

Differences in cardio metabolic risk profiles and functional capacity in a contemporary multi-ethnic community in North East Florida - the VIDASANA project

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Introduction

- Cardiovascular disease remains the leading cause of death among ethnic minority groups in the United States.
- CVD remains the leading cause of death in ethnic minority groups in the US.
- Ethnic minority groups have the highest incidence of hypertension, diabetes, metabolic syndrome, and consequently adverse cardiovascular events.
- Similarly a poorer functional capacity, has been found in Hispanic
- There are no prior head to head comparisons between other ethnic (ie Asians) groups for appropriate distinction of targeting therapies.

Background

- Ethnic minority groups such as non-Hispanic blacks (NHB), Hispanic Americans (H) and South East Asians (SEA) have a high prevalence of metabolic syndrome (MS) .
- The differences of cardiometabolic risk profiles and functional capacity among these groups have not been fully characterized.

Project Goal

- Our study sought to assess these differences in a racial/ethnically diverse population in North East Florida.

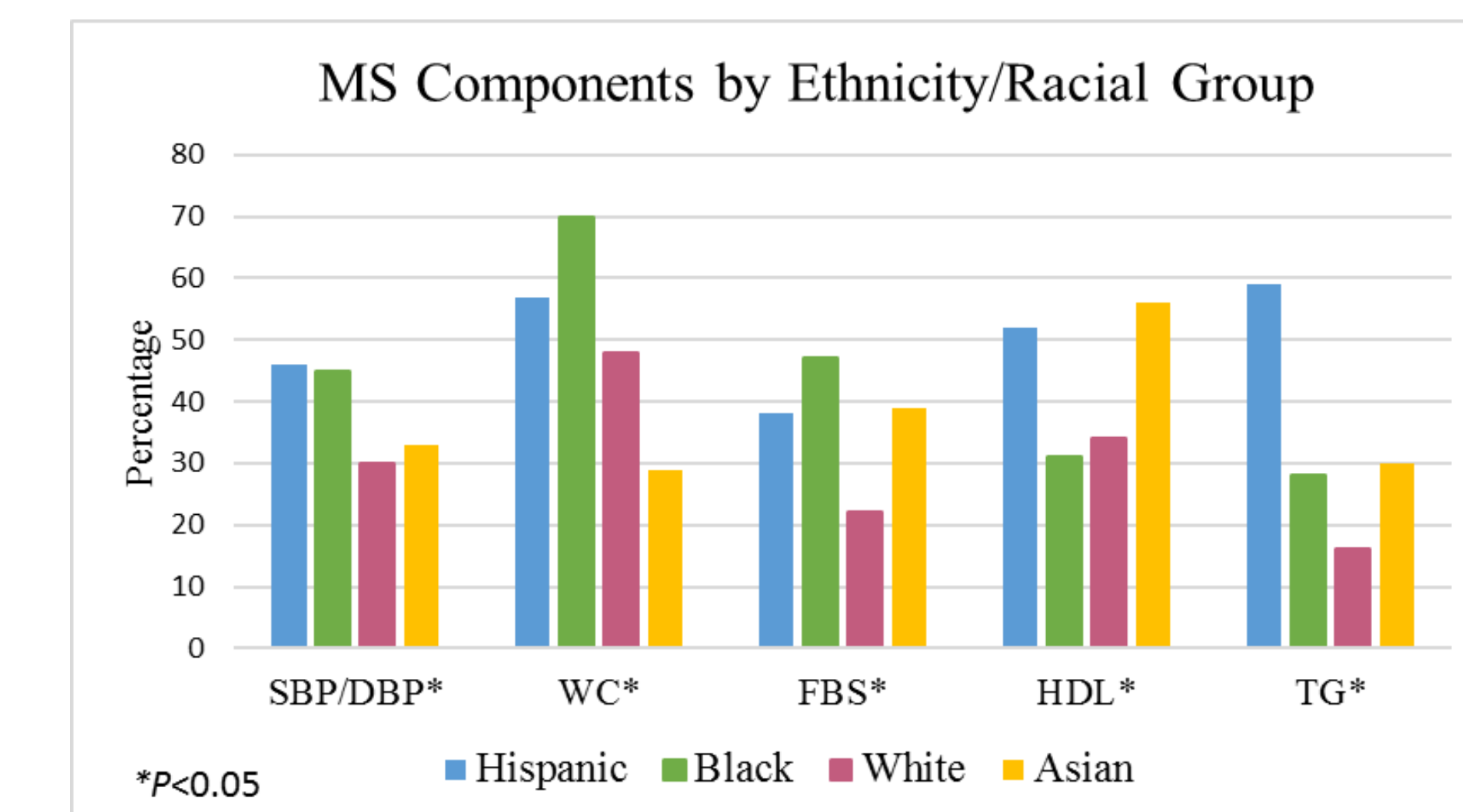
Method

- Adults aged 18 and older attended free health screenings at local community centers conducted by the UF- Jacksonville Women's Heart Program. Self-reported race and medical history were obtained.
- Using validated cardiometabolic risk screening tools, blood pressure, waist circumference, lipid profiles, blood sugar levels and functional capacity were obtained.
- Multivariable logistic regression was used to determine whether MS (presence of 3 or more MS components) is associated with race, controlling for other factors. Functional capacity (DASI) was also evaluated.

Results

- Of the 345 participants, 38% were H, 38% NHB, 9% W, and 15% SEA. MS was present in 47% H, 35% NHB, 21% W and 33% SEA.
- Highest rates by MS components were: 46% of H met the BP criteria; 70% and 47% of NHB met the WC and the fasting glucose criteria, respectively; 56% of SEA and 52% of H met the HDL criteria while 59% of H met the TG criteria (Figure 1).
- Controlling for age, sex, BMI, family history of heart disease, alcohol use and treatment for HTN and/or HLD, H were 7.3 times more likely to have MS compared to W (OR=7.3, 95%CI 1.8, 28.6); 3.3 times more likely compared to NHB (OR=3.3, 95%CI 1.67, 6.4) but similar to SEA (OR = 1.4, 95% CI 0.6, 3.1).
- SEA were 5.2 times more likely to have MS compared to W (OR =5.2, 95%CI 1.2, 22.2). Functional capacity was significantly lower in H and NHB compared to W.
- Among those with MS, H and SEA had significantly lower functional capacity (Table 1).

Results



RACE	With MS Mean DASI (95%CI)	Without MS Mean DASI (95%CI)	Adjusted P value
White	53.82 (50.20, 57.38)	57.96 (53.74, 62.18)	0.986
Black	53.79 (50.20, 57.38)	51.48 (48.95, 54.00)	0.968
Hispanic	47.71 (44.66, 50.77)	54.89 (52.30, 57.49)	0.011
SEA	44.09 (38.95, 49.23)	54.10 (50.52, 57.68)	0.038

Conclusion

- Hispanics have the highest likelihood of MS compared to other groups in our study.
- Among MS patients, H and SEA have significantly lower functional capacity.
- Differences in the distribution of components of MS according to racial/ethnic groups may guide specific therapeutic approaches and help reduce cardiovascular disparities in these groups.