Kasim Ortiz
Sociology of Mental Health – Spring 2018

INTRODUCTION

Racial disparities in mental health is persistent and yet very complex. General trends in psychological distress among various racial/ethnic groups in the United States points out that many racial/ethnic minority groups experience better mental health compared to their white counterparts when examining specific mental health diagnoses. Conversely, when examining contextual impacts (i.e., neighborhood contexts for example) social epidemiological research highlights vast disparities, wherein close examination of well-known drivers of mental health illuminates differential outcomes that depart from the general trends in mental health at the aggregate population-level. For one ethnoracial group, Latinos in the U.S., this complexity is even more complex; whereby factors such as acculturation, length in the U.S. and the well-known epidemiological paradox highlights differential patterning of mental health which often points to elevated levels of poor mental health compared to their white counterparts. Nonetheless, some of this complexity might be driven by the lack of attentiveness to racial stratification that exists among Latino populations. The current paper utilizes an innovative methodological advancement of empirical intersectionality by examining the extent that racial differences among Latinos exist with respect to psychological distress. To achieve this, the current investigation explores whether racialized (i.e., Black or Afro-Latino status) and gendered disadvantaged statuses among Latinos help explain demographic patterning of mental health by drawing upon the critical race theories' foundation emphasis on historicization. While previous medical sociological literature has deployed critical race theory and/or intersectionality separately primarily, a theoretical intervention of the current paper is to argue that these two growing dominant frameworks work in-tandem and have roots in similar ontological traditions.

Taking the investigation even further, the current paper explores the mediating role of neighborhood social cohesion in shaping differential mental health patterning among Latinos in the U.S.; again exploring both racialized and gendered stratification within this growing population.

BACKGROUND

Research has persistently documented a relationship between social contexts (i.e., laws, policies, geography, organizational dynamics, etc.) and mental health for racial/ethnic minority groups in the United States (Alegria et al. 2010, Alegría, Molina Kristine and Chen 2014, Miranda et al. 2008, Williams, Costa and Leavell 2017, Williams and Earl 2007). One particular context that has received considerable attention is that of neighborhoods in shaping mental health for racial/ethnic minority groups (Browning et al. 2013, Hong, Zhang and Walton 2014, Kwate and Goodman 2014, Sewell, Jefferson and Lee 2016). Medical sociologists have been at the forefront of illuminating how perceptions of neighborhood contexts matter for health; specifically pointing to the role of perceived neighborhood social cohesion (Kawachi and Berkman 2000b); for example, Echeverría et. al (2008) demonstrated that less socially cohesion neighborhoods are associated with increased depression; drawing on data from the Multi-Ethnic Study of Atherosclerosis (MESA).

Furthermore, evaluation of psychological distress as a global measure of mental health has gained increasing attention in its utility for also capturing aging-related dynamics (Bekteshi and Kang 2018, Mulia et al. 2008). Pointedly, a plethora of literature responding to the recent Great Recession empirically linked housing market dynamics with poor mental health (Burgard, Seefeldt and Zelner 2012, Cagney et al. 2014). Similarly, linkages between changes in neighborhoods during the Great Recession and mental health have been plentiful (Burgard,

Ailshire and Kalousova 2013). Undergirding this research is recognition of the important ways in which objective and subjective measurements of neighborhood contexts matter for individual-level health. Moreover, this work illuminated how neighborhood stratification processes fuel variations in markers of mental health and well-being.

Despite these advances, medical sociologists have paid far less attention to potential intra-ethnic racial variations among Latinos in the U.S. with respect to the impact of perceived neighborhood social cohesion in shaping mental health outcomes. Particularly, researchers have overlooked racial stratification embedded within the Latino population that can simultaneously inform knowledge concerning mental health, racial stratification and the role of neighborhood contexts. While considerable evaluation of subgroup ethnic variations, along dimensions of nativity for example, in mental health among Latinos has been well documented within the extant literature (Ault-Brutus and Alegria 2018, Jones et al. 2018, Perreira et al. 2018), very little has contextualized the impact of racial variation among the largest growing ethnic group in the U.S. Viruell-Fuentes, Miranda & Abdulrahim's (2012) review highlights the need for research that theoretically integrates intersectionality to better understanding mental health variation among Latino populations in the U.S.; as a means to overcome shortcomings of cultural explanations that are deployed within health research.

The current paper takes up this challenge by evaluating intra-ethnic racial variations in mental health and mental health service use among Latinos. Specifically, the paper draws upon recent theorizing encouraging better specification of racialization processes that occur among Latino populations and how this can manifest in health. Drawing upon Link and Phelan's racism as a fundamental cause of health inequities, I aim to test whether: a) racial differences among Latinos in the U.S. exist relative to mental health and mental health service use and b) what are

the contributions of perceived neighborhood social cohesion in moderating the relationship between race and mental health outcomes. Further grounding the current paper is extraction of Brown's critical race theory for mental health research; whereby we utilize perceived neighborhood social cohesion as a marker of racial stratification, recognizing how neighborhoods can serve as important markers for stratification that ultimately shapes health. Lastly, the current manuscript demonstrates the usefulness of both intersectionality and critical race theory for augmenting current medical sociological approaches for mental health service use.

BACKGROUND

I. Theoretical Considerations

Fundamental Cause Theory & Mental Health

Link and Phelan's (1995) fundamental cause theory [FCT] has been one of the most widely utilized theoretical contributions to the study of medical sociology in the past twenty years. At its core FCT originally posited that social inequalities in mortality are large, persistent and substantially and driven by the lack of material resources afforded via socioeconomic status [SES]. More recently, Phelan and Link (2015) articulated how similarly to SES, race and racism serve as a fundamental cause for health inequities. They concluded that racial inequities in health endure primarily because of racisms' shaping of racial differences in SES (Phelan and Link 2015). Furthermore, Phelan and Link's (2015) review pointedly identified that racism is a fundamental cause of health (i.e. a driver), independent of SES, exhibited by inequalities in neighborhood contexts. Such attentiveness to neighborhood contexts in shaping racial health disparities is exemplified by Williams and Collins (2001) deployment of FCT to highlight the salience of racial residential segregation. While multiple studies have utilized FCT to emanate

the contributions of neighborhood contexts in facilitating access to material resources that shape health trajectories (Cerdá et al. 2014, Dinwiddie et al. 2013, Glymour, Clark and Patton 2014, Riley 2018), no research to date has empirically evaluated variations in perceptions of neighborhood contexts and its role in shaping mental health. Fundamental cause therefore is an optimal framework for integrating a nuanced perspective on the potential linkages in intra-ethnic racial variation among Latinos and possible differential patterning of mental health. In other words, racialization processes that might negatively impact Black or Afro-Latinos may not be present for their white Latino counterparts and therefore as a result of these processes could be useful in understanding mental health patterning. While FCT has been primarily utilized a tool to expound and highlight stratification in SES as a driver of health inequities, recent iterations of the theory remind us that both racism and in the case of this paper, racialization processes are also drivers of health inequities.

Perceived Neighborhood Social Cohesion

In the 1990s, Sampson, Raudenbush & Earls (1997b) developed a measure of perceived neighborhood social cohesion for use in studies of crime. Social cohesion is conceptualized as the absence of latent social conflict and the presence of strong social bonds; or defined more plainly, Kawachi and Berkman (2000a:175), identify that social cohesion refers to the extent of connectedness and solidarity among groups in society. Health researchers have leveraged this concept to examine its relationship with a multitude of health outcomes, including cardiovascular-related outcomes (Christine et al. 2015, Pabayo et al. 2014, Powell-Wiley et al. 2013, Unger et al. 2014); substance use (Andrews et al. 2014, Brown et al. 2014, Kuipers et al. 2012); mental health related outcomes (Echeverría et al. 2008, Mair et al. 2009, Mair et al. 2015, Perez et al. 2015); and sleep problems (Chen-Edinboro et al. 2014), to name a selected few. This

work largely suggests a positive association between perceived neighborhood social cohesion and health, with the theorized mechanism that perceived neighborhood social cohesion acts as a buffer against stress (de Vries et al. 2013), discrimination (Cheong et al. 2007, Mulvaney-Day, Alegría and Sribney 2007, Muntaner and Lynch 1999), and economic challenges (Poortinga 2012, Rios, Aiken and Zautra 2012). This literature is restricted in having been frequently conducted in samples with limited geographic reach (Christine et al. 2015, Echeverría et al. 2008) or focused on older adults (Bromell and Cagney 2014, Chen-Edinboro et al. 2014). It is here that the current investigation draws partial theoretical guidance.

Linkages between neighborhoods (as a form of geographical space) and mental health, have served as cornerstones within the extant health service utilization literature. For example, facilitating the deinvestment from mental health institutions in the 1960s, the enactment of the 1963 Community Mental Health Act aided a greater emphasis being placed on mental health services accessibility within communities. These changes were coupled by intense evaluation of the ways in which neighborhoods could facilitate and/or deter mental health service utilization. Furthermore, those interested in evaluating racial/ethnic disparities in mental health have also called attention to ways in which neighborhood contexts may facilitate access to mental health care. In a study in Chicago, it was shown that neighborhood segregation is associated with more health problems for Puerto Rican Americans but not for Mexican Americans; whereas, the relationship between segregation and health was conditioned by generational status for Mexican Americans in such that second or later generations living in highly segregated neighborhoods had better health than first generation (Lee and Ferraro 2007). Thus, suggesting that racial enclaving may provide greater social capital development that leads to better health outcomes over time by facilitating construction of informal health resources and social support. Multilevel

analyses in Chicago also revealed that segregation is positively associated with depressive symptoms for both Puerto Ricans and Mexican Americans, whereas was more salient for the mental health of Mexican Americans (Lee 2009). The effects of neighborhood segregation on mental health among Puerto Ricans were nonsignificant after controlling for neighborhood-level income and individual-level covariates and the inverse for Mexican Americans (Lee 2009). These findings are in contrast to previous studies that have implicated that Mexican Americans living in similar ethnic dominated communities were beneficial for physical health (Lee 2009).

Using this background, I utilize FCT to illuminate how perceptions of neighborhood contexts serve as a strong marker for materials resources, we develop the following hypotheses:

H1: Individuals reporting lower levels of neighborhood social cohesion will report higher levels of psychological distress, as well as higher levels of material resources (operationalized as socioeconomic status measures).

H2: Individuals reporting lower levels of neighborhood social cohesion will report lower levels of mental health service use, as well as higher levels of material resources (operationalized as socioeconomic status measures).

Critical Race Theory & Mental Health/Mental Health Service Use

While it has become widely accepted the importance of social determinants in shaping mental health, explicit attention to how race and ethnicity collide for stronger articulations of health stratification are warranted. To achieve such impact, a new theoretical orientation is warranted. Omi & Winant (2014) define a racial project as an interpretation, representation, or explanation of racial dynamics, and an effort to reorganize and redistribute resources along particular racial lines. For example, Metzl's (2010) assessment of the racial dynamics fueling schizophrenia diagnoses during the 1960s illuminates an example of a racial project whereby the

redistribution of schizophrenia aligned with racial dynamics in explaining mental health. Yet, the current paper is more interested in *how* racial stratification and health stratification occur along self-identified racial classification and manifests in self-reported psychological distress and mental health service use. More broadly, the paper is focused on illuminating how intra-ethnic racial variations are an important sociodemographic marker of evaluation that can bring into focus both racial and health stratification. Theoretically grounding this empirical assessment, the paper draws upon critical race theory as a theoretical orientation for several reasons. First, critical race theory provides a useful lens for articulating racial stratification within Latinos, which has been grossly overlooked. Second, critical race theory's orientation as a tool for empirical investigations, rather than its direct reliance on a theoretical assumption warranting empirical investigation, is most useful in this context. Lastly, critical race theory's emphasis on racial stratification uniquely aligns with this paper's focus on racial self-identification as a marker of racial stratification; rather than a by-product of racial dynamics fueling racial self-identification. Ontological origins of critical race theory are also highly intertwined with theorizing of intersectionality. In 2004 Bonilla-Silva proclaimed that a new racial stratification order was developing; wherein he suggests that this new order has two central features: three loosely organized racial strata (white, honorary white, and the collective Black) and a pimentocratic logic. The former suggests that even among Latino populations, racialization will create hierarchies and in-turn these hierarchies undoubtedly may exhibit similar patterning in terms of health. Yet, in order to fully appreciate such theorizing and its application for medical sociological literature a further interrogation of critical race theory is warranted; especially as it relates to mental health.

Brown's (2003) provocative article, asserts that documentation of mental health problems experienced by racial minorities can be better understood by illuminating the social and personal implications of racial stratification in the U.S. Brown contends (2003:299): "As more studies are published showing enigmatic or complex relationships between race and mental health, sociologists of mental health must more systematic explain if, how, and through what mechanisms racial stratification contributes to observed patterns". CRT provides a unique opportunity to theoretically attend to mechanistic pathways, both divergent and convergent pathways, often overlooked within current sociological research on mental health and mental health service use. Particularly salient is understanding how neighborhood processes, serving as a marker of racial stratification, can vary among Latinos in the U.S. Yet it is important to provide the contours of CRT and its relatedness to mental health.

CRT centers on knowledge production as its main tool of operation, in which the theoretical framework is an iterative methodology for investigators to ensure proper attention is given to issues of equity/racialization (Ford and Airhihenbuwa 2010a, Ford and Airhihenbuwa 2010b). Four basic features of CRT are: a) race consciousness; b) contemporary orientation; c) centering in the margins; and praxis. Race consciousness is concerned with redressing beliefs, and methodological approaches that may utilize nonracial factors (e.g., income) to fundamentally explain ostensibly racial phenomena (Ford and Airhihenbuwa 2010a). Also, this feature advocates for racialization of research questions in understanding how race impacts the problem at hand (Ford and Airhihenbuwa 2010b). In the case of the current investigation, we explicitly seek to uncover often overlooked racial variations among Latinos in terms of mental health and mental health service use. The second feature, contemporary orientation, suggests examining the

socio-historical context of not only the individuals being studied but the conditions that contributed to the experiences of those being studied (Ford and Airhihenbuwa 2010a).

Comparable to warnings from researchers examining residential segregation (Frazier, Margai and Tettey-Fio 2003, LaVeist 1993, Massey and Fischer 2000, Osypuk et al. 2009), CRT proposes examining structural aspects of racism that have evolved across time and contexts. America in a post-Civil Rights era has experienced characterization where ordinariness is common, speaking to the difficulty to identify racism in a post *de jure* segregated society (Ford and Airhihenbuwa 2010a, Ford and Airhihenbuwa 2010b, Graham et al. 2011). Ordinariness may cause individuals to become desensitized to racist realities or cause a hypersensitivity to discriminatory behaviors that may be perceived as racists. Centering on the margins revolves around the constant advocacy of making the perspectives of socially marginalized groups the central axis around which discourse on a topic develops (Ford and Airhihenbuwa 2010a). This process should include going beyond examinations of race, but rather the intersectionality of the study population (Ford and Airhihenbuwa 2010a, Rogers and Kelly 2011, Tsouroufli et al. 2011). CRT suggests that medical sociological research should not view "race" as a risk factor, but rather as a marker of risk for racism-related exposures (Ford and Airhihenbuwa 2010b). In the case of the current investigation, partitioning the Latino population into racial strata should be understood as a marker of stratification indicating the possibility of experiencing racial hierarchies which directly has impacts on mental health.

Harkening back to FCT and perceived neighborhood social cohesion, it is important to recognize that in our current investigation, perceived neighborhood social cohesion is conceptualized as a marker for racial stratification; illuminating how structural racism manifests in varied neighborhood contexts. Extremely important to CRT is understanding that race is a

product of social construction rather than merely a population characteristic (Ford and Airhihenbuwa 2010a, Ford and Airhihenbuwa 2010b, Graham et al. 2011, Jones et al. 2008). Such a conceptualization allows for the identification of persons at risk for exposures that will most certainly vary by racial category (e.g., perceived neighborhood social cohesion). An important delineation in utilizing CRT for the study of the sociology of mental health is to clearly demarcate race from ethnicity. Although survey researchers are often limited by sample sizes, conflation between race and ethnicity require better empirical specification; as well as theoretical articulation. Based on CRT and FCT, we developed the following hypotheses:

H3: Racial/ethnic minorities reporting lower levels of neighborhood social cohesion will report higher levels of psychological distress, compared to their white counterparts.

H4: Individuals reporting lower levels of neighborhood social cohesion will report lower levels of mental health service use, compared to their white counterparts.

Intra-Ethnic Racial Variations among Latinos, Intersectionality & Andersen's Behavioral Model for Vulnerable Populations

Debates are vast, and consensus very little, in terms of how best to define, operationalize, and subsequently measure the Latino (or Hispanic) population in the U.S., particularly measurement of race (Arias et al. 2016, Mora 2014, Perreira and Telles 2014, Rodriguez 2000). Furthermore, we recognize that some studies deploy the term "Hispanic" to refer to Spanish-speaking individuals with origins in Latin American and/or the Caribbean; while some studies deploy the term Latino. The two terms are often used interchangeably. Nevertheless, it is recognized that "Hispanic" is a narrower term that only refers to persons of Spanish-speaking origin or ancestry, while "Latino" is more used to refer generally to anyone of Latin American origin or ancestry, including Brazilians. In this paper, we operationalize Latinos as persons of

Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish-speaking origin or ancestry (Arias 2010, Arias et al. 2016, Flores et al. 2002, Perez and Hirschman 2009, Wallman, Evinger and Schechter 2000).

Latinos who racially identify as Black have been rapidly increasing in the U.S., with the population of Black-Latinos more than doubling between 2000 and 2010 (Humes, Jones and Ramirez 2011, Therrien and Ramirez 2000). Of the roughly 50.5 million American residents identifying as Hispanic/Latino (16% of the general population), roughly 2.5% identified as Afro-Latinos (≈ 1,261,939 persons) (Jones and Ramirez 2011). A recent review revealed that health differences between Black-Latinos and White-Latinos in the United States closely resembles that of non-Hispanic Blacks and non-Hispanic Whites (Cuevas, Dawson and Williams 2016). Black-Latinos tend to share many similar sociodemographic characteristics of non-Hispanic Blacks, such as having disproportionately low-income (Gradín 2012), experiencing high rates of poverty (Hamilton 2014), and living in highly segregated Black neighborhoods (Logan 2003), all of which may influence the racial health gap among Latinos. Nevertheless, there is a paucity of research identifying the factors contributing to these racial health differences among this group.

Borrell (2005) produced a framework for investigating racial differences in health outcomes and behaviors among Latinos (see Figure 1). This dynamic framework rests on the premise that Black Latinos/as may experience different advantages and disadvantages than do White Latinos/as in a race-conscious society, which consequently shapes health behaviors and health outcomes (Borrell 2005). Particularly useful for the current study, Borrell's (2005) framework draws explicit attention to how racial differences among Latino populations are an important sociodemographic characteristic which deserves greater attentiveness. Specifically,

Borrell's (2005) framework suggests that individual-level racial differences among Latinos may help explain variations in health behaviors that have insufficiently been explored.

Intersectionality, as a theoretical and empirical framework (Collins and Bilge 2016, Crenshaw 1991, Hancock 2007, McCall 2005), has challenged public health researchers to consider how social determinants operate in terms of multiple interacting factors shaping health behaviors and outcomes. Public health scholars have argued (Bowleg 2012, Hankivsky 2012, Mullings and Schulz 2006), and empirically demonstrated (Jackson, Williams and VanderWeele 2016, Jackson 2017, Ray 2017, Wemrell, Mulinari and Merlo 2017), that evaluation of health disparities along a single axis of inequality (i.e., gender or SES) can obscure important within-group variation; which could ultimately drive between-group disparities. Most public health research to date, drawing upon intersectionality, has examined disparities in terms of between-group variations (e.g., race/ethnicity, gender, sexuality, SES). Yet Borrell's (2005) framework reminds us that, although most social epidemiological research conflates race and ethnicity, we must be mindful of potentially different social ecological contexts shaping intra-ethnic racial differences among Latinos. Similarly, recent sociological race scholarship has encouraged the deployment of intersectionality in examining racial *and* ethnic differences (Valdez and Golash-Boza 2017). McCall's typology for intersectionality provides guidance in terms of empirically modeling intersectionality. Specifically, we draw inspiration from McCall's explanation of categorical intersectional quantitative approaches, facilitating examination of individual-level social position variation that could explain Borrell's explication of racial differences among Latinos.

Cultural Versus Structural Explanations in Health & Racial Stratification of Latinos

When examining differences in mental health outcomes between Latinos and other ethnoracial groups, researchers have relied heavily on cultural explanations. The well observed "Hispanic Paradox", the idea of relative health advantages of Latino's in the U.S., was originally pinpointed in studies assessing mortality. In identifying the mechanisms that help explain the mental health advantages of Latinos, researchers have focused on dynamics such as acculturative stress, length in the U.S. , and other dynamics that are often utilized as cultural explanations. These cultural explanation models have often neglected racial self-identification as a potential marker of difference within Latinos as a subgroup that could explain across-group ethnoracial variations in mental health. Yet, Metzl's evocation of structural competency provides a useful heuristic. Racial self-identification, as a marker of racial stratification, requires examination of dynamics beyond what others have utilized as cultural explanations and brings into focus a structural explanation that could explain within-group differences in mental health outcomes among Latinos.

Medical sociologists interested in understanding variations in health service use have long relied on Andersen's framework. Andersen's model for vulnerable populations is grounded by three key foundations: a) potential access- simply defined as the presence of enabling resources (e.g.-financing/organization); b) realized access – the actual use of health services; and c) equitable access, which occurs when predisposing demographic and need measures account for most of the variance in service utilization. Andersen's model for vulnerable populations is composed of several key domains: i) individual characteristics – situated by predisposing factors (attitudes, beliefs and demographic characteristics); enabling factors (socioeconomic status and material resources); need factors (subjective and objective need); ii) health behaviors – grounded by personal health practices; process of medical care (behavior of providers interacting with patients); and iii) health outcomes.

Drawing on Borrell's and Andersen's framework, guided by the key component of CRT focused on intersectionality, we derived the following hypotheses:

H5: Black Latinos, reporting lower levels of neighborhood social cohesion, will report higher levels of psychological distress, compared to their White Latino counterparts.

H5b: This relationship will vary by gender.

H6: Black Latinos, reporting lower levels of neighborhood social cohesion, will report lower levels of mental health service use, compared to their White Latino counterparts.

H6b: This relationship will vary by gender.

METHODS

Data for the current investigation comes from the National Health Interview Study (NHIS). We use pooled data from the 2013-2017 samples of the NHIS, collected by the National Center for Health Statistics (NCHS) (National Center for Health Statistics (NCHS) 2017), for which we obtained through the Minnesota Population Center's publicly-available, harmonized version of the NHIS, the Integrated Public Use Microdata Series (IPUMS) Health Surveys (Blewett et al. 2017, Blewett et al. 2016). The NHIS is a household survey conducted annually since 1957, which uses a multistage area probability sampling technique to generate a representative sample of the civilian, non-institutionalized population residing in the U.S. (National Center for Health Statistics (NCHS) 2017). U.S. Census Bureau interviewers conduct face-to-face interviews using computer-assisted personal interviewing (National Center for Health Statistics (NCHS) 2017). Telephone interviewing is permitted within the NHIS to ensure missing portions of interviews are captured. NHIS covers a broad range of health topics including health behaviors, health outcomes, healthcare access and utilization and informed consent was obtained from all study participants. Response rates for each year in our pooled

analysis, drawn primarily from the Sample Adult files harmonized within the IPUMS data were: 81.7% (2013), 80.5% (2014), 79.7% (2015), and 80.9% (2016) respectively. A more detailed description of the study design and procedures has been published elsewhere (National Center for Health Statistics (NCHS) 2017). Our final analytic sample included N= 143,926 respondents. We utilized listwise deletion as missingness among all measures ranged from 0% – 13%, which has shown to be an acceptable portion of missing data not to alter point estimates and/or confidence intervals and follows convention of recent relevant publications assessing sexual orientation differences based on pooled analyses from NHIS (Badgett 2018, Calzo et al. 2017, Cochran, Björkenstam and Mays 2017, Trinh et al. 2017).

Measures

Our primary independent measure of interest is neighborhood social cohesion. Perceived neighborhood social cohesion was measured by taking scores across 4 questions and reverse coding the items (Sampson, Raudenbush and Earls 1997a, Sampson, Morenoff and Gannon-Rowley 2002). Each measure was captured with a question, "How much do you agree with the following statement(s): 1) people in this neighborhood help each other out; 2) there are people I can count on in this neighborhood; 3) people in this neighborhood can be trusted; and 4) this is a close-knit neighborhood". Respondents were given four response options to each question respectively: 1) definitely agree; 2) somewhat agree; 3) somewhat disagree; and 4) definitely disagree. The measure demonstrated strong internal consistency ($\alpha = 0.89$). The summed score of perceived neighborhood social cohesion was reverse coded, as previously done (Barber et al. 2016, Christine et al. 2015, Perez et al. 2015).

Our primary dependent measure of interest was race/ethnicity. Black-Latinos (n=2,583) were persons who considered themselves to be ethnically Hispanic/Latino and reported only

Black/African-American as their race. To obtain this specification, two questions were utilized: a) "Are you Hispanic, Latino or of Spanish origin?" and b) "Are you Black or African American?" White Latinos were persons who reported only White as their race and Hispanic/Latino ethnicity (n = 59,017). Latinos providing another racial identification were dropped from the current analyses (n = 2,147); following previous research in this area (LaVeist-Ramos et al. 2012). Using the same prompts above, the current investigation included n=198,175 non-Hispanic Whites, n=41,181 non-Hispanic Blacks, and n=4,157 Asian Americans.

To adjust for potential confounders, multivariate regression models included the following measures: age (in years) (Bromell and Cagney 2014, York Cornwell and Cagney 2014); educational attainment, which was categorized as, High School Diploma or GED [ref], Some College, Bachelor's Degree, Master Degree or Higher (Braveman et al. 2010, Kawachi, Daniels and Robinson 2005); marital/cohabitating status, which was categorized as married (or cohabitating), widowed, divorced, separated, or single (Browning 2002, Frech and Kimbro 2011); nativity status (Mulvaney-Day, Alegria and Sribney 2007, Rios, Aiken and Zautra 2012); citizenship status (Denney et al. 2017, Hill, Burdette and Hale 2009, Viruell-Fuentes, Miranda and Abdulrahim 2012); survey year (to adjust for potential temporality across survey waves) and neighborhood tenure (Michener 2012).

Statistical Analysis

We first estimated the prevalence of sociodemographic characteristics, and perceived neighborhood social cohesion in relation to race/ethnicity. To improve our estimates, we evaluated two direct standardization approaches: 1) direct standardization method for age, using the 2010 U.S. Census as the standard population; and 2) direct standardization method for age, using an average of yearly estimates of vintage bridged-race postcensal population estimates

(2013—2016), supplied be the U.S. National Vital Statistics System (National Center for Health Statistics 2016). Utilizing the postcensal data, rather than intercensal data, allows us to standardize age in a manner that will not yield an underestimate of the Latino population (Lariscy et al. 2016, Passel and Cohn 2011).

Multivariate ordered logistic regressions, with robust error variance, were deployed to estimate odd ratios (ORs) and corresponding 95% confidence intervals (CI) to assess the association between race/ethnicity and perceived neighborhood social cohesion. Additionally, we conducted gender stratified models, supported by a priori hypothesis that gender differences exist in the association between perceived neighborhood social cohesion and race/ethnicity (Bassett and Moore 2013, Cramm, van Dijk and Nieboer 2013, Mair, Roux and Morenoff 2010). The regression strategy was implemented in the following manner, drawing upon nested models: a) Models 1: age-adjusted; b) Model 2, adjusted for age, and other socioeconomic status-related covariates (i.e., educational attainment, family household income, and marital status); c) Model 3, adjusted for age, socioeconomic status-related covariates, and immigration-related, geographic-related, and neighborhood tenure measures (i.e., nativity status, language status, citizenship status, region of the country, and year). These series of models were run among the full sample, and then we stratified by gender, providing estimates for both men and women. Lastly, we assessed the interaction between race/ethnicity and neighborhood tenure to evaluate whether residing in a neighborhood moderated the association between race/ethnicity and perceived neighborhood social cohesion.

All analyses took advantage of sampling weights supplied within the NHIS, which utilized a multistage design with stratification, clustering and oversampling adjustments for certain subpopulations. Utilizing the *svy* and *subpop* commands in Stata v14.2 (2015), variance

estimates was conducted using Taylor series linearization (Williams 2000). Two-sided p-values (<0.05) were utilized to identify statistical significance. To assess the significance of interactions between neighborhood tenure and race/ethnicity, in models in which these interactions were evaluated, we utilized *margins* command to determine significance of the interaction terms (Long and Freese 2014).

To more authentically capture empirical intersectionality, the current paper also draws upon the work of Merlo et al. The multilevel analysis of individual heterogeneity and discriminatory accuracy (MAIHDA) developed by Merlo and colleagues (Axelsson Fisk et al. 2018, Merlo 2018, Wemrell, Mulinari and Merlo 2017), indispensably assumes that individuals in each intersectional strata, which comprises level-2, share a similar context of oppression or privilege and these similarities condition health statuses (i.e., psychological distress), beyond individual-level heterogeneities. Therefore, the similarities shared by intersectional strata can be mathematically expressed by means of the intra-class correlation coefficient (ICC) (Goldstein, Browne and Rasbash 2002, Merlo et al. 2004, Merlo et al. 2006, Merlo 2014); which indicates the share of the total individual variance in health that is located at the intersectional cluster (i.e., strata) found in level-2. Substantively, the ICC is a measure of similarity or clustering that quantifies the General Contextual Effect (GCE) (Austin Peter and Merlo 2017, Austin Peter et al. 2017, Merlo 2014, Merlo et al. 2016, Merlo et al. 2018); the influence of the context itself (in our case the intersectional strata) without specifying any other individual-level characteristics. This stands in contrast to the more traditional Specific Contextual Effect (SCE), which merely expresses the difference between the average outcome values of categories of exposure, and can be mathematically expressed by classical probabilistic measures of association (i.e., odds ratio [OR], relative risk [RR] of the absolute risk difference [AR]). To achieve this, we will utilize a

three-level hierarchical cross-level interaction random effect model, which will be modified based on the outcome under investigation (i.e., changing functional form from linear to logit, and other functional forms when necessary; here we show a logit model):

Level 1: Individual-Level Measures & Covariates

$\log(\gamma_{ijk}) = \pi_{ojk} + \sum_{p=1}^{P} \pi_{pjk}\,\alpha_{pjk} + \varepsilon_{ijk}$ (1): whereby Y_{ijk} is an outcome measure, for individuals ($_i$), nested within intersectional social stratum ($_j$), further nested within states ($_k$); and $\boldsymbol{\pi}_{ojk}$ a vector of p covariates for individual $i = 1, \ldots, n$ at the individual-level. The random effects ε_{ijk} are mutually independent with a common underlying distribution. It is important to denote that interactions which will be primary predictors in Level 2 to create intersectional stratum, will also be added to Level 1 as an adjustment to ensure partitioning of individual-level effects versus intersectional stratum effects. Level-2, the $\boldsymbol{\pi}_{ojk}$ serves as the random intercept for intersectional social stratum, and the level-2 model is represented by:

Level 2: Clustering – Individuals within Intersectional Stratum [interactions of social identities]

$\pi_{pjk} = \beta_{p0k} + \sum_{q=1}^{Qp} \beta_{pqk} X_{qjk} + r_{pjk}$ (2): and

The application of Merlo and colleagues' MAIHDA for modeling intersectionality has currently included implementation of only two-level multilevel models; although quite conducive for three-level multilevel models. This approach is superior and most fitting for our proposed analyses for several reasons: a) the partitioning of residuals and ICC at each level of analysis permits our ability to more directly assess the contributions of measurements at each level, even within the cross-level interaction models; b) the discriminatory accuracy (DA) approach, using the ICC as a measure of DA, which will allow us to evaluate the area under the receiver operating characteristic curve (AUC) to assess the predictive performance of exposure categorization. Our

results will not only include probabilistic measures of association based on differences between group averages, but will provide information on the accuracy of mechanistic drivers that will minimize bias resulting from what Merlo calls the "tyranny of averages" (Merlo et al. 2016, Merlo et al. 2017). Also, when the measure of DA is low it will provide more information about whether our mechanistic drivers are accurately discriminating between those with and without predictive measures of poor psychological distress.

REFERENCES

Alegria, Margarita, Marc Atkins, Elizabeth Farmer, Elaine Slaton and Wayne Stelk. 2010. "One Size Does Not Fit All: Taking Diversity, Culture and Context Seriously." *Administration and Policy in Mental Health and Mental Health Services Research* 37(1):48-60. doi: 10.1007/s10488-010-0283-2.

Alegría, Margarita, M. Molina Kristine and Chih-Nan Chen. 2014. "Neighborhood Characteristics and Differential Risk for Depressive & Anxiety Disorders across Racial-Ethnic Groups in the United States." *Depression and Anxiety* 31(1):27-37. doi: 10.1002/da.22197.

Andrews, J. O., M. Mueller, S. D. Newman, G. Magwood, J. S. Ahluwalia, K. White and M. S. Tingen. 2014. "The Association of Individual and Neighborhood Social Cohesion, Stressors, and Crime on Smoking Status among African-American Women in Southeastern Us Subsidized Housing Neighborhoods." *J Urban Health* 91(6):1158-74. doi: 10.1007/s11524-014-9911-6.

Arias, Elizabeth. 2010. *United States Life Tables by Hispanic Origin*: DIANE Publishing.

Arias, Elizabeth, M Heron, J Hakes and National Center for Health Statistics. 2016. "The Validity of Race and Hispanic-Origin Reporting on Death Certificates in the United States: An Update." *Vital and health statistics. Series 2, Data evaluation and methods research* (172):1.

Ault-Brutus, Andrea and Margarita Alegria. 2018. "Racial/Ethnic Differences in Perceived Need for Mental Health Care and Disparities in Use of Care among Those with Perceived Need in 1990–1992 and 2001–2003." *Ethnicity & Health* 23(2):142-57. doi: 10.1080/13557858.2016.1252834.

Austin Peter, C. and Juan Merlo. 2017. "Intermediate and Advanced Topics in Multilevel Logistic Regression Analysis." *Statistics in Medicine* 36(20):3257-77. doi: 10.1002/sim.7336.

Austin Peter, C., Henrik Stryhn, George Leckie and Juan Merlo. 2017. "Measures of Clustering and Heterogeneity in Multilevel Poisson Regression Analyses of Rates/Count Data." *Statistics in Medicine* 37(4):572-89. doi: 10.1002/sim.7532.

Axelsson Fisk, Sten, Shai Mulinari, Maria Wemrell, George Leckie, Raquel Perez Vicente and Juan Merlo. 2018. "Chronic Obstructive Pulmonary Disease in Sweden: An Intersectional Multilevel Analysis of Individual Heterogeneity and Discriminatory Accuracy." *SSM - Population Health* 4:334-46. doi: https://doi.org/10.1016/j.ssmph.2018.03.005.

Badgett, M. V. Lee. 2018. "Left Out? Lesbian, Gay, and Bisexual Poverty in the U.S." *Population Research and Policy Review*. doi: 10.1007/s11113-018-9457-5.

Barber, S., D. A. Hickson, I. Kawachi, S. V. Subramanian and F. Earls. 2016. "Double-Jeopardy: The Joint Impact of Neighborhood Disadvantage and Low Social Cohesion on Cumulative Risk of Disease among African American Men and Women in the Jackson Heart Study." *Soc Sci Med* 153:107-15. doi: 10.1016/j.socscimed.2016.02.001.

Bassett, Emma and Spencer Moore. 2013. "Gender Differences in the Social Pathways Linking Neighborhood Disadvantage to Depressive Symptoms in Adults." *PLOS ONE* 8(10):e76554. doi: 10.1371/journal.pone.0076554.

Bekteshi, Venera and Sung-wan Kang. 2018. "Contextualizing Acculturative Stress among Latino Immigrants in the United States: A Systematic Review." *Ethnicity & Health*:1-18. doi: 10.1080/13557858.2018.1469733.

Blewett, Lynn A., Kathleen Thiede Call, Joanna Turner and Robert Hest. 2017. "Data Resources for Conducting Health Services and Policy Research." *Annual Review of Public Health*. doi: 10.1146/annurev-publhealth-040617-013544.

Blewett, Lynn A. , Julia A. Rivera-Drew, Risa Griffin, Miram L King and Kari C.W. Wlliams. 2016, "Ipums Health Surveys: National Health Interview Survey, Version 6.2", Minneapolis: University of Minnesota Retrieved December 10, 2017 2017 (http://www.nhis.ipums.org).

Borrell, Luisa N. 2005. "Racial Identity among Hispanics: Implications for Health and Well-Being." *American Journal of Public Health* 95(3):379-81. doi: 10.2105/AJPH.2004.058172.
Bowleg, Lisa. 2012. "The Problem with the Phrase Women and Minorities: Intersectionality—an Important Theoretical Framework for Public Health." *American Journal of Public Health* 102(7):1267-73. doi: 10.2105/ajph.2012.300750.
Braveman, Paula A., Catherine Cubbin, Susan Egerter, David R. Williams and Elsie Pamuk. 2010. "Socioeconomic Disparities in Health in the United States: What the Patterns Tell Us." *American Journal of Public Health* 100(S1):S186-S96. doi: 10.2105/AJPH.2009.166082.
Bromell, L. and K. A. Cagney. 2014. "Companionship in the Neighborhood Context: Older Adults' Living Arrangements and Perceptions of Social Cohesion." *Res Aging* 36(2):228-43. doi: 10.1177/0164027512475096.
Brown, Q. L., A. J. Milam, M. J. Smart, R. M. Johnson, S. L. Linton, C. D. Furr-Holden and N. S. Ialongo. 2014. "Objective and Perceived Neighborhood Characteristics and Tobacco Use among Young Adults." *Drug Alcohol Depend* 134:370-5. doi: 10.1016/j.drugalcdep.2013.11.005.
Brown, Tony N. 2003. "Critical Race Theory Speaks to the Sociology of Mental Health: Mental Health Problems Produced by Racial Stratification." *Journal of health and social behavior*:292-301.
Browning, Christopher, Brian Soller, Margo Gardner and Jeanne Brooks-Gunn. 2013. "“Feeling Disorder” as a Comparative and Contingent Process: Gender, Neighborhood Conditions, and Adolescent Mental Health." *Journal of health and social behavior* 54(3):296-314. doi: 10.1177/0022146513498510.
Browning, Christopher R. 2002. "The Span of Collective Efficacy: Extending Social Disorganization Theory to Partner Violence." *Journal of Marriage and Family* 64(4):833-50. doi: 10.1111/j.1741-3737.2002.00833.x.
Burgard, Sarah A., Kristin S. Seefeldt and Sarah Zelner. 2012. "Housing Instability and Health: Findings from the Michigan Recession and Recovery Study." *Social Science & Medicine* 75(12):2215-24. doi: https://doi.org/10.1016/j.socscimed.2012.08.020.
Burgard, Sarah A., Jennifer A. Ailshire and Lucie Kalousova. 2013. "The Great Recession and Health: People, Populations, and Disparities." *The ANNALS of the American Academy of Political and Social Science* 650(1):194-213. doi: 10.1177/0002716213500212.
Cagney, Kathleen A., Christopher R. Browning, James Iveniuk and Ned English. 2014. "The Onset of Depression During the Great Recession: Foreclosure and Older Adult Mental Health." *American Journal of Public Health* 104(3):498-505. doi: 10.2105/AJPH.2013.301566.
Calzo, Jerel P., Vickie M. Mays, Charlotte Björkenstam, Emma Björkenstam, Kyriaki Kosidou and Susan D. Cochran. 2017. "Parental Sexual Orientation and Children's Psychological Well-Being: 2013–2015 National Health Interview Survey." *Child Development*:1-12. doi: 10.1111/cdev.12989.
Cerdá, Magdalena, Melissa Tracy, Jennifer Ahern and Sandro Galea. 2014. "Addressing Population Health and Health Inequalities: The Role of Fundamental Causes." *American Journal of Public Health* 104(S4):S609-S19. doi: 10.2105/AJPH.2014.302055.
Chen-Edinboro, L. P., C. N. Kaufmann, J. L. Augustinavicius, R. Mojtabai, J. M. Parisi, A. M. Wennberg, M. T. Smith and A. P. Spira. 2014. "Neighborhood Physical Disorder, Social Cohesion, and Insomnia: Results from Participants over Age 50 in the Health and Retirement Study." *Int Psychogeriatr*:1-8. doi: 10.1017/s1041610214001823.
Cheong, Pauline Hope, Rosalind Edwards, Harry Goulbourne and John Solomos. 2007. "Immigration, Social Cohesion and Social Capital: A Critical Review." *Critical Social Policy* 27(1):24-49. doi: 10.1177/0261018307072206.
Christine, P. J., A. H. Auchincloss, A. G. Bertoni, M. R. Carnethon, B. N. Sanchez, K. Moore, S. D. Adar, T. B. Horwich, K. E. Watson and A. V. Diez Roux. 2015. "Longitudinal

Associations between Neighborhood Physical and Social Environments and Incident Type 2 Diabetes Mellitus: The Multi-Ethnic Study of Atherosclerosis (Mesa)." *JAMA Intern Med* 175(8):1311-20. doi: 10.1001/jamainternmed.2015.2691.

Cochran, Susan D, Charlotte Björkenstam and Vickie M Mays. 2017. "Sexual Orientation Differences in Functional Limitations, Disability, and Mental Health Services Use: Results from the 2013–2014 National Health Interview Survey." *Journal of consulting and clinical psychology* 85(12):1111.

Collins, Patricia Hill and Sirma Bilge. 2016. *Intersectionality*: John Wiley & Sons.

Cramm, Jane M., Hanna M. van Dijk and Anna P. Nieboer. 2013. "The Importance of Neighborhood Social Cohesion and Social Capital for the Well Being of Older Adults in the Community." *The Gerontologist* 53(1):142-52. doi: 10.1093/geront/gns052.

Crenshaw, Kimberle. 1991. "Mapping the Margins: Intersectionality, Identity Politics, and Violence against Women of Color." *Stanford Law Review* 43(6):1241-99. doi: 10.2307/1229039.

Cuevas, Adolfo G., Beverly Araujo Dawson and David R. Williams. 2016. "Race and Skin Color in Latino Health: An Analytic Review." *American Journal of Public Health* 106(12):2131-36. doi: 10.2105/AJPH.2016.303452.

de Vries, Sjerp, Sonja M. E. van Dillen, Peter P. Groenewegen and Peter Spreeuwenberg. 2013. "Streetscape Greenery and Health: Stress, Social Cohesion and Physical Activity as Mediators." *Social Science & Medicine* 94:26-33. doi: http://dx.doi.org/10.1016/j.socscimed.2013.06.030.

Denney, Justin T, Rachel Tolbert Kimbro, Katherine Heck and Catherine Cubbin. 2017. "Social Cohesion and Food Insecurity: Insights from the Geographic Research on Wellbeing (Grow) Study." *Maternal and child health journal* 21(2):343-50.

Dinwiddie, Gniesha Y., Darrell J. Gaskin, Kitty S. Chan, Janette Norrington and Rachel McCleary. 2013. "Residential Segregation, Geographic Proximity and Type of Services Used: Evidence for Racial/Ethnic Disparities in Mental Health." *Social Science & Medicine* 80:67-75. doi: https://doi.org/10.1016/j.socscimed.2012.11.024.

Echeverría, Sandra, Ana V. Diez-Roux, Steven Shea, Luisa N. Borrell and Sharon Jackson. 2008. "Associations of Neighborhood Problems and Neighborhood Social Cohesion with Mental Health and Health Behaviors: The Multi-Ethnic Study of Atherosclerosis." *Health & Place* 14(4):853-65. doi: https://doi.org/10.1016/j.healthplace.2008.01.004.

Flores, G., E. Fuentes-Afflick, O. Barbot and et al. 2002. "The Health of Latino Children: Urgent Priorities, Unanswered Questions, and a Research Agenda." *JAMA* 288(1):82-90. doi: 10.1001/jama.288.1.82.

Ford, Chandra L. and Collins O. Airhihenbuwa. 2010a. "Critical Race Theory, Race Equity, and Public Health: Toward Antiracism Praxis." *American Journal of Public Health* 100(S1):S30-S35. doi: 10.2105/AJPH.2009.171058.

Ford, Chandra L. and Collins O. Airhihenbuwa. 2010b. "The Public Health Critical Race Methodology: Praxis for Antiracism Research." *Social Science & Medicine* 71(8):1390-98. doi: 10.1016/j.socscimed.2010.07.030.

Frazier, John W., Florence M. Margai and Eugene Tettey-Fio. 2003. *Race and Place : Equity Issues in Urban America*. Boulder, Colo.: Westview Press.

Frech, Adrianne and Rachel Tolbert Kimbro. 2011. "Maternal Mental Health, Neighborhood Characteristics, and Time Investments in Children." *Journal of Marriage and Family* 73(3):605-20. doi: 10.1111/j.1741-3737.2011.00833.x.

Glymour, M. Maria, Cheryl R. Clark and Kristen K. Patton. 2014. "Socioeconomic Determinants of Cardiovascular Disease: Recent Findings and Future Directions." *Current Epidemiology Reports* 1(2):89-97. doi: 10.1007/s40471-014-0010-8.

Goldstein, Harvey, William Browne and Jon Rasbash. 2002. "Partitioning Variation in Multilevel Models." *Understanding Statistics* 1(4):223-31. doi: 10.1207/S15328031US0104_02.

Gradín, Carlos. 2012. "Chapter 3 Occupational Segregation of Afro-Latinos." Pp. 63-90 in *Inequality, Mobility and Segregation: Essays in Honor of Jacques Silber*: Emerald Group Publishing Limited.

Graham, Louis, Shelly Brown-Jeffy, Robert Aronson and Charles Stephens. 2011. "Critical Race Theory as Theoretical Framework and Analysis Tool for Population Health Research." *Critical Public Health* 21(1):81-93. doi: 10.1080/09581596.2010.493173.

Hamilton, Tod G. 2014. "Selection, Language Heritage, and the Earnings Trajectories of Black Immigrants in the United States." *Demography* 51(3):975-1002. doi: 10.1007/s13524-014-0298-5.

Hancock, Ange-Marie. 2007. "When Multiplication Doesn't Equal Quick Addition: Examining Intersectionality as a Research Paradigm." *Perspectives on Politics* 5(1):63-79. doi: 10.1017/S1537592707070065.

Hankivsky, Olena. 2012. "Women's Health, Men's Health, and Gender and Health: Implications of Intersectionality." *Social Science & Medicine* 74(11):1712-20. doi: http://dx.doi.org/10.1016/j.socscimed.2011.11.029.

Hill, Terrence D, Amy M Burdette and Lauren Hale. 2009. "Neighborhood Disorder, Sleep Quality, and Psychological Distress: Testing a Model of Structural Amplification." *Health & place* 15(4):1006-13.

Hong, Seunghye, Wei Zhang and Emily Walton. 2014. "Neighborhoods and Mental Health: Exploring Ethnic Density, Poverty, and Social Cohesion among Asian Americans and Latinos." *Social Science & Medicine* 111:117-24. doi: https://doi.org/10.1016/j.socscimed.2014.04.014.

Humes, Karen, Nicholas A Jones and Roberto R Ramirez. 2011. *Overview of Race and Hispanic Origin, 2010*: US Department of Commerce, Economics and Statistics Administration, US Census Bureau.

Jackson, J, D Williams and T VanderWeele. 2016. "Disparities at the Intersection of Marginalized Groups." *Social Psychiatry and Psychiatric Epidemiology* 51(10):1349-59. doi: 10.1007/s00127-016-1276-6.

Jackson, John W. 2017. "Explaining Intersectionality through Description, Counterfactual Thinking, and Mediation Analysis." *Social Psychiatry and Psychiatric Epidemiology* 52(7):785-93. doi: 10.1007/s00127-017-1390-0.

Jones, C.P., B.I. Truman, L.D. Elam-Evans, C.A. Jomes, C.Y. Jones, R. Jiles, S.F. Rumisha and G.S. Perry. 2008. "Using "Socially Assigned Race" to Probe *White* Advantages in Health Status." *Ethnicity & Disease* 18(4):496-504.

Jones, L. Audrey, D. Susan Cochran, Arleen Leibowitz, B. Kenneth Wells, Gerald Kominski and M. Vickie Mays. 2018. "Racial, Ethnic, and Nativity Differences in Mental Health Visits to Primary Care and Specialty Mental Health Providers: Analysis of the Medical Expenditures Panel Survey, 2010–2015." *Healthcare* 6(2). doi: 10.3390/healthcare6020029.

Jones, Nicholas A and Roberto R Ramirez. 2011. "Overview of Race and Hispanic Origin: 2010." *PDF). US Census Bureau. Retrieved March* 29.

Kawachi, I. and L. Berkman. 2000a. "Social Cohesion, Social Capital & Health." Pp. 174-90 in *Social Epidemiology*, edited by L. Berkman and I. Kawachi. New York: Oxford University Press.

Kawachi, Ichiro and Lisa Berkman. 2000b. "Social Cohesion, Social Capital, and Health." *Social epidemiology*:174-90.

Kawachi, Ichiro, Norman Daniels and Dean E. Robinson. 2005. "Health Disparities by Race and Class: Why Both Matter." *Health Affairs* 24(2):343-52. doi: 10.1377/hlthaff.24.2.343.

Kuipers, M. A., M. N. van Poppel, W. van den Brink, M. Wingen and A. E. Kunst. 2012. "The Association between Neighborhood Disorder, Social Cohesion and Hazardous Alcohol Use: A National Multilevel Study." *Drug Alcohol Depend* 126(1-2):27-34. doi: 10.1016/j.drugalcdep.2012.04.008.

Kwate, Naa Oyo A. and Melody S. Goodman. 2014. "Cross-Sectional and Longitudinal Effects of Racism on Mental Health among Residents of Black Neighborhoods in New York City." *American Journal of Public Health* 105(4):711-18. doi: 10.2105/AJPH.2014.302243.

Lariscy, Joseph T, Claudia Nau, Glenn Firebaugh and Robert A Hummer. 2016. "Hispanic-White Differences in Lifespan Variability in the United States." *Demography* 53(1):215-39.

LaVeist-Ramos, Thomas Alexis, Jessica Galarraga, Roland J Thorpe, Caryn N Bell and Chermeia J Austin. 2012. "Are Black Hispanics Black or Hispanic? Exploring Disparities at the Intersection of Race and Ethnicity." *Journal of Epidemiology and Community Health* 66(7):e21. doi: 10.1136/jech.2009.103879.

LaVeist, Thomas A. 1993. "Segregation, Poverty, and Empowerment: Health Consequences for African Americans." *The Milbank Quarterly* 71(1):41-64.

Lee, Min-Ah and Kenneth F. Ferraro. 2007. "Neighborhood Residential Segregation and Physical Health among Hispanic Americans: Good, Bad, or Benign?". *Journal of Health and Social Behavior* 48(2):131-48. doi: 10.1177/002214650704800203.

Lee, Min-Ah. 2009. "Neighborhood Residential Segregation and Mental Health: A Multilevel Analysis on Hispanic Americans in Chicago." *Social science & medicine* 68(11):1975-84. doi: http://dx.doi.org/10.1016/j.socscimed.2009.02.040.

Link, Bruce G. and Jo Phelan. 1995. "Social Conditions as Fundamental Causes of Disease." *Journal of Health and Social Behavior*:80-94. doi: 10.2307/2626958.

Logan, John R. 2003. "How Race Counts for Hispanic Americans."

Long, J Scott and Jeremy Freese. 2014. *Regression Models for Categorical Dependent Variables Using Stata*: Stata press.

Mair, C., A. V. Diez Roux, M. Shen, S. Shea, T. Seeman, S. Echeverria and E. S. O'Meara. 2009. "Cross-Sectional and Longitudinal Associations of Neighborhood Cohesion and Stressors with Depressive Symptoms in the Multiethnic Study of Atherosclerosis." *Ann Epidemiol* 19(1):49-57. doi: 10.1016/j.annepidem.2008.10.002.

Mair, C., A. V. Diez Roux, S. H. Golden, S. Rapp, T. Seeman and S. Shea. 2015. "Change in Neighborhood Environments and Depressive Symptoms in New York City: The Multi-Ethnic Study of Atherosclerosis." *Health Place* 32:93-8. doi: 10.1016/j.healthplace.2015.01.003.

Mair, Christina, Ana V Diez Roux and Jeffrey D Morenoff. 2010. "Neighborhood Stressors and Social Support as Predictors of Depressive Symptoms in the Chicago Community Adult Health Study." *Health & place* 16(5):811-19.

Massey, Douglas S. and Mary J. Fischer. 2000. "How Segregation Concentrates Poverty." *Ethnic and Racial Studies* 23(4):670-91. doi: 10.1080/01419870050033676.

McCall, Leslie. 2005. "The Complexity of Intersectionality." *Signs: Journal of Women in Culture and Society* 30(3):1771-800. doi: 10.1086/426800.

Merlo, Juan, Monica Project for the World Health Organization, Kjell Asplund, Monica Project for the World Health Organization, John Lynch, Monica Project for the World Health Organization, Lennart Råstam, Monica Project for the World Health Organization, Annette Dobson and Monica Project for the World Health Organization. 2004. "Population Effects on Individual Systolic Blood Pressure: A Multilevel Analysis of the World Health Organization Monica Project." *American Journal of Epidemiology* 159(12):1168-79. doi: 10.1093/aje/kwh160.

Merlo, Juan, Basile Chaix, Henrik Ohlsson, Anders Beckman, Kristina Johnell, Per Hjerpe, L. Råstam and K. Larsen. 2006. "A Brief Conceptual Tutorial of Multilevel Analysis in Social Epidemiology: Using Measures of Clustering in Multilevel Logistic Regression to Investigate Contextual Phenomena." *Journal of Epidemiology and Community Health* 60(4):290.

Merlo, Juan. 2014. "Invited Commentary: Multilevel Analysis of Individual Heterogeneity—a Fundamental Critique of the Current Probabilistic Risk Factor Epidemiology." *American Journal of Epidemiology* 180(2):208-12. doi: 10.1093/aje/kwu108.
Merlo, Juan, Philippe Wagner, Nermin Ghith and George Leckie. 2016. "An Original Stepwise Multilevel Logistic Regression Analysis of Discriminatory Accuracy: The Case of Neighbourhoods and Health." *PLOS ONE* 11(4):e0153778. doi: 10.1371/journal.pone.0153778.
Merlo, Juan, Shai Mulinari, Maria Wemrell, S. V. Subramanian and Bo Hedblad. 2017. "The Tyranny of the Averages and the Indiscriminate Use of Risk Factors in Public Health: The Case of Coronary Heart Disease." *SSM - Population Health* 3:684-98. doi: https://doi.org/10.1016/j.ssmph.2017.08.005.
Merlo, Juan. 2018. "Multilevel Analysis of Individual Heterogeneity and Discriminatory Accuracy (Maihda) within an Intersectional Framework." *Social Science & Medicine* 203:74-80. doi: https://doi.org/10.1016/j.socscimed.2017.12.026.
Merlo, Juan, Philippe Wagner, Peter C. Austin, S. V. Subramanian and George Leckie. 2018. "General and Specific Contextual Effects in Multilevel Regression Analyses and Their Paradoxical Relationship: A Conceptual Tutorial." *SSM - Population Health* 5:33-37. doi: https://doi.org/10.1016/j.ssmph.2018.05.006.
Metzl, Jonathan M. 2010. *The Protest Psychosis: How Schizophrenia Became a Black Disease*: Beacon Press.
Michener, Jamila. 2012. "Neighborhood Disorder and Local Participation: Examining the Political Relevance of "Broken Windows"." *Political Behavior* 35(4):777-806. doi: 10.1007/s11109-012-9217-x.
Miranda, Jeanne, Thomas G. McGuire, David R. Williams and Philip Wang. 2008. "Mental Health in the Context of Health Disparities." *American Journal of Psychiatry* 165(9):1102-08. doi: 10.1176/appi.ajp.2008.08030333.
Mora, G. Cristina. 2014. "Cross-Field Effects and Ethnic Classification: The Institutionalization of Hispanic Panethnicity, 1965 to 1990." *American Sociological Review* 79(2):183-210. doi: 10.1177/0003122413509813.
Mulia, N., Y. Ye, S. E. Zemore and T. K. Greenfield. 2008. "Social Disadvantage, Stress, and Alcohol Use among Black, Hispanic, and White Americans: Findings from the 2005 U.S. National Alcohol Survey." *J Stud Alcohol Drugs* 69(6):824-33.
Mullings, Leith and Amy J Schulz. 2006. "Intersectionality and Health: An Introduction." Pp. 3-17 in *Gender, Race, Class, & Health: Intersectional Approaches*, edited by A. J. S. L. Mullings. San Francisco: Jossey-Bass.
Mulvaney-Day, Norah E, Margarita Alegria and William Sribney. 2007. "Social Cohesion, Social Support, and Health among Latinos in the United States." *Social Science & Medicine* 64(2):477-95.
Mulvaney-Day, Norah E., Margarita Alegría and William Sribney. 2007. "Social Cohesion, Social Support, and Health among Latinos in the United States." *Social Science & Medicine* 64(2):477-95. doi: https://doi.org/10.1016/j.socscimed.2006.08.030.
Muntaner, Carles and John Lynch. 1999. "Income Inequality, Social Cohesion, and Class Relations: A Critique of Wilkinson's Neo-Durkheimian Research Program." *International Journal of Health Services* 29(1):59-81. doi: 10.2190/g8qw-tt09-67pl-qtnc.
National Center for Health Statistics. 2016. *Vintage 2016 Postcensal Estimates of the Resident Population of the United States (April 1, 2010, July 1, 2010-July 1, 2016), by Year, County, Single-Year of Age (0, 1, 2, .., 85 Years and over), Bridged Race, Hispanic Origin, and Sex*Congress, (https://www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#july2010).
National Center for Health Statistics (NCHS). 2017. "National Health Interview Survey, 2016: Public-Use Data File & Documentation." Vol.

Omi, Michael and Howard Winant. 2014. *Racial Formation in the United States*: Routledge.
Osypuk, Theresa L., Sandro Galea, Nancy McArdle and Dolores Acevedo-Garcia. 2009. "Quantifying Separate and Unequal." *Urban Affairs Review* 45(1):25-65. doi: 10.1177/1078087408331119.
Pabayo, R., B. E. Molnar, A. Cradock and I. Kawachi. 2014. "The Relationship between Neighborhood Socioeconomic Characteristics and Physical Inactivity among Adolescents Living in Boston, Massachusetts." *Am J Public Health* 104(11):e142-9. doi: 10.2105/ajph.2014.302109.
Passel, Jeffrey S and D Cohn. 2011. "How Many Hispanics." *Comparing new census counts with the latest census estimates. Washington, DC: Pew Hispanic Center*.
Perez, Anthony Daniel and Charles Hirschman. 2009. "The Changing Racial and Ethnic Composition of the Us Population: Emerging American Identities." *Population and Development Review* 35(1):1-51.
Perez, L. G., E. M. Arredondo, T. L. McKenzie, M. Holguin, J. P. Elder and G. X. Ayala. 2015. "Neighborhood Social Cohesion and Depressive Symptoms among Latinos: Does Use of Community Resources for Physical Activity Matter?". *J Phys Act Health* 12(10):1361-8. doi: 10.1123/jpah.2014-0261.
Perreira, Krista M. and Edward E. Telles. 2014. "The Color of Health: Skin Color, Ethnoracial Classification, and Discrimination in the Health of Latin Americans." *Social Science & Medicine* 116:241-50. doi: http://dx.doi.org/10.1016/j.socscimed.2014.05.054.
Perreira, Krista M., Ashley N. Marchante, Seth J. Schwartz, Carmen R. Isasi, Mercedes R. Carnethon, Heather L. Corliss, Robert C. Kaplan, Daniel A. Santisteban, Denise C. Vidot, Linda Van Horn and Alan M. Delamater. 2018. "Stress and Resilience: Key Correlates of Mental Health and Substance Use in the Hispanic Community Health Study of Latino Youth." *Journal of Immigrant and Minority Health*. doi: 10.1007/s10903-018-0724-7.
Phelan, Jo C. and Bruce G. Link. 2015. "Is Racism a Fundamental Cause of Inequalities in Health?". *Annual Review of Sociology* 41(1):311-30. doi: 10.1146/annurev-soc-073014-112305.
Poortinga, Wouter. 2012. "Community Resilience and Health: The Role of Bonding, Bridging, and Linking Aspects of Social Capital." *Health Place* 18(2):286-95. doi: http://dx.doi.org/10.1016/j.healthplace.2011.09.017.
Powell-Wiley, T. M., C. R. Ayers, J. A. de Lemos, S. G. Lakoski, G. L. Vega, S. Grundy, S. R. Das, K. Banks-Richard and M. A. Albert. 2013. "Relationship between Perceptions About Neighborhood Environment and Prevalent Obesity: Data from the Dallas Heart Study." *Obesity (Silver Spring)* 21(1):E14-21. doi: 10.1002/oby.20012.
Ray, Rashawn. 2017. "Black People Don't Exercise in My Neighborhood: Perceived Racial Composition and Leisure-Time Physical Activity among Middle Class Blacks and Whites." *Social Science Research* 66:42-57. doi: http://dx.doi.org/10.1016/j.ssresearch.2017.03.008.
Riley, Alicia R. 2018. "Neighborhood Disadvantage, Residential Segregation, and Beyond—Lessons for Studying Structural Racism and Health." *Journal of Racial and Ethnic Health Disparities* 5(2):357-65. doi: 10.1007/s40615-017-0378-5.
Rios, Rebeca, Leona S. Aiken and Alex J. Zautra. 2012. "Neighborhood Contexts and the Mediating Role of Neighborhood Social Cohesion on Health and Psychological Distress among Hispanic and Non-Hispanic Residents." *Annals of Behavioral Medicine* 43(1):50-61. doi: 10.1007/s12160-011-9306-9.
Rodriguez, Clara E. 2000. *Changing Race: Latinos, the Census, and the History of Ethnicity in the United States*: NYU Press.
Rogers, Jamie and Ursula A Kelly. 2011. "Feminist Intersectionality: Bringing Social Justice to Health Disparities Research." *Nursing Ethics* 18(3):397-407. doi: 10.1177/0969733011398094.

Sampson, R. J., S. W. Raudenbush and F. Earls. 1997a. "Neighborhoods and Violent Crime: A Multilevel Study of Collective Efficacy." *Science* 277(5328):918-24.
Sampson, Robert J, Stephen W Raudenbush and Felton Earls. 1997b. "Neighborhoods and Violent Crime: A Multilevel Study of Collective Efficacy." *Science* 277(5328):918-24.
Sampson, Robert J., Jeffrey D. Morenoff and Thomas Gannon-Rowley. 2002. "Assessing "Neighborhood Effects": Social Processes and New Directions in Research." *Annual Review of Sociology* 28:443-78.
Sewell, Abigail A., Kevin A. Jefferson and Hedwig Lee. 2016. "Living under Surveillance: Gender, Psychological Distress, and Stop-Question-and-Frisk Policing in New York City." *Social Science & Medicine* 159:1-13. doi: https://doi.org/10.1016/j.socscimed.2016.04.024.
StataCorp, LP. 2015. "Stata Statistical Software: Release 14.[Computer Program]." *StataCorp LP*.
Therrien, Melissa and Roberto R Ramirez. 2000. "The Hispanic Population in the United States." *Current population reports*.
Trinh, Mai-Han, Madina Agénor, S. Bryn Austin and Chandra L. Jackson. 2017. "Health and Healthcare Disparities among U.S. Women and Men at the Intersection of Sexual Orientation and Race/Ethnicity: A Nationally Representative Cross-Sectional Study." *BMC Public Health* 17(1):964. doi: 10.1186/s12889-017-4937-9.
Tsouroufli, Maria, Charlotte E. Rees, Lynn V. Monrouxe and Vanita Sundaram. 2011. "Gender, Identities and Intersectionality in Medical Education Research." *Medical Education* 45(3):213-16. doi: 10.1111/j.1365-2923.2010.03908.x.
Unger, E., A. V. Diez-Roux, D. M. Lloyd-Jones, M. S. Mujahid, J. A. Nettleton, A. Bertoni, S. E. Badon, H. Ning and N. B. Allen. 2014. "Association of Neighborhood Characteristics with Cardiovascular Health in the Multi-Ethnic Study of Atherosclerosis." *Circ Cardiovasc Qual Outcomes* 7(4):524-31. doi: 10.1161/circoutcomes.113.000698.
Valdez, Zulema and Tanya Golash-Boza. 2017. "Towards an Intersectionality of Race and Ethnicity." *Ethnic and Racial Studies* 40(13):2256-61. doi: 10.1080/01419870.2017.1344277.
Viruell-Fuentes, Edna A, Patricia Y Miranda and Sawsan Abdulrahim. 2012. "More Than Culture: Structural Racism, Intersectionality Theory, and Immigrant Health." *Social Science & Medicine* 75(12):2099-106.
Wallman, Katherine K, Suzann Evinger and Susan Schechter. 2000. "Measuring Our Nation's Diversity: Developing a Common Language for Data on Race/Ethnicity." *American Journal of Public Health* 90(11):1704.
Wemrell, Maria, Shai Mulinari and Juan Merlo. 2017. "Intersectionality and Risk for Ischemic Heart Disease in Sweden: Categorical and Anti-Categorical Approaches." *Social Science & Medicine* 177:213-22. doi: https://doi.org/10.1016/j.socscimed.2017.01.050.
Williams, D. R. and C. Collins. 2001. "Racial Residential Segregation: A Fundamental Cause of Racial Disparities in Health." *Public Health Reports* 116(5):404-16.
Williams, D.R., M. Costa and J.P. Leavell. 2017. "Race and Mental Health." Pp. 281-304 in *A Handbook for the Study of Mental Health: Social Contexts, Theories, and Systems*, edited by L. S. Teresa and R. W. Eric: New York: Cambridge University Press.
Williams, David R. and Tara R. Earl. 2007. "Commentary: Race and Mental Health—More Questions Than Answers." *International Journal of Epidemiology* 36(4):758-60. doi: 10.1093/ije/dym114.
Williams, Rick L. 2000. "A Note on Robust Variance Estimation for Cluster-Correlated Data." *Biometrics* 56(2):645-46.
York Cornwell, E. and K. A. Cagney. 2014. "Assessment of Neighborhood Context in a Nationally Representative Study." *J Gerontol B Psychol Sci Soc Sci* 69 Suppl 2:S51-63. doi: 10.1093/geronb/gbu052.

[Before beginning a preemptive apology for any typos/ grammatical errors. I've privileged speed in responding over elegant writing. With that said, if there are any unclear portions of text below, please feel free to contact me to clarify]

Dear Kasim,

This is a really strong project. You have a great command of the extant research and have identified a gap in the literature. Moreover, you are grappling with the complex relationship between mental illness and race in a nuanced way. Examining the intra-ethnic variation among Latinos is a good way to push the field further. Additionally, paying attention to the relationship between mental health and neighborhood perceptions is a crucial ingredient for a robust sociology of mental health.

For the purposes of these comments, I'm going to assume that your methodology is sound. I'd like to hone in elsewhere, namely on your use of theory. (NOTE: narrower feedback on your writing is included in in-text comments). My expertise is such that what I can help with the most is the logical of argumentation. Toward this end, I'd like to preface my comments with the following general take: there's still a bit of a disconnect between your empirical project and the different theoretical traditions you draw upon. The linkages are there but they are buried and need to be foregrounded. I suspect that much of the problem stems from trying to do too much theoretically.

The best use of theory is to fully integrate it into the logic of your research, to the point that it becomes not a mere accessory, but an inextricable part of your argument. You need to make some sort of assertion that the theory you are using is essential to making sense of/interpreting your research findings. In other words, you want to convince the readers that they couldn't possibly understand this particular piece of research without the theoretical frame you affix to it. Of course, this isn't entirely true. Any finding can be interpreted through multiple theoretical lenses. But your argument will land better if you do some rhetorical work insisting on the value-added of your particular theoretical frame.

The main problem with your paper as constructed is that there are too many moving theoretical parts. To put succinctly, you marshal too many theoretical traditions and in doing so, muddle your ultimate argument. It is hard within the confines of a journal article to juggle multiple theoretical traditions. Why? Well for each theoretical tradition you need 1) lay out its parameters, 2) articulate how it is relevant to your project and 3) reconcile it with any other theoretical traditions you might be evoking. It just takes too much precious real-estate to do this adequately. Thus, as a rule of thumb, I'd recommend tackling no more than TWO theoretical traditions in any given journal article (unless it's specifically a theoretical piece).

In the course of fifteen pages here, you lay out four different theoretical frameworks – fundamental cause theory, CRT/racial project, intersectionality, and Andresen's behavioral model. Moreover, from these different traditions you spin out 8 different hypotheses. Frankly, there's no way you're going to be able to pull all these threads together into a single, coherent article. You'll just end up with a mess on your hands. Your theoretical claims will be merely impressionistic and your empirical findings will get lost in the shuffle.

I'd advise you to choose the two theories that are most relevant – for my money it's FCT and intersectionality – and focus your energies there. You can either drop the other two altogether OR evoke them in a secondary way in the context of discussing your core theories OR relegate them to a mention in your discussion section.

Once you've selected the theories, make them do more analytical work for you. Really use them to grapple with the stakes of your research and the assessment of your findings. To do this, you're going to have to assert your authorial voice more. I had a professor, Richard Sennett, who would always ask us (in a faux British accent; he is American but an unrepentant Anglophile), "where are you in this paper?" Often we are so focused reviewing the literature, in making sure that we get what others say correctly, that we forget to assert ourselves as the analyst. But you're in control here. So I'd encourage you to take a step back and ask yourself "what is it I, Kasim, want to say here?". As I said you have great command over the literature. That's the first step; the second is imposing yourself on that literature. So once you've settled on your theoretical frameworks, make them serve your ends.

Finally, in these comments, I've assumed that you want to make a strong theoretical argument, that you want to say something beyond your empirical findings. But that might not be the case. This paper could stand on its empirical merits alone. In that case, you would still need to make a nod to theory but it might become de-emphasized. Here I'm struggling with this paper for the course vs. what this article actually will be. It's hard for me to gauge how much of this particular draft is being written with the course in mind, to meet those expectations. I'll leave this determination up to you.

One final class-related note: your claim re the importance of neighborhoods that points the pivot to the community after deinstitutionalization struck me as a good one. That was a historical moment when collectively we decided that mental illness was best handled as a community affair. The assumption underlying this was that neighborhoods could be healing (or conversely harmful). So the largely throwaway comment you made on page 5 struck me as an excellent observation. It might also be a way to contextualize and specify the stakes of your research by situating it within history. Just a thought though.

Excellent paper. I look forward to seeing how it evolves. I'd be happy to chat about this going forward.

Best,
Owen