

Supplemental Materials for
Improving delivery of the social safety net: The role of stigma

Jessica Lasky-Fink & Elizabeth Linos
Harvard Kennedy School

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Supplemental Methods

Field Experiments

Study 1

Sample construction

Denver County is divided into 78 distinct neighborhoods and 144 census tracts. We identified 56 neighborhoods and 106 census tracts with populations at high risk of displacement through a four-step process that used publicly available data.

First, Denver Economic Development and Opportunity's division of Neighborhood Equity and Stabilization (NEST) identified ten neighborhoods as being at high risk of involuntary displacement due to rapid socio-economic changes (City and County of Denver (a), n.d.). All ten of these neighborhoods were included at the request of the County.

Second, Denver County also tracked vulnerability to displacement for all 78 neighborhoods. A neighborhood's vulnerability score was ranked on a scale of 0 to 3, where 3 indicates the highest level of vulnerability (City and County of Denver (b), n.d.). Scores were calculated based on a neighborhood's average educational attainment, rental occupancy, and median household income. All neighborhoods with a vulnerability score greater than 0 were included in the sample universe.

Third, the Urban Institute's Emergency Rental Assistance Priority Index estimated the risk of housing instability and homelessness by census tract (Urban Institute, 2020). Their Rental Assistance Priority Index was a weighted measure of three subindexes: housing instability, impact from COVID-19, and equity. Higher total index values indicated that a census tract was in higher need of rental assistance. The 70 highest priority census tracts in Denver County were included in the sample universe. This threshold was decided upon based on budget and resource availability constraints that limited the total number of residents that could be contacted.

Fourth, we used publicly available data from the Eviction Lab to rank each census tract in Denver County by four key predictors of vulnerability: percent of non-White residents; percent of renter households; percent of cost-burdened renters; and poverty rate (Eviction Lab, 2016). At the census-tract level, we created an equal-weighted composite rank such that the highest-ranked census tracts were those with the highest proportions of non-White, renter, cost-burdened, and poor households. The 70 highest ranked census tracts were included in the sample universe. Again, this threshold reflected budget and resource constraints.

Outcomes

In addition to the three primary outcomes described in the main paper—application requests, application submissions, and assistance received—we also obtained Denver County Court administrative data on evictions during our outcome period.

On September 4, 2020, the Centers for Disease Control (CDC) used its authority under the Public Health Service Act to issue a national eviction moratorium in order to reduce the potential for transmission of Covid-19 that can occur as displaced people double-up with friends or family, become homeless, or turn to shelters. Initially the moratorium was set to expire on January 31, 2021. However, the moratorium was extended during our study implementation

period, which hindered our ability to evaluate this outcome. While some evictions still occurred during this period, the rate was so low it is not possible to analyze—or interpret—the effect of our intervention on evictions. As a result, we do not report these results. As detailed in our pre-registered analysis plan, we anticipated this challenge ahead of time and noted our intent to only conduct an exploratory analysis of evictions if the moratorium was extended.

Deviation from analysis plan

We deviate from our pre-registered analysis plan for Study 1 by analyzing our primary outcomes via OLS models instead of logistic models. Because the overall prevalence of application requests and submissions was so low, many neighborhoods had no positive outcomes. Thus, there was significant collinearity in covariate-adjusted logistic models. Although we preference the OLS models, we also report results from our pre-registered models, excluding collinear neighborhoods.

Online Experiments

Standard MTurk Participant Qualifications

All studies reported utilized the same minimum qualifications for recruiting MTurk participants. In order to participate, a MTurk worker must:

1. Be located in the United States;
2. Have an approval rating of at least 95%;
3. Have not participated in prior surveys as part of this study;
4. Consent to participate;
5. And pass an initial attention check.

Only MTurk workers who met all five criteria were eligible to participate in any study reported in this paper.

Exclusion Criteria

For each online experiment, we excluded responses that met the following criteria:

- Duplicate responses based on worker ID and IP address.
- Participants who failed second attention check included at the end of the survey.
- Responses flagged by Qualtrics as likely fraudulent.
- Responses that were not internally consistent on two household income questions: All studies included an initial screener question to ensure that we only recruited participants whose household income was less than \$50,000 per year. At the end of each survey, we again asked household income. Responses from participants who provided different answers to the screener question and the income question at the end of the survey were excluded.
- Participants who completed the survey in less than 30 seconds (pilot study) or 45 seconds (Studies 3 and 4).

All exclusion criteria were pre-registered.

Pilot Study

Participants

Participants were Amazon MTurk workers whose reported annual household income was under \$50,000 and who were recruited to complete a 1-minute online survey for which they were paid \$0.35 each. Standard participant qualifications were applied. A total of 676 participants (mean age = 38.3 years, $SD = 12.0$; 42.5% female) passed the attention check and completed the study. Data quality exclusions were balanced evenly across treatment conditions ($\chi^2(5) = 4.24, p = .52$). After all exclusions, our final analytic sample consisted of 490 participants (mean age = 39.5 years, $SD = 12.7$; 45.7% female).

Procedures

After passing an initial attention check, all participants were randomly assigned via the survey platform to one of six conditions, each associated with a different stigmatized means-tested program or attribute: (1) rental assistance; (2) Medicaid; (3) Supplemental Nutrition Assistance Program; (4) Social Security Disability Insurance; (5) obesity; (6) mental illness. Participants were then asked to what extent they agreed or disagreed with the following eight statements (presented in random order) about the program or attribute corresponding with their condition assignment:

1. *Shame [IS]*: I would be ashamed [X].
2. *Down [AS]*: Most people would look down on me if I [X].
3. *Judge [AS]*: If I [X], others would judge me.
4. *Less [IS]*: I would think less of myself if I [X].
5. *Stereotype [AS]*: If someone were to find out I [X], they would think I [*common stereotype*].
6. *Fault [AS]*: Most people would think it was my fault if I [X].
7. *Deal [IS]*: I would rather deal with my problems myself than [X].
8. *Inferior [IS]*: If I were [X], I would feel inferior.

Agreement for each question was measured on a 1-7 scale in which a 1 reflected “strongly disagree” and a 7 reflected “strongly agree.” In each question [X] reflected the participant’s randomly assigned program or attribute. For instance, participants assigned to the rental assistance condition were shown statements such as: “I would be ashamed if I applied for rental assistance” and “I would rather deal with my problems myself than apply for rental assistance.” Meanwhile, participants assigned to the obesity condition were shown statements such as: “I would be ashamed if I were obese” and “I would rather deal with my problems myself than accept help if I were obese.”

The [*common stereotype*] in Question 5 was as follows:

- For all conditions associated with a means-tested program: “If someone were to find out I applied for [*program name*], they would think I lack a work ethic.
- For obesity: “If someone were to find out I were obese, they would think I was lazy.”
- For mental illness: “If someone were to find out I had a mental illness, they would think I was weak.”

Questions denoted with [IS] constitute a measure of internalized stigma, while questions denoted with [AS] constitute a measure of anticipated stigma.

Analysis

All participants were asked eight stigma measures, four about anticipated stigma and four about internalized stigma. Each was measured on a 7-point scale in which a 7 reflects high stigma and a 1 reflects low stigma. As our primary outcomes, we constructed three indices: overall stigma, anticipated stigma, and internalized stigma. Each was calculated as the average of their respective stigma measures. We evaluated differences in the stigma associated with each program and attribute via a covariate-adjusted OLS model that includes controls for gender, age, college education, race/ethnicity, income, party affiliation.

Study 3

Procedures

In Study 3, all participants who passed an initial attention check were randomly assigned to one of two conditions with equal probability: *Information Only* or *Information + Stigma*. Participants were then shown the postcard from Study 2 that corresponded with their condition assignment. Thereafter, all participants were asked the following nine questions:

To what extent do you agree or disagree with each of the following statements:

1. *Shame [IS]*: I would be ashamed to apply for the rental assistance program.
2. *Down [AS]*: Most people would look down on me if I applied for the rental assistance program.
3. *Judge [AS]*: If I applied for the rental assistance program, others would judge me.
4. *Less [IS]*: I would think less of myself if I applied for the rental assistance program.
5. *Stereotype [AS]*: If someone were to find out I applied for the rental assistance program, they would think I lack a work ethic.
6. *Fault [AS]*: Most people would think it was my fault if I needed to apply for the rental assistance program.
7. *Deal [IS]*: I would rather deal with my problems myself than apply for the rental assistance program.
8. *Inferior [IS]*: If I were to apply for the rental assistance program, I would feel inferior.
9. *Apply*: If you were eligible, how likely would you be to apply for the rental assistance program after receiving this postcard? [Scale of 1-7, where 7 = Extremely likely]
10. *Difficulty*: How easy do you think it would be to apply for the rental assistance program on a scale from 1 to 10, where 10 = extremely difficult? [1-10 scale]

Questions 1-8 were presented in a random order and each measured on a 1-7 scale in which a 1 reflected “strongly disagree” and a 7 reflected “strongly agree.” Questions denoted with [IS] constitute a measure of internalized stigma, while questions denoted with [AS] constitute a measure of anticipated stigma.

Study 4

Procedures

In Study 4, all participants who passed an initial attention check were randomly assigned to one of two conditions with equal probability: *Information Only* or *Information + Stigma*. Participants were then shown the postcard from Study 2 that corresponded with their condition assignment. Thereafter, all participants were asked the following four questions:

1. *Difficulty*: How easy do you think it would be to apply for the rental assistance program on a scale from 1 to 10, where 10 = extremely difficult? [1-10 scale]
2. *Receive*: If you were to apply for the rental assistance program, how likely do you think it is that you would receive money? [1-5 scale, 5 = Very likely]
3. *Credible*: To what extent do you agree or disagree with the following statement: This postcard is from a credible source. [1-5 scale, 5 = Strongly agree]
4. *Comprehension*: This postcard is advertising a program that offers which of the following services: *[answer choices presented in random order]*
 - a. Temporary rent and utility assistance
 - b. Eviction legal assistance
 - c. Long-term housing assistance
 - d. Housing choice voucher assistance
 - e. Rental search assistance

Supplemental Tables

Table S1. Pilot study results

	(1) Shame	(2) Down	(3) Judge	(4) Less	(5) Stereotype	(6) Fault	(7) Deal	(8) Inferior	(9) Stigma Index	(10) AS Index	(11) IS index
Medicaid	-0.857 (0.294) [0.004]	-0.502 (0.263) [0.056]	-0.449 (0.243) [0.066]	-0.866 (0.294) [0.003]	-0.572 (0.268) [0.033]	-0.665 (0.258) [0.010]	-0.556 (0.284) [0.051]	-0.467 (0.298) [0.118]	-0.617 (0.229) [0.007]	-0.547 (0.229) [0.017]	-0.687 (0.258) [0.008]
SNAP	-0.583 (0.294) [0.048]	-0.025 (0.250) [0.920]	-0.204 (0.248) [0.412]	-0.662 (0.305) [0.030]	-0.257 (0.264) [0.331]	-0.398 (0.255) [0.119]	-0.166 (0.277) [0.550]	-0.201 (0.294) [0.494]	-0.312 (0.220) [0.156]	-0.221 (0.225) [0.326]	-0.403 (0.254) [0.113]
SSDI	-0.405 (0.279) [0.148]	-0.250 (0.254) [0.324]	-0.477 (0.241) [0.048]	-0.622 (0.296) [0.036]	-0.562 (0.259) [0.030]	-0.620 (0.254) [0.015]	-0.363 (0.268) [0.177]	-0.313 (0.285) [0.274]	-0.452 (0.211) [0.033]	-0.478 (0.218) [0.029]	-0.426 (0.244) [0.081]
Obesity	1.103 (0.268) [0.000]	0.658 (0.232) [0.005]	0.815 (0.225) [0.000]	0.732 (0.280) [0.009]	0.638 (0.236) [0.007]	0.805 (0.216) [0.000]	0.112 (0.271) [0.679]	0.724 (0.276) [0.009]	0.699 (0.195) [0.000]	0.729 (0.197) [0.000]	0.668 (0.224) [0.003]
Ment. Illness	-0.098 (0.284) [0.731]	0.070 (0.240) [0.769]	0.007 (0.249) [0.977]	-0.408 (0.286) [0.154]	-0.148 (0.244) [0.544]	-0.990 (0.277) [0.000]	-0.541 (0.290) [0.063]	0.401 (0.276) [0.147]	-0.213 (0.210) [0.311]	-0.265 (0.220) [0.228]	-0.162 (0.235) [0.492]
Observations	490	490	490	490	490	490	490	490	490	490	490
R-squared	0.163	0.111	0.146	0.141	0.118	0.156	0.099	0.116	0.163	0.150	0.152
Mean for Rental Asst.	4.235	4.644	4.956	4.476	4.759	4.912	4.574	4.312	4.609	4.818	4.400

Notes: OLS estimates of differences between rental assistance (reference group) and other means-tested programs and stigmatized attributes. Columns (1) to (8) are continuous measures of stigma, described in Supplemental Methods. Column (9) is constructed as the average of all 8 stigma measures; Column (10) is an average of all 4 anticipated stigma measures; and column (11) is an average of all 4 internalized stigma measures. Additional controls include income, age, gender, college education, race, and party. Robust standard errors in parentheses; *p*-values in brackets.

Table S2. Study 1: Balance of randomized universe

Level	Control	Information Only	Info + Stigma	p-value
N	12066	25389	25260	
Excluded address	38 (0.3%)	74 (0.3%)	74 (0.3%)	0.92
Apartment building	6320 (52.4%)	13611 (53.6%)	13513 (53.5%)	0.07
DEMOGRAPHICS (CENSUS TRACT)				
Eviction rate, median (IQR)	1.48 (1.1, 2.67)	1.45 (1.02, 2.67)	1.45 (1.1, 2.67)	0.25
% cost burdened, median (IQR)	.58 (.48, .68)	.58 (.48, .68)	.58 (.48, .67)	0.16
% below poverty line, median (IQR)	.15 (.11, .20)	.15 (.11, .20)	.15 (.11, .20)	0.55
% White, median (IQR)	70.3 (33.8, 80.6)	71.7 (33.8, 80.6)	70.3 (33.8, 80.6)	0.12
NONPROFIT				
1	5440 (45.1%)	11694 (46.1%)	11690 (46.3%)	0.06
2	4899 (40.6%)	10164 (40.0%)	10192 (40.3%)	
3	1727 (14.3%)	3531 (13.9%)	3378 (13.4%)	
NEIGHBORHOOD				
ATHMAR PARK	108 (0.9%)	246 (1.0%)	246 (1.0%)	1.00
BAKER	183 (1.5%)	359 (1.4%)	376 (1.5%)	
BARNUM	92 (0.8%)	180 (0.7%)	189 (0.7%)	
BARNUM WEST	65 (0.5%)	134 (0.5%)	127 (0.5%)	
BEAR VALLEY	84 (0.7%)	164 (0.6%)	173 (0.7%)	
CAPITOL HILL	966 (8.0%)	2200 (8.7%)	2200 (8.7%)	
CBD	133 (1.1%)	259 (1.0%)	273 (1.1%)	
CHAFFEE PARK	58 (0.5%)	119 (0.5%)	114 (0.5%)	
CHEESMAN PARK	530 (4.4%)	1207 (4.8%)	1208 (4.8%)	
CITY PARK	267 (2.2%)	549 (2.2%)	524 (2.1%)	
CITY PARK WEST	326 (2.7%)	636 (2.5%)	669 (2.6%)	
CIVIC CENTER	45 (0.4%)	93 (0.4%)	88 (0.3%)	
CLAYTON	67 (0.6%)	137 (0.5%)	129 (0.5%)	
COLE	97 (0.8%)	199 (0.8%)	189 (0.7%)	
COLLEGE VIEW - SOUTH PLATTE	143 (1.2%)	280 (1.1%)	293 (1.2%)	
CONGRESS PARK	1105 (9.2%)	2516 (9.9%)	2516 (10.0%)	
DIA	44 (0.4%)	87 (0.3%)	91 (0.4%)	
EAST COLFAX	452 (3.7%)	926 (3.6%)	881 (3.5%)	
ELYRIA SWANSEA	127 (1.1%)	289 (1.1%)	289 (1.1%)	
FIVE POINTS	228 (1.9%)	451 (1.8%)	473 (1.9%)	
GATEWAY - GREEN VALLEY RANCH	269 (2.2%)	552 (2.2%)	526 (2.1%)	
GLOBEVILLE	81 (0.7%)	183 (0.7%)	183 (0.7%)	
GOLDSMITH	62 (0.5%)	121 (0.5%)	128 (0.5%)	
HALE	754 (6.2%)	1535 (6.0%)	1479 (5.9%)	
HAMPDEN	243 (2.0%)	499 (2.0%)	473 (1.9%)	
HARVEY PARK	150 (1.2%)	294 (1.2%)	308 (1.2%)	
HARVEY PARK SOUTH	61 (0.5%)	125 (0.5%)	118 (0.5%)	
HIGHLAND	429 (3.6%)	837 (3.3%)	879 (3.5%)	
JEFFERSON PARK	179 (1.5%)	348 (1.4%)	367 (1.5%)	
LINCOLN PARK	121 (1.0%)	237 (0.9%)	248 (1.0%)	
MAR LEE	157 (1.3%)	355 (1.4%)	355 (1.4%)	
MONTBELLO	302 (2.5%)	589 (2.3%)	620 (2.5%)	
NORTH CAPITOL HILL	238 (2.0%)	464 (1.8%)	487 (1.9%)	
NORTH PARK HILL	75 (0.6%)	154 (0.6%)	147 (0.6%)	
NORTHEAST PARK HILL	229 (1.9%)	469 (1.8%)	446 (1.8%)	
OVERLAND	46 (0.4%)	95 (0.4%)	90 (0.4%)	
REGIS	146 (1.2%)	300 (1.2%)	285 (1.1%)	

RUBY HILL	147 (1.2%)	301 (1.2%)	286 (1.1%)
SKYLAND	73 (0.6%)	150 (0.6%)	144 (0.6%)
SLOAN LAKE	117 (1.0%)	264 (1.0%)	264 (1.0%)
SOUTHMOOR PARK	6 (<1%)	12 (<1%)	12 (<1%)
SPEER	586 (4.9%)	1274 (5.0%)	1248 (4.9%)
SUN VALLEY	73 (0.6%)	143 (0.6%)	150 (0.6%)
SUNNYSIDE	194 (1.6%)	377 (1.5%)	397 (1.6%)
UNION STATION	174 (1.4%)	357 (1.4%)	339 (1.3%)
UNIVERSITY	268 (2.2%)	610 (2.4%)	610 (2.4%)
UNIVERSITY HILLS	35 (0.3%)	68 (0.3%)	72 (0.3%)
UNIVERSITY PARK	187 (1.5%)	384 (1.5%)	365 (1.4%)
VALVERDE	36 (0.3%)	83 (0.3%)	83 (0.3%)
VILLA PARK	165 (1.4%)	323 (1.3%)	339 (1.3%)
VIRGINIA VILLAGE	171 (1.4%)	351 (1.4%)	333 (1.3%)
WASHINGTON PARK WEST	174 (1.4%)	357 (1.4%)	340 (1.3%)
WASHINGTON VIRGINIA VALE	114 (0.9%)	233 (0.9%)	221 (0.9%)
WEST COLFAX	442 (3.7%)	1007 (4.0%)	1007 (4.0%)
WESTWOOD	220 (1.8%)	453 (1.8%)	432 (1.7%)
WINDSOR	222 (1.8%)	454 (1.8%)	431 (1.7%)

Notes: Includes 186 addresses that were randomized, but later found to be duplicates and excluded from the final analytic universe. P-values from Pearson's chi-squared tests (excluded address; apartment building; nonprofit; neighborhood) and Kruskal-Wallis tests (census tract demographics).

Table S3. Study 1 results: application requests, full analytic universe

	(1)	(2)	(3)	(4)
	Full treatment		Pooled treatment	
	Logistic	OLS	Logistic	OLS
Treatment pooled			0.5013 (0.1228) [0.0000]	0.0041 (0.0009) [0.0000]
Information Only	0.4555 (0.1310) [0.0005]	0.0036 (0.0010) [0.0002]		
Information + Stigma	0.5453 (0.1300) [0.0000]	0.0045 (0.0010) [0.0000]		
Percent rent burdened	-0.0175 (0.0146) [0.2304]	-0.0002 (0.0002) [0.2870]	-0.0175 (0.0146) [0.2318]	-0.0002 (0.0002) [0.2876]
Poverty rate	-0.0181 (0.0099) [0.0681]	-0.0002 (0.0001) [0.0327]	-0.0181 (0.0099) [0.0678]	-0.0002 (0.0001) [0.0323]
Percent non-White	2.5473 (1.2482) [0.0413]	0.0201 (0.0084) [0.0168]	2.5543 (1.2479) [0.0407]	0.0201 (0.0084) [0.0164]
Observations	61,659	62,529	61,659	62,529
R-squared		0.0102		0.0102
Control mean	0.00643	0.00631	0.00643	0.00631

Notes: Estimates of the average effect of treatment assignment on application requests in the eight weeks following the mailing date. Some observations are excluded from logistic models due to collinearity of neighborhoods and outcome (see Supplemental Methods). Additional controls not shown include neighborhood, nonprofit organization, and an indicator for whether the address was part of an apartment building. Robust standard errors in parentheses; p -values in brackets.

Table S4. Study 1 results: Assistance received prior to April 2021

	(1)	(2)	(3)	(4)
	Full treatment		Pooled treatment	
	Logistic	OLS	Logistic	OLS
Treatment pooled			0.5483 (0.1834) [0.0028]	0.0021 (0.0006) [0.0003]
Information Only	0.5036 (0.1950) [0.0098]	0.0019 (0.0006) [0.0039]		
Information + Stigma	0.5914 (0.1934) [0.0022]	0.0023 (0.0007) [0.0006]		
Percent rent burdened	-0.0043 (0.0217) [0.8438]	-0.0000 (0.0001) [0.9217]	-0.0042 (0.0217) [0.8486]	-0.0000 (0.0001) [0.9225]
Poverty rate	-0.0299 (0.0158) [0.0583]	-0.0002 (0.0001) [0.0221]	-0.0300 (0.0158) [0.0582]	-0.0002 (0.0001) [0.0221]
Percent non-White	5.2959 (1.3734) [0.0001]	0.0318 (0.0089) [0.0003]	5.3007 (1.3739) [0.0001]	0.0318 (0.0089) [0.0003]
Observations	53,198	62,529	53,198	62,529
R-squared		0.0041		0.0041
Control mean	0.00334	0.00284	0.00334	0.00284

Notes: Estimates of the average effect of treatment assignment on receipt of rental assistance funds following the mailing date. Some observations excluded from logistic models due to collinearity of neighborhoods and outcome (see Supplemental Methods). Additional controls not shown include neighborhood, nonprofit organization, and an indicator for whether the address was part of an apartment building. Robust standard errors in parentheses; *p*-values in brackets.

Table S5. Study 1: Distribution of submitted applications, by race

	AI/AN/NH/PI	Asian	Black	Multi	White	Total
Control	2 9.1%	2 9.1%	1 4.6%	1 4.6%	16 72.7%	22 100%
Information Only	3 4.8%	1 1.6%	11 17.5%	0 0%	48 76.2%	63 100%
Info + Stigma	3 5.7%	3 5.7%	14 26.4%	2 3.8%	31 58.5%	53 100%
Total	8 5.8%	6 4.4%	26 18.1%	3 2.2%	95 68.8%	138 100%

Notes: Cells reflect proportion of submitted applications during the outcome period that included data on applicant race, by treatment condition and race. AI/AN/NH/PI reflects American Indian; Alaskan Native; Native Hawaiian; Pacific Islander

Table S6. Study 1: Distribution of submitted applications, by ethnicity

	Not Hispanic	Hispanic	Total
Control	18 58.1%	13 41.9%	31 100%
Information Only	44 53.7%	38 46.3%	82 100%
Info + Stigma	39 47.6%	43 52.4%	82 100%
Total	101 51.8%	94 48.2%	138 100%

Notes: Cells reflect proportion of submitted applications during the outcome period that included data on applicant ethnicity, by treatment condition and ethnicity.

Table S7. Study 1: Missingness of race and ethnicity among submitted applications, by treatment

	Total N applied	N/% missing race	N missing ethnicity
Control	64	42 65.6%	33 51.6%
Information Only	166	103 62.1%	84 50.6%
Info + Stigma	183	130 71.0%	101 55.2%
Total	413	275 66.6%	218 52.8%

Notes: Columns indicate the number and percent of submitted applications that were missing race or ethnicity data, by treatment condition. Missingness across conditions is not significant for either race ($\chi^2(2) = 3.19, p = .20$) or ethnicity ($\chi^2(2) = 0.78, p = .68$).

Table S8. Study 1: Pre-registered test of sharp null hypothesis of no treatment effect

	Effect/ Test statistic	p-value
Application requests (Nonprofit #2)		
Info Only vs. Control	0.0047	.017
Info + Stigma vs. Control	0.0072	.001
Info Only vs. Info + Stigma	0.0025	.141
Treatment pooled vs. Control	0.0060	<.001
Application submissions		
Info Only vs. Control	0.0013	.148
Info + Stigma vs. Control	0.0020	.029
Info Only vs. Info + Stigma	0.0007	.321
Treatment pooled vs. Control	0.0016	.036

Notes: Results from Fisher's randomization inference test of sharp null hypothesis for each pairwise comparison and both primary outcomes.

Table S9. Study 1: Effect estimates

Panel A: Submitted applications		# applications submitted	% applied	# applied if rec'd no outreach	# applied if rec'd Information + Stigma outreach
	N				
Control	12,028	64	0.53%	64	87
Information Only	25,315	166	0.66%	135	184
Information + Stigma	25,186	183	0.73%	134	183
Total applied		413		333	454
Panel B: Assistance received		# households rec'd assistance	% rec'd assistance	# rec'd assistance if no outreach	# rec'd assistance if Information + Stigma outreach
	N				
Control	12,028	34	0.28%	34	62
Information Only	25,315	119	0.47%	72	130
Information + Stigma	25,186	129	0.51%	71	129
Total assistance rec'd		282		177	320

Notes: Estimates from Study 1. Columns 4 and 5 reflect estimates of the number of households in each experimental condition that would have applied (Panel A) and received assistance (Panel B) had they received no outreach or the most effective outreach (Information + Stigma), respectively. The average amount of assistance disbursed per household was \$2,837. Had all households received the Information + Stigma outreach, we estimate an additional 144 households ($320 - 177 = 143$) would have received approximately \$405,000 in assistance ($143 \times \$2,837 = \$405,691$).

Table S10. Study 3 results, by individual measure

VARIABLES	(1) Shame	(2) Down	(3) Judge	(4) Less	(5) Stereotype	(6) Fault	(7) Deal	(8) Inferior	(9) Apply	(10) Difficulty
Info + Stigma	-0.385 (0.147) [0.009]	-0.166 (0.130) [0.202]	-0.140 (0.132) [0.287]	-0.355 (0.146) [0.015]	-0.188 (0.136) [0.167]	-0.217 (0.136) [0.111]	-0.225 (0.139) [0.105]	-0.236 (0.148) [0.112]	0.080 (0.127) [0.531]	0.201 (0.188) [0.285]
Observations	622	622	622	622	622	622	622	622	622	622
R-squared	0.158	0.170	0.146	0.207	0.159	0.119	0.135	0.151	0.121	0.061
Mean for Info Only	4.171	4.541	4.734	4.305	4.579	4.605	4.498	4.327	5.169	5.551

Notes: OLS estimates of average treatment effect on each individual stigma measure in Study 3, as well as likelihood of applying (column 9) and perceived difficulty of applying (column 10). See Supplemental Methods for question text. Additional controls include income, age, gender, college education, race, party, prior experience with housing insecurity, and prior experience using rental assistance. Robust standard errors in parentheses; p -values in brackets.

Supplemental Figures

Figure S1. Study 1 postcards - front

Information Only

DENVER
THE MILE HIGH CITY

BRI
Brothers Redevelopment, Inc.
Housing • Home Modification & Repair • Housing Counseling

Northeast Denver
Housing Center

DEL NORTE
Neighborhood Development Corporation

ARE YOU STRUGGLING TO PAY YOUR RENT?
¿Tiene dificultades con el pago de la renta?

You're not alone.

The City and County of Denver has many programs to support residents in need.

Usted no está solo.

La ciudad y el condado de Denver tienen muchos programas para ayudar a los residentes que necesitan asistencia.

Assistance subject to eligibility and availability of funding. Translation interpretation services in other languages can be made available. La asistencia está sujeta a elegibilidad y disponibilidad de fondos. Se pueden ofrecer servicios de traducción e interpretación en otros idiomas.

Did you know? ¿Sabía usted?

Denver's Temporary Rental and Utility Assistance (TRUA) program provides **temporary help to cover rent and utility payments** for eligible Denver residents. *El programa de Asistencia Temporal de Alquiler y Servicios Públicos de Denver (TRUA) brinda ayuda temporal para cubrir los pagos de alquiler y servicios públicos para los residentes elegibles de Denver.*

Even if you're facing eviction or behind on rent, **it's not too late to apply!** *Incluso si se enfrenta a un desalojo o está atrasado con el alquiler, ¡no es demasiado tarde para aplicar!*

If you're eligible, you can receive an application via mail or email. *Si es elegible, puede recibir una aplicación por correo postal o electrónico.*

Information + Stigma (red boxes highlight language changes)

DENVER
THE MILE HIGH CITY

BRI
Brothers Redevelopment, Inc.
Housing • Home Modification & Repair • Housing Counseling

Northeast Denver
Housing Center

DEL NORTE
Neighborhood Development Corporation

ARE YOU STRUGGLING TO PAY YOUR RENT?
¿Tiene dificultades con el pago de la renta?

You're not alone and it's not your fault.

Because of COVID-19, many Denver residents need a little extra help right now.

Usted no está solo y no es su culpa.

Debido a COVID-19, muchos residentes de Denver necesitan un poco de ayuda adicional en este momento.

Assistance subject to eligibility and availability of funding. Translation interpretation services in other languages can be made available. La asistencia está sujeta a elegibilidad y disponibilidad de fondos. Se pueden ofrecer servicios de traducción e interpretación en otros idiomas.

Did you know? ¿Sabía usted?



Denver's Temporary Rental and Utility Assistance (TRUA) program provides **temporary help to cover rent and utility payments** for eligible Denver residents. *El programa de Asistencia Temporal de Alquiler y Servicios Públicos de Denver (TRUA) brinda ayuda temporal para cubrir los pagos de alquiler y servicios públicos para los residentes elegibles de Denver.*

Even if you're facing eviction or behind on rent, **it's not too late to apply!** *Incluso si se enfrenta a un desalojo o está atrasado con el alquiler, ¡no es demasiado tarde para aplicar!*

All eligible residents can receive an application via mail or email. *Todos los residentes elegibles pueden recibir una aplicación por correo postal o correo electrónico.*

Figure S2. Study 1 postcards - back

Information Only

<p>HOW DO I APPLY? ¿CÓMO ME INSCRIBO?</p> <p>It's easy to check your eligibility and request an application! ¡Es fácil verificar su elegibilidad y pedir una aplicación!</p> <p>Choose one: Elija uno:</p> <p> Call [redacted] and a TRUA staff member will determine if you're eligible and send you an application. <i>Llame al [redacted] y un miembro de TRUA determinará si usted es elegible y le enviará una aplicación.</i></p> <p>OR</p> <p> Go online to [redacted] to check if you're eligible and request an application directly. <i>Ingrese a [redacted] en línea para verificar si es elegible y solicite una aplicación directamente.</i></p>	<p><i>We can help many eligible households in need. Apply today!</i></p> <p><i>Podemos ayudar a muchos hogares elegibles que lo necesitan. ¡Aplique hoy!</i></p>
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Information + Stigma (red boxes highlight language changes)



<p>HOW DO I APPLY? ¿CÓMO ME INSCRIBO?</p> <p>It's easy to check your eligibility and request an application! ¡Es fácil verificar su elegibilidad y pedir una aplicación!</p> <p>Choose one: Elija uno:</p> <p> Call [redacted] and a TRUA staff member will help you determine if you're eligible and send you an application.</p> <p><i>Llame [redacted] y un miembro de TRUA lo ayudará a determinar si es elegible y le enviará una aplicación.</i></p> <p>OR</p> <p> Go online to [redacted] to check if you're eligible and request an application directly. <i>Ingrese a [redacted] en línea para verificar si es elegible y solicite una aplicación directamente.</i></p>	<p><i>We're here to help every eligible household get the assistance they deserve. Apply today!</i></p> <p><i>Estamos aquí para ayudar a todos los hogares elegibles a obtener la asistencia que merecen. ¡Aplique hoy!</i></p>
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Figure S3. Study 2 emails

Information Only

The image is a screenshot of an email from the City of Austin Housing & Planning department. At the top left is the City of Austin logo, followed by the text "HOUSING & PLANNING". To the right, the phone number "(512) 488-1397" and the website "AustinTexas.gov/RENT" are listed. Below this is a banner featuring a woman wearing a blue face mask, with the text "RENT assistance" in large orange and white letters, and "AustinTexas.gov/RENT" below it. The main body of the email has a white background with orange and blue accents. It starts with the question "Are you struggling to pay your rent?" in orange. Below this, it says "You're not alone. If your ability to pay rent has been affected by COVID, the City of Austin RENT Assistance program may be able to help." The next paragraph states, "The City of Austin RENT Assistance Program can help to cover current and missed rent payments. It's easy to apply and payments are made quickly for those who qualify." A bolded paragraph follows: "The RENT program has helped over 17,500 Austinites since the start of the pandemic. Even if you're facing eviction or behind on rent, it's not too late to apply! We will accept applications 24/7 until funds run out. Applicant selections happen weekly!" In the center is an orange button with the text "Apply Now". Below the button, it says "For more information about the RENT Assistance Program and other available resources, call (512) 488-1397 or go to AustinTexas.gov/RENT". At the bottom, there are three links: "How RENT helped me", "Eviction Info", and "Help for Homeowners".

HOUSING & PLANNING

(512) 488-1397
AustinTexas.gov/RENT

RENT
assistance
AustinTexas.gov/RENT

Are you struggling to pay your rent?

You're not alone. If your ability to pay rent has been affected by COVID, the City of Austin RENT Assistance program may be able to help.

The City of Austin RENT Assistance Program can help to cover current and missed rent payments. It's easy to apply and payments are made quickly for those who qualify.


The RENT program has helped over 17,500 Austinites since the start of the pandemic. Even if you're facing eviction or behind on rent, it's not too late to apply! We will accept applications 24/7 until funds run out. Applicant selections happen weekly!

Apply Now

For more information about the RENT Assistance Program and other available resources, call (512) 488-1397 or go to [AustinTexas.gov/RENT](https://austintexas.gov/rent)


[How RENT helped me](#) [Eviction Info](#) [Help for Homeowners](#)

Information + Stigma (red boxes highlight language changes)



HOUSING & PLANNING

(512) 488-1397
AustinTexas.gov/RENT



RENT
assistance
AustinTexas.gov/RENT

Are you struggling to pay your rent?

You're not alone, and it's not your fault. Because of COVID, many Austinites need a little extra help right now.

The City of Austin RENT Assistance Program can now help to cover current and missed rent payments. It's easy to apply and payments are made quickly for all qualified applicants.

We are here to help all eligible Austinites get the assistance they deserve. Even if you're facing eviction or behind on rent, it's not too late to apply! We will accept applications 24/7 until funds run out. **New applicants join every week!**

[Apply Now](#)

For more information about the RENT Assistance Program and other available resources, call (512) 488-1397 or go to [AustinTexas.gov/RENT](#)

[How RENT helped me](#) [Eviction Info](#) [Help for Homeowners](#)

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