

# Profiles of Psychological Distress among Middle-aged and Older Adults: Findings from the National Survey of American Life

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# Serious Psychological Distress

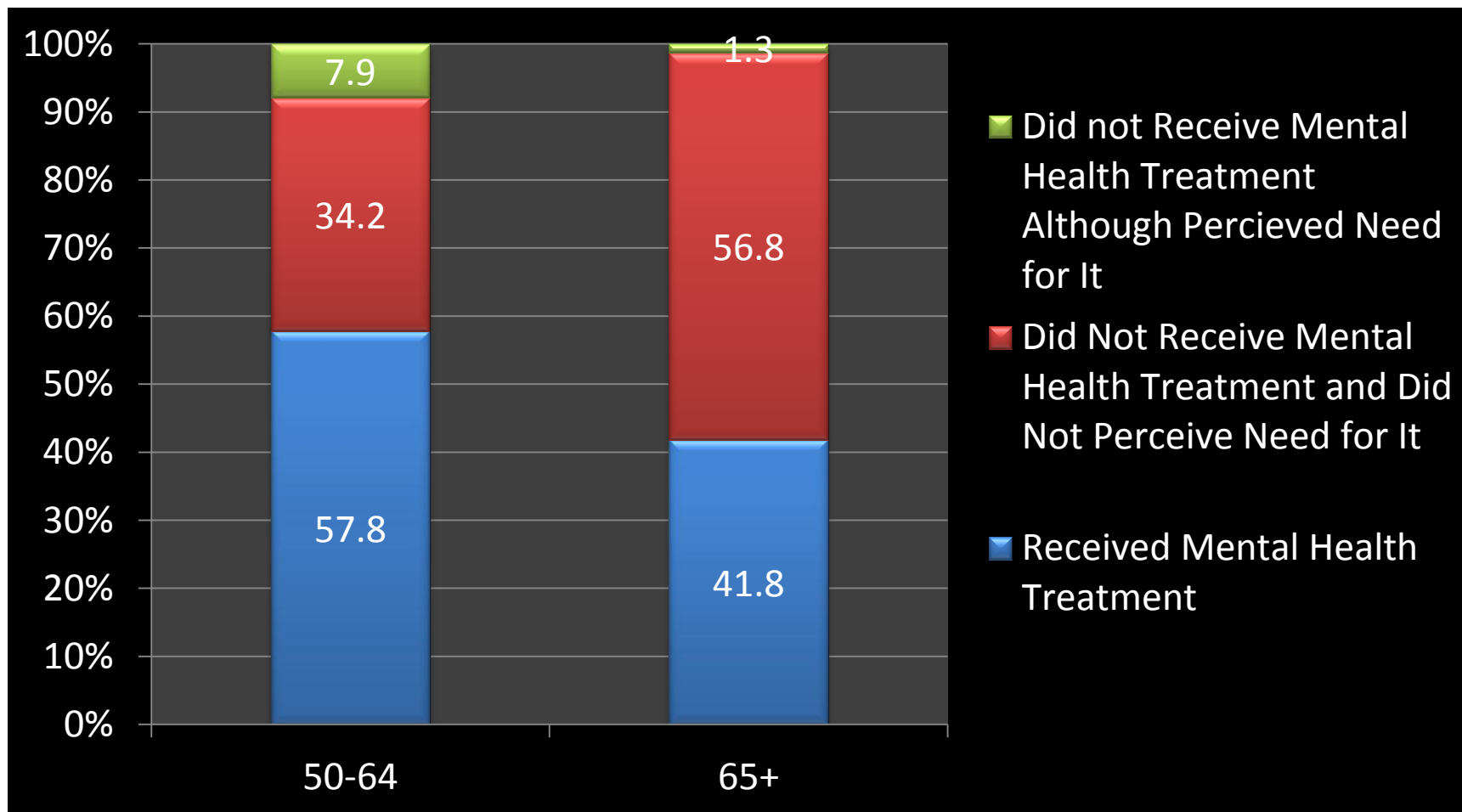
- Serious psychological distress (SPD) is a nonspecific indicator of past-year mental health problems such as anxiety or mood disorders.
- In 2007, an estimated 24.3 million people, or 10.9% of the adult population, had symptoms of SPD.<sup>3</sup>
- Combined data from 2005 and 2006 indicate that the annual prevalence rate of SPD was 7.0% for adults aged 50 or older (an estimated 6.1 million persons).<sup>4</sup>

# Prevalence Rates of SPD Vary by Demographic Characteristics

- White
- Female
- Less than a high school diploma
- Poverty
- 35–64 years old
- Obese

Source: 1. Substance Abuse and Mental Health Service Administration [SAMHSA], 2008a; 2. SAMHSA, 2008b; 3. Pratt, Dey, & Cohen, 2007.

## Percentages of Persons Aged 50+ with Past Year SPD Who Reported Past Year Mental Health Treatment and Perceived Need for Treatment, by Age Group: 2005 and 2006



Source: SAMHSA, 2005 and 2006 NSDUHs.

# Older Adults with SPD

- Higher prevalence of ever being diagnosed with heart disease, diabetes, arthritis, and stroke than persons without SPD.
- More likely to report needing help with activities of daily living (ADLs) and instrumental activities of daily living (IADLs).
- Use more medical care services such as doctor visits and visits to mental health professionals.

Source: 1. Substance Abuse and Mental Health Service Administration [SAMHSA], 2008a; 2. SAMHSA, 2008b; 3. Pratt, Dey, & Cohen, 2007.

# SPD vs. Serious Mental Illness

- The associations between SPD and sociodemographic characteristics, health status, and health care utilization are similar to the relationships found between serious mental illnesses (e.g., major depression or schizophrenia) and these same variables.

# Current Literature

- Comparative studies make up the bulk of investigations of SPD among African Americans.
- Studies typically report significantly higher levels of SPD for the general population of non-Hispanic whites compared with African Americans.<sup>1-3</sup>
- Non-Hispanic white adults aged 65 and older have the lowest prevalence of SPD.<sup>3</sup>

# Limitation of Available Studies

- Studies that treat Black Americans as a monolithic group may obscure important mental health differentials.



# Black Americans

- Black population in the U.S. is diverse and becoming more so each year, largely due to the immigration of blacks of Caribbean descent.
- In 1990, Blacks in the United States totaled about 30 million and by 2000 had increased to 36.2 million.
- Of the nearly 4% of Blacks who were foreign born, 60 percent were from the Caribbean.

# Limitations of Existing Research

- Few studies examine the risk factors for SPD using representative broad-based national or community samples of older Black Americans.<sup>1</sup>
- Consequently, little is known about whether identified risk factors function in the same way and to the same extent among older African Americans compared with other groups.

# Purpose of Study

- Identify the risk profiles of serious psychological distress among a nationally representative sample middle-aged and older African American, Caribbean black and non-Hispanic white adults.

# Data

- The National Survey of American Life (NSAL; PI: James Jackson)
- N = 6,082 (face-to-face interviews; age 18+)
  - 3,570 African Americans
  - 1,621 Caribbean Blacks
  - 891 non-Hispanic Whites
- Response rate = 72.3%
- Data collection: February 2001-June 2003

# Measures

- Serious psychological distress: measured using the K6.
- Assesses non-specific psychological distress in the past 30 days.<sup>1-2</sup>
- Identifies individuals with a high likelihood of having a diagnosable mental illness and associated impairment in social and occupational functioning that requires treatment.
  - So sad that nothing could cheer you up
  - Nervous
  - Restless or fidgety
  - Hopeless
  - That everything was an effort
  - Worthless

# Sample Characteristics (Covariates)

	n	%		n	%
<u>Race/Ethnicity</u>			<u>Body mass index</u>		
African American	1364	61	Not overweight (<24)	625	28
Caribbean Black	549	24	Overweight (25-29)	836	37
Non-Hispanic White	330	15	Obese (30+)	782	35
<u>Age</u>			<u>Gender</u>		
45-64	1580	70	Male	867	61
65+	663	30	Female	1376	39
<u>Poverty status</u>			<u>Education</u>		
Poor	449	20	Less than high school	681	30
Near poor	558	25	High school diploma	716	32
Non-poor	658	29	Some college	414	18
Affluent	578	26	College degree	432	19

# Analytic Approach

- Latent Class Analysis
  - Mplus 6.1
- Multivariable logistic regression
  - Stata 11.0
- Geo mapping
  - ArcGIS 9.0
- All analyses weighted and took into account complex survey design characteristics

# Latent Class Analysis

- Designed to describe distinct subpopulations (classes) of individuals.
  - Models do not assume that everyone in the population has the same profile.
  - Assumes that there are important demographic, cultural and social distinctions within racial and ethnic groups that influence mental health profiles (e.g., heterogeneity within and between groups).



# Results: 2-Class Solution

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**FINAL CLASS COUNTS AND PROPORTIONS FOR THE LATENT CLASS PATTERNS  
BASED ON ESTIMATED POSTERIOR PROBABILITIES**

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<b>CLASS</b>	<b>COUNT</b>	<b>PROPORTIONS</b>
High distress class	366.60658	0.16301
Low distress class	1882.39342	0.83699

# Results

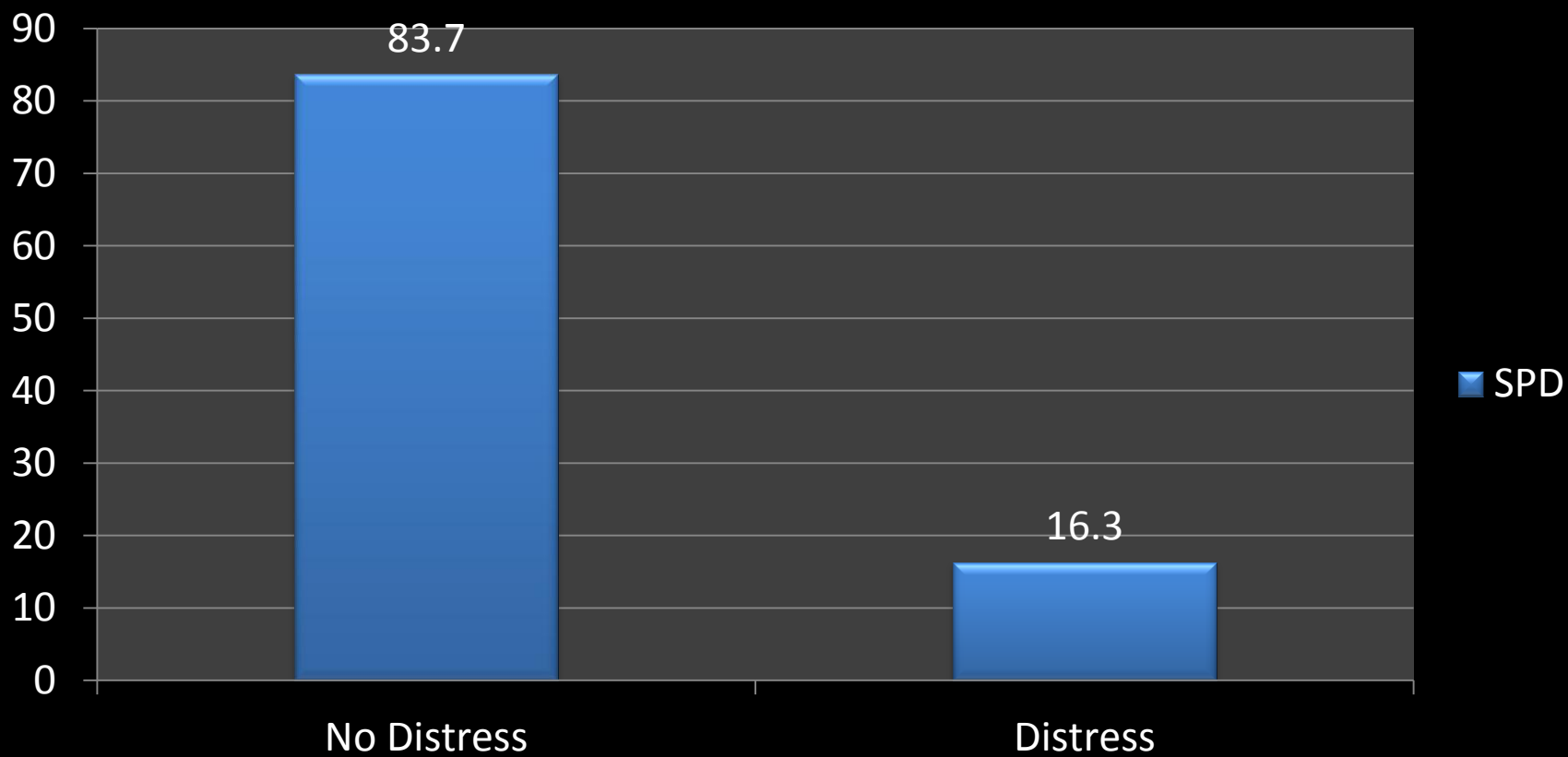
## Tests of Model Fit

Log likelihood	-14600.620
Akaike (AIC)	29239.240
Bayesian (BIC)	29347.887
Sample size adjusted BIC	29287.521
Lo-Mendell-Rubin ( $p$ value)	0.009***
Entropy (classification quality)	0.972

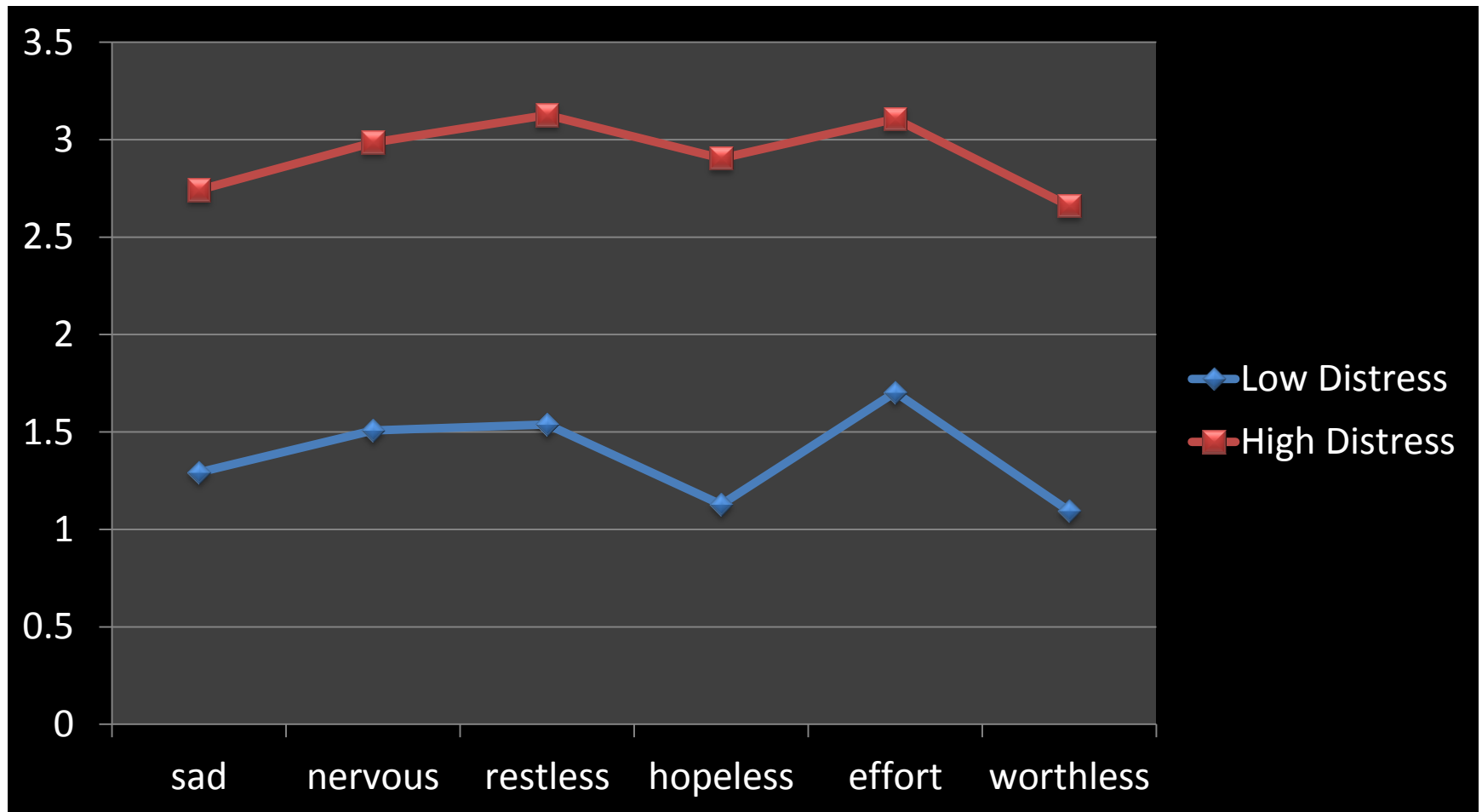
## Class Count Probabilities

	1	2
1	.975	.025
2	.004	.996

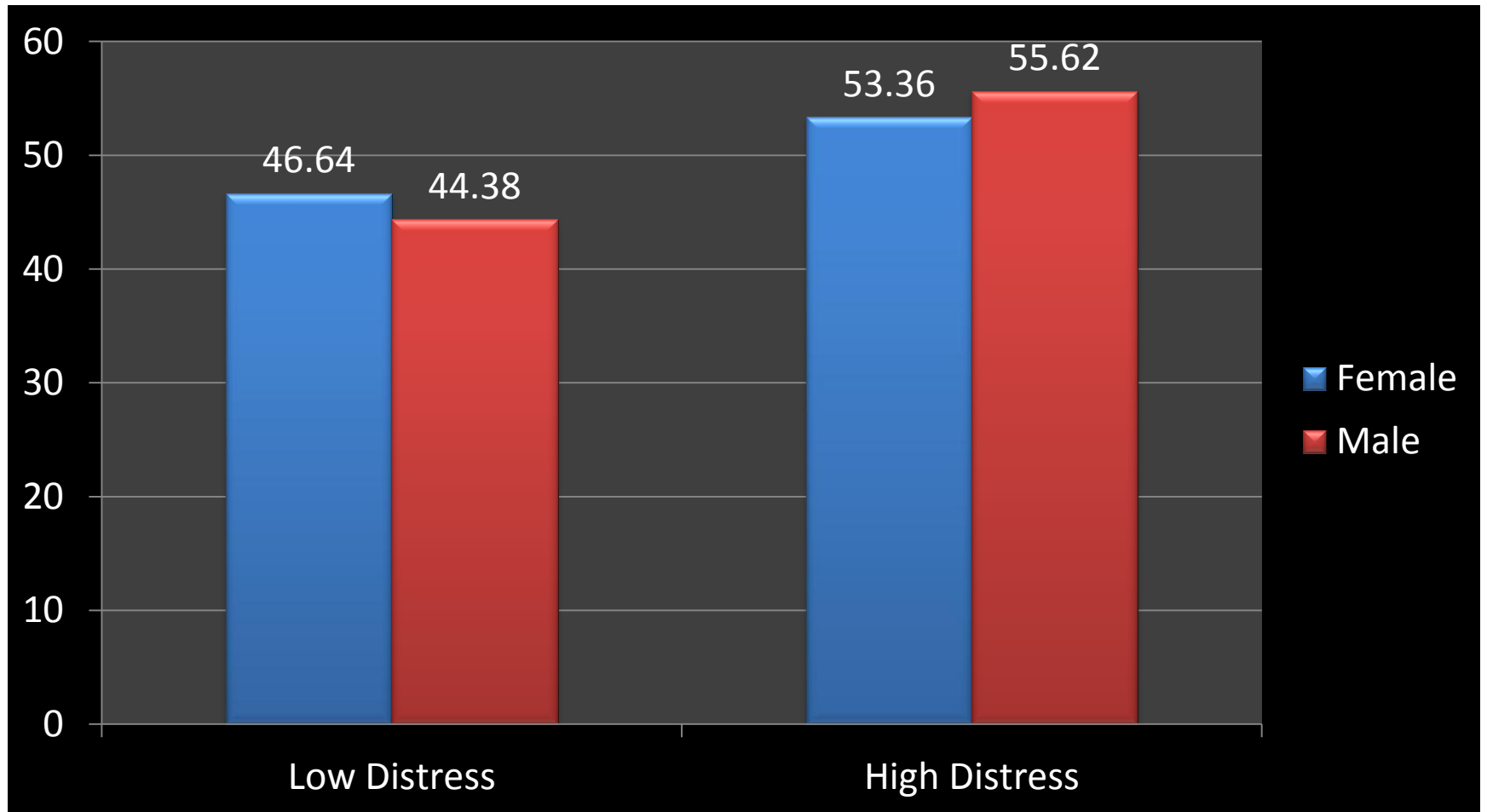
## SPD using recommended cut-off of 13



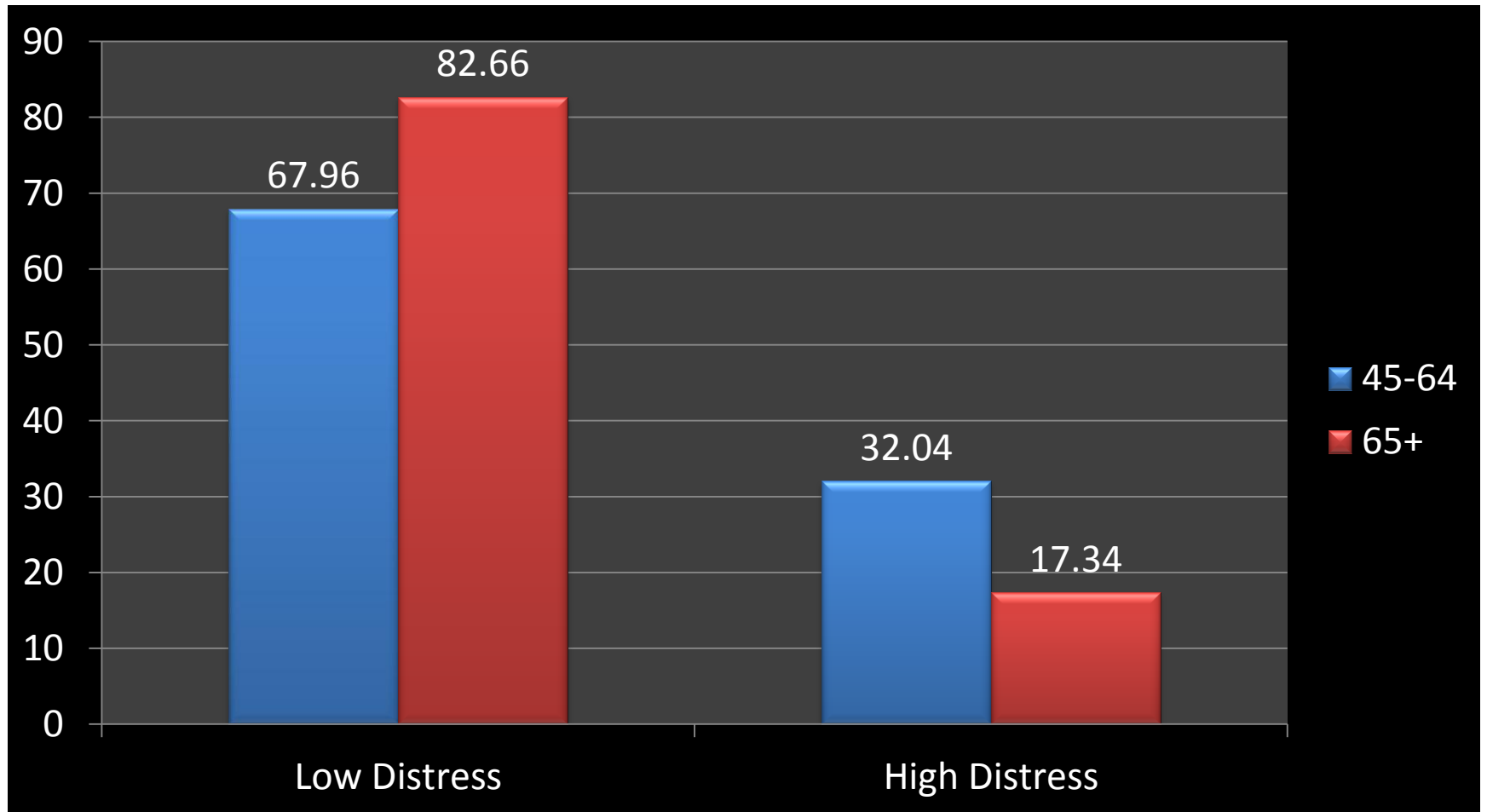
# Endorsement Profile (Means)



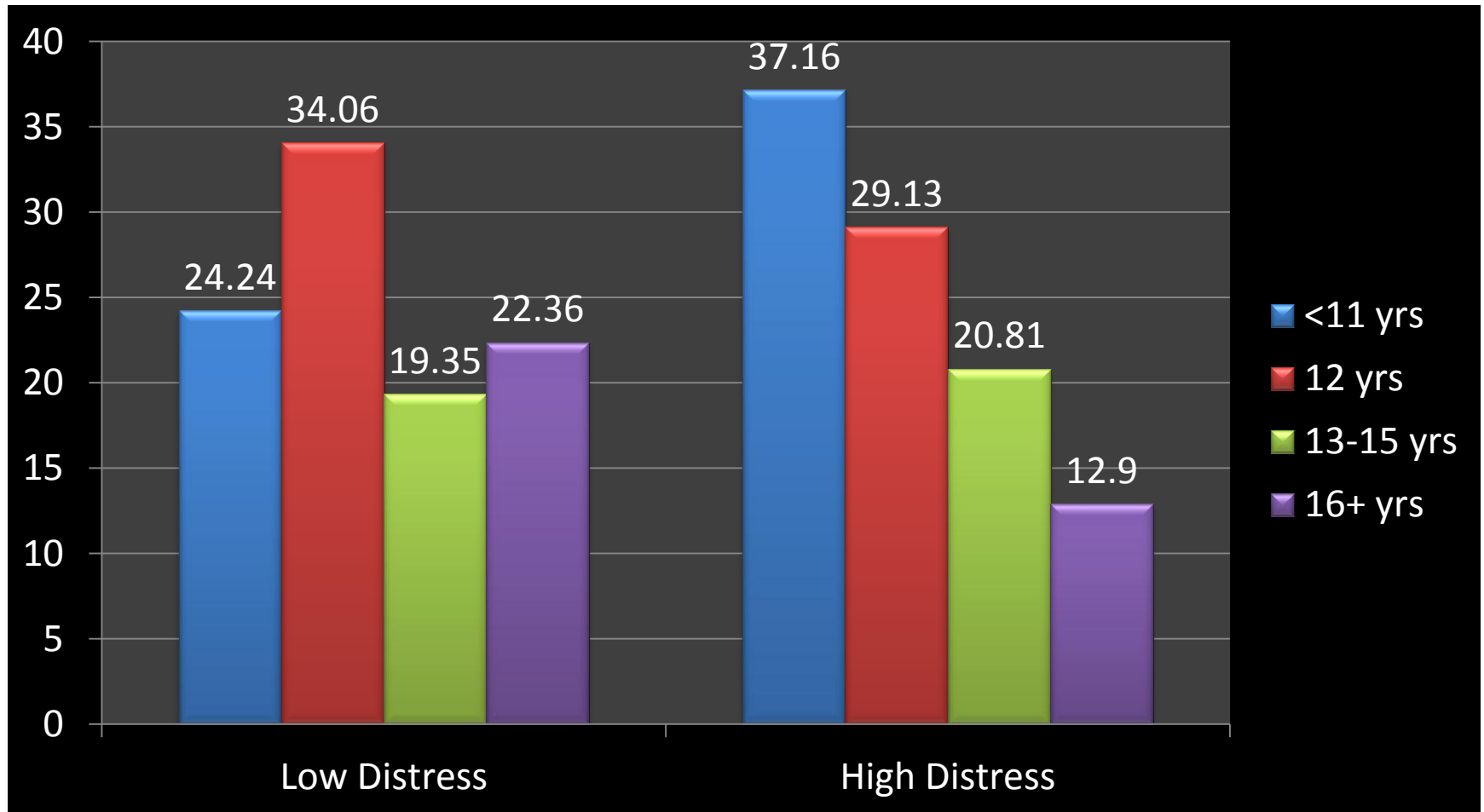
# Gender



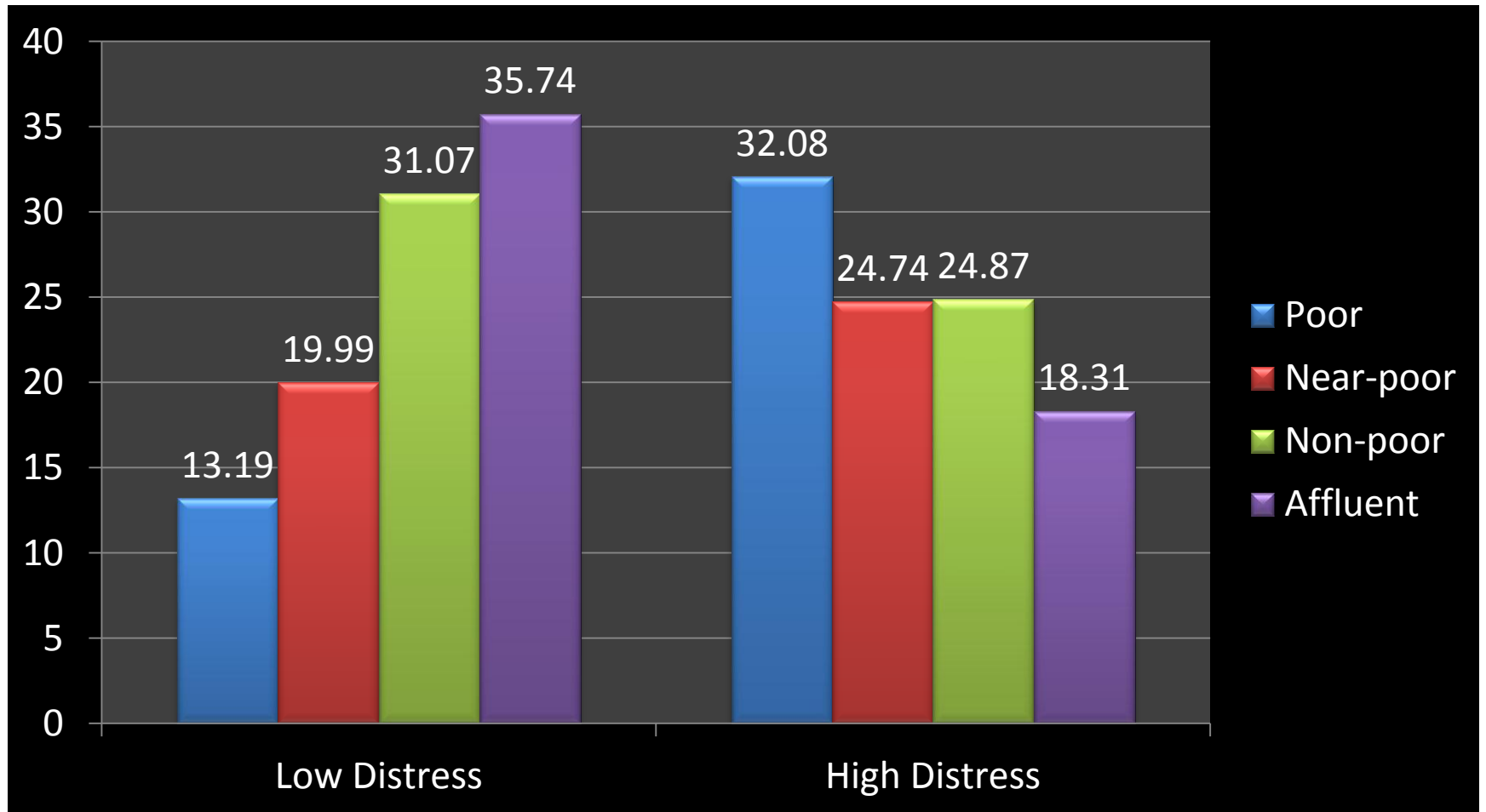
# Age



# Education

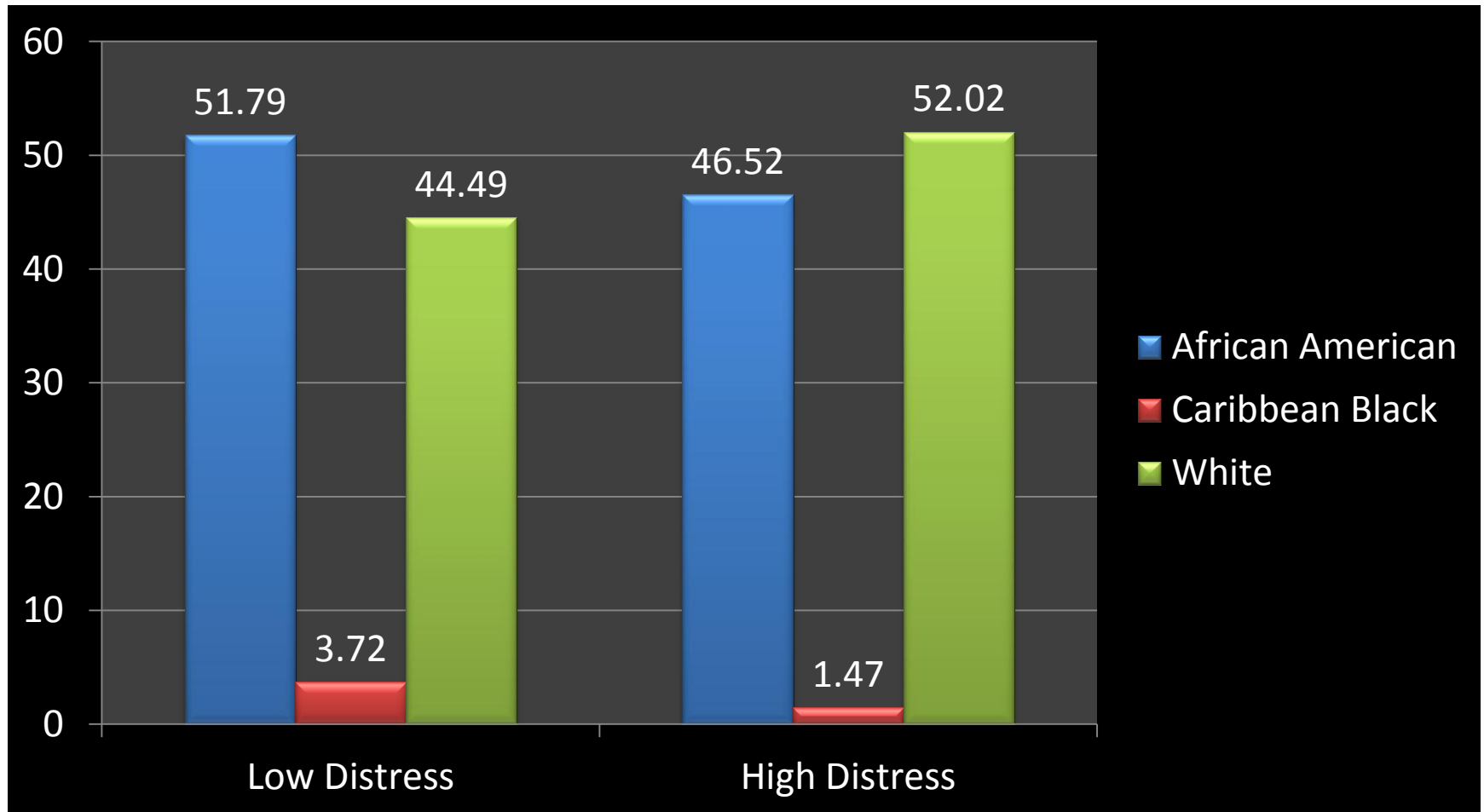


# Poverty Status

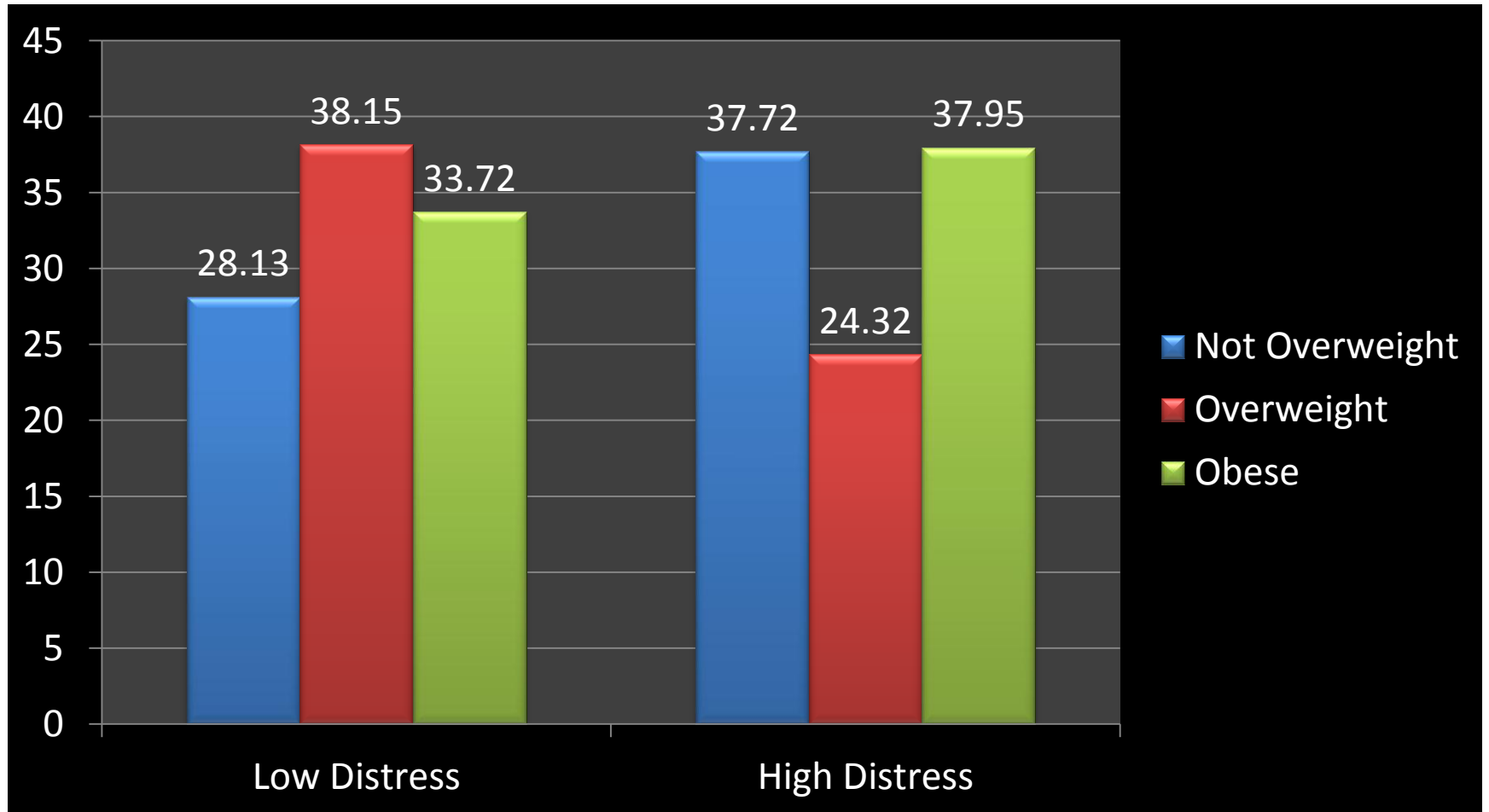




# Race/Ethnicity



# Body Mass Index



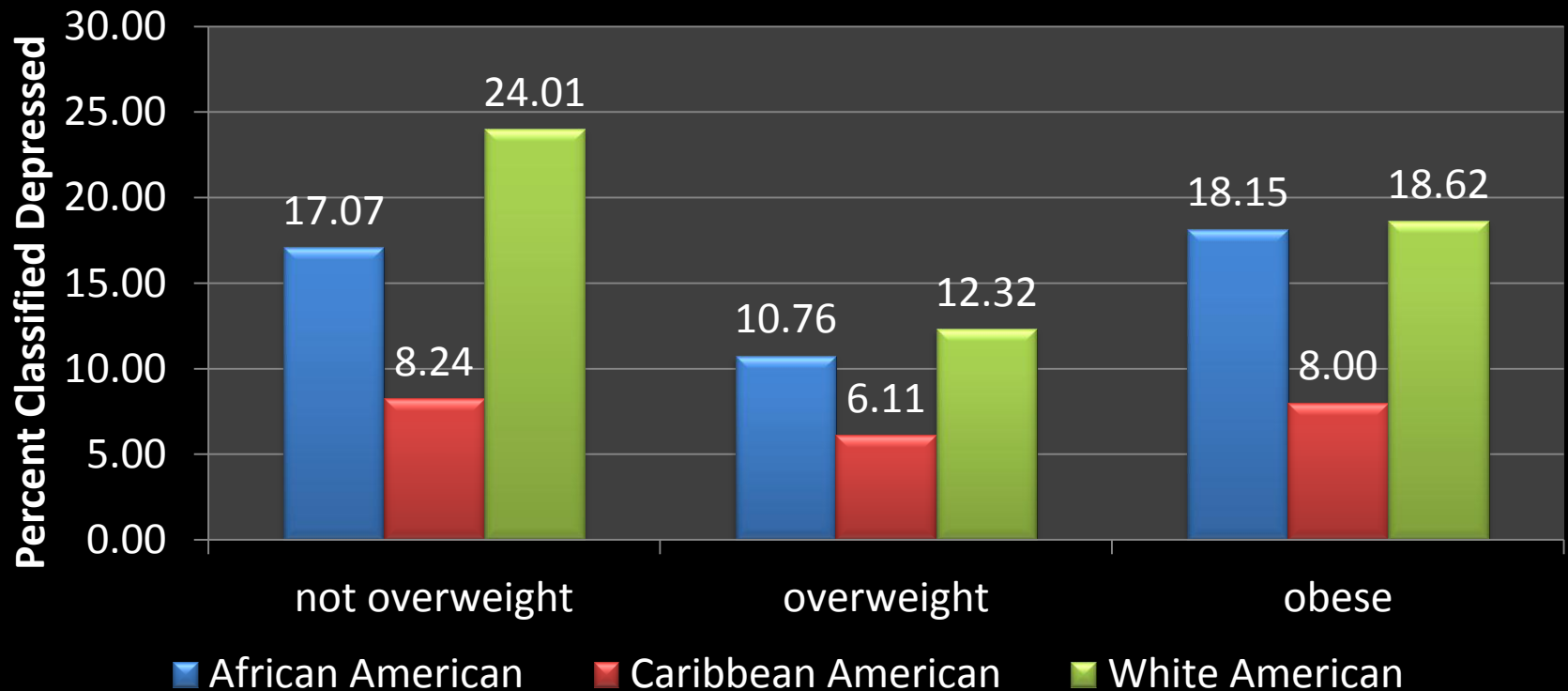
# Multivariable logistic regression

- Used to identify significant covariates that predict class assignment in distressed class vs. not distressed class.

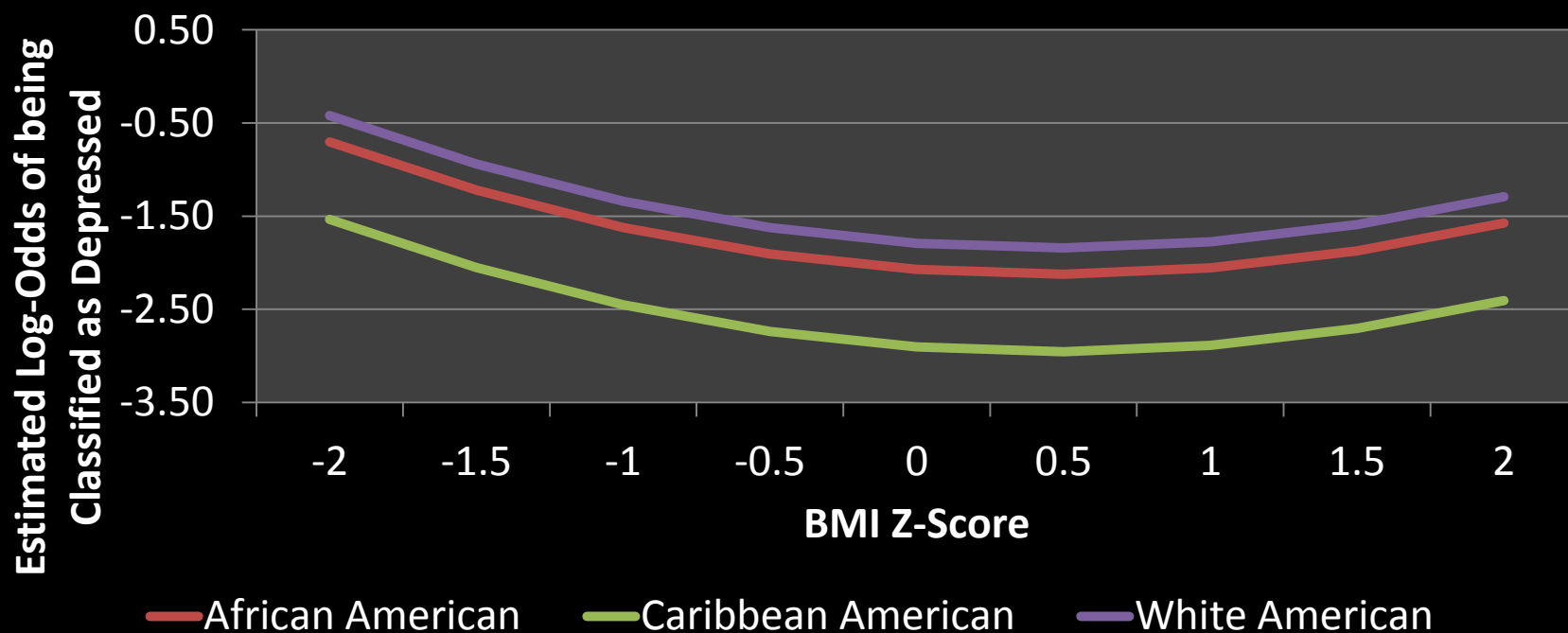
# Depressed Class Assigned in 2-Class Solution of LCA Model

Covariate	Model 1	Model 2	Model 3	Model 4
Female	0.120	0.138	0.120	-0.017
White	0.304	0.477	0.467	0.677*
Caribbean	-0.826*	-0.759*	-0.813*	-0.651
65+	-0.835**	-1.019**	-1.065**	-1.076**
High school		-0.800***	-0.828***	-0.569**
Some college		-0.659*	-0.669*	-0.181
College degree		-1.290*	-1.325**	-0.632
BMI		0.013	-0.417***	-0.372***
BMI <sup>2</sup>			0.007***	0.006***
Near poor				-0.697**
Non-poor				-1.025***
Affluent				-1.643***
* p<.05;	** p<.01;	*** p<.001		

## Percent Classified as Depressed (K6-based 2-class model) by Weight Status and Race/ethnicity, NSAL, ages 45+



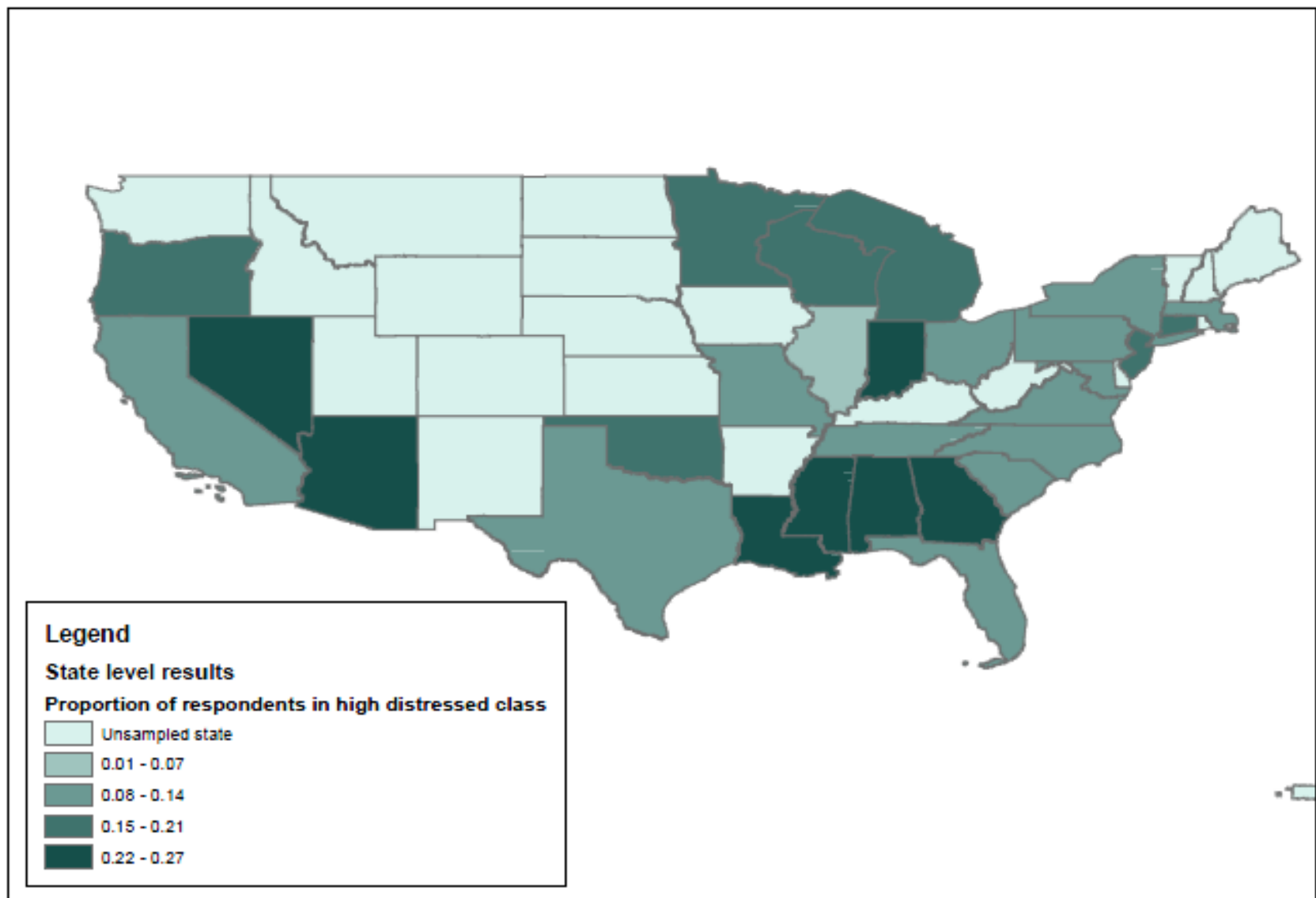
## Log-odds of Depressed Classification by BMI by Race/ethnicity, NSAL, ages 45+, quadratic fit, sex and age controlled



# GIS

- Geo mapping was used to provide an example of the geographic distribution of adults 45+ with SPD based on class assignment.
- Map reflects individuals assigned to “high distressed” class vs. prevalence of SPD by state.

# Distribution of Serious Psychological Distress, NSAL, age 45+





# Summary of Findings

- Two latent profile classes were identified – one “high distressed” and one “low distressed” class.
- Heterogeneity in SPD among middle-aged and older adults.

# Summary of Findings: Race/Ethnicity

- Whites were more likely to be assigned to the “high distressed” class compared to African Americans.
- However, 44% of whites were in the “low distress” class.

# Summary of Findings: SES

- Poverty and less than high school diploma are significant risk factors for SPD.
- Higher levels of education seem to have little or no effect for those most at risk.
- Findings demonstrate the varying effects of income vs. education.

# Body Mass Index

- BMI had a curvilinear relationship with SPD.
- Increased risk of SPD among those who are “not overweight” and those who are “obese.”

# Implications for Research

- This work highlights the need to consider heterogeneity within the adult population.
- Results demonstrate the utility of a latent profile approach to risk characterization while also providing substantively meaningful information.

# Implications for Intervention

- Findings identified two classes of people with varying risk, which can facilitate the development of targeted interventions designed to reduce the burden of SPD.
- Geo mapping in combination with LCA can be used to locate individuals with SPD using survey data.
  - Advantage over prevalence rates.

# Acknowledgements

- R01 MH084963 (NIMH)
  - PI: Karen Lincoln
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  - PI: Karen Lincoln
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