C., & Culhane, J. F. (2010). Risky health behaviors among mothers-to-be: the impact of adverse childhood experiences. Academic pediatrics, 10(4), 245-251.

Glaze, L.E. and L. M. Maruschak. (2008). Parents in Prison and Their Minor Children. Office of Justice Programs. NCJ 222984. Washington, DC: U.S. Department of Justice.

Lee, R. D., Fang, X., & Luo, F. (2013). The impact of parental incarceration on the physical and mental health of young adults. Pediatrics, peds-2012.

Hillis, S.D., R.F. Anda, S.R. Dube, V.J. Felitti, P.A. Marchbanks, and J. S. Marks. 2004. "The Association between Adverse Childhood Experiences and Adolescent Pregnancy, Long-Term Psychosocial Consequences, and Fetal Death."Pediatrics113(2):320-327

Turney, K. (2018). Adverse childhood experiences among children of incarcerated parents. Children and Youth Services Review, 89, 218-225.

Wildeman, C., & Western, B. (2010). Incarceration in fragile families. The future of children, 20(2), 157-177.