

What's Your "Street Race"? Leveraging Multidimensional Measures of Race and Intersectionality for Examining Physical and Mental Health Status among Latinxs

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Abstract

Using the 2015 Latino National Health and Immigration Survey (N = 1,197), we examine the relationship between physical and mental health status and three multidimensional measures of race: (1) *street race*, or how you believe other "Americans" perceive your race at the level of the street; (2) *socially assigned race*, or what we call *ascribed race*, which refers to how you believe others usually classify your race in the United States; and (3) *self-perceived race*, or how you usually self-classify your race on questionnaires. We engage in intersectional inquiry by combining street race and gender. We find that only self-perceived race correlates with physical health and that street race is associated with mental health. We also find that men reporting their street race as Latinx or Arab were associated with higher odds of reporting worse mental health outcomes. One surprising finding was that for physical health, men reporting their street race as Latinx were associated with higher odds of reporting optimal physical health. Among women, those reporting their street race as Mexican were associated with lower odds of reporting optimal physical health when compared to all other women; for mental health status, however, we found no differences among women. We argue that street race is a promising multidimensional measure of race for exploring inequality among Latinxs.

Keywords

Latinxs, racialization, street race, gender, intersectionality, health inequities, multidimensional measures of race

INTRODUCTION

The reality of racial heterogeneity within the Latinx community poses a quagmire for scholars, researchers, and policymakers interested in advancing health equity.¹ Because of internal racial variations within these communities, the collection of multidimensional data on the 56 million Latinxs living in the United States remains elusive. Zambrana and Dill (2006) suggest that compliance-oriented data collection in health research mechanistically aggregates all Hispanics into the same category, possibly

masking important within-group differences by race, ethnicity, gender, class, nativity, sexual orientation, legal status, and language proficiency. Second,

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Zambrana and Dill (2006) allude to the complexities of historic White supremacist colonization and the ongoing dynamics of internalized racism that may complicate data collection (Bonilla-Silva 2003; Cobas, Duany, and Feagin 2009; Dowling 2014; Foley 2016; Garcia et al. 2015; L. Gómez 2007).

Against the backdrop of historic and ongoing White supremacist, racialized social hierarchies, we seek to clarify the meaning of race within the group generally called *Hispanic*, *Spanish*, and/or *Latinx*. First, we examine physical and mental health status for Latinxs in the United States using three multidimensional measures of race, with a particular focus on exploring whether those who identify racially as White are associated with optimal health status. Second, we conduct the first empirical examination of *street race*, or how you believe other “Americans” perceive your race at the level of the street. And finally, we explore intersectionality by examining how street race and associated differences in health status may operate differently among men and women.

To advance these aims, we place racial formation theory, critical race theory, as well as intersectionality into a productive dialogue for interrogating intra-categorical complexity among Latinx communities in the United States. We argue that multidimensional measures of race coupled with intersectional inquiry are important for excavating social inequalities in health (Collins 2009; Hogan 2017; Howell and Emerson 2016; Irizarry 2015; López 2013; Otiniano and Gee 2012; Saperstein, Kizer, and Penner 2016; Weinick et al. 2004; Vidal-Ortiz 2004).

THEORETICAL BACKGROUND

Racial stratification, whether in the form of structural racism or personally mediated implicit and/or overt discrimination, plays an important role in creating inequitable health differences between groups that are unnecessary, avoidable, unfair, or unjust (Jones 2000; Matthew 2015; Monk 2015; Williams and Mohammed 2013; World Health Organization 2016). Jones (2001) makes an analytical distinction between race (an external social classification based on phenotype) and ethnicity (cultural heritage) that health disparities researchers who focus on Latinx communities corroborate (Gravlee and Dressler 2005; LaVeist-Ramos et al. 2011).

Racialization is “the extension of racial meaning to a previously racially unclassified relationship, social practice, or group” (Omi and Winant 2015:111). Race (just like gender) operates as a master status or a social status that in most social

circumstances overpowers all others, such as socioeconomic status (Omi and Winant 2015). This means that depending on physical appearance, Latinxs may be subjected to vastly different racialization experiences (Bonilla-Silva and Glover 2004; Du Bois [1899] 1996, [1903] 1999; Fox and Rivera-Salgado 2004; Harris 1993; Hogan 2017; Montalvo and Codina 2001; Perreira and Telles 2014; Rodriguez, Ageros, and Miyawaki 2012; Sue 2014; Zambrana and Dill 2006). Indeed, racialized inequalities observed within Latin American and Caribbean families are the byproducts of centuries of colonization and annexation, and they have major implications for health today (Flores et al. 2008; Gravlee and Dressler 2005; LaVeist-Ramos et al. 2011; Perreira and Telles 2014; Sue 2014; Telles 2014; Vargas et al. 2016).

The dynamics of colorism and the impact of within-race heterogeneity of phenotype on health are also visible among African Americans in the United States. Using a national survey, Monk (2015) investigates the complexity of skin color and discrimination and the impact on health for African Americans. Monk (2015) finds that self-perceived skin tone, which he conceptualizes as “embodied bodily social status,” is an even stronger predictor of health outcomes than interviewer-rated skin color. There is a curvilinear relationship whereby those at either end of the color continuum (e.g., those that are light or dark skinned) may experience intraracial discrimination more than those who are medium skin tone.

Monk (2015) also finds that self-rated skin color is more predictive of self-rated mental health than self-rated physical health, alluding to the notion that the mental health effects of racialization may be more immediate than physical effects, which may manifest over time. Monk (2015) concludes that it is imperative that we consider the “relationality” of skin color. Because the meaning of race or phenotype for the same individual may differ depending on context and/or reference group, the pathways of wellness and illness through racialization and embodiment may appear to interact in seemingly contradictory ways (Campbell and Troyer 2007; Drake and Cayton [1945] 2015; Gravlee 2009; Gravlee and Dressler 2005; Yeung and Martin 2003).

Critical race theory is a useful framework for exploring the relationship between racial stratification and health inequity (Brown 2003; Ford and Airhihenbuwa 2010; Graham et al. 2011). A central tenet of critical race theory is that White supremacist racism is ingrained and systemic and White privilege affects multiple groups in a society organized

along White supremacist, pigmentocratic logics (Allen 2001; Frankenberg 1993; L. Gómez 2007; Harris 1993; McIntosh 1998; Mills 2016; Sue 2014; Telles and Ortiz 2008). For example, the social construction of Whiteness is most visible in the role laws play in the racialized politics of immigration and naturalization, which have imbued the American national racial identity as White (Crenshaw et al. 1993; Frankenberg 1993; L. Gómez 2007; Haney-Lopez 2016; Harris 1993).

An intersectional lens is also valuable for interrogating the social determinants of health (Araújo and Borrell 2006; Bowleg 2012; P. H. Collins and Bilge 2016; Crenshaw 1993; Ehlers and Hinkson 2017; Hankivsky 2012; López and Gadsden 2016; Ray 2014; Richardson, Hussey, and Strutz 2011; Schulz and Mullings 2006; Viruell-Fuentes, Miranda, and Abdulrahim 2012; Weber 2006, 2010). Intersectional research on colorism and gender finds that having dark skin may be more important for women as compared to men in Black and Latinx communities. Monk (2014) observes that dark-skinned African American women tend to have partners with less education, but no such association exists between marital status and skin color for African American men (C. Gómez 2000; Hunter 2013). Saenz and Morales (2015) find that while native-born Latino men's earnings do not differ significantly from White men, a wage gap between native-born Latina women's earnings and that of White women does exist.

DATA AND METHODS

Hypotheses

We test two sets of hypotheses based on the extant literature. The first set of hypotheses is related to using three measures of race to predict physical and mental health. The second set of hypotheses is solely focused on providing the first empirical test of our street race measure. We examine how street race is gendered in separate models for men and women. This provides us with the opportunity to interrogate associations between a given street race–gender social location and health status.

Hypothesis 1a: We expect that the percentages of people self-identifying as White will be much higher than those reporting that they believe that others perceive them as White.

Hypothesis 1b: We expect our measure of self-perceived race will predict health differently than our measures of other-perceived race. Specifically, we expect that self-perceived

White race will not be a statistically significant predictor of physical or mental health holding all other factors constant.

Hypothesis 1c: We expect to find that our measures of other-perceived race, namely, street race and ascribed race, will be statistically significant predictors of both mental and physical health. Specifically, we expect that those that say that they believe that their race is perceived as White by others will report better physical and mental health than all other race categories holding all other factors constant.

Hypothesis 2a: When we examine men by themselves, we expect to find that those men reporting their street race as White will report better physical and mental health than all other street race categories holding all other factors constant.

Hypothesis 2b: When we examine women by themselves, we expect to find that women reporting their street race as White will report better physical and mental health than all other street race categories holding all other factors constant.

We use the 2015 Latino National Health and Immigration Survey (LNHIS), which is a unique survey designed for the specific purpose of examining diverse Latinx health and well-being. The LNHIS relies on a sample of mixed cell phone and landline households along with web surveys (N = 1,493). This mixed-mode approach improves our ability to capture a wide segment of the Hispanic population that lacks a landline telephone as well as those who prefer to engage surveys online. Our data set includes 1,493 respondents (989 via phone interview, 504 via the Internet). We randomly drew the web-focused respondents from the Latino Decision's national panel of Latinx adults. We randomly selected respondents for the web survey from a double-opt-in national Internet panel and weighted the sample to be representative of the Latinx population.

Latino Decisions selected the 44 states with the highest number of Latino residents and Puerto Rico for the sampling design, which collectively account for 91 percent of the overall Latinx adult population. Respondents across all modes of data collection could choose to be interviewed in either English or Spanish. A mix of cell phone only (35 percent) and landline (65 percent) households were included in the sample. The full data set, including both phone and web interviews, is weighted to

match the 2013 Current Population Survey universe estimate of Latinx adults with respect to age, place of birth, gender, and state. The survey was approximately 28 minutes long, and it was fielded from January to March 2015.

We are interested in estimating the probability of optimal health and use health as the outcome variable in our analysis through a validated and tested measure of self-rated health. The self-perceived physical and mental health status questions are closely aligned to the items included in the Centers for Disease Control and Prevention (CDC) Behavioral Risk Factor Surveillance System (BRFSS), which have been validated as reliable measures of health status (Jones et al. 2008; Macintosh et al. 2013; Vargas, Sanchez, and Kinlock 2015). Previous meta-analysis and review studies demonstrate a strong association between self-rated health and mortality (Ahmad et al. 2014; Garbarski 2016; Idler and Benyamini 1997). Self-rated health has been found to be a reliable measurement of general health since respondents rated the same general health assessment within a period during which their health was unlikely to change. Both questions utilize a 1 to 5 Likert scale, with respondents rating their health status from excellent to poor. We used the following survey questions: “How would you rate your overall physical health—excellent, very good, good, fair, or poor?” and “How would you rate your overall mental health?” The categories of the dependent variable for self-rated physical and mental health are collapsed into binary variables. From the original 5-point Likert scale, we dichotomized 1 (poor health), 2 (fair health), and 3 (good health) = 0 and 4 (very good) and 5 (excellent) = 1. We are therefore interested in predicting optimal health. We dichotomized physical and mental health into two categories: optimal health (1: very good and excellent) and poor health (0: good, fair, and poor health). This operationalization has been found to be a valid, reliable, and cognitively tested value-added measure for both physical and mental health status (Idler and Benyamini 1997; Jones et al. 2008; Mossey and Shapiro 1982; Pascoe and Richman 2009; Vargas et al. 2015).

Health scholars have recently identified challenges in using self-rated health status to examine variation in health across diverse racial/ethnic and immigrant populations that are Spanish speakers. Our self-rated health measure takes into consideration the recommendations by Sanchez and Vargas (2015), who confirm the work of Viruell-Fuentes et al. (2011), who found that a better measurement of self-perceived health is *más o menos* instead of

regular as the Spanish translation of *fair* health (as *regular* overinflates poor health).

We also control for a handful of measures that previous research has found to be correlated with Latinx health status. Among the demographic variables, we include standard measures of household income, educational attainment, age, marital status, gender, and insurance coverage. To assess household income, we have included dummy variables representing different household income categories: \$20,000–\$39,999, \$40,000–\$59,999, \$60,000–\$79,999, \$80,000–\$99,999, \$100,000–\$149,999, \$150,000 and above, with less than \$19,999 serving as the reference category. To save cases, we included a variable of “unknown” household income in the model that includes respondents who did not report their income.

Operationalization of Multidimensional Measures of Race: Street Race for Enhancing Measures of Racialization at the Individual Level

We employ three different ways of measuring race based on the extant literature: self-perceived race, ascribed race, and street race. All of the multidimensional race measures used in the survey are anchored in the theory of reflected appraisals, which stipulates that we all arrive at our self-concept through social interaction with others (Mead, quoted in Monk 2015; also see Blumer 1969; Cooley 1983; Du Bois [1899] 1966).

We intentionally asked respondents to self-classify their specific Hispanic/Latinx national origin as the first question in the survey to reverify that they were indeed of Hispanic ancestry before proceeding to the entire battery of questions. The very next question asked respondents to select their race from a set of preset options that included wording similar to the 2010 U.S. census. Much later in the survey, we asked about their street race and ascribed race, in that order. It is important to note that the question formats not only varied in the question wording, but each also had slightly different response categories. We included the racial category Arab in street race to probe if Latinxs were racialized accordingly (Selod and Embrick 2013). We include immigrant race in the self-perceived race formats and the ascribed question to test if individuals who were U.S.-born were seen as perpetual foreigners (Vargas et al. 2016).

Our main explanatory variables include three multidimensional measures of race: (1) self-perceived race, (2) street race, and (3) ascribed race. It is important to emphasize that all race measures in

the survey reported by the respondent are subjective, perceptual, and self-perceived. We do not have data on observed race, or the race an interviewer would assign, or a skin pigment a measurement device would register. The survey wording and distribution of these response categories are listed in Table 1.

To create our new street race measure we blend previous formats. First, we use Jones et al.'s (2008:497) measure of "socially assigned race" or what we call *ascribed race*: "How do other people usually classify you in this country?," which comes from the reactions to race module in the BRFSS national survey. Second, we build on Dowling's (2014:138) question on Mexican American racial ideologies in Texas:

If you were walking down the street here in [city name], and someone were to see you, how do you think that person would label you in terms of your racial or ethnic background? Do you think that some would be able to tell from looking at you that you are [Mexican American/Hispanic/Mexican]?

Our question format also differed from Vargas's (2015:125) design, "Earlier you told us that you are Hispanic. Do you think other Americans would say that you are Hispanic or something else?," which comes from the 2006 Portraits of American Life Study (PALS) survey.

Our specific question on street race was: "If you were walking down the street, what race do you think other Americans who do not know you personally would assume you were based on what you look like?" The five street race categories were: White, Latinx, Black, Arab, and Mexican, totaling 1,304 respondents. The categories of Asian American ($n = 29$), Native American/American Indian ($n = 27$), and some other race ($n = 60$) are dropped due to small sample size. The distributions of all race categories are displayed in Table 1.

We believe the street race wording is a major improvement over previous question formats because it implicitly defines race as based on meanings attributed to physical appearance and avoids the false equivalence of conflating race, ethnicity, national origin, and ancestry as interchangeable social constructions that can be measured via one question (Gravlee and Dressler 2005; Hogan 2017; Jones 2001; Jones et al. 2008; LaVeist-Ramos et al. 2011; López 2013).

To compare how street race White measures up with self-perceived White and ascribed White for interrogating health inequity, we also compare differences across physical and mental health

outcomes (see Table 2). We believe this exercise allows us to better understand the utility of the street race measure for examining health disparities within the Latinx community. And finally, because gender, like race, is a master social status, we employ a measure of self-identified gender as the very last question in the survey (i.e., woman, man, transgender,² other), which allows us to combine street race and gender for intersectional inquiry (López 2014).

Methodology for Comparing Different Measures of Race for Assessing Mental and Physical Health Status

Our first sets of analytics are intended to first determine the relationship between multiple measures of race (i.e., self-perceived, street race, and ascribed) and self-perceived physical and mental health. We estimate models that compare self-perceived White race, ascribed White race, and street White race relative to all other racial categories within their respective response categories. We control for various demographic factors, including U.S. citizenship and language of interview. We also include a measure for whether respondents are of Mexican origin as this population has been found to have unique health outcomes relative to Latinxs from other backgrounds (Vargas et al. 2016). Table 2 lists summary statistics for all variables in this analysis.

Our second set of analytics provides an empirical test of the street race measure for exploring physical and mental health within a full model and then with separate models for Latinx men and women. This analytical approach conceptualizes street race-gender as an intersectional social location that can elucidate the racialized-gendered pathways of embodiment as categories of experience for physical and mental health (Bowleg 2012; J. Collins 2007; López 2013, 2015). Given that our health outcomes are binary, we estimate a series of logistic regressions to examine the differences across racial categories on the probability of reporting very good and excellent physical and mental health, controlling for multiple covariates. An examination of the within-group gender dynamics for the other multidimensional measures of race (e.g., ascribed race and self-perceived race) is beyond the scope of this study. We focused on providing an empirical test of street race as an innovative value-added multidimensional measure of race that when combined with gender may be especially important for mapping and interrupting inequalities in health.

Table 1. Crosstab of Street Race, Ascribed Race, and Self-perceived Race Using the 2015 National Latino Health and Immigration Survey.

Street Race ^a	N	Percent	Ascribed Race ^b	N	Percent	Self-Perceived Race ^c	N	Percent
White	287	20.21	White	207	14.43	White	662	44.88
Latino/Hispanic	597	42.04	Latino/Hispanic	553	38.54	Latino/Hispanic	646	43.8
Black	52	3.66	Black	27	1.88	Black	33	2.24
American Indian or Alaskan Native	27	1.9	American Indian or Alaskan Native	8	.56	American Indian or Alaskan Native	52	3.53
Mexican	317	22.32	Mexican	433	30.17	—	—	—
Middle Eastern/Arab	51	3.59	Middle Eastern/Arab	10	.7	—	—	—
Asian	29	2.04	—	—	—	Asian	7	.47
—	—	—	Cuban	42	2.93	Native Hawaiian/Pacific Islander	9	.61
—	—	—	Puerto Rican	98	6.83	—	—	—
—	—	—	Immigrant	57	3.97	—	—	—
Other	60	4.23	—	—	—	Other	66	4.47
Total	1,420			1,435			1,475	

^aif you were walking down the street, what race do you think other Americans who do not know you personally would assume you were based on what you look like?"

^bHow do other people usually classify your race in the United States. Would you say that others usually view you as?"

^cWhat is your race? Are you White, Black, American Indian, Asian, or Native Hawaiian/Pacific Islander?"

Table 2. Summary Statistics Using 2015 Latino Decisions National Latino Health and Immigration Survey (n = 1,493).

Variable	Mean	Standard Deviation	Minimum	Maximum
Self-rated physical health ^a	.43	.50	0	1
Self-rated mental health ^b	.60	.49	0	1
Self-perceived White race	.45	.50	0	1
Ascribed as White	.14	.35	0	1
Street race White	.22	.41	0	1
Street race Latino	.46	.50	0	1
Street race Black	.04	.20	0	1
Street race Middle Eastern/Arab	.04	.19	0	1
Street race Mexican	.24	.43	0	1
Woman	.62	.49	0	1
Education ^c	5.52	2.36	1	10
Age	45.87	17.00	18	98
Uninsured ^d	.15	.36	0	1
Spanish ^e	.58	.49	0	1
U.S. citizen ^f	.77	.42	0	1
Married ^g	.53	.50	0	1
Income missing	.21	.41	0	1
Income less than \$20,000	.20	.40	0	1
Income \$20,000–\$39,999	.21	.40	0	1
Income \$40,000–\$59,999	.13	.33	0	1
Income \$60,000–\$79,999	.09	.28	0	1
Income \$80,000–\$99,999	.06	.24	0	1
Income \$100,000–\$150,000	.07	.25	0	1
Income \$150,000+	.04	.19	0	1
Mexican origin	.55	.50	0	1

^aSelf-rated physical health: 0 = poor, fair, good; 1 = very good, excellent.

^bSelf-rated mental health: 0 = poor, fair, good; 1 = very good, excellent.

^cHighest education levels completed: 1 = no formal schooling, 2 = Grades 1–8, 3 = some high school, 4 = GED, 5 = high school graduate, 6 = some college, 7 = associate's, 8 = bachelor's, 9 = MA, 10 = PhD/MD.

^dInsurance coverage: 0 = currently insured, 1 = currently uninsured.

^eLanguage of interview: 0 = English, 1 = Spanish.

^fCitizenship: 0 = non-citizens and permanent residents, 1 = U.S. citizens.

^gMarital status: 0 = unmarried, 1 = married.

RESULTS

Table 2 displays the distribution of our sample. The mean age was 46, and most of our sample had a high school education. Just over half of our sample completed the survey in English, and just over half were women.³ In regard to citizenship, 77 percent of our sample were U.S. citizens; it is important to note that this figure includes U.S.-born (64 percent) and naturalized citizens (36 percent). Over half of our sample was of Mexican origin, 53 percent reported being married, and just over 15 percent were uninsured. On average, around 43 percent of the sample reported that they had very

good and excellent physical health. Sixty percent of the sample stated they had very good and excellent mental health.

Depending on the measure used, we had dramatically different results in reports of White race. For our measure of street race, 22 percent report White, 46 percent report Latinx, 24 percent report Mexican, 4 percent report Black, and 4 percent report Middle Eastern/Arab. The other race measures show that when we use self-perceived race, 45 percent of the sample self-classified as White, but when we used ascribed race, only 14 percent of our respondents reported White as their ascribed race. This wide variation in reporting their race as

Table 3. Logistic Coefficients for Regressions of Various Operations of Race on Self-rated Physical Health Using 2015 National Latino Health and Immigration Survey.

Variables	Street Race Model		Self-perceived Race Model		Ascribed Race Model	
	β	Odds Ratios	β	Odds Ratios	β	Odds Ratios
Street race White	.028	1.028				
Self-perceived White			.417***	1.517***		
Ascribed as White					.193	1.213
Woman	-.235*	.791*	-.218*	.804*	-.211*	.809*
Education ^a	.197***	1.217***	.174***	1.190***	.187***	1.206***
Age	-.023***	.977***	-.022***	.978***	-.022***	.979***
Uninsured	-.543***	.581***	-.559***	.572***	-.633***	.531***
Spanish	-.501***	.606***	-.497***	.608***	-.499***	.607***
U.S. citizen	.454***	1.575***	.400**	1.491**	.443***	1.558***
Married	-.049	.953	-.101	.904	-.062	.940
Reference income: Less than \$20,000						
Income missing	.211	1.235	.148	1.160	.097	1.101
Income \$20,000–\$39,999	.150	1.162	.030	1.030	.008	1.008
Income \$40,000–\$59,999	.305	1.357	.197	1.218	.183	1.201
Income \$60,000–\$79,999	.781***	2.183***	.513**	1.671**	.620**	1.859**
Income \$80,000–\$99,999	.266	1.305	.168	1.183	.129	1.138
Income \$100,000–\$150,000	.724**	2.062**	.631**	1.880**	.619**	1.857**
Income \$150,000+	.775**	2.171**	.690*	1.994*	.642*	1.900*
Mexican origin	-.330***	.719***	-.310**	.734**	-.364***	.695***
Constant	-.271	.762	-.212	.809	-.148	.862
Observations	1,303		1,340		1,311	
Adjusted R ²	.0983		.0968		.0972	

Note: β is a logit coefficient.

^aHighest education levels completed: 1 = no formal schooling, 2 = Grades 1–8, 3 = some high school, 4 = GED, 5 = high school graduate, 6 = some college, 7 = associate's, 8 = bachelor's, 9 = MA, 10 = PhD/MD.

* $p < .10$. ** $p < .05$. *** $p < .01$.

White in accordance with question format, in particular the gap between self-perception as White and other-perceived measures, confirms our original hypothesis.

Table 3 shows results of our next set of models. The results in this table estimate three separate logistic regression models that include various multidimensional measures of White race (i.e., street race, self-perceived race, and ascribed race) on physical health adjusting for various confounders. In these models, we find that there are only differences between self-perceived White race versus all other racial categories on the probability of reporting very good and excellent physical health. In fact, respondents who self-report their race as White as opposed to non-White increase their odds of reporting very good and excellent physical health by a factor of 52 percent, holding all else constant. We

do not find differences for ascribed as White versus non-White and street race White versus street race non-White in predicting optimal physical health. These results are not what we expected, as we hypothesized that the measure of self-reported race would not be statistically significant.

Table 4 depicts the results of our second set of models. Our first set of results in this table estimates three separate logistic regression models that include various measures of White race (i.e., street race, self-perceived race, and ascribed race) on mental health. In these models, we find differences between street race White versus street race non-White on the probability of reporting very good and excellent mental health. In fact, for respondents who report their street race as White as opposed to street race non-White, their odds of reporting very good and excellent mental health

Table 4. Logistic Coefficients for Regressions of Various Operations of Race on Self-rated Mental Health Using 2015 National Latino Health and Immigration Survey.

Variables	Street Race Model		Self-perceived Race Model		Ascribed Race Model	
	β	Odds Ratios	β	Odds Ratios	β	Odds Ratios
Street race White	.342**	1.408**				
Self-perceived White			.239*	1.270*		
Ascribed as White					.084	1.088
Woman	-.108	.898	-.108	.898	-.094	.911
Education ^a	.162***	1.176***	.159***	1.172***	.166***	1.181***
Age	-.015***	.985***	-.014***	.986***	-.012***	.988***
Uninsured	-.471***	.625***	-.440***	.644***	-.477***	.620***
Spanish	-.070	.932	-.048	.953	-.007	.993
U.S. citizen	.305*	1.356*	.256	1.291	.282*	1.326*
Married	-.044	.957	-.056	.946	-.019	.981
Reference income: Less than \$20,000						
Income missing	.062	1.064	.030	1.030	-.000	1.000
Income \$20,000–\$39,999	.433**	1.541**	.308*	1.361*	.344*	1.411*
Income \$40,000–\$59,999	.631***	1.880***	.611***	1.842***	.612***	1.844***
Income \$60,000–\$79,999	.876***	2.400***	.798***	2.221***	.822***	2.275***
Income \$80,000–\$99,999	.001	1.001	-.004	.996	-.012	.989
Income \$100,000–\$150,000	1.068***	2.909***	1.052***	2.863***	1.070***	2.916***
Income \$150,000+	.604	1.829	.539	1.715	.630	1.877
Mexican origin	-.236*	.790*	-.254**	.775**	-.281**	.755**
Constant	.042	1.043	.028	1.029	-.061	.941
Observations		1,303		1,340		1,311
Adjusted R ²		.0979		.0937		.0958

Note: β is a logit coefficient.

^aHighest education levels completed: 1 = no formal schooling, 2 = Grades 1–8, 3 = some high school, 4 = GED, 5 = high school graduate, 6 = some college, 7 = associate's, 8 = bachelor's, 9 = MA, 10 = PhD/MD.

* $p < .10$. ** $p < .05$. *** $p < .01$.

increases by 41 percent, holding all else constant. We find marginal differences for self-perceived White race versus non-White and no differences between ascribed as White versus ascribed as non-White on optimal mental health.

Our next set of models engage in intersectional inquiry by disaggregating the street race variable within men and within women. In this analysis, we estimate a logistic regression to examine the probability of reporting very good and excellent physical health, controlling for a vector of covariates (Table 5). When we run separate models by gender, we find very different patterns. In fact, among men, being seen as street race Latinx or Arab as opposed to street race White increases the odds of reporting very good and excellent physical health. This was not at all what we expected as we postulated that reporting your street race as White would be

associated with better physical health for both men and women when compared to the other street race categories. This unexpected finding may be due to the possibility that those who say that their street race is White are simply echoing previous research that shows that for some, claiming Whiteness is a way of claiming belonging in the American social fabric and may not necessarily actually represent how they are really seen by “other Americans” (Dowling 2014; L. Gómez 2007; Vargas 2015). More mixed-methods studies that elucidate the racialized-gendered pathways of embodiment that may be shaping these paradoxical findings are necessary (Chapman and Berggren 2005; Zuberi 2001).

We find a different pattern among women. Women who reported that their street race was Mexican are less likely to report optimal physical health relative to all other street race categories,

Table 5. Logistic Coefficients for Regressions of Street Race on Self-rated Physical Health Using 2015 National Latino Health and Immigration Survey.

Variables	Full Model		Female Model		Male Model	
	β	Odds Ratios	β	Odds Ratios	β	Odds Ratios
Reference category: Street race White						
Latino	.062	1.064	-.181	.834	.514**	1.673**
Black	.062	1.064	-.100	.905	.569	1.767
Arab	.402	1.495	.143	1.154	.728*	2.070*
Mexican	-.357*	.700*	-.634**	.531**	-.001	.999
Woman	-.213*	.808*				
Education ^a	.205***	1.228***	.069	1.072	.300***	1.350***
Age	-.022***	.978***	-.040***	.960***	-.008	.992
Uninsured	-.524***	.592***	-.623**	.536**	-.474*	.622*
Spanish	-.609***	.544***	-.265	.767	-1.084***	.338***
U.S. citizen	.562***	1.755***	.588**	1.800**	.612**	1.845**
Married	-.075	.928	-.325*	.722*	-.143	.867
Reference income: Less than \$20,000						
Income missing	.217	1.243	.201	1.223	.389	1.476
Income \$20,000–\$39,999	.163	1.177	.006	1.006	.489	1.631
Income \$40,000–\$59,999	.326	1.386	.510	1.665	.259	1.296
Income \$60,000–\$79,999	.699***	2.012***	1.230***	3.421***	.670	1.954
Income \$80,000–\$99,999	.207	1.230	.494	1.639	.221	1.247
Income \$100,000–\$150,000	.823***	2.278***	1.071**	2.919**	.913**	2.493**
Income \$150,000+	.674*	1.962*	1.580***	4.855***	.305	1.357
Mexican origin	-.259**	.772**	-.261	.770	-.369*	.691*
Constant	-.362	.697	.937*	2.553*	-1.512***	.220***
Observations	1,197		748		449	
Adjusted R ²	.109		.148		.113	

Note: β is a logit coefficient.

^aHighest education levels completed: 1 = no formal schooling, 2 = Grades 1–8, 3 = some high school, 4 = GED, 5 = high school graduate, 6 = some college, 7 = associate's, 8 = bachelor's, 9 = MA, 10 = PhD/MD.

* $p < .10$. ** $p < .05$. *** $p < .01$.

including street race White women. In other words, reporting that you believe that you are seen as a street race Mexican woman as opposed to a street race White woman decreases the odds of reporting very good and excellent physical health by a factor of 52 percent, holding all else constant. This finding resonates with our hypotheses, namely, that racially stigmatized women such as street race Mexican woman experience a penalty for physical health, holding all other factors constant. This finding may also be related to the increased vigilance that street race Mexican women may experience in this anti-immigrant climate (Salas, Ayon, and Gurrola 2013; Vargas et al. 2016).

Our last set of models also disaggregates our street race variable to better understand the role of racialized-gendered social determinants of health

in how individuals are seen on the street in relation to their reported mental health. As shown in Table 6, we find that there are differences between street race Arab and street race White on the probability of reporting very good and excellent mental health ($p < .01$). In fact, being seen as street race Arab as opposed to street race White decreases the odds of reporting very good and excellent mental health by a factor of 58 percent, holding all else constant. We do find significant differences between street race White and street race Latinx, street race Mexican, and street race Black on the likelihood of reporting optimal mental health, holding all else constant, suggesting White privilege in mental health for those who report that they believe that they are seen as White on the street (Jones et al. 2008).

Table 6. Logistic Coefficients for Regressions of Street Race on Self-rated Mental Health Using 2015 National Latino Health and Immigration Survey.

Variables	Full Model		Female Model		Male Model	
	β	Odds Ratios	β	Odds Ratios	β	Odds Ratios
Reference category: Street race White						
Latino	-.269	.764	-.119	.887	-.546*	.579*
Black	-.189	.828	-.102	.903	-.298	.742
Arab	-.855***	.425***	-.475	.622	-1.211***	.298***
Mexican	-.221	.802	-.291	.748	-.123	.884
Woman	-.085	.919				
Education ^a	.166***	1.180***	.126**	1.134**	.200***	1.222***
Age	-.017***	.983***	-.022***	.978***	-.008	.992
Uninsured	-.383**	.682**	-.622***	.537***	-.049	.952
Spanish	-.070	.933	-.008	.992	-.196	.822
U.S. citizen	.485***	1.624***	.327	1.387	.822***	2.276***
Married	.045	1.046	.301	1.352	-.346	.707
Reference income: Less than \$20,000						
Income missing	.079	1.082	.025	1.025	.204	1.226
Income \$20,000–\$39,999	.371*	1.449*	.397	1.488	.397	1.487
Income \$40,000–\$59,999	.547**	1.728**	.420	1.522	.709*	2.033*
Income \$60,000–\$79,999	1.084***	2.956***	.884**	2.422**	1.361***	3.899***
Income \$80,000–\$99,999	-.045	.956	-.072	.930	.177	1.194
Income \$100,000–\$150,000	1.180***	3.254***	.853*	2.347*	1.592***	4.915***
Income \$150,000+	.438	1.549	-.217	.805	1.477**	4.380**
Mexican origin	-.258*	.773*	-.318*	.728*	-.218	.804
Constant	.251	1.285	.593	1.810	-.368	.692
Observations	1,197		749		448	
Adjusted R ²	.110		.0990		.151	

Note: β is a logit coefficient.

^aHighest education levels completed: 1 = no formal schooling, 2 = Grades 1–8, 3 = some high school, 4 = GED, 5 = high school graduate, 6 = some college, 7 = associate's, 8 = bachelor's, 9 = MA, 10 = PhD/MD.

* $p < .10$. ** $p < .05$. *** $p < .01$.

After stratifying street race by gender, we find street race Arab men to be less likely to report optimal mental health relative to street race White men, holding all else constant ($p < .01$). We also find that street race Latino men are less likely to report optimal mental health relative to street race White men, holding all else constant, which is marginally significant. This may be related to the reality that the anti-Muslim and anti-Latinx rhetoric that has become ubiquitous in the United States has taken an especially negative toll on the mental health of men that are visible minorities. The stress and added vigilance that result from being subjected to race-gender verbal attacks and the threat of physical violence may negatively impact the mental health of racially stigmatized men more immediately than their physical health.

When we explore intra-categorical heterogeneity among women, again, only street race Mexican women have significantly worse mental health, which may be related to the intersecting oppressions faced by women racialized on the street as Mexican. These findings are in line with our original hypotheses.

Regarding demographic control variables in our street race models, we find that across the models, education, age, Mexican origin, household income, and insurance coverage are strong predictors of Latinx health. We also find that those who are more educated are more likely to report optimal health. Additionally, if they are insured and as they get older, respondents are less likely to report very good and excellent physical and mental health. We also find statistical differences between U.S. citizens

and noncitizens (in our physical and mental health models) as U.S. citizens are more likely to report very good and excellent physical and mental health. Lastly, we do find household income differences across our models but tend to see much more variation in our mental health models.

DISCUSSION

We focus our attention to the value added by employing multidimensional measures of race for probing health outcomes among Latinxs in the United States. Using the 2015 Latino National Health and Immigration survey, we examine the relationship between self-perceived physical and mental health status and three multidimensional measures of race: (1) street race, or how you believe other “Americans” perceive your race at the level of the street; (2) socially assigned race, or what we call *ascribed race*, which refers to how you believe others usually classify your race in the United States; and (3) self-perceived race, or how you usually self-classify your race on questionnaires. We also engage intersectionality by disaggregating the street race measure by gender. To our knowledge, our study is the first to use multidimensional measures of race and engage intersectionality to explore social inequalities in health.

We find that using each of the aforementioned measures of race leads to widely different reporting, where those replying that their race is White may range from a low of 14 percent to a high of 45 percent. Using White as the reference category in each of the multidimensional measures of race, we find that self-perceived race was statistically correlated to physical health status; only those who self-perceived their race as White had higher odds of reporting optimal health. For mental health, street race was statistically significant for predicting mental health. This is important because this correlation may have remained invisible if we had relied on the gold standard of using self-identified race or even ascribed race. It may also mean that the pathway between mental health and social psychological processes and mechanisms may be more direct, whereas effects on physical health status may take longer to manifest. This is not to say that physical health is unaffected by social psychological processes but rather to underscore that your mental health status may be the first thing to change when exposed to everyday racism, whereas the impact on physical health may take longer to manifest and may be more directly a function of a multitude of structural factors in a way that mental

health is not (Brown 2003; Geronimus 2013; Monk 2015; Williams and Mohammed 2013).

We also engaged in intersectional inquiry by providing an empirical analysis that combines street race and gender for examining health status. Using street race White as the reference category, we find surprising results in separate models for physical and mental health status for men and women. For physical health, street race Arab and street race Mexican men had higher odds of reporting optimal physical health; however, street race Latinx and street race Arab men had lower odds of reporting optimal mental health. Why street race Arab and street race Mexican men would have higher odds of optimal physical health than all other street race categories including street race White is quite unexpected and warrants further explanation through further studies.

Among women, none of the non-White street race social locations were statistically different from street race White women for mental health. This also was not expected since we postulated that women who believed that they were racialized as street race White would report better mental health than all other street race–gender social locations (Richardson et al. 2011). However, for physical health, street race Mexican women reported lower optimal health when compared to all other categories. This finding echoes previous research, which found that women report lower self-rated health than their male counterparts and that being socially assigned Mexican race is associated with negative health outcomes, even if you are not of Mexican origin (Brown et al. 2016; Vargas et al. 2016).

LIMITATIONS

There are also several limitations to our study. One limitation is that it did not employ observed race or interviewer-assessed measures of skin color or race, which have been associated with important social inequalities (Roth 2016; Telles 2014). The survey did not include measures of hair texture, eye color, or other markers of physical appearance, which may underestimate the number of respondents in the survey that may indeed have light skin, eye color, and European features but do not identify as White (Vargas 2015). Another major limitation was the small samples of AfroLatinxs or Latinxs from indigenous communities, groups that may remain invisible in so-called representative national samples (LaVeist-Ramos et al. 2011; Montalvo and Codina 2001). We also did not have sufficient numbers of transgender individuals in

our sample, so we could not interrogate how street race may function differently within transgender communities (Johnson, Rivera, and López forthcoming; López and Gadsden 2016).

Future research should create targeted oversamples of AfroLatinxs and Indigenous Latinxs. In addition, triangulated data focused on multidimensional measures of race would benefit from also including interviewer assessments of race and skin color in a given context as racial status for the same individual may vary depending on the local context. This could greatly expand our understandings of racialized health inequities (Candelario 2007; Gravlee and Dressler 2005; Monk 2015; Roth 2010, 2016; Sue 2014). It is also important to note that although we do provide an analysis of correlations and associations between physical and mental health status and a given multidimensional measure of race, we do not directly identify the mechanisms for these correlations (e.g., experiences with discriminatory treatment, concentration in segregated disadvantaged communities, etc.).

Despite these limitations, we argue that the street race measure is a novel, value-added measure that adds to our methodological toolbox of multidimensional measures of race or racialization at the micro/individual level. Street race may be an especially important measure for mental health but not always physical health, and it can provide a window to the individual's subjective sense of place within social hierarchies of race in the U.S. landscape (Monk 2015; Roth 2010, 2016). When combined with gender, street race can be leveraged to unique social locations as categories of experience for interrogating health inequity (Bowleg 2012; Cacari-Stone et al. 2017; J. Collins 2007; Hankvisky 2012; López et al. forthcoming; McCall 2005; Morales 2008; Saenz and Morales 2015; Van Hattum et al. 2017; Viruell-Fuentes et al. 2011).

CONCLUSION

By 2060, Latinxs are projected to represent 28 percent of the U.S. population, or 119 million people. Against the backdrop of the normalization and proliferation of anti-Mexican, nativist, racist, xenophobic, misogynistic, homophobic, and Islamophobic discourses and attacks against individuals and entire communities based on what they look like, street race may provide a tool for capturing the heterogeneity of the Latinx experience with racialization. As the percentage of people taking DNA tests and marking one or more race(s) in questionnaires

increases and the color line hardens, the use of the street race measure will become even more important for assessing social inequalities. We believe that our findings indicate new avenues for future research that can help us make sense of the mixed results for social inequalities that are associated with Latinx communities (P. H. Collins and Shay 1994). Another benefit of the street race measure is that the wording provides an implicit definition of race as an interactive process, which has the potential to dislodge essentialist, biomedical, and culturally racist understandings of race that have become pervasive in both lay and scientific communities (Duster 2003; Morning 2011; Nelson 2016; Shiao et al. 2012; Tallbear 2013; Zuberi 2001). It is our hope that this first empirical test of the street race measure expands our toolbox for interrogating social inequality.

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NOTES

1. We employ the gender-neutral terms *Latinx* and *Hispanic* interchangeably to refer to women, men, transgender and nonbinary individuals, and communities that come from the Spanish-speaking Caribbean, Latin America, and/or the descendants of former Spanish colonies in the western and southwestern United States.
2. There were not sufficient numbers of transgender respondents to report separate outcomes.
3. The 2016 Social Determinants of Health in New Mexico Study conducted by the Robert Wood Johnson Foundation (RWJF) Center for Health Policy at the University of New Mexico did include a question on street gender (López 2014), but again the numbers of participants identifying as transgender was very small and could not be reported. Future research on social inequalities in the transgender community may need to include multiple waves of surveys that also employ multidimensional measures of gender, including self-identified gender, street gender, and sex assigned at birth.

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