

Does Limited Health Literacy Explain Racial/Ethnic Disparities in Diabetes Control?

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Background

- Health literacy refers to the skills required to seek appropriate care and comprehend health related instructions.
- More than 90 million English-speaking adults have limited health literacy
- Low health literacy differentially affects racial/ethnic minority groups.

Study Question

Do differences in health literacy levels help to explain racial and ethnic disparities in diabetes control?

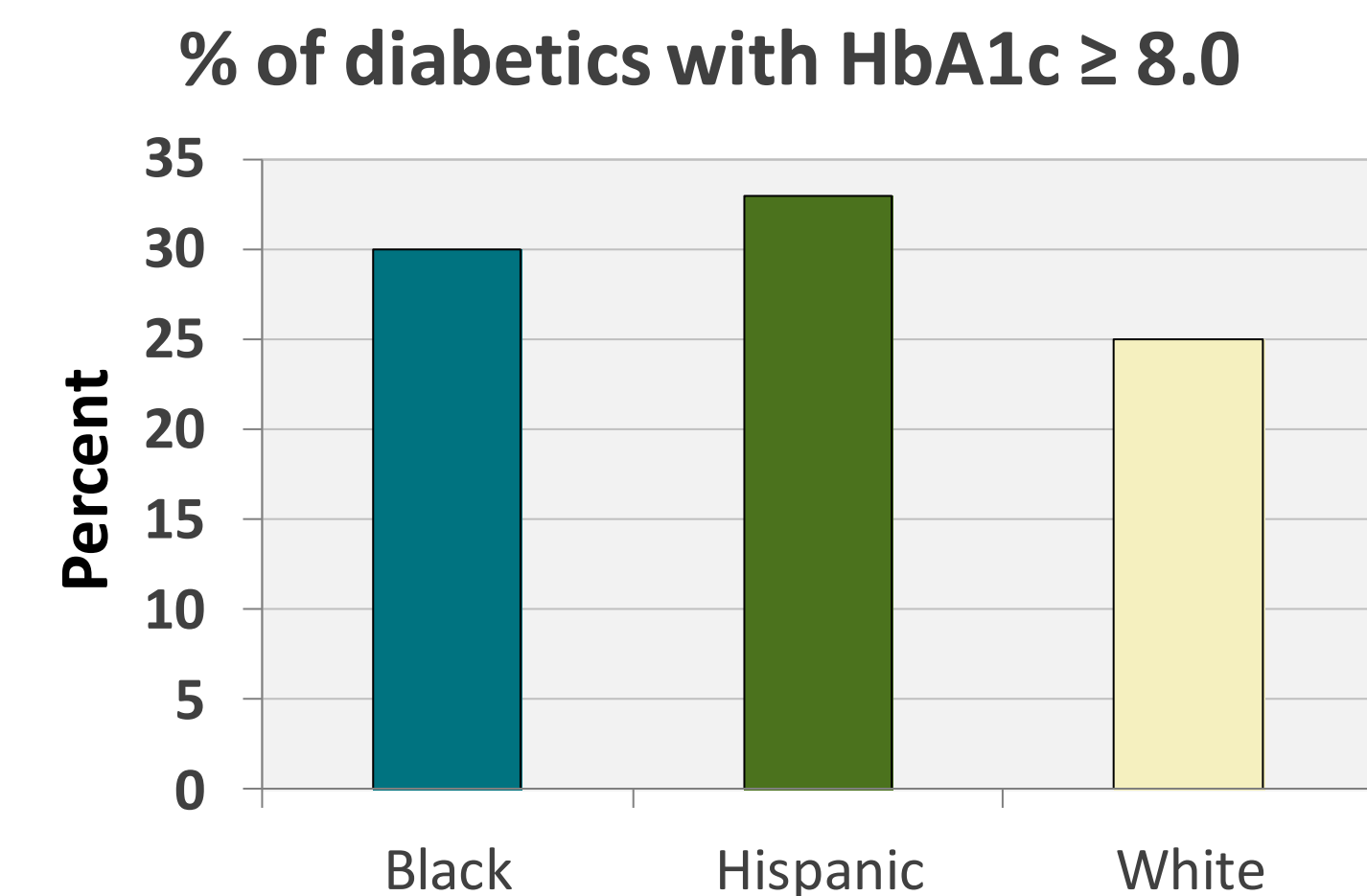


Methods

- The Boston Area Community Health (BACH) III Survey is a population-based random-sample of community dwelling adults, n=3,151
- 426 diagnosed diabetics with health literacy and HbA1c collected were included in the analyses
- Diagnosed diabetes was obtained by self-report
- The Test of Functional Health Literacy in Adults (sTOFHLA) was used to assess health literacy in English and Spanish
- Conventional cutoffs were used to classify health literacy:
 - Inadequate: 0-16
 - Marginal: 17-22
 - Adequate: 23-36
- Poor diabetes control was defined as HbA1c \geq 8.0

Findings

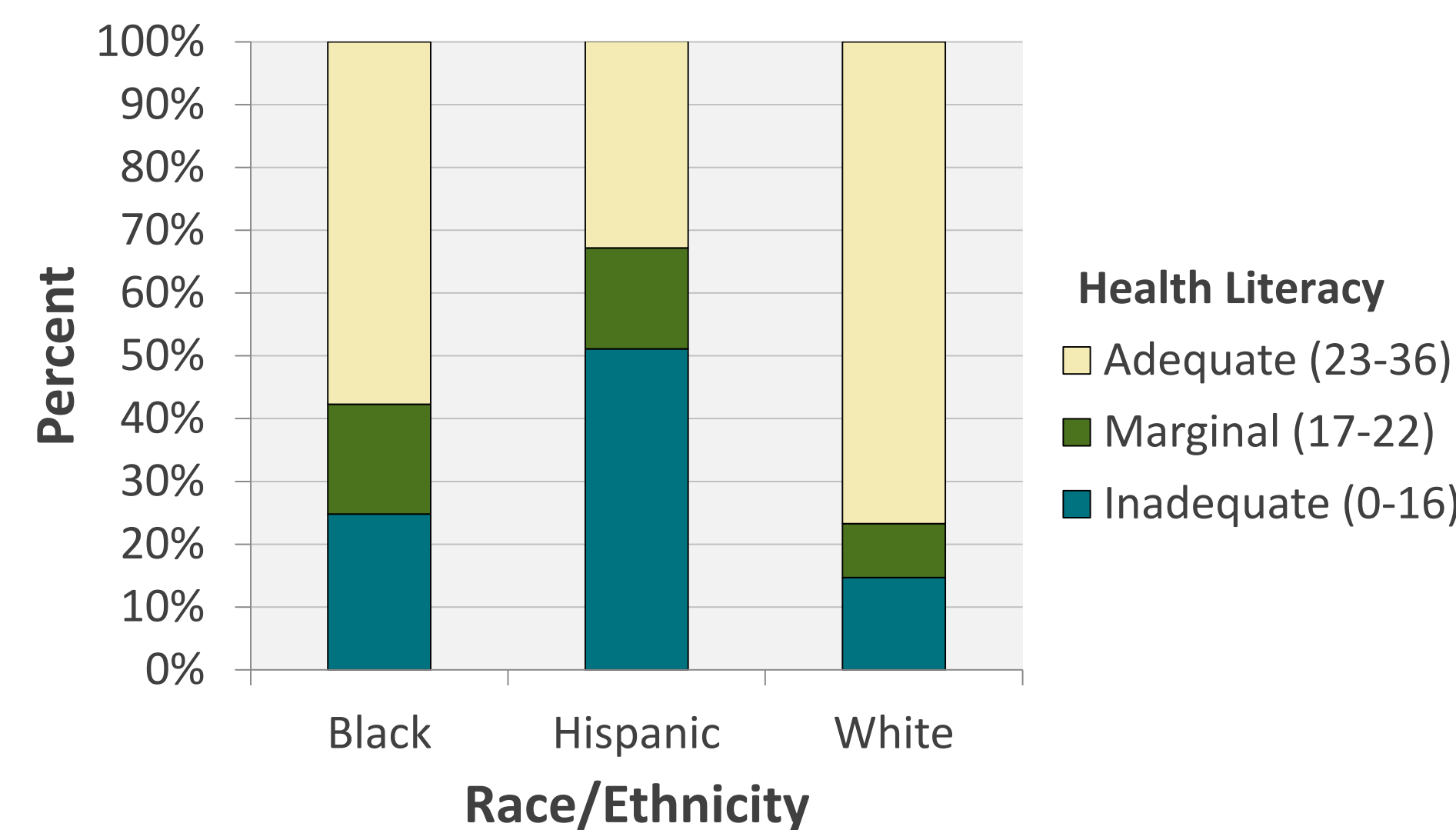
Race/ethnicity and diabetes control



- Blacks and Hispanics are more likely to have poor control of their diabetes
- 30.4% of Blacks and 32.5% of Hispanics have HbA1c \geq 8.0 (compared to 25.1% of Whites)
- HbA1c is (on average) .20 higher among Blacks and .27 higher among Hispanics

Race/ethnicity and health literacy

Racial/ethnic minorities are more likely to have inadequate or marginal health literacy



% with adequate health literacy

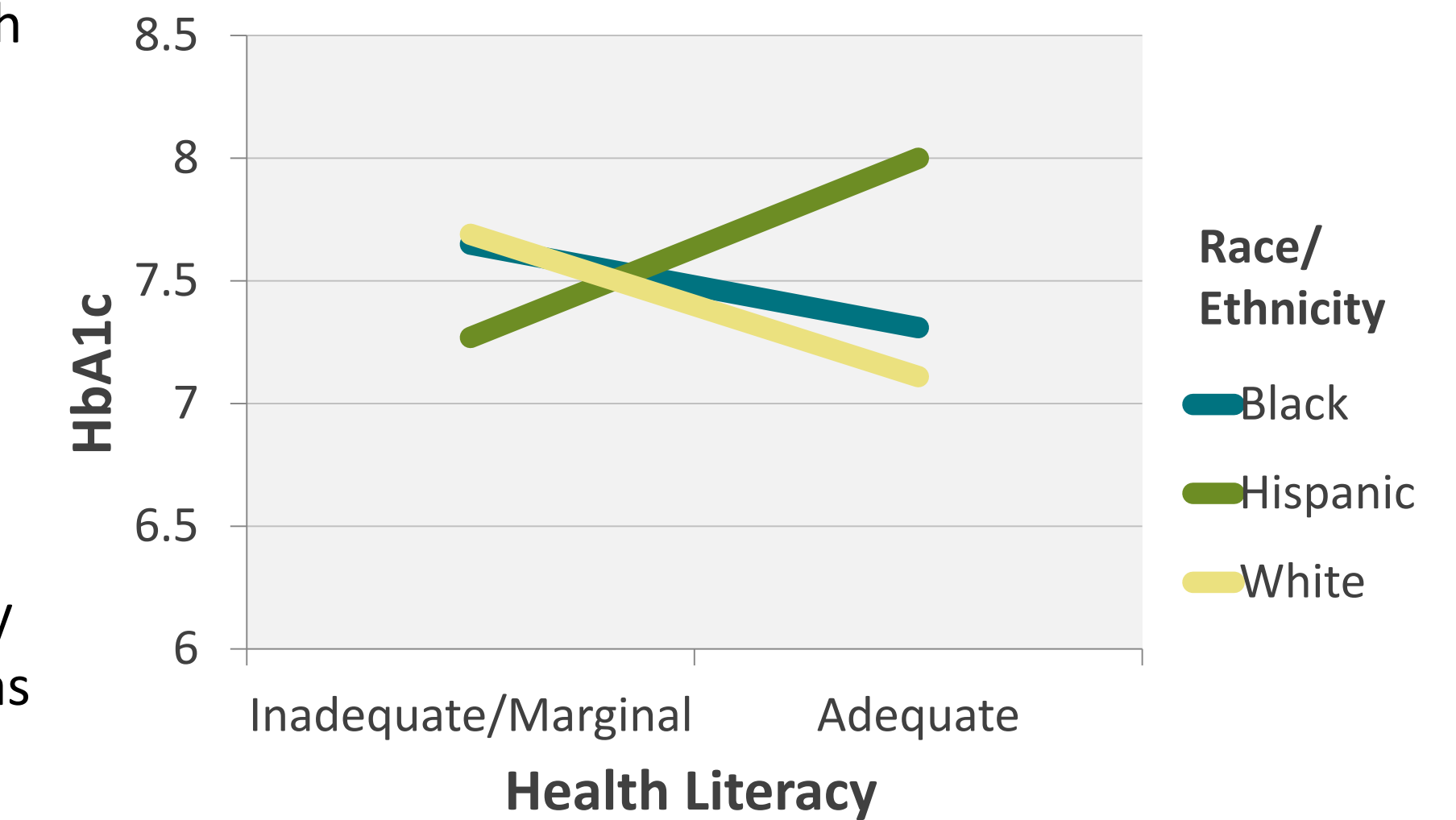
- Black 57.7%
- Hispanic: 32.9%
- White: 76.7%

Findings continued

- Adjusting for health literacy had no effect on the relationship between race/ethnicity and diabetes control (no confounding or mediation)
- However, there was evidence of effect-modification (statistical interaction, $p = 0.01$)

Race/ethnicity, health literacy and HbA1c

- Blacks and whites with adequate health literacy had an HbA1c that was, on average, .40 lower than their lower health literacy counterparts ($p=0.03$)
- However, Hispanics with adequate literacy had an HbA1c that was .64 higher ($p=0.05$)



This relationship was surprising and could not be explained by primary language or language concordance with their health care provider.

Conclusions

- There were large racial/ethnic disparities in health literacy and diabetes control.
- Black and white diabetics with adequate health literacy had significantly lower HbA1c values. However, this relationship did not hold true for Hispanics.
- Limited health literacy did not explain racial/ethnic disparities in diabetes control (no evidence of mediation).
- Unlike race/ethnicity or socioeconomic status, health literacy can be targeted as an area for improvement in diabetes control through provider education and improvements in patient materials.