STRUCTURAL RACISM AND IMMIGRANT HEALTH: EXPLORING THE ASSOCIATION BETWEEN WAGE THEFT, MENTAL HEALTH, AND INJURY AMONG LATINO DAY LABORERS

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Background: Although wage theft has been discussed primarily as a labor and human rights issue, it can be conceptualized as an issue of structural racism with important consequences for immigrant health.

Objectives: The objectives of this study were to: 1) identify sociodemographic, employment, and stress-related characteristics that increase Latino day laborers' odds of experiencing wage theft; 2) assess the association between wage theft and serious work-related injury; 3) assess the association between wage theft and three indicators of mental health—depression, social isolation, and alcohol use—as a function of wage theft; and 4) assess serious work-related injury as a function of wage theft controlling for mental health.

Methods: Secondary data analyses were based on survey data collected from 331 Latino day laborers between November 2013 and July 2014. Regression analyses were conducted to test the relationships described above.

Results: Approximately 25% of participants reported experiencing wage theft and 20% reported serious work-related injury. Wage theft was associated with working in construction and was initially associated with work-related injury. Wage theft was not significantly associated with mental health indicators. The association between wage theft and injury became non-significant when controlling for the mental health variables.

Conclusions: The hardship and stress associated with wage theft incidents may ultimately lead to more frequent injury. Although we expected an association of wage theft with mental health, we found vulnerability to physical health as indicated by in-

INTRODUCTION

Wage theft, defined as purposefully withholding payment or the underpayment of wages for completed work,^{1,2} is typically discussed as a labor and human rights issue but is also a manifestation of structural racism with serious implications for health among immigrant workers. According to the Economic Policy Institute, wage theft is experienced by millions of workers in the United States and costs approximately \$15 billion a year in lost income,² an estimate likely substantially lower than the exact dollar amount stolen each year given most workers never report or pursue action against their employer. Though wage theft is a common labor law violation experienced by US workers, those most likely to experience it include low-income and racial/ ethnic minority workers such as Latino day laborers (LDLs).^{1,2} For LDLs, wage theft is only possible because of racist beliefs that individuals who lack legal documentation are of inferior status and therefore, rightfully excluded from society.^{3,4}

Wage Theft and Latino Day Laborers

Latino day laborers represent an informal and often unregulated

jury incidents. Thus, our basic premise was partially supported: wage theft may act as a stressor that stems from conditions, in part, reflecting structural racism, making workers vulnerable to poorer health. *Ethn Dis*. 2021;31(Suppl 1):345-356; doi:10.18865/ ed.31.S1.345

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Address correspondence to Maria Eugenia Fernández-Esquer, The University of Texas Health Science Center at Houston School of Public Health, Center for Health Promotion and Prevention Research, 7000 Fannin Street, Suite 2518, Houston, TX 77030; Maria.E.Fernandez-Esquer@uth.tmc.edu workforce who are particularly vulnerable to labor abuses and wage theft due to the interaction between individual (eg, sociodemographic and employment characteristics) and structural (eg, criminalization and devaluation of immigrants) factors that make them targets of exploitation.^{4,5} At the individual level, limited education, low English proficiency, and lack of knowledge about labor laws make them vulnerable to

Though wage theft is a common labor law violation experienced by US workers, those most likely to experience it include low-income and racial/ethnic minority workers such as Latino day laborers (LDLs).^{1,2}

exploitation, as these factors have been associated with increased reports of minimum wage violations.⁶ Employment characteristics such as industry category, company size, and payments of wages in cash have also been found to be strong predictors of wage theft.⁷ These individual and work characteristics do not exist in a vacuum, as they are connected by macro structural forces that devalue the work and worth of Latino immigrants.^{4,8} LDLs' experiences of discrimination, undocumented status, threats of deportation, and job loss from employers are also the byproducts of a legal and social system that tacitly allows LDLs to become the victims of wage theft.⁸⁻¹⁰

Wage Theft and Structural Racism

Structural racism is defined as "the macro level systems, social forces, institutions, ideologies, and processes that interact with one another to generate and reinforce inequities among racial/ethnic groups."11,12 In this system, dominant groups receive social, economic, and political advantages, while non-dominant groups, such as Latinos, receive less favorable treatment often manifested as social oppression and economic disadvantage (eg, wage theft).¹³ It is within such an environment of differential treatment that US labor and immigration laws foster the systematic practice of wage theft experienced by LDLs.^{3,4} The presumed or real undocumented status of LDLs often place them in a marginalized position, where they experience social exclusion and the presumption that they are not entitled to basic rights.⁴ Being undocumented represents more than an immigration status category, as it is a sociopolitical condition characterized by instability, insecurity, and hypervigilance that shapes every aspect of life for those who are forced to live under the specter of illegality.³

Other structural disadvantages such as weak enforcement and the limited scope of existing labor laws as they pertain to minimum wage, give cover to the practice of wage theft and further contributes to LDLs' systemic discrimination.^{2,9,14} Several labor laws created to help protect US workers-notably those established through the Fair Labor Standards Act of 1938^{2,6,14}—historically excluded people of color by explicitly excluding occupations overwhelmingly made up by this group (eg, agricultural, domestic). While some of these legal barriers have been lifted to increase access to protections for people of color, Latinos remain some of the least protected workers in the United States.^{15,16}

Wage Theft and Health

Although several forms of structural racism have been linked to negative health outcomes,^{11,13} only a few studies have explored the relationship between wage theft and health. These studies are qualitative in nature and suggest that wage theft is a major stressor commonly reported by LDLs and that wage theft is linked to maladaptive health behaviors and indicators of poor mental and physical health.^{4,8,17-21} For example, the seminal work of Walter et al²¹ illustrated how the mental well-being of immigrant workers is closely tied to their self-image as economic providers. Thus, workers who lose income due to wage theft, not only report economic loss but also report feelings of worthlessness and depression as a result of this type of abuse.

Negi's^{18,19} extensive ethnographic work illustrates the connection between wage theft and mental health. She has noted that abuses of worker rights, including wage theft, have a negative effect on the mental health of LDLs.^{18,19} Depression and anxiety often result from this experience, as wage theft deprives these workers of income slated for their families, often leading the workers to isolate themselves and to abuse alcohol and other substances.¹⁸ The stress created by wage theft is exacerbated by the sense of powerlessness that comes from an irregular immigration status and the resulting perceived inability to seek justice.^{8,19}

Workplace injury, which often co-occurs with wage theft in the context of hazardous work conditions, is a serious health problem among LDLs.^{18,22} One in five LDLs report experiencing a work-related injury.⁴ In fact, the US Bureau of Labor Statistics reports that the workrelated fatality rate in the United States is higher for Latinos than for non-Latino workers (excluding transportation incidents) and higher for foreign-born Latino workers than US-born Latino workers.²³

While there are no studies that establish a direct association between wage theft and injury, LDLs have reported wage theft as a major source of stress at work that may contribute to their vulnerability to injury.²⁴ Economic pressures and competition for a limited number of jobs, particularly at corners with a large labor pool,25 may push LDLs to take more hazardous jobs from employers willing to exploit their economic needs.^{26,27} Wage theft and the fear or actual experience of a serious injury have a negative impact on mental health, as these threats may increase LDLs levels of depression and binge drinking.^{18,28} Thus, the very need for a job and the fear of losing it contributes to their increased risk for injury,²⁹ and wage theft likely exacerbates this risk.

While the evidence is limited, the above findings suggest that wage theft is a commonly experienced and pernicious problem that affects LDLs' economic well-being and may adversely impact their health. To our knowledge, studies that identify individual-level predictors of wage theft or examine the association between wage theft and health among LDLs are rare. Such evidence could strengthen existing research on day laborers and other Latino immigrants' susceptibility to wage theft and its co-occurring health consequences, which in turn can inform individ-



Figure 1. Relationship of wage theft with sociodemographic and work characteristics, deportation stress, mental health, and injury

ual and policy level interventions to assist this vulnerable population.

Thus, the purpose of this study was to: 1) identify sociodemographic, employment, and stress-related characteristics that increase LDLs' odds of experiencing wage theft; 2) assess the association between wage theft and serious work-related injury; 3) assess the association between wage theft and three indicators of mental health-depression, social isolation, and alcohol use-as a function of wage theft; and 4) assess serious work-related injury as a function of wage theft controlling for mental health. These aims are depicted in presented in Figure 1.

METHODS

Our current study represents a secondary data analysis based on survey data collected for a pilot community-based program to reduce workplace injury among Latino day laborers.³⁰ The parent study was approved to interview adult Latino males (aged ≥21 years) by the Committee for the Protection of Human Subjects at The University of Texas Health Science Center at Houston. Key methodological aspects of the parent study pertaining to this article are presented below and full study details are found in an earlier article.³⁰

Study Setting and Participant Selection

We recruited Latino day laborers at corners (ie, street corners, home improvement and convenience stores, parks, bus stops, parking

lots) or locations where they frequently look for work in the Houston metropolitan area. A total of 38 corners were identified and observed between November 2013 and July 2014. Corners were stratified by size (ie, labor pool density) as determined by the average number of Latino day laborers observed on location. Corners were classified as small (≤ 20 LDLs observed), medium (21-44 observed), and large $(\geq 45 \text{ observed})$. To ensure adequate representation of corner size during data collection, we set recruitment quotas of 60 LDLs from small corners, 90 from medium corners, and 150 from large corners. Sample size and power considerations for this pilot study were based on the ability to establish feasibility, acceptability, and initial outcomes for an injury prevention program. Thus, we systematically surveyed all identified corners and assessed initial trends in injury rates and its social, occupational, and demographic correlates.

The corner survey was administered via face-to-face interview to 331 individuals and completed over the course of 10 weeks, beginning in mid-November 2013. Participant eligibility criteria included: a) being aged \geq 21 years; b) self-identifying as Hispanic or Latino; and c) presently looking for work on corners. All eligible individuals who agreed to participate were included in the study until sample quotas were met or exceeded for each corner size.

Interview Procedures

Four Latino day laborers and two bilingual Latinas familiar with the LDL community participated

in a two-day interviewer training, guided by a manual of procedures. They administered the survey on site at each corner location, which lasted between 45 and 60 minutes per interview. All participants provided verbal consent prior to the interview and were given the option to discontinue the interview or complete it at a later time if they needed to participate in daily hiring activities. Upon survey completion, participants were compensated with a \$20 gift card and received a copy of their informed consent and a list of community resources.

Survey Content and Measures

Sociodemographic and employment characteristics measured in the survey included age, years of school, country of origin, language(s) spoken, marital status, number of children supported financially, time living in the United States, time looking for work on the corners, and most frequent job performed in the last year.

Three scales assessed participants' mental health. Depression in the previous week was measured using the sum of the seven-item Center for Epidemiological Studies-Depression (CES-D) scale.³¹ A sample item was, "In the last week..., how often would you say... You felt that everything you did was an effort?" Responses could range from 1 = not at all to 4 = a lot. Chronbach's α for the depression scale was .83.

Social isolation was measured as the sum of two items used previously as part of a scale developed to measure adaptation in a sample of LDLs.³² The two items were: "Could

Table 1. Characteristics of the study sample (N=331)				
	Ν	Range	Mean	SD
Age (years)	324	21.7 – 73.8	43.6	10.2
Last year went to school	330	0 – 18.0	7.6	3.8
Time in the US (years)	327	.08 - 53.0	12.8	9.9
Time on the corners (years)	331	.02 - 27.0	3.7	4.5
Number of children support financially	330	0 - 8.0	1.8	1.7
Deportation stress	331	2.0 - 8.0	4.9	2.0
Depression	330	7.0 - 27.0	13.7	4.0
Social isolation	330	2.0 - 8.0	5.4	1.6
Country of origin	Ν		Percent	
US (Puerto Rico)	15		4.5	
Mexico	135		40.8	
Central America	153		46.2	
Other Latin American country	28		8.5	
, Marital status				
Single	106		32.0	
Married or living with a partner	173		52.3	
Separated/divorced/widowed	52		15.7	
Spoken language				
Primary language Spanish or other non-English language	292		88.2	
English equally with or better than Spanish	39		11.8	
Most frequent job in last year				
Other	107		32.3	
Construction	224		67.7	
Corner size				
Small	76		23.0	
Medium	152		45.9	
Large	103		31.1	
Past year alcohol use				
Never	138		41.9	
Monthly or less	85		25.8	
2 – 4 times a month	73		22.2	
2 – 3 times a week	21		6.4	
4 or more times a week	12		3.6	
Experienced wage theft				
No	249		75.5	
Yes	81		24.5	
Experienced past year injury				
No	264		79.8	
Yes	67		20.2	

you tell me how often you miss your family and friends in your country of origin?" and "Could you tell me how often you need someone to talk to?" Responses ranged from 1 = never to 4 = always. The Pearson correlation between the two items was .27 (P<.001). Alcohol use frequency in the past-year was measured on a five-point scale: 1 = never; 2 =monthly or less; 3 = 2 to 4 times a month; 4 = 2 to 3 times a week; 5 = 4or more times a week. It was treated as a continuous variable. Scale scores were missing if an item was missing. Deportation stress was measured using two items from the previously mentioned adaptation scale: "Could you tell me how often you worry about being deported?" and "Could you tell me how often you worry about family and friends being deported?" Responses ranged from 1 = never to 4 = always. The two items were summed. The Pearson correlation between the two items was .59 (P<.001). Serious work-related injury, an indicator of physical (occupational) health,³³ was assessed by asking participants, "In the past year, have you had a serious injury or illness related to your job as a day laborer?" Based on the US Bureau of Labor Statistics' criteria for "work-related recordable cases," this was defined as, "an injury or illness for which you missed work because of it; you felt you should not have gone to work

Table 2. Adjusted logistic regression results for predictors of wage theft; wage theft as a predictor of injury; wage theft as predictor of injury controlling for mental health

	A. Predictors of wage theft		B. Wage theft as a predictor of Injury		C. Wage theft as a predictor of injury controlling for mental health	
	AOR (95% CI)	Р	AOR (95% CI)	Р	AOR (95% CI)	Р
Sociodemographics						
Age	1.00 (.97 – 1.03)	.990	.99 (.96 – 1.02)	.555	.99 (.95 – 1.02)	.449
Years of school	1.05 (.97 – 1.15)	.216	.98 (.89 – 1.07)	.623	1.01 (.92 – 1.11)	.872
Time in the US (years)	.98 (.94 – 1.02)	.348	.99 (.95 – 1.03)	.626	.99 (.95 – 1.03)	.509
Time on the corners (years)	1.02 (.95 – 1.09)	.579	.97 (.90 – 1.05)	.460	.97 (.90 – 1.05)	.450
Number of children support	1.01 (.84 – 1.21)	.938	.90 (.73 – 1.12	.340	.89 (.72 – 1.11)	.305
Marital status						
Single	(referent)		(referent)		(referent)	
Married/Living with partner	1.47 (.72 – 3.02)	.289	.42 (.2089)	024 ^{ac}	.46 (.21 – 1.00)	.051
Separated/Divorced/Widowed	.95 (.37 – 2.46)	.912	1.09 (.48 – 2.50)	.839	.98 (.41 – 2.32)	.954
Country of origin	100 (107 2110)		1105 (110 2100)	.000	130 (111 2132)	
United States	(referent)		(referent)		(referent)	
Mexico	.26 (.05 – 1.24)	.090	1.12 (.23 – 5.32)	.891	.89 (.17 – 4.67)	.894
Central America	.55 (.11 – 2.69)	.459	.86 (.17 – 4.32)	.850	.60 (.11 – 3.40)	.567
Other Latin American Country	.20 (.03 – 1.49)	.116	.34 (.04 – 3.06)	.337	.16 (.02 – 1.67)	.126
Spoken language	.20 (.05 1.15)	.110	.51(.01 5.00)	.557	.10(.02 1.07)	.120
Primary language Spanish or other non-English language	(referent)		(referent)		(referent)	
English equally with or better than Spanish	.54 (.19 – 1.55)	.256	1.07 (.42 – 2.75)	.889	1.00 (.38 – 2.66)	.993
Employment	.5+(.15-1.55)	.250	1.07 (.42 - 2.73)	.005	1.00 (.30 – 2.00)	.,,,,
Most frequent job in last year						
Other	(referent)		(referent)		(referent)	
Construction	(1.04 - 3.94)	020ac	(referenc) 1.59 (.81 – 3.12)	100	(Telefent) 1.43 (.72 – 2.87)	210
Corner Size	2.02 (1.04 - 3.94)	.039**	1.59 (.01 – 3.12)	.102	1.43 (./2 – 2.0/)	.310
Small	(notonont)		(nofonont)		(nofement)	
	(referent)	260	(referent)	(())	(referent)	(0)
Medium	.67 (.33 – 1.35)	.260	1.18(.57 - 2.43)	.660	1.17 (.55 – 2.48)	.682
Large	1.31(.60 - 2.86)	.506	.71 (.30 – 1.70)	.444	.80 (.32 – 2.00)	.636
Deportation stress	1.16 (1.00 – 1.35)	.055	1.06 (.90 – 1.25)	.477	1.00 (.84 – 1.19)	.997
Mental health						o o o bo
Depression	Not included		Not included		1.13 (1.05 – 1.22)	.002 ^{bc}
Social isolation	Not included		Not included		1.11 (.90 – 1.37)	.338
Alcohol use	Not included		Not included	b	.87 (.65 – 1.16)	.341
Experienced wage theft						
No	Outcome of interest		(referent)		(referent)	
Yes			1.97 (1.01 – 3.86)	.048 ^{ac}	1.78 (.89 – 3.56)	.101

a.P<.05, two-tailed.

b. P<.01, two-tailed.

c. Unstandardized coefficient.

Nagelkerke R^2 Predictors of wage theft = .14; Nagelkerke R^2 wage theft as a predictor of injury = .14; Nagelkerke R^2 wage theft as a predictor of injury controlling for mental health = .06

	A. Depression		B. Social Isolation		C. Frequency of Alcohol Use	
	B (95% Cl)	Р	B (95% CI)	Р	B (95% CI)	Р
Sociodemographics						
Age	004 (053045)	.884	.02 (00204)	.073	02 (03002)	.026 ^{ad}
Years of school	20 (3307)	.003 ^{bd}	01 (06 – .04)	.776	.01 (03 – .05)	.582
Time in the US , years	.01 (05 – .07)	.668	.003 (019 – .024)	.813	< .001 (016016)	.975
Time on the corners (years)	02 (12 – .09)	.742	.03 (01 – .07)	.131	.01 (02 – .04)	.366
Number of children support	.20 (10 – .49)	.190	.04 (07 – .15)	.494	.02 (07 – .10)	.670
Marital status						
Single	(referent)		(referent)		(referent)	
Married/living with partner	51 (-1.61 – .60)	.368	52 (93 – .11)	.013 ^{ad}	10 (41 – .21)	.523
Separated/divorced/widowed	1.37 (01 – 2.76)	.052	08 (59 – .44)	.765	.23 (16 – .62)	.247
Country of origin						
United States	(referent)		(referent)		(referent)	
Mexico	.43 (2.16 – 3.01)	.745	.14 (83 – 1.12)	.774	32 (-1.0238)	.365
Central America	.43 (-2.24 - 3.10)	.752	.37 (64 – 1.37)	.475	75 (-1.4803)	$.041^{ad}$
Other Latin American country	2.60 (54 - 5.73)	.105	1.02 (16 – 2.20	.091	81 (-1.67 – .05)	.064
Spoken language						
Primary language Spanish or other non-English language	(referent)		(referent)		(referent)	
English equally with or better than Spanish	.56 (95 – 2.06)	.467	21 (77 – .35)	.463	21 (62 – .21)	.330
Employment .						
Most frequent job in last year						
Other	(referent)		(referent)		(referent)	
Construction	.55 (43 – 1.52)	.269	16 (52 – .21)	.398	02 (29 – .25)	.819
Corner size						
Small	(referent)		(referent)		(referent)	
Medium	.27 (85 – 1.39)	.638	17 (58 – .25)	.427	.17 (13 – .48)	.268
Large	.05 (-1.24 – 1.33)	.944	.08 (39 – .56)	.732	.67 (.31 – 1.02)	< .001 ^{cd}
Deportation stress	.29 (.0453)	.022 ^{ad}	.28 (.19 – .37)	<.001 ^{cd}	< .001 (068 – .067)	.993
Experienced wage theft	· · · · · · · · · · · · · · · · · · ·				, , ,	
No	(referent)		(referent)		(referent)	
Yes	.62 (45 – 1.69)	.257	.04 (36 – .44)	.851	10 (40 – .20)	.518

Table 3. Adjusted linear regression results for association of wage theft with each mental health indicator (dependent variable)

a. P<.05, two-tailed.

b. P<.01, two-tailed.

c. P<.001, two-tailed.

d. Unstandardized coefficient.

 $\label{eq:adjusted R2 Depression = .05; Adjusted R2 Social Isolation = .14; Adjusted R2 Alcohol Use = .06.$

but you did, anyway; or you had to receive medical attention from a doctor or a clinic."³⁴ The occurrence of any serious past-year injury or illness was dichotomized as no or yes.

Wage theft was measured by a single item, "In your last full day as a day laborer, would you say you were paid what was promised/agreed upon?" Responses ranged from 1 =strongly disagree to 4 = strongly agree. Responses for the wage theft item were reverse scored so that higher scores indicated greater disagreement with the statement that the participant was paid what was promised/agreed upon. Experience of wage theft was then dichotomized as no (strongly agreed or agreed with the statement) or yes (disagreed or strongly disagreed with the statement). Participants could refuse to answer any question or state they did not know the answer.

To reduce the survey burden on participants in the original study, we adopted a planned missing strategy.³⁵ One of three different versions of the survey containing selected subsets of items were randomly administered to participants. For depression, isolation, and wage theft items, values for planned missing items were imputed using the Monte Carlo method in SPSS. Original responses of refused or do not know were not changed and were treated as missing. Although imputed data values do not represent the values that would have been recorded had items been administered to all participants, planned missingness is a mature strategy that functioned as intended during our data collection.³⁵

Data Analysis

In the first part of data analysis, frequencies were computed for categorical variables. Ranges, means, and standard deviations were computed for continuous items. Some demographic variables were recoded to facilitate interpretation of results. Recoded variables are presented in Table 1.

Following the initial descriptive analysis, we conducted regression analyses to assess the primary study questions presented above and represented in Figure 1. First, a logistic regression analysis was conducted to determine the correlates of wage theft. Thus, wage theft was regressed on the sociodemographic, employment (including corner size), and deportation stress variables. Second, to assess the association of wage theft with injury, injury was regressed on wage theft in a logistic regression, controlling for the sociodemographic, employment, and deportation stress variables.

Third, to determine the association of wage theft with each mental health variable, separate linear regression analyses were conducted with depression, isolation, and alcohol use as the dependent variable. Each separate outcome was regressed on wage theft while controlling for sociodemographic, employment, and deportation stress variables. In the final logistic regression model, to assess the association between wage theft and injury, controlling for the mental health variables, serious past-year injury was regressed on wage theft and each of the other study variables. For each analysis, independent variables were entered simultaneously. Dummy variables were created for categorical variables. Analyses were conducted with SPSS, v. 26. A significance level of P<.05, two-tailed, was used.

RESULTS

Descriptive Statistics

As shown in Table 1, participants, on average, were in their mid-40s and had completed almost eight years of education, they had been in the US nearly 13 years and had been looking for work at the corners for nearly four years. Most LDLs were born in Mexico or Central America. One-half of participants (52.3%) reported being married or living with a partner. The majority (88.2%) indicated that their primary spoken language was Spanish. Two-thirds of participants (67.7%) reported construction as the job they most frequently performed in the last year. The average participant supported two children financially. The average deportation stress score was 4.9 (SD = 2.0; N = 331) in a 1-8 scale. Although results suggest concern, this item was not intended to be used as a clinical tool.

Regression Results

Regression results described in this section, as depicted in Figure 1, are organized according to regression type. Logistic regressions are reported in Table 2 and linear regressions in Table 3.

Wage Theft

Eighty-one of 331 (24.5%) participants reported wage theft at their last job, and as shown in Table 2, column A, it was more likely to be reported by participants mostly employed in construction during the previous year (P=.039). Participants experiencing higher deportation stress were marginally more likely to report wage theft (P=.055). Nagelkerke' s R^2 for the model was .14.

Depression

The mean depression score was 13.7 (SD = 4.0; N=331) out of a possible range of 7.0 – 28.0. As shown in Table 3, column A, more years of schooling were associated with a decrease in depression scores (P=.003). Compared with those who were married, those who were formerly married had marginally higher depression scores (P=.052). Higher scores were also associated with more deportation stress

(P=.022). Two-fifths (38.8%) of participants had at or above the cutoff score (15.0 for our scoring range) cited by Levine³¹ as indicative of elevated depressive symptoms. The adjusted R^2 for this model was .05.

Social Isolation

The mean isolation score was 5.4 (SD = 1.6; N=331) out of a possible range of 2.0 - 8.0. As with the deportation stress item, our isolation scale was not intended as a clinical measure. As shown in Table 3, column B, isolation was inversely associated with being married or living with a partner compared with never being married (P=.013) and positively associated with deportation stress (P<.001). The adjusted R² for this model was .14.

Alcohol Use

Of 329 participants, 138 LDLs (41.9%) reported no past-year alcohol use, but 32.2% drank 2-4 times a month or more often. As shown in Table 3, column C, frequency of alcohol use in the past year was inversely associated with age (P=.026) and with being from Central America compared with being from the United States (P=.041). It was marginally inversely associated with being from "Other Latin American country" as compared with being born in the United States (P=.064). It was also associated with looking for work in a large corner, compared with a small one (P<.001). The adjusted R² for alcohol use was .06. (Due to the skewed distribution of the alcohol use variable, we initially transformed it to correct for non-normality, but kept the original variable in the regression

models, as this transformation did not improve the explanation of variance.)

In summary, although we predicted that wage theft would be associated with indicators of mental health after controlling for sociodemographic, employment, and deportation stress variables, we found that wage theft was not a significant correlate of mental health.

Work-Related Injury

Sixty-seven participants (20.2%) reported a total of 88 past-year injury or illness incidents (range = 1 to 4; mean = 1.3; SD = .7). All but three incidents involved physical injuries to the upper body and the extremities, as described elsewhere.³⁰ Table 2, column B results indicate that those who experienced wage theft were more likely to report a work-related injury (P=.048). Compared with those never married, those who were married or living with a partner were less likely to report an injury (P=.024). Nagelkerke' s \mathbb{R}^2 for the model was .11.

Work-Related Injury Controlling for Mental Health

As shown in Table 2, column C, past-week depression was a significant correlate of serious work-related injury in the past year (P=.002) and being married or living with a partner compared with being single was marginally protective against serious injury (P=.051). After controlling for sociodemographic, employment, deportation stress, and mental health variables, wage theft was no longer significantly associated with injury (P=.101). Nagelkerke' s \mathbb{R}^2 for this model was .16.

DISCUSSION

Latino day laborers are particularly vulnerable to wage theft due to individual and structural factors that make them vulnerable to exploitation by unscrupulous employers. Their undocumented status is used as justification for devaluing their worth and denying them due payment and basic rights reserved for legal citizens. Wage theft among LDLs is possible because of histori-

The most striking aspect of our LDLs' profile is their experience of wage theft in their last job (25%) and report of serious work-related injury in the last year (20%), which confirms previously reported high rates of injury for day laborers.³⁰

cally racist labor laws and contemporary anti-immigration rhetoric that allow for discriminatory labor practices to persist.^{4,14-16} It is within this political, social, and legal environment that wage theft continues to thrive, as employers exploit individuals whom they regard as vulnerable, and benefit from the lack of protection afforded to these workers.

The most striking aspect of our LDLs' profile is their experience of wage theft in their last job (25%) and report of serious work-related injury in the last year (20%), which confirms previously reported high rates of injury for day laborers.³⁰ Being married (compared with being single) was marginally protective of injury replicating previous findings that have been attributed to family obligations but may need further exploration. ³⁰ Notably, our results indicate that wage theft is associated with injury. Although this association has limitations to be discussed in the next section, this study represents one of the first instances where these two work-related conditions have been found to be significantly associated.

Regression results depicted in Tables 2 and 3 have several implications for understanding wage theft among LDLs. First, the association of wage theft with work in the construction sector (Table 2, column A) confirms previous studies indicating that labor law violations are common in this sector.^{1,8} This finding is particularly notable because Latinos (including LDLs) make up about 27% of the construction workers in the United States.²³ Second, several socio-demographic factors were associated with depression, social isolation, and frequency of alcohol use, confirming patterns previously reported for LDLs (eg, higher depression scores among previously married men, less frequent drinking among foreign-born Latinos)¹⁷⁻²⁰ but mental health indicators were

not related to wage theft, as reported in previous qualitative research.^{18,19} Limitations of the wage theft measure are discussed in the next section.

Limitations

There are several limitations to the interpretation of our findings that should be considered. First, as it is often the case with other regression analyses, the study items were measured according to different time frames (eg, wage theft on the last job performed vs past-year injury). This lack of correspondence may have limited our ability to detect hypothesized relationships (eg, wage theft and injury, wage theft and mental health indicators). Second, our significant findings only predict results in the statistical sense and are not indicative of true causality. Third, additional measures (eg, anxiety) that could have accounted for the unexplained variance in regression results or could have intervened in the proposed relationships (eg, wage theft and injury, wage theft and mental health indicators) were not included in the parent study. Fourth, our measure of wage theft in the last job performed as a day laborer, restricted reports to a single event and this restriction may have attenuated its variability, explaining the lack of association with the mental health indicators. Finally, our measure of construction work did not specify the type of job and may have artificially inflated the association with wage theft, as two-thirds (67.7%) of participants reported construction as their most frequent job in the last year. In spite of these limitations, this exploratory study suggests that

wage theft is a frequent and stressful event experienced by LDLs and should be explored further.

CONCLUSION

The wage theft experienced by LDLs perpetuates factors rooted in structural racism. Nearly a quarter of the LDLs in our sample reported experiencing wage theft on their last job and more than a fifth reported serious work-related injury in the past year. These experiences are indicative of a risk environment rooted in structural racism, where LDLs are forced to endure exploitive conditions not acceptable to most Americans.

Contrary to what we predicted, wage theft was not significantly associated with mental health and was not associated with injury in the final model. However, the greater vulnerability to physical health indicated by injury incidents partially supported our basic premise that wage theft may act as a stressor that stems from conditions reflecting structural racism, making workers vulnerable to poorer health. Future studies may need to explore the mechanisms mediating the influence of wage theft on health and other outcomes, as the living and working conditions of day laborers may interact in complex ways that may be better represented by models that capture this complexity.

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Conflict of Interest

No conflicts of interest to report.

Author Contributions

Research concept and design: Fernández-Esquer, Ibekwe, Guerrero-Luera, King, Durand; Acquisition of data: Fernández-Esquer, Atkinson; Data analysis and interpretation: Fernández-Esquer, Ibekwe, Guerrero-Luera, King, Durand, Atkinson; Manuscript draft: Fernández-Esquer, Ibekwe, Guerrero-Luera, King, Durand, Atkinson; Statistical expertise: Durand, Atkinson; Acquisition of funding: Fernández-Esquer; Administrative: Ibekwe, Guerrero-Luera, King; Supervision: Fernández-Esquer

References

- Bobo K. Wage Theft in America: Why Millions of Working Americans Are Not Getting Paid— And What We Can Do About It. New York: The New Press; 2011.
- Cooper D, Kroeger T. Employers steal billions from workers' paychecks each year. Washington, D.C.: Economic Policy Institute; 2017.
- Fernández-Esquer ME, Agoff MC, Leal IM. Living Sin Papeles: Undocumented Latino workers negotiating life in "illegality." *Hisp J Behav Sci.* 2017;39(1):3-18. https://doi. org/10.1177/0739986316679645
- Quesada J, Hart LK, Bourgois P. Structural vulnerability and health: Latino migrant laborers in the United States. *Med Anthropol.* 2011;30(4):339-362. https://doi.org/10.1080/ 01459740.2011.576725 PMID:21777121
- Valenzuela A, Theodore N, Melendez E, Gonzalez AL. On the Corner: Day Labor in the United States. Los Angeles, CA: UCLA Center for the Study of Urban Poverty; 2006.
- Siqueira CE, Gaydos M, Monforton C, et al. Effects of social, economic, and labor policies on occupational health disparities. *Am J Ind Med.* 2014;57(5):557-572. https://doi. org/10.1002/ajim.22186 PMID:23606055
- Bernhardt A, Milkman R, Theodore N, et al. Broken Laws, Unprotected Workers: Violations of Employment and Laws in America's Cities.

Los Angeles: UCLA Institute for Research on Labor and Employment; 2009.

- Fussell E. The deportation threat dynamic and victimization of Latino migrants: Wage theft and robbery. *Sociol Quarterly*. 2011;52(4):593-615. https://doi. org/10.1111/j.1533-8525.2011.01221.x
- Lee S. Policing wage theft in the day labor market. UC Irvine L Rev. 2014;4(2):655.
- Sanidad C. Stories from Immigrant Workers in the Valley of the Sun: Status, Wage Theft, Recourse, and Resilience. Tempe, AZ: Arizona State University; 2011.
- Gee GC, Ford CL. Structural racism and health inequities: old issues, new directions. *DuBois Rev.* 2011;8(1):115-132. https:// doi.org/10.1017/S1742058X11000130 PMID:25632292
- Powell JA. Structural racism: building upon the insights of John Calmore. North Carol Law Rev. 2008;86:791-816.
- Williams DR, Lawrence JA, Davis BA. Racism and health: evidence and needed research. *Annu Rev Publ Health*. 2019;40(1). https://doi.org/10.1146/annurev-publhealth-040218-043750
- Ruan N. Facilitating Wage theft: How courts use procedural rules to undermine substantive rights of low-wage workers. *Vanderbilt Law Rev.* 2010;63(3):725.
- Coleman LG. Disrupting the discrimination narrative: an argument for wage and hour laws' inclusion in antisubordination advocacy. *Stanford J Civ Rights Civ Lib.* 2018;14(1):49-87.
- 16. Solomon D, Maxwell C, Castro A. Systematic Inequality and Economic Opportunity. Center for American Progress; 2019. Last accessed January 5, 2020 from https:// www.americanprogress.org/issues/race/ reports/2019/08/07/472910/systematicinequality-economic-opportunity/
- Mora DC, Grzywacz JG, Anderson AM, et al. Social isolation among Latino workers in rural North Carolina: exposure and health implications. *J Immigr Minor Health.* 2014;16(5):822-830. https:// doi.org/10.1007/s10903-013-9784-x PMID:23417706
- Negi NJ; Nalini Junko Negi. Identifying psychosocial stressors of well-being and factors related to substance use among Latino day laborers. *J Immigr Minor Health.* 2011;13(4):748-755. https:// doi.org/10.1007/s10903-010-9413-x PMID:21107694
- Negi NJ. Battling discrimination and social isolation: psychological distress among Latino day laborers. *Am J Community Psychol.* 2013;51(1-2):164-174. https:// doi.org/10.1007/s10464-012-9548-0 PMID:22864958
- 20. Organista KC, Kubo A. Pilot survey of HIV risk and contextual problems and issues

in Mexican/Latino migrant day laborers. J Immigr Health. 2005;7(4):269-281. https:// doi.org/10.1007/s10903-005-5124-0 PMID:19813293

- Walter N, Bourgois P, Margarita Loinaz H, Schillinger D. Social context of work injury among undocumented day laborers in San Francisco. *J Gen Intern Med.* 2002;17(3):221-229. https://doi. org/10.1046/j.1525-1497.2002.10501.x PMID:11929509
- Torres R, Heyman R, Munoz S, et al. Building Austin, building justice: immigrant construction workers, precarious labor regimes and social citizenship. *Geoforum*. 2013;45:145-155. https://doi.org/10.1016/j. geoforum.2012.10.012
- 23. Bureau of Labor Statistics, U.S. Department of Labor. Hispanics and Latinos in industries and occupations. *The Economics Daily* 2015. Last accessed January 16, 2020 from https:// www.bls.gov/opub/ted/2015/hispanics-andlatinos-in-industries-and-occupations.htm..
- 24. Martínez AD, Piedramartel A, Agnew J. Going beyond the injury: regulatory conditions contributing to latina/o immigrants' occupational psychosocial Stressors. *Front Public Health.* 2015;3(240):240. https:// doi.org/10.3389/fpubh.2015.00240 PMID:26539426
- Crotty SM. Locating day-labor employment: toward a geographic understanding of day-labor hiring site locations in the San Diego metropolitan area. Urban Geogr. 2015;36(7):993-1017. https://doi.org/10.1080/02723638.2015.1049481
- Menzel NN, Gutierrez AP. Latino worker perceptions of construction risks. *Am J Ind Med.* 2010;53(2):179-187. https://doi. org/10.1002/ajim.20735 PMID:19670290
- Seixas NS, Blecker H, Camp J, Neitzel R. Occupational health and safety experience of day laborers in Seattle, WA. *Am J Ind Med.* 2008;51(6):399-406. https://doi. org/10.1002/ajim.20577 PMID:18330894
- Organista KC, Arreola SG, Neilands TB. Depression and risk for problem drinking in latino migrant day laborers. *Subst Use Misuse*. 2017;52(10):1320-1327. https:// doi.org/10.1080/10826084.2016.1276599 PMID:28346082
- 29. Ibarra-Mejia G, Maynez-Guaderrama AI, Vargas-Salgado MM, Gomez-Bull KG. Predictive Cultural Dimensions of Occupational Risk Perception and Behavior in Migrant Mexican Construction Workers. El Paso, TX: University of Texas at El Paso; 2019.
- Fernández-Esquer ME, Aguerre CF, Ojeda M, et al. Documenting and understanding workplace injuries among Latino day laborers. *J Health Care Poor Underserved*. 2020;31(2):791-809. https://doi. org/10.1353/hpu.2020.0061
- 31. Levine SZ. Evaluating the seven-item

Center for Epidemiologic Studies depression scale short-form: a longitudinal U.S. community study. *Soc Psychiatry Psychiatr Epidemiol.* 2013;48(9):1519-1526. https:// doi.org/10.1007/s00127-012-0650-2 PMID:23299927

- 32. Steel KC, Fernandez-Esquer ME, Atkinson JS, Taylor WC. Exploring relationships among social integration, social isolation, self-rated health, and demographics among Latino day laborers. *Ethn Health.* 2018;23(4):425-441. https://doi. org/10.1080/13557858.2017.1280130 PMID:28100070
- 33. Thomsen C, McClain J, Rosenman K, Davis L; Centers for Disease Control and Prevention (CDC). Indicators for occupational health surveillance. *MMWR Recomm Rep.* 2007;56(RR-1):1-7. PMID:17230144
- Bureau of Labor Statistics, U.S. Department of Labor. Clarification of preexisting conditions and reportable incidents. 2010; Last accessed January 5, 2021 from www.osha.gov/ pls/oshaweb/owadisp.show_document?p_ table=STANDARDS&tp_id=9638.
- 35. Enders CK. *Applied Missing Data Analysis*. New York: Guilford Press; 2010.