



Michigan BRFS

# MICHIGAN BRFS SURVEILLANCE BRIEF

*A NEWSLETTER FROM THE CHRONIC DISEASE EPIDEMIOLOGY UNIT, MDCH*

## Indicators of Social Context among Michigan Adults

**Background.** Socioeconomic position has implications for health related behaviors and outcomes as it shapes access to health resources and the ability to prioritize health behaviors. Persons of lower socioeconomic position report greater stress related to economic challenges that they face on a daily basis.<sup>1</sup> For example, the association between socioeconomic position and cardiovascular disease has been recognized for years.<sup>2,3</sup> In the United States, lack of access to healthy diet and recreational options on an individual and neighborhood scale has been shown to increase the incidence of obesity.<sup>4,5</sup> Furthermore, the association between socioeconomic status and stress differs by race, with African Americans being more impacted.<sup>6,7</sup>

It is essential that public health and health care workers have an appreciation of the economic and social challenges and stressors people may be facing while also trying to maintain their health.<sup>8</sup> However, information about the prevalence of economic and social challenges and the association between social context and health behaviors and health outcomes is lacking among Michigan adults.

**Methods.** Questions related to social context, selected health conditions/behaviors, and respondent demographics were included within the 2012 Michigan Behavioral Risk Factor Survey (MiBRFS).

The social context questions assessed how often in the past 12 months the respondent was worried or stressed about having enough money to pay their rent/mortgage or buy nutritious meals. Responses of always, usually, or sometimes were coded as being worried, while responses of rarely or never were coded as not being worried.

These data were used to assess the prevalence of being worried about having enough money to pay rent/mortgage or buy nutritious meals in the past 12 months among Michigan adults. Demographic and health condition/behavior subpopulations were compared to determine if significant differences existed among these social context indicators.

**Results.** In 2012, an estimated 34.8% and 21.9% of Michigan adults reported being worried about having enough money to pay their rent/mortgage or buy nutritious meals, respectively (Table 1). 86.6% of adults who worried about having enough money to buy nutritious meals also worried about having enough money to pay their rent/mortgage (data not shown).

The prevalence of being worried about having enough money to pay the rent/mortgage or buy nutritious meals decreased significantly within the older age groups (65-74 and 75+ years), and females were more likely to report being worried than males (Table 1). When compared to White, non-Hispanic adults, both Black, non-Hispanics and Hispanics reported higher prevalences of being worried about both having enough money to pay their rent/mortgage and buy nutritious meals. Worrying decreased significantly with increasing household income level for both rent/mortgage and nutritious meals (Table 1).

**Table 1. Social Context Indicators among Michigan Adults by Demographics, 2012 Michigan BRFS**

	Worried About Having Enough Money to Pay Rent/Mortgage		Worried About Having Enough Money To Buy Nutritious Meals	
	%	95% CI	%	95% CI
<b>Total</b>	<b>34.8</b>	<b>(33.4-36.2)</b>	<b>21.9</b>	<b>(20.7-23.1)</b>
<b>Age (in years)</b>				
18-24	39.4	(33.9-45.2)	26.1	(21.9-30.7)
25-34	41.7	(37.3-46.3)	26.1	(22.5-30.0)
35-44	40.6	(37.0-44.4)	25.9	(22.7-29.3)
45-54	41.2	(38.2-44.2)	26.8	(24.2-29.6)
55-64	31.7	(29.3-34.3)	20.1	(17.9-22.4)
65-74	20.9	(18.7-23.3)	10.8	(8.9-12.9)
75+	16.8	(14.2-19.8)	8.1	(6.2-10.4)
<b>Gender</b>				
Male	31.9	(29.8-34.1)	18.6	(16.9-20.5)
Female	37.5	(35.7-39.3)	25.0	(23.4-26.6)
<b>Race/Ethnicity</b>				
White, non-Hispanic	31.9	(30.5-33.4)	19.8	(18.6-21.0)
Black, non-Hispanic	47.9	(43.6-52.3)	29.6	(25.8-33.7)
Other, non-Hispanic	35.7	(29.6-42.3)	24.3	(19.4-29.9)
Hispanic	49.4	(39.8-59.1)	37.2	(28.0-47.4)
<b>Annual Household Income</b>				
Less than \$20,000	61.8	(58.1-65.4)	47.4	(43.8-51.0)
\$20,000 - \$34,999	44.6	(41.5-47.8)	29.4	(26.6-32.3)
\$35,000 - \$49,999	35.7	(32.1-39.4)	19.8	(17.0-23.0)
\$50,000 - \$74,999	27.5	(24.3-30.9)	13.3	(10.9-16.1)
\$75,000 or more	14.3	(12.5-16.4)	5.1	(4.0-6.6)

### MiBRFSS News

- The 2013 MiBRFSS data is currently being weighted by the CDC and should be available for analysis in the near future. Updated prevalence estimates from these data can be expected in June or July 2014.
- The 2014 MiBRFSS Data Users Meeting will be held in July 2014. Email updates will be sent out once the meeting has been finalized.
- Did you miss an issue of *Michigan BRFS Surveillance Brief*? Back issues are available on our website ([www.michigan.gov/brfs](http://www.michigan.gov/brfs)).

Worrying about having enough money to pay rent/mortgage (46.5% vs. 30.9%) or buy nutritious meals (35.1% vs. 17.5%) was more prevalent among disabled adults than non-disabled adults, respectively (Table 2). Adults with poor physical health, poor mental health, and those who currently smoked cigarettes were more likely to report being worried about having money for their rent/mortgage or to buy nutritious meals. Furthermore, the prevalence of being worried about money for rent/mortgage or nutritious meals increased with the number of chronic conditions reported by Michigan adults.

Michigan adults who reported being worried about having enough money to pay their rent/mortgage were less likely to report having had a routine health checkup within the past year (61.0% vs. 70.9%) or dental visit within the past year (55.5% vs. 75.8%) when compared to their non-worried counterparts (data not shown). Furthermore, those who worried about having enough money to buy nutritious meals were less likely to have participated in some form of leisure time physical activity within the past month than those who were not worried about having enough money to purchase nutritious meals (66.1% vs. 80.0%; data not shown).

**Table 2. Social Context Indicators among Michigan Adults by Selected Health Conditions, 2012 Michigan BRFSS**

	Worried About Having Enough Money to Pay Rent/Mortgage		Worried About Having Enough Money To Buy Nutritious Meals	
	%	95% CI	%	95% CI
<b>Disability</b>				
Disabled	46.5	(43.8-49.2)	35.1	(32.5-37.7)
Not Disabled	30.9	(29.3-32.5)	17.5	(16.2-18.8)
<b>Poor Physical Health</b>				
Yes	52.7	(48.8-56.5)	40.0	(36.3-43.9)
No	32.0	(30.6-33.5)	18.9	(17.7-20.2)
<b>Poor Mental Health</b>				
Yes	65.0	(60.8-68.9)	51.6	(47.5-55.7)
No	30.6	(29.2-32.0)	17.3	(16.2-18.5)
<b>Cigarette Smoking</b>				
Current	55.0	(51.6-58.3)	38.4	(35.2-41.6)
Former	29.3	(27.1-31.7)	16.4	(14.6-18.3)
Never	28.5	(26.7-30.3)	17.3	(15.8-18.8)
<b>Chronic Conditions</b>				
No Chronic Conditions	29.6	(27.5-31.9)	15.3	(13.7-17.1)
1 Chronic Condition	35.1	(32.5-37.7)	22.2	(20.0-24.7)
2 or More Conditions	41.8	(39.4-44.1)	31.1	(28.8-33.4)

**Conclusions.** More than one-third of Michigan adults reported being worried about affording a place to live, with the majority of these individuals also being worried about food access. A higher proportion of African American and Hispanic adults reported these worries. Worry about basic necessities was higher among people with physical and mental health challenges, and was also shown to be associated with health behaviors in this cross-sectional study, including smoking, lack of exercise, and difficulty accessing health care.

Broader consideration of social determinants that impact people’s ability to be active, eat well, and manage preventive services and behaviors is essential when developing programs and policies around these efforts. The Public Health Accreditation Board recognizes as essential the ability to “analyze public health data to identify trends in health problems, environmental public health hazards, and social and economic factors that affect the public’s health.”<sup>9</sup>

The MiBRFSS data provide a broader perspective to public health professionals and policy makers about the social context in which Michigan adults are making health-related decisions for themselves and their families. This analysis was undertaken as part of a larger MDCH effort to understand social determinants of health, including the Health Equity data set.<sup>10</sup>

**References**

<sup>1</sup> Braveman PA. The Social Context of Health Behaviors. NICHD Workshop on Health Behaviors, Bethesda MD, February 17-18, 2011.  
<sup>2</sup> Marmot, M. Inequalities in health. *N Engl J Med.* 2001; 345:134-136.  
<sup>3</sup> Gebreab SY, Diez-Roux AV, Hickson DA, Boykin S, Sims M, Sarpong DR, Taylor HA, Wyatt SB. The contribution of stress to the social patterning of clinical and subclinical CVD risk factors in African Americans: the Jackson Heart Study. *Soc Sci Med.* 2009; 75:1697-1707.  
<sup>4</sup> Auchincloss AH, Mujahid MS, Shen M, Michos ED, Whitt-Glover MC, Diex-Roux AV. Neighborhood health-promoting resources and obesity risk (the Multi-Ethnic Study of Atherosclerosis). *Obesity (Silver Spring).* 2013; 21(3):1-16.  
<sup>5</sup> Larson NI, Story MT, Nelson MC. Neighborhood Environments: Disparities in Access to Healthy Foods in the U.S. *Am J Prev Med.* 2009; 36(1): 74-81.  
<sup>6</sup> Castro-Diehl C, Diex-Roux AV, Seeman T, Shea S, Shrager S, Tadros S. Associations of socioeconomic and psychosocial factors with urinary measures of cortisol and catecholamines in the Multi-Ethnic Study of Atherosclerosis (MESA). *Psychoneuroendocrinology.* 2014; 41:132-141.  
<sup>7</sup> Williams DR, Jackson PB. Social sources of racial disparities in health. *Health Affairs.* 2005; 24: 325-334.  
<sup>8</sup> Braveman PA, Cubbin C, Egerter S, Chideya A, Marchi KS, Metzler M, Posner S. Socioeconomic status in health research: One size does not fit all. *JAMA.* 2005; 294(22): 2879-2888.  
<sup>9</sup> Public Health Accreditation Board. Standards and Measures, Version 1.0. Application Period 2011-2012, Approved May 2011.  
<sup>10</sup> Coughlin R. Michigan Health Equity Data Tables and Related Technical Documents 2000-2009: Michigan Health Equity Data Project. Michigan Department of Community Health, Lansing, MI. May 2011. Accessed at [www.michigan.gov/minorityhealth](http://www.michigan.gov/minorityhealth).

**The Michigan Behavioral Risk Factor Surveillance System (MiBRFSS)**  
 The MiBRFSS comprises annual, statewide telephone surveys of Michigan adults aged 18 years and older and is part of the national BRFSS coordinated by the CDC. The annual Michigan Behavioral Risk Factor Surveys (MiBRFS) follow the CDC BRFSS protocol and use the standardized English core questionnaire that focuses on various health behaviors, medical conditions, and preventive health care practices related to the leading causes of mortality, morbidity, and disability. Landline and cell phone interviews are conducted across each calendar year. Data are weighted to adjust for the probabilities of selection and a raking weighting factor that adjusts for the distribution of the Michigan adult population based on eight demographic variables. All analyses are performed using SAS-callable SUDAAN® to account for the complex sampling design.

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