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Lifestyle behavior modification assessment among Black women in Atlanta following a community health screening intervention

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Abstract Cover Page

Lifestyle behavior modification assessment among Black women in Atlanta following a community health screening intervention

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An abstract of
A thesis submitted to the Faculty of the
James T. Laney School of Graduate Studies of Emory University
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Abstract

Lifestyle behavior modification assessment among Black women in Atlanta following a community health screening intervention

By Catherine Lindsay Begley McGeoch

Cardiovascular disease (CVD) remains the leading cause of mortality in the United States (U.S.), yet awareness of heart disease risk is alarmingly low, particularly among women from minority groups. Key modifiable CVD risk factors, such as diet, physical activity, and weight, are often underrecognized. Community-engaged CVD prevention interventions have demonstrated success but remain underutilized due to their narrow focus and the challenges of sustaining community partnerships. Thus, we sought to assess whether a one-time educational intervention delivered during a community screening event will lead to measurable improvements in weight, physical activity, and dietary habits among Black women at six months post-screening. Additionally, we investigate whether these effects are influenced by socioeconomic factors such as income, insurance type, and education level. At the community screenings, participants self-reported CVD comorbidity risks and had risk factors weight, cholesterol, triglycerides, and blood pressure measured on-site measured by volunteer healthcare workers. These volunteers counseled participants on the most salient risk factors identified. Participants were then contacted six months post-screening by phone by the same volunteers to see if they had made lifestyle changes, including weight loss, diet improvement, and increase in weekly exercise. A total of 209 participants completed follow-up, and while socioeconomic factors as collected did not significantly impact behavior changes, overall, nearly half of participants reported CVD risk-mitigating behavior six months post-screening, thus providing confidence that community health screenings with tailored counseling and follow-up invoke meaningful behavior change.

Thesis Cover Page

Lifestyle behavior modification assessment among Black women in Atlanta following a community health screening intervention

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Table of Contents

Introduction

Cardiovascular disease (CVD) remains the leading cause of mortality in the United States (U.S.), yet awareness of heart disease risk is alarmingly low, particularly among women from minority groups.[1,2] Key modifiable CVD risk factors, such as diet, physical activity, and weight, are often underrecognized. A 2021 study by the American Heart Association (AHA) revealed that knowledge of heart disease as the leading cause of death in women is notably deficient among Hispanic and non-Hispanic Black women.[2] Moreover, Black women experience a disproportionate burden of CVD compared to other racial groups, with higher prevalence and mortality rates.[1-5] According to recent AHA statistics, 57.1% of Black women have CVD, compared to 43.4% of White, 42.6% of Hispanic, and 37.2% of Asian women, and Black women's CVD-related mortality rate is 29% higher than that of White women.[3,6] This disparity is multifactorial, stemming from systemic inequities, limited access to healthcare, social determinants of health (SDoH), discrimination, and underrepresentation in clinical research.[10] As such, Black women represent a unique at-risk population requiring tailored strategies that address their specific social and environmental challenges.

Community-engaged CVD prevention interventions have demonstrated success but remain underutilized due to their narrow focus and the challenges of sustaining community partnerships. While direct comparisons between racially-tailored and generic interventions are limited, longstanding disparities in healthcare access and representation in NIH-funded research highlight the need for culturally specific approaches.[10-12] Preliminary studies, such as community-based initiatives in barber shops and hair salons, have shown promise in fostering social support and encouraging positive lifestyle changes among Black communities.[13,14] However, awareness of

Black women's heightened CVD risk and communication of prevention strategies remain insufficient.

In this study, we hypothesize that a one-time educational intervention delivered during a community screening event will lead to measurable improvements in weight, physical activity, and dietary habits among Black women at six months post-screening. Additionally, we investigate whether these effects are influenced by socioeconomic factors such as income, insurance type, and education level.

Methods

Study population and data collection

In this study, we included all adult Black women (aged 18 to 92 years) enrolled between 2015 and 2019 in the ongoing 10,000-women cardiovascular disease community screening project who completed the six-month post-screening follow-up phone call. Participants were recruited from various screening events held in conjunction with African American churches and community organizations in the metropolitan Atlanta area. Women were eligible if they self-identified as African American and were at least 18 years old. A total of 972 participants provided written informed consent and were enrolled. Consented participants completed a questionnaire about medical and lifestyle risk factors as well as demographic and socioeconomic information. Questionnaires were provided in an online format which participants filled out individually on laptops provided on-site at the screening. Emory Women's Heart Center volunteers obtained vitals including blood pressure and weight (as measured by an on-site scale). They also collected point-of-care cholesterol (Cholestick®, low and high-density lipoprotein and triglycerides). Based on this data, participants were given a calculated Atherosclerotic Cardiovascular (ASCVD) Risk Score, which comprises age, sex, race, blood pressure,

cholesterol level, smoking status, and diabetes diagnosis and corresponds to the ten-year risk of developing an ASCVD event. An ASCVD score of less than 5% corresponds to low-risk, 5-7.4% is borderline risk, 7.5% to 20% is intermediate risk, and greater than 20% is high risk. The volunteers then provided counseling on salient risk factors identified during screening, including recommendations on follow-up with a healthcare provider and risk factor modification strategies—the importance of establishing care with a healthcare provider, lowering dietary salt intake, and aiming for at least thirty minutes of physical activity at least three times per week. Educational handouts were also given to participants according to volunteer discretion based on identified risk factors. Phone follow-up information on weight, diet, and exercise habits at six months post-screening was completed in a subset of participants who chose to participate in follow-up. In our final cohort, we included all consented participants who completed six-month phone follow-up, 209 total.

CVD risk prevention behavior changes at six-month post-screening phone follow-up

The primary outcome of interest was prevalence of weight loss, increased physical activity, and improved diet at six-month post-screening phone follow-up. On the six-month post-screening follow-up call, participants were asked if they had experienced weight loss since screening (yes or no), if they changed their diet (yes or no), if they decreased their salt intake (yes or no), if they increased their amount of weekly exercise (yes or no), and if they had visited a healthcare provider (yes or no).

CVD risk prevention behavior changes at six-month post-screening phone follow-up according to social determinant stratification

We sought to assess whether the primary outcome—prevalence of weight loss, increased physical activity, and improved diet—at six-month post-screening phone follow-up varied

according to income, insurance status, and education level. Participants self-reported their income, education level, and health insurance information. Income categories were guided by the 2015 US Census poverty threshold, <$24,000, $24,000-$47,999, $48,000-96,000, and >$96,000. Education level was defined as the highest grade level completed and was divided into two categories, college graduation and no college graduation. Insurance status was a binary variable, insurance or no insurance.

Statistical analysis

Baseline demographics and comorbidities were assessed for all participants who completed six-month post-screening follow-up (n=209). A stratified analysis for primary outcome (weight loss since screening, diet change, decrease in salt intake, increase in weekly exercise, and provider visit) by social determinant factors income, education level, and insurance status was also performed. Chi-squared or Fisher's exact tests were used to assess differences in these categorical outcome variables. Logistic regression was performed to assess differential predictors of primary outcome behavior changes by social determinant factors. A crude odds ratio included only the pertinent social determinant as a predictor, a partially-adjusted odds ratio added age and BMI as additional predictors, and a fully-adjusted odds ratio comprised these predictors as well as known diagnosis of hypertension (which was identified as a predictor in a forward selection procedure) and the additional social determinant factors. For the primary outcome, missing values were reported in the tables that summarize the crude analyses and excluded from difference-in-mean testing.

A sensitivity analysis comparing baseline demographic and clinical characteristics between those who completed six-month phone follow-up and those who did not was also performed. Stepwise selection was employed to identify predictors of follow-up, and a logistic

regression was performed using these predictors. All analyses were performed using SAS version 9.4 (SAS Institute, Inc., Cary, North Carolina). This study was approved by the institutional review board at Emory University (IRB 00080040).

Results

Mean participant age was 50.8±14 years. Mean BMI was 32.2±7.9 kg/m^2. A total of 15% of patients were healthy weight (BMI below 25.0 kg/m^2), 32% were overweight, with BMI between 25 and 30 kg/m^2, and 53% were obese. In terms of comorbidities, 34% reported a personal history of hypertension, 24% reported hyperlipidemia, 10% reported diabetes, 17% reported tobacco use, and 2% reported known CVD (Table 1). For the risk factors measured at on-site at screening, the average ASCVD risk score was 7.2%, representing borderline risk. Mean measured total cholesterol was 190 mg/dL (normal range 125-200 mg/dL), triglycerides were 141 mg/dL (normal below 150 mg/dL), and systolic BP was 133 mm Hg (normal below 120 mm Hg).

In stratifying participant responses according to SDoH classifications income level, education level, and insurance status, the income brackets collected were too narrow for between-group comparison, thus only education level and insurance status were assessed. Three participants elected not to disclose insurance status. When comparing baseline demographics between those without insurance (n=14) and those with insurance (n=192), the groups were matched on age and most comorbidities with the biggest difference between groups being BMI (Table 1). The no-health-insurance group had higher mean BMI (38.2 vs. 31.9 kg/m^2), skewed by 43% [6/14] being Class III obese. Among measurements obtained at screening, the no-health-insurance cohort had a lower ASCVD risk score (4.9% vs. 9.6%) and lower triglyceride levels (87 vs. 144 mg/dL) with nearly equal total cholesterol and systolic blood pressure levels. For the

behavior change outcomes, a statistically significantly greater proportion of those with no insurance reported diet change 93 vs. 66%, as well as increase in weekly exercise, 100% vs. 62%, (Table 2). No meaningful predictors for behavior change were demonstrated with logistic regression (Table 3).

When comparing baseline demographics across education level, some college or less (n=90), and college graduate or more (n=118), groups were matched on age, BMI, and most comorbidities except that hypertension was more prevalent in those with some college education or less, 44% vs. 27% (Table 4). In terms of clinical factors measured on-site, ASCVD risk score and total cholesterol were equivalent between groups. Triglycerides and systolic blood pressure were slightly lower in the cohort that did not graduate from college, triglycerides 130 vs. 148 mg/dL and blood pressure 131 vs. 136 mm Hg (Table 4). There were no statistically significant differences between groups on primary outcome of post-screening behavior change. Approximately 50% of participants in each group reported weight loss since screening, 70% reported diet change, 60% reported increase in weekly exercise, and 80% visited a healthcare provider (Table 5). A larger but not statistically significant proportion of participants who did not graduate from college reported a decrease in salt intake (50% vs. 37%). Logistic regression adjusting for age, BMI, clinical, and SDoH factors did not reveal any significant predictors of behavior change (Table 6).

Sensitivity analysis comparing baseline characteristics between those who responded to the six-month post-intervention phone call (n= 209) and those who did not (n= 763) did not reveal significant differences in mean comparisons between responders and non-responders. The mean age and BMI were equivalent, as were proportions of participants who had known diagnoses of hypertension, hyperlipidemia, CVD, and diabetes. There was a greater proportion of

responders than non-responders with smoking history, 17% vs. 10%. In terms of on-site measurements, ASCVD risk score, total cholesterol, and systolic blood pressure were equivalent between groups, and triglycerides were higher but not statistically significantly so in the responder group. For social determinant factors, insurance status was comparable between groups at 90% insured, as was maximum education level, with about 60% graduating from college. There were some significant discrepancies in income level between responders and non-responders, with a greater proportion of responders in the above $96,000 annual income category, 20% vs. 12% (Table 7).

A stepwise selection procedure of these baseline characteristics was performed to identify predictors of six-month post-screening response and identified smoking status, BMI, and hypertension diagnosis as predictors. Logistic regression with these predictors was conducted, and the resulting odds ratios did not demonstrate statistical significance.

Discussion

Our study findings highlight the potential of community-based educational interventions to enhance CVD risk awareness and promote healthy behavior changes among Black women, a population disproportionately affected by CVD. Six months post-screening, many participants demonstrated notable improvements in key prevention behaviors, including weight loss, increased physical activity, and dietary modifications. These findings align with prior research emphasizing the efficacy of culturally tailored interventions in addressing health disparities within underserved communities.[13,14]

Overall, 49% [103/209] reported weight loss, 68% [143/209] reported diet improvement, 42% [89/209] reported decrease in salt intake, 64% reported increase in weekly exercise [134/209], and 77% [162/209] reported seeing a healthcare provider. This affirms our primary

aim of assessing the feasibility of a one-time educational intervention delivered at an unfunded, volunteer-driven community health screening event leading to improvements in weight, physical activity, and dietary habits among Black women. In terms of stratification by SDoH factors, while it is difficult to draw generalizable conclusions based on insurance status with less than 7% of follow-up responders reporting being uninsured, a statistically significantly greater proportion of those with no insurance reported diet change and increase in weekly exercise. Potentially, those with limited provider access due to their uninsured status were more motivated to make the changes the volunteer healthcare provider suggested and to enact change to lower their CVD risk given the lack of health insurance coverage as a failsafe. On the other hand, education level did not impact behavior changes. It is possible that income may have an effect, but the income categories surveyed were too narrow. The Distressed Communities Index (DCI), which classifies zip codes as "prosperous, comfortable, mid-tier, at risk, and distressed" based on high school graduation rate, poverty rate, rate of unemployed adults, housing vacancy rate, median household income, and change in number of establishments from 2016 to 2020 could be a better, composite proxy for SDoH, but this information was not surveyed.

Sensitivity analysis comparing six-month follow-up responders and non-responders did not reveal salient characteristic differences between the groups. The greater proportion of responders with smoking history suggests that perhaps smoking risk factor discussions with the screening volunteers motivated them to improve lifestyle behaviors and report them in the post-screening follow-up. The lack of meaningful characteristic differences between follow-up responders and non-responders, in terms of demographics, comorbidities, on-site measured CVD risk factors, insurance status, education level, and income level, suggests that the follow-up methodology could be improved, as opposed to inherent differences that predispose a participant

to respond to follow-up or not. For this project, phone call records detailing how many times follow-up was attempted and the times of day calls were attempted are not available, so ascertaining the exact phone call methodology will require further study interviewing volunteers who made the calls.

Limitations include the unfunded, volunteer-driven nature of this community intervention, which caused screenings and follow-up phone calls to occur on a more dispersed basis than could be achieved with funding backing. In addition, study participants self-reported and manually entered their known comorbidities, and volunteers manually input on-site measurements. Manual entry introduces the possibility of false entry and permitted skipped questions, resulting in missing data. For example, most participants had an ASCVD risk score listed, but many were missing a triglyceride level even though this is a component required to calculate ASCVD score. Furthermore, the self-reported nature of the six-month-post-screening lifestyle changes introduces recall bias and social desirability bias. Finally, while our study builds on prior community-based interventions, it remains unclear whether the observed improvements can be sustained beyond six months. Longitudinal studies with extended follow-up periods are needed to assess the durability of behavior changes and their impact on clinical outcomes, such as blood pressure control and CVD event rates.

As a future direction, it would be informative to conduct interviews with individuals who reported lifestyle improvements to determine their most motivating factors for change, specifically whether knowledge that they would receive a phone call from a provider following initial screening was motivating. Community health programs may benefit from integrating financial incentives, peer support groups, or tailored educational materials to enhance participation and retention among underserved populations. Furthermore, increasing

representation of Black women in NIH-funded research could provide critical insights into the systemic factors contributing to their heightened CVD risk and inform the development of more effective interventions.[10-12]

In conclusion, this preliminary exploratory study to assess the potential for targeted counseling and follow-up after community health screenings to impact lifestyle behaviors protective against cardiovascular disease revealed that some participants were motivated to make health-promoting lifestyle changes. The study also demonstrates the feasibility of a one-time educational intervention at community screenings in improving CVD risk prevention behaviors among Black women. Given the success of prior community screening initiatives for improving health behaviors, further investigation as to the most motivating factors for this specific population are needed. Future research should explore strategies to sustain behavior changes over time and expand access to interventions for populations facing the greatest barriers to care.

Tables

Table 1 Baseline characteristics of all patients who completed 6-month phone follow-up intervention stratified by health insurance status, n=207 (missing insurance status for 2 responders)

	No health insurance (n= 14)	Health insurance (n= 193)	Overall (n=209)	p-value
Age (Mean ± SD)	39.8 (12.3)	51.5 (14.0)	50.8 (14.2)	0.004
Weight				
Mean BMI ± SD (kg/m^2)	38.2 (10.9)	31.8 (7.5)	32.2 (7.9)	0.048
Weight class				0.04
Underweight	0	0	1 (0.5%)	
Healthy weight	2 (14%)	30 (16%)	32 (15%)	
Overweight	1 (7%)	65 (33%)	66 (31.5%)	
Obese class I	4 (29%)	40 (21%)	44 (21%)	
Obese class II	1 (7%)	29 (15%)	31 (15%)	
Obese class III	6 (43%)	29 (15%)	35 (17%)	
Comorbidities				
Hypertension diagnosis	4 (29%)	68 (35%)	72 (34%)	0.77
Hyperlipidemia diagnosis				0.14
Yes	4 (29%)	45 (23%)	49 (24%)	
No	9 (64%)	136 (70%)	146 (70%)	
Unknown	0	7 (4%)	7 (3%)	
Missing	1 (7%)	5 (3%)	6 (3%)	
CVD diagnosis	0	4 (2%)	4 (2%)	0.75
Diabetes diagnosis	3 (21%)	17 (9%)	20 (10%)	0.14
Tobacco Use				0.14
Current	0	11 (5.5%)	11 (5%)	
Former	1 (7%)	23 (12%)	24 (11.5%)	
Never	13 (93%)	158 (82%)	172 (82%)	
Missing	0	1 (0.5%)	1 (0.5%)	
Site Measurements (Mean ± SD)				
ASCVD Risk Score	4.3 (4.9)	7.5 (9.6)	7.2 (9.3)	0.04
Missing	0	6	6	
Measured total cholesterol	181 (28)	190 (36)	190 (36)	0.25
Missing	0	1	1	
Measured triglycerides	87 (22)	144 (95)	141 (93)	0.0003
Missing	8	86	96	
Measured systolic BP	136 (11)	133 (19)	133 (19)	0.38

Table 2 Primary outcomes stratified by insurance status, n=207

	No health insurance (n= 14)	Health insurance (n= 193)	p-value
Weight loss since screening			0.41
Yes	9 (64%)	93 (48%)	
No	5 (36%)	96 (50%)	
Missing	0	4 (2%)	
Diet change			0.07
Yes	13 (93%)	128 (66%)	
No	1 (7%)	63 (33%)	
Missing	0	2 (1%)	
Decrease in salt intake			0.16
Yes	9 (64%)	79 (41%)	
No	5 (36%)	110 (57%)	
Missing	0	4 (2%)	
Increase in weekly exercise			0.003
Yes	14 (100%)	119 (62%)	
No	0	73 (37.5%)	
Missing	0	1 (0.5%)	
Healthcare provider visit			0.20
Yes	9 (64%)	152 (79%)	
No	5 (36%)	41 (21%)	

Table 3 Logistic regression for primary outcomes stratified by insurance status, n=207

	Crude OR (95% CI)	Partially Adjusted OR (95% CI)*	Fully Adjusted OR (95% CI)*
Weight loss since screening			
No insurance	1.9 (0.6, 5.8)	1.5 (0.5, 5.2)	1.5 (0.4, 5.1)
Insurance	REF	REF	REF
Diet change			
No insurance	6.4 (0.8, 50.0)	4.1 (0.5, 33.9)	3.9 (0.5, 33.3)
Insurance	REF	REF	REF
Decrease in salt intake			
No insurance	2.5 (0.8, 7.8)	1.9 (0.6, 6.3)	1.6 (0.5, 5.3)
Insurance	REF	REF	REF
Healthcare provider visit			
No insurance	0.5 (0.2, 1.5)	0.8 (0.2, 2.6)	0.7 (0.2, 2.5)
Insurance	REF	REF	REF

*Partially adjusted includes age and BMI as predictors. Fully adjusted includes age, BMI, known diagnosis of hypertension, and education level.

Table 4 Baseline characteristics of all patients who completed 6-month phone follow-up intervention stratified by education level, n= 209

	Did not graduate from college (n= 90)	Graduated from college (n= 119)	p-value
Age (Mean ± SD)	52.7 (15.0)	49.3 (13.4)	0.09
Weight			
Mean BMI ± SD (kg/m^2)	32.6 (8.4)	32.0 (7.5)	0.58
Weight class			0.41
Underweight	1 (1%)	0	
Healthy weight	16 (18%)	16 (14%)	
Overweight	25 (28%)	41 (34%)	
Obese class I	17 (19%)	27 (23%)	
Obese class II	12 (13%)	19 (16%)	
Obese class III	19 (21%)	16 (13%)	
Comorbidities			
Hypertension diagnosis	40 (44%)	32 (27%)	0.008
Hyperlipidemia diagnosis			0.023
Yes	24 (27%)	25 (21%)	
No	59 (66%)	87 (73%)	
Unknown	3 (3%)	4 (3%)	
Missing	4 (4%)	3 (3%)	
CVD diagnosis	1 (1%)	3 (3%)	0.64
Diabetes diagnosis	10 (11%)	10 (10%)	0.51
Tobacco Use			
Current	7 (8%)	4 (3%)	0.33
Former	11 (12%)	13 (11%)	
Never	71 (79%)	101 (85%)	
Missing	1 (1%)	1 (1%)	
Site Measurements (Mean ± SD)			
ASCVD Risk Score	7.4 (9.3)	7.1 (9.4)	0.86
Missing	4	2	
Measured total cholesterol	188 (37)	191 (35)	0.54
Missing	0	1	
Measured triglycerides	130 (76)	148 (104)	0.33
Missing	43	53	
Measured systolic BP	131 (18)	136 (19)	0.06

Table 5 Primary outcomes stratified by education level, n= 209

	Did not graduate from college (n= 90)	Graduated from college (n= 119)	p-value
Weight loss since screening			0.52
Yes	46 (51%)	57 (48%)	
No	41 (46%)	61 (51%)	
Missing	3 (3%)	1 (1%)	
Diet change			0.58
Yes	64 (71%)	79 (66%)	
No	26 (29%)	38 (32%)	
Missing	0	2 (2%)	
Decrease in salt intake			0.05
Yes	45 (50%)	44 (37%)	
No	43 (48%)	73 (61%)	
Missing	2 (2%)	2 (2%)	
Increase in weekly exercise			
Yes	59 (66%)	75 (63%)	0.62
No	30 (33%)	44 (37%)	
Missing	1 (1%)	0	
Healthcare provider visit			
Yes	72 (80%)	90 (76%)	0.45
No	18 (20%)	29 (24%)	

Table 6 Logistic regression for primary outcomes stratified by education level n= 209

	Crude OR (95% CI)	Partially Adjusted OR (95% CI)*	Fully Adjusted OR (95% CI)*
Weight loss since screening			
Did not graduate college	1.2 (0.7, 2.1)	1.2 (0.7, 2.1)	1.1 (0.6 ,2.0)
Graduated from college	REF	REF	REF
Diet change			
Did not graduate college	1.2 (0.7, 2.2)	1.2 (0.6, 2.3)	1.2 (0.6, 2.2)
Graduated from college	REF	REF	REF
Decrease in salt intake			
Did not graduate college	1.7 (1.0, 3.0)	1.7 (1.0, 3.0)	1.7 (1.0, 3.2)
Graduated from college	REF	REF	REF
Increase in weekly exercise			
Did not graduate college	1.2 (0.6, 2.1)	1.1 (0.6, 2.0)	1.0 (0.6, 1.9)
Graduated from college	REF	REF	REF
Healthcare provider visit			
Did not graduate college	1.3 (0.7, 2.5)	1.2 (0.6, 2.5)	1.2 (0.6, 2.6)
Graduated from college	REF	REF	REF

*Partially adjusted includes age and BMI as predictors. Fully adjusted includes age, BMI, known diagnosis of hypertension, and insurance status.

Table 7 Baseline characteristics of all patients who completed 6-month phone follow-up versus those who did not

	Completed follow-up (n=209)	Did not complete follow-up (n=763)	p-value
Age (Mean ± SD)	50.8 (14.2)	50.8 (14.2)	0.97
Weight			
Mean BMI ± SD (kg/m^2)	32.2 (7.9)	31.4 (7.0)	0.19
Weight class			0.14
Underweight	1 (0.5%)	18 (2%)	
Healthy weight	32 (15%)	131 (17%)	
Overweight	66 (31.5%)	205 (27%)	
Obese class I	44 (21%)	200 (26%)	
Obese class II	31 (15%)	112 (15%)	
Obese class III	35 (17%)	97 (13%)	
Comorbidities			
Hypertension diagnosis	72 (34%)	303 (40%)	0.17
Hyperlipidemia diagnosis			0.003
Yes	49 (23%)	186 (24%)	
No	146 (71%)	470 (62%)	
Unknown	7 (3%)	81 (11%)	
Missing	7 (3%)	26 (3%)	
CVD diagnosis	4 (2%)	31 (4%)	0.14
Diabetes diagnosis	20 (10%)	85 (11%)	0.52
Tobacco Use			0.03
Current	11 (5%)	30 (4%)	
Former	24 (12%)	48 (6%)	
Never	172 (82%)	670 (88%)	
Missing	2 (1%)	15 (2%)	
Site Measurements (Mean ± SD)			
ASCVD Risk Score	7.2 (9.3)	7.0 (8.8)	0.78
Missing	6	64	
Measured total cholesterol	189.5 (35.7)	190.5 (39.6)	0.73
Missing	1	8	
Measured triglycerides	140.6 (93.4)	125.9 (77.1)	0.12
Missing	96	153	
Measured systolic BP	133.4 (18.7)	132.4 (19.9)	0.49
Missing	0	3	
Insurance Status			0.33
Insured	193 (92%)	686 (89%)	
Not insured	14 (7%)	67 (10%)	
Missing	2 (1%)	10 (1%)	
Annual Income Level			0.01
<$12,000	22 (10%)	63 (8%)	
$12,000-$23,999	27 (13%)	89 (11%)	
$24,000-$47,999	56 (27%)	203 (27%)	
$48,000-96,000	54 (26%)	260 (34%)	
>$96,000	42 (20%)	90 (12%)	
Missing	8 (4%)	58 (8%)	
Maximum Education Level			0.44
Did not graduate from college	90 (43%)	306 (40%)	
Graduated from college	119 (57%)	457 (60%)	

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