

THE EFFECT OF MARRIAGE ON WEIGHT GAIN AND PROPENSITY TO BECOME OBESE IN THE AFRICAN- AMERICAN COMMUNITY

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Obesity in the U.S.



- Obesity is associated with a host of diseases and increased likelihood of premature death (National Center for Health Statistics 2006).
- The majority of U.S. adult citizens are considered to be overweight and about a third obese (National Center for Health Statistics 2006).

Obesity and Race

- African-American women are disproportionately obese at all ages relative to African-American men and women and men of other races (Burke and Heiland 2008).

Marriage and Obesity

- Marriage and health
- Few studies have examined the link between marriage and obesity
 - ▣ Inconsistent results regarding marriage and body mass index
- Even less well understood is how marriage relates to obesity by different race and ethnic groups
 - ▣ Yet marriage rates vary widely by race

Questions

- What change in the likelihood of becoming obese is associated with marriage?
- What change in Body Mass Index is associated with marriage?
- And how do these effects differ by race and gender?

Data

- NLSY 1979
- $BMI = [\text{weight} / \text{height}^2] * 703$
- Levels of BMI
 - ▣ underweight (BMI < 18.5)
 - ▣ normal weight (BMI in range 18.5-24.9)
 - ▣ overweight (BMI in range 25-29.9)
 - ▣ obese (BMI ≥ 30).
- For example, if an individual is 5'9":
 - ▣ normal weight range is from 125 to 168 lbs.
 - ▣ over weight is 169-202 lbs.
 - ▣ obese is over 202 lbs.
- 2 outcomes – obesity and BMI index

Method

- Models aimed specifically at netting out selection bias
- Lagged Y-Regressor Model
- Individual level fixed effects

Results

Predicted probability of becoming obese in the next survey year, if an individual is not obese currently

	<u>never married, living alone</u>	<u>married</u>		<u>% change in probability</u>
African-American women	7.24%	10.70%	**	+ 48%
African-American men	6.22%	5.84%		Not significant
White women	3.68%	3.93%		Not significant
White men	3.58%	4.34%		Not significant
Hispanic women	4.56%	6.81%	*	+ 49%
Hispanic men	7.15%	6.33%		Not significant

Results (2)

Individual fixed effects regression predicting Body Mass Index (BMI) by race and gender

	African American		white		Hispanic	
	women	men	women	men	women	men
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Relationship status (never married, living without a partner)						
married	0.56 ***	0.65 ***	0.46 ***	0.45 ***	0.63 ***	0.71 ***
cohabiting with a partner	0.24 +	0.41 ***	0.11	0.16 ***	0.19	0.57 ***
separated	0.00	0.13	-0.39 **	-0.19 *	0.09	0.27
divorced	0.42 +	0.06	-0.27 *	-0.08	-0.13	0.39 *
widowed	-0.26	-0.25	0.03	0.33	0.86 *	-1.97 *

A .71 BMI increase is associated with a 5 lb increase for an individual who is 5'9".

Summary

- Marriage is associated with an increase in the likelihood of obesity for African-American and Hispanic women.
- Marriage is associated with a modest increase in body mass index.

Conclusions

- These results call into question the role of marriage as a protective institution
- We need to understand the mechanisms that produce weight gain in marriage
 - ▣ This is particularly important for African American and Hispanic women
- Health prior to marriage equally important as health within marriage