The Impact of Sexual Assault on Hourly Wages

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Motivation

Around 15% of American women have survived a completed rape during their lifetime. I wondered about the long-term quantitative impacts of sexual assault for survivors, including impacts on lifetime earnings or hourly wages.

Question

Do female sexual assault survivors make lower hourly wages than their similarly situated female peers?

Data

National Longitudinal Study of Adolescent to Adult Health (AddHealth) - Wave IV In-Home Questionnaire (2008), public use

Method

Nearest-neighbor propensity score match and logistic regression on the matched data for double robustness

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Model

Transformed yearly personal income to hourly wage: WAGE=PI/(50*reported weekly hours)

Propensity score estimated with logistic regression: $PHYS\_SA \sim B1*RACE + B2*AGE + B3*EDU + B4*CHILDREN$

Linear regression on the matched dataset to estimate impacts on wage: $LOG\_wage \sim B1*PHYS\_SA + B2*CHILDREN + B3*EDU + B4*MARRIED + B5*URBAN\_d$

PSM and Regression Results

Summary of Balance for Data – SMD		
	All	*Matched*
Distance	0.4133	0.0000
RACE1	0.0018	-0.0151
RACE2	0.0265	0.0077
RACE3	0.0379	0.0336
RACE4	-0.1608	0.0000
AGE	-0.0111	-0.0419
EDU DNG	0.1146	0.0000
EDU HSG	0.2631	-0.0213
EDU CG	-0.3781	0.0000
EDU PG	-0.0598	0.0334
CHILDREN	0.2178	0.0000

Covariate	Estimate	Std Error	P-value
Intercept	1.83	0.19	<2e^-16***
PHYS_SA	-0.24	0.08	0.003**
CHILDREN	-0.11	0.04	0.002**
EDU – High School Grad	0.53	0.16	0.001***
EDU – College Grad	0.92	0.19	2.77e^-06***
EDU – Post Grad	0.92	0.21	1.38e^-05***
MARRIED	-0.16	0.08	0.062
UBRAN_urban	0.25	0.10	0.011*
URBAN_other	-0.06	0.22	0.782

N=598, Adjusted R-squared: 0.126
Significance codes: '***' 0.001 // '**' 0.01 // '*' .05

Findings and Discussion

Based on this data and approach, sexual assault survivors do make lower wages than similarly situated female peers. This study finds **approximately 24% lower hourly wages for sexual assault survivors.**

This was the first study of wages in this literature to use the matching technique. However, the indicator used for sexual assault in the AddHealth dataset may not capture all SA survivors. In addition, the propensity score match method led to a substantial reduction in sample size, and this model was unable to control for family-level effects.

Moving forward, additional controls such as parent's socioeconomic status, career industry, or personality measures may increase R squared. Future research rests in several areas, like the impact of sexual assault on labor force participation rates and the role of diminished physical or mental health as a mechanism for the observed lower wages.

References

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