



## Self-rated health of both US citizens and noncitizens is associated with state-level immigrant criminalization policies

Maria-Elena De Trinidad Young<sup>a,\*</sup>, Danielle M. Crookes<sup>b</sup>, Jacqueline M. Torres<sup>c</sup>

<sup>a</sup> Department of Public Health, School of Social Sciences, Humanities, and Arts, University of California, Merced, CA, USA

<sup>b</sup> Department of Health Sciences, Bouvé College of Health Sciences and Department of Sociology and Anthropology, College of Social Sciences and Humanities, Northeastern University, Boston, MA, USA

<sup>c</sup> Department of Epidemiology & Biostatistics, UC San Francisco, San Francisco, CA, USA

### ARTICLE INFO

#### Keywords:

Immigrant policy  
State policy  
Race/ethnicity  
Self-rated health  
Health inequities

### ABSTRACT

Evidence shows that state-level restrictive immigrant policies are associated with health disparities between noncitizens and citizens. Most research has focused on Latinos and there is limited knowledge of the relationship between restrictive policies and citizenship status among other groups, particularly Asian and Pacific Islanders (API). We examined whether state-level criminalization policy contexts (e.g., law enforcement collaboration with immigration authorities, E-Verify employment authorization) were associated with self-rated health (SRH) by citizenship, with a focus on Latinos and APIs. We expected that criminalization policies would be associated with worse health for noncitizens and citizens, but with a more negative influence for noncitizens; and that this pattern would be the same for Latinos and APIs. We merged a state-level immigrant criminalization policy database with a multi-racial/ethnic sample from 2014 to 2015 National Health Interview Survey (NHIS,  $n = 70,335$ ). We tested the association between SRH and the number of state-level criminalization policies and generated predicted probabilities of noncitizens and citizens reporting excellent health in states with the most and fewest criminalization policies for the full sample, Latino, and API respondents. In states with the most criminalization policies, all noncitizens had a *higher* and all US-born citizens had a *lower* probability of excellent health. In states with the fewest criminalization policies there were no differences by citizenship status. Findings provide new evidence that state-level immigrant policies may harm the health of US-born citizens. As immigrant policymaking at the state level continues, understanding the relationship between state-level immigrant policies and health inequities across citizenship statuses will continue to be critical to improving population health.

### 1. Introduction

US states have become critical sites of policymaking regarding immigration and immigrant populations (Motomura, 2014; Varsanyi, 2008). State legislatures, courts, and administrative agencies have discretion to enact restrictive policies that limit noncitizens' rights and authorize enforcement in communities and workplaces (Pham & Pham, 2014; Wallace et al., 2018). In the last ten years, most state-level policymaking has been restrictive and anti-immigrant (Samari et al., 2021) and associated with changing state demographics and political polarization (Gulasekaram and Ramakrishnan 2012; Marquez & Schraufnagel, 2013).

Mounting evidence indicates that state-level restrictive immigrant policies are associated with worse health outcomes among noncitizens,

resulting in health inequities by citizenship status, as well as among populations of color, primarily Latinos, who experience the racializing impact of restrictive policies (Crookes et al., 2022; Pereira & Pedroza, 2019). There has been limited examination, however, of health inequities by citizenship status across different groups, particularly among Asian and Pacific Islanders, the second largest immigrant group in the US. In this study, we examine how criminalization policies influence health inequities by citizenship in a multiple race/ethnic sample, with a focus on Latinos and APIs. Immigrant policymaking by states will likely continue to influence how public policies treat immigrants and US-born citizens, many of whom live in mixed-status families. Understanding the relationship between state-level immigrant policies and health inequities by citizenship will be critical to improving population health.

\* Corresponding author. 5200 N. Lake Rd., Merced, CA, 95340, USA.

E-mail address: [mariaelena@ucmerced.edu](mailto:mariaelena@ucmerced.edu) (M.-E.D.T. Young).

<https://doi.org/10.1016/j.ssmph.2022.101199>

Received 22 April 2022; Received in revised form 3 August 2022; Accepted 4 August 2022

Available online 10 August 2022

2352-8273/© 2022 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

### 1.1. Immigrant criminalization policies and citizenship health inequities

While only the federal government can create immigration policies, state policymakers can enact and implement *immigrant* policies that determine the rights of noncitizens residing in their state. Restrictive state immigrant policies exist within numerous policy sectors, including law enforcement, criminal justice, and employment. They can be described as *criminalization* policies because they influence mechanisms of surveillance, policing, and deportation of noncitizens and create contexts that racialize immigrants and people of color as threatening “others” (Young & Wallace, 2019). State-level immigrant policies related to enforcement include laws authorizing local police or sheriffs to collaborate with federal immigration authorities. State criminal justice policies include sentencing laws, which can trigger grounds for deportation under federal immigration law (Stumpf, 2006). State policies also regulate who can qualify for identification or driver’s licenses and mandate employment authorization verification and legal status verification by law enforcement. These policies result in processes, such as the E-Verify employment verification system, in which noncitizens experience ongoing surveillance and verification of their legal status and in which both noncitizens and citizens experience bureaucratic burdens (LeBrón et al., 2018).

Specific restrictive immigrant policies, such as federal and state enforcement policies, have been linked with poor immigrant health outcomes. For example, federal policies authorizing law enforcement to collaborate with federal immigration enforcement (e.g., 287(g), Secure Communities) are associated with Latino immigrants’ avoidance of health care (Hacker et al., 2011; Rhodes et al., 2015; Wang & Kaushal, 2018). At the state level, policies such as Arizona’s SB 1070, which would have required law enforcement to check individuals’ legal status during routine stops, have been linked to an increase in low birth weight, worse self-rated health, and declines in use of safety net programs among immigrant Latinos and Latinas (Toomey et al., 2014; Torche & Sirois, 2019).

Beyond any single policy, however, there is also mounting evidence that states’ overall policy contexts are associated with poor health outcomes among immigrants and US-born populations (Crookes et al., 2022; Crookes et al., 2022; Philbin et al., 2018; Rhodes et al., 2020; Wallace et al., 2018). Studies show that states with more restrictive, criminalizing policies have worse health and social outcomes among some groups, including barriers to health care, poverty, poor birth outcomes, and mental health problems (Hatzenbuehler et al., 2017; Sudhinaraset et al., 2021; Young et al., 2020; Young et al. 2017, 2018). Because criminalization policies span numerous sectors, they produce contexts in which individuals are exposed to anti-immigrant social climates, institutional practices, or interpersonal interactions across different aspects of their lives that shape material and psychosocial health mechanisms (e.g., barriers to resources, chronic stress) (Philbin et al., 2018). For example, in states with many criminalization policies, individuals may be exposed to anti-immigrant media messages (Young et al., 2021); be perceived as a threatening “others” (Viruell-Fuentes, 2007); or experience interpersonal discrimination through interactions with police (Armenta, 2017).

### 1.2. State-level criminalization policy contexts and the health of Latino and Asian and Pacific Islander noncitizens and citizens

Overall, we conceptualize state-level criminalization policy contexts as an “intentional and not unusual” (Carbado, 2011) *system* that enacts nativist attitudes that reinforce citizenship and racial/ethnic hierarchies in the United States, marginalizing both immigrants and US citizens of color (Gee & Ford, 2011). Criminalization policies have largely targeted immigrant communities of color through racialized policing and surveillance (Armenta, 2017). This has led scholars to describe the enforcement system as a “racial removal program” (Golash-Boza & Hondagneu-Sotelo, 2013). As Golash-Boza has argued, enforcement and

deportation policies are not simply about migration control but, similar to criminal justice policies, a “racialized and gendered tool of state repression” (Golash-Boza 2016, p.503).

Because of the evidence of the racializing impact of criminalization policy contexts, much of the recent research has focused on Latino populations. Federal immigration policies have shaped the legality and racial positions of Latinos in the United States, historically and currently (Asad & Clair, 2018; Hernández, 2008; Ngai, 2004). Many recent policies, such as Arizona’s SB 1070, have been enacted explicitly to limit Latino migration (Armenta & Alvarez, 2017; Saenz et al., 2012). There has been less examination, however, of criminalization policies and outcomes among noncitizens and citizens of other races/ethnicities, particularly API immigrants, the United States’ second largest immigrant group (Clough et al., 2013). Further, evidence from the limited comparative studies on both Latinos and APIs is mixed. One study found that in states with more inclusive policies, Latino noncitizens had higher health insurance rates, but API noncitizens did not (Young et al., 2017).

APIs have experienced unique trajectories of citizenship stratification and racialization in the US (Alegria et al., 2004; Escudero, 2020). Although their trajectories are distinct from those of Latinos, APIs are similarly subject to potential material and psychosocial risks to health as they make their lives under criminalization contexts. As a result, they likely also experience worse outcomes in criminalization contexts. API populations have been racialized as “model minorities” but have still contended with xenophobic attitudes that reinforce their position as perpetual, and deportable, foreigners (Lachica Buenavista 2018; Molina, 2006; Ngai, 2004). Mounting evidence indicates that many API immigrants, particularly those that are undocumented, have been exposed to immigration enforcement at the border and racialized policing in communities (Hsin & Aptekar, 2021). Comparative examination of the relationship between criminalization policies and health inequities between citizens and noncitizens across different races/ethnicities can contribute to the growing knowledge of the population impact of these policies.

For both Latino and API noncitizens, criminalization policies may influence health by shaping the authorization or permissibility of their life, work, and other behaviors as members of a state’s society. These policies selectively target some immigrants for arrest or deportation - who experience direct contact with policing and deportation - while also reinforcing the vulnerability for deportation among all noncitizens (De Genova & MaePeutz, 2010). For example, in California, among a sample of mostly undocumented Latina immigrant women, reporting worry about deportation for one’s self or a loved one was associated with greater body mass index and blood pressure, suggesting a link between stress created by criminalization policies and physical well-being (Torres et al., 2018). Recent evidence suggests that similar worry is also associated with worse health among API immigrants. A study found that fears of deportation mediated the relationship between legal status and depressive symptoms among Asian noncitizens (Yellow Horse & Vargas, 2022).

Both Latino and API documented immigrants may experience less vulnerability to deportation, but similarly feel concern about the negative impact of criminalization policies and the lack of security because they are noncitizens (Asad, 2020b; Vargas, Sanchez and Juárez 2017). For example, Lawful Permanent Resident Latinos living at the US-Mexico border reported high levels of stress as they contended with daily encounters with immigration officials (Sabo & Lee, 2015). Evidence suggests that API noncitizens also experience such vulnerability, but through often hidden and potentially stigmatizing ways. For example, evidence indicates that API youth experience high level of stigma associated DACA status within their own ethnic communities and limited support in navigating resources, including physical and mental healthcare services (Sudhinaraset et al., 2017). Ultimately, the racial and citizenship inequities that noncitizens in both groups face may result in similarly harmful influences on health (Escudero, 2020; Asad & Clair, 2018).

For US-born Latinos and Asians, criminalization policy contexts may

influence health by shaping the social environment in which they experience structural and interpersonal discrimination, regardless of citizenship status. Recent evidence shows that, despite being US citizens, many Latino US citizens fear deportation (Asad, 2020a). There has been little research on criminalization policies and US-born API individuals. The evidence from studies of Latino and API populations suggests that in restrictive policy contexts, individuals may experience a process of “othering” in which day-to-day encounters with discrimination and stress serve as reminders of their subordinate social and racial position (Kwon, 2022; Viruell-Fuentes et al., 2013). In addition, many US citizens live in mixed-status families in which at least one family member is not a citizen, resulting in “spillover” effects in which policies result in harmful implications for entire families and communities (Vargas, Sanchez and Juárez 2017). US citizens in mixed-status families may contend with the intersecting stress of daily discrimination, concerns about the deportation of loved ones, and the challenges of supporting noncitizen family members (Abrego, 2019; Kwon, 2022). The unique influences of criminalization policy on noncitizens and citizens likely influence both Latino and API populations but may reflect unique dynamics of the intersection of citizenship and racial/ethnic hierarchies. Examination is needed of how states’ overall criminalization policy contexts may be associated with health status of citizens and noncitizens of different racial/ethnic groups.

### 1.2.1. The current study

To investigate the relationship between criminalization policy contexts and differences in health between noncitizens and citizens of different race/ethnic groups, we conducted analysis of a state-level policy data set and a multi-race/ethnic population health data set. We link a database of state immigrant criminalization policies (Young & Wallace, 2019) with individual-level National Health Interview Survey data to examine differences in self-rated health (SRH) among noncitizens and citizens in states with fewer vs. more criminalization policies. This allowed us to assess if differences between noncitizens and citizens varied for Latinos and APIs, the two largest immigrant groups in the US. We focus on policies enacted in states by December 2013, a time frame that captures policy enactment after federal legislation in 1996 granted US states discretion to participate in immigration enforcement and before 2016 when the Trump campaign and presidency resulted in a new wave of federal immigration policy-making (Pierce & Bolter, 2020; Varsanyi, 2008). A recent policy analysis based on Wallace et al.’s (2018) policy framework showed that between 2009 and 2019 state policy making was primarily restrictive and states’ policy context did not significantly change (Samari et al., 2021). We hypothesized that in states with more, compared to fewer, criminalization policies 1) both noncitizens and US-born citizens would have worse health, but noncitizens would show a greater reduction in SRH. Further, we hypothesized that these associations between criminalization policies and SRH would be the same for both Latinos and APIs.

## 2. Methods

### 2.1. Data sources

**Individual-level data.** Data on health outcomes and other health and socio-demographic characteristics of individuals came from the 2014 and 2015 National Health Interview Survey (NHIS) public and restricted Person and Household files. The merged public-use and restricted-use data were accessed through the University of California, Los Angeles Census Research Data Center. The NHIS collects data on non-institutionalized households in the United States (Parsons et al., 2014). The restricted Person and Household files contain data on state of residence and immigration-related characteristics. To ensure adequate sample size, we pooled data of adult respondents, ages 18 and over, from the 2014 and 2015 samples for a total of sample of 70,335.

**State-level data.** Data on state immigrant criminalization policies

came from a policy dataset containing a systematic review of state immigrant policies in the 50 states and the District of Columbia enacted by December 31, 2013 (Young & Wallace, 2019). The data set contains measures on 6 state criminalization policies, as well as 14 integration policies (See Appendix A). We merged the individual- and state-level datasets on the NHIS state of residence variable to produce an analytic dataset.

### 2.2. Measures

**Health outcome.** The primary outcome was self-rated health (SRH). NHIS respondents were asked to describe their health as excellent, very good, good, fair, or poor. This is a validated measure of general health (Idler & Benyamini, 1997). Levels of SRH were numerically coded such that *increasing* values indicated *worse* health. We combined the fair and poor categories. The prevalence of these categories were relatively small in the sample and the word “fair” may have a slightly different meaning when translated to Spanish (Lee et al., 2019; Viruell-Fuentes et al., 2011). Therefore, our analysis focused solely on predicted probabilities for the excellent health category. In Appendix B, however, we present the predicted probabilities for each SRH category.

**Number of criminalization policies.** For this study, the primary exposure of interest was the number of state criminalization immigrant policies. Criminalization policies are multi-sector policies that enact or authorize policing, surveillance, or deportation of noncitizens, shaping the “legality” of noncitizens’ life, work, and other behaviors as members of a state’s society. These include: immigration enforcement policies (2); criminal justice policies (1); work authorization policies (1), and identification and licensing policies (2). We tallied states’ total number of criminalization policies (observed range 1–6). This approach captured the extent to which a state criminalized noncitizens through legislative, regulatory, or judicial processes (Young & Wallace, 2019). A greater number of criminalization policies indicated a context of greater surveillance, policing, and risk of deportation.

**Citizenship status.** We classified individuals as being a noncitizen, a naturalized citizen, or US-born citizen.

**Race and ethnicity.** We categorized individuals as Latino, Non-Latino White, Non-Latino Black, Non-Latino Asian/Pacific Islander (API) or Non-Latino “Other” which included individuals who self-reported as Native American or multi-racial.

**Individual-level covariates.** We included the following individual-level variables associated with the outcome: age (continuous), sex (1 = female), education (1 = high school graduate), currently working (1 = yes), marital status (1 = married), has a usual source of care (1 = yes), and speaks English well (1 = yes, 0 = no).

**State-level covariates.** We included a measure of the number of integration policies in each state (potential total = 14; observed range 2–11) to account for inclusive policy making which could ameliorate the impact of criminalization policies by extending rights to noncitizens, such as access to Medi-Cal or driver’s licenses for undocumented individuals. We included the percent of the state that was Latino in 2014 and the percent of the electorate who voted Republican in the 2012 presidential election to account for demographic changes and political polarization which may influence policy making.

### 2.3. Statistical analysis

We conducted analyses with Stata 15 software through the Census Bureau Restricted Data Center at the University of California, Los Angeles. We conducted descriptive analysis of the mean and distribution of all variables across citizenship status. To assess the association between self-rated health and criminalization policy, we constructed a mixed-effects ordinal logistic regression model, with a random effect for state of residence. All models were unweighted because NHIS does not have state-level weights.

To assess if the association between level of criminalization policy

and SRH varied for noncitizens, naturalized citizens, and US-born citizens, we estimated a mixed effects ordinal logistic regression model testing a multiplicative interaction between the level of criminalization and citizenship status, including all lower-order effects and covariates. For ease of interpretation, we calculated and plotted predicted probabilities of reporting excellent health in states with 1, 3, and 6 criminalization policies. We tested differences in the predicted probability of reporting excellent health by citizenship status in states with 1 compared to 6 criminalization policies for the full population and for Latinos and APIs, separately. Statistical significance for interaction terms and predicted probabilities were assessed at  $p < 0.05$ .

We conducted sensitivity analyses that controlled for the length of time immigrant respondents had lived in the US, as more time spent living in the United States has been linked to poorer health status (Young & Pebley, 2017). Estimates from models that included this term remained similar to our primary analysis.

### 3. Results

#### 3.1. Descriptive statistics

Table 1 presents the unweighted descriptive statistics for the total sample and by citizenship status. About nine percent of respondents ( $n = 6,171$ ) were noncitizens, 9.6% were naturalized citizens ( $n = 6,724$ ), and 81.7% ( $n = 57,395$ ) were US-born citizens. Latinos and API made up 16.7% and 5.8% of the sample, respectively. About a quarter of the full population reported having excellent health. A higher proportion of noncitizens reported having excellent health compared to naturalized and US-born citizens. The states in which respondents resided had mean of about 3 criminalization policies.

#### 3.2. State criminalization policy, citizenship status, and self-rated health

There was no evidence of an overall association between self-rated health and the number of state-level criminalization policies ( $OR = 1.02$ , 95% CI 0.97–1.07, Table 2). Compared to noncitizens, naturalized citizens had 1.28 (95% CI 1.19–1.37) times the odds and US-born citizens had 1.49 (95% CI 1.39–1.59) times the odds of reporting worse health.

Table 3 shows evidence of a multiplicative interaction between state-level immigrant criminalization policies and citizenship status.

Fig. 1 presents the predicted probabilities of excellent health for the full population of participants of any race or ethnicity. Fig. 2 shows the predicted probabilities across levels of criminalization for APIs and Latinos, indicating that the pattern for both groups was similar to that of the full sample. We caution interpretation of the specific values of the predicted probabilities in our results. The model and predicted probabilities are intended to identify patterns and are not intended to be predictive of population levels of SRH. Among all noncitizens in states with one criminalization policy, 40% were predicted to report excellent health as compared to 44% in states with six. Among US-born citizens in states with one criminalization policy 39% had predicted probability of reporting excellent health, compared 37% in states with six criminalization policies. There were no statistically significant differences in predicted probabilities between noncitizens and US-born citizens in states with one compared to 6 criminalization policies. In contrast, in states with 6 criminalization policies, noncitizens had a higher predicted probability of reporting excellent than US-born citizens.

### 4. Discussion

In this study we examined the association between state-level criminalization policies and the self-rated health of noncitizen, naturalized citizen, and US-born citizens, with a focus on Latinos and APIs who constitute the two largest immigrant groups in the United States. Counter to what we had hypothesized we found that in the states with

**Table 1**

Sample characteristics by citizenship status, adults ages 18 and over, NHIS, 2014–15.

	Noncitizen	Naturalized Citizen	US Born Citizen	All
	n = 6171	n = 6724	n = 57,395	n = 70,335
	%	%	%	%
<b>Self-Rated Health</b>				
(1) Excellent	30.2	26.7	25.6	26.0
(2) Very good	27.7	27.7	32.4	31.5
(3) Good	30.1	29.8	27.1	27.7
(4) Fair/Poor	12.0	15.9	14.9	14.8
<b>Citizenship Status</b>				
Noncitizen				8.8
Naturalized Citizen				9.6
US Born Citizen				81.7
# of state criminalization policies	3.2 ± 0.01	3.3 ± 0.01	3.6 ± 0.005	3.5 ± 1.1
<b>Race</b>				
Latino	64.4	43.0	8.4	16.7
White	9.2	20.9	74.5	63.6
Black	6.1	9.9	15.2	13.9
Asian	20.2	26.3	1.9	5.8
<b>Sex</b>				
Male	47.7	42.1	44.7	44.7
Female	52.3	57.9	55.3	55.3
<b>Age</b>	40.8 ± 0.2	52.6 ± 0.2	50.3 ± 0.08	49.6
<b>High school graduate or higher</b>				
Yes	58.2	78.7	89.3	85.5
No	41.8	21.3	10.7	14.5
<b>Currently working</b>				
Yes	68.7	63.1	63.9	64.3
No	31.3	36.9	36.1	35.8
<b>Currently married</b>				
Yes	57.7	62.7	52.2	53.7
No	42.3	37.3	47.8	46.3
<b>Has health insurance</b>				
Yes	88.6	94.5	94.4	94.0
No	11.4	5.5	5.6	6.0
<b>Speaks English Well</b>				
Yes	53.2	78.8	99.6	93.5
No	46.8	21.2	0.4	6.5
<b>% state voted Republican in 2012</b>	0.45 ± 0.00	0.44 ± 0.00	0.49 ± 0.00	0.48 ± 0.1
<b>% of state foreign born</b>	0.17 ± 0.00	0.17 ± 0.00	0.10 ± 0.00	0.1 ± 0.08
<b>% of state Latino</b>	0.24 ± 0.00	0.22 ± 0.00	0.14 ± 0.00	0.2 ± 0.13
<b># of state integration policies</b>	7.0 ± 0.04	6.8 ± 0.04	5.2 ± 0.01	5.5 ± 2.3

**Table 2**

Mixed effects ordinal logistic regression model with the association between self-reported health and citizenship status, Adults 18 and over, NHIS, 2014–15.

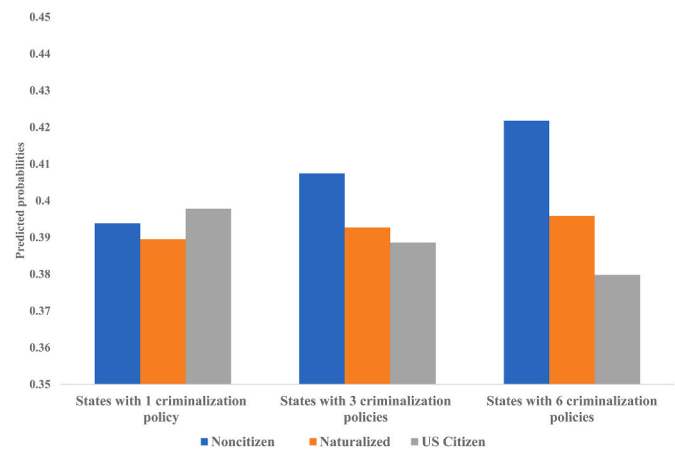
	OR	95% CI	p-value
<b># criminalization policies</b>	1.02	0.97–1.07	0.4
<b>Citizenship</b>			
Naturalized	1.28	1.19–1.37	<0.05
US Born	1.49	1.39–1.59	<0.05
Noncitizen	ref		-
<b>Race/Ethnicity</b>			
White	0.69	0.66–0.73	<0.05
Black	1.11	1.05–1.18	<0.05
Asian	0.80	0.75–0.86	<0.05
Other	1.17	1.02–1.33	<0.05
Latino	ref		-

Notes:  $n = 69,095$ . Model controls for age, gender, high school graduation, employment status, marital status, usual source of care, limited English, % state voted Republican (2012), and % state Latino (2014). Self-reported health is coded as 1 = Excellent, 2 = Very good, 3 = Good, and 4 = Fair/poor.

**Table 3**  
Mixed effects ordinal logistic regression model with the association between self-reported health and intersection of criminalization policy and citizenship status, Adults 18 and over, NHIS, 2014-15.

	OR	95% CI	p-value
<b># criminalization Policies</b>	0.90	0.85–0.958	<0.05
<b>Citizenship</b>			
Naturalized	1.04	0.86–1.3	0.7
US Born	0.93	0.80–1.1	0.4
Noncitizen	ref		-
<b>Race/Ethnicity</b>			
White	0.69	0.65–0.7	<0.05
Black	1.10	1.04–1.2	<0.05
Asian	0.79	0.74–0.9	<0.05
Other	1.16	1.01–1.3	0.03
Latino	ref		-
<b>Citizenship X Criminalization policy</b>			
NaturalizedXCriminalization	1.07	1.01–1.1	0.02
US BornXCriminalization	1.15	1.11–1.2	<0.05
NoncitizenXCriminalization	ref		-

Notes: n = 69,095. Model controls for age, gender, high school graduation, employment status, marital status, usual source of care, limited English, % state voted Republican (2012), and % state Latino (2014). Self-reported health is coded as 1 = Excellent, 2 = Very good, 3 = Good, and 4 = Fair/poor.



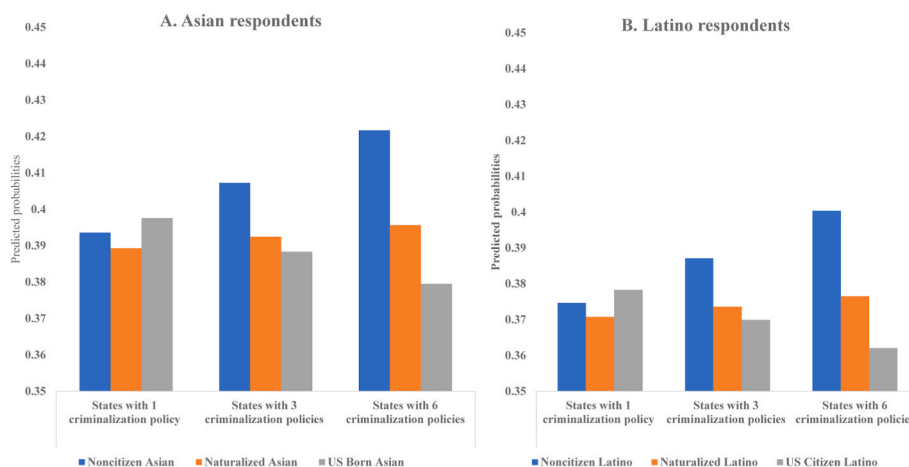
**Fig. 1.** Predicted probabilities of reporting Excellent health, all respondents to NHIS 2014-15.

the most criminalization policies it was US-born citizens – not non-citizens – who were the least likely to report excellent health. In the states with the most criminalization policies, noncitizens were more

likely to report excellent health than US-born citizens. While immigrants have been found to have better outcomes than US-born populations on some indicators (Abraído-Lanza et al., 2016), it is counterintuitive that we would observe the worse outcomes among US-born citizens in these states. This counterintuitive finding, however, indicated a pattern in which the states with the fewest criminalization policies had no meaningful differences in the predicted probability of reporting excellent health among noncitizens, naturalized citizens, and US-born citizens. In contrast, in the states with the most criminalization policies, there were differences in health across citizenship statuses. As expected, the patterns were the same in the separate analyses with Latinos and APIs.

This study is one of the first that suggests that restrictive immigrant policy may be associated with worse outcomes among US-born citizens of any race or ethnicity, including APIs, not solely Latino citizens. On their face, criminalization policies target noncitizens but they may also influence the health of US citizens, an observation often referred to as “spillover” effects. Our findings contribute to a growing literature on the negative impact of restrictive immigrant policies on US born Latinos. Many restrictive policies are racially motivated and the racial profiling employed to enforce policies suggest that their impacts on Latino US citizens are not accidental spillovers but are instead explicitly designed to exclude some Latinos (Romero, 2008; Saenz et al., 2012). A study of Latinos at the US-Mexico border found that all respondents, regardless of citizenship, experienced and were concerned about being targeted by enforcement (Sabo & Lee, 2015). In a study of mixed-status families, after the passage of state-level anti-immigrant omnibus bills (e.g., Arizona’s SB 1070), US-born Latino children with citizen parents were more likely to be enrolled in Medicaid (Allen & McNeely, 2017), likely motivated to proactively seek services in response to increased restrictions. Other studies have similarly found associations between state policy and mental and physical health outcomes among Latino populations that include US-born individuals, demonstrating the potentially racialized impact of policies on US-born citizens of color. Even among Latino families that do not have undocumented or noncitizen members, research has suggested that Latinos experience concern about the negative impact of deportations (Dreby, 2012; Vargas et al., 2018; Vargas, Sanchez and Juárez 2017).

Critically, our findings extend evidence to also show that criminalization policies may be associated with worse outcomes among noncitizen and citizen APIs, suggesting that similar patterns of racialization and discrimination influence the well-being of US-born API populations. To date, there have been few studies that examine the health impact of restrictive immigrant policies in multi-race/ethnic samples, resulting in mixed findings regarding the impact of state immigrant policy across race/ethnic groups. A previous study found that only Latinos, compared to non-Latinos experienced worse mental health in states with restrictive



**Fig. 2.** Predicted probabilities of reporting Excellent health, A. Asian and B. Latino respondents to NHIS 2014-15.

immigrant policies (Hatzenbuehler et al., 2017). Another study of the relationship between state-level immigrant policies and birth outcomes, however, found that all women in states with more integration (rather than criminalization) policies had lower rates of pre-term birth compared to women in states with fewer integration policies, suggesting benefits of inclusionary policies across groups (Sudhinaraset et al., 2021). In recent years, there has been increased attention regarding the widespread and historically rooted nature of anti-Asian sentiment in the United States (Kim and Yellow Horse 2018). Our findings point to the importance of examining multi-race/ethnic samples to understand how policy contexts may harm diverse groups that, despite distinct migration histories, encounter similar patterns of racialization in the United States (Escudero, 2020). Future research should also examine the relationship between criminalization policies and the health of Black immigrants. Future research could also examine other axes of inequality within immigrant populations. This could include examination of “street race,” which acknowledges colorism as a critical dynamic in racialized treatment (Vargas et al., 2021).

Our findings also indicate that immigrant-related policies are also relevant for the health equity broadly – as these policies likely influence the health of non-immigrants. Overall, this study contributes to the growing evidence that state-level immigrant policy contexts are associated with health inequities between noncitizens and citizens. Our findings suggest that SRH is more similar among noncitizen and US-born populations in states with fewer criminalization policies. In contrast, in states with numerous criminalization policies, we found differences between US citizens and noncitizens. This points to a need to examine state immigrant policy contexts as a factor that shapes inequality for all residents within states. Immigrant policy represents intentional decisions of policy makers to include or exclude state residents (Motomura, 2014) and states that use policy to limit the criminalization of immigrants may also be more equitable in other domains. More research is needed to understand how state immigrant policy climates align with non-immigrant policy climates related to social safety nets (e.g., earned income tax benefits), education, or other domains that drive racial and economic inequality in the US. A recent study showed that, there is substantial variation across states in laws that reinforce structural racism (e.g., criminal justice, minimum wage, and voting rights policies) (Agénor et al., 2021). Research on inequality and population health suggests that nations, as well as states, that have higher levels of income inequality, tend to have better outcomes in mortality and certain areas of health, such as child health outcomes (Kawachi & Kennedy, 1999; Lynch et al., 2001). Research at the state-level indicates that there are observable variations in health outcomes across states and that in states with more inclusive policy environments there are fewer disparities in some outcomes, such as mortality (Montez et al., 2016). Future research on the intersections of policies that criminalize immigrants, reinforce structural racism, and produce income inequality would advance population health research on the impacts of intersecting forms of social inequality (Homan et al., 2021).

The finding of better SRH among noncitizens in states with more criminalization policies was unexpected, and not consistent with evidence that restrictive policies are associated with poor immigrant health outcomes. It is highly unlikely that greater criminalization is healthy or less stressful for noncitizens. An extensive literature has established that immigrants face challenges living, working, and settling in restrictive contexts (Ayón et al., 2011; Kline, 2017). Therefore, the unexpected findings provide an opportunity to extend understanding of the mechanisms between the policy contexts and immigrant health outcomes.

First, it is critical to consider how noncitizens make sense of their social placement in racialized and economically divided societies and how this influences their well-being. The structural disadvantages that noncitizens face in contexts of criminalization may influence their perceptions and priorities as they settle in the US. For example, a qualitative study of undocumented workers in Arizona found that respondent described having to “aguantarse” – to “grin and bear it” – in difficult

workplace conditions (Ayón et al., 2011). A study in Los Angeles found that undocumented Mexican mothers had lower parenting stress than their documented and US-born counterparts; one explanation for this pattern was that undocumented mothers may have had an optimistic outlook on the possibilities for their children in the US, which translated into lower perceptions of stress related to parenting (Noah & Landale, 2018).

Second, in states with more, compared to less, criminalization policies there may be variations in noncitizens’ discriminatory experiences. Some studies suggest that immigrants report less perceived discrimination than the US-born (Landale et al., 2017; Pérez et al., 2008). In one study, US-born, compared to immigrant, Latinos were more likely to report racial discrimination (Landale et al., 2017), possibly because US-born individuals are socialized into US racial hierarchies and more likely to recognize acts of discrimination (Landale et al., 2017). It is also possible that, the overall national context and individuals’ local-level experiences are more salient than state policy contexts. Factors such as national and local media narratives, interactions with institutions, and confrontations with discrimination in schools, workplaces, and communities may influence the extent to which noncitizens are exposed to racializing or marginalizing experiences.

Finally, it is also possible in contexts of greater criminalization that noncitizens may be less exposed to certain forms of discrimination. Research has found that more community, neighborhood, and workplace diversity may be associated with more experiences of everyday discrimination, as individuals interact more with US natives and Whites (Landale et al., 2017). States with greater criminalization may have more segregated neighborhoods, workplaces, and community spaces in which immigrants are more likely to live among co-ethnics. One study found that in North Carolina (which in this study had 5 criminalization policies), 60% of Latino immigrant men were employed in a workplace that was entirely Latino (Flippen & Parrado, 2015). This could buffer some noncitizens from pursuing work where they may encounter interpersonal discrimination. It should be noted, however, immigration officials target immigrant neighborhoods (Kline, 2017; Lopez et al., 2017). Therefore, segregation may reduce exposure to interpersonal discrimination, but be a risk factor for being the target of enforcement. In addition, there is significant heterogeneity in experiences of perceived discrimination across immigrant groups (Pérez et al., 2008) and this study did not disaggregate by country of origin. These possible mechanisms should be further examined.

#### 4.1. Strengths, limitations, and future research

Our findings contribute to the growing body of research on state-level immigrant policy and health, examining the relationship between state-level policies and health by citizenship in a multi-race/ethnic sample. The study has some limitations that should be addressed in future research. A methodological limitation of the study is that it is cross-sectional and does not test a causal association between criminalization policy and SRH. Further, while the majority of policies had been enacted in the period between 2005 and 2010, we were not able to assess the specific timing of exposure to policy contexts. However, as noted above, recent research shows that between 2009 and 2019 there was little change in state policy contexts (Samari et al., 2021). This suggests that our cross-sectional analysis captured the aggregate extent of criminalization policy of the recent past. A key strength of the study is that it included controls for state-level political and demographic indicators to account for potential state-level confounding in an attempt to isolate the impacts of criminalization policies. Future research should look at additional health outcomes over time, such as outcomes related to stress-processes over the life course, to shed light on the extent to which criminalization policies are related to stressful environments. Future research can also disentangle how distinct policy sectors, such as enforcement and employment, uniquely contribute to state’s policy contexts. Different types of policy may have a greater influence on SRH

and other outcomes and merit further investigation.

We were not able to examine the mechanisms by which criminalization policies influence health, but the unexpected findings provide a starting point for further research. These mechanisms include local policy, policy implementation practices, and immigrants' experiences of policies. This study did not include measures of local-level policy enactment, which may differ from state-level policy on immigration enforcement, for example. Future research can examine how sub-state variations in policy may interact with state-level policies to influence health outcomes. Because there are few good measures of policy implementation, one way to capture this would be to examine how policies produce direct experiences in individuals' lives, such as racial profiling or work authorization verification.

Lastly, we improved upon other studies of nativity status, by examining differences in citizenship status, but we could not make further demographic and legal status distinctions across groups. Our unexpected associations among noncitizens may reflect a lower representation of undocumented individuals among NHIS respondents. Future studies that can examine patterns across legal statuses of noncitizens (e.g., Lawful Permanent Residence, undocumented, or DACA), while maintaining trust and engagement with immigrants, could advance knowledge on noncitizen populations most affected by criminalization policies. Our findings also do not account for the distinct demographic compositions of Latino and APIs immigrant groups. Future comparative examination of the two groups should consider how factors such as contexts in country of origin (e.g., war or other conflict), migration circumstances (e.g., refugee status), socioeconomic resources, and citizenship composition of each group influence immigrants' experiences within contexts of criminalization and, ultimately, their health.

#### 4.2. Conclusion

In the coming years, there will likely continue to be tensions around the inclusion and criminalization of immigrants in the United States. Enacting federal immigration legislation has, and will likely continue, to be difficult. State governments will continue to play a role in determining the extent to which their immigrant residents are criminalized as they pursue their lives, seek work, and move about their communities. There is still much research needed to understand the long-term impact of these policies on well-being, particularly as some states engage in efforts to reduce criminalization while others engage in efforts to expand criminalization. Overall, however, it will be critical to understand and address how these "intentional and not unusual" policy contexts are related to well-being of all state residents.

#### Ethics statement

Data collection for the National Health Interview was approved by the NCHS Research Ethics Review Board. Analysis of deidentified data from the survey is exempt from the federal regulations for the protection of human research participants. Analysis of restricted data through the NCHS Research Data Center is also approved by the NCHS ERB.

#### Author statement

MEY: Conceptualization; Data curation; Formal analysis; Methodology; Writing - original draft. DC: Methodology; Writing - review & editing. JMT: Methodology; Writing - review & editing.

#### Declaration of competing interest

None.

#### Data availability

The authors do not have permission to share data.

#### Acknowledgments

The authors dedicate this paper to the memory of Steven P. Wallace (1957–2021). This paper was funded in part by National Institute on Minority Health and Disparities (R01 MD012292). The content is solely the responsibility of the authors and does not represent the official views of the National Institutes of Health.

#### Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.ssmph.2022.101199>.

#### References

- Abraído-Lanza, A. F., Echeverría, S. E., & Flórez, K. R. (2016). Latino immigrants, acculturation, and health: Promising new directions in research. *Annual Review of Public Health, 37*, 219–236.
- Abrego, L. J. (2019). Relational legal consciousness of U.S. Citizenship: Privilege, responsibility, guilt, and love in Latino mixed-status families. *Law & Society Review, 53*(3), 641–670.
- Agénor, M., Perkins, C., Stamoulis, C., Hall, R. D., Samnaliev, M., Berland, S., & Bryn Austin, S. (2021). Developing a database of structural racism-related state laws for health equity research and practice in the United States. *Public Health Reports, 136* (4), 428–440.
- Alegria, M., Takeuchi, D., Canino, G., Duan, N., Shrout, P., Meng, X. L., Vega, W., Zane, N., Vila, D., Woo, M., Vera, M., Guarnaccia, P., Aguilar-Gaxiola, S., Sue, S., Escobar, J., Lin, K. M., & Gong, F. (2004). Considering context, place and culture: the National Latino and Asian American study. *International Journal of Methods in Psychiatric Research, 13*(4), 208–220.
- Allen, C. D., & McNeely, C. A. (2017). Do restrictive omnibus immigration laws reduce enrollment in public health insurance by Latino citizen children? A comparative interrupted time series study. *Social Science & Medicine, 191*, 19–29.
- Armenta, A. (2017). *Protect, serve, and deport: The rise of policing as immigration enforcement: The rise of policing as immigration enforcement*. Oakland, CA: University of California Press.
- Armenta, A., & Alvarez, I. (2017). Policing immigrants or policing immigration? Understanding local law enforcement participation in immigration control. *Sociology Compass, 11*(2), Article e12453.
- Asad, A. L. (2020a). Latinos' deportation fears by citizenship and legal status, 2007 to 2018. *Proceedings of the National Academy of Sciences, 117*(16), 8836–8844.
- Asad, A. L. (2020b). On the radar: System embeddedness and Latin American immigrants' perceived risk of deportation. *Law & Society Review, 54*(1), 133–167.
- Asad, A. L., & Clair, M. (2018). Racialized legal status as a social determinant of health. *Social Science & Medicine, 199*, 19–28.
- Ayón, C., Gurrola, M., Moya Salas, L., Androff, D., & Krysiak, J. (2011). Intended and unintended consequences of the employer sanction law on Latino families. *Qualitative Social Work, 11*(6), 587–603.
- Carbado, D. W. (2011). Critical what what? *Connecticut Law Review, 43*(No. 5), 1593–2011.
- Clough, J., Lee, S., & Chae, D. H. (2013). Barriers to health care among Asian immigrants in the United States: A traditional review. *Journal of Health Care for the Poor and Underserved, 24*(1), 384–403.
- Crookes, D. M., Stanhope, K. K., Kim, Y. J., Lummus, E., & Suglia, S. F. (2022). Federal, state, and local immigrant-related policies and child health outcomes: A systematic review. *Journal of Racial and Ethnic Health Disparities, 9*, 478–488. <https://doi.org/10.1007/s40615-021-00978-w>
- Crookes, D. M., Stanhope, K. K., & Suglia, S. F. (2022). Immigrant-related policies and the health outcomes of Latinx adults in the United States: A systematic review. *Epidemiology, 33*(4), 593–605.
- De Genova, N., & Mae Peutz, N. (2010). *The deportation regime: Sovereignty, space, and the freedom of movement*. Durham, NC: Duke University Press.
- Dreby, J. (2012). The burden of deportation on children in Mexican immigrant families. *Journal of Marriage and Family, 74*(4), 829–845.
- Escudero, K. (2020). *Organizing while undocumented: Immigrant youth's political activism under the law*. New York: New York University Press.
- Flippen, C. A., & Parrado, E. A. (2015). Perceived discrimination among Latino immigrants in new destinations: the case of Durham, North Carolina. *Sociological Perspectives, 58*(4), 666–685.
- Gee, G. C., & Ford, C. L. (2011). Structural racism and health inequities: Old issues, new directions. *Du Bois Review: Social Science Research on Race, 8*(1), 115–132.
- Golash-Boza, T. (2016). The parallels between mass incarceration and mass deportation: An intersectional analysis of state repression. *Journal of World-Systems Research, 22* (2), 484–509.
- Golash-Boza, T., & Hondagneu-Sotelo, P. (2013). Latino immigrant men and the deportation crisis: A gendered racial removal program. *Latino Studies, 11*(3), 271–292.
- Gulasekaram, P., & Karthick Ramakrishnan, S. (2012). The importance of the political in immigration federalism. *Arizona State Law Journal, 44*.
- Hacker, K., Chu, J., Leung, C., Marra, R., Pirie, A., Brahimi, M., English, M., Beckmann, J., Acevedo-Garcia, D., & Marlin, R. P. (2011). The impact of immigration and customs enforcement on immigrant health: Perceptions of

- immigrants in Everett, Massachusetts, USA. *Social Science & Medicine*, 73(4), 586–594.
- Hatzenbuehler, M. L., Prins, S., Morgan, F., Morgan, P., Frazer, S., Hagen, D., & Hirsch, J. (2017). Immigration policies and mental health morbidity among latinos: A state-level analysis. *Social Science & Medicine*, 174, 169–178.
- Hernández, D. M. (2008). Pursuant to deportation: Latinos and immigrant detention. *Latino Studies*, 6(1), 35–63.
- Homan, P., Brown, T. H., & King, B. (2021). Structural intersectionality as a new direction for health disparities research. *Journal of Health and Social Behavior*, 62(3), 350–370.
- Hsin, A., & Aptekar, S. (2021). The violence of Asylum: The case of undocumented Chinese migration to the United States. *Social Forces*, 100(3), 1195–1217. <https://doi.org/10.1093/sf/soab032>
- Idler, E. L., & Benyamini, Y. (1997). Self-rated health and mortality: A review of twenty-seven community studies. *Journal of Health and Social Behavior*, 38(1), 21–37.
- Kawachi, I., & Kennedy, B. P. (1999). Income inequality and health: Pathways and mechanisms. *Health Services Research*, 34(1 Pt 2), 215–227.
- Kim, S. M., & Yellow Horse, A. J. (2018). Undocumented Asians, left in the shadows. *Contexts*, 17(4), 70–71.
- Kline, N. (2017). Pathogenic policy: Immigrant policing, fear, and parallel medical systems in the US South. *Medical Anthropology*, 36(4), 396–410.
- Kwon, H. (2022). Inclusion work: Children of immigrants claiming membership in everyday life. *American Journal of Sociology*, 127(6), 1818–1859.
- Lachica Buenavista, T. (2018). Model (undocumented) minorities and “illegal” immigrants: Centering Asian Americans and US carcerality in undocumented student discourse. *Race, Ethnicity and Education*, 21(1), 78–91.
- Landale, N. S., Oropesa, R. S., & Noah, A. J. (2017). Experiencing discrimination in Los Angeles: Latinos at the intersection of legal status and socioeconomic status. *Social Science Research*, 67, 34–48.
- LeBrón, A. M. W., Lopez, W. D., Cowan, K., Novak, N. L., Temrowski, O., Ibarra-Frayre, M., & Delva, J. (2018). Restrictive ID policies: Implications for health equity. *Journal of Immigrant and Minority Health*, 20(2), 255–260. <https://doi.org/10.1007/s10903-017-0579-3>
- Lee, S., Alvarado-Leiton, F., Vasquez, E., & Davis, R. E. (2019). Impact of the terms “regular” or “pasable” as Spanish translation for “fair” of the self-rated health question among US Latinos: A randomized experiment. *American Journal of Public Health*, 109(12), 1789–1796.
- Lopez, W. D., Kruger, D. J., Delva, J., Llanes, M., Ledon, C., Waller, A., Harner, M., Martinez, R., Sanders, L., Harner, M., & Israel, B. (2017). Health implications of an immigration raid: Findings from a Latino community in the Midwestern United States. *Journal of Immigrant and Minority Health*, 19(3), 702–708.
- Lynch, J., Smith, G. D., Hillemeier, M., Shaw, M., Raghunathan, T., & Kaplan, G. (2001). Income inequality, the psychosocial environment, and health: Comparisons of wealthy nations. *Lancet*, 358(9277), 194–200.
- Marquez, T., & Schraufnagel, S. (2013). Hispanic population growth and state immigration policy: An analysis of restriction (2008–12). *Publius: The Journal of Federalism*, 43(3), 347–367.
- Molina. (2006). *Fit to be citizens? : Public health and race in Los Angeles, 1879-1939*. University of California Press.
- Montez, J. K., Zajacova, A., & Hayward, M. D. (2016). Explaining inequalities in women’s mortality between U.S. States. *SSM Population Health*, 2, 561–571.
- Motomura, H. (2014). *Immigration outside the law*. New York: Oxford University Press.
- Ngai, M. M. (2004). *Impossible subjects : Illegal aliens and the making of modern America*. Princeton, N.J.: Princeton University Press.
- Noah, A. J., & Landale, N. S. (2018). Parenting strain among Mexican-origin mothers: Differences by parental legal status and neighborhood. *Journal of Marriage and Family*, 80(2), 317–333.
- Parsons, V. L., Moriarty, C., & Jonas, K. (2014). Design and estimation for the national health interview survey, 2006–2015. *Vital Health Statistics*, 2(165).
- Pérez, D. J., Fortuna, L., & Alegria, M. (2008). Prevalence and correlates of everyday discrimination among U.S. Latinos. *Journal of Community Psychology*, 36(4), 421–433.
- Perreira, K. M., & Pedroza, J. M. (2019). *Policies of exclusion: Implications for the health of immigrants and their children*. Annu Rev Public Health.
- Pham, H., & Pham, H. Van (2014). Measuring the climate for immigrants: A state-by-state analysis. In C. B. Hessick, & G. J. Chin (Eds.), *Strange neighbors: The role of states in immigration policy*. New York: NYU Press.
- Philbin, M. M., Flake, M., Hatzenbuehler, M. L., & Hirsch, J. S. (2018). State-level immigration and immigrant-focused policies as drivers of Latino health disparities in the United States. *Social Science & Medicine*, 199, 29–38.
- Pierce, S., & Bolter, J. (2020). Migration Policy Institute. In *Dismantling and reconstructing the U.S. Immigration system: A catalog of changes under the Trump presidency*. Washington, D.C.: Migration Policy Institute.
- Rhodes, S. D., Mann-Jackson, L., Song, E. Y., Wolfson, M., Filindra, A., & Hall, M. (2020). Laws and policies related to the health of US immigrants: A policy scan. *Health Behavior Policy Review*, 7(4), 314–324.
- Rhodes, S. D., Mann, L., Siman, F. M., Song, E., Alonso, J., Downs, M., Lawlor, E., Martinez, O., Sun, C. J., O’Brien, M. C., Reboussin, B. A., & Hall, M. A. (2015). The impact of local immigration enforcement policies on the health of immigrant hispanics/latinos in the United States. *American Journal of Public Health*, 105(2), 329–337.
- Romero, M. (2008). Crossing the immigration and race border: A critical race theory approach to immigration studies. *Contemporary Justice Review*, 11(1), 23–37.
- Sabo, S., & Lee, A. E. (2015). The spillover of US immigration policy on citizens and permanent residents of Mexican Descent: How internalizing “illegality” impacts public health in the Borderlands. *Frontiers in Public Health*, 3(155).
- Saenz, R., Menjivar, C., & Garcia, S. J. (2012). Arizona’s SB 1070: Setting conditions for violations of human rights here and beyond. In J. Blau, & M. Frezzo (Eds.), *Sociology and human rights: A bill of rights for the twenty-first century*. Thousand Oaks, California: SAGE Publications, Inc.
- Samari, G., Nagle, A., & Coleman-Minahan, K. (2021). Measuring structural xenophobia: US State immigration policy climates over ten years. *SSM - Population Health*, 16, Article 100938.
- Stumpf, J. (2006). The crimmigration crisis: Immigrants, crime, and Sovereign power. *American University Law Review*, 56(No. 2), 367–419.
- Sudhinaraset, M., Ling, I., To, T. M., Melo, J., & Quach, T. (2017). Dreams deferred: Contextualizing the health and psychosocial needs of undocumented Asian and Pacific Islander young adults in Northern California. *Social Science & Medicine*, 184, 144–152.
- Sudhinaraset, M., Woofter, R., De Trinidad Young, M.-E., Landrian, A., Vilda, D., & Wallace, S. P. (2021). Analysis of state-level immigrant policies and preterm births by race/ethnicity among women born in the US and women born outside the US. *JAMA Network Open*, 4(4), Article e214482-e82.
- Toomey, R. B., Umaña-Taylor, A. J., Williams, D. R., Harvey-Mendoza, E., Jahromi, L. B., & Updegraff, K. A. (2014). Impact of Arizona’s SB 1070 immigration law on utilization of health care and public assistance among Mexican-origin adolescent mothers and their mother figures. *American Journal of Public Health*, 104(Suppl 1), S28–S34. Suppl 1.
- Torche, F., & Sirois, C. (2019). Restrictive immigration law and birth outcomes of immigrant women. *American Journal of Epidemiology*, 188(1), 24–33.
- Torres, J. M., Deardorff, J., Gunier, R. B., Harley, K. G., Alkon, A., Kogut, K., & Eskenazi, B. (2018). Worry about deportation and cardiovascular disease risk factors among adult women: The center for the health Assessment of mothers and children of Salinas study. *Annals of Behavioral Medicine*, 52(2), 186–193.
- Vargas, E. D., Juárez, M., Sanchez, G. R., & Livaudais, M. (2018). Latinos’ connections to immigrants: How knowing a deportee impacts Latino health. *Journal of Ethnic and Migration Studies*, 1–18.
- Vargas, E. D., Juárez, M., Stone, L. C., & Lopez, N. (2021). Critical ‘street race’ praxis: Advancing the measurement of racial discrimination among diverse Latinx communities in the U.S. *Critical Public Health*, 31(4), 381–391.
- Vargas, E. D., Sanchez, G. R., & Melina, J. (2017). Fear by association: Perceptions of anti-immigrant policy and health outcomes. *Journal of Health Politics, Policy and Law*, 42(3), 459–483. <https://doi.org/10.1215/03616878-3802940>
- Varsanyi, M. W. (2008). Rescaling the “Alien,” rescaling personhood: Neoliberalism, immigration, and the state. *Annals of the Association of American Geographers*, 98(4), 877–896.
- Viriuell-Fuentes, E. A. (2007). Beyond acculturation: Immigration, discrimination, and health research among Mexicans in the United States. *Social Science & Medicine*, 65(7), 1524–1535.
- Viriuell-Fuentes, E. A., Morenoff, J. D., Williams, D. R., & House, J. S. (2011). Language of interview, self-rated health, and the other Latino health puzzle. *American Journal of Public Health*, 101(7), 1306–1313.
- Viriuell-Fuentes, E. A., Morenoff, J. D., Williams, D. R., & House, J. S. (2013). Contextualizing nativity status, Latino social ties, and ethnic enclaves: An examination of the ‘immigrant social ties hypothesis. *Ethnicity and Health*, 18(6), 586–609.
- Wallace, S. P., De Trinidad Young, M.-E., Rodríguez, M. A., & Brindis, C. D. (2018). A social determinants framework identifying state-level immigrant policies and their influence on health. *SSM - Population Health*, 7.
- Wang, J. S.-H., & Kaushal, N. (2018). Health and mental health effects of local immigration enforcement. *International Migration Review*, 53(4), 970–1001.
- Yellow Horse, A., & Vargas, E. D. (2022). Legal status, worries about deportation, and depression among Asian immigrants. *Journal of Immigrant and Minority Health*, 4, 427–433. <https://doi.org/10.1007/s10903-021-01252-1>
- Young, M. E. D., Beltrán-Sánchez, H., & Wallace, S. P. (2020). States with fewer criminalizing immigrant policies have smaller health care inequities between citizens and noncitizens. *BMC Public Health*, 20(1), 1460.
- Young, M. E., Leon-Perez, G., Wells, C. R., & Wallace, S. P. (2017). Inclusive state immigrant policies and health insurance among Latino, Asian/Pacific Islander, Black, and White noncitizens in the United States. *Ethnicity and Health*, 1–13.
- Young, M. E., León-Pérez, G., Wells, C. R., & Wallace, S. P. (2018). More inclusive states, less poverty among immigrants? An examination of poverty, citizenship stratification, and state immigrant policies. *Population Research and Policy Review*, 37, 205–228. <https://doi.org/10.1007/s11113-018-9459-3>
- Young, M. E., & Pebley, A. R. (2017). Legal status, time in the USA, and the well-being of Latinos in Los Angeles. *Journal of Urban Health*, 94(6), 764–775.
- Young, M. E., Sarnoff, H., Lang, D., & Ramirez, S. (2021). Coverage and framing of exclusionary and integrating immigration policy in US Newspapers. *The Milbank Quarterly* (in press).
- Young, M.-E. D., & Wallace, S. P. (2019). Included, but deportable: A new public health approach to policies that criminalize and integrate immigrants. *American Journal of Public Health*, 109(9), 1171–1176.