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**SOCIAL CAPITAL, RACE, AND GLUCOSE CONTROL**

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## SOCIAL CAPITAL, RACE, AND GLUCOSE CONTROL

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**BACKGROUND:** There is growing interest in how a person's health is influenced by his/her social environment, in particular, the social capital of their environment. Social capital refers to those features of social organization, such as trust, norms, and networks that can facilitate coordinated action. How social capital influences overall health is not clear. Moreover, while lower social capital has been associated with higher mortality and worse self-rated health, no studies have established a link between social capital and individual disease states. Establishing such a link would provide insight into mechanisms by which social capital influences health. To that end, we evaluated, in a low-income veteran population, whether social capital is associated with glucose control in diabetics.

**METHODS:** We performed a clinic population based, cross-sectional study of veterans who use the Philadelphia VAMC and had a recently evaluated glycosylated hemoglobin (HbA1c). Individual-level data derived from surveys and chart reviews were merged with six area-level social capital descriptors aggregated from the 2004 Southeastern Pennsylvania Household Health Survey (SPHHS). At the individual-level we included measures of demographics, clinical characteristics, self-care, access-to-care, and health care. Philadelphia was divided into 69 spatially-coherent neighborhoods. Neighborhood scores were created for each social capital measures based on the mean weighted response of the SPHHS participants living in these neighborhoods. Scores were scaled such that higher scores are worse. We employed multi-level mixed effects models and stratified by race after inspection revealed that neighborhood characteristics varied widely by race. These analyses focus on 410 black and white participants (95% of total sample) for who we had complete data.

**RESULTS:** For blacks, after adjusting for individual-level characteristics, a higher HbA1c was significantly associated with 5/6 social capital measures: less neighborhood participation in local organizations; a worse overall community rating; less working together to improve the neighborhood; a lower sense of neighborhood belonging; and a lower sense of neighborhood trustworthiness. None of the social capital measures were associated with HbA1c in whites.

**Association of Social Capital Measures with Hb A1c**

Social Capital Measures (higher = worse)	Black		White	
	$\beta$	p value	$\beta$	p value
Active participation in local organizations	1.460	0.0440	-0.412	0.4638
Community rating	0.854	0.0354	-0.414	0.2288
Neighbors willingness to help	0.679	0.1425	-0.442	0.3385
Worked together	5.007	0.0008	0.413	0.7025
Sense of belonging	1.889	0.0496	-0.549	0.5638
Neighbors trustworthiness	1.182	0.0222	-0.415	0.3338

**CONCLUSIONS:** We observed a strong association, independent of individual-level factors including income, between multiple measures of social capital and glucose control for black but not white veterans. These results suggest an independent and meaningful influence of social capital on disease control, pointing to potentially important modifiable neighborhood characteristics for intervention.