

Teenage pregnancy: The impact of maternal adolescent childbearing and older sister's teenage pregnancy on a younger sister

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Background

Higher Neonatal Mortality
Pre-Term
Low Birth Weight
Health and
Developmental Problems



Post Partum Depression
Breastfeeding Initiation
High School Completion
Poverty

Background

Risk Factors for Teenage Pregnancy

- Adversity during childhood and adolescence
- Conduct and Attention Problems
- Family Instability
- Low Educational Achievement
- Family History of Teenage pregnancy

Background

Family Influence

- Shared Social Risk
 - Poverty
 - Ethnicity
 - Lack of Opportunities
- Social Influence
 - Attitudes and Values

Study Objective

Which is a **stronger** predictor of teenage pregnancy –

- Having an **older sister** who had a teenage pregnancy? or
- Having a **mother** who bore her first child before age 20?

Methods

Setting – Manitoba, Canada

Teenage pregnancy rates (2010)

- Manitoba - 48.7 per 1,000
- Canada - 28.2 per 1,000
- England and Wales - 54.6 per 1,000
- United States - 57.4 per 1,000

Methods

Data – Population Health Research Registry at the Manitoba Centre for Health Policy (MCHP)

Cohort

- Women born in Manitoba between April 1, 1979 and March 31, 1994
- Stayed in the province until at least their 20th birthday
- Had at least one older sister
- No missing values on key variables
- One randomly selected younger sister per family

N = 17,115

Methods

Analytic Approach

Propensity Score matching (2:1) using greedy matching

Two conditional Logistic Regression Models on matched cohorts:

- 1) Relationship between mother's teenage motherhood status and younger daughter's teenage pregnancy odds
- 2) Relationship between older sister's teenage pregnancy status and younger sister's teenage pregnancy odds

Methods

Outcome

- Teenage Pregnancy: pregnancy between 14th and 20th birthday

Confounders

- Socioeconomic Status and Location of Neighborhood at 14th Birthday
- Mother's marital status at time of birth
- Number of Older Sisters
- Mental Health Diagnoses before 14th Birthday
- Residential Mobility before 14th Birthday
- Family Structure Change before 14th Birthday

Results

Impact of Mother's Teenage Childbearing

Teenage pregnancy rates:

- 39.4% if mom was a teenage mother
- 13.1% if mom was not a teenage mother

After propensity score matching, sample consisted of 1,522 cases and 3,044 controls (1:2)

Results

Impact of Mother's Teenage Childbearing

Odds Ratio: 1.57 (99% CI 1.30 - 1.89)

- Intergenerational transmission of values regarding family
- Directly through the mother's role modeling
- Indirect impact of socioeconomic and family environment through educational deficits or low opportunity

Results

Impact of Older Sister having a Teenage Pregnancy

Teenage pregnancy rates:

- 40.4% if older sister had a teenage pregnancy
- 10.3% if older sister did not have teenage pregnancy

After propensity score matching, sample consisted of 1,873 cases and 3,746 controls (1:2)

Results

Impact of Older Sister having a Teenage Pregnancy

Odds Ratio: 3.38 (99% CI 2.77 – 4.13)

Social learning theory

Shared parenting influences

Shared societal risk

Conclusion

For both older sisters' teenage pregnancy and mother's teenage childbearing, the odds in this study are lower than those reported elsewhere

Social modeling may have a **bigger** impact on adolescent child bearing than growing up in an **adverse family environment**.

Advantages and Limitations

Administrative Data

Advantages

- Higher levels of accuracy - does not depend on recall
- Well-suited for propensity scoring

Limitations

- Certain covariates and mediating effects are unobservable due to lack of information
- The data is only able to capture variables that are recorded

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