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GENDER, BODY MASS AND ECONOMIC STATUS

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ABSTRACT

Previous research on the effect of body mass on economic outcomes has used a variety of methods to mitigate endogeneity bias. We extend this research by using an older sample of U.S. individuals from the PSID. This sample allows us to examine age-gender interactive effects. Through sibling-random and fixed effects models, we find that a one percent increase in a woman's body mass results in a .6 percentage point decrease in her family income and a .4 percentage point decrease in her occupational prestige measured 13 to 15 years later. Body mass is also associated with a reduction in a woman's likelihood of marriage, her spouse's occupational prestige, and her spouse's earnings. However, consistent with past research, men experience no negative effects of body mass on economic outcomes. Age splits show that it is among younger adults where BMI effects are most robust, lending support to the interpretation that it is BMI causing occupational outcomes and not the reverse.

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A handful of recent studies have used various methods to provide estimates of the effect of body mass on economic outcomes free from bias due to endogenous effects (Averett and Korenman 1996; Averett and Korenman 1999; Baum II and Ford 2004; Cawley 2004). We add to this line of research estimates from a much older sample of individuals from the Panel Study of Income Dynamics (PSID). We use this older sample to explore gender-age interaction effects of body mass and, more importantly, to provide counterfactual tests of the causal effect of body mass on economic outcomes. We also examine the effects of body mass on occupational prestige, which has not been explored in previous research. This is significant because occupational prestige may display different results as it may better reflect the permanent component of income and/or job characteristics that are less endogenous to other family level factors than income or wages (which may be responsive to household bargaining dynamics, substitution effects with respect to leisure, and which may display income effects on food consumption).

Previous Research on Body Mass and Economic Outcomes

We are not the first researchers to broach the topic of the relationship between BMI and economic outcomes. Register and Williams (1990) use data from the National Longitudinal Survey of Youth (NLSY) to compare individuals who were 18 to 25 years old in 1982 (using a definition of obesity of >20 percent of recommended weight for height and sex) to examine wage rates. Correcting for a number of measured factors that would affect wage rates—such as union status, race, work experience and industrial category among others—they find that obese women earn 12 percent less than their non-obese counterparts. For obese men, the wage penalty is five percent.[1]

A second study also uses the NLSY to examine the impact of obesity on several economic outcomes: education level, household income, marriage probabilities, poverty probabilities, likelihood of graduating from college and a self-esteem index (Gortmaker et al. 1993). With the exception of self-esteem, women who were obese between the ages of 16 and 24 suffered from worse outcomes seven years later, at ages 23 to 31. When a number of background measures were held constant, differences in marital status, income, poverty rates and years of schooling remained significant. The only outcome for which obesity was significant for men was marriage propensity. Their results are robust to the inclusion of a variable for work-related health limitations. Thus, they interpret the residual differences as resulting from discrimination.

However, as Cawley (2004) notes, the correlation between body mass and economic status may be due to (1) a negative causal effect of body mass on economic status through mechanisms of employer discrimination or reduced health and productivity, (2) a negative causal effect of economic status on body mass, or (3) a spurious correlation between the two due to unobservable variables correlated with both lowered economic status and increased body mass. Only a handful of studies have attempted to deal with these confounding factors. Research by Averett and Korenman (1996) and Gortmaker et al. (1993) relies on a lagged body mass variable which mitigates bias due to reverse causality as body mass of years ago is more endogenous to current

[1] Pagan and Davila (1997) examine social sorting into occupational sectors and find that men are able to mitigate the possible effects of obesity on wages through occupational sector mobility in a way that women are not able to.

economic status than is current body mass. Research has also used individual-fixed effects (Baum II and Ford 2004) or sibling-fixed effects (Averett and Korenman 1996; Baum II and Ford 2004; Cawley 2004) to control for unobserved family-level heterogeneity.[2] We discuss these studies and their findings in detail below.

Averett and Korenman (1996) use an NLSY sample to examine wage rate differentials (which would be a more direct test of discrimination) in addition to breaking down income differentials into components related to the job market (wages) and the marriage market (likelihood of being married and spouse's earnings). The authors employ sibling fixed-effects models as a stricter control for family background characteristics. They find that obesity effects for women are significant, but that men apparently only suffer mild economic sanctions, if any. This "obesity effect" is most profound for white women, and is primarily concentrated in the marriage market.[3] Specifically, differences

[2] Behrman and Rosenzweig (2001) use a twin-differencing approach that also attempts to mitigate endogenous body mass and socioeconomic status effects. They examine 402 MZ-twin pairs from Minnesota and find that "The significant inverse association between adult BMI and wages found in cross-sectional estimates solely reflects a correlation between unmeasured earnings endowments and BMI, and disappears with control for endowments common to monozygotic (MZ) twins… The significant positive association between adult height and wages found in cross-sectional estimates is increased substantially with control for endowments." This finding was later dropped in a revision. It does seem entirely plausible that endowment heterogeneity would work in opposite directions for height and BMI effects; further, results from Minnesota MZ-twin differences in BMI and height are of questionable generalizability to the US population as a whole.

[3] In fact, overweight black women earn about eight percent more per hour than do obese white women. For a variety of social, political and historical reasons, there are fewer social and economic penalties for overweight black women. However, we should not take this to mean that black women's life outcomes are somehow less dependent on physical attractiveness. Instead, a comparably important measure of beauty for black women is that of their skin color. Indeed, despite some gains made with the "Black is Beautiful" mantra during the 1960s and 70s, lighter-skinned African-Americans are still more likely to be considered physically attractive than are their darker peers (and enjoy higher SES

in marriage probabilities between overweight and normal weight women account for 50 to 95 percent of their lower economic status. However, sister fixed effects wipe out these obesity effects for all models except one (predicting total family income without controls for marital status, children, and age of youngest child).

In a subsequent analysis, Averett and Korenman (1999) examine black-white differences in the effect of obesity on economic outcomes for women. They examine outcome variables for individuals at ages 25 to 33 in 1990 and body mass for these individuals evaluated at ages 17 to 24 in 1982. They find that self-esteem does not explain differences in obesity effects between white and black women, and that obesity effects work largely through the marriage market for white women as it significantly reduces their likelihood of marriage and significantly reduces their spouse's earnings.

Cawley (2004) also uses an NLSY sample and individual-fixed effects as well as instrumental variable models. Individual-fixed effects models, which control for all time-invariant unobservable variables specific to individuals, reveal no negative effect of body mass or weight on the wages of black women, Hispanic women, and Hispanic men. There is, however, a significant negative effect of body mass on the wages of white women that remains in tact after controlling for individual-specific unobserved heterogeneity. Using a sibling's body mass as an instrument, Cawley reports an instrumental variable estimate that is again only significant for white women. While the Hausman test does not lead to a rejection of equality between OLS and IV estimates, it is

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[Hughes and Hertel 1990]), and black men are much more likely to prefer lighter-skinned black women as their mates (Anderson and Cromwell 1977; Freeman, Armor, Ross and Pettigrew 1966; Hall 1992; Hill 2000; Hughes and Hertel 1990; Keith and Herring 1991; Robinson and Ward 1995; Ross 1997; Russell, Wilson, and Hall 1992).

also possible that the sibling's body mass instrument fails to meet the exclusion assumption and is directly correlated with an individual's economic status outcomes. Having an overweight sibling may lead you down certain status attainment paths. Likewise, the IV approach does not deal with the problem of unobserved heterogeneity, since the same lurking variable that is causing the sibling's BMI to be associated with the respondent's in the first stage regression may be associated with the error term in the second stage. But the fact that Cawley's results are consistent across these two methods (and with corrections for measurement error) make this study the most definitive statement on the casual relationship to date.

The Current Study

While previous studies have used various methods to reduce bias due to endogenous body mass and economic status outcome effects, their results are limited in that they all rely on young samples from the NLSY. In contrast, in the current study, we analyze a completely different survey, the Panel Study of Income Dynamics (PSID). The PSID obtained respondents' height and weight information during 1986 and the latest two survey waves available, 1999 and 2001. We compare siblings from these three survey years who also have valid data on their education level, occupational prestige and earnings (if employed), marital statuses, and total family income.[4] These respondents are generally much older than the NLSY samples previously used, so they allow for a better long term sense of the impact of weight-for-height and they allow us to compare younger

[4] For all models, we use a Hausman (1978) test of the null hypothesis that fixed effects and random effects estimates are not systematically different. When our models fail to reject the null hypothesis, we interpret the more efficient random effects estimates.

and older individuals. This is particularly important in that older respondents should have economic outcomes that are largely solidified and not as dependent on body mass.

Ideally, we would like to estimate the causal effect of body mass on socioeconomic and marital status outcomes without bias due to unobserved family heterogeneity (as discussed above) *and* without bias due to reverse causation. Sibling fixed effects models alone do not effectively eliminate bias due to reverse causality. It is likely that reverse causality is especially problematic in the current study as socioeconomic outcomes could be a significant cause of body mass. We follow the lead of previous research that uses a lagged body mass variable to deal with bias due to reverse causality. Instead of using a lag of seven years (as do Averett and Korenman [1996], Cawley [2004], and Gortmaker et al. [1993]), we use a lag of 13 to 15 years. This is largely by default, as the PSID only includes weight and height variables for years 1986, 1999, and 2001. Therefore, we examine the effect of 1986 body mass on averaged 1999 to 2001 socioeconomic and 2001 marital status outcomes. As a further test of bias due to reverse causality, we compare estimates for individuals younger than age 35 and individuals age 35 and older. Because individual socioeconomic outcomes are largely stable by age 35, we should see witness no effect of body mass on post-age 35 socioeconomic outcomes; rather, if we do, then it suggests that perhaps it is socioeconomic status causing weight gain in our models.

Our minimum age for inclusion into the sample is 25 and the mean for the sample is 47.61 in 1986 and 58.70 between 1999 and 2001 (see Table 1, below). This is closer to peak earning years and after peak childbearing ages and also after most formal education ends. We examine body mass within random effects and sibling-fixed effects models for three economic status outcomes—occupational prestige, labor earnings, and total family income. Occupational prestige differences reflect labor market dynamics, mostly (there is choice as to whether to work and what job to take which is endogenous to marital outcomes as well). Total family income reflects labor market dynamics as well as marriage market dynamics. We also examine marital status outcomes (as do Averett and Korenman 1996; Averett and Korenman 1999) and we examine divorce and spousal outcomes.

Data and Variables

The PSID began in 1968 with a nationally representative sample of 5,000 American families and has followed them each year since. Needless to say, it is a complicated study design and cannot be done justice in the space allowed here. For a fuller description, see Hill (1992) or Duncan and Hill (1989). By virtue of this complex design, the study has information on the economic histories of families as well as on the outcomes of multiple children from the same families who were in the original sample, moved into it, or were born to sample members. We select adult respondents ages 25 and older who were head or wife of their household in any (or all) years for 1986, 1999 and 2001. Further, these individuals had to have a valid person number for their mother; that is, their mother had to have been in the sample at some time. They were then linked to their siblings through this maternal connection. A trivial number (less than 1 percent) of respondents had a father in the sample but not a mother. The majority had both parents. But since many more of the fathers were missing, we decided to identify siblings based on their mother’s identification.

Body mass, marital status, and the measures that we used to capture economic outcomes are described below. The unit of analysis is the sibling, as we have averaged outcomes from 1999 and 2001 (for economic variables and 2001 values for marital status variables). Mean values—which generally conform to national averages—are presented in Table 1.

<u>Occupational Prestige</u>: This is based on Socioeconomic Index Scores (SEI) for 1970 U.S. Census occupational classification codes (Stevens and Featherman 1981). Hodge-Siegel-Rossi prestige scores (1964) return similar results (analyses not shown but available from the authors upon request). This variable is logged to the base e.

<u>Earnings</u>: This is measured as the total labor market earnings (logged to the base e). We also tested a variable for log-hourly wage, and results were similar. We prefer the total labor market earnings formulation since this reflects both work hours and wages and thus is sensitive to underemployment as well as wage rates.

<u>Family Income</u>: We tested a number of formulations of income including logged and unlogged forms; income-to-needs ratios and straight income; and total household income as well as individual income. We present total household income (logged to the base e).

<u>Body Mass Index</u>: This is a ratio of weight in kilograms to height in meters squared. The PSID collects weight in pounds and height in inches. We converted these measures but excluded all extreme values (weight greater than 400 pounds or less than 70 pounds and height greater than 84 inches and less than 45 inches). In general, BMI between 20 and 25 is considered healthy weight, BMI under 19 is considered underweight, BMI between 25 and 29 is considered overweight, and BMI over 30 is

considered obese. We use BMI averaged over 1999 and 2001 as an outcome variable and BMI in 1986 as a predictor variable. These variables are logged to the base e, as they are positively skewed.[5]

Marital Status: We examine the effects of BMI on likelihood of being married or divorced, separated, widowed in 2001 contingent on being married or divorced, separated, widowed in 1986.

Spousal Outcome Variables: We examine the effect of BMI on spouse's occupational prestige and spouse's earnings measured similarly to respondent's occupational prestige and earnings (that is, logged to the base e).

Control Variables: All models control for respondent's educational attainment in 1986. This is measured as total years of formal schooling completed—a continuous variable from 1 to 17, with the topcode representing any graduate work, regardless of whether a degree was received (the PSID does not, unfortunately, distinguish between various levels of graduate schooling). This is an important control absent in most previous studies. Education level—at least for individuals over 25—is an important control variable given its presumed exogeneity to other forms of economic attainment and its strong association with BMI (particularly since it is more likely that education affects BMI than the reverse).

Models also control for respondent's age in 1986 (models are robust to the inclusion of a quadratic age term as well) and for respondent's parental status in 1986

[5] In addition to body mass, we explore an analysis of height, a different measure of physical appearance. However, all of our estimates using height as a predictor variable are insignificant and we do not present them (they are available upon request).

with three dummy variables for no children living in the household, children under age one living in the household, and children between ages two and seventeen living in the household. Coefficients remain relatively robust to this control variable (as well as other specifications—such as using economic status more broadly defined, as opposed to education level). Finally, previous research (Averett and Korenman 1996; Averett and Korenman 1999; Cawley 2004) has found significant differences in the effect of body mass on economic outcomes across racial groups. In random effects models not presented (but available from the authors upon request), we included a race dummy variable and estimates were not significantly altered.

Findings

We begin with an initial analysis of the extent to which socioeconomic status, height, weight, and body mass index cluster within families. To estimate sibling resemblance, we use a variance decomposition method that follows the strategy for income used by Mazumder and Levine (2003) and Solon et al. (1991). See Conley, Glauber, and Olasky (2004) for a thorough discussion of this variance decomposition method for unbalanced survey design.

Sibling correlations for height, weight, and body mass are calculated for same-sex siblings and are presented in Table 2, below. We report a .359 correlation in sisters' height, a .292 correlation in sisters' weight, and a .332 correlation in body mass. For brothers, we find a .529 correlation in height (note that this is larger than any other socioeconomic status correlation save education), a .371 correlation in weight, and a .318 correlation in body mass.

These figures imply a significant amount of sibling variation in health-related physical appearance, especially in body mass—even more than the amount of intra-family variation in most socioeconomic measures. The degree of variation on these indicators within families is relevant to the current study because when we run random effects models of height, weight and BMI on socioeconomic and marital status outcomes, we find each of these to be significant, controlling for a number of basic demographic factors.

Table 3 present the effects of BMI on 1999 to 2001 averaged occupational prestige, earnings and family income, and on the likelihood of being married in 2001 (given not married in 1986) and on the likelihood of being divorced, separated, or widowed in 2001 (given married in 1986). Model 1 examines the effect of 1986 BMI on outcomes controlling for 1986 educational attainment and age separately for men and women. Fixed effects and random effects models are presented. For occupational prestige, earnings, and income, we present linear random and fixed effects models, and for marital status models, we present linear probability models.

Similar to previous studies, we find that lagged BMI does not significantly affect men's socioeconomic status or marital status outcomes. For women, however, lagged BMI significantly reduces their current socioeconomic status net of their education and their age. No previous study has examined occupational prestige, and our finding of women's reduced occupational prestige contingent on their body mass is novel. Here we interpret the random effects coefficient as the Hausman test does not lead us to reject the null hypothesis of equality between fixed and random effects models. The occupational prestige (SEI) coefficient is interpreted as an elasticity, where a one percent increase in

BMI in 1986 decreases women's current occupational prestige by .212 percent, net of education and age. BMI has no significant effect on women's labor market earnings. This finding differs from the significant obesity-wage effects reported in previous research—at least for white women (Averett and Korenman 1996; Cawley 2004). We can attribute differences between our research findings as due to an increase in our lag time period or as potentially due to not separating out our analyses by race. However, we ran random effects models with a race term included and our coefficients did not significantly change. Our models also differ from previous models by including a control variable for previous education (measured at the time of BMI collection).

Moving to family income, we see that body mass significantly decreases women's family income. A one percent increase in BMI leads to a .602 percent decrease in women's family income.[6] Again we interpret the random effects coefficient as the Hausman test indicates equality between random and fixed effects. Differences between the random and fixed effects models, especially for women's family income, appear to be largely a function of sample size, as both random effects and fixed effects coefficients are similar in sign and magnitude. Finally, body mass significantly decreases women's likelihood of marriage, and it does not significantly affect men's likelihood of marriage. Body mass also leads to an increase in women's likelihood of being divorced, separated, or widowed in 2001. Whereas previous studies examine likelihood of marriage for all

[6] This income effect remains robust in a second model (not presented) where we included women's current BMI. Essentially, this model is a sibling-fixed effects difference-in-difference model as we are modeling the change in women's BMI between 1986 and 1999 to 2001 controlling for family-level unobserved heterogeneity. We do not present these results since we are uncertain as to how to interpret the difference-in-difference with respect to causal directionality—in other words, is the weight change over the period causal of the current income or a result of permanent income differences?

women, we restrict our sample to women who were not married in 1986 and therefore provide a cleaner measure of the effect of body mass on marriage market outcomes.[7]

In general, findings reported in Table 3 indicate that women's body mass significantly affects their economic well-being (their occupational prestige, family income, and marital status). We turn next to the question of how women's and men's body mass affects not only their economic outcomes, but their spouse's economic outcomes, as this, too, comprises overall economic well-being. Table 4 reports results from sibling random and fixed effects estimates of spouse's 1999 to 2001 averaged occupational prestige and earnings predicted from respondent's 1986 BMI. Models are limited only to individuals married in 2001. Regressions are split by gender and by marital status in 1986 (men who were not married in 1986 provide an insufficient number of observations for the models).

Similar to findings reported in Table 3, findings reported in Table 4 show a clear picture of gender-stratified body mass effects such that body mass confers advantages on men's socioeconomic outcomes and disadvantages on women's socioeconomic outcomes. From Table 3 we saw that BMI does not significantly reduce men's current socioeconomic outcomes and does not significantly affect their marriage market outcomes. Findings from Table 4 add to this and indicate that in addition to no deleterious effects of body mass on men's individual outcomes, men's body mass is associated with increased spousal earnings. We interpret the random effects coefficient, though we note that both random and fixed effects coefficients are of the same sign. A

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[7] As was the case for total family income, this divorce effect remains robust when we include women's current BMI.

one percent increase in husband's 1986 BMI is positively associated with their wife's labor market earnings by .628 percent.

This curious finding suggests one of three dynamics. First, it could be that despite our efforts to deploy lags and sibling differences, there is a lurking variable that causes higher mass men to marry women with more successful labor market profiles. Second, it could be the case that women's career attainment is negatively elastic to their husbands. In other words, men who fare less well in the labor market induce their wives to raise their earnings, in a household equilibrium. This dynamic might hold whether or not the husband's BMI is causally related to his own labor market outcomes (through a productivity or discrimination mechanism) or even if it is a spurious association for the husband. A third potential dynamic explaining this phenomenon is that the higher household costs associated with the food budget of an overweight husband might directly induce greater labor force commitment on the part of wives. We attempted an analysis of wage outcomes which differs from earnings primarily in that it controls for hours worked. However, missing data for wages and work hours is even greater than for earnings and occupation, which leads us to have an insufficient number of cases to carry out this analysis.

Turning next to women, we find that their body mass serves to decrease their husband's occupational prestige and earnings. For women married in 1986, a one percentage increase in the BMI in 1986 leads to a .284 percentage decrease in their husband's current occupational prestige. This appears to work similarly across samples of women, as both random and fixed effects coefficients are similar in sign and magnitude. The sample of unmarried women is exceedingly small for this type of analysis and their standard errors are inflated. When we turn to husband's earnings, we see that for women unmarried in 1986, a one percent increase in their 1986 BMI leads to a 1.085 percent decrease in their husband's current earnings. These effects are robust to unobserved family-level heterogeneity and to endogenous effects of BMI and spousal socioeconomic outcomes.

A Further Test for Endogenous BMI Effects

All previous causally-attuned analyses of the effect of body mass on socioeconomic status have relied on data from the NLSY, which provides a relatively young sample of individuals. In contrast, we rely on an older PSID sample that has a relatively equal age distribution across survey years. We capitalize on this age distribution and estimate the effects of body mass on socioeconomic and marital status outcomes for individuals age 35 and older and individuals younger than age 35. This not only provides purchase on age-gender interactive effects, but it also provides estimates purged of bias due to endogenous body mass and socioeconomic outcome effects. We would anticipate that older people have stabilized socioeconomic status trajectories, so that any relation between body mass and socioeconomic status for the older cohort is more likely reflective of reverse causality (although not exclusively, as this older cohort may still experience health problems that in turn affect their productivity).

Tables 5 and 6 provide some evidence in support of a causal effect of body mass on socioeconomic and marital status outcomes as body mass has more of an effect on younger respondents' outcomes, especially younger respondents' occupations. Turning first to Table 5 for older respondents, we see only two significant effects of body mass—on women's family income and women's likelihood of being divorced, separated, or widowed. Controlling for their children, age, and education, women's 1986 BMI reduces their current family income by .659 percent. Women older than age 35 in 1986 *and* married in 1986 experience a 3.789 increase in the likelihood of being currently divorced, separated, or widowed. For both men and women sample sizes for unmarried in 1986 are too low and render analyses of the effect of BMI on marital status not possible.

When we compare these results to younger women, we see that the family income estimate remains similar in sign and magnitude and that the occupational prestige estimate becomes significant. For these younger women—that is, women whose socioeconomic status outcomes may be less solidified—BMI in 1986 significantly decreases their current occupational prestige by .395 percent. This finding lends support to our conclusion that body mass causes a reduction to women's occupational prestige and not that women's occupational prestige causes any significant body mass effects. Unlike occupational prestige, income remains significant across both age groups of women which leads us to the conclusion that income and body mass effects might be bi-directional, meaning that higher total family income may raise BMI through its effect on food budgets.

Summary

Extending previous research, we report significant effects of women's body mass on their socioeconomic status and marital status outcomes. We find a robust effect of body mass on women's family income, such that a one percent increase in body mass decreases their family income by about six percent. We cannot, however, rule out the possibility that this is partially due to endogenous BMI and income effects, as the income effect remains intact even after we separate our analyses into older and younger women. We can, however, be more confident that the observed effects of body mass on occupational prestige are likely to be causal since they only appear in the younger cohort. Among women younger than age 35 in 1986, a one percentage point increase in body mass reduces their occupational prestige by about .4 of a percentage point. And to the extent that we can call insignificant effects of body mass robust, then we find robust insignificant effects for men. Across younger and older cohorts, body mass does not reduce their economic status outcomes, it does not reduce their likelihood of marriage, and it does not increase their likelihood of divorce, separation, or widowhood. In fact, the only significant effect of men's body mass appears to be a significant *positive* association with their wife's earnings.

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Table 1. Descriptive Statistics: Means Separated by Gender (Standard Deviations, and Within-Family Standard Deviations Below)

1999-2001 Averaged Socioeconomic Status Outcomes:	Total Sample	Women Only	Men Only
SEI (ln)	8.23	8.21	8.25
	0.46	0.45	0.48
	0.18	0.13	0.14
Earnings (ln)	10.12	9.74	10.50
	1.18	1.17	1.05
	0.48	0.36	0.25
Family Income (ln)	10.72	10.56	10.92
	1.18	1.31	0.96
	0.40	0.29	0.38
1999-2001 Spouse's Averaged Socioeconomic Status Outcomes:			
Spouse's SEI (ln)	8.27	8.26	8.28
	0.47	0.49	0.45
	0.19	0.14	0.14
Spouse's Earnings (ln)	10.13	10.49	9.75
	1.15	1.08	1.09
	0.54	0.35	0.38
Marital Status:			
2001 Married	0.70	0.62	0.79
	0.46	0.49	0.41
	0.26	0.12	0.13
2001 Divorced	0.24	0.34	0.18
	0.43	0.47	0.39
	0.21	0.11	0.12
1986 Married	0.73	0.68	0.79
	0.44	0.47	0.41
	0.19	0.13	0.17
1986 Height, Weight, BMI:			
BMI	24.95	24.20	25.82
	4.69	5.24	3.77
	1.62	1.16	1.10
BMI (ln)	3.20	3.17	3.24
	0.18	0.19	0.14
	0.07	0.05	0.05
Height	67.15	64.55	70.22
	3.92	2.70	2.74
	1.50	0.71	0.73
Weight	160.88	143.17	181.35
	35.75	30.78	29.67
	13.50	6.77	8.54
1999-2001 Averaged Height, Weight, BMI:			
BMI	26.53	26.02	27.20
	5.08	5.57	4.27
	1.85	1.51	1.27
BMI (ln)	3.26	3.24	3.29
	0.18	0.20	0.15
	0.07	0.05	0.04

(table continues)

1999-2001 Averaged Height, Weight, BMI:	Total Sample	Women Only	Men Only
Height	66.84	64.55	69.89
	3.86	2.69	2.96
	1.45	0.68	0.82
Weight	171.12	153.88	191.29
	39.00	34.35	34.15
	14.62	9.43	9.70
Control Variables:			
1986 Educational Attainment	12.71	12.43	13.05
	2.84	2.75	2.90
	0.65	0.47	0.52
1986 Age	47.61	48.66	46.36
	16.26	16.78	15.53
	1.47	1.05	1.33
1999-2001 Averaged Age	58.70	59.53	57.71
	13.89	14.37	13.23
	1.45	1.07	13.23
No Children Under Age 18 Living in the Household	0.59	0.60	0.58
	0.49	0.49	0.49
	0.19	0.12	0.17
Youngest Child Living in the Household is Under Age 2	0.07	0.06	0.08
	0.25	0.24	0.27
	0.15	0.11	0.14
Youngest Child Living in the Household is between Age 2 and 18	0.34	0.34	0.34
	0.47	0.47	0.47
	0.19	0.17	0.17
Female	0.54	–	
	0.50		
	0.21		

Table 2. PSID Sibling Correlations in Socioeconomic Status using 1983-2001 Waves and Sibling Correlations in Height, Weight, and Body Mass for Sisters and Brothers using 1986, 1999, 2001 Waves (Fisher's z transformation, Standard Errors of z, Number of Person-Years, Number of Individuals, Number of Families Below)

Education	Occ. Prestige (SEI)	Ln Earnings	Ln Income	Ln Net Worth (minus home equity)	Height: Sisters Only	Height: Brothers Only	Weight: Sisters Only	Weight: Brothers Only	BMI: Sisters Only	BMI: Brothers Only
0.576***	0.418***	0.376***	0.458***	0.371***	0.359***	0.529***	0.292***	0.371***	0.332***	0.318***
0.657	0.445	0.395	0.495	0.390	0.376	0.589	0.301	0.389	0.345	0.330
0.036	0.036	0.035	0.035	0.035	0.023	0.026	0.023	0.026	0.023	0.026
25,554	20,146	20,792	18,144	5,041	5,042	3,926	4,949	4,385	4,873	3,916
1,777	1,859	1,876	1,871	1,871	2,188	1,849	2,171	1,904	2,165	1,849
780	794	801	806	806	1,847	1,505	1,833	1,536	1,830	1,505

*p<.05; **p<.01; ***p<.001 (two-tailed tests)

Table 3. 1986 BMI Predicting 1999-2001 SES Outcomes and 2001 Marital Status: Sibling-Fixed Effects and Random Effects Regressions Coefficients (Standard Errors, Number of Individuals, Number of Families Below)

	1999-2001 SEI (ln)		1999-2001 Earnings (ln)		1999-2001 Income (ln)		2001 Married[a]		2001 Divorced[b]	
	F.E.	R.E.	F.E.	R.E.	F.E.	R.E.	F.E.	R.E.	F.E.	R.E.
Model Controlling for age, education, and children										
Men: BMI 1986	0.285	-0.096	-0.225	-0.335	-0.089	-0.106	0.061	-0.102	-0.048	0.052
	0.208	0.096	0.431	0.232	0.641	0.184	0.912	0.216	0.363	0.096
	838	838	783	783	1103	1103	191	191	866	866
	695	695	651	651	952	952	181	181	781	781
Hausman Test for no difference between models (Chi-square)	7.4		6.47				7.59		7.83	
Women: BMI 1986	-0.423*	-0.212**	-0.536	-0.006	-0.591	-0.602**	-0.054	-.349**	0.148	0.169*
	0.212	0.076	0.624	0.228	0.554	0.183	0.739	0.121	0.282	0.080
	789	789	774	774	1287	1287	322	322	908	908
	678	678	665	665	1165	1165	206	206	841	840
Hausman Test for no difference between models (Chi-square)	6.26		8.6		5.96		8.21		9.11	

*p<.05; **p<.01; ***p<.001 (two-tailed tests)

[a]: Subset to not married in 1986

[b]: Subset to married in 1986

Table 4. 1986 BMI Predicting 1999-2001 Spousal SES Outcomes by 1986 Marital Status and Gender: Sibling-Fixed Effects Regressions Coefficients (Standard Errors, Number of Individuals, Number of Families Below)

	1999-2001 Spouse's SEI (ln)						1999-2001 Spouse's Earnings (ln)					
	Full Sample 1986		Married 1986		Not Married 1986		Full Sample 1986		Married 1986		Not Married 1986	
	F.E.	R.E.	F.E.	R.E.	F.E.	R.E.	F.E.	R.E.	F.E.	R.E.	F.E.	R.E.
Model Controlling for age, education, and children												
Men: BMI 1986	0.207	0.008	-0.154	-0.026			1.569*	0.628*	1.116	0.546		
	0.262	0.126	0.480	0.147			0.722	0.320	1.212	0.374		
	571	571	476	476			594	594	494	494		
	486	486	423	423			507	507	439	439		
Hausman Test for no difference between models (Chi-square)	10.3		4.2				7.39		3.44			
Women: BMI 1986	0.399	-.348**	0.588	-.284*	-0.566	-.703*	0.015	-0.550*	0.103	-0.453	-2.690	-1.085*
	0.320	0.113	0.412	0.122	0.794	0.307	0.802	0.254	1.210	0.283	2.711	0.469
	589	589	503	503	86	86	596	596	513	513	83	83
	507	507	448	448	79	79	515	515	459	459	75	75
Hausman Test for no difference between models (Chi-square)	12.04*		8.55		32.18***		11.38*		12.15*		0.53	

*p<.05; **p<.01; ***p<.001 (two-tailed tests)

Table 5. For Respondents Age 35 and Older in 1986: 1986 BMI Predicting 1999-2001 SES Outcomes and 2001 Marital Status: Sibling-Fixed Effects and Random Effects Regressions Coefficients (Standard Errors, Number of Individuals, Number of Families Below)

	1999-2001 SEI (ln)		1999-2001 Earnings (ln)		1999-2001 Income (ln)		2001 Married[a]		2001 Divorced[b]	
	F.E.	R.E.	F.E.	R.E.	F.E.	R.E.	F.E.	R.E.	F.E.	R.E.
Model Controlling for age, education, and children										
Men: BMI 1986	0.018	-0.095	-0.358	-0.365	0.436	0.050			0.842	0.083
	0.848	0.130	0.777	0.326	1.198	0.208			0.638	0.112
	487	487	452	452	749	749			632	632
	465	465	431	431	726	726			613	613
Hausman Test for no difference between models (Chi-square)	0.78		25.53***		2.30				11.61*	
Women: BMI 1986	3.974	-0.071	-1.370	0.037	-0.701	-0.659**			3.739*	.512***
	2.245	0.103	3.286	0.323	3.145	0.233			0.205	0.124
	438	438	427	427	909	909			642	642
	433	433	422	422	903	903			638	638
Hausman Test for no difference between models (Chi-square)	12.65**		4.89		0.97				2226.83***	

*p<.05; **p<.01; ***p<.001 (two-tailed tests)

Table 6. For Respondents Younger than 35 in 1986: 1986 BMI Predicting 1999-2001 SES Outcomes and 2001 Marital Status: Sibling-Fixed Effects and Random Effects Regressions Coefficients (Standard Errors, Number of Individuals, Number of Families Below)

	1999-2001 SEI (ln)		1999-2001 Earnings (ln)		1999-2001 Income (ln)		2001 Married[a]		2001 Divorced[b]	
	F.E.	R.E.	F.E.	R.E.	F.E.	R.E.	F.E.	R.E.	F.E.	R.E.
Model Controlling for age, education, and children										
Men: BMI 1986	0.410	-0.069	0.403	-0.182	0.443	-0.437	0.713	-0.178	-0.139	0.135
	0.247	0.142	0.535	0.301	0.841	0.369	1.023	0.271	0.653	0.191
Number of Individuals	351	351	331	331	354	354	109	109	234	234
Number of Families	269	269	256	256	270	270	102	102	194	194
Hausman Test for no difference between models (Chi-square)	11.33*		3.8		4.24		6.29		1.3	
Women: BMI 1986	-0.587*	-0.395**	-0.745	-0.261	-0.416	-0.688*	0.463	-0.288	0.228	0.078
	0.258	0.115	0.857	0.297	0.781	0.283	0.788	0.243	0.317	0.132
Number of Individuals	351	351	347	347	378	378	111	111	266	272
Number of Families	272	272	270	270	291	291	97	97	216	221
Hausman Test for no difference between models (Chi-square)	6.37		4.63		1.41		5.64		5.68	

*p<.05; **p<.01; ***p<.001 (two-tailed tests)