

INCREASING BODY WEIGHT AND THE TRANSITION FROM WELFARE TO WORK: FINDINGS FROM THE NATIONAL SURVEY OF AMERICAN LIFE

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Objective: Few studies focus on employment outcomes for overweight and obese low-income women. We describe the relationship between body mass index and employment status among African American, Caribbean Black and White women who receive assistance through the Temporary Assistance for Needy Family program.

Methods: This was a secondary analysis of data from the National Survey of American Life dataset. We analyzed a sample of 1039 community-dwelling adult women who reported that they received public assistance.

Results: African Americans and Whites reported the highest rates of obesity, 45% and 48%, respectively. Logistic regression analyses for the entire sample revealed that being overweight or obese did not significantly predict employment status, controlling for known covariates. This aggregate effect concealed ethnic differences. African American women who were overweight (OR 1.60, $P < .05$) and Caribbean Black women who were obese (OR 3.41, $P < .05$) were more likely to be employed, but overweight White women (OR .09, $P < .01$) were less likely to be employed.

Conclusion: Overweight was as an employment barrier only to White women. By contrast, overweight African American women and obese Caribbean Black women were more likely than were women of a normal weight to be employed. (*Ethn Dis.* 2009;19:13-17)

Key Words: Depression, African American, Immigrant, Mental Health, National Survey of American Life

INTRODUCTION

Obesity among African American women receives considerable public attention in the scientific literature and mainstream press. Heavier body weights have been associated with health conditions such as diabetes,¹⁻³ cardiovascular disease and hypertension,⁴ and mental health.⁵⁻⁷ Moreover, obesity has been linked with increased medical costs,⁸ work disability,⁹ and poverty.¹⁰ Although gains have been made in identifying racial disparities in health and social factors attributed to heavier body weights among women, few research studies focus on another potential role of obesity: its possible role as a barrier to employment.

Temporary Assistance for Needy Families (TANF), a state-federal partnership, is the primary “welfare” cash assistance program for needy families.¹¹⁻¹⁴ TANF’s primary goal is to move recipients quickly from welfare to work, and most states have been successful in reducing caseloads by more than 50%.¹⁴ Maintaining employment for current and former TANF recipients remains a policy goal for the reauthorized TANF program.

However, substantial barriers to work face TANF recipients. Limited work skills are a barrier, but so are physical and mental health problems, domestic violence, lack of affordable housing, and limited proficiency in English, all of which are found among TANF participants more than among others and undermine the ability to work.¹⁵⁻¹⁸

Obesity is associated with health conditions that might interfere with steady employment, and poor health limits opportunities to work. The highest rate of obesity is found among poor women, and nearly 66% of African

American women are obese or overweight.¹⁹⁻²² Yet African American women are least likely to access health care when health conditions arise.^{23,24} African American women are more likely to use TANF as a lever for family sustainability through work.

Because TANF requires that program participants seek and maintain employment, and because overweight and obesity are overrepresented among poor women like those on TANF, determining whether overweight and obesity are associated with employment has policy implications. However, little research has been conducted to establish the extent to which being overweight or obese interferes with securing and maintaining employment.²⁵ Researchers have not taken sufficient account of possible racial differences, although race is likely a factor to consider in the link between overweight and employment.²⁵

We examined the association between body weight and employment in a nationally representative and ethnically diverse sample of welfare recipients. We examined differences separately for African Americans and Whites, and because health disparities have been observed between Blacks of African and Caribbean descent,²⁶ we examined data separately for African Americans and Caribbean Blacks.

METHODS

Data and Sample

The National Survey of American Life (NSAL) collected data through face-to-face interviews in English using a computer-assisted personal interview system after participants provided written informed consent. Interviews lasted an average of 2 hours and 20 minutes. The NSAL included a household probability

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We examined the association between body weight and employment in a nationally representative and ethnically diverse sample of welfare recipients.

sample of 3570 African Americans, 1621 Caribbean Blacks, and 891 non-Hispanic Whites aged 18 years and older. African Americans were persons who self-identified as Black but did not report Caribbean ancestry. Caribbean Blacks were persons who self-identified as Black and answered that they were of West Indian or Caribbean descent, were from a Caribbean-area country, or had parents or grandparents who were born in a Caribbean-area country. The Caribbean Black sample was selected from residential areas that were sampled to reflect the distribution of the African American population and from additional metropolitan areas where Caribbean Blacks composed >10% of the population. Data were collected for the study from February 2001 through June 2003. The study's overall response rate was 72.3% for Whites, 70.7% for African Americans, and 77.7% for Caribbean Blacks.

The study sample was selected according to the response to one question about receipt of government assistance, "Are you (or your family) currently receiving public assistance?" Government assistance meant Aid to Families with Dependent Children, TANF, or General Assistance. Women receiving General Assistance were most likely excluded because only single adults without children are eligible. The study sample included 1,039 adult women. The University of California Office for the Protection of Human Subjects granted approval for this study on August 2, 2006.

Variables

Employment was coded dichotomously; 1 represented full-time employment and 0 represented less than full-time employment. Full-time employment was based on 40 hours per work week in the calendar year.

Body weight status was calculated from self-reported height and weight. Three body mass index (BMI) categories grouped participants on the basis of criteria from the National Heart, Lung, and Blood Institute:³¹ normal weight (BMI 18.5–24.9 kg/m²), overweight (BMI 25.0–29.9 kg/m²), and obese (BMI ≥30.0 kg/m²). Participants categorized as normal weight served as the comparison group.

Age was measured as the number of years attained by the date of the interview; education was measured as the number of school years finished; household income was measured as total monetary resources (dollar amount) from all sources; ethnicity was coded African American=1; Caribbean Black=2; and White=3; marital status categories were represented as a series of dummy-coded variables where married served as the primary reference group. Dummy coded variables were never married (1) versus all other marital statuses (0); partnered (1) versus all other marital statuses (0) and separated, divorced, and widowed (1) versus all other marital statuses coded as (0). Children was measured as the number of children between newborn and 12 years living in the household; adolescents (13–17 years) was measured as the number living in the household; household size was measured as the total number of persons living in the household; nativity was measured as the country respondents were born and coded as US-born (1) and foreign-born (0).

Statistical Analyses

Simple descriptive statistics were used to characterize the sample, and χ^2 test and one-way analysis of variance

were used to identify significant differences across subgroups. Logistic regression analyses were conducted to examine the relationship between work status and BMI for welfare recipients above and beyond individual-level demographic variables. Odds ratios in the logistic regression adjusted for age, education, annual household income, marital status, and place of birth. The data were weighted to adjust for differential probabilities of selection and nonresponse and poststratified to represent the Black population accordingly. Stata version 9.2 (StataCorp LP, College Station, Texas) was used to adjust the statistical tests for the survey design. Differences were considered significant at $P<.05$.

RESULTS

The total sample consisted of 1,039 welfare participants. The women did not statistically differ in terms of age, educational attainment, annual household income, the number of children or adolescents living in the home, and employment status (Table 1). However, the women in this study differed in terms of household size, BMI, marital status, and place of birth.

Most women in the study were young. Caribbean Black women were slightly younger (39 years) than African American and White women (40 and 41 years, respectively). African American and Caribbean Black women completed equal number of years of education (12.1 years). More White women were married or separated, widowed, or divorced. By contrast, most of the women who had never been married were African American. Household incomes were lowest among African American women (\$24,800) when compared to Caribbean Black (\$27,000) and White (\$27,300) women. Compared with national rates, public assistance recipients in the NSAL sample had higher rates of obesity (38%).

Table 1. Demographic and socioeconomic characteristics by race of 1039 women who received public assistance, National Survey of American Life

Characteristic	African American (<i>n</i> =793)	Caribbean Black (<i>n</i> =156)	Non-Hispanic whites (<i>n</i> =90)	<i>F</i> or χ^2	<i>P</i> value
	Mean or % (SE)	Mean or % (SE)	Mean or % (SE)		
Mean age, years	40 (.7)	39 (2.8)	41 (1.0)	.54	.59
Mean education, years	12.1 (.9)	12.2 (.2)	11.7 (.26)	1.10	.34
Mean annual household income, \$	24,800 (1643)	27,000 (2640)	27,300 (1834)	.57	.57
Mean no. of children living in the home	1.0 (.6)	1.0 (.1)	.74 (.1)	2.21	.12
Mean no. of adolescents living in the home	0.5 (0)	0.4 (.1)	1.0 (.2)	2.50	.09
Household size	3.3 (.1)	3.4 (.2)	2.7 (.1)	6.55	<.001
BMI				3.41	.02
% normal weight	23.1 (1.7)	44.6 (8.4)	34.1 (6.4)		
% overweight	31.8 (2.0)	22.5 (5.7)	18.2 (4.4)		
% obese	45.1 (2.0)	32.9 (6.6)	47.8 (6.3)		
Marital status				6.23	<.001
% married	22.0 (1.7)	16.5 (4.2)	35.2 (6.1)		
% partnered	11.6 (1.3)	18.5 (6.2)	7.7 (3.0)		
% separated, widowed, or divorced	30.3 (1.7)	36.2 (7.9)	45.2 (6.1)		
% never married	36.1 (1.9)	28.8 (6.1)	12.0 (3.8)		
Employment status				.40	.60
Currently working	61.4 (1.9)	60.5 (7.6)	62.5 (2.1)		
Not working	38.7 (1.9)	39.5 (7.6)	34.4 (2.1)		
Place of birth				66.65	<.001
US-born	98.8 (.5)	50.4 (7.6)	98.0 (1.5)		
Foreign-born	1.3 (.5)	49.6 (7.6)	2.0 (1.5)		

SE = standard error, BMI = body mass index.

African Americans and Whites had the highest rates of obesity. In keeping with the current emphasis of welfare policy, most public assistance recipients were working (60%). Equal numbers of Caribbean Black women were US-born and foreign-born, and most African Americans and Whites were born in the United States.

Multivariate Analyses

We calculated four logistic regression models by race. The first model included the entire welfare sample to test the relationship between employment status and BMI. We found that being overweight or obese was not related to employment status, even after controlling for demographic differences (Table 2). Including demographic covariates, however, showed individual contributions to the association between employment and BMI. Significant factors were education, annual household income, and being never married.

To allow for the possibility that African American, Caribbean Black, and White women would have different patterns of weight and employment, we estimated individual logistic regression models for each race to ascertain whether there were within-group effects for the relationship between employment and BMI. A significant association between employment status and BMI was found for each within-group model. Compared with normal-weight women, African American women who were overweight were more likely to be employed. Significant control variables that predicted employment were years of education and annual household income.

Obesity related to likelihood of employment even after controlling for demographic factors among Caribbean Black women. Specifically, controlling for other demographic factors, obese Caribbean Black women were 3.41 times more likely than those of normal weight to be employed. The significant control variables that predicted

employment were annual household income and being in a partnered relationship. Overweight White women were much less likely to be employed than were those of a normal weight, although the difference was not significant for obese White women. Control variables that increased the odds of employment were annual income, being separated, divorced, or widowed, and never having been married.

DISCUSSION

We found that overweight African American women and obese Caribbean Black women were more likely than normal weight women to be employed. These associations were not in the expected direction. We also found that overweight, but not obesity, was an employment barrier among overweight White women.

One explanation for the sharply contrasting patterns of association

Table 2. Odds of being employed by BMI level and race, controlling for demographic characteristics, among 1039 women who received public assistance, National Survey of American Life

Independent Variable	Entire Sample (N=1,039)		African Americans (n = 793)		Caribbean Blacks (n = 156)		Whites (n = 90)	
	Odds Ratio	95% CI	Odds Ratio	95% CI	Odds Ratio	95% CI	Odds Ratio	95% CI
Normal (Ref.)								
Overweight	0.98	[0.58, 1.66]	1.60*	[1.05, 2.44]	5.95([0.76, 46.44]	0.09**	[0.01, 0.64]
Obese	0.86	[0.58, 1.29]	1.36	[0.88, 2.13]	3.41*	[0.97, 12.0]	0.23	[0.05, 1.15]
Racial background								
African American	0.89	[0.50, 1.56]						
Caribbean Black	0.67	[0.24, 1.89]						
White (Ref.)								
Age (mean years)	0.98	[0.96, 1.00]	0.99	[0.97, 1.01]	1.01	[0.95, 1.07]	0.96 (0.04)	[0.89, 1.04]
Education (years)	1.16*	[1.00, 1.35]	1.20**	[1.05, 1.38]	1.01	[0.77, 1.34]	1.23 (0.19)	[0.89, 1.71]
Annual household	1.00***	[1.00, 1.00]	1.00***	[1.00, 1.00]	1.00**	[1.00, 1.00]	1.00***	[1.00, 1.00]
Income (mean \$)								
Marital Status								
Married (Ref.)								
Partner	1.34		0.88	[0.49, 1.58]	26.53**	[2.32, 303.12]	7.87	[0.14, 449.17]
Separated, widowed,	1.46	[0.85, 2.53]	0.93	[0.50, 1.73]	1.37	[0.20, 9.35]	5.65**	[1.71, 18.71]
Divorced								
Never Married	2.14**	[1.06, 4.32]	1.49	[0.76, 2.91]	2.73	[0.31, 23.61]	15.53*	[1.18, 204.94]
US-Born	0.93	[0.22, 3.89]	0.84)	[0.10, 6.87]	1.30	[0.30, 5.67]	—	—
Foreign-Born (Ref.)								

* $P < .05$; ** $P < .01$; *** $P < .000$.

All calculations are weighted.

We found that overweight African American women and obese Caribbean Black women were more likely than normal weight women to be employed.

between heavier body weights and work is that social and cultural differences are at work.^{3,28} Apart from official criteria for defining overweight and obesity, cultural standards define what constitutes appropriate weight and what constitutes overweight.^{2,29} Considering the issue from a cultural perspective, some theorists have argued that African Americans respond more favorably to higher BMI than do Whites, and that heavier African American women can find greater acceptance. These normative beliefs can translate into an increased sense of personal comfort and self-confidence. Overweight and obesity

was positively linked to employment both for African American and Caribbean Black women, which suggests that the Black communities of both groups demonstrate this greater acceptance of higher levels of weight for Black women; this hypothesis is supported by previous research.^{2,29}

The present study demonstrates the importance of separating African American, Caribbean Black, and White samples when studying the social and economic aspects of weight and perhaps of weight-related health conditions. Not to have considered African Americans and Whites separately would have masked what are opposite patterns of response, although these findings contradict claims in a previous study, which theorized that obesity lowers wages and employment.¹⁰ Unemployment among White recipients of public assistance might predispose to obesity; these women would have more time to eat and may be more likely to be depressed. Our findings suggest that increasing weight appears to be more problematic for specific welfare recipients when

TANF policy encourages work. However, we can only speculate on the causal relationships embedded in the associations, and more research needs to be conducted to untangle other factors.

Several limitations restrict the interpretation of our findings. First, the Caribbean Black sample excluded persons who did not speak English, and as a consequence, the study findings are not generalizable to these groups of Caribbean Blacks. Second, we used self-reported height, weight, and employment status, which may be subject to error without external validation. However, BMI calculated from self-reported heights and weight is highly correlated with actual BMI.³⁰ Finally, the participants may not have accurately reported their receipt of public assistance.

Nonetheless, the findings of this study are consistent with those found in the few other published research studies on welfare recipients. The advantages of the sample, methods, and analysis used in this study provided a unique opportunity to examine differences in a nationally representative

sample of African Americans and Caribbean Blacks. The availability of a nationally representative sample was an advantage of the study and an extension of prior investigations of small and localized African American and Caribbean Black samples.

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Acquisition of data: Hastings

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Manuscript draft: Hastings, Snowden

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