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

Nancy López,

University of New Mexico, Sociology Department, MSCO5 3080, 1 University of New Mexico, Albuquerque, NM 87131, Tel: 505 277-3101

Edward D. Vargas, PhD,

Center for Women's Health and Health Disparities Research, University of Wisconsin-Madison, 1180 Observatory Drive, IRP 3467, Madison, WI 53705, USA

Melina Juarez,

University of New Mexico, Political Science Department, MSC05 3070, 1 University of New Mexico, Albuquerque, NM 87131, 505 277-5104

Lisa Cacari-Stone, and

University of New Mexico, MSCO9 5070, College of Population Health, 1 University of New Mexico, Albuquerque, NM 87131, 505 272-0511

Sonia Bettez

University of New Mexico, Evaluation Lab, MSC02 1625, 1 University of New Mexico, Albuquerque, NM 87131, 505 277-4257

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 U.S.; 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[1] 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 U.S. 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, Zambrana and Dill (2006) allude to the complexities of historic White supremacist colonization and the on-going dynamics of internalized racism that may complicate data collection (Bonilla-Silva 2003; Gómez 2007; Dowling 2014; Foley 2016; Cobas et al. 2009; Garcia et al. 2015).

Against the backdrop of historic and on-going 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 U.S. 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.

In order to advance these aims, we place racial formation theory, critical race theory, as well as intersectionality into a productive dialogue for interrogating intracategorical complexity among Latinx communities in the U.S. We argue that multidimensional measures of race coupled with intersectional inquiry are important for excavating social inequalities in health (Hogan 2017; Irizarry 2015; Howell and Emerson 2016; López 2013; Weinick et al. 2004; Otiniano et al. 2012; Saperstein et al. 2016).

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 (World Health Organization 2016; Williams and Mohammed 2013; Monk 2015; Matthew 2015; Jones

[1]We employ the gender-neutral terms "Latinx" and Hispanic interchangeably to refer to women, men, transgender and non-binary 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 U.S.

2000). 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 (Sue 2014; Montalvo and Codiana 2001; Fox and Rivera-Salgado 2004; Harris 1993; Du Bois [1899] 1996, [1903] 1999; Bonilla-Silva and Glover 2006; Perreira and Telles 2014; Sue 2014; Zambrana and Dill 2006; Rodriguez et al. 2012; Hogan 2017). 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 (Gravlee and Dressler 2005; Perreira and Telles 2014; Flores et al. 2008; Telles 2014; Sue 2014; LaVeist-Ramos et al. 2011; 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 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 overtime. Monk (2015:20) 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 (Gravlee and Dressler 2005; Gravlee 2009; Campbell & Troyer 2007).

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 (Harris 1993; McIntosh 1998; Sue 2014; Telles and Ortiz 2008; Frankenberg 1993; Mills 2016; Allen 2001; Gómez 2007). 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; Harris 1993; Haney-Lopez 2016; Gómez 2007; Frankenberg 1993).

An intersectional lens is also valuable for interrogating the social determinants of health (Shultz and Mullings 2006; Hankivsky 2012; Bowleg 2012; Viruell-Fuentes et al. 2012; López and Gadsden 2016; Collins and Bilge 2016; Crenshaw 1993; Schultz and Mullings 2006; Hinkson 2017; Ray 2014; Araújo and Borrell 2006; Richardson et al. 2011; Weber 2006; Weber 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 (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 (A) is related to using three measures of race to predict physical and mental health. The second set of hypotheses (B) 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 locations and health status.

Hypotheses A

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.

2a.) 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.

3a.) We expect to find that our measures of other-perceived race, namely the 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.

Hypotheses B

1b.) 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.

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 wellbeing. 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 on-line. Our dataset 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 dataset, 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 question 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 et al. 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 Benjamini 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 (Jones et al. 2008; Vargas et al. 2015; Pascoe and Richmond 2009; Mossey and Shapiro 1982; Idler and Benyamini 1997). 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 1934, quoted in Monk 2015:412; also see Cooley 1983; Blumer 1969; Du Bois 1899).

We intentionally asked respondents to self-classify their specific Hispanic/Latinx national origin as the first question in the survey to re-verify 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 the “street race” to probe if Latinxs were racialized accordingly (Selod and Embrick 2013). We include “immigrant race” in the “self-perceived race” formats and in 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 Behavioral Risk Factor Surveillance System (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 (LaVeist-Ramos et al. 2011; Gravlee & Dressler 2005; López 2013; Jones et al. 2008; Jones 2001; Hogan 2011). 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 (Centers for Disease Control 2011a, 2011b; Vargas et al. 2016). Table 2 lists summary statistics for all variables in this analysis.

[2]There were not sufficient numbers of transgender respondents to report separate outcomes.

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 (Collins 2007; Bowleg 2012; 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.

RESULTS

Table 2 displays the distribution of our sample. The mean age was 46, and most 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 White in accordance with question format, and, 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

[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 they 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.

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 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 it may not necessarily actually represent how are really seen by "other Americans" (Dowling 2014; 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 (Zuberi 2001; Chapman and Berggren 2005).

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, 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 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 (Vargas et al. 2016; Salas et al. 2013).

Our last set of models also disaggregate 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 5, 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 ($p<0.01$). 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). 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 ($p<0.01$). 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 U.S. has taken an especially negative toll on the mental health of men that are visible minorities. The stress and added vigilance that results 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 intracategorical 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 non-citizens (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 U.S. 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 U.S.; 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% to a high of 45%. 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 ascribe race. It may also mean that the pathway between mental health and social psychological processes and mechanisms may be more direct, while 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 (Geronimus 2013; Williams and Mohammed 2013; Brown 2003; Monk 2015).

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 (Vargas et al. 2016; Brown et al. 2007).

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 (Telles 2014; Roth 2016). 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 many 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 Codia 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 & López forthcoming; López & Gadsden 2016).

Future research should create targeted over-samples 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 (Monk 2015; Gravlee and Dressler 2005; Candelario 2007; Sue 2014; Roth 2012). 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 (Roth 2016; Monk 2015). When combined with gender, “street race” can be leveraged to unique social locations as categories of experience for interrogating health inequity (Collins 2007; Bowleg 2012; Viruell-Fuentes et al. 2012; Hankvisky 2012; McCall 2005; Saenz and Morales 2015; Morales 2008).

CONCLUSION

By 2060 Latinxs are projected to represent 28% 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 (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 (Shaio et al. 2012; Tallbear 2008; Duster 2003; Morning 2011; Nelson 2016; 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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Biographies

Nancy López PhD is associate professor of sociology at the University of New Mexico, director and co-founder of the Institute for the Study of "Race" and Social Justice and she is the founding coordinator of the New Mexico Statewide Race, Gender, Class Data Policy Consortium. Her books include: *Hopeful Girls, Troubled Boys: Race and Gender Disparity in Urban Education* (Routledge, 2003) and *Mapping "Race": Critical Approaches to Health Disparities Research* (Rutgers, 2013), co-edited with Dr. Laura Gómez. Dr. Lopez's current research uses intersectionality, critical race theory, racial formation theory and colorblind racism to examine ontologies of race in several sites: Office of Management and Budget (OMB), Census, scholarly associations statements and Supreme Court rulings; she cautions that current proposals to combine two analytically distinct concepts, Hispanic origin and race, into one question for the 2020 Census may undermine civil rights monitoring and enforcement. Dr. López argues data collection should be anchored in ethical accuracy for social justice rather than an aesthetic accuracy for compliance only.

Edward Vargas is assistant professor at the School of Transborder Studies at Arizona State University. Dr. Vargas was a postdoctoral fellow at the Center for Women's Health and Health Disparities Research at the University of Wisconsin-Madison. Dr. Vargas earned Ph.D. in Public Affairs from the School of Public and Environmental Affairs at Indiana University. His research interests include the effects of poverty and inequality on the quality of life, focusing specifically on health, education, and social policy, and how these factors contribute to the well-being of vulnerable families. He also investigates the methodological issues involved in the quantitative study of race and ethnicity. Dr. Vargas is investigating how socio-political, familial, and personal contexts that make up the Latino/a experience affect their physical and mental health. In particular, he is examining the effects of immigration policy and deportations on health, health hardships on the well-being of Latino/a families.

Melina Juarez is a PhD student with concentrations in American Politics and Public Policy. Melina's research focuses on Latinx and minority politics, health, and well-being; immigration policy and politics; and race, gender, and class theories. She is currently a doctoral fellow with the Robert Wood Johnson Foundation Center for Health Policy at the University of New Mexico. She holds a BA in Political Science from California State University, Stanislaus and a Master's in Transatlantic Politics from the University of North Carolina, Chapel Hill.

Dr. Lisa Cacari Stone is Associate Professor in the College of Population Health and Assistant Director with the RWJF Center for Health Policy at the University of New Mexico. Dr. Cacari Stone received her PhD from Brandeis University, completed her postdoctoral

research at the Harvard T.H. Chan School of Public Health, and served as a policy fellow with the late Senator Edward Kennedy. Her research focus on upstream determinants of health including societal and political structures and relationships that differentially affect population health, characteristics of the health care system and policy interventions that influence health equity. Her community engaged research with Latino and U.S.-Mexico border communities encompass the macro-level determinants of health (e.g., immigration policy, health reform), the community level (e.g., impact of neighborhood context and migration on substance use), and the interpersonal level (e.g., the role of promotores de salud in bridging patient and provider communication for chronic disease management among Latinos).

Sonia Bettez is Associate Director of the Evaluation Lab at the University of New Mexico. Dr. Bettez supervises students learning and practicing program evaluation with social justice organizations and is planning the expansion of the Evaluation Lab throughout the state. Dr. Bettez was born and grew up in Bogota, Colombia and earned a PhD in sociology from the University of New Mexico (as a Robert Wood Johnson Foundation fellow) with concentrations in health and race and social relation and is committed to working with communities and academia to bridge academic research, human services work and policy to overcome socio-structural inequities.

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Table 1

Crosstab of Street Race, Ascribed Race and Self-Perceived Race Using the 2015 National Latino Health and Immigration Survey

Street Race[1]	**N**	**Percent**	**Ascribed Race**[2]	**N**	**Percent**	**Self-Perceived Race**[3]	**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	0.56	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	0.7	---	---	---
Asian	29	2.04	---	---	---	Asian	7	0.47
---	---	---	Cuban	42	2.93	Native Hawaiian/Pacific Islander	9	0.61
			Puerto Rican	98	6.83	---	---	---
---	---	---	Immigrant	57	3.97	---	---	---
Other	60	4.23				Other	66	4.47
Total	1420			1435			1475	

[1]"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?"

[2]"How do other people usually classify your race in the United States. Would you say that others usually view you as?"

[3]What 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	Min	Max
Self-Rated Physical Health[1]	0.43	0.50	0	1
Self-Rated Mental Health[2]	0.60	0.49	0	1
Self-Perceived White Race	0.45	0.50	0	1
Ascribed as White	0.14	0.35	0	1
Street-Race: White	0.22	0.41	0	1
Street-Race: Latino	0.46	0.50	0	1
Street-Race: Black	0.04	0.20	0	1
Street-Race: Middle Eastern/Arab	0.04	0.19	0	1
Street-Race: Mexican	0.24	0.43	0	1
Woman	0.62	0.49	0	1
Education[3]	5.52	2.36	1	10
Age	45.87	17.00	18	98
Uninsured[4]	0.15	0.36	0	1
Spanish[5]	0.58	0.49	0	1
U.S. Citizen[6]	0.77	0.42	0	1
Married[7]	0.53	0.50	0	1
Income Missing	0.21	0.41	0	1
Income: Less than 20	0.20	0.40	0	1
Income: 20K–39K	0.21	0.40	0	1
Income: 40k–60k	0.13	0.33	0	1
Income: 60k–80k	0.09	0.28	0	1
Income: 80k–100k	0.06	0.24	0	1
Income: 100k–150k	0.07	0.25	0	1
Income: 150k+	0.04	0.19	0	1
Mexican Origin	0.55	0.50	0	1

[1] Self-Rated Physical Health: (0=Poor, Fair, Good, 1=Very Good & Excellent)

[2] Self-Rated Mental Health: (0=Poor, Fair, Good, 1=Very Good & Excellent)

[3] Highest education levels completed, (1= No formal schooling, 2= Grade 1–8, 3=Some HS, 4=GED, 5=HS Graduate, 6=Some College, 7=Associates, 8=Bachelors, 9=MA, 10=Ph.D/MD)

[4] Insurance Coverage: (0=Currently Insured, 1= Currently Uninsured)

[5] Language of Interview: (0=English, 1=Spanish)

[6] Citizenship: (0=Non-Citizens and Permanent Residents, 1=U.S. Citizens)

[7] Marital Status: (0=Unmarried, 1=Married)

Table 3

Logistic Coefficients for Regressions of Various Operations of Race on Self-Rated Physical Health using 2015 National Latino Health and Immigration Survey.

	Street Race Model		Self-Perceived Race Model		Ascribed Race Model	
VARIABLES	***β***	**Odds Ratios**	***β***	**Odds Ratios**	***β***	**Odds Ratios**
Street Race White	0.028	1.028				
Self-Perceived White			0.417***	1.517***		
Ascribed as White					0.193	1.213
Woman	−0.235*	0.791*	−0.218*	0.804*	−0.211*	0.809*
Education[1]	0.197***	1.217***	0.174***	1.190***	0.187***	1.206***
Age	−0.023***	0.977***	−0.022***	0.978***	−0.022***	0.979***
Uninsured	−0.543***	0.581***	−0.559***	0.572***	−0.633***	0.531***
Spanish	−0.501***	0.606***	−0.497***	0.608***	−0.499***	0.607***
U.S. Citizen	0.454***	1.575***	0.400**	1.491**	0.443***	1.558***
Married	−0.049	0.953	−0.101	0.904	−0.062	0.940
Reference Income: Less than 20						
Income Missing	0.211	1.235	0.148	1.160	0.097	1.101
Income: 20K–39K	0.150	1.162	0.030	1.030	0.008	1.008
Income: 40k–60k	0.305	1.357	0.197	1.218	0.183	1.201
Income: 60k–80k	0.781***	2.183***	0.513**	1.671**	0.620**	1.859**
Income: 80k–100k	0.266	1.305	0.168	1.183	0.129	1.138
Income: 100k–150k	0.724**	2.062**	0.631**	1.880**	0.619**	1.857**
Income: 150k+	0.775**	2.171**	0.690*	1.994*	0.642*	1.900*
Mexican Origin	−0.330***	0.719***	−0.310**	0.734**	−0.364***	0.695***
Constant	−0.271	0.762	−0.212	0.809	−0.148	0.862
Observations	1,303		1,340		1,311	
Adjusted R-squared	0.0983		0.0968		0.0972	

Notes:

*** p<0.01,

Sociol Race Ethn (Thousand Oaks). Author manuscript; available in PMC 2018 February 06.

** p<0.05,

* p<0.1,

β is a logit coefficient

1 Highest education levels completed, (1= No formal schooling, 2= Grade 1–8, 3=Some HS, 4=GED, 5=HS Graduate, 6=Some College, 7=Associates, 8=Bachelors, 9=MA, 10=Ph.D/MD)

Table 4

Logistic Coefficients for Regressions of Various Operations of Race on Self-Rated Mental Health using 2015 National Latino Health and Immigration Survey.

	Street Race Model		Self-Perceived Race Model		Ascribed Race Model	
VARIABLES	***β***	**Odds Ratios**	***β***	**Odds Ratios**	***β***	**Odds Ratios**
Street Race White	0.342**	1.408**				
Self-Perceived White			0.239*	1.270*		
Ascribed as White					0.084	1.088
Woman	−0.108	0.898	−0.108	0.898	−0.094	0.911
Education[1]	0.162***	1.176***	0.159***	1.172***	0.166***	1.181***
Age	−0.015***	0.985***	−0.014***	0.986***	−0.012***	0.988***
Uninsured	−0.471***	0.625***	−0.440***	0.644***	−0.477***	0.620***
Spanish	−0.070	0.932	−0.048	0.953	−0.007	0.993
U.S. Citizen	0.305*	1.356*	0.256	1.291	0.282*	1.326*
Married	−0.044	0.957	−0.056	0.946	−0.019	0.981
Reference Income: Less than 20						
Income Missing	0.062	1.064	0.030	1.030	−0.000	1.000
Income: 20K–39K	0.433**	1.541**	0.308*	1.361*	0.344*	1.411*
Income: 40k–60k	0.631***	1.880***	0.611***	1.842***	0.612***	1.844***
Income: 60k–80k	0.876***	2.400***	0.798***	2.221***	0.822***	2.275***
Income: 80k–100k	0.001	1.001	−0.004	0.996	−0.012	0.989
Income: 100k–150k	1.068***	2.909***	1.052***	2.863***	1.070***	2.916***
Income: 150k+	0.604	1.829	0.539	1.715	0.630	1.877
Mexican Origin	−0.236*	0.790*	−0.254**	0.775**	−0.281**	0.755**
Constant	0.042	1.043	0.028	1.029	−0.061	0.941
Observations	1,303		1,340		1,311	
Adjusted R-squared	0.0979		0.0937		0.0958	

Notes:

*** p<0.01,

** p<0.05,

* p<0.1,

β is a logit coefficient

1 Highest education levels completed, (1= No formal schooling, 2= Grade 1–8, 3=Some HS, 4=GED, 5=HS Graduate, 6=Some College, 7=Associates, 8=Bachelors, 9=MA, 10=Ph.D/MD)

Table 5

Logistic Coefficients for Regressions of Street-Race on Self-Rated Physical Health using 2015 National Latino Health and Immigration Survey.

	Full Model		Female Model		Male Model	
VARIABLES	***β***	**Odds Ratios**	***β***	**Odds Ratios**	***β***	**Odds Ratios**
Reference Category: Street-Race White						
Latino	0.062	1.064	−0.181	0.834	0.514**	1.673**
Black	0.062	1.064	−0.100	0.905	0.569	1.767
Arab	0.402	1.495	0.143	1.154	0.728*	2.070*
Mexican	−0.357*	0.700*	−0.634**	0.531**	−0.001	0.999
Woman	−0.213*	0.808*				
Education[1]	0.205***	1.228***	0.069	1.072	0.300***	1.350***
Age	−0.022***	0.978***	−0.040***	0.960***	−0.008	0.992
Uninsured	−0.524***	0.592***	−0.623**	0.536**	−0.474*	0.622*
Spanish	−0.609***	0.544***	−0.265	0.767	−1.084***	0.338***
U.S. Citizen	0.562***	1.755***	0.588**	1.800**	0.612**	1.845**
Married	−0.075	0.928	−0.325*	0.722*	−0.143	0.867
Reference Income: Less than 20						
Income Missing	0.217	1.243	0.201	1.223	0.389	1.476
Income: 20K–39K	0.163	1.177	0.006	1.006	0.489	1.631
Income: 40k–60k	0.326	1.386	0.510	1.665	0.259	1.296
Income: 60k–80k	0.699***	2.012***	1.230***	3.421***	0.670	1.954
Income: 80k–100k	0.207	1.230	0.494	1.639	0.221	1.247
Income: 100k–150k	0.823***	2.278***	1.071**	2.919**	0.913**	2.493**
Income: 150k+	0.674*	1.962*	1.580***	4.855***	0.305	1.357
Mexican Origin	−0.259**	0.772**	−0.261	0.770	−0.369*	0.691*
Constant	−0.362	0.697	0.937*	2.553*	−1.512***	0.220***
Observations	1,197		748		449	
Adjusted R-squared	0.109		0.148		0.113	

Notes:

*** p<0.01,

** p<0.05,

* p<0.1,

β is a logit coefficient

1 Highest education levels completed, (1= No formal schooling, 2= Grade 1–8, 3=Some HS, 4=GED, 5=HS Graduate, 6=Some College, 7=Associates, 8=Bachelors, 9=MA, 10=Ph.D/MD)

Table 6

Logistic Coefficients for Regressions of Street-Race on Self-Rated Mental Health using 2015 National Latino Health and Immigration Survey.

	Full Model		Female Model		Male Model	
VARIABLES	***β***	**Odds Ratios**	***β***	**Odds Ratios**	***β***	**Odds Ratios**
Reference Category: Street-Race White						
Latino	−0.269	0.764	−0.119	0.887	−0.546*	0.579*
Black	−0.189	0.828	−0.102	0.903	−0.298	0.742
Arab	−0.855***	0.425***	−0.475	0.622	−1.211***	0.298***
Mexican	−0.221	0.802	−0.291	0.748	−0.123	0.884
Woman	−0.085	0.919				
Education[1]	0.166***	1.180***	0.126**	1.134**	0.200***	1.222***
Age	−0.017***	0.983***	−0.022***	0.978***	−0.008	0.992
Uninsured	−0.383**	0.682**	−0.622***	0.537***	−0.049	0.952
Spanish	−0.070	0.933	−0.008	0.992	−0.196	0.822
U.S. Citizen	0.485***	1.624***	0.327	1.387	0.822***	2.276***
Married	0.045	1.046	0.301	1.352	−0.346	0.707
Reference Income: Less than 20						
Income Missing	0.079	1.082	0.025	1.025	0.204	1.226
Income: 20K–39K	0.371*	1.449*	0.397	1.488	0.397	1.487
Income: 40k–60k	0.547**	1.728**	0.420	1.522	0.709*	2.033*
Income: 60k–80k	1.084***	2.956***	0.884**	2.422**	1.361***	3.899***
Income: 80k–100k	−0.045	0.956	−0.072	0.930	0.177	1.194
Income: 100k–150k	1.180***	3.254***	0.853*	2.347*	1.592***	4.915***
Income: 150k+	0.438	1.549	−0.217	0.805	1.477**	4.380**
Mexican Origin	−0.258*	0.773*	−0.318*	0.728*	−0.218	0.804
Constant	0.251	1.285	0.593	1.810	−0.368	0.692
Observations	1,197		749		448	
Adjusted R-squared	0.110		0.0990		0.151	

Notes:

*** p<0.01,

** p<0.05,

* p<0.1,

β is a logit coefficient

1 Highest education levels completed, (1= No formal schooling, 2= Grade 1–8, 3=Some HS, 4=GED, 5=HS Graduate, 6=Some College, 7=Associates, 8=Bachelors, 9=MA, 10=Ph.D/MD)