

The Impact of Punitive Immigrant Laws on the Health of Latina/o Populations

EDWARD D. VARGAS

University of Wisconsin-Madison

GABRIEL R. SANCHEZ

University of New Mexico

MELINA D. JUÁREZ

University of New Mexico

This study examines how anti-immigrant policies affect the physical health of Latinalos in the United States. Merging two unique datasets: sum of anti-immigrant policies by state from 2005 to 2011 and a 2011 Robert Wood Johnson Center for Health Policy nationally representative sample of Latinalos (n = 1,200), we estimate a series of logistic regressions to understand how anti-immigrant legislations are affecting the health of Latinalos. Our modeling approach takes into consideration Latinos' diverse experience, a context that is widely overlooked in datasets that treat Latinalos as a homogeneous ethnic group. Our findings suggest that an increase in anti-immigrant laws enacted by a state decreases the probability of respondents reporting optimal health, even when controlling for other relevant factors, such as citizenship status, language of interview, and inter-ethnic variation. The implication and significance of this work has tremendous impacts for scholars, policy makers, health service providers, and applied researchers interested in reducing health disparities among minority populations.

Keywords: Immigration Policy, Anti-Immigration Laws, Latino Populations, Self-Reported Health Status, Citizenship Status, Measuring Anti-Immigrant Legislation, Minority Issues, Health Issues, United States,

Acknowledgements: This article is based on a project supported, in part, by a NICHD training grant to the University of Wisconsin-Madison (T32HD049302) and the Robert Wood Johnson Foundation Center for Health Policy at the University of New Mexico. The content is solely the responsibility of the authors and does not necessarily represent the official views of the Eunice Kennedy Shriver National Institute of Child Health and Human Development, the National Institutes of Health, or the Robert Wood Johnson Foundation. The authors would also like to thank Drs. Vickie D. Ybarra and Lisa M. Sanchez.

State and Local Politics and Policy, Healthcare Policy, Interethnic Variation, Health Service Providers, Health Disparities, Ethnicity and Race, Arizona SB 1070, Alabama HB 56, South Carolina Senate Bill 20, SB 20, E-Verify.

Related Articles:

Sabia, Debra. 2010. "The Anti-Immigrant Fervor in Georgia: Return of the Nativist or Just Politics as Usual?" *Politics & Policy* 38 (1): 53-80. <http://onlinelibrary.wiley.com/doi/10.1111/j.1747-1346.2009.00228.x/abstract>

Turner, Robert C., and William Sharry. 2012. "From Progressive Pioneer to Nativist Crackdown: The Transformation of Immigrant Policy in Oklahoma." *Politics & Policy* 40 (6): 983-1018. <http://onlinelibrary.wiley.com/doi/10.1111/j.1747-1346.2012.00392.x/abstract>

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Este estudio examina cómo las políticas anti-inmigrantes afectan la salud física de la población latina en los Estados Unidos. Fusionando dos conjuntos de datos únicos: la suma de políticas antiinmigrantes por estado desde 2005-11 y una muestra representativa nacional de 2011 del Robert Wood Johnson para Latinos (n = 1.200), estimamos una serie de regresiones logísticas para entender cómo las legislaciones anti-inmigrantes están afectando la salud de las latinas(os). Nuestro enfoque de modelaje toma en consideración la diversa experiencia de los latinos, contexto que es ampliamente ignorado en conjuntos de datos que tratan a los latinos como un grupo étnico homogéneo. Nuestros hallazgos sugieren que un aumento en las leyes antiinmigrantes promulgadas por un estado disminuye la probabilidad de que los encuestados reporten una salud óptima, incluso al controlar otros factores relevantes, como el estatus de ciudadanía, el idioma de la entrevista y la variación interétnica. La implicación y la importancia de este trabajo tiene un enorme impacto para los académicos, responsables de políticas, proveedores de servicios de salud y los investigadores aplicados interesados en reducir las disparidades de salud entre las poblaciones minoritarias.

本研究检测了反移民政策如何影响了美国拉丁裔人口的身体健康。通过融合两种不同的数据集：一项关于2005-11年国家反移民政策的收集和一项由罗伯特·伍德约翰逊卫生政策中心（Robert Wood Johnson Center for Health Policy）于2011年收集的全国性拉丁裔代表样本（样本容量N=1200），本文估计了一系列逻辑回归，用于理解反移民立法正在如何影响拉丁裔的健康状况。本文的建模途径考虑了拉丁裔的多样化经历，而将拉丁裔人口作为同质化族群的数据集却广泛忽视了这一内容。研究表明：反移民法的增加会降低调查对象报道良好身体健康的可能性。甚至当控制诸如公民身份状况、面试语言和跨族群差异等相关因素时情况也是如此。本

文的意义和重要性对学者、决策者、卫生服务提供者以及对减少少数民族人口健康差异感兴趣的应用研究人员都具有重大影响。

Immigration reform has been hotly debated for over four decades in the United States.¹ Yet the past two presidential administrations did not achieve comprehensive immigration reform despite pressure to do so from the immigrant communities, immigrant rights organizations, business community, and politicians.² Despite these pressures, federal comprehensive immigration reform has failed to materialize; this has provided the American states the opportunity to pursue their own immigration agendas.

State immigrant³ policy activity increased from just 300 proposed bills and 39 enacted laws in 2005 to over 1,500 proposed bills and over 200 enacted laws in 2009 (Meyer *et al.* 2011). Scholars have attempted to identify factors within states that have led to an increase in these laws (Sabia 2010; Turner and Sharry 2012). Meanwhile, research exploring the effects of this increased policy activity at the state level on the socioeconomic and health outcomes of the populations being directly and indirectly impacted continues to grow.⁴ We attempt to contribute to this literature by exploring the relationship between punitive immigrant laws and the self-rated health of Latina/os in the United States. This research will not only inform the policy literature but is also pertinent to the public health literature as public policies constitute an important facet of the social determinants of health.

Background: State Immigration Laws

There has been major recent activity in U.S. state immigration policy, including increasingly aggressive laws intended to curb migration to their states. According to the National Council of State Legislatures (NCSL), the number of immigration-related legislation and resolutions hit a peak in 2010 with 319 measures passed during that year. The number went up further in 2013 with 377 legislation and resolutions, and again increased in 2015 to 391. The NCSL's 2016 mid-year report finds that immigration-related legislation decreased by 40 percent from 2015. However, they note that this decrease is mainly due to the

¹ For a comprehensive, historical overview of immigration policies, debates, and events in the United States, see Arnold (2011).

² See Batalova and others (2014) for overview of the Deferred Action for Childhood Arrivals executive order, an attempt by the Obama Administration to reduce the burden of deportation for select unauthorized youth.

³ We make the distinction between immigration policy (which determines who can enter and exit the country, a solely federal power) and immigrant policy (which concerns immigrant rights and benefits, a power shared by local, state, and federal authorities).

⁴ See Martinez and others (2015) for a systemic review of this literature focused on unauthorized immigrants.

most active states not being in legislative session in 2016 (e.g., Texas; Morse *et al.* 2016).

Undoubtedly, the most controversial of these has been Arizona's Senate Bill 1070 Support Our Law Enforcement and Safe Neighborhoods Act (S.B. 1070) passed in 2010. S.B. 1070 has been one of the most polarizing state immigrant laws since California's Proposition 187 (passed in 1994) in the United States. This law requires law enforcement to check immigration status of an individual when, "reasonable suspicion exists that the person is an alien who is unlawfully present in the U.S." (Arizona State Senate 2010), prompting even conservative pundits to label it the "breathing while Latino law" (Media Matters for America 2010).

S.B. 1070 has inspired a variety of studies ranging from analyzing the discourse of economic austerity undergirding the policy's framing (Swenson 2015), to its implications for uncovering authoritarian values in policing (Fisher *et al.* 2011), and its effects on the experiences of highly skilled migrants (Sadowski-Smith and Li 2014). More closely related to the present study, research analyzing the health effects of the law has also increased. Toomey and others (2014) found that S.B. 1070 contributed to the fear of seeking preventative health care and public assistance among high-risk populations. Anderson and Finch (2014) examined the law's effects on Latina/os' self-reported health and found that Spanish speakers were more negatively impacted than English speakers. Additionally, Crocker's (2015) qualitative ethnography of Latina/os in Arizona found that the law exacerbated structural inequalities that contributed to heightened psychological and emotional stress among immigrants. These intensified hostile environments are an important component to our study. Andrea Nill believes the passage of the law has triggered a broader phenomenon of Latina/o demonization, general acceptance of racial profiling, and a movement against birthright citizenship, contributing to a specific form of xenophobia she terms as "Hispanophobia" (Nill 2011, 36). This is evident in the dramatic increase of copycat laws that were passed across the nation in the months following the passage of S.B. 1070.

An example of these is the Beason-Hammon Alabama Taxpayer's and Citizen Protection Act (H.B. 56) signed into law by Governor Robert J. Bentley in June 2011. Many believe H.B. 56 to be the most severe U.S. anti-immigrant state law on the books (Sarlin 2013; Southern Poverty Law Center (SPLC; 2012). The Alabama law is even more extreme than the more hotly debated Arizona S.B. 1070, which has generated international attention for its severity and anticonstitutional components that have since been struck down by the Supreme Court. However, Arizona's S.B. 1070 prompted national mass demonstrations from the public (Hing 2012) as well as from cities and businesses that chose to boycott the state (AZ Central 2010). H.B. 56 sought to curb the growth of the unauthorized population in the state. In September of that same year, a federal judge struck down several provisions of the law. The provisions on public education remained. Among its directives, H.B. 56 required

immigrants to provide immigration status to public schools during enrollment, but it also required police officers to check the immigration status of all those stopped; it criminalized those who knowingly assisted the unauthorized (this was struck down), and it put severe financial penalties on employers who failed to check the immigration status of their employees (Brooks 2012).

S.B.1070 has also increased attention to the policies being enacted in new destination or new gateway states, especially those in the Deep South. For example, Georgia has seen an increase in its Latina/o population by over 300 percent just in the last few years, and legislative responses to these newcomers have been especially hostile. The Security and Immigration Compliance Act, S. B. 529, passed by the Georgia legislature in the spring of 2006, essentially prohibited unauthorized immigrants from accessing any public benefits or employment opportunities, and allowed local police officers to act as immigration agents to enforce federal immigration laws (Sabia 2010).

Similarly in Oklahoma, the Latina/o population grew from 2.7 percent in 1990 to about 9 percent by 2010 (Turner and Sharry 2012). However, as Turner and Sharry (2012) note, Oklahoma is an interesting case study due to its previous record as a pro-immigrant state. Between 1996 and 2005, Oklahoma implemented policies such as in-state tuition for unauthorized students that very few states across the nation allowed. There was a sudden shift in 2007 when the state swiftly began pursuing a punitive immigrant policy regime. The Oklahoma Taxpayer and Citizen Protection Act, H.B. 1804, went into effect in November 2007 and was followed by a slew of anti-immigrant referendums, punitive laws, and enforcement actions that aimed to make Oklahoma inhospitable to unauthorized immigrants (Turner and Sharry 2012).

Public Policy as a Social Determinant of Health

Our theory regarding the relationship between state-level immigrant policy and self-rated health is grounded in the literature focused on the relationship between public policy and health outcomes, more specifically, within the literature on the social determinants of health (see e.g., Adler and Newman 2002; Adler *et al.* 2016; Galea 2007; Penman-Aguilar *et al.* 2016). The World Health Organization's Commission on Social Determinants of Health (CSDH) define the social determinants of health as, "the conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life" (World Health Organization 2017). It is not only health policies that influence health outcomes but social and economic policies also play a part in shaping the environmental, social, economic, and political contexts that affect health. This upstream perspective, grounded in ideals of social justice, places a stronger focus on social forces and power structures that shape and create policy. Simply put, the Commission is focused on addressing the "causes of the causes" (CSDH 2008, 42).

A strong focus of the Social Determinants of Health (SDH) framework is placed on the role that structural determinants of health play in creating and perpetuating health inequalities. Structural determinants of health are those factors that, “generate stratification and social class divisions in the society and that define individual socioeconomic position within hierarchies of power, prestige and access to resources. Structural determinants are rooted in the key institutions and mechanisms of the socioeconomic and political context” (Solar and Irwin 2007, 34). There are six main structural determinants of health: inequalities in education, income, gender, race/ethnicity, social class, and occupation (Solar and Irwin 2007). Sociopolitical context (including governance patterns and social/health/economic policy) and the structural determinants of health are mutually reinforcing elements that combine to shape social status and, ultimately, access to resources that affect health. The SDH framework argues that the impacts of SDHs on health are not direct. Instead, there are three categories of intermediary determinants that help to finally influence health and well-being. These categories include material circumstances (e.g., living and working conditions), psychosocial factors (e.g., stress), and behaviors and biological factors (e.g., cigarette smoking or drug use).

There is also a strong base of developing research that specifically focuses on the health effects of immigration policies. The drastic shifts in immigration and immigrant policies have been observed to impact several indicators of immigrant children’s well-being, including economic prospects, educational outcomes, and poor health (Androff *et al.* 2011; Hardy *et al.* 2012; McGuire 2014). Environments of xenophobia or “Hispanophobia” that produce heightened fears of deportation and discrimination have been found to exacerbate already existing physical and mental health conditions (Salas, Ayon, and Gurrola 2013; Vargas, Sanchez, and Juárez 2017). Legal status plays a critical role in linking immigration and immigrant policies to health outcomes, as the unauthorized are especially prone to high levels of fear and stress related to detention and deportation (Cavazos-Rehg, Zayas, and Spitznagel 2007; Hacker *et al.* 2011; Vargas 2010). Legal status⁵ ultimately affects the health-seeking behaviors of immigrants and Latina/os (Berk and Schur 2001; Vargas and Pirog 2016), including health insurance uptake (Doty *et al.* 2016; Gelatt 2016; Pourat *et al.* 2014; Reyes and Hardy 2014; Vargas Bustamante *et al.* 2012) posing challenges to public health interventions aimed at minority and marginalized populations.

Additionally, Hacker and others (2011) also note that these effects go beyond the individual level. Fear and distrust of law enforcement can lead to immigrants not reporting crimes and withdrawing from community engagement (Nichols, LeBron, and Pedraza 2016). This in itself has implications for the health of Latina/os as a whole (citizen and noncitizens alike). In sum,

⁵ See Martinez and others (2015) for a comprehensive literature review of undocumented health.

researchers have found that immigrants living under punitive state laws or in communities with increased immigration enforcement have high levels of mental and emotional distress (Cavazos-Rehg, Zayas, and Spitznagel 2007; Salas, Ayon, and Gurrola 2013). Our work aims to inform this growing literature by examining if the number of state anti-immigrant laws is affecting Latina/o and immigrant health.

The vulnerability of the Latina/o population and particularly the foreign-born segment of this community makes this study particularly relevant. Despite gains in insurance due to the Affordable Care Act, 30.5 percent of Latina/os under the age of 65 remain uninsured (U.S. Department of Health and Human Services 2016). Beyond lacking health insurance, there are several other barriers to health-care access for Latina/os. Barriers such as lack of Latina/o medical providers, lack of culturally competent providers, language barriers, and lack of medical care facilities in their communities all contribute to low levels of access for Latina/os in the United States (Artiga 2013; Carillo *et al.* 2001; Derose and Baker 2000; Fiscella *et al.* 2002; Mosqueira, Hua, and Sommers 2015; Sanchez 2015; Sanchez and Morales 2013; Stephens and Artiga 2013; Valdez *et al.* 1993; Wallace *et al.* 2013).

One of the sources of internal variation in health status among Latina/os of greatest interest to scholars is nativity. Our analysis addresses a relatively understudied aspect of this scholarly debate by exploring the relationship between immigrant policy and Latina/o self-rated health. With a rich sample of Latina/o adults to work with, we are able to explore this association while controlling for citizenship status. We are also able to explore the interactive effect of state immigrant policy and citizenship status. This is important, as noncitizens are the most vulnerable segment of the population at large and are directly impacted by the passage of immigrant laws, often intended to restrict access to resources for the unauthorized population. We hypothesize that while punitive immigrant laws passed by a state will have a negative impact on Latina/o health overall, the substantive impact of these laws will be more pronounced for noncitizens.

Data and Methods

We take advantage of a 2011 Latino Decisions/ImpreMedia survey that was designed in collaboration with the Robert Wood Johnson Foundation (RWJF) Center for Health Policy at the University of New Mexico (UNM) for our analysis. Latino Decisions conducted the fieldwork for the survey and worked in conjunction with the RWJF Center for Health Policy at UNM to design the survey instrument. This survey was therefore designed by a community of scholars with a strong background in the methodological issues in the quantitative study of race and ethnicity. These data were then merged with immigrant legislation data from the National Conference of State Legislatures to examine immigration policy enactment from 2005 to 2011 (Ybarra, Sanchez, and Sanchez 2016). This unique dataset allows researchers to model the count

of punitive immigration legislations across time. Using the punitive laws, we create a measure of anti-immigrant legislation utilized in our analysis with the specific focus on testing the relationship between anti-immigrant legislation and self-reported health status. Across the span of our data, we find a total of 1,229 punitive laws have been passed across the American states. This is therefore an ideal dataset for our research question.

A total of 1,200 Latina/os were interviewed over the phone through two samples: 600 Latina/o registered voters and 600 nonregistered Latina/os. The nonvoter sample was added for the specific purpose of ensuring our ability to include noncitizens who are excluded from registered voter samples. All phone calls were administered by Pacific Market Research in Renton, Washington. The survey has an overall margin of error of ± 4 percent, with an American Association for Public Opinion Research response rate of 29 percent.⁶

Latino Decisions selected the 21 states with the highest number of Latina/o residents, states that collectively account for 91 percent of the overall Latina/o adult population. These states include Arizona, California, Colorado, Connecticut, Florida, Georgia, Illinois, Massachusetts, Maryland, Michigan, North Carolina, New Jersey, New Mexico, Nevada, New York, Ohio, Pennsylvania, Texas, Virginia, Washington, and Wisconsin. The voter sample was drawn from registered voters using the official statewide databases of registered voters, maintained by elections officials in each of the 21 states. A separate list of Hispanic households was used to identify respondents for the nonvoter sample, which was designed to be proportionate to the overall population in those states. Probability sampling methods were employed in both samples based on the respective lists used to identify the universe of potential participants. Respondents were interviewed by telephone and could choose to be interviewed in either English or Spanish. A mix of cell phone only and landline households were included in the sample, and both samples are weighted to match the 2010 Current Population Survey universe estimate of Latina/os and Latina/o voters, respectively, for these 21 states with respect to age, place of birth, gender, and state. The sample is therefore weighted to be consistent with the demographic profile of Latinos nationally. The survey was approximately 22 minutes long and was fielded from September 27, 2011 to October 9, 2011.

The primary outcome variable of interest is self-reported health status using a single health status question within the Latino Decisions dataset. The self-reported health status question included in the Latino Decisions survey is very close in wording to the item included in the Centers for Disease Control and Prevention (CDC) and Behavioral Risk Factor Surveillance System (BRFSS) for many years, and a measure that existing research has already found to be highly correlated with several other health outcome measures (Bodde, Seo, and

⁶ This response rate is in line with that for other Latino national surveys conducted by Latino Decisions.

Frey 2009; Smith *et al.* 2014). Both questions utilize a 1 to 5 Likert scale, with respondents rating their health status from excellent to poor. The specific survey question we utilize is “How would you rate your overall physical health—excellent, very good, good, fair, or poor?,” which is nearly identical to the CDC BRFSS question of “Would you say that in general your health is—excellent, very good, good, fair, or poor?” The categories of the dependent variable for this study are collapsed into a binary variable for parsimony. 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. Similar to other work in this area, we are interested in estimating the probability of optimal health (see e.g., Jones *et al.* 2008; Vargas and Pirog 2016).

Numerous studies have found the overall BRFSS questionnaire to produce reliable and valid results (see e.g., Cheung and Lucas 2014; Nelson *et al.* 2001; Wade *et al.* 2016). Self-reported health status, as measured by the CDC BRFSS, has been especially well studied in relation to mortality (Idler and Benyamini 1997). Self-reported health status has also been found to be associated with a variety of health behaviors and health status indicators including physician-rated health status, smoking behavior, alcohol use, healthy eating, physical activity, healthy days, diabetes-related complications, and cardiovascular disease (Mossey and Shapiro 1982; Rubin and Peyrot 1999; Tsai *et al.* 2010a, 2010b; Zullig and Hendryx 2010).

Our main explanatory variable is the number of total anti-immigrant laws that were passed from 2005 to 2011. Using the geo-coded Federal Information Processing Standard state indicators, these data are then merged with the 21 states represented in the Latino Decisions/ImpreMedia dataset. Because laws can also benefit immigrants, we only count laws that are punitive in nature. Therefore, our measure is the total number of laws that are punitive toward immigrants net of laws that benefit immigrants from 2005 to 2011.⁷ Summary statistics for all variables used in this analysis are listed in Table 1. The total number of punitive laws by each state is included in Table 2. Given that the distributions of anti-immigrant data are not normally distributed, we measure punitive laws in two ways. We first create three mutually exclusive variables, which include low, medium, and high (reference category) punitive passing states. The three cutoff points (low, medium, and high) were set by dividing the total distribution into thirds. We also include a second-order polynomial to model the curve linear relationship between laws and health, so we also include state laws and state laws squared in our analysis. Our analytic approach is focused on the association between anti-immigrant legislation on the self-reported health among the Latina/o population.

All statistical analysis was conducted using Stata 12 software (StataCorp 2011), and survey weights were used to account for the complex survey design.

⁷For more background and detailed directions on the coding strategy of state laws, please see Ybarra and others (2016).

Table 1. Summary Statistics (Unweighted) Using a 2011 Latina/o Decisions/ImpreMedia Survey Merged with Sum of Anti-Immigrant State Laws (2005-11)

Variables	Mean	SD	Min	Max
Self-rated health ^a	.37	.48	0	1
Anti-immigrant laws	13.17	8.18	1	35
Low laws	.57	.50	0	1
Medium laws	.33	.47	0	1
High laws	.10	.30	0	1
Education ^b	3.47	1.55	1	6
Age	51.62	17.18	18	98
Income missing	.19	.39	0	1
Inc. less \$40k	.49	.50	0	1
Inc. \$40-\$60	.13	.34	0	1
Inc. \$60-\$80k	.07	.26	0	1
Inc. more \$80k	.12	.33	0	1
Uninsured	.21	.41	0	1
Female	.59	.49	0	1
Citizenship ^c	.84	.37	0	1
Spanish language ^d	.50	.50	0	1
Mexican origin	.53	.50	0	1

Notes: ^aHealth (0 = Poor, Fair, Good, 1 = Very Good, Excellent).

^bEducation (1 = Grade 1-8, 2 = Some HS, 3 = HS, 4 = Some College, 5 = College Grad, 6 = Post-Grad).

^cCitizenship (0 = Noncitizen, 1 = U.S. Citizen).

^dLanguage of interview (0 = English, 1 = Spanish).

This analysis also takes into account unobserved state factors such as access to care, local immigration policies, and state economy by using the geocoded information and clustering at the state level. By controlling for state-fixed effects, we take into account for variation across states. Finally, we control for a handful of measures that have been found to be correlated with Latina/o health status in previous research. The inclusion of these factors is intended to provide clarity in whether the relationship of interest in our analysis holds when other factors known to influence Latina/o health are accounted for in the model. Among the demographic variables, we include standard measures of income, educational attainment, age, and gender. The impact of socioeconomic status on Latina/o health outcomes is well established in the literature (Adler and Newman 2002; Braveman *et al.* 2005; Marmot 2006; Marmot and Wilkinson 1999).

To assess income, we have included several dummy variables representing different income categories: \$40,000-\$60,000, \$60,000-\$80,000, >\$80,000, with less than \$40,000 serving as the reference category. We also include a variable of “unknown” income in the model, which includes respondents who did not

Table 2. Sum of Anti-Immigrant and Beneficial Immigrant Laws Enacted 2005-12 (Ybarra, Sanchez, and Sanchez 2016) by State (Sorted High to Low)

State	Punitive Immigration Laws		Number of Laws
	Number of Laws	State	
Georgia	41	Maryland	8
Utah	40	Montana	8
Arizona	38	West Virginia	8
Colorado	36	Minnesota	7
Virginia	36	Pennsylvania	7
Alabama	33	South Dakota	7
Tennessee	26	Washington	7
Oklahoma	23	Iowa	6
Indiana	19	New Hampshire	6
South Carolina	18	New York	6
Florida	17	North Carolina	6
California	16	Kentucky	5
Missouri	16	Nevada	5
Kansas	14	North Dakota	5
Nebraska	14	Rhode Island	4
Texas	14	Connecticut	3
Arkansas	13	Massachusetts	3
Hawaii	13	New Jersey	3
Illinois	13	New Mexico	3
Michigan	13	Vermont	3
Louisiana	12	Wyoming	3
Maine	12	Alaska	2
Idaho	10	Delaware	2
Mississippi	10	Ohio	2
Oregon	10	Wisconsin	1

report their income as a means of saving cases. We also include a measure for whether respondents currently have health insurance (0 = insured, 1 = uninsured), as we expect uninsured Latina/os to have poorer self-rated health based on the findings from previous work exploring this relationship (Carillo *et al.* 2001). Finally, by sample selection, we control for several Latina/o-specific factors, which include nativity (0 = foreign born, 1 = U.S. born), if the interview was in Spanish language (0 = English, 1 = Spanish), citizenship (0 = noncitizen, 1 = U.S. citizen), and Mexican origin (0 = non-Mexican origin, 1 = Mexican origin) to control for Latina/o heterogeneity.

Results

As provided in Table 1, .37 percent of our sample indicated that their health was very good or excellent. The mean age in our sample is 52, the majority of

our sample is female (59 percent) and has at least a high-school education. At least half of our sample completed the survey in Spanish (50 percent), and a large majority of the sample reported that they were U.S. citizens (84 percent) and insured with medical coverage (79 percent). The majority of our sample reported that their combined household income was less than \$40,000. The distribution for our main independent variable shows that anti-immigrant laws varied across states, ranging from 1 to 39 laws in our sample (mean = 13.12 and standard deviation = 8). The distribution for our three mutually exclusive categories include low (mean = 57 percent), medium (mean = 33 percent), and high (10 percent).

Our logistic regression models test the association between anti-immigrant laws on the self-rated health among Latina/os, controlling for various sociopolitical, familial, cultural, and context-level variables. After dropping missing data, we have a total sample of 1,002 respondents in model 1 which isolates the relationship between anti-immigrant laws on the self-rated health of Latina/os, controlling for age, education, income, gender, health insurance, citizenship, and language of interview.⁸ This model includes state laws as either low or medium, versus high, which serves as our reference category.

The results of these models are depicted in Table 3. Our results in model 1 estimate a logistic regression that includes three mutually exclusive categories of anti-immigrant laws, controlling for age, education, income, gender, insurance coverage, citizenship, and language of interview. We did find support for our primary hypothesis, as we found that respondents who live in states that pass low and medium punitive immigration laws relative to states that pass a high number of anti-immigrant laws are more likely to report optimal health. As shown in model 1 in Table 3, we concluded that among Latina/o respondents who live in low punitive law states, have increased odds of 1.8 in reporting optimal health relative to Latina/os who live in high anti-immigrant states, holding all other variables constant ($p \leq .05$ level). We also found that respondents living in states with medium punitive laws have increased odds of 1.5 in reporting optimal health relative to Latina/os who live in high anti-immigrant states, holding all other variables constant ($p \leq .01$ level). When including anti-immigrant laws and the anti-immigrant laws squared variable in the model, we find that at first there is an insignificant relationship between anti-immigrant laws and health but, as laws start to increase later, the association between anti-immigrant laws and health decreases the likelihood of reporting optimal health (Table 3, model 2). In addition to our measure of anti-immigrant climate, we briefly discuss the performance of the control variables as well. The sociodemographic factors are particularly meaningful, as essentially all of these controls have an impact on Latina/o health status. For example, in-line with the extant

⁸ We ran separate models for missing data and find no statistical differences. Missing data include respondents who stated "Refused" or responded "Do not know."

Table 3. Logistic Coefficients for Regression of Anti-Immigrant Laws on General Health Status Using a 2011 Latino Decisions/ImpreMedia Survey Merged with Sum of Anti-Immigrant State Laws (2005-11)

Variables	Model 1		Model 2	
	β	OR	β	OR
Reference category: High laws				
Low	.163** (.082)	1.177**		
Medium	.444*** (.070)	1.559***		
Anti-immigrant laws			.041* (.025)	1.042*
Anti-immigrant laws squared			-.001** (.001)	.999**
Education ^a	.190*** (.041)	1.209***	.193*** (.042)	1.213***
Age	-.028*** (.004)	.972***	-.028*** (.004)	.972***
Reference category: Income below \$39,999				
Income missing	.243 (.189)	1.275	.242 (.181)	1.274
Inc. \$40-\$60	.214 (.155)	1.239	.216 (.153)	1.241
Inc. \$60-\$80k	.355** (.171)	1.426**	.322* (.174)	1.380*
Inc. more \$80k	.951*** (.191)	2.588***	.917*** (.188)	2.503***
Female	-.418** (.166)	.658**	-.413** (.167)	.662**
Uninsured	-.692*** (.210)	.501***	-.682*** (.210)	.506***
Citizenship ^b	.292 (.192)	1.339	.321* (.194)	1.378*
Spanish language	-.298* (.160)	.742*	-.276* (.157)	.759*
Mexican origin	-.128 (.171)	.879	-.173 (.215)	.841
Constant	.105 (.268)	1.111	.048 (.301)	1.050
Observations	1,002	1,002	1,002	
Adjusted R-square	.130		.128	

Notes: β is the logistic coefficient, OR are the odds ratios, standard errors in parentheses.

^aEducation (1 = Grade 1-8, 2 = Some HS, 3 = HS, 4 = Some College, 5 = College Grad, 6 = Post-Grad).

^bCitizenship (1 = Citizen, 0 = Noncitizen).

***p < .01, **p < .05, * p < .1.

literature on the relationship between education and health broadly, education is positively correlated with health (Gallo, Smith, and Cox 2006; Lynch and Kaplan 2000; Ross and Wu 1995; Silventoinen *et al.* 2005). Furthermore, and also consistent with previous research, age is negatively correlated with self-rated health. Therefore, in-line with the extant literature, older and more poorly educated Latina/os are less likely to report excellent health than respondents who are younger and better educated. We also find that insurance coverage is strongly associated with optimal health in that, if respondents are uninsured, they are less likely to report optimal health. Finally, language of interview is an important factor in self-reported health, and we found it to be significant in our model. Spanish-speaking Latinos were less likely to report optimal health. We did not find differences between Mexican-origin Latina/os relative to all other Latina/os.⁹ Nor did we find differences between citizens and noncitizens in our model. In general, the fact that our control variables are in-line with the extant literature lends some confidence in the results for our punitive law models.

Discussion

Our findings suggest that state anti-immigrant laws *are* affecting Latina/o health. As the number of anti-immigrant laws increase, the probabilities of reporting optimal health decrease. In particular, respondents who live in states that pass a low and medium amount of punitive immigration laws relative to states that pass a high number of anti-immigrant laws are more likely to report optimal health, all else equal. This relationship, however, is an indirect one. Thus, the SDH framework seems indeed to be the most appropriate for interpreting the association between anti-immigrant laws and self-rated health as it is able to capture the intermediary steps between public policy and health and well-being. To bolster our claim and illustrate this mechanism in more useful detail, we focus on South Carolina's Senate Bill 20 (S.B. 20).

S.B. 20 was signed into law on June 27, 2011. S.B. 20 was crafted based on Arizona's omnibus legislation S.B. 1070 (South Carolina General Assembly 2011). The socioeconomic and political context under which this law was signed reflects important demographic and economic shifts seen throughout the region during these years. The most notable of these changes is the rapid growth of the Latino population in the Southern states. Between 1990 and 2000, the Latino population in South Carolina grew by approximately 211 percent (Kochhar, Suro, and Tafoya 2005). This rapid growth helped fuel racial tensions in a region that was once defined by the black-white divide (Barrington, Messias, and Weber 2012).

⁹ Although the sample sizes for other Latino national origin groups are limited, we included multiple variations on this measure and did not find any to be statistically significant.

The law also contained provisions allowing police officers to investigate the documentation status of all those lawfully stopped when, “the officer has reasonable suspicion to believe that the person is unlawfully present in the United States” (South Carolina Senate Bill 20 Section 17-13-170). This language was directly influenced by Arizona’s S.B. 1070 and produced the same outcry regarding its legality. The SPLC, American Civil Liberties Union of South Carolina, the National Immigration Law Center, and the Mexican American Legal Defense and Educational Fund were among some of the civil rights groups arguing that S.B. 20 was in direct violation of the Fourth Amendment. In these cases, the complaints were that it exposed South Carolinians to unreasonable searches and seizures and violated the Supremacy Clause of the U.S. Constitution by attempting to supersede federal immigration laws.

The accounts outlined in the lawsuit against the state are in-line with the literature on immigrant health mentioned previously. S.B. 20 produced widespread fear of being detained and deported as shown through decreased usage of support services and an increase in legal and civil rights consultations. This increase in fear and anxiety are facets of the psychosocial responses to the law. S.B. 20 directly affected the health-seeking behaviors of immigrants as evidenced by the drastic decrease in transportation demand for medical appointments. Further, the implementation of E-Verify can be argued to have negative consequences for the material circumstances of unauthorized immigrants and their families. E-Verify makes it more difficult to obtain employment and can put unauthorized job seekers at risk for detention and deportation. These three indicators—material circumstances, psychosocial responses, and behaviors—are part of the intermediary factors the SDH framework highlights as mediating the effects of public policy on health.

Conclusion

The current political climate toward immigrants, especially toward Latina/o immigrants, is clearly punitive in nature. We test in this analysis whether these punitive laws at the state level are associated with the health status of the Latina/o population. Our analyses show that living in a state that is passing punitive immigrant laws is bad for the health of Latina/os. Negative health outcomes due to an anti-immigrant climate have a short-term effect that reverberates from the local to the national level. This research highlights that this association is also having a spill-over effect on U.S.-born Latinos. As shown in the rhetoric utilized by Alabama legislators in their testimonies for the passage of Alabama H.B. 56, this law exposed how legislators frequently conflated Latinos with “illegal” immigrants, indicating the racialization of undocumented immigrants and Latinos alike (*Central Alabama Fair Housing Center et al. v. Julie Magee et al.* 2011). Social, political, and economic externalities of anti-immigrant legislation are expressed in many forms. For example, there has been intense social backlash after the passing of Arizona’s S.B.

1070 and Alabama's H.B. 56. Thousands took to the streets in protest, boycotts against Arizona cost the state millions of dollars, and the unrest helped to further expose preexisting racial animosities. Our study suggests that in addition to these well-documented outcomes associated with immigration policy, there are also health implications for a relatively large segment of the population.

The economic implications of these laws for states may not be limited to the direct impact from a drop in tourism or available low-wage workforce, but also from the potential increase in health costs for Latina/os being harmed by the laws. Considering that unauthorized immigrants are banned from the Affordable Care Act, this group's health is especially vulnerable given their increasingly limited access to health care. Bad health can also contribute to decreased labor productivity, as a sick worker is not a productive worker. While directly testing these implications are beyond the scope of this study, we believe that we have provided motivation for economists and public health scholars to further explore the health and economic implications of immigrant policy.

Finally, these punitive immigrant laws and their health effects on Latina/o immigrants contribute to the continued marginalization of this already vulnerable community. Because of this, our analysis has important implications for scholars of immigration and immigrant policy, public health researchers, and policy makers concerned with the unintended consequences of legislation being passed across the nation. Despite, and possibly in response to, the administrative movements by President Obama, states will continue to consider the passage of punitive immigration laws. We hope that the results of these studies help provide some insights into the ramifications of these policies on a large and growing segment of the American population.

Appendix

Case

Central Alabama Fair Housing Center et al. v. Julie Magee et al. 2:11-cv-00982-MHT-CSC (2011).

About the Authors

Edward D. Vargas holds a PhD in Public Affairs from the School of Public and Environmental Affairs at Indiana University. He is currently a NIH postdoctoral trainee in the Center for Women's Health and Health Disparities Research in the School of Medicine and Public Health at the University of Wisconsin-Madison. 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.

Gabriel R. Sanchez is a professor of political science at the University of New Mexico and also serves as the executive director of the Robert Wood Johnson Foundation Center for Health Policy and co-director of the Institute of Policy, Evaluation and Applied Research (IPEAR) at the University of New Mexico. Sanchez was formerly the director of research, and now principal at Latino Decisions, the nation's leading survey firm focused on the Latino electorate. His research agenda focuses on understanding the impact of racial and ethnic diversity on the U.S. political system.

Melina D. Juárez is a PhD candidate in political science at the University of New Mexico. She is also a Robert Wood Johnson Center for Health Policy doctoral fellow and a Transformar fellow at El Centro de la Raza at the University of New Mexico. She holds an MA in Transatlantic Politics from the University of North Carolina-Chapel Hill. Her work focuses on Latinx, minority, and LGBTQI politics; immigration policy; and health equity. Utilizing intersectionality, queer, decolonization, and class-based theories she explores how identity and socioeconomic status interact with public policy and politics to affect a variety of political and health outcomes.

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