

Perceived racial concentration of current neighborhood among diverse community health center patients: Racial/ethnic differences in subjective perceptions?

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Introduction

- Race and ethnicity are crucial constructs in public health research.
- The development of measures to assess individuals' perceptions of the racial/ethnic concentration of their communities is needed to evaluate the relationship between segregation experience and health.
- This study examined differences between self-reported racial concentration of current neighborhood and 2010 Census data.

Methods

- Cross-sectional questionnaires were used to measure self-reported racial concentration and town of residence among 943 adult community health center visitors in Suffolk County, NY.
- Participants were asked to describe the racial concentration (e.g., mostly Whites, half Blacks, some Hispanics) of their current neighborhood, as well as their town of residence.
- We examined the concordance between self-reported racial concentration of current neighborhood and 2010 Census data.
- We stratified the analysis by race/ethnicity to examine differences by subgroup.
- Receiver operating characteristics (ROC) curves were created to examine diagnostic accuracy of the self-reported racial concentration measure when compared to 2010 Census data.

Results

- The sample used in analysis was 36.5% Non-Hispanic White, 36.1% Non-Hispanic Black and 27.4% Hispanic.
- Respondents who self-reported as Non-Hispanic White ($\chi^2=54.2$, $p<0.0001$), had adequate health literacy ($\chi^2=27.4$, $p=0.001$), or had higher household income ($\chi^2=19.4$, $p=0.0035$) were more likely to self-report racial concentration of their neighborhood in concordance with 2010 Census estimates.
- Self-reported racial concentration had good diagnostic accuracy relative to 2010 Census data.
- Relative to Census estimates, 33.6% of Whites underestimated the proportion of their current neighborhood that was White, 68.5% of Blacks overestimated the proportion that was Black, and 33.3% of Hispanics overestimated the proportion that was Hispanic.
- Respondents had the highest concordance when reporting the perceived proportion of whites.
- Blacks and Hispanics were more likely to overestimate the proportion of people of their own race in their neighborhood.

Table 1: Participant characteristics

Characteristic	N	%
Gender, n=941		
Male	284	(30.2)
Female	657	(69.8)
Race/Ethnicity, n=943		
Non-Hispanic White	344	(36.5)
Non-Hispanic Black	340	(36.1)
Hispanic	259	(27.4)
Education, n=924		
< High school	85	(9.2)
High school/GED	428	(46.3)
>High school	411	(44.5)
Household Income, n=838		
<\$20,000	330	(39.4)
\$20,000-\$39,999	272	(32.5)
\$40,000+	236	(28.2)
Health Literacy, n=922		
High likelihood of limited literacy	237	(25.3)
Possible likelihood of limited literacy	346	(36.9)
Adequate literacy	354	(37.8)
	Mean	SD
Age, n=904	37.4	13.9

Table 2: Performance of self-reported racial concentration of current neighborhood against 2010 Census data

Racial concentration	N	Sensitivity	Specificity
Overall	943		
White concentration	525		
3:Mostly White		0.91	0.84
1:Some White(<33%)		0.97	0.39
2:Half White(33%~66%)		1.00	0.00
Black concentration	478		
1:Some Black(<33%)		0.91	0.95
2:Half Black(33%~66%)		1.00	0.68
3:Mostly Black		1.00	0.00
Hispanic concentration	309		
1:Some Latino(<33%)		0.85	0.82
2:Half Latino(33%~66%)		0.91	0.53
3:Mostly Latino		1.00	0.00

Figure 1: Concentration (%) of White (top), Black (middle), and Hispanic (bottom) population by zip code for Long Island

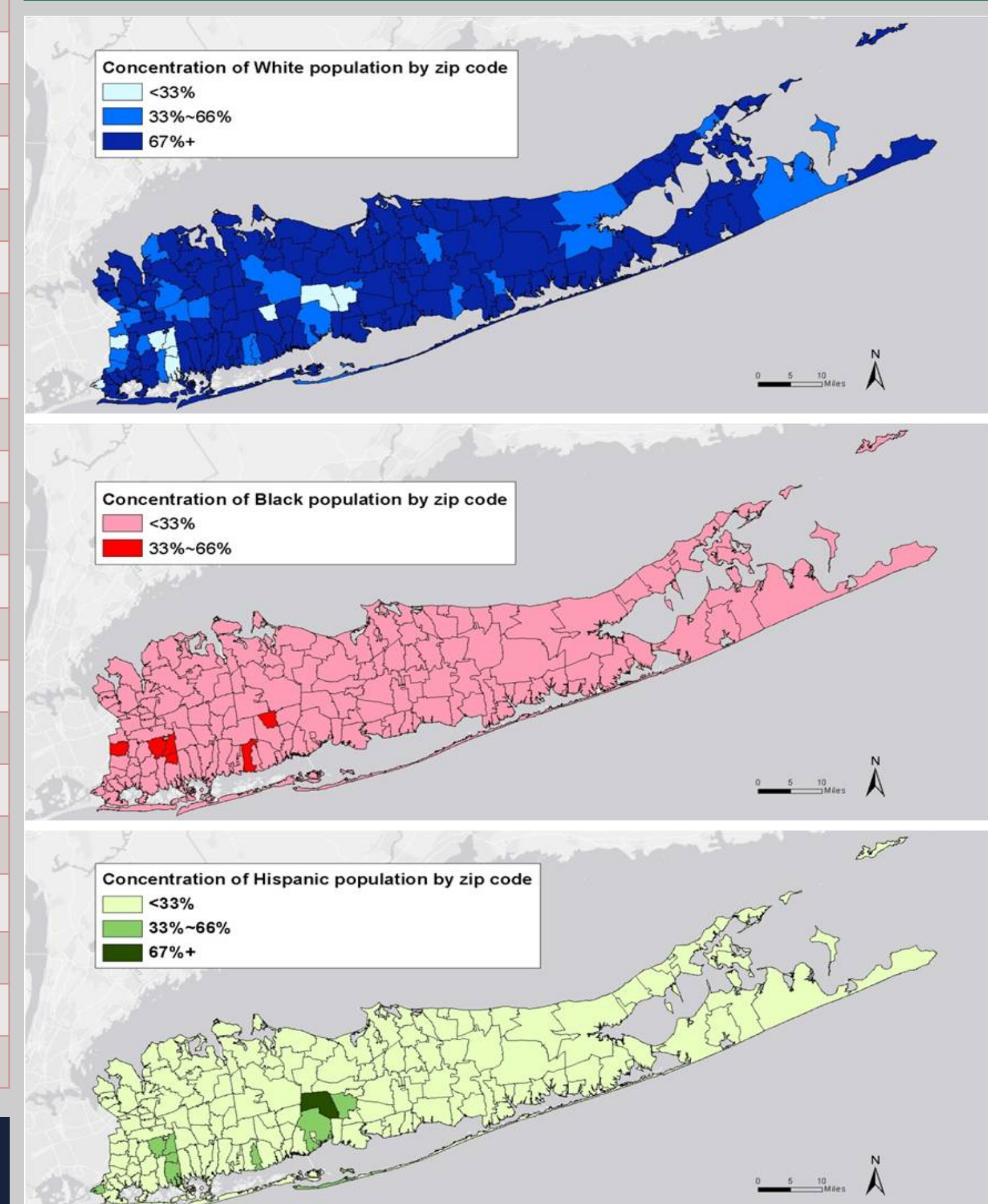


Figure 2: ROC curve for self-reported racial concentration of current neighborhood against 2010 Census data

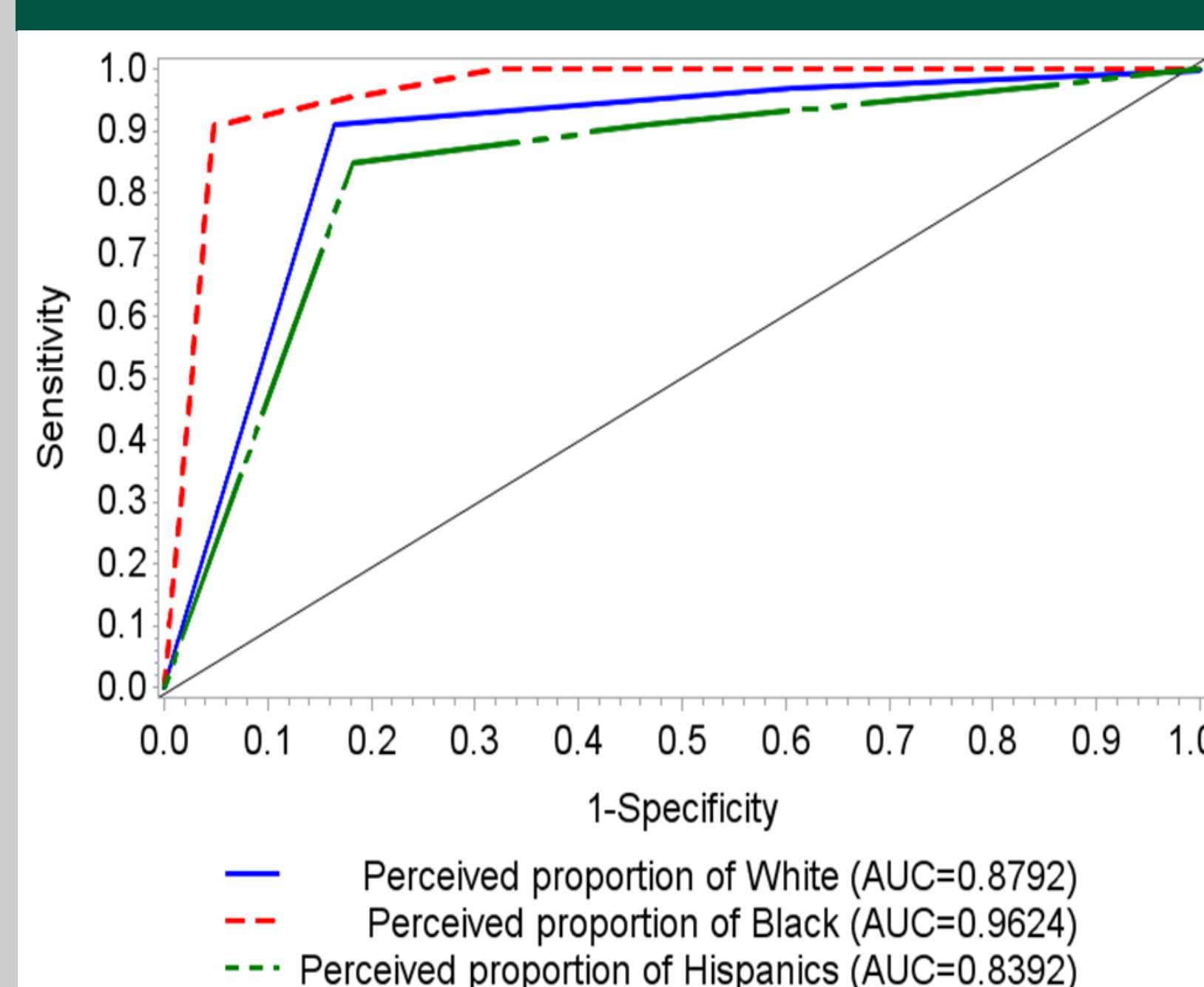


Table 3: Self-reported racial concentration of current neighborhood by race/ethnicity

Racial concentration	Overall	Non-Hispanic White N=344	Non-Hispanic Black N=340	Hispanic N=259	χ^2	P-value
White concentration					9.37	0.0524
Concordance	300 (57.1)	162 (61.1)	59 (50.4)	79 (55.2)		
Underestimate	181 (34.5)	89 (33.6)	46 (39.3)	46 (32.2)		
Overestimate	44 (8.4)	14 (5.3)	12 (10.3)	18 (12.6)		
Black concentration					38.11	<.0001
Concordance	184 (38.5)	74 (56.9)	63 (26.5)	47 (42.7)		
Underestimate	14 (2.9)	1 (0.8)	12 (5.0)	1 (0.9)		
Overestimate	280 (58.6)	55 (42.3)	163 (68.5)	62 (56.4)		
Hispanic concentration					15.64	0.0035
Concordance	172 (55.7)	58 (69.0)	45 (48.4)	69 (52.3)		
Underestimate	28 (9.1)	2 (2.4)	7 (7.5)	19 (14.4)		
Overestimate	109 (35.3)	24 (28.6)	41 (44.1)	44 (33.3)		

Discussion

- Neighborhood was not defined for survey respondents; it is likely that respondents definition of neighborhood is smaller than town as defined by census.
- There is the potential for neighborhoods within a town to be more segregated than the town overall.
- Future studies are needed to validate self-reported measures of individuals' perceptions of the racial/ethnic concentration of their communities to study the association between segregation and health.

References

- Suffolk County Government – Online Maps

Acknowledgements

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