

The role of sex and age in the association between diet and lipids among Black Americans enrolled in the Jackson Heart Study

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BACKGROUND

- ~1 in 3 US adults have elevated cholesterol levels
- Diet is a major driver of elevated cholesterol levels.
- Yet <10% of US population consume a healthy diet
- Sex differences exist in the prevalence of dyslipidemia.
- However, the role of sex and age on the association between diet and dyslipidemia remain understudied.

OBJECTIVE

We examined age and sex differences in the association between diet and lipid concentrations using the Jackson Heart Study.

METHODS

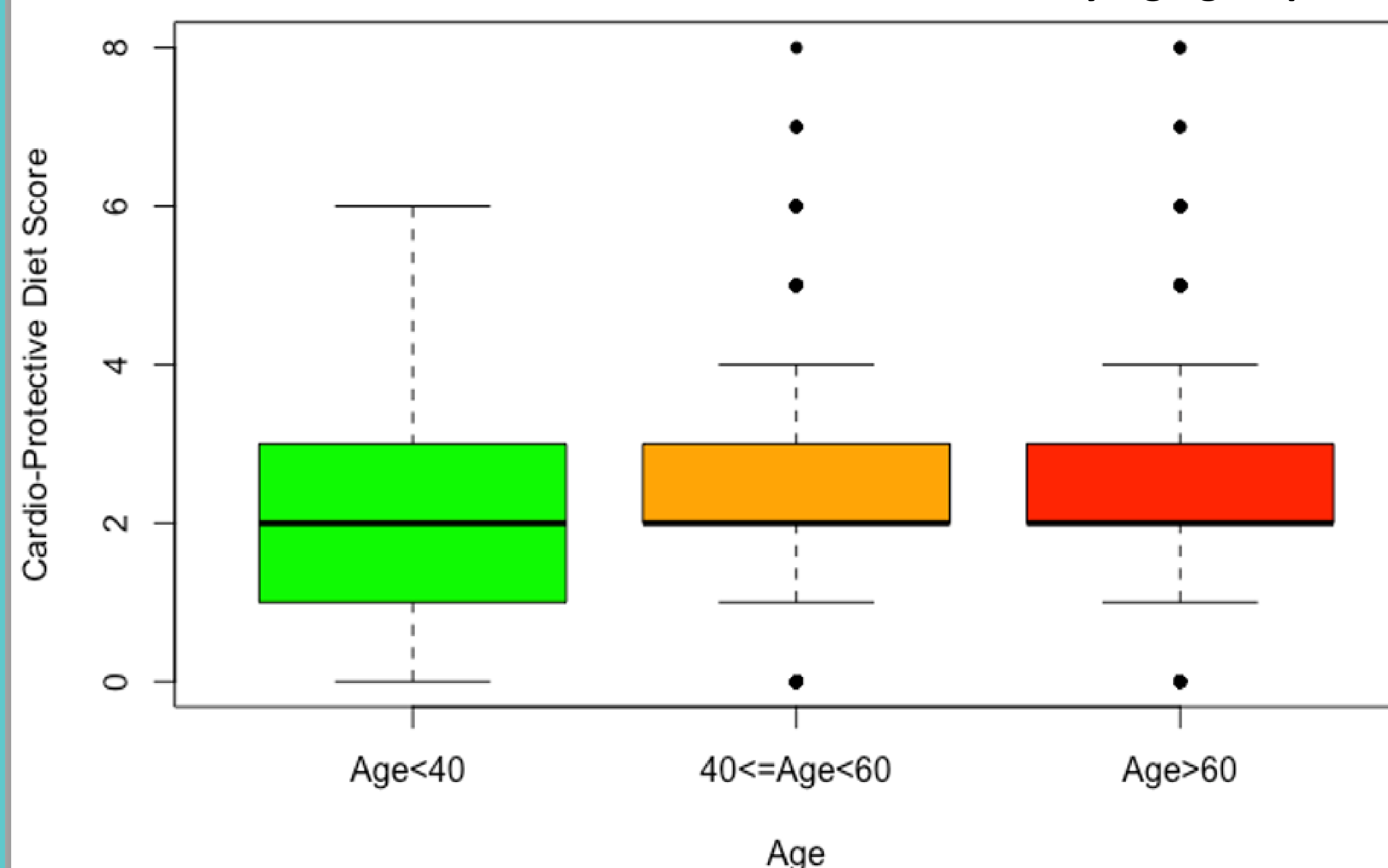
- Secondary data analysis of JHS
- Major outcomes included diet quality, lipid profiles and dyslipidemia
- Results were stratified by sex and age

RESULTS

Sample Characteristics by sex (n=4,797)

Characteristic	Category	Female	Male	P-Value
Healthy Diet	0	2860 (93.2%)	1647 (95.4%)	0.0026
	1	210 (6.8%)	80 (4.6%)	
Age		55.46 (12.62)	54.37 (12.78)	0.0047
Income *		32309.97 (14937.9)	34692.51 (16567.29)	< 0.001
DASH Sodium		3.7 (1.77)	4.37 (1.94)	<0.001
Lipid Medication	No	2623 (85.4%)	1474 (85.4%)	0.7706
	Yes	427 (13.9%)	233 (13.5%)	
Dyslipidemia	No	823 (26.8%)	412 (23.9%)	0.0303

Distribution of the Cardio-Protective Diet Score by Age group



DISCUSSION

- The sample was primarily female (64%) with a mean age of 55 years old.
- Poor diet was prevalent among both female (81%) compared to males (75%).
- Only Among male participants, consuming a poor diet was significantly associated with an increased odd of dyslipidemia (OR=1.31; p-value =0.03).
- Accounting for age as a confounder, the associations between diet and dyslipidemia and diet was no longer significant.
- The direction of the association between diet and LDL changed among women >50 years old ($\beta = -0.20$; p-value=0.93) compared to women ≤ 50 ($\beta = 1.02$; p-value=0.9).

CONCLUSION

- Female participants were more likely to consume a poor diet compared to their male counterparts.
- Consuming a poor diet was associated with an increased risk of dyslipidemia among male participants but not female participants.
- Age plays a major role in the association between diet and dyslipidemia.
- Further is warranted on the role of age and hormonal changes during menopause on the association between diet and dyslipidemia.