

ABSTRACT

Background: Where gay, bisexual and other MSM live, socialize and have sex in New York City (NYC) and whether this varies by race/ethnicity is unknown. A baseline understanding is required to meet the health and social needs of diverse, urban-dwelling MSM.

Methods: In the NYCM2M study, participants identified their residential, social, most often sex and most recent sex neighborhoods from 347 neighborhoods. Latitude and longitude coordinates of the closest intersection were recorded and randomly jittered within 2010 census tracts. Spatial distributions by race/ethnicity and autocorrelations were assessed in ArcGIS.

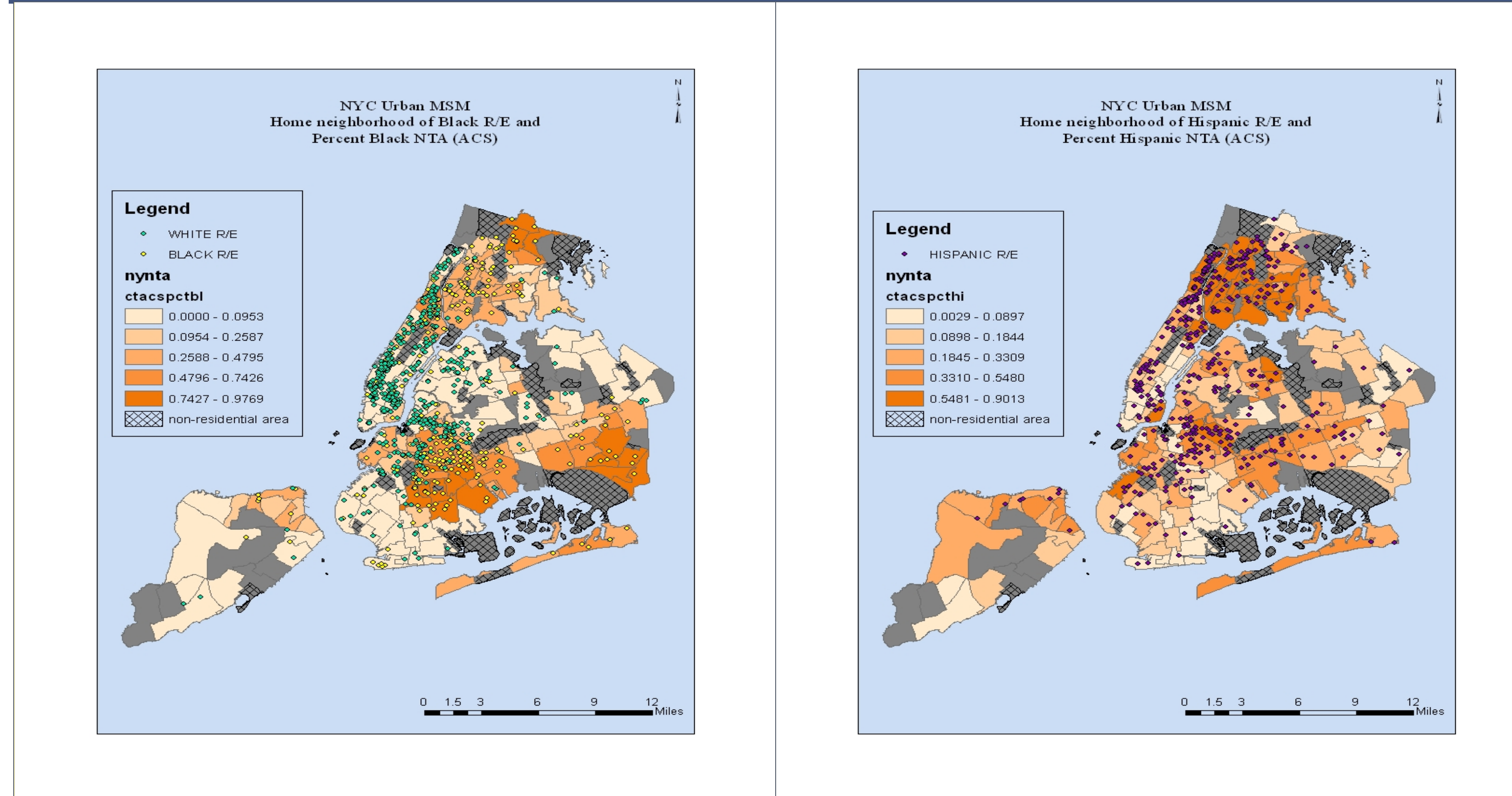
Results: MSM were spatially concentrated (Moran's I = 0.56; $p < .001$). African American MSM were concentrated in fewer and different residential neighborhoods (Moran's I = 0.164; $p < .001$), as compared with white MSM (Moran's I = 0.216; $p < .001$). Most African American MSM lived in Brooklyn (42%) and the Bronx (21%); more white MSM lived in Manhattan (54%; $p < .001$). Only 3 neighborhoods (Bushwick, Chelsea and Bed-Stuy) appeared twice in the top 5 home neighborhoods for white, Black and Latino MSM. Three neighborhoods (Chelsea, Clinton and the West Village) were the top 3 social neighborhoods across race/ethnicity. The top 5 neighborhoods where MSM had sex most often didn't overlap for white and Black MSM; a just 1 top 5 neighborhood overlapped for Latino and Black MSM (Bed-Stuy) and for Latino and white MSM (Chelsea). 17% and 30% reported total and no neighborhood congruence, which varied by race/ethnicity ($p < .01$).

Conclusions: MSM of various races and ethnicities socialize in the same spaces of NYC, but live and have sex in different neighborhoods.

BACKGROUND & METHODS

New York City (NYC) is the metropolitan area with the largest number of newly diagnosed infections among MSM. In NYC, MSM of color are overrepresented among new infections and HIV is geographically concentrated. The NYCM2M sample was recruited using a modified venue-based time-space sampling methodology and select websites and mobile applications. From 398 events, 8,164 MSM were approached; 1124 (16%) provided contact information, were eligible, were contacted and scheduled a visit; 805 (72%) completed a visit. From 4 web ads, 2080 MSM provided contact information; 873 (42%) provided contact information, were eligible and scheduled a visit; and 698 (80%) completed a visit. Participants identified coordinates for each neighborhood type via Google Earth and defined neighborhood boundaries. ArcGIS was used to create maps and assess spatial correlation.

RESULTS



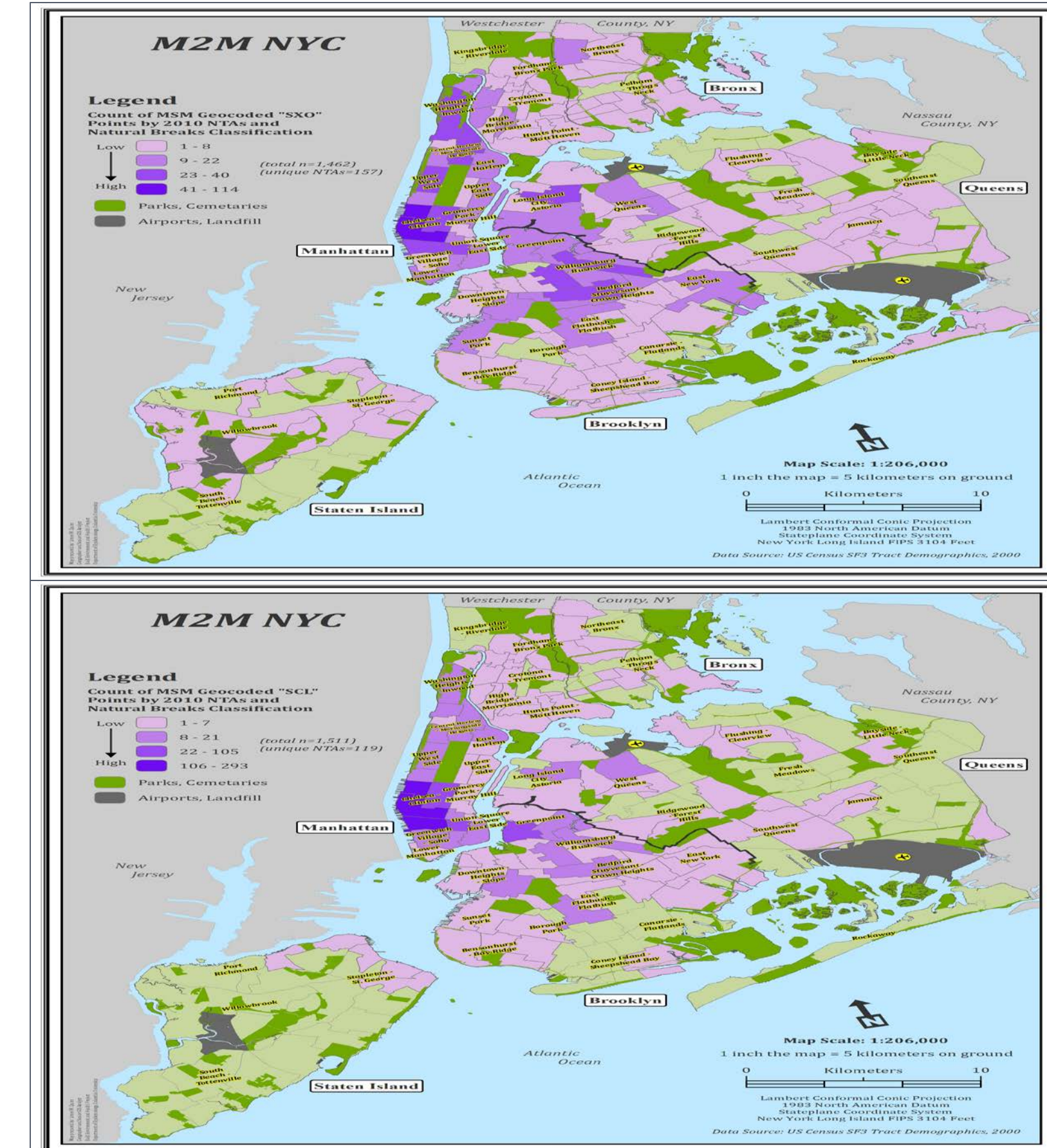
RESULTS

- New York City is one of the most segregated cities in the United States, with the the white-Black dissimilarity index in the New York metro area reaching 79.1, indicating severe residential segregation.
- In our sample of MSM, we found evidence of residential segregation, with white and Black MSM concentrated in different neighborhoods.
- Only 3 neighborhoods (Bushwick, Chelsea and Bed-Stuy) appeared twice in the top 5 home neighborhoods for white, Black and Latino MSM.
- The 3 same neighborhoods (Chelsea, Clinton and the West Village) were the top 3 social neighborhoods across race/ethnicity.
- The top 5 neighborhoods where MSM had sex most often didn't overlap for white and Black MSM; one top 5 overlapped for Latino and Black MSM (Bed-Stuy) and for Latino and white MSM (Chelsea).

Table 1. Top 10 home, social and most often sex neighborhoods

	NH White	NH Black	Hispanic
HOME	1 Clinton (43)	Crown Heights (28)	Washington Heights (23)
	2 Chelsea (27)	Central Harlem (22)	Bed-Stuy (21)
	3 Bushwick (24)	Bed-Stuy (22)	Bushwick (20)
	4 Upper West Side (23)	Bushwick (17)	Chelsea (13)
	5 Williamsburg (23)	West Harlem (16)	East Harlem (11)
	6 Washington Heights (19)	East New York (12)	West Harlem (11)
	7 Astoria (18)	Brownsville (11)	Fordham (10)
	8 East Village (18)	Flatbush (11)	Park Slope (9)
	9 Park Slope (16)	Fordham (9)	Williamsburg (9)
	10 Hamilton Heights (14)	Morrisania (8)	Crown Heights (9)
SOCIAL	1 Clinton (126)	West Village (73)	Chelsea (82)
	2 Chelsea (99)	Chelsea (64)	West Village (61)
	3 West Village (56)	Clinton (26)	Clinton (34)
	4 East Village (48)	Central Harlem (15)	East Village (33)
	5 Williamsburg (27)	West Harlem (15)	Washington Heights (23)
	6 Upper West Side (14)	Crown Heights (12)	Midtown (13)
	7 Little Italy (12)	Midtown (11)	Williamsburg (11)
	8 Astoria (8)	Union Square (8)	Union Square (8)
	9 Park Slope (7)	Flatbush (9)	East Harlem (8)
	10 Greenwich Village (5)	East Village (10)	Bushwick (7)
SEX (Most Often)	1 Clinton (59)	Bed-Stuy (28)	Chelsea (35)
	2 Chelsea (39)	West Harlem (24)	Washington Heights (22)
	3 Williamsburg (24)	Crown Heights (22)	Bed-Stuy (19)
	4 Astoria (23)	Central Harlem (19)	Bushwick (16)
	5 Upper East Side (21)	Flatbush (16)	Central Harlem (15)
	6 Upper West Side (21)	East NY (15)	Clinton (13)
	7 East Village (20)	Clinton (15)	East Village (12)
	8 Hamilton Heights (14)	Chelsea (14)	East Harlem (11)
	9 Park Slope (13)	Bushwick (9)	Inwood (11)
	10 Bushwick (10)	Jamaica (8)	Hamilton Heights (9)

RESULTS, Cont.



DISCUSSION

- The residential segregation that characterizes NYC is reflected in the residential and sexual neighborhood patterns of MSM.
- Research suggest that MSM of color may be at elevated HIV risk because of sexual network characteristics. The extent to which neighborhood factors condition these networks and increase the disparity in HIV infection is unknown.
- Combination prevention approaches to HIV prevention require a better understanding of both the contextual and fundamental correlates of HIV.
- Understanding of how neighborhoods relate to the risks and resiliencies of MSM is essential to implementing novel and effective interventions and building urban environments that are safe and healthy for emerging and young MSM of color.
- Future research directions: Migration to NYC and HIV Risk, Sexual Behavior by Neighborhood Viral Load, Spatial Analysis of Substance Use and Depression/Anxiety

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