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The citizenship shield: Mediated and moderated links between immigration status, discrimination, food insecurity, and negative health outcomes for latinx immigrants during the COVID-19 pandemic

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Abstract

A framework termed "the citizenship shield" is introduced to conceptualize how legal protections buffer against negative health outcomes among Latinx immigrants in the United States. In this study, we tested the citizenship shield framework in the context of the disproportionate impact of the COVID-19 pandemic on Latinx immigrants. We investigated the connection between immigration status, discrimination, food insecurity, and negative health outcomes. Analyses involved testing mediation and moderation models among a community-based sample of 536 Latinx immigrants holding five statuses (i.e., U.S. citizenship, permanent residency, Deferred Action for Childhood Arrivals, undocumented, and temporary status). Results suggested that food insecurity mediated the link between discrimination and negative impacts from the pandemic for Latinx immigrants across all statuses. Follow up analyses suggested that two of the three paths were moderated by immigration status. This research provides novel, important data to inform health interventions and federal policy targeted for the most vulnerable immigrants in the United States.

KEYWORDS
COVID-19 pandemic, food insecurity, health disparity, Latinx immigrants, racial discrimination, U.S. citizenship

The COVID-19 pandemic has disparately negatively impacted communities of color in the United Stated (U.S.) as evidenced by higher rates of infection, mortality, and unemployment among African American, Indigenous, and Latinx communities (Rodriguez-Diaz et al., 2020; Zelner et al., 2021). Issues related to documentation status and discrimination, key social determinants of health for Latinxs and Latinx immigrants, could partly explain health and economic disparities Latinx communities experienced during the COVID-19 pandemic. Indeed, prepandemic, 25 million immigrants lacked permanent protections and civil rights granted by U.S. citizenship (Budiman, 2020; Garcini et al., 2020). Health researchers and providers reported unique challenges faced by undocumented immigrants during COVID-19, including severe barriers to health and economic supports (Martinez et al., 2021).

The National Institutes of Health define health disparities as, "differences in the incidence, prevalence, mortality, and burden of diseases and other adverse health conditions that exist among specific population groups in the United States." Fundamentally important in examinations of racial and ethnic health disparities is the consideration of social factors—the contexts in which individuals reside and work (CDC). For immigrants in the United States, documentation status is a critical social determinant of health. Lack of documentation is tied to increased discrimination and health disparities (e.g., physical health, mental health, and socioeconomic wellbeing; Becerra et al., 2013; Mann-Jackson et al., 2018). Discrimination and documentation status also play a key role in determining access to resources and services critical to a person's health (Adames & Chavez-Dueñas, 2017; Borrell, 2005).

During the coronavirus pandemic, documentation status was an important social determinant of health, particularly as immigrants were impacted by intersecting crises (Garcini et al., 2020). In fact, during the pandemic, food insecurity hit astronomical levels with 46% of Latinx households reporting food insecurity as compared to prepandemic levels (16%) (Wolfson et al., 2020). Given the direct links between healthy diet and optimal physical and emotional development, food insecurity is a critical issue to examine, particularly among Latinx immigrants during the pandemic (Gabbad, 2020). The current study introduces and provides empirical support to "the citizenship shield" during the COVID-19 pandemic—a conceptual framework for understanding how documentation status, and/or lack thereof, is an important factor in understanding the relationship between discrimination and negative health outcomes among Latinx immigrants. In this particular study, we examined whether the citizenship shield explained the links between discrimination, food insecurity and negative impacts from the pandemic among five groups of immigrants: U.S. citizens, green card holders, Deferred Action for Childhood Arrivals (DACA) recipients, undocumented, and those with temporary statuses.

1 | THE CITIZENSHIP SHIELD

We define the citizenship shield as a conceptual framework that explains the pathways by which immigration status serves as a social determinant of health in the United States and influences other critical social factors like access to economic and health resources. Thus, for immigrants during the COVID-19 pandemic, the citizenship shield may serve as a protective factor among those that possessed U.S. citizenship, and in turn, exposed immigrants with fewer legal protections to more vulnerabilities and risks. This concept builds on extant scholarship that suggests that anti-immigrant policies and laws, which limit immigrants' access to legal protections, also have the effect of restricting access to health and social services thereby fostering detrimental socioemotional outcomes, such as depression, anxiety, and posttraumatic stress (Chang, 2019; Martinez et al., 2015). For example, discrimination has been identified as a key determinant of health disparity among Latinxs because these negative events, both structural and interpersonal, can limit one's ability to access critical resources such as medical care and government

food assistance (Borrell, 2005). More recently, a U.S. national survey of 3453 Latinxs conducted in 2017 found that over a third (37%) said they had experienced individual and interpersonal discrimination because they were Latinx and nearly 20% of participants reported that they avoided seeking medical care and government services to avoid ethnic-based discrimination (Discrimination in America: Experiences and Views of Latinos). Food insecurity has detrimental consequences for physical and emotional health (Bruening et al., 2017). Recent research has documented the experiences of immigrants during the pandemic, supporting the notion that their immigration status may have exposed them to intersecting crises given the interconnectedness between legal status, poverty, education, access to health services, and mental health in exacerbating health disparities (Chang, 2019; Garcini et al., 2020; Mendoza, 2009). The current study further investigates these intersections.

With the concept of the citizenship shield, we propose a detailed framework to examine the process through which immigration status fosters risk or resilience for individuals during the COVID-19 pandemic (see Figure 1). Specifically, we examined a moderated mediation framework, where immigration status was omnipresent as a moderating factor in the ability of food insecurity to mediate the relationship between discrimination and health among Latinx adults. A key predictor of health outcomes among Latinx communities in the United States is the ongoing experience of everyday discrimination (Schulz et al., 2006; Williams et al., 1997), which research suggests involves everyday occurrences of subtle and explicit racism that are prevalent among Latinx communities (Adames & Chavez-Dueñas, 2017;Pérez et al., 2008). We posit that these racialized health disparities were active and catalyzed by everyday discrimination during the COVID-19 pandemic. Furthermore, an underexplored construct in this link between discrimination and health is food insecurity, which can be defined as lack of access to enough food at all times for an active and healthy life. Food insecurity can be conceptualized as an indicator of vulnerability linked to intersecting social determinants of health that were impacted during the COVID-19 pandemic (Escobar et al., 2021; Owens et al., 2020), and which are aggravated with experiences of discrimination. This includes the economic resources and/or connection to social resources that ensure adequate access to food. Thus, food insecurity in this paper was used to partially explain the detrimental impacts of discrimination on health outcomes such that food insecurity indicates health vulnerability that is tied to negative health

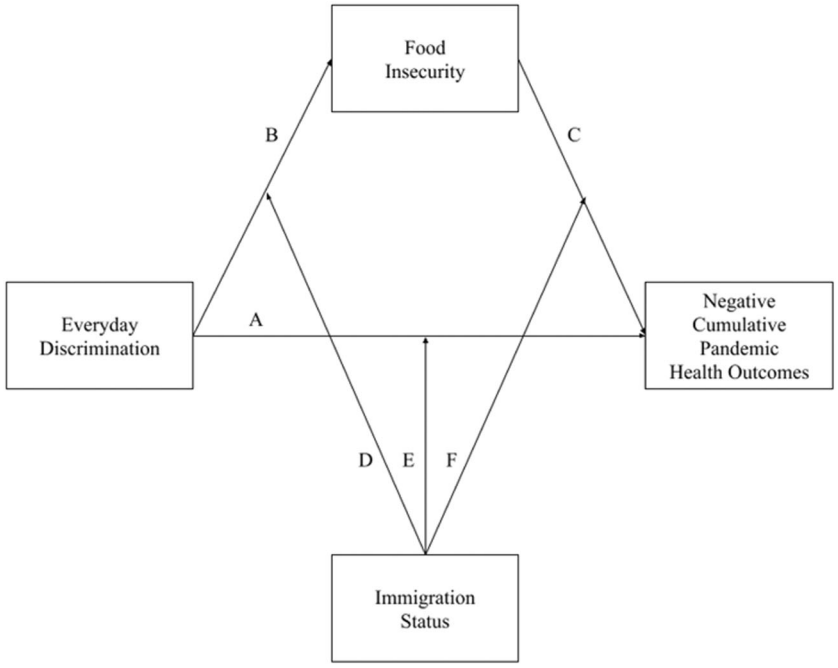

FIGURE 1 The Citizenship Shield Framework

outcomes. Indeed, food insecurity is consistently found in the scientific literature to be linked to negative health outcomes, including among immigrants (Alarcão et al., 2020; Gundersen & Ziliak, 2015). What follows is justification for each path in the citizenship shield framework, which is supported by scientific literature.

1.1 | Discrimination as a predictor of negative health outcomes (Path A)

Discrimination occurs at both interpersonal and structural levels with severe, chronic negative effects on health (Williams et al., 1997). At the interpersonal level, discrimination can range from microaggressions—indirect, subtle, or unintentional slights—to targeted, sometimes repeated behaviors that are intended to negative affect members of a certain minoritized group (Sissoko & Nadal, 2021; Sue et al., 2007). At the structural level, discrimination involves socio-cultural norms and institutional practices and policies that restrict access to critical resources that in turn drive health disparities (Hatzenbuehler, 2016).

Latinx immigrants in the United States face a unique form of discrimination at the intersection of race, nativity, and for some, documentation status (Yakushko, 2009). In the years leading up to the coronavirus pandemic, Latinx immigrants faced particularly intense, often hostile xenophobic rhetoric emerging at the federal level, ranging from the use of terms like "murderers" and "rapists" to describe immigrants crossing the Mexico-U.S. border to federal policies and practices directed at reducing immigrants' access to critical social, economic and health resources. In fact, the 45th presidential administration introduced "inadmissibility on public charge grounds," a rule that denied green cards to immigrants that sought out public assistance in the form of food stamps or Medicaid (Fox, 2020)—a direct barrier to the ability of immigrants to rely on critical resources tied to health outcomes.

1.2 | Food insecurity as a mediator (Paths B and C)

Food insecurity represents a pressing health concern among Latinx populations. Household food security reflects whether a family or individual has reliable access to nutritious food acceptable for active and healthy living (Coleman-Jensen et al., 2016). In 2019, 17% of Latinx families with children faced high levels of food insecurity (Coleman-Jensen, 2020). Food insecurity among Latinx in the United States has tripled (from 16% in 2019 to 46% in 2020) since the start of the COVID-19 pandemic (Wolfson et al., 2020). Widespread food insecurity is alarming given that household food insecurity has been associated with negative health outcomes among Latinx communities (Kollannoor-Samuel et al., 2011; McLaughlin et al., 2012). Moreover, food insecurity has been identified as a social determinant of health. Researchers suggest that public policies and social norms may lead to unfair and unjust distribution of opportunities (e.g., education, employment, neighborhood safety) that reduces individuals' options for healthy food access, and this in turn exacerbates behavioral risk factors, biopsychological stress responses, and overall higher psychological stress (Shim & Compton, 2020). We contend that the link between food insecurity and health outcomes may be particularly detrimental among Latinx in the context of the COVID-19 pandemic.

As previously noted, discrimination is a social determinant of mental health (Shim & Compton, 2020), one that could negatively affect food security among Latinx households. To illustrate, during COVID-19, individuals who experienced food insecurity also experienced discrimination (Larson et al., 2021), and these experiences may be further complicated by immigration status. Given than previous research among Latinx mothers has shown that experiences with discrimination were associated with a higher likelihood of experiencing food insecurity (Phojanakong et al., 2019), it is possible that experiences with discrimination in terms of ethnicity, race, and documentation status among Latinx immigrants might have hindered their ability to ask for support from food banks, food pantries, and assistance programs, thus affecting the levels of food security (or the lack thereof) during the pandemic (Larson et al., 2021). Likewise, it is well documented that fewer legal protections based on immigration status expose immigrants to workplace exploitation (Gelatt, 2020; Paret, 2014; Wilson &

Stimpson, 2020), such as lower wages and fewer work-based benefits, which may have hindered their financial ability to purchase food during a period of increased unemployment and underemployment.

1.3 | Immigration status as a moderator (Paths D, E, and F)

In this paper, food insecurity was hypothesized to mediate the association between everyday discrimination and negative health impacts from the COVID-19 pandemic. Further, the impact of food insecurity as a mediator would differ by immigration status. In other words, U.S. citizens would benefit from the citizenship shield in the associations between food insecurity, everyday discrimination and negative health impacts more so than green card holders and DACA recipients. The rationale is that immigrants exist along a spectrum of legal protections that are afforded to them by their immigration status. The highest form of protection is provided to those who have obtained U.S. citizenship by naturalization or birth, as in the case of Puerto Rican immigrants, as they have access to legal documentation to reside and work in the United States and are not subjected to deportation. Permanent residents (i.e., green card holders) possess the next highest level of protection, holding legal status that allows them to function as residents of the United States for a long period of time, yet still being vulnerable to deportation. The next level of protection is for those who hold temporary protected statuses which are more transient (e.g., refugees and asylees, temporary protected status holders, temporary workers, visa holders). The lowest level of protection is held by those who are undocumented, immigrants that lack most legal protections and are most vulnerable to deportation. This spectrum encompassing protectiveness from vulnerability based on legal status has been documented in other studies, which have similarly found that those with fewer protections display poorer physical and mental health, educational, and vocational outcomes (Cadenas & Nienhusser, 2021; Chang, 2019). We suggest that a higher degree of legal protections can be leveraged by immigrants to protect themselves from multiple negative impacts during the COVID-19 pandemic, while fewer protections confer risk for health disparities.

2 | THE CURRENT STUDY

The present study seeks to inform interventions and policy efforts that aim to foster postpandemic health and economic recovery for Latinx immigrants. This is important given the growing body of work noting that immigration status is a key social determinant of health (Chang, 2019) and that immigrants' health was disproportionally impacted during the COVID-19 pandemic (Garcini et al., 2020). To develop interventions and policy, it is key to better understand the nuanced pathways through which health disparities occurred among Latinx immigrants during the pandemic. The citizenship shield framework is helpful in examining the links between immigration status, discrimination, health outcomes, and food insecurity among Latinx immigrants in the United States during the COVID-19 pandemic. This framework builds on extant scientific literature, which theoretically supports each of the links depicted (see Figure 1). The following hypotheses guided our study:

Hypothesis 1: *Food insecurity would mediate the relation between discrimination and negative health outcomes (i.e., physical health, mental health, socioeconomic wellbeing) reported during the COVID-19 pandemic (Paths A, B, and C in Figure 1).*

Hypothesis 2: *Immigration status (e.g., ranging from U.S. citizen to undocumented) would moderate each link in the mediational model; thus, the detrimental links between discrimination and negative health, discrimination and food insecurity, and food insecurity and negative health would be more pronounced among participants with fewer legal protections based on immigration status (Paths D, E, and F in Figure 1).*

3 | METHOD

3.1 | Participants

The participating sample consisted of 536 Latinx immigrants. Of the participants, 35.6% (*n* = 191) held U.S. citizenship while the remaining 63.9% held statuses without permanent protections (lawful residents/green card holders = 16.4% [*n* = 88], DACA recipients = 26.7% [*n* = 143], undetermined = 4.9% [*n* = 26], and other temporary status = 15.9% [*n* = 85]). The ages of the participants ranged from 18 to 67 years, with a mean age of 30.18. Participants varied racially, however the largest racial category identify as white (27.6%, *n* = 148), 17.7% (*n* = 95) were unsure of their race, and 15.7% (*n* = 85) were indigenous from Mexico. Other racial groups constituting the rest of the sample were represented in low numbers. The sample mostly identified as woman (65.5%, *n* = 351), but among the participants 31.9% (*n* = 171) identified as male, 2.1% (*n* = 11) were gender binary, and 0.2% (*n* = 1) marked other. Participants resided in 40 different states in the United States; with California (37.5%, *n* = 201), Texas (10.4%, *n* = 55), and New York (9.7%, *n* = 52) representing the largest portion of the sample.

Of the participants, married and single individuals comprised of 48% (*n* = 257) of the sample each; the remaining participants either were divorced or separated (3.7%, *n* = 20) and only 0.4% (*n* = 2) were widowed. Roughly three quarters of the participants (71.6%, *n* = 124) of individuals were low income and reported a household income lower than 49,000 in 2019; only 1.9% (*n* = 10) of the sample identified reported having a household income over 150,000 a year. The sample's education level was relatively high, with 24.4% (*n* = 131) having received some college education and 22.9% (*n* = 123) holding a bachelor's degree. Fewer than ten percent had less than a high school education—4.9% (*n* = 26) reported having no high school education and 4.1% (*n* = 22) reported having some high school education. A small portion of the sample also reported technical or vocational training (7.3%, *n* = 39) or a graduate degree (9.9%, *n* = 53). Additionally, 27.2% of the sample totaling (*N* = 146) identified as essential workers.

3.2 | Procedure

The current study received approval from the Institutional Review Board. No identifiable information was collected to protect participant's identity, and participation was voluntary. Participants were able to withdraw from the study at any point, without any consequence, and still be able to claim compensation from the study. The survey was comprised of robust questionnaire that covered several factors related to wellbeing (e.g., health, mental health, employment, home life) during the COVID-19 pandemic. This survey was made publicly available using Qualtrics, and promotional materials (e.g., flyers, recruitment emails) were developed to recruit participants. These materials were shared with immigrant rights activists, who then widely shared the survey and recruitment materials to their networks (i.e., social media, emails to coalition partners, internal emails within their advocacy organizations). The data were collected during the third peak of the COVID-19 pandemic, in November 2020.

To ensure validity of the survey responses, several validity checks were put in place. There were two attention questions positioned throughout the survey to scan for inattentive or automated responses. Additionally, time spent on the survey was tracked, and responses that were completed with a speed that was not humanly possible, relative to the estimated time to complete the survey, were dropped from the study. Participants had the option to obtain compensation for engaging in the study, which was provided in the form of a $30 electronic gift card. To receive compensation, participants were provided a unique code at the end of the survey, which was generated by the survey's platform. Participants then emailed this code to an account created for this study. The research team then confirmed that the survey responses passed the validity checks before providing compensation. This procedure resulted in 536 trustworthy survey responses.

3.3 | Measures

3.3.1 | Immigration status

Immigration status was measured within the demographic questionnaire, which gave participants a range of immigration status options to choose from. Participants identified as U.S. citizens (191, 35.6%), lawful permanent resident/green card holder (88, 16.4%), recipients of the DACA program (143, 26.7%), undetermined (26, 15.9%), or temporary stratus (85, 15.9%). The category for those holding temporary statuses was composed of participants who selected immigration statuses that had similarities in their degree of low legal protections, but that were represented in low numbers in the sample, including visa holders (7, 1.3%), temporary protected status (8, 1.5%), refugee (3, .6%), "other" (37, 6.9%), and prefer not to answer (30, 5.6%). There were 3 participants (.6%) who did not answer. The aforementioned five immigration status groups (i.e., U.S. citizen, permanent resident, DACA recipient, undetermined, and temporary status) were used in analyses (see Table 1).

3.3.2 | Everyday discrimination

Daily perceived discrimination was measured using the Everyday Discrimination Scale Revised (Revised-EDS) (Stucky et al., 2011). The measure asks how often specific events occurred as a result of participants' race and ethnicity. The measure uses a 6-point scale (0 = never to 6 = almost everyday) and is comprised of 5 items. Higher summed scores indicate greater frequency of daily experiences with discrimination. Examples items include, "You are treated with less respect that other people are" and "People act as if they think you are not smart." The long form of this scale has been used in research with Latinx immigrant and was found to be highly reliable (Cadenas et al., 2020). The revised version amended item redundancy found in the original EDS measure and minimized item bias. The internal consistency of the original EDS had a Cronbach's alpha of 0.88. In the development of the revised EDS, factor analyses were used to establish the validity of the measure. The current study yielded a Cronbach's alpha of 0.84 for the Revised-EDS, which suggested high internal consistency.

3.3.3 | Food insecurity

Food insecurity was assessed using the U.S. Household Food Security Survey Module: Six-Item Short Form Economic Research Service evaluation tool (Blumberg et al., 1999). The short version was adapted from the original 18-item measure and assesses household food consumption in the past 12 months. Participants were asked to

TABLE 1 Correlations, means, and standard deviation

Measure	1	2	3
1. Negative health outcomes	–	–	–
2. Food insecurity	0.31*	–	–
3. Discrimination	0.35*	0.31*	–
Overall sample, *M* (*SD*)	37.12 (15.99)	7.69 (3.16)	9.85 (5.23)
Overall sample Cronbach's	0.90	0.87	0.84

Note: *M* = mean, *SD* = standard deviation.
*$p < 0.01$.

respond to six statements that included anxiety about food supply, experiencing a decrease in the quality of food, followed by a decrease in quantity of food, and about sleeping hungry and going all day and night without eating. Participants were asked to rate each statement by indicating how often they experienced food insecurity in their household in the past 12 months. Scores of two or more affirmative responses indicated that the participant experienced food insecurity, and five or more affirmative responses indicated hunger. Higher scores in the food insecurity scale indicated that participants experienced greater food insecurity in their household. Example of an item on the scale include: "In the last 12 months, did you ever eat less than you felt because there wasn't enough money for food?" In a previous study, Knueppel et al. (2010) found a high internal consistency estimate with this measure (Cronbach's alpha = 0.83). The current study found a Cronbach's alpha of 0.87.

3.3.4 | Epidemic-pandemic impacts inventory (EPII)

Pandemic experiences were gathered using the EPII (Grasso et al., 2020). The EPII was developed by a team of clinical and developmental psychologist and incorporates feedback from interdisciplinary professionals (i.e., pediatrics, social work, anthropology, medicine) to assess stress, trauma, resiliency, and coping during the COVID-19 pandemic. The EPII survey is comprised of 92-items, divided into 10 subcategories (work and employment, education and training, home life, social activities, economic, emotional health and wellbeing, physical health, physical distancing and quarantine, infection history, and positive change). Examples of items include, "Laid off from job or had to close own business", "Had to spend a lot more time taking care of a family member" or "Had symptoms of this disease but never tested." Answer choices included Yes (Me), Yes (Person in home), No, and NA. If the statement applied to both the individual and a person in their home, they could mark yes to "me" and "person in home." We removed the positive change subscale for the purposes of this study. We then calculated an index of commutative negative impact from the pandemic by coding all yes responses (me or person in home) as values of 1 and summing these scores. Because the measure was newly developed, there were no prior psychometric properties to report. The Cronbach's alpha in the current study was 0.91, suggesting high internal consistency of the scale.

3.4 | Analyses

The analyses consisted of evaluating the overall mediation model and to test follow-up moderation models (see Figure 1) in SPSS version 27 with PROCESS Macro (Hayes, 2018). Model 59 was selected as it most closely matched the conceptual framework to be tested. Assumptions of the test were met before running analyses, including, assessing for multicollinearity and homoscedasticity.

- Hypothesis 1 involved testing the mediating role of food insecurity in the link between discrimination and negative health outcomes. Testing mediation with the PROCESS Macro involved examining direct and indirect effects using the bootstrapped resampling process, specified at 10,000 repetitions with 95% bias-corrected intervals not containing zero (Hayes, 2018)
- Hypothesis 2 involved testing the moderating role of immigration status separately in each of the links in the model. To assess this hypothesis, we independently examined the interaction of each immigration status on each of the three links (discrimination → negative health; discrimination → food insecurity; food insecurity → negative health). Additionally, we examined conditional effects, which allowed us to test the effect of the predictor on the outcome variable at each level of the moderator, hence examining the strength of each direct path for each type of immigration status. Continuous predictors were mean centered for analyses.

4 | RESULTS

4.1 | Mediation

As a precursor to testing the mediational model, we conducted correlational analyses, which are reported on Table 1, which also includes means and standard deviations for each variable by immigrant group. We tested the mediation model using Process Macro in SPSS (Hayes, 2017), to test whether food insecurity (M) mediated the relationship between discrimination (X) and negative health outcomes (Y1) from the COVID-19 pandemic among Latinx immigrants (see Table 2, and Figure 1 Paths A, B, and C). This model accounted for a significant amount of the variance in negative health outcomes, $R^2 = 0.17$, F (2, 480) = 48.55 $p < 0.001$. The direct effect of discrimination on negative health outcomes (path A; see Figure 1) was positive and statistically significant ($b = 0.83$, $SE = 0.13$, 95% confidence interval [CI] = [0.57, 1.09], $p < 0.001$), indicating that Latinx immigrants that experienced greater everyday discrimination were more likely to have more commutative negative health outcomes during the COVI-19 pandemic than Latinx immigrants that experienced lower degrees of discrimination. Food insecurity significantly mediated the path between discrimination and negative health outcomes (Path B; see Figure 1), with a total indirect effect that was positive and 95% confidence intervals that did not cross zero ($b = 1.05$, $SE = 0.13$, 95% CI = [0.79, 1.30], $p < 0.001$). Specifically, the effect of discrimination on food insecurity was positive and statistically significant ($b = 0.19$, $SE = 0.03$, 95% CI = [0.14, 0.24], $p < 0.001$), suggesting that increased everyday discrimination was associated with increased food insecurity. Additionally, the direct effect of food insecurity on negative health outcomes (Path C; see Figure 1) was positive and statistically significant ($b = 1.15$, $SE = 0.22$, 95% CI = [0.72, 1.58], $p < 0.001$), indicating that Latinx immigrants that experienced greater food insecurity were more likely to have greater negative health outcomes. Taken together, these findings provide support for Hypothesis 1; the mediation model was supported by the data.

4.2 | Moderation

The effect of the moderator (immigration status) was probed independently for each of the three paths (D, E, and F on Figure 1), including testing interactions across the five immigration statuses (see Table 3). Results suggested that the path between discrimination and negative health outcomes was moderated by immigration status, specifically for permanent residents/green card holders ($b = 1.16$, $SE = 0.42$, 95% CI = [0.24, 1.98], $p < 0.05$), while U.S. citizenship was the baseline status in the regression. Conditional effects by immigration status (see Table 3) suggested that the effect of discrimination on negative health outcomes was significant for U.S. citizens, green card holders, DACA recipients, and temporary status holders, but not for undocumented immigrants. This link was stronger for permanent residents/green card holders than it was for U.S. citizens. However, the link was weaker for DACA recipients and those holding temporary statuses, compared to U.S. citizens and those holding green cards.

Furthermore, the path between discrimination and food insecurity was not moderated by any immigration status. However, results suggested that food insecurity was positively predicted by discrimination for Latinx immigrants who held permanent residency/green card ($b = 0.97$, $SE = 0.40$, 95% CI = [0.19, 1.75], $p < 0.05$) and immigrants who held temporary statuses ($b = 1.93$, $SE = 0.40$, 95% CI = [1.14, 2.72], $p < 0.001$). Evidently, the effect of discrimination on food insecurity was stronger with those with temporary statuses. Tests of higher order interactions were nonsignificant, and thus conditional effects were not examined. Finally, the path between food insecurity and negative health outcomes was moderated for immigrants holding temporary statuses ($b = -1.47$, $SE = 0.65$, 95% CI = [−2.75, −0.19], $p < 0.05$) when U.S. citizenship was the baseline contrast. Tests of higher order interactions were nonsignificant, and thus conditional effects were not examined. Moreover, temporary status was a negative predictor of increased cumulative negative health outcomes ($b = -5.43$, $SE = 2.18$, 95% CI = [−9.75, −1.16], $p < 0.05$). Taken together, these results provide partial support to Hypothesis 2. Immigration status moderated two of the three paths tested. Overall, patterns suggest that negative effects were more pronounced for

TABLE 2 Food insecurity mediating the link between discrimination and negative health outcomes from the COVID-19 pandemic among latinx immigrants

M (food insecurity)						*Y* (negative health outcomes)					
Predictor		***b***	***SE***	**95% CI**	***p***	**Predictor**		***b***	***SE***	**95% CI**	***p***
Intercept		5.85	0.29	[5.27, 6.42]	<0.05	Intercept		20.09	1.90	[16.36, 23.82]	<0.05
X (discrimination)	*a*	0.19	0.03	[0.14, 0.24]	<0.05	X (discrimination)	*a*	0.83	0.13	[0.57, 1.09]	<0.05
Model summary $R^2 = 0.10$ $F(1, 481) = 50.93$ $p < 0.05$						M (food insecurity)	*b1*	1.15	0.22	[0.72, 1.58]	<0.05
						Model summary $R^2 = 0.17$ $F(2, 480) = 48.55$ $p < 0.05$					

Note: X = predictor variable; M = mediator, food insecurity; Y = dependent variable, negative health outcomes; *$p < 0.05$.

Abbreviation: CI, confidence interval.

TABLE 3 Interactions and conditional effects by immigration status

Immigration status	Effects (*b*)	*SE*	95% CI	*t*	*p*
Interactions of discrimination on negative health outcomes by immigration status					
Green card holders	1.16*	0.42	[0.34, 1.97]	278	<0.05
DACA recipients	−0.23	0.34	[−0.90, 0.43]	−0.69	0.50
Undetermined	−0.63	0.46	[−1.54, 0.27]	−1.38	0.17
Temporary status	−0.36	0.36	[−1.06, 0.35]	−0.99	0.32
Conditional effect of discrimination on negative health outcomes by immigration status					
Green card holders	1.15*	0.24	[0.68, 1.62]	4.80	<0.01
DACA recipients	2.31*	0.34	[1.64, 2.98]	6.79	<0.01
Undetermined	0.92*	0.24	[0.45, 1.39]	3.87	<0.05
Temporary status	0.52	0.39	[−0.57, 1.02]	1.32	0.19
Interactions of discrimination on food insecurity by immigration status					
Green card holders	0.12	0.09	[−0.05, 0.29]	1.38	0.17
DACA recipients	−0.01	0.07	[−0.15, 0.12]	−0.20	0.84
Undetermined	0.05	0.09	[−0.13, 0.24]	0.57	0.57
Temporary status	−0.04	0.07	[−0.18, 0.11]	−0.49	0.62
Interactions of food insecurity on negative health outcomes by immigration status					
Green card holders	−0.32	0.68	[−1.65, 1.01]	−0.47	0.64
DACA recipients	−0.29	0.57	[−1.42, 0.84]	−0.50	0.61
Undetermined	−0.57	0.94	[−2.42, 1.28]	−0.60	0.55
Temporary status	−1.47*	0.65	[−2.75, −0.19]	−2.25	0.02

Note: U.S citizens is the reference group for immigration status on tests of interactions. *$p < 0.05$, **$p < 0.01$.

permanent residents/green card holders compared to U.S. citizens. However, and contrary to the hypothesis, effects seemed to be less pronounced for DACA recipients and those holding temporary statuses.

5 | DISCUSSION

Results from the present study demonstrate initial evidence of the citizenship shield, demonstrating that immigration status played a key role in the relations between everyday discrimination, food insecurity, and cumulative negative health impacts from the COVID-19 pandemic. Consistent with our hypotheses, the link between everyday discrimination and negative health outcomes was detected across all immigration statuses, and this link was mediated by food insecurity across all statuses as well. Further, the strengths of these links varied, with conditional effects suggesting a lessened overall impact for U.S. citizens compared to immigrants whose documentation status provides fewer legal protections (e.g., green card holders). However, results also suggest that the links discrimination and food insecurity were less negative for DACA recipients and temporary status holders, possibly highlighting the resilience that these vulnerable immigrants exhibited in the face of increased discrimination and intersecting crises (Cadenas et al., 2020; Garcini et al., 2020). The latter results also suggest that there are social determinants of health beyond food insecurity that need to be considered when investigating COVID-19 health outcomes for DACA recipients and temporary status holders.

The findings from this study make a significant contribution to parallel bodies of scholarship that are beginning to coalesce. Specifically, the findings advance the literature on health disparities based on immigration status (Cadenas & Nienhusse, 2021; Chang, 2019; Garcini et al., 2020; Mendoza, 2009; Wilson & Stimpson, 2020), ethno-racial discrimination among people of color and Latinx immigrants (Adames & Chavez-Dueñas, 2017; Sanchez et al., 2018; Schulz et al., 2006; Williams et al., 1997), and on the detriments of food insecurity among Latinxs in the U.S. (Coleman-Jensen, 2020). Similar to Escobar et al. (2021), our study demonstrated low levels of food security among Latinxs during COVID-19. Although Escobar et al. (2021) did not examine documentation status in their study, they determined that level of education and employment status were associated with decreased levels of food security—two factors that are tied to documentation status.

A major contribution of the study is providing a conceptual framework to integrate various strands of research across discrimination, food insecurity and negative health effects, thus making clear the importance of considering social and structural determinants of health among Latinx immigrants. Our findings offer initial evidence of the complexity of intersecting crises (i.e., COVID-19, immigration policy, ethno-racial discrimination) and their impact on vulnerable populations during the pandemic. As a result, our findings lend important lessons for the development and/or refinement of health interventions and federal policy targeted toward the most vulnerable immigrants in the United States, demonstrating the need for immigration reform policy that provides a pathway to citizenship and better access to economic and health resources. Notably, interventions and policy aimed at eradicating discrimination and food insecurity may prove fruitful in fostering recovery from the pandemic among Latinx immigrant communities, particularly among immigrants with fewer legal protections.

5.1 | Implications for research

The major findings of the current study contribute to the empirical literature by providing a theoretical framework by which immigration status influences the everyday experiences of Latinx adult immigrants, particularly during the COVID-19 pandemic. Specifically, we found that discrimination was associated with higher cumulative health outcomes, and this link was moderated by immigration status. This relation was strongest for green card holders but was also significant among DACA recipients, temporary status holders, and U.S. citizens. We also found that immigration status influenced the indirect relationship between discrimination and health, which was mediated by food insecurity. This mediated link was present across all immigration statuses during the COVID-19 pandemic. The results of this study demonstrate that future research on Latinx immigrants, related to the Coronavirus pandemic and beyond, should consider key differences by documentation status. Legal protections may buffer the negative effects of discrimination and reduce barriers to important social and economic resources tied to health outcomes. Thus, researchers need to account for the complexity and diversity of immigration statuses and other critical demographic factors (e.g., gender, years of residence in the U.S., residential location) to accurately capture how vulnerability to health disparities differ across levels of legal rights and protections. Furthermore, the current work highlights how food insecurity is an important underlying mechanism linking discrimination and health among Latinx immigrants. Additionally, future research that builds on the work from more in-depth examination of how individuals with vulnerable immigration statuses (e.g., DACA recipients, temporary status holders) shield themselves against discrimination to protect their health.

5.2 | Implications for practice

The results of our study demonstrate that Latinx immigrants faced immense stress during COVID-19 and that this stress was related to access to food and negative health outcomes. Thus, providers must take into account the heavy toll of the pandemic on immigrant health and the potential for these outcomes to be long-term (Garcini et al., 2020). Mental health providers, in particular, should consider whether their services are financially, linguistically, and culturally

accessible to Latinx immigrants. This includes taking stock of their current clientele as well as their outreach efforts with immigrant communities. Further, providers should learn about public charge and whether services for immigrants with temporary and/or no documentation face unique barriers to care. Far too often, providers assume that Latinx immigrants do not engage with mental health services as a result of cultural preference. While that may be true for some, it is also the responsibility of the mental health field to create pathways to mental health care that improves engagement and uptake of services for the most vulnerable in our communities.

5.3 | Policy recommendations

The findings of this study make clear the important link between immigration policy and immigrant health. The start of the coronavirus pandemic in the United States occurred under the 45th presidential administration—a governmental body with significant power that introduced highly contentious anti-Latinx and anti-immigrant rhetoric and policies. In fact, immigrants were explicitly excluded from receiving critical benefits during COVID-19, such as those covered under the Coronavirus Aid, Relief, and Economic Security Act (Garcini et al., 2020). The findings from our study support the negative effects of federal and state policy such that all immigrants, across documentation type, reported discrimination during COVID-19 that was associated with negative health outcomes. Thus, policy efforts at the city, county, state and federal levels must protect immigrants of all documentation statuses and especially those with temporary and no protections who may fear that accessing critical resources will count against them under "public charge" (Fox, 2020). Indeed, Immigration and Customs Enforcement continued deporting immigrants during COVID-19, separating families and disrupting financial stability during a global pandemic (Jordan, 2020). In an effort to support and expand communal health, protections for immigrants must be in place. This includes creating a fair pathway to citizenship and at the very least, making use of public services—like food banks and food assistance programs—safe and accessible to all immigrants, regardless of immigration status.

5.4 | Contributions to community psychology

The current study advances community psychology as its findings illustrates several community factors (e.g., immigration status, discrimination, food insecurity) and their negative impact on the wellbeing of Latinx immigrants, including on their psychological wellbeing. Our study found that for all immigrants, experiences of discrimination exacerbate their experiences with food insecurity as well as their cumulative negative health outcomes from the COVID-19 pandemic. Evidently, these findings add to recent research that is uncovering the deep, complex, and disproportionate impact of the COVID-19 pandemic on communities of color, including the mental health of Black Americans (Cokley et al., 2021), the mental health of families with disabilities (Urizar et al., 2021), health behaviors in Asian countries (Mukhlis et al., 2021), among others. Importantly, the current study builds on research that has been demonstrating the harmful effects of anti-immigrant policies that limit immigrants' ability to obtain the protections of U.S. citizenship (Salas et al., 2013). Finally, this study moves the field forward by contributing to the growing literature on COVID-19 and Latinxs (Moore, 2021), and by identifying opportunities for policy change and interventions, which align with recent work in this area (Lardier et al., 2021).

5.5 | Limitations and future research

The findings presented should be considered within the context of our study's limitations. First, while we were able to capture differential effects between discrimination, food insecurity, and health across immigration statuses, our study did not include other salient individual identities (e.g., race, skin color, gender identity, sexual minority status), which

could have also influenced the relationships we examined. For example, researchers have found that skin color is an important distal indicator of health among Latinxs (e.g., Araújo-Dawson, 2015; Cuevas et al., 2016). In the future, researchers should evaluate how other individual-level differences in combination with immigration status, may affect the relationship between discrimination, food insecurity, and health. Along the same line, in our study we only asked participants to recall ethnic-based discrimination. However, the extant literature on social determinants of health among U.S. Latinxs indicates that racial (e.g., Borrell, 2005; Capielo Rosario et al., 2021; Mazzula & Sanchez, 2021) and heterosexist discrimination (e.g., Cerezo, 2016; Estrada, Cerezo and Ramirez, 2021) are also significant correlates of Latinx immigrant health. Therefore, future investigations should examine how intersectional discrimination (e.g., simultaneously experiencing ethno-racism, and/or heterosexism) influences the health of Latinxs immigrants.

Beyond individual and social level indicators of health, future investigations should examine how structural factors (e.g., neighborhood poverty, local and state laws, food deserts) also influence levels of discrimination and food insecurity Latinx immigrants experience. Lastly, although we offer important steps researchers, practitioners, and policy makes should take time to address health disparities associated with immigration status during the COVID-19 pandemic. The design of our study precluded us from understanding how the results we report may change as a function of time lived in the United States. To illustrate, in our study we observed that the direct effect of discrimination on health was stronger for U.S. citizens than it was for DACA recipients and those with temporary statuses. This aligns with previous studies noting that nonimmigrant Latinxs and Latinxs immigrants who have lived longer in the U.S. report more discrimination than recent Latinx immigrants (Discrimination in America: Experiences and Views of Latinos; Kulis et al., 2009). Less familiarity with ethno-racial hierarchies in the United States as a function of having spent less time in the United States may help explain these differences. Therefore, this moderating effect should be examined across generations of immigrants.

6 | CONCLUSION

We propose *the citizenship shield* as a conceptual framework to help explain the key role citizenship status play in the context of U.S. immigration among Latinx populations. Specifically, the syndemic interaction between immigration status and other neglected social determinants of health, such as discrimination and food insecurity, highlights important factors in immigrant mental health. Clearly, the COVI/D-19 has uncovered the fragility of the social structures and racial inequalities for Latinx adults (Garcia et al., 2021), particularly Latinx immigrants whose lack of U.S. citizenship put them at risk for higher levels of food insecurity.

This project is part of a larger multiracial research study that is supported by the National Urban League, a historic civil rights and advocacy organization with 90 affiliates in 300 communities across the country. The full The COVID-19 Communities of Color Needs Assessment Phase 1 report, inclusive of this presentation, will soon be available on the National Urban League's website, http://www.nul.org. The Needs Assessment Phase 1 was funded by from The W. K. Kellogg Foundation, JPB Foundation, Ford Foundation, The California Endowment, Weingart Foundation, and The California Wellness Foundation.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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