

Resiliency Collab

S.Kelly

Final Models: Education (hsg & sc), Health (lbw, pud, mud), and Housing (rent30, median, owned)

To address VIF, dropped the following three IVs from all previous final models:
z_SVI_RPL_THEMES_ALL, z_ACS_PER_CAPITA_INCOME, z_pfh_percent

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dim(Z_and_Final_Variables_10.28.22)
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[1] 3141 129
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glimpse(Z_and_Final_Variables_10.28.22)
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Rows: 3,141

Columns: 129

\$ FIPS	<int> 1001, 1003, 1005, 1007, 1009, 1011, 1013, 10~
\$ State.x	<chr> "al", "al", "al", "al", "al", "al", "al", "a~
\$ county	<chr> "autauga", "baldwin", "barbour", "bibb", "bl~
\$ hsg_rate	<dbl> 90.00000, 86.36158, 81.41026, 83.76384, 93.4~
\$ sc_percent	<dbl> 62.00997, 67.37162, 34.85765, 44.13735, 53.3~
\$ rs_average	<dbl> 2.959586, 3.005642, 2.660388, 2.628688, 3.02~
\$ ms_average	<dbl> 2.802699, 2.860696, 2.443271, 2.381308, 2.84~
\$ pfh_percent	<dbl> 20.88299, 17.50913, 29.59180, 19.43972, 21.7~
\$ pphd_avgnum	<dbl> 4.743889, 4.224519, 5.430279, 4.591482, 4.86~
\$ pmhd_avgnum	<dbl> 4.654031, 4.304056, 5.185594, 4.551699, 4.89~
\$ lbw_percent_lb	<dbl> 8.619529, 8.345003, 11.474559, 10.308710, 7.~
\$ pi_phy_inact	<dbl> 34.7, 26.5, 23.5, 33.5, 30.3, 24.6, 39.5, 31~
\$ cip_perc	<dbl> 19.3, 13.9, 43.9, 27.8, 18.0, 68.3, 36.3, 26~
\$ csph_perc	<dbl> 26.24268, 24.13960, 56.60343, 28.68924, 28.5~

\$ ACS_PCT_CHILD_DISAB	<dbl> 9.013, 3.656, 8.609, 4.047, 2.495, 5.814, 3.~
\$ ACS_PCT_BLACK	<dbl> 19.139, 9.497, 47.576, 22.275, 1.495, 76.246~
\$ ACS_PCT_HISPAN	<dbl> 2.768, 4.494, 4.290, 2.428, 9.127, 0.493, 0.~
\$ SVI_RPL_THEME1_SOCIECO	<dbl> 0.3631, 0.2232, 0.9780, 0.7694, 0.6143, 0.97~
\$ SVI_RPL_THEME2_HH_DISB	<dbl> 0.5810, 0.1990, 0.9153, 0.1203, 0.3187, 0.44~
\$ SVI_RPL_THEME3_MINO	<dbl> 0.5947, 0.4358, 0.8558, 0.4323, 0.5915, 0.67~
\$ SVI_RPL_THEME4_HH_TRANS	<dbl> 0.3741, 0.3359, 0.9889, 0.7189, 0.1741, 0.76~
\$ SVI_RPL_THEMES_ALL	<dbl> 0.4354, 0.2162, 0.9959, 0.6003, 0.4242, 0.88~
\$ ACS_PCT_ENGL_NOT_WELL	<dbl> 0.732, 0.477, 1.451, 0.216, 1.366, 0.441, 0.~
\$ ACS_PCT_NON_CITIZEN	<dbl> 0.969, 1.850, 1.420, 0.870, 2.840, 0.000, 0.~
\$ ACS_MEDIAN_AGE	<dbl> 37.8, 42.8, 39.9, 39.9, 40.8, 39.6, 40.7, 39~
\$ food_afford	<dbl> 0.1440757, 0.1656779, 0.2300316, 0.1781116, ~
\$ fd_enviro_indx	<dbl> 7.2, 8.0, 5.6, 7.8, 8.4, 4.3, 6.6, 6.9, 6.4,~
\$ fi_percent	<dbl> 13.2, 11.6, 22.0, 14.3, 10.7, 24.8, 20.6, 15~
\$ ACS_PCT_FOOD_STAMP	<dbl> 13.010, 7.932, 27.749, 12.924, 9.762, 26.517~
\$ childelig_lunch_perc	<dbl> 43.40867, 48.48656, 63.29230, 61.56212, 52.9~
\$ shp_percent	<dbl> 14.663462, 13.566201, 14.583333, 10.496454, ~
\$ shcb_percent	<dbl> 13.403481, 11.725808, 14.059546, 9.886874, 8~
\$ ACS_PCT_NO_VEH	<dbl> 5.641, 3.441, 9.242, 5.994, 4.155, 11.721, 7~
\$ ACS_PCT_RENTER_HH_CHILD	<dbl> 40.747, 28.721, 43.373, 30.557, 31.070, 62.6~
\$ ACS_PCT_RENT_COST_30PCT	<dbl> 53.066, 48.301, 47.601, 46.154, 42.469, 58.5~
\$ ACS_PCT_MOBILE_HOME	<dbl> 18.353, 11.680, 29.187, 28.545, 25.217, 33.3~
\$ ACS_PCT_OWNED_HH	<dbl> 74.895, 73.619, 61.398, 75.073, 78.626, 75.5~
\$ ACS_PCT_OWNER_HH_CHILD	<dbl> 34.128, 24.981, 24.078, 28.549, 30.765, 26.9~
\$ ACS_PCT_RENTED_HH	<dbl> 25.105, 26.381, 38.602, 24.927, 21.374, 24.4~
\$ ACS_MEDIAN_HOME_VALUE	<dbl> 147900, 189800, 92900, 96500, 124700, 77500,~
\$ soc_assoc_num	<int> 67, 217, 19, 19, 49, 8, 18, 166, 60, 22, 67,~
\$ aeo_perc_w_acc	<dbl> 69.130124, 73.713549, 53.166770, 16.251364, ~
\$ dwv_presence	<int> 1, 1, 1, 1, 1, 1, 2, 1, 1, 1, 1, 2, 1, 2, 1,~
\$ ACS_PCT_HH_PUB_ASSIST	<dbl> 1.345, 1.372, 2.841, 4.474, 1.587, 4.378, 1.~
\$ AHRF_TXC_SITE_NO_CNTRL	<int> 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0,~
\$ unemp_perc	<dbl> 3.629079, 3.615382, 5.171384, 3.971828, 3.51~
\$ ACS_GINI_INDEX	<dbl> 0.4602, 0.4609, 0.4731, 0.4294, 0.4331, 0.51~
\$ ACS_MEDIAN_HH_INCOME	<int> 58786, 55962, 34186, 45340, 48695, 32152, 39~
\$ ACS_PCT_WORK_NO_CAR	<dbl> 0.767, 1.219, 4.158, 1.650, 1.121, 5.282, 2.~
\$ ACS_PER_CAPITA_INCOME	<int> 29372, 31203, 18461, 20199, 22656, 20346, 20~
\$ ACS_PCT_BROADBAND	<dbl> 78.859, 78.126, 60.396, 66.096, 68.461, 58.8~
\$ ACS_PCT_NO_PC	<dbl> 13.010, 11.431, 23.949, 23.728, 21.350, 27.0~
\$ ACS_PCT_SMARTPHONE	<dbl> 5.588, 7.245, 10.592, 11.535, 8.553, 13.993,~
\$ uninsur_perc	<dbl> 8.721686, 11.333404, 12.242792, 10.206253, 1~
\$ uc_percent	<dbl> 2.669154, 3.538763, 2.913534, 2.617801, 4.07~
\$ pcp_ratio	<chr> "92.500694444444406", "57.167361111111099", ~
\$ opcp_rate	<dbl> 39.56763, 55.95766, 52.24870, 111.60714, 22.~

\$ dents_ratio	<chr> "128.709027777777701", "84.125694444444406", ~
\$ mhp_ratio	<chr> "178.209027777777701", "43.250694444444399", ~
\$ phs_rate	<int> 7108, 4041, 6209, 5961, 4060, 6632, 9203, 65~
\$ ms_perc_ann	<int> 41, 43, 45, 40, 34, 35, 42, 32, 38, 36, 39, ~
\$ AMFAR_AMATFAC	<int> 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, ~
\$ MP_PERCPEN	<dbl> 44.98, 42.77, 37.25, 49.98, 51.56, 41.15, 21~
\$ AHRF_RURAL_H_CLINIC	<int> 0, 0, 1, 1, 4, 3, 3, 0, 0, 1, 1, 2, 5, 0, 0, ~
\$ TeenBirths	<int> 1839, 6194, 694, 529, 1719, 286, 645, 3743, ~
\$ phys_per_cap	<dbl> 0.0004710145, 0.0007351987, 0.0003102940, 0.~
\$ mhp_per_cap	<dbl> 0.000000e+00, 7.688353e-05, 3.878675e-05, 0.~
\$ dents_per_cap	<dbl> 3.260870e-04, 5.670160e-04, 2.327205e-04, 2.~
\$ z_hsg_rate	<dbl> 0.17560941, -0.33273076, -1.02450160, -0.695~
\$ z_sc_percent	<dbl> 0.348003662, 0.801035960, -1.946232079, -1.1~
\$ z_rs_average	<dbl> -0.2130832, -0.2088286, -0.2407231, -0.24365~
\$ z_ms_average	<dbl> -0.5362162, -0.4295601, -1.1972017, -1.31115~
\$ z_ACS_PCT_BLACK	<dbl> 0.69336041, 0.02990109, 2.65009061, 0.909146~
\$ z_ACS_PCT_HISPAN	<dbl> -0.470973965, -0.345828201, -0.360619474, -0~
\$ z_SVI_RPL_THEME1_SOCIECO	<dbl> -0.47437091, -0.95880330, 1.65484620, 0.9325~
\$ z_SVI_RPL_THEME2_HH_DISB	<dbl> 0.2801763, -1.0427818, 1.4379378, -1.3153388~
\$ z_SVI_RPL_THEME3_MINO	<dbl> 0.32822699, -0.22165854, 1.23178338, -0.2337~
\$ z_SVI_RPL_THEME4_HH_TRANS	<dbl> -0.43546688, -0.56774285, 1.69341454, 0.7584~
\$ z_SVI_RPL_THEMES_ALL	<dbl> -0.22388945, -0.98281156, 1.71669377, 0.3470~
\$ z_ACS_PCT_ENGL_NOT_WELL	<dbl> -0.270050837, -0.421196223, 0.156119876, -0.~
\$ z_ACS_PCT_NON_CITIZEN	<dbl> -0.51019277, -0.26306389, -0.38368298, -0.53~
\$ z_ACS_MEDIAN_AGE	<dbl> -0.64439450, 0.27909238, -0.25653001, -0.256~
\$ z_food_afford	<dbl> -0.439448964, 0.071371779, 1.593128721, 0.36~
\$ z_fd_enviro_indx	<dbl> -0.21949409, 0.47886061, -1.61620350, 0.3042~
\$ z_fi_percent	<dbl> -0.04477055, -0.44348572, 2.14816286, 0.2293~
\$ z_ACS_PCT_FOOD_STAMP	<dbl> -0.12543469, -0.89616985, 2.11164002, -0.138~
\$ z_childelig_lunch_perc	<dbl> -0.42325470, -0.18342220, 0.51586352, 0.4341~
\$ z_shp_percent	<dbl> 0.17404824, -0.06580777, 0.15653260, -0.7368~
\$ z_shcb_percent	<dbl> 0.55598033, 0.08942385, 0.73843031, -0.42197~
\$ z_ACS_PCT_NO_VEH	<dbl> -0.15863051, -0.65012243, 0.64585240, -0.079~
\$ z_ACS_PCT_RENTER_HH_CHILD	<dbl> 0.77902931, -0.64319146, 1.08958575, -0.4260~
\$ z_ACS_PCT_RENT_COST_30PCT	<dbl> 0.9236173, 0.4262663, 0.3532032, 0.2021713, ~
\$ z_ACS_PCT_MOBILE_HOME	<dbl> 0.56349590, -0.13039326, 1.69006494, 1.62330~
\$ z_ACS_PCT_OWNED_HH	<dbl> 0.4190011, 0.2645905, -1.2142909, 0.4405412, ~
\$ z_ACS_PCT_OWNER_HH_CHILD	<dbl> 1.17618972, -0.35796554, -0.50941871, 0.2404~
\$ z_ACS_MEDIAN_HOME_VALUE	<dbl> 0.008481818, 0.472893552, -0.601127858, -0.5~
\$ z_ACS_PCT_BROADBAND	<dbl> 0.66668600, 0.58749438, -1.32801377, -0.7121~
\$ z_ACS_PCT_NO_PC	<dbl> -0.5158114, -0.7435088, 1.0616311, 1.0297621~
\$ z_ACS_PCT_SMARTPHONE	<dbl> -0.35156862, 0.20891337, 1.34103963, 1.66001~
\$ z_pfh_percent	<dbl> 0.62132388, -0.09043965, 2.45857541, 0.31684~

\$ z_pphd_avgnum	<dbl> 1.0686813, 0.3317775, 2.0425608, 0.8524406, ~
\$ z_pmhd_avgnum	<dbl> 0.8071895, 0.2263430, 1.6894141, 0.6373502, ~
\$ z_lbw_percent_lbw	<dbl> 0.23414587, 0.09957632, 1.63365236, 1.062165~
\$ z_pi_phy_inact	<dbl> 1.28678114, -0.15283038, -0.67951752, 1.0761~
\$ z_cip_perc	<dbl> -0.20340963, -0.80996824, 2.55980185, 0.7513~
\$ z_csph_perc	<dbl> -0.57497431, -0.77237114, 2.27471379, -0.345~
\$ z_ACS_PCT_CHILD_DISAB	<dbl> 1.9789546, -0.5137625, 1.7909655, -0.3318225~
\$ z_phys_per_cap	<dbl> -0.12978042, 0.57993866, -0.56154881, 0.0359~
\$ z_mhp_per_cap	<dbl> -0.49269142, 0.32117672, -0.08210541, -0.492~
\$ z_dents_per_cap	<dbl> -0.14768020, 0.80656949, -0.51747750, -0.560~
\$ z_uninsur_perc	<dbl> -0.535429391, -0.027813084, 0.148936505, -0.~
\$ z_uc_percent	<dbl> -0.7572901, -0.6010458, -0.7133819, -0.76651~
\$ z_opcp_rate	<dbl> -0.73164417, -0.46603422, -0.52614007, 0.435~
\$ z_TeenBirths	<dbl> -0.13945763, 0.27695051, -0.24893807, -0.264~
\$ z_phs_rate	<dbl> 1.221509621, -0.443936625, 0.733333496, 0.59~
\$ z_ms_perc_ann	<dbl> 0.04485619, 0.30548105, 0.56610592, -0.08545~
\$ z_AMFAR_AMATFAC	<dbl> -0.1985903, -0.1985903, -0.1985903, -0.19859~
\$ z_MP_PERCPEN	<dbl> 1.433688929, 1.274661948, 0.877454284, 1.793~
\$ z_AHRF_RURAL_H_CLINIC	<dbl> -0.6641385, -0.6641385, -0.1888237, -0.18882~
\$ z_unemp_perc	<dbl> -0.33580552, -0.34492510, 0.69109612, -0.107~
\$ z_ACS_GINI_INDEX	<dbl> 0.40562723, 0.42479806, 0.75891841, -0.43788~
\$ z_ACS_MEDIAN_HH_INCOME	<dbl> 0.5266713, 0.3204602, -1.2696432, -0.4551679~
\$ z_ACS_PCT_WORK_NO_CAR	<dbl> -0.505363092, -0.376387589, 0.462238521, -0.~
\$ z_ACS_PER_CAPITA_INCOME	<dbl> 0.35932791, 0.64059481, -1.31675245, -1.0497~
\$ z_soc_assoc_num	<dbl> -0.115790810, 0.539443880, -0.325465911, -0.~
\$ z_aeo_perc_w_acc	<dbl> 0.27088719, 0.46709498, -0.41247397, -1.9927~
\$ z_dwv_presence	<dbl> -0.7682178, -0.7682178, -0.7682178, -0.76821~
\$ z_ACS_PCT_HH_PUB_ASSIST	<dbl> -0.5760527, -0.5601563, 0.3047219, 1.2661556~
\$ z_AHRF_TXC_SITE_NO_CNTRL	<dbl> -0.1671344, -0.1671344, -0.1671344, -0.16713~

Final Education Model

DV: High School Rate

IVs: Demographics, Food/Housing, Technology, Health 1, (DOES NOT INCLUDE health 2), HWCC, Business, Government

```
options(scipen = 999)
z_hsg_levels_1234678 <- lm(formula = z_hsg_rate ~ z_ACS_PCT_BLACK +
  z_ACS_PCT_HISPAN + z_SVI_RPL_THEME1_SOCIECO + z_SVI_RPL_THEME2_HH_DISB +
  z_SVI_RPL_THEME3_MINO + z_SVI_RPL_THEME4_HH_TRANS + z_ACS_PCT_ENGL_NOT_WELL +
  z_ACS_PCT_NON_CITIZEN + z_ACS_MEDIAN_AGE + z_food_afford +
  z_fd_enviro_indx + z_fi_percent + z_ACS_PCT_FOOD_STAMP +
  z_childelig_lunch_perc + z_shp_percent + z_shcb_percent +
  z_ACS_PCT_NO_VEH + z_ACS_PCT_RENTER_HH_CHILD + z_ACS_PCT_RENT_COST_30PCT +
  z_ACS_PCT_MOBILE_HOME + z_ACS_PCT_OWNED_HH + z_ACS_PCT_OWNER_HH_CHILD +
  z_ACS_MEDIAN_HOME_VALUE + z_ACS_PCT_BROADBAND + z_ACS_PCT_NO_PC +
  z_ACS_PCT_SMARTPHONE + z_phys_per_cap + z_mhp_per_cap + z_dents_per_cap +
  z_uninsur_perc + z_uc_percent + z_opcp_rate + z_TeenBirths +
  z_pphd_avgnum + z_pmhd_avgnum + z_lbw_percent_lbw + z_pi_phy_inact +
  z_cip_perc + z_csph_perc + z_ACS_PCT_CHILD_DISAB + z_unemp_perc +
  z_ACS_GINI_INDEX + z_ACS_MEDIAN_HH_INCOME + z_ACS_PCT_WORK_NO_CAR +
  z_soc_assoc_num + z_aeo_perc_w_acc + z_dvw_presence + z_ACS_PCT_HH_PUB_ASSIST +
  z_AHRF_TXC_SITE_NO_CNTRL, data = Z_and_Final_Variables_10.28.22)
summary(z_hsg_levels_1234678)
```

Call:

```
lm(formula = z_hsg_rate ~ z_ACS_PCT_BLACK + z_ACS_PCT_HISPAN +
  z_SVI_RPL_THEME1_SOCIECO + z_SVI_RPL_THEME2_HH_DISB + z_SVI_RPL_THEME3_MINO +
  z_SVI_RPL_THEME4_HH_TRANS + z_ACS_PCT_ENGL_NOT_WELL + z_ACS_PCT_NON_CITIZEN +
  z_ACS_MEDIAN_AGE + z_food_afford + z_fd_enviro_indx + z_fi_percent +
  z_ACS_PCT_FOOD_STAMP + z_childelig_lunch_perc + z_shp_percent +
  z_shcb_percent + z_ACS_PCT_NO_VEH + z_ACS_PCT_RENTER_HH_CHILD +
  z_ACS_PCT_RENT_COST_30PCT + z_ACS_PCT_MOBILE_HOME + z_ACS_PCT_OWNED_HH +
  z_ACS_PCT_OWNER_HH_CHILD + z_ACS_MEDIAN_HOME_VALUE + z_ACS_PCT_BROADBAND +
  z_ACS_PCT_NO_PC + z_ACS_PCT_SMARTPHONE + z_phys_per_cap +
  z_mhp_per_cap + z_dents_per_cap + z_uninsur_perc + z_uc_percent +
  z_opcp_rate + z_TeenBirths + z_pphd_avgnum + z_pmhd_avgnum +
  z_lbw_percent_lbw + z_pi_phy_inact + z_cip_perc + z_csph_perc +
```

z_ACS_PCT_CHILD_DISAB + z_unemp_perc + z_ACS_GINI_INDEX +
z_ACS_MEDIAN_HH_INCOME + z_ACS_PCT_WORK_NO_CAR + z_soc_assoc_num +
z_aeo_perc_w_acc + z_dwv_presence + z_ACS_PCT_HH_PUB_ASSIST +
z_AHRF_TXC_SITE_NO_CNTRL, data = Z_and_Final_Variables_10.28.22)

Residuals:

Min	1Q	Median	3Q	Max
-6.0736	-0.3829	0.1047	0.5005	2.2237

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	0.079080	0.017903	4.417	0.000010419195144	***
z_ACS_PCT_BLACK	-0.056832	0.037003	-1.536	0.124697	
z_ACS_PCT_HISPAN	0.030385	0.033100	0.918	0.358717	
z_SVI_RPL_THEME1_SOCIECO	0.148532	0.049923	2.975	0.002955	**
z_SVI_RPL_THEME2_HH_DISB	-0.073186	0.028526	-2.566	0.010359	*
z_SVI_RPL_THEME3_MINO	-0.212499	0.033893	-6.270	0.000000000423809	***
z_SVI_RPL_THEME4_HH_TRANS	-0.121791	0.026213	-4.646	0.000003553222011	***
z_ACS_PCT_ENGL_NOT_WELL	0.084921	0.051575	1.647	0.099778	.
z_ACS_PCT_NON_CITIZEN	0.015747	0.047828	0.329	0.741999	
z_ACS_MEDIAN_AGE	0.159220	0.038758	4.108	0.000041164284073	***
z_food_afford	-0.139488	0.031774	-4.390	0.000011796280202	***
z_fd_enviro_indx	0.098296	0.034269	2.868	0.004160	**
z_fi_percent	0.170410	0.049907	3.415	0.000649	***
z_ACS_PCT_FOOD_STAMP	0.090184	0.042176	2.138	0.032590	*
z_childelig_lunch_perc	-0.221645	0.035687	-6.211	0.0000000000614205	***
z_shp_percent	-0.180918	0.035613	-5.080	0.000000404666364	***
z_shcb_percent	0.132581	0.037298	3.555	0.000385	***
z_ACS_PCT_NO_VEH	0.105318	0.056873	1.852	0.064170	.
z_ACS_PCT_RENTER_HH_CHILD	0.052475	0.024187	2.170	0.030135	*
z_ACS_PCT_RENT_COST_30PCT	0.013532	0.026123	0.518	0.604481	
z_ACS_PCT_MOBILE_HOME	-0.114869	0.026493	-4.336	0.000015092563372	***
z_ACS_PCT_OWNED_HH	-0.033395	0.034071	-0.980	0.327102	
z_ACS_PCT_OWNER_HH_CHILD	0.128695	0.034327	3.749	0.000181	***
z_ACS_MEDIAN_HOME_VALUE	-0.156575	0.037272	-4.201	0.000027505502431	***
z_ACS_PCT_BROADBAND	0.090783	0.049616	1.830	0.067409	.
z_ACS_PCT_NO_PC	0.181280	0.049259	3.680	0.000238	***
z_ACS_PCT_SMARTPHONE	0.076845	0.026091	2.945	0.003257	**
z_phys_per_cap	-0.009151	0.027023	-0.339	0.734909	
z_mhp_per_cap	0.017030	0.024764	0.688	0.491726	
z_dents_per_cap	-0.059618	0.027478	-2.170	0.030127	*
z_uninsur_perc	-0.086799	0.046847	-1.853	0.064024	.
z_uc_percent	0.363729	0.069037	5.269	0.000000149032129	***

z_opcp_rate	0.007027	0.022172	0.317	0.751313
z_TeenBirths	0.038864	0.051603	0.753	0.451440
z_pphd_avgnum	0.093795	0.059394	1.579	0.114415
z_pmhd_avgnum	-0.036368	0.051623	-0.704	0.481191
z_lbw_percent_lbw	-0.019361	0.026053	-0.743	0.457475
z_pi_phy_inact	0.023931	0.023503	1.018	0.308670
z_cip_perc	-0.037167	0.046999	-0.791	0.429137
z_csph_perc	-0.164744	0.032165	-5.122	0.000000325415557 ***
z_ACS_PCT_CHILD_DISAB	-0.004463	0.019209	-0.232	0.816273
z_unemp_perc	-0.056345	0.024956	-2.258	0.024043 *
z_ACS_GINI_INDEX	0.121843	0.024667	4.940	0.000000834064601 ***
z_ACS_MEDIAN_HH_INCOME	0.167916	0.052133	3.221	0.001294 **
z_ACS_PCT_WORK_NO_CAR	-0.111213	0.047995	-2.317	0.020574 *
z_soc_assoc_num	-0.062071	0.056858	-1.092	0.275076
z_aeo_perc_w_acc	-0.077810	0.023457	-3.317	0.000922 ***
z_dwv_presence	-0.053564	0.016660	-3.215	0.001320 **
z_ACS_PCT_HH_PUB_ASSIST	-0.153868	0.020980	-7.334	0.0000000000000299 ***
z_AHRF_TXC_SITE_NO_CNTRL	-0.006993	0.015743	-0.444	0.656965

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.7914 on 2532 degrees of freedom
(559 observations deleted due to missingness)
Multiple R-squared: 0.3687, Adjusted R-squared: 0.3565
F-statistic: 30.19 on 49 and 2532 DF, p-value: < 0.00000000000000022

Final Education Model, High School Rate

Confidence Intervals

```
confint(z_hsg_levels_1234678)
```

	2.5 %	97.5 %
(Intercept)	0.043974625	0.114186011
z_ACS_PCT_BLACK	-0.129391485	0.015727714
z_ACS_PCT_HISPAN	-0.034521031	0.095291754
z_SVI_RPL_THEME1_SOCIECO	0.050638224	0.246426469
z_SVI_RPL_THEME2_HH_DISB	-0.129123404	-0.017248281
z_SVI_RPL_THEME3_MINO	-0.278959325	-0.146038601
z_SVI_RPL_THEME4_HH_TRANS	-0.173190885	-0.070390135

z_ACS_PCT_ENGL_NOT_WELL	-0.016213728	0.186055030
z_ACS_PCT_NON_CITIZEN	-0.078039168	0.109533396
z_ACS_MEDIAN_AGE	0.083219885	0.235220889
z_food_afford	-0.201793062	-0.077183399
z_fd_enviro_indx	0.031099160	0.165493718
z_fi_percent	0.072548004	0.268272965
z_ACS_PCT_FOOD_STAMP	0.007480800	0.172887773
z_childelig_lunch_perc	-0.291622946	-0.151666072
z_shp_percent	-0.250751768	-0.111084743
z_shcb_percent	0.059443549	0.205719437
z_ACS_PCT_NO_VEH	-0.006204523	0.216840246
z_ACS_PCT_RENTER_HH_CHILD	0.005046140	0.099904381
z_ACS_PCT_RENT_COST_30PCT	-0.037691579	0.064756390
z_ACS_PCT_MOBILE_HOME	-0.166820208	-0.062918430
z_ACS_PCT_OWNED_HH	-0.100204473	0.033414784
z_ACS_PCT_OWNER_HH_CHILD	0.061382789	0.196007960
z_ACS_MEDIAN_HOME_VALUE	-0.229661924	-0.083488947
z_ACS_PCT_BROADBAND	-0.006508466	0.188075265
z_ACS_PCT_NO_PC	0.084688483	0.277871305
z_ACS_PCT_SMARTPHONE	0.025682083	0.128007647
z_phys_per_cap	-0.062141086	0.043838802
z_mhp_per_cap	-0.031530805	0.065590020
z_dents_per_cap	-0.113500654	-0.005735722
z_uninsur_perc	-0.178660427	0.005063004
z_uc_percent	0.228354532	0.499103137
z_opcp_rate	-0.036449682	0.050504131
z_TeenBirths	-0.062324173	0.140051708
z_pphd_avgnum	-0.022670901	0.210260949
z_pmhd_avgnum	-0.137595998	0.064859766
z_lbwt_percent_lbwt	-0.070448579	0.031727005
z_pi_phy_inact	-0.022155356	0.070016849
z_cip_perc	-0.129327636	0.054994001
z_csph_perc	-0.227816354	-0.101670789
z_ACS_PCT_CHILD_DISAB	-0.042129580	0.033202751
z_unemp_perc	-0.105280290	-0.007409159
z_ACS_GINI_INDEX	0.073473486	0.170211572
z_ACS_MEDIAN_HH_INCOME	0.065687213	0.270144235
z_ACS_PCT_WORK_NO_CAR	-0.205326419	-0.017098996
z_soc_assoc_num	-0.173565125	0.049422352
z_aeo_perc_w_acc	-0.123806142	-0.031813778
z_dwt_presence	-0.086232745	-0.020894932
z_ACS_PCT_HH_PUB_ASSIST	-0.195008603	-0.112728173
z_AHRF_TXC_SITE_NO_CNTRL	-0.037863408	0.023878389

Final Education Model, High School Rate

VIF

```
vif(z_hsg_levels_1234678)
```

z_ACS_PCT_BLACK	z_ACS_PCT_HISPAN	z_SVI_RPL_THEME1_SOCIECO
5.986239	4.790007	10.209992
z_SVI_RPL_THEME2_HH_DISB	z_SVI_RPL_THEME3_MINO	z_SVI_RPL_THEME4_HH_TRANS
3.302636	4.612389	2.713486
z_ACS_PCT_ENGL_NOT_WELL	z_ACS_PCT_NON_CITIZEN	z_ACS_MEDIAN_AGE
10.980536	9.026072	5.874310
z_food_afford	z_fd_enviro_indx	z_fi_percent
3.959762	4.316293	9.960199
z_ACS_PCT_FOOD_STAMP	z_childelig_lunch_perc	z_shp_percent
6.748474	3.970270	4.705439
z_shcb_percent	z_ACS_PCT_NO_VEH	z_ACS_PCT_RENTER_HH_CHILD
5.352030	11.952928	2.230955
z_ACS_PCT_RENT_COST_30PCT	z_ACS_PCT_MOBILE_HOME	z_ACS_PCT_OWNED_HH
2.343245	2.947404	4.357617
z_ACS_PCT_OWNER_HH_CHILD	z_ACS_MEDIAN_HOME_VALUE	z_ACS_PCT_BROADBAND
4.695585	5.535924	10.398107
z_ACS_PCT_NO_PC	z_ACS_PCT_SMARTPHONE	z_phys_per_cap
10.134087	2.812610	2.576760
z_mhp_per_cap	z_dents_per_cap	z_uninsur_perc
2.205391	2.678205	9.032061
z_uc_percent	z_opcp_rate	z_TeenBirths
7.051198	1.743018	11.868977
z_pphd_avgnum	z_pmhd_avgnum	z_lbw_percent_lbw
14.837853	10.959208	2.853103
z_pi_phy_inact	z_cip_perc	z_csph_perc
2.402281	9.385820	4.014187
z_ACS_PCT_CHILD_DISAB	z_unemp_perc	z_ACS_GINI_INDEX
1.382749	2.487257	2.339564
z_ACS_MEDIAN_HH_INCOME	z_ACS_PCT_WORK_NO_CAR	z_soc_assoc_num
11.224234	8.264878	13.412388
z_aeo_perc_w_acc	z_dwv_presence	z_ACS_PCT_HH_PUB_ASSIST
2.078271	1.163771	1.612934
z_AHRF_TXC_SITE_NO_CNTRL		
1.099189		

Final Education Model

DV: Some College

IVs: Demographics, Food/Housing, Technology, Health 1, Health 2, HWCC, Business, Government

```
z_sc_levels_12345678 <- lm(formula = z_sc_percent ~ z_ACS_PCT_BLACK +
  z_ACS_PCT_HISPAN + z_SVI_RPL_THEME1_SOCIECO + z_SVI_RPL_THEME2_HH_DISB +
  z_SVI_RPL_THEME3_MINO + z_SVI_RPL_THEME4_HH_TRANS + z_ACS_PCT_ENGL_NOT_WELL +
  z_ACS_PCT_NON_CITIZEN + z_ACS_MEDIAN_AGE + z_food_afford +
  z_fd_enviro_indx + z_fi_percent + z_ACS_PCT_FOOD_STAMP +
  z_childelig_lunch_perc + z_shp_percent + z_shcb_percent +
  z_ACS_PCT_NO_VEH + z_ACS_PCT_RENTER_HH_CHILD + z_ACS_PCT_RENT_COST_30PCT +
  z_ACS_PCT_MOBILE_HOME + z_ACS_PCT_OWNED_HH + z_ACS_PCT_OWNER_HH_CHILD +
  z_ACS_MEDIAN_HOME_VALUE + z_ACS_PCT_BROADBAND + z_ACS_PCT_NO_PC +
  z_ACS_PCT_SMARTPHONE + z_phys_per_cap + z_mhp_per_cap + z_dents_per_cap +
  z_uninsur_perc + z_uc_percent + z_opcp_rate + z_TeenBirths +
  z_phs_rate + z_ms_perc_ann + z_AMFAR_AMATFAC + z_MP_PERCPEN +
  z_AHRF_RURAL_H_CLINIC + z_pphd_avgnum + z_pmhd_avgnum + z_lbw_percent_lbw +
  z_pi_phy_inact + z_cip_perc + z_csph_perc + z_ACS_PCT_CHILD_DISAB +
  z_unemp_perc + z_ACS_GINI_INDEX + z_ACS_MEDIAN_HH_INCOME +
  z_ACS_PCT_WORK_NO_CAR + z_soc_assoc_num + z_aeo_perc_w_acc +
  z_dwv_presence + z_ACS_PCT_HH_PUB_ASSIST + z_AHRF_TXC_SITE_NO_CNTRL,
  data = Z_and_Final_Variables_10.28.22)
summary(z_sc_levels_12345678)
```

Call:

```
lm(formula = z_sc_percent ~ z_ACS_PCT_BLACK + z_ACS_PCT_HISPAN +
  z_SVI_RPL_THEME1_SOCIECO + z_SVI_RPL_THEME2_HH_DISB + z_SVI_RPL_THEME3_MINO +
  z_SVI_RPL_THEME4_HH_TRANS + z_ACS_PCT_ENGL_NOT_WELL + z_ACS_PCT_NON_CITIZEN +
  z_ACS_MEDIAN_AGE + z_food_afford + z_fd_enviro_indx + z_fi_percent +
  z_ACS_PCT_FOOD_STAMP + z_childelig_lunch_perc + z_shp_percent +
  z_shcb_percent + z_ACS_PCT_NO_VEH + z_ACS_PCT_RENTER_HH_CHILD +
  z_ACS_PCT_RENT_COST_30PCT + z_ACS_PCT_MOBILE_HOME + z_ACS_PCT_OWNED_HH +
  z_ACS_PCT_OWNER_HH_CHILD + z_ACS_MEDIAN_HOME_VALUE + z_ACS_PCT_BROADBAND +
  z_ACS_PCT_NO_PC + z_ACS_PCT_SMARTPHONE + z_phys_per_cap +
  z_mhp_per_cap + z_dents_per_cap + z_uninsur_perc + z_uc_percent +
  z_opcp_rate + z_TeenBirths + z_phs_rate + z_ms_perc_ann +
  z_AMFAR_AMATFAC + z_MP_PERCPEN + z_AHRF_RURAL_H_CLINIC +
```

z_pphd_avgnum + z_pmhd_avgnum + z_lbw_percent_lbw + z_pi_phy_inact +
z_cip_perc + z_csph_perc + z_ACS_PCT_CHILD_DISAB + z_unemp_perc +
z_ACS_GINI_INDEX + z_ACS_MEDIAN_HH_INCOME + z_ACS_PCT_WORK_NO_CAR +
z_soc_assoc_num + z_aeo_perc_w_acc + z_dvw_presence + z_ACS_PCT_HH_PUB_ASSIST +
z_AHRF_TXC_SITE_NO_CNTRL, data = Z_and_Final_Variables_10.28.22)

Residuals:

Min	1Q	Median	3Q	Max
-2.93975	-0.29737	0.00421	0.30410	2.37554

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	-0.028527	0.011193	-2.549	0.010870 *
z_ACS_PCT_BLACK	-0.033258	0.023509	-1.415	0.157272
z_ACS_PCT_HISPAN	0.055009	0.021822	2.521	0.011771 *
z_SVI_RPL_THEME1_SOCIECO	-0.292260	0.031850	-9.176	< 0.0000000000000002 ***
z_SVI_RPL_THEME2_HH_DISB	0.103086	0.018510	5.569	0.00000002829795 ***
z_SVI_RPL_THEME3_MINO	-0.009385	0.021657	-0.433	0.664782
z_SVI_RPL_THEME4_HH_TRANS	-0.113070	0.017132	-6.600	0.00000000004988 ***
z_ACS_PCT_ENGL_NOT_WELL	-0.035731	0.033235	-1.075	0.282437
z_ACS_PCT_NON_CITIZEN	-0.110942	0.030814	-3.600	0.000324 ***
z_ACS_MEDIAN_AGE	-0.098847	0.025109	-3.937	0.00008481136035 ***
z_food_afford	0.016316	0.020713	0.788	0.430935
z_fd_enviro_indx	-0.080712	0.022079	-3.656	0.000262 ***
z_fi_percent	0.117635	0.031167	3.774	0.000164 ***
z_ACS_PCT_FOOD_STAMP	-0.010705	0.027008	-0.396	0.691869
z_childelig_lunch_perc	-0.007110	0.022987	-0.309	0.757094
z_shp_percent	-0.005608	0.025559	-0.219	0.826328
z_shcb_percent	0.057836	0.024763	2.336	0.019591 *
z_ACS_PCT_NO_VEH	0.043240	0.037969	1.139	0.254879
z_ACS_PCT_RENTER_HH_CHILD	-0.109777	0.015446	-7.107	0.00000000000153 ***
z_ACS_PCT_RENT_COST_30PCT	0.021260	0.016709	1.272	0.203374
z_ACS_PCT_MOBILE_HOME	-0.028567	0.017327	-1.649	0.099334 .
z_ACS_PCT_OWNED_HH	-0.095454	0.022345	-4.272	0.00002009288519 ***
z_ACS_PCT_OWNER_HH_CHILD	0.038796	0.022340	1.737	0.082579 .
z_ACS_MEDIAN_HOME_VALUE	0.006357	0.024799	0.256	0.797694
z_ACS_PCT_BROADBAND	-0.032550	0.031788	-1.024	0.305944
z_ACS_PCT_NO_PC	-0.212218	0.031699	-6.695	0.00000000002650 ***
z_ACS_PCT_SMARTPHONE	-0.092291	0.016687	-5.531	0.00000003514662 ***
z_phys_per_cap	0.037069	0.017656	2.100	0.035869 *
z_mhp_per_cap	0.040475	0.015811	2.560	0.010527 *
z_dents_per_cap	0.030155	0.017272	1.746	0.080951 .
z_uninsur_perc	-0.034841	0.029665	-1.174	0.240320

z_uc_percent	-0.160421	0.042452	-3.779	0.000161	***
z_opcp_rate	0.024151	0.014184	1.703	0.088756	.
z_TeenBirths	-0.055651	0.033234	-1.675	0.094151	.
z_phs_rate	0.009163	0.012935	0.708	0.478767	
z_ms_perc_ann	0.043874	0.014851	2.954	0.003163	**
z_AMFAR_AMATFAC	0.006309	0.014217	0.444	0.657270	
z_MP_PERCPEN	-0.026348	0.011759	-2.241	0.025139	*
z_AHRF_RURAL_H_CLINIC	-0.013410	0.010437	-1.285	0.198949	
z_pphd_avgnum	-0.013447	0.038477	-0.349	0.726764	
z_pmhd_avgnum	-0.151292	0.033458	-4.522	0.00000641054209	***
z_lbw_percent_lbw	0.036280	0.016829	2.156	0.031193	*
z_pi_phy_inact	-0.033893	0.015057	-2.251	0.024473	*
z_cip_perc	-0.061174	0.030340	-2.016	0.043879	*
z_csph_perc	-0.073978	0.020736	-3.568	0.000367	***
z_ACS_PCT_CHILD_DISAB	-0.002033	0.012307	-0.165	0.868786	
z_unemp_perc	-0.013811	0.016232	-0.851	0.394951	
z_ACS_GINI_INDEX	0.075269	0.015699	4.795	0.00000172434171	***
z_ACS_MEDIAN_HH_INCOME	0.062392	0.034214	1.824	0.068337	.
z_ACS_PCT_WORK_NO_CAR	-0.084914	0.031275	-2.715	0.006671	**
z_soc_assoc_num	0.103089	0.037027	2.784	0.005407	**
z_aeo_perc_w_acc	0.020289	0.015030	1.350	0.177163	
z_dwv_presence	-0.027017	0.010677	-2.530	0.011450	*
z_ACS_PCT_HH_PUB_ASSIST	-0.032037	0.014391	-2.226	0.026088	*
z_AHRF_TXC_SITE_NO_CNTRL	-0.000113	0.010075	-0.011	0.991049	

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.5055 on 2538 degrees of freedom

(548 observations deleted due to missingness)

Multiple R-squared: 0.7349, Adjusted R-squared: 0.7293

F-statistic: 130.3 on 54 and 2538 DF, p-value: < 0.00000000000000022

Final Education Model, Some College

Confidence Intervals

```
confint(z_sc_levels_12345678)
```

	2.5 %	97.5 %
(Intercept)	-0.050475153	-0.006579393

z_ACS_PCT_BLACK	-0.079355675	0.012839763
z_ACS_PCT_HISPAN	0.012217462	0.097800508
z_SVI_RPL_THEME1_SOCIECO	-0.354714623	-0.229804427
z_SVI_RPL_THEME2_HH_DISB	0.066788992	0.139382726
z_SVI_RPL_THEME3_MINO	-0.051851859	0.033081148
z_SVI_RPL_THEME4_HH_TRANS	-0.146663077	-0.079475837
z_ACS_PCT_ENGL_NOT_WELL	-0.100901206	0.029439934
z_ACS_PCT_NON_CITIZEN	-0.171364675	-0.050518498
z_ACS_MEDIAN_AGE	-0.148083028	-0.049611424
z_food_afford	-0.024300489	0.056933021
z_fd_enviro_indx	-0.124006983	-0.037417539
z_fi_percent	0.056519592	0.178750203
z_ACS_PCT_FOOD_STAMP	-0.063665447	0.042255238
z_childelig_lunch_perc	-0.052184872	0.037963864
z_shp_percent	-0.055726282	0.044509303
z_shcb_percent	0.009278126	0.106394950
z_ACS_PCT_NO_VEH	-0.031212811	0.117693356
z_ACS_PCT_RENTER_HH_CHILD	-0.140064600	-0.079490108
z_ACS_PCT_RENT_COST_30PCT	-0.011505562	0.054024753
z_ACS_PCT_MOBILE_HOME	-0.062543849	0.005409607
z_ACS_PCT_OWned_HH	-0.139269698	-0.051638856
z_ACS_PCT_OWNER_HH_CHILD	-0.005010866	0.082602040
z_ACS_MEDIAN_HOME_VALUE	-0.042269979	0.054984615
z_ACS_PCT_BROADBAND	-0.094883071	0.029782862
z_ACS_PCT_NO_PC	-0.274376878	-0.150059353
z_ACS_PCT_SMARTPHONE	-0.125011759	-0.059569439
z_phys_per_cap	0.002447517	0.071689794
z_mhp_per_cap	0.009471114	0.071479919
z_dents_per_cap	-0.003713644	0.064024684
z_uninsur_perc	-0.093011041	0.023329813
z_uc_percent	-0.243664865	-0.077178210
z_opcp_rate	-0.003663079	0.051964472
z_TeenBirths	-0.120820103	0.009517366
z_phs_rate	-0.016201035	0.034526965
z_ms_perc_ann	0.014752796	0.072995767
z_AMFAR_AMATFAC	-0.021569488	0.034186718
z_MP_PERCPEN	-0.049406298	-0.003288926
z_AHRF_RURAL_H_CLINIC	-0.033876083	0.007055484
z_pphd_avgnum	-0.088897265	0.062003619
z_pmhd_avgnum	-0.216898711	-0.085684632
z_lbw_percent_lbw	0.003279994	0.069279984
z_pi_phy_inact	-0.063418999	-0.004367668
z_cip_perc	-0.120668802	-0.001679402

z_csph_perc	-0.114639926	-0.033316300
z_ACS_PCT_CHILD_DISAB	-0.026165315	0.022098776
z_unemp_perc	-0.045640551	0.018019164
z_ACS_GINI_INDEX	0.044485007	0.106051961
z_ACS_MEDIAN_HH_INCOME	-0.004699109	0.129482170
z_ACS_PCT_WORK_NO_CAR	-0.146242268	-0.023586429
z_soc_assoc_num	0.030482606	0.175695740
z_aeo_perc_w_acc	-0.009182817	0.049760337
z_dwv_presence	-0.047953662	-0.006081395
z_ACS_PCT_HH_PUB_ASSIST	-0.060255507	-0.003818019
z_AHRF_TXC_SITE_NO_CNTRL	-0.019869409	0.019643338

Final Education Model, Some College

VIF

```
vif(z_sc_levels_12345678)
```

z_ACS_PCT_BLACK	z_ACS_PCT_HISPAN	z_SVI_RPL_THEME1_SOCIECO
5.984693	5.116041	10.241988
z_SVI_RPL_THEME2_HH_DISB	z_SVI_RPL_THEME3_MINO	z_SVI_RPL_THEME4_HH_TRANS
3.454238	4.634665	2.830548
z_ACS_PCT_ENGL_NOT_WELL	z_ACS_PCT_NON_CITIZEN	z_ACS_MEDIAN_AGE
11.175520	9.096697	6.015478
z_food_afford	z_fd_enviro_indx	z_fi_percent
4.079734	4.392939	9.816684
z_ACS_PCT_FOOD_STAMP	z_childelig_lunch_perc	z_shp_percent
6.656686	4.074120	5.127465
z_shcb_percent	z_ACS_PCT_NO_VEH	z_ACS_PCT_RENTER_HH_CHILD
5.857526	9.502766	2.237009
z_ACS_PCT_RENT_COST_30PCT	z_ACS_PCT_MOBILE_HOME	z_ACS_PCT_OWNED_HH
2.370509	3.052488	4.534235
z_ACS_PCT_OWNER_HH_CHILD	z_ACS_MEDIAN_HOME_VALUE	z_ACS_PCT_BROADBAND
4.669415	6.015653	10.493166
z_ACS_PCT_NO_PC	z_ACS_PCT_SMARTPHONE	z_phys_per_cap
10.267259	2.845675	2.658822
z_mhp_per_cap	z_dents_per_cap	z_uninsur_perc
2.236844	2.630188	8.954414
z_uc_percent	z_opcp_rate	z_TeenBirths
6.819500	1.764710	12.073355

z_phs_rate	z_ms_perc_ann	z_AMFAR_AMATFAC
1.711294	2.180132	2.170016
z_MP_PERCPEN	z_AHRF_RURAL_H_CLINIC	z_pphd_avgnum
1.406493	1.184002	15.377550
z_pmhd_avgnum	z_lbw_percent_lbw	z_pi_phy_inact
11.437133	2.922845	2.453453
z_cip_perc	z_csph_perc	z_ACS_PCT_CHILD_DISAB
9.655712	4.150368	1.391167
z_unemp_perc	z_ACS_GINI_INDEX	z_ACS_MEDIAN_HH_INCOME
2.415039	2.322590	11.826439
z_ACS_PCT_WORK_NO_CAR	z_soc_assoc_num	z_aeo_perc_w_acc
5.668515	13.949884	2.105564
z_dwv_presence	z_ACS_PCT_HH_PUB_ASSIST	z_AHRF_TXC_SITE_NO_CNTRL
1.175208	1.528072	1.103666

Final Health Model

DV: Low Birth Weight

IVs: Demographics, Health 1, Health 2, Food/Housing, Technology, HWCC, Business, Government

```
z_lbw_levels_12345678 <- lm(formula = z_lbw_percent_lbw ~ z_ACS_PCT_BLACK +
  z_ACS_PCT_HISPAN + z_SVI_RPL_THEME1_SOCIECO + z_SVI_RPL_THEME2_HH_DISB +
  z_SVI_RPL_THEME3_MINO + z_SVI_RPL_THEME4_HH_TRANS + z_ACS_PCT_ENGL_NOT_WELL +
  z_ACS_PCT_NON_CITIZEN + z_ACS_MEDIAN_AGE + z_phys_per_cap +
  z_mhp_per_cap + z_dents_per_cap + z_uninsur_perc + z_uc_percent +
  z_opcp_rate + z_TeenBirths + z_phs_rate + z_ms_perc_ann +
  z_AMFAR_AMATFAC + z_MP_PERCPEN + z_AHRF_RURAL_H_CLINIC +
  z_food_afford + z_fd_enviro_indx + z_fi_percent + z_ACS_PCT_FOOD_STAMP +
  z_childelig_lunch_perc + z_shp_percent + z_shcb_percent +
  z_ACS_PCT_NO_VEH + z_ACS_PCT_RENTER_HH_CHILD + z_ACS_PCT_RENT_COST_30PCT +
  z_ACS_PCT_MOBILE_HOME + z_ACS_PCT_OWNED_HH + z_ACS_PCT_OWNER_HH_CHILD +
  z_ACS_MEDIAN_HOME_VALUE + z_hsg_rate + z_sc_percent + z_ms_average +
  z_ACS_PCT_BROADBAND + z_ACS_PCT_NO_PC + z_ACS_PCT_SMARTPHONE +
  z_pi_phy_inact + z_cip_perc + z_csph_perc + z_ACS_PCT_CHILD_DISAB +
  z_unemp_perc + z_ACS_GINI_INDEX + z_ACS_MEDIAN_HH_INCOME +
  z_ACS_PCT_WORK_NO_CAR + z_soc_assoc_num + z_aeo_perc_w_acc +
  z_dwv_presence + z_ACS_PCT_HH_PUB_ASSIST + z_AHRF_TXC_SITE_NO_CNTRL,
  data = Z_and_Final_Variables_10.28.22)
```

```
summary(z_lbw_levels_12345678)
```

Call:

```
lm(formula = z_lbw_percent_lbw ~ z_ACS_PCT_BLACK + z_ACS_PCT_HISPAN +
    z_SVI_RPL_THEME1_SOCIECO + z_SVI_RPL_THEME2_HH_DISB + z_SVI_RPL_THEME3_MINO +
    z_SVI_RPL_THEME4_HH_TRANS + z_ACS_PCT_ENGL_NOT_WELL + z_ACS_PCT_NON_CITIZEN +
    z_ACS_MEDIAN_AGE + z_phys_per_cap + z_mhp_per_cap + z_dents_per_cap +
    z_uninsur_perc + z_uc_percent + z_opcp_rate + z_TeenBirths +
    z_phs_rate + z_ms_perc_ann + z_AMFAR_AMATFAC + z_MP_PERCPEN +
    z_AHRF_RURAL_H_CLINIC + z_food_afford + z_fd_enviro_indx +
    z_fi_percent + z_ACS_PCT_FOOD_STAMP + z_childelig_lunch_perc +
    z_shp_percent + z_shcb_percent + z_ACS_PCT_NO_VEH + z_ACS_PCT_RENTER_HH_CHILD +
    z_ACS_PCT_RENT_COST_30PCT + z_ACS_PCT_MOBILE_HOME + z_ACS_PCT_OWNED_HH +
    z_ACS_PCT_OWNER_HH_CHILD + z_ACS_MEDIAN_HOME_VALUE + z_hsg_rate +
    z_sc_percent + z_ms_average + z_ACS_PCT_BROADBAND + z_ACS_PCT_NO_PC +
    z_ACS_PCT_SMARTPHONE + z_pi_phy_inact + z_cip_perc + z_csph_perc +
    z_ACS_PCT_CHILD_DISAB + z_unemp_perc + z_ACS_GINI_INDEX +
    z_ACS_MEDIAN_HH_INCOME + z_ACS_PCT_WORK_NO_CAR + z_soc_assoc_num +
    z_aeo_perc_w_acc + z_dwv_presence + z_ACS_PCT_HH_PUB_ASSIST +
    z_AHRF_TXC_SITE_NO_CNTRL, data = Z_and_Final_Variables_10.28.22)
```

Residuals:

Min	1Q	Median	3Q	Max
-1.9177	-0.3266	-0.0060	0.2981	5.6200

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	-0.046268	0.014941	-3.097	0.001983	**
z_ACS_PCT_BLACK	0.506412	0.026423	19.166	< 0.0000000000000002	***
z_ACS_PCT_HISPAN	0.184555	0.029049	6.353	0.000000000259	***
z_SVI_RPL_THEME1_SOCIECO	0.201418	0.038915	5.176	0.000000249104	***
z_SVI_RPL_THEME2_HH_DISB	-0.053734	0.022298	-2.410	0.016048	*
z_SVI_RPL_THEME3_MINO	-0.017310	0.027173	-0.637	0.524187	
z_SVI_RPL_THEME4_HH_TRANS	-0.037459	0.021430	-1.748	0.080621	.
z_ACS_PCT_ENGL_NOT_WELL	-0.093934	0.042508	-2.210	0.027230	*
z_ACS_PCT_NON_CITIZEN	-0.113591	0.038777	-2.929	0.003434	**
z_ACS_MEDIAN_AGE	0.077674	0.031190	2.490	0.012841	*
z_phys_per_cap	-0.016793	0.021952	-0.765	0.444350	
z_mhp_per_cap	-0.009638	0.019247	-0.501	0.616586	
z_dents_per_cap	-0.020040	0.021879	-0.916	0.359803	

z_uninsur_perc	0.016021	0.038350	0.418	0.676169
z_uc_percent	-0.154599	0.054909	-2.816	0.004916 **
z_opcp_rate	0.041194	0.017147	2.402	0.016372 *
z_TeenBirths	-0.118054	0.043480	-2.715	0.006680 **
z_phs_rate	0.017162	0.015742	1.090	0.275771
z_ms_perc_ann	-0.101397	0.018077	-5.609	0.000000023095 ***
z_AMFAR_AMATFAC	0.002217	0.018753	0.118	0.905907
z_MP_PERCPEN	-0.029187	0.014643	-1.993	0.046373 *
z_AHRF_RURAL_H_CLINIC	-0.026865	0.012870	-2.087	0.036969 *
z_food_afford	0.008514	0.025237	0.337	0.735874
z_fd_enviro_indx	0.078141	0.028137	2.777	0.005533 **
z_fi_percent	0.082767	0.039095	2.117	0.034372 *
z_ACS_PCT_FOOD_STAMP	-0.013092	0.034085	-0.384	0.700951
z_childelig_lunch_perc	0.072305	0.027783	2.603	0.009321 **
z_shp_percent	-0.111272	0.033103	-3.361	0.000790 ***
z_shcb_percent	-0.015198	0.031487	-0.483	0.629381
z_ACS_PCT_NO_VEH	-0.020007	0.048169	-0.415	0.677936
z_ACS_PCT_RENTER_HH_CHILD	0.038089	0.019041	2.000	0.045589 *
z_ACS_PCT_RENT_COST_30PCT	0.010710	0.020400	0.525	0.599645
z_ACS_PCT_MOBILE_HOME	0.071093	0.021369	3.327	0.000894 ***
z_ACS_PCT_OWNED_HH	-0.046690	0.027761	-1.682	0.092749 .
z_ACS_PCT_OWNER_HH_CHILD	0.043075	0.027697	1.555	0.120048
z_ACS_MEDIAN_HOME_VALUE	0.180463	0.034100	5.292	0.000000133774 ***
z_hsg_rate	-0.008217	0.016554	-0.496	0.619668
z_sc_percent	0.025215	0.024535	1.028	0.304202
z_ms_average	0.022991	0.028449	0.808	0.419096
z_ACS_PCT_BROADBAND	0.070231	0.038311	1.833	0.066919 .
z_ACS_PCT_NO_PC	0.017289	0.038749	0.446	0.655521
z_ACS_PCT_SMARTPHONE	0.026435	0.020459	1.292	0.196459
z_pi_phy_inact	0.019923	0.018392	1.083	0.278825
z_cip_perc	0.092735	0.037209	2.492	0.012770 *
z_csph_perc	0.055159	0.026153	2.109	0.035059 *
z_ACS_PCT_CHILD_DISAB	0.023456	0.014828	1.582	0.113822
z_unemp_perc	-0.036290	0.021762	-1.668	0.095548 .
z_ACS_GINI_INDEX	0.080269	0.019480	4.121	0.000039281756 ***
z_ACS_MEDIAN_HH_INCOME	-0.111918	0.046145	-2.425	0.015380 *
z_ACS_PCT_WORK_NO_CAR	0.023324	0.040409	0.577	0.563876
z_soc_assoc_num	0.129262	0.048824	2.648	0.008171 **
z_aeo_perc_w_acc	0.076667	0.018333	4.182	0.000030111885 ***
z_dwv_presence	-0.004965	0.013272	-0.374	0.708375
z_ACS_PCT_HH_PUB_ASSIST	-0.024376	0.017509	-1.392	0.164011
z_AHRF_TXC_SITE_NO_CNTRL	0.013822	0.013753	1.005	0.315011

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.5578 on 2045 degrees of freedom

(1041 observations deleted due to missingness)

Multiple R-squared: 0.7042, Adjusted R-squared: 0.6964

F-statistic: 90.14 on 54 and 2045 DF, p-value: < 0.00000000000000022

Final Health Model, Low Birth Weight

Confidence Intervals

```
confint(z_lbw_levels_12345678)
```

	2.5 %	97.5 %
(Intercept)	-0.0755686670	-0.0169679537
z_ACS_PCT_BLACK	0.4545932143	0.5582307601
z_ACS_PCT_HISPAN	0.1275873611	0.2415233492
z_SVI_RPL_THEME1_SOCIECO	0.1251006019	0.2777351055
z_SVI_RPL_THEME2_HH_DISB	-0.0974632173	-0.0100050800
z_SVI_RPL_THEME3_MINO	-0.0705999551	0.0359804230
z_SVI_RPL_THEME4_HH_TRANS	-0.0794852591	0.0045681040
z_ACS_PCT_ENGL_NOT_WELL	-0.1772978318	-0.0105706420
z_ACS_PCT_NON_CITIZEN	-0.1896373160	-0.0375449257
z_ACS_MEDIAN_AGE	0.0165066193	0.1388422207
z_phys_per_cap	-0.0598431603	0.0262565009
z_mhp_per_cap	-0.0473828934	0.0281066939
z_dents_per_cap	-0.0629481780	0.0228677036
z_uninsur_perc	-0.0591884802	0.0912306310
z_uc_percent	-0.2622812854	-0.0469163201
z_opcp_rate	0.0075679647	0.0748208890
z_TeenBirths	-0.2033240548	-0.0327846230
z_phs_rate	-0.0137109141	0.0480340069
z_ms_perc_ann	-0.1368479299	-0.0659452580
z_AMFAR_AMATFAC	-0.0345607914	0.0389947377
z_MP_PERCPEN	-0.0579047488	-0.0004696035
z_AHRF_RURAL_H_CLINIC	-0.0521035799	-0.0016259995
z_food_afford	-0.0409787405	0.0580070891
z_fd_enviro_indx	0.0229613074	0.1333213010
z_fi_percent	0.0060976050	0.1594362894
z_ACS_PCT_FOOD_STAMP	-0.0799368872	0.0537533626

z_childelig_lunch_perc	0.0178197241	0.1267901311
z_shp_percent	-0.1761907220	-0.0463535152
z_shcb_percent	-0.0769472755	0.0465517735
z_ACS_PCT_NO_VEH	-0.1144721684	0.0744589425
z_ACS_PCT_RENTER_HH_CHILD	0.0007477574	0.0754299537
z_ACS_PCT_RENT_COST_30PCT	-0.0292975340	0.0507175386
z_ACS_PCT_MOBILE_HOME	0.0291859010	0.1129999676
z_ACS_PCT_OWNED_HH	-0.1011330306	0.0077527220
z_ACS_PCT_OWNER_HH_CHILD	-0.0112423655	0.0973925678
z_ACS_MEDIAN_HOME_VALUE	0.1135891102	0.2473359783
z_hsg_rate	-0.0406821167	0.0242473042
z_sc_percent	-0.0229005777	0.0733299761
z_ms_average	-0.0328012403	0.0787841509
z_ACS_PCT_BROADBAND	-0.0049011279	0.1453623405
z_ACS_PCT_NO_PC	-0.0587025408	0.0932796853
z_ACS_PCT_SMARTPHONE	-0.0136867573	0.0665571392
z_pi_phy_inact	-0.0161454743	0.0559907250
z_cip_perc	0.0197643297	0.1657060444
z_csph_perc	0.0038694670	0.1064489147
z_ACS_PCT_CHILD_DISAB	-0.0056226740	0.0525350712
z_unemp_perc	-0.0789677777	0.0063876597
z_ACS_GINI_INDEX	0.0420672251	0.1184709209
z_ACS_MEDIAN_HH_INCOME	-0.2024136442	-0.0214214215
z_ACS_PCT_WORK_NO_CAR	-0.0559240850	0.1025718136
z_soc_assoc_num	0.0335120954	0.2250121702
z_aeo_perc_w_acc	0.0407147734	0.1126195042
z_dwv_presence	-0.0309933588	0.0210633606
z_ACS_PCT_HH_PUB_ASSIST	-0.0587120847	0.0099609252
z_AHRF_TXC_SITE_NO_CNTRL	-0.0131497099	0.0407941128

Final Health Model, Low Birth Weight

VIF

```
vif(z_lbwt_levels_12345678)
```

z_ACS_PCT_BLACK	z_ACS_PCT_HISPAN	z_SVI_RPL_THEME1_SOCIECO
5.506150	5.660755	10.243688
z_SVI_RPL_THEME2_HH_DISB	z_SVI_RPL_THEME3_MINO	z_SVI_RPL_THEME4_HH_TRANS
3.245933	4.679088	2.932958

z_ACS_PCT_ENGL_NOT_WELL	z_ACS_PCT_NON_CITIZEN	z_ACS_MEDIAN_AGE
11.368366	9.088522	5.860501
z_phys_per_cap	z_mhp_per_cap	z_dents_per_cap
2.673476	2.042504	2.554682
z_uninsur_perc	z_uc_percent	z_opcp_rate
10.375193	7.482365	1.770422
z_TeenBirths	z_phs_rate	z_ms_perc_ann
14.158753	1.625196	2.099618
z_AMFAR_AMATFAC	z_MP_PERCPEN	z_AHRF_RURAL_H_CLINIC
1.844610	1.364743	1.195117
z_food_afford	z_fd_enviro_indx	z_fi_percent
4.115949	4.500221	10.381150
z_ACS_PCT_FOOD_STAMP	z_childelig_lunch_perc	z_shp_percent
7.006982	3.996132	4.640375
z_shcb_percent	z_ACS_PCT_NO_VEH	z_ACS_PCT_RENTER_HH_CHILD
5.450653	6.830070	2.243321
z_ACS_PCT_RENT_COST_30PCT	z_ACS_PCT_MOBILE_HOME	z_ACS_PCT_OWNED_HH
2.223516	3.227679	4.364230
z_ACS_PCT_OWNER_HH_CHILD	z_ACS_MEDIAN_HOME_VALUE	z_hsg_rate
4.692068	5.363346	1.567727
z_sc_percent	z_ms_average	z_ACS_PCT_BROADBAND
3.776960	1.827143	10.034577
z_ACS_PCT_NO_PC	z_ACS_PCT_SMARTPHONE	z_pi_phy_inact
10.211290	2.867022	2.322183
z_cip_perc	z_csph_perc	z_ACS_PCT_CHILD_DISAB
9.791130	4.444144	1.357535
z_unemp_perc	z_ACS_GINI_INDEX	z_ACS_MEDIAN_HH_INCOME
2.539355	2.463491	12.814509
z_ACS_PCT_WORK_NO_CAR	z_soc_assoc_num	z_aeo_perc_w_acc
3.171389	15.573902	2.066312
z_dwv_presence	z_ACS_PCT_HH_PUB_ASSIST	z_AHRF_TXC_SITE_NO_CNTRL
1.159147	1.469954	1.067253

Final Health Model

DV: Physically Unhealthy Days

IVs: Demographics, Health 1, Health 2, Food/Housing, Technology, HWCC, Business, Government

Note: z_pfh_percent was previously excluded from the final physically unhealthy days model

```
z_pphd_levels_12345678 <- lm(formula = z_pphd_avgnum ~ z_ACS_PCT_BLACK +
  z_ACS_PCT_HISPAN + z_SVI_RPL_THEME1_SOCIECO + z_SVI_RPL_THEME2_HH_DISB +
  z_SVI_RPL_THEME3_MINO + z_SVI_RPL_THEME4_HH_TRANS + z_ACS_PCT_ENGL_NOT_WELL +
  z_ACS_PCT_NON_CITIZEN + z_ACS_MEDIAN_AGE + z_phys_per_cap +
  z_mhp_per_cap + z_dents_per_cap + z_uninsur_perc + z_uc_percent +
  z_opcp_rate + z_TeenBirths + z_phs_rate + z_ms_perc_ann +
  z_AMFAR_AMATFAC + z_MP_PERCPEN + z_AHRF_RURAL_H_CLINIC +
  z_food_afford + z_fd_enviro_indx + z_fi_percent + z_ACS_PCT_FOOD_STAMP +
  z_childelig_lunch_perc + z_shp_percent + z_shcb_percent +
  z_ACS_PCT_NO_VEH + z_ACS_PCT_RENTER_HH_CHILD + z_ACS_PCT_RENT_COST_30PCT +
  z_ACS_PCT_MOBILE_HOME + z_ACS_PCT_OWNED_HH + z_ACS_PCT_OWNER_HH_CHILD +
  z_ACS_MEDIAN_HOME_VALUE + z_hsg_rate + z_sc_percent + z_ms_average +
  z_ACS_PCT_BROADBAND + z_ACS_PCT_NO_PC + z_ACS_PCT_SMARTPHONE +
  z_pi_phy_inact + z_cip_perc + z_csph_perc + z_ACS_PCT_CHILD_DISAB +
  z_unemp_perc + z_ACS_GINI_INDEX + z_ACS_MEDIAN_HH_INCOME +
  z_ACS_PCT_WORK_NO_CAR + z_soc_assoc_num + z_aeo_perc_w_acc +
  z_dwv_presence + z_ACS_PCT_HH_PUB_ASSIST + z_AHRF_TXC_SITE_NO_CNTRL,
  data = Z_and_Final_Variables_10.28.22)
summary(z_pphd_levels_12345678)
```

Call:

```
lm(formula = z_pphd_avgnum ~ z_ACS_PCT_BLACK + z_ACS_PCT_HISPAN +
  z_SVI_RPL_THEME1_SOCIECO + z_SVI_RPL_THEME2_HH_DISB + z_SVI_RPL_THEME3_MINO +
  z_SVI_RPL_THEME4_HH_TRANS + z_ACS_PCT_ENGL_NOT_WELL + z_ACS_PCT_NON_CITIZEN +
  z_ACS_MEDIAN_AGE + z_phys_per_cap + z_mhp_per_cap + z_dents_per_cap +
  z_uninsur_perc + z_uc_percent + z_opcp_rate + z_TeenBirths +
  z_phs_rate + z_ms_perc_ann + z_AMFAR_AMATFAC + z_MP_PERCPEN +
  z_AHRF_RURAL_H_CLINIC + z_food_afford + z_fd_enviro_indx +
  z_fi_percent + z_ACS_PCT_FOOD_STAMP + z_childelig_lunch_perc +
  z_shp_percent + z_shcb_percent + z_ACS_PCT_NO_VEH + z_ACS_PCT_RENTER_HH_CHILD +
```

```

z_ACS_PCT_RENT_COST_30PCT + z_ACS_PCT_MOBILE_HOME + z_ACS_PCT_OWNED_HH +
z_ACS_PCT_OWNER_HH_CHILD + z_ACS_MEDIAN_HOME_VALUE + z_hsg_rate +
z_sc_percent + z_ms_average + z_ACS_PCT_BROADBAND + z_ACS_PCT_NO_PC +
z_ACS_PCT_SMARTPHONE + z_pi_phy_inact + z_cip_perc + z_csph_perc +
z_ACS_PCT_CHILD_DISAB + z_unemp_perc + z_ACS_GINI_INDEX +
z_ACS_MEDIAN_HH_INCOME + z_ACS_PCT_WORK_NO_CAR + z_soc_assoc_num +
z_aeo_perc_w_acc + z_dwv_presence + z_ACS_PCT_HH_PUB_ASSIST +
z_AHRF_TXC_SITE_NO_CNTRL, data = Z_and_Final_Variables_10.28.22)

```

Residuals:

Min	1Q	Median	3Q	Max
-1.92436	-0.32493	0.00141	0.31293	1.56282

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	-0.032906	0.012068	-2.727	0.006452	**
z_ACS_PCT_BLACK	-0.261404	0.021423	-12.202	< 0.00000000000000002	***
z_ACS_PCT_HISPAN	0.085978	0.023485	3.661	0.000258	***
z_SVI_RPL_THEME1_SOCIECO	0.362650	0.031585	11.482	< 0.00000000000000002	***
z_SVI_RPL_THEME2_HH_DISB	-0.059199	0.018086	-3.273	0.001081	**
z_SVI_RPL_THEME3_MINO	-0.061646	0.022063	-2.794	0.005252	**
z_SVI_RPL_THEME4_HH_TRANS	-0.059185	0.017378	-3.406	0.000673	***
z_ACS_PCT_ENGL_NOT_WELL	-0.051581	0.034427	-1.498	0.134211	
z_ACS_PCT_NON_CITIZEN	0.015083	0.031424	0.480	0.631279	
z_ACS_MEDIAN_AGE	-0.041895	0.025153	-1.666	0.095939	.
z_phys_per_cap	-0.025293	0.017794	-1.421	0.155360	
z_mhp_per_cap	0.022352	0.015661	1.427	0.153673	
z_dents_per_cap	0.013248	0.017657	0.750	0.453165	
z_uninsur_perc	-0.017569	0.031128	-0.564	0.572525	
z_uc_percent	-0.351319	0.044069	-7.972	0.000000000000000257	***
z_opcp_rate	0.009349	0.013750	0.680	0.496637	
z_TeenBirths	-0.145249	0.035405	-4.102	0.00004246986266028	***
z_phs_rate	0.046190	0.012716	3.632	0.000288	***
z_ms_perc_ann	-0.091741	0.014641	-6.266	0.00000000044930436	***
z_AMFAR_AMATFAC	-0.018255	0.015278	-1.195	0.232283	
z_MP_PERCPEN	-0.035553	0.011920	-2.983	0.002891	**
z_AHRF_RURAL_H_CLINIC	0.021734	0.010478	2.074	0.038174	*
z_food_afford	0.047283	0.020512	2.305	0.021256	*
z_fd_enviro_indx	-0.043215	0.022471	-1.923	0.054594	.
z_fi_percent	0.370666	0.031570	11.741	< 0.00000000000000002	***
z_ACS_PCT_FOOD_STAMP	0.045344	0.027665	1.639	0.101358	
z_childelig_lunch_perc	-0.002839	0.022594	-0.126	0.900037	
z_shp_percent	0.011277	0.026844	0.420	0.674469	

z_shcb_percent	-0.059933	0.025503	-2.350		0.018867 *
z_ACS_PCT_NO_VEH	-0.068253	0.039162	-1.743		0.081509 .
z_ACS_PCT_RENTER_HH_CHILD	0.026246	0.015422	1.702		0.088937 .
z_ACS_PCT_RENT_COST_30PCT	0.037502	0.016512	2.271		0.023235 *
z_ACS_PCT_MOBILE_HOME	-0.015780	0.017276	-0.913		0.361134
z_ACS_PCT_OWNED_HH	0.053596	0.022464	2.386		0.017130 *
z_ACS_PCT_OWNER_HH_CHILD	0.062578	0.022396	2.794		0.005251 **
z_ACS_MEDIAN_HOME_VALUE	0.147435	0.027667	5.329	0.00000010962847601	***
z_hsg_rate	0.025340	0.013455	1.883		0.059800 .
z_sc_percent	-0.132418	0.019933	-6.643	0.00000000003917544	***
z_ms_average	0.051909	0.022975	2.259		0.023966 *
z_ACS_PCT_BROADBAND	0.027084	0.031097	0.871		0.383888
z_ACS_PCT_NO_PC	0.012441	0.031516	0.395		0.693073
z_ACS_PCT_SMARTPHONE	0.033486	0.016637	2.013		0.044267 *
z_pi_phy_inact	0.065722	0.014930	4.402	0.00001127366583839	***
z_cip_perc	0.042986	0.030094	1.428		0.153326
z_csph_perc	0.129145	0.020883	6.184	0.00000000075137113	***
z_ACS_PCT_CHILD_DISAB	0.040239	0.012031	3.345		0.000839 ***
z_unemp_perc	-0.012817	0.017705	-0.724		0.469196
z_ACS_GINI_INDEX	0.039001	0.015763	2.474		0.013432 *
z_ACS_MEDIAN_HH_INCOME	-0.139643	0.037459	-3.728		0.000198 ***
z_ACS_PCT_WORK_NO_CAR	0.123845	0.032852	3.770		0.000168 ***
z_soc_assoc_num	0.173902	0.039745	4.375	0.00001272378545355	***
z_aeo_perc_w_acc	-0.011489	0.014844	-0.774		0.439017
z_dwv_presence	-0.002890	0.010786	-0.268		0.788737
z_ACS_PCT_HH_PUB_ASSIST	-0.083117	0.014222	-5.844	0.00000000590720554	***
z_AHRF_TXC_SITE_NO_CNTRL	0.005355	0.011206	0.478		0.632797

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.4545 on 2055 degrees of freedom

(1031 observations deleted due to missingness)

Multiple R-squared: 0.7981, Adjusted R-squared: 0.7928

F-statistic: 150.4 on 54 and 2055 DF, p-value: < 0.00000000000000022

Final Health Model, Physically Unhealthy Days

Confidence Intervals

```
confint(z_pphd_levels_12345678)
```

	2.5 %	97.5 %
(Intercept)	-0.0565741250	-0.0092387949
z_ACS_PCT_BLACK	-0.3034166724	-0.2193922781
z_ACS_PCT_HISPAN	0.0399214149	0.1320352339
z_SVI_RPL_THEME1_SOCIECO	0.3007068763	0.4245921951
z_SVI_RPL_THEME2_HH_DISB	-0.0946675651	-0.0237299741
z_SVI_RPL_THEME3_MINO	-0.1049128805	-0.0183784691
z_SVI_RPL_THEME4_HH_TRANS	-0.0932662581	-0.0251040273
z_ACS_PCT_ENGL_NOT_WELL	-0.1190965180	0.0159336761
z_ACS_PCT_NON_CITIZEN	-0.0465424848	0.0767093190
z_ACS_MEDIAN_AGE	-0.0912229664	0.0074322941
z_phys_per_cap	-0.0601895258	0.0096044775
z_mhp_per_cap	-0.0083617654	0.0530654493
z_dents_per_cap	-0.0213794912	0.0478752110
z_uninsur_perc	-0.0786142271	0.0434756941
z_uc_percent	-0.4377437209	-0.2648940273
z_opcp_rate	-0.0176166445	0.0363142268
z_TeenBirths	-0.2146828431	-0.0758151824
z_phs_rate	0.0212516641	0.0711286650
z_ms_perc_ann	-0.1204531593	-0.0630294180
z_AMFAR_AMATFAC	-0.0482181963	0.0117073509
z_MP_PERCPEN	-0.0589287130	-0.0121767812
z_AHRF_RURAL_H_CLINIC	0.0011860443	0.0422821307
z_food_afford	0.0070572665	0.0875089203
z_fd_enviro_indx	-0.0872825499	0.0008522803
z_fi_percent	0.3087522373	0.4325789614
z_ACS_PCT_FOOD_STAMP	-0.0089103798	0.0995990912
z_childelig_lunch_perc	-0.0471489663	0.0414718689
z_shp_percent	-0.0413681258	0.0639218300
z_shcb_percent	-0.1099477626	-0.0099180271
z_ACS_PCT_NO_VEH	-0.1450533150	0.0085475625
z_ACS_PCT_RENTER_HH_CHILD	-0.0039986803	0.0564907591
z_ACS_PCT_RENT_COST_30PCT	0.0051206075	0.0698828737
z_ACS_PCT_MOBILE_HOME	-0.0496599292	0.0181000624
z_ACS_PCT_OWNED_HH	0.0095413200	0.0976509462

z_ACS_PCT_OWNER_HH_CHILD	0.0186574599	0.1064987425
z_ACS_MEDIAN_HOME_VALUE	0.0931768941	0.2016936182
z_hsg_rate	-0.0010469814	0.0517271788
z_sc_percent	-0.1715090312	-0.0933276639
z_ms_average	0.0068518589	0.0969663556
z_ACS_PCT_BROADBAND	-0.0339011601	0.0880683469
z_ACS_PCT_NO_PC	-0.0493659801	0.0742475469
z_ACS_PCT_SMARTPHONE	0.0008596413	0.0661133074
z_pi_phy_inact	0.0364428687	0.0950017634
z_cip_perc	-0.0160311754	0.1020031187
z_csph_perc	0.0881904677	0.1701002529
z_ACS_PCT_CHILD_DISAB	0.0166442622	0.0638332963
z_unemp_perc	-0.0475383244	0.0219044317
z_ACS_GINI_INDEX	0.0080881110	0.0699130311
z_ACS_MEDIAN_HH_INCOME	-0.2131032786	-0.0661819985
z_ACS_PCT_WORK_NO_CAR	0.0594180030	0.1882720781
z_soc_assoc_num	0.0959579476	0.2518464471
z_aeo_perc_w_acc	-0.0406007804	0.0176217923
z_dwv_presence	-0.0240426245	0.0182617419
z_ACS_PCT_HH_PUB_ASSIST	-0.1110090892	-0.0552256423
z_AHRF_TXC_SITE_NO_CNTRL	-0.0166213495	0.0273312677

Final Health Model, Physically Unhealthy Days

VIF

```
vif(z_pphd_levels_12345678)
```

z_ACS_PCT_BLACK	z_ACS_PCT_HISPAN	z_SVI_RPL_THEME1_SOCIECO
5.461083	5.642329	10.212896
z_SVI_RPL_THEME2_HH_DISB	z_SVI_RPL_THEME3_MINO	z_SVI_RPL_THEME4_HH_TRANS
3.230278	4.681909	2.925382
z_ACS_PCT_ENGL_NOT_WELL	z_ACS_PCT_NON_CITIZEN	z_ACS_MEDIAN_AGE
11.265256	9.003040	5.812589
z_phys_per_cap	z_mhp_per_cap	z_dents_per_cap
2.658364	2.039378	2.540115
z_uninsur_perc	z_uc_percent	z_opcp_rate
10.517365	7.596624	1.753503
z_TeenBirths	z_phs_rate	z_ms_perc_ann
14.145085	1.610513	2.092128

z_AMFAR_AMATFAC	z_MP_PERCPEN	z_AHRF_RURAL_H_CLINIC
1.844290	1.365307	1.194210
z_food_afford	z_fd_enviro_indx	z_fi_percent
4.099892	4.385551	10.236496
z_ACS_PCT_FOOD_STAMP	z_childelig_lunch_perc	z_shp_percent
6.987802	4.006203	4.634204
z_shcb_percent	z_ACS_PCT_NO_VEH	z_ACS_PCT_RENTER_HH_CHILD
5.446176	6.835045	2.239925
z_ACS_PCT_RENT_COST_30PCT	z_ACS_PCT_MOBILE_HOME	z_ACS_PCT_OWNED_HH
2.236878	3.204573	4.321109
z_ACS_PCT_OWNER_HH_CHILD	z_ACS_MEDIAN_HOME_VALUE	z_hsg_rate
4.660747	5.335610	1.572655
z_sc_percent	z_ms_average	z_ACS_PCT_BROADBAND
3.770083	1.808081	10.047412
z_ACS_PCT_NO_PC	z_ACS_PCT_SMARTPHONE	z_pi_phy_inact
10.243006	2.862280	2.309632
z_cip_perc	z_csph_perc	z_ACS_PCT_CHILD_DISAB
9.677287	4.309989	1.370185
z_unemp_perc	z_ACS_GINI_INDEX	z_ACS_MEDIAN_HH_INCOME
2.539103	2.454818	12.753686
z_ACS_PCT_WORK_NO_CAR	z_soc_assoc_num	z_aeo_perc_w_acc
3.169270	15.554714	2.062653
z_dwv_presence	z_ACS_PCT_HH_PUB_ASSIST	z_AHRF_TXC_SITE_NO_CNTRL
1.158060	1.468724	1.067219

Final Health Model

DV: Mentally Unhealthy Days

IVs: Demographics, Health 1, Health 2, Food/Housing, Technology, HWCC, Business, Government

Note: z_pfh_percent was previously excluded from the final mentally unhealthy days model

```
z_pmhd_levels_12345678 <- lm(formula = z_pmhd_avgnum ~ z_ACS_PCT_BLACK +
  z_ACS_PCT_HISPAN + z_SVI_RPL_THEME1_SOCIECO + z_SVI_RPL_THEME2_HH_DISB +
  z_SVI_RPL_THEME3_MINO + z_SVI_RPL_THEME4_HH_TRANS + z_ACS_PCT_ENGL_NOT_WELL +
  z_ACS_PCT_NON_CITIZEN + z_ACS_MEDIAN_AGE + z_phys_per_cap +
  z_mhp_per_cap + z_dents_per_cap + z_uninsur_perc + z_uc_percent +
```

```

z_opcp_rate + z_TeenBirths + z_phs_rate + z_ms_perc_ann +
z_AMFAR_AMATFAC + z_MP_PERCPEN + z_AHRF_RURAL_H_CLINIC +
z_food_afford + z_fd_enviro_indx + z_fi_percent + z_ACS_PCT_FOOD_STAMP +
z_childelig_lunch_perc + z_shp_percent + z_shcb_percent +
z_ACS_PCT_NO_VEH + z_ACS_PCT_RENTER_HH_CHILD + z_ACS_PCT_RENT_COST_30PCT +
z_ACS_PCT_MOBILE_HOME + z_ACS_PCT_OWNED_HH + z_ACS_PCT_OWNER_HH_CHILD +
z_ACS_MEDIAN_HOME_VALUE + z_hsg_rate + z_sc_percent + z_ms_average +
z_ACS_PCT_BROADBAND + z_ACS_PCT_NO_PC + z_ACS_PCT_SMARTPHONE +
z_pi_phy_inact + z_cip_perc + z_csph_perc + z_ACS_PCT_CHILD_DISAB +
z_unemp_perc + z_ACS_GINI_INDEX + z_ACS_MEDIAN_HH_INCOME +
z_ACS_PCT_WORK_NO_CAR + z_soc_assoc_num + z_aeo_perc_w_acc +
z_dwv_presence + z_ACS_PCT_HH_PUB_ASSIST + z_AHRF_TXC_SITE_NO_CNTRL,
data = Z_and_Final_Variables_10.28.22)
summary(z_pmhd_levels_12345678)

```

Call:

```

lm(formula = z_pmhd_avgnum ~ z_ACS_PCT_BLACK + z_ACS_PCT_HISPAN +
  z_SVI_RPL_THEME1_SOCIECO + z_SVI_RPL_THEME2_HH_DISB + z_SVI_RPL_THEME3_MINO +
  z_SVI_RPL_THEME4_HH_TRANS + z_ACS_PCT_ENGL_NOT_WELL + z_ACS_PCT_NON_CITIZEN +
  z_ACS_MEDIAN_AGE + z_phys_per_cap + z_mhp_per_cap + z_dents_per_cap +
  z_uninsur_perc + z_uc_percent + z_opcp_rate + z_TeenBirths +
  z_phs_rate + z_ms_perc_ann + z_AMFAR_AMATFAC + z_MP_PERCPEN +
  z_AHRF_RURAL_H_CLINIC + z_food_afford + z_fd_enviro_indx +
  z_fi_percent + z_ACS_PCT_FOOD_STAMP + z_childelig_lunch_perc +
  z_shp_percent + z_shcb_percent + z_ACS_PCT_NO_VEH + z_ACS_PCT_RENTER_HH_CHILD +
  z_ACS_PCT_RENT_COST_30PCT + z_ACS_PCT_MOBILE_HOME + z_ACS_PCT_OWNED_HH +
  z_ACS_PCT_OWNER_HH_CHILD + z_ACS_MEDIAN_HOME_VALUE + z_hsg_rate +
  z_sc_percent + z_ms_average + z_ACS_PCT_BROADBAND + z_ACS_PCT_NO_PC +
  z_ACS_PCT_SMARTPHONE + z_pi_phy_inact + z_cip_perc + z_csph_perc +
  z_ACS_PCT_CHILD_DISAB + z_unemp_perc + z_ACS_GINI_INDEX +
  z_ACS_MEDIAN_HH_INCOME + z_ACS_PCT_WORK_NO_CAR + z_soc_assoc_num +
  z_aeo_perc_w_acc + z_dwv_presence + z_ACS_PCT_HH_PUB_ASSIST +
  z_AHRF_TXC_SITE_NO_CNTRL, data = Z_and_Final_Variables_10.28.22)

```

Residuals:

	Min	1Q	Median	3Q	Max
	-1.83456	-0.34480	0.00553	0.35487	1.63633

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)
--	----------	------------	---------	----------

(Intercept)	-0.0505477	0.0137896	-3.666	0.000253
z_ACS_PCT_BLACK	-0.2586252	0.0244777	-10.566	< 0.0000000000000002
z_ACS_PCT_HISPAN	-0.0155932	0.0268343	-0.581	0.561241
z_SVI_RPL_THEME1_SOCIECO	0.4201191	0.0360899	11.641	< 0.0000000000000002
z_SVI_RPL_THEME2_HH_DISB	-0.0560373	0.0206653	-2.712	0.006750
z_SVI_RPL_THEME3_MINO	-0.0286897	0.0252089	-1.138	0.255221
z_SVI_RPL_THEME4_HH_TRANS	-0.0868536	0.0198568	-4.374	0.0000128094357975
z_ACS_PCT_ENGL_NOT_WELL	-0.0648031	0.0393366	-1.647	0.099628
z_ACS_PCT_NON_CITIZEN	-0.0184892	0.0359053	-0.515	0.606648
z_ACS_MEDIAN_AGE	-0.0417878	0.0287399	-1.454	0.146100
z_phys_per_cap	0.0062078	0.0203322	0.305	0.760155
z_mhp_per_cap	0.0421064	0.0178948	2.353	0.018716
z_dents_per_cap	-0.0175188	0.0201751	-0.868	0.385311
z_uninsur_perc	-0.0506521	0.0355669	-1.424	0.154558
z_uc_percent	-0.3197171	0.0503540	-6.349	0.0000000002653056
z_opcp_rate	-0.0006519	0.0157110	-0.041	0.966908
z_TeenBirths	-0.2497514	0.0404545	-6.174	0.0000000008018990
z_phs_rate	0.0212514	0.0145300	1.463	0.143734
z_ms_perc_ann	-0.1299010	0.0167285	-7.765	0.0000000000000128
z_AMFAR_AMATFAC	0.0014175	0.0174573	0.081	0.935294
z_MP_PERCPEN	-0.0644555	0.0136196	-4.733	0.0000023682474222
z_AHRF_RURAL_H_CLINIC	0.0121486	0.0119720	1.015	0.310342
z_food_afford	0.0229256	0.0234369	0.978	0.328099
z_fd_enviro_indx	-0.0017841	0.0256752	-0.069	0.944610
z_fi_percent	0.3445312	0.0360728	9.551	< 0.0000000000000002
z_ACS_PCT_FOOD_STAMP	0.0035736	0.0316106	0.113	0.910002
z_childelig_lunch_perc	0.0679383	0.0258167	2.632	0.008563
z_shp_percent	0.0076384	0.0306727	0.249	0.803363
z_shcb_percent	-0.0344577	0.0291403	-1.182	0.237155
z_ACS_PCT_NO_VEH	-0.0565121	0.0447465	-1.263	0.206754
z_ACS_PCT_RENTER_HH_CHILD	0.0473203	0.0176216	2.685	0.007303
z_ACS_PCT_RENT_COST_30PCT	0.1048092	0.0188663	5.555	0.0000000313025793
z_ACS_PCT_MOBILE_HOME	-0.0214318	0.0197396	-1.086	0.277727
z_ACS_PCT_OWNED_HH	0.0946818	0.0256678	3.689	0.000231
z_ACS_PCT_OWNER_HH_CHILD	0.0335482	0.0255896	1.311	0.190002
z_ACS_MEDIAN_HOME_VALUE	0.0974919	0.0316128	3.084	0.002070
z_hsg_rate	0.0349542	0.0153740	2.274	0.023093
z_sc_percent	-0.1756402	0.0227755	-7.712	0.0000000000000192
z_ms_average	0.0652470	0.0262519	2.485	0.013019
z_ACS_PCT_BROADBAND	0.0547872	0.0355318	1.542	0.123246
z_ACS_PCT_NO_PC	-0.0208550	0.0360107	-0.579	0.562563
z_ACS_PCT_SMARTPHONE	0.0517102	0.0190095	2.720	0.006579
z_pi_phy_inact	0.0839113	0.0170592	4.919	0.0000009397736418

z_cip_perc	-0.0683683	0.0343854	-1.988	0.046911
z_csph_perc	0.1497082	0.0238617	6.274	0.0000000004278835
z_ACS_PCT_CHILD_DISAB	0.0666597	0.0137470	4.849	0.0000013336191881
z_unemp_perc	-0.0065894	0.0202298	-0.326	0.744663
z_ACS_GINI_INDEX	0.0610167	0.0180106	3.388	0.000718
z_ACS_MEDIAN_HH_INCOME	-0.1037562	0.0428006	-2.424	0.015429
z_ACS_PCT_WORK_NO_CAR	0.1685531	0.0375374	4.490	0.0000075072787003
z_soc_assoc_num	0.3119074	0.0454129	6.868	0.0000000000085815
z_aeo_perc_w_acc	0.0234789	0.0169612	1.384	0.166426
z_dwv_presence	0.0404014	0.0123240	3.278	0.001062
z_ACS_PCT_HH_PUB_ASSIST	-0.1070308	0.0162507	-6.586	0.0000000000571207
z_AHRF_TXC_SITE_NO_CNTRL	-0.0066027	0.0128041	-0.516	0.606139

(Intercept)	***
z_ACS_PCT_BLACK	***
z_ACS_PCT_HISPAN	
z_SVI_RPL_THEME1_SOCIECO	***
z_SVI_RPL_THEME2_HH_DISB	**
z_SVI_RPL_THEME3_MINO	
z_SVI_RPL_THEME4_HH_TRANS	***
z_ACS_PCT_ENGL_NOT_WELL	.
z_ACS_PCT_NON_CITIZEN	
z_ACS_MEDIAN_AGE	
z_phys_per_cap	
z_mhp_per_cap	*
z_dents_per_cap	
z_uninsur_perc	
z_uc_percent	***
z_opcp_rate	
z_TeenBirths	***
z_phs_rate	
z_ms_perc_ann	***
z_AMFAR_AMATFAC	
z_MP_PERCPEN	***
z_AHRF_RURAL_H_CLINIC	
z_food_afford	
z_fd_enviro_indx	
z_fi_percent	***
z_ACS_PCT_FOOD_STAMP	
z_childelig_lunch_perc	**
z_shp_percent	
z_shcb_percent	
z_ACS_PCT_NO_VEH	

```

z_ACS_PCT_RENTER_HH_CHILD **
z_ACS_PCT_RENT_COST_30PCT ***
z_ACS_PCT_MOBILE_HOME
z_ACS_PCT_OWNED_HH ***
z_ACS_PCT_OWNER_HH_CHILD
z_ACS_MEDIAN_HOME_VALUE **
z_hsg_rate *
z_sc_percent ***
z_ms_average *
z_ACS_PCT_BROADBAND
z_ACS_PCT_NO_PC
z_ACS_PCT_SMARTPHONE **
z_pi_phy_inact ***
z_cip_perc *
z_csph_perc ***
z_ACS_PCT_CHILD_DISAB ***
z_unemp_perc
z_ACS_GINI_INDEX ***
z_ACS_MEDIAN_HH_INCOME *
z_ACS_PCT_WORK_NO_CAR ***
z_soc_assoc_num ***
z_aeo_perc_w_acc
z_dwv_presence **
z_ACS_PCT_HH_PUB_ASSIST ***
z_AHRF_TXC_SITE_NO_CNTRL

```

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.5193 on 2055 degrees of freedom

(1031 observations deleted due to missingness)

Multiple R-squared: 0.7334, Adjusted R-squared: 0.7264

F-statistic: 104.7 on 54 and 2055 DF, p-value: < 0.000000000000000022

Final Health Model, Mentally Unhealthy Days

Confidence Intervals

```
confint(z_pmhd_levels_12345678)
```

2.5 % 97.5 %

(Intercept)	-0.077590753	-0.0235047406
z_ACS_PCT_BLACK	-0.306628941	-0.2106214885
z_ACS_PCT_HISPAN	-0.068218505	0.0370320380
z_SVI_RPL_THEME1_SOCIECO	0.349342579	0.4908956832
z_SVI_RPL_THEME2_HH_DISB	-0.096564435	-0.0155101481
z_SVI_RPL_THEME3_MINO	-0.078127435	0.0207479988
z_SVI_RPL_THEME4_HH_TRANS	-0.125795135	-0.0479120130
z_ACS_PCT_ENGL_NOT_WELL	-0.141946836	0.0123405597
z_ACS_PCT_NON_CITIZEN	-0.088903831	0.0519254109
z_ACS_MEDIAN_AGE	-0.098150197	0.0145746887
z_phys_per_cap	-0.033666042	0.0460815658
z_mhp_per_cap	0.007012599	0.0772001968
z_dents_per_cap	-0.057084460	0.0220469355
z_uninsur_perc	-0.120402934	0.0190987236
z_uc_percent	-0.418467376	-0.2209668896
z_opcp_rate	-0.031462965	0.0301592058
z_TeenBirths	-0.329087484	-0.1704153450
z_phs_rate	-0.007243713	0.0497464484
z_ms_perc_ann	-0.162707606	-0.0970944335
z_AMFAR_AMATFAC	-0.032818431	0.0356533403
z_MP_PERCPEN	-0.091165254	-0.0377458404
z_AHRF_RURAL_H_CLINIC	-0.011329863	0.0356271024
z_food_afford	-0.023037017	0.0688881722
z_fd_enviro_indx	-0.052136104	0.0485679909
z_fi_percent	0.273788155	0.4152743084
z_ACS_PCT_FOOD_STAMP	-0.058418638	0.0655658071
z_childelig_lunch_perc	0.017308635	0.1185680455
z_shp_percent	-0.052514498	0.0677912832
z_shcb_percent	-0.091605385	0.0226899952
z_ACS_PCT_NO_VEH	-0.144265407	0.0312411122
z_ACS_PCT_RENTER_HH_CHILD	0.012762229	0.0818783122
z_ACS_PCT_RENT_COST_30PCT	0.067810029	0.1418083040
z_ACS_PCT_MOBILE_HOME	-0.060143595	0.0172799226
z_ACS_PCT_OWNED_HH	0.044344177	0.1450194732
z_ACS_PCT_OWNER_HH_CHILD	-0.016636149	0.0837325336
z_ACS_MEDIAN_HOME_VALUE	0.035495512	0.1594882450
z_hsg_rate	0.004803906	0.0651044022
z_sc_percent	-0.220305717	-0.1309745892
z_ms_average	0.013763956	0.1167300447
z_ACS_PCT_BROADBAND	-0.014894802	0.1244692691
z_ACS_PCT_NO_PC	-0.091476268	0.0497662831
z_ACS_PCT_SMARTPHONE	0.014430350	0.0889901053
z_pi_phy_inact	0.050456166	0.1173663815

z_cip_perc	-0.135802139	-0.0009344973
z_csph_perc	0.102912575	0.1965038459
z_ACS_PCT_CHILD_DISAB	0.039700275	0.0936191284
z_unemp_perc	-0.046262576	0.0330836925
z_ACS_GINI_INDEX	0.025695687	0.0963377091
z_ACS_MEDIAN_HH_INCOME	-0.187693385	-0.0198190671
z_ACS_PCT_WORK_NO_CAR	0.094937840	0.2421683153
z_soc_assoc_num	0.222847204	0.4009675920
z_aeo_perc_w_acc	-0.009784067	0.0567418619
z_dwv_presence	0.016232586	0.0645701488
z_ACS_PCT_HH_PUB_ASSIST	-0.138900295	-0.0751613458
z_AHRF_TXC_SITE_NO_CNTRL	-0.031713171	0.0185077061

Final Health Model, Mentally Unhealthy Days

VIF

```
vif(z_pmhd_levels_12345678)
```

z_ACS_PCT_BLACK	z_ACS_PCT_HISPAN	z_SVI_RPL_THEME1_SOCIECO
5.461083	5.642329	10.212896
z_SVI_RPL_THEME2_HH_DISB	z_SVI_RPL_THEME3_MINO	z_SVI_RPL_THEME4_HH_TRANS
3.230278	4.681909	2.925382
z_ACS_PCT_ENGL_NOT_WELL	z_ACS_PCT_NON_CITIZEN	z_ACS_MEDIAN_AGE
11.265256	9.003040	5.812589
z_phys_per_cap	z_mhp_per_cap	z_dents_per_cap
2.658364	2.039378	2.540115
z_uninsur_perc	z_uc_percent	z_opcp_rate
10.517365	7.596624	1.753503
z_TeenBirths	z_phs_rate	z_ms_perc_ann
14.145085	1.610513	2.092128
z_AMFAR_AMATFAC	z_MP_PERCPEN	z_AHRF_RURAL_H_CLINIC
1.844290	1.365307	1.194210
z_food_afford	z_fd_enviro_indx	z_fi_percent
4.099892	4.385551	10.236496
z_ACS_PCT_FOOD_STAMP	z_childelig_lunch_perc	z_shp_percent
6.987802	4.006203	4.634204
z_shcb_percent	z_ACS_PCT_NO_VEH	z_ACS_PCT_RENTER_HH_CHILD
5.446176	6.835045	2.239925
z_ACS_PCT_RENT_COST_30PCT	z_ACS_PCT_MOBILE_HOME	z_ACS_PCT_OWNED_HH

2.236878	3.204573	4.321109
z_ACS_PCT_OWNER_HH_CHILD	z_ACS_MEDIAN_HOME_VALUE	z_hsg_rate
4.660747	5.335610	1.572655
z_sc_percent	z_ms_average	z_ACS_PCT_BROADBAND
3.770083	1.808081	10.047412
z_ACS_PCT_NO_PC	z_ACS_PCT_SMARTPHONE	z_pi_phy_inact
10.243006	2.862280	2.309632
z_cip_perc	z_csph_perc	z_ACS_PCT_CHILD_DISAB
9.677287	4.309989	1.370185
z_unemp_perc	z_ACS_GINI_INDEX	z_ACS_MEDIAN_HH_INCOME
2.539103	2.454818	12.753686
z_ACS_PCT_WORK_NO_CAR	z_soc_assoc_num	z_aeo_perc_w_acc
3.169270	15.554714	2.062653
z_dwv_presence	z_ACS_PCT_HH_PUB_ASSIST	z_AHRF_TXC_SITE_NO_CNTRL
1.158060	1.468724	1.067219

Final Housing Model

DV: Rent 30 Percent

IVs: Excludes those IVs that serve as DVs in the housing models –
z_ACS_PCT_RENT_COST_30PCT, z_ACS_MEDIAN_HOME_VALUE,
z_ACS_PCT_OWNED_HH – and the three problematic VIF IVs

Note: Building final model below (R markdown housing doc had groupings only)

```
z_rent30_levels_12345678 <- lm(formula = z_ACS_PCT_RENT_COST_30PCT ~
  z_ACS_PCT_BLACK + z_ACS_PCT_HISPAN + z_SVI_RPL_THEME1_SOCIECO +
  z_SVI_RPL_THEME2_HH_DISB + z_SVI_RPL_THEME3_MINO + z_SVI_RPL_THEME4_HH_TRANS +
  z_ACS_PCT_ENGL_NOT_WELL + z_ACS_PCT_NON_CITIZEN + z_ACS_MEDIAN_AGE +
  z_food_afford + z_fd_enviro_indx + z_fi_percent + z_ACS_PCT_FOOD_STAMP +
  z_childelig_lunch_perc + z_shp_percent + z_shcb_percent +
  z_ACS_PCT_NO_VEH + z_ACS_PCT_RENTER_HH_CHILD + z_ACS_PCT_MOBILE_HOME +
  z_ACS_PCT_OWNER_HH_CHILD + z_hsg_rate + z_sc_percent +
  z_ms_average + z_ACS_PCT_BROADBAND + z_ACS_PCT_NO_PC +
  z_ACS_PCT_SMARTPHONE + z_phys_per_cap + z_mhp_per_cap +
  z_dents_per_cap + z_uninsur_perc + z_uc_percent + z_opcp_rate +
  z_TeenBirths + z_phs_rate + z_ms_perc_ann + z_AMFAR_AMATFAC +
  z_MP_PERCPEN + z_AHRF_RURAL_H_CLINIC + z_pphd_avgnum +
  z_pmhd_avgnum + z_lbw_percent_lbw + z_pi_phy_inact +
```

```

z_cip_perc + z_csph_perc + z_ACS_PCT_CHILD_DISAB + z_unemp_perc +
z_ACS_GINI_INDEX + z_ACS_MEDIAN_HH_INCOME + z_ACS_PCT_WORK_NO_CAR +
z_soc_assoc_num + z_aeo_perc_w_acc + z_dwv_presence +
z_ACS_PCT_HH_PUB_ASSIST + z_AHRF_TXC_SITE_NO_CNTRL, data = Z_and_Final_Variables_1
summary(z_rent30_levels_12345678)

```

Call:

```

lm(formula = z_ACS_PCT_RENT_COST_30PCT ~ z_ACS_PCT_BLACK + z_ACS_PCT_HISPAN +
  z_SVI_RPL_THEME1_SOCIECO + z_SVI_RPL_THEME2_HH_DISB + z_SVI_RPL_THEME3_MINO +
  z_SVI_RPL_THEME4_HH_TRANS + z_ACS_PCT_ENGL_NOT_WELL + z_ACS_PCT_NON_CITIZEN +
  z_ACS_MEDIAN_AGE + z_food_afford + z_fd_enviro_indx + z_fi_percent +
  z_ACS_PCT_FOOD_STAMP + z_childelig_lunch_perc + z_shp_percent +
  z_shcb_percent + z_ACS_PCT_NO_VEH + z_ACS_PCT_RENTER_HH_CHILD +
  z_ACS_PCT_MOBILE_HOME + z_ACS_PCT_OWNER_HH_CHILD + z_hsg_rate +
  z_sc_percent + z_ms_average + z_ACS_PCT_BROADBAND + z_ACS_PCT_NO_PC +
  z_ACS_PCT_SMARTPHONE + z_phys_per_cap + z_mhp_per_cap + z_dents_per_cap +
  z_uninsur_perc + z_uc_percent + z_opcp_rate + z_TeenBirths +
  z_phs_rate + z_ms_perc_ann + z_AMFAR_AMATFAC + z_MP_PERCPEN +
  z_AHRF_RURAL_H_CLINIC + z_pphd_avgnum + z_pmhd_avgnum + z_lbw_percent_lbw +
  z_pi_phy_inact + z_cip_perc + z_csph_perc + z_ACS_PCT_CHILD_DISAB +
  z_unemp_perc + z_ACS_GINI_INDEX + z_ACS_MEDIAN_HH_INCOME +
  z_ACS_PCT_WORK_NO_CAR + z_soc_assoc_num + z_aeo_perc_w_acc +
  z_dwv_presence + z_ACS_PCT_HH_PUB_ASSIST + z_AHRF_TXC_SITE_NO_CNTRL,
  data = Z_and_Final_Variables_10.28.22)

```

Residuals:

Min	1Q	Median	3Q	Max
-2.61815	-0.32335	-0.01227	0.32746	2.44266

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	0.04450426	0.01630723	2.729	0.006405
z_ACS_PCT_BLACK	0.06287379	0.03233226	1.945	0.051958
z_ACS_PCT_HISPAN	0.09711668	0.03177474	3.056	0.002269
z_SVI_RPL_THEME1_SOCIECO	0.15504788	0.04377296	3.542	0.000406
z_SVI_RPL_THEME2_HH_DISB	0.02067159	0.02430947	0.850	0.395229
z_SVI_RPL_THEME3_MINO	0.02794314	0.02959327	0.944	0.345159
z_SVI_RPL_THEME4_HH_TRANS	0.01923604	0.02332987	0.825	0.409738
z_ACS_PCT_ENGL_NOT_WELL	-0.06833261	0.04614567	-1.481	0.138813
z_ACS_PCT_NON_CITIZEN	0.00940515	0.04205639	0.224	0.823066

z_ACS_MEDIAN_AGE	0.14271664	0.03014514	4.734	0.000002348673372
z_food_afford	0.02792617	0.02713845	1.029	0.303589
z_fd_enviro_indx	0.07121591	0.03047864	2.337	0.019557
z_fi_percent	0.11743322	0.04364747	2.690	0.007193
z_ACS_PCT_FOOD_STAMP	0.02414325	0.03691101	0.654	0.513125
z_childelig_lunch_perc	-0.07691614	0.03035422	-2.534	0.011352
z_shp_percent	-0.01581771	0.03556524	-0.445	0.656546
z_shcb_percent	0.49729398	0.03154948	15.762	< 0.0000000000000002
z_ACS_PCT_NO_VEH	-0.00950064	0.05227153	-0.182	0.855793
z_ACS_PCT_RENTER_HH_CHILD	-0.06997220	0.02068707	-3.382	0.000732
z_ACS_PCT_MOBILE_HOME	0.02910822	0.02302461	1.264	0.206295
z_ACS_PCT_OWNER_HH_CHILD	0.06136034	0.02933822	2.091	0.036608
z_hsg_rate	-0.01121778	0.01799604	-0.623	0.533126
z_sc_percent	-0.00007062	0.02707719	-0.003	0.997919
z_ms_average	0.02731284	0.03100623	0.881	0.378485
z_ACS_PCT_BROADBAND	-0.01212059	0.04166209	-0.291	0.771137
z_ACS_PCT_NO_PC	-0.05401957	0.04216946	-1.281	0.200335
z_ACS_PCT_SMARTPHONE	-0.01556011	0.02229011	-0.698	0.485211
z_phys_per_cap	-0.00939847	0.02388188	-0.394	0.693962
z_mhp_per_cap	-0.00465376	0.02097623	-0.222	0.824446
z_dents_per_cap	0.00544094	0.02375526	0.229	0.818860
z_uninsur_perc	0.06820443	0.04159934	1.640	0.101251
z_uc_percent	-0.18686676	0.06018925	-3.105	0.001931
z_opcp_rate	0.00260486	0.01858050	0.140	0.888521
z_TeenBirths	0.08694257	0.04763133	1.825	0.068098
z_phs_rate	0.00285348	0.01707947	0.167	0.867331
z_ms_perc_ann	0.04200299	0.01994825	2.106	0.035361
z_AMFAR_AMATFAC	-0.03926102	0.02040512	-1.924	0.054484
z_MP_PERCPEN	0.09157979	0.01571393	5.828	0.000000006504301
z_AHRF_RURAL_H_CLINIC	-0.01390059	0.01403882	-0.990	0.322216
z_pphd_avgnum	-0.22252104	0.05226922	-4.257	0.000021635827077
z_pmhd_avgnum	0.32884362	0.04558615	7.214	0.0000000000000764
z_lbw_percent_lbw	-0.00631823	0.02410422	-0.262	0.793254
z_pi_phy_inact	-0.01325130	0.01985411	-0.667	0.504571
z_cip_perc	0.00293567	0.04087095	0.072	0.942746
z_csph_perc	-0.00786132	0.02856789	-0.275	0.783206
z_ACS_PCT_CHILD_DISAB	-0.01560343	0.01624390	-0.961	0.336881
z_unemp_perc	0.05597570	0.02334817	2.397	0.016600
z_ACS_GINI_INDEX	0.07101732	0.02102040	3.378	0.000743
z_ACS_MEDIAN_HH_INCOME	0.11883677	0.04023069	2.954	0.003174
z_ACS_PCT_WORK_NO_CAR	-0.09663174	0.04403167	-2.195	0.028305
z_soc_assoc_num	-0.11152187	0.05355064	-2.083	0.037416
z_aeo_perc_w_acc	0.02112620	0.02004586	1.054	0.292056

z_dwv_presence	-0.00078721	0.01455836	-0.054	0.956883
z_ACS_PCT_HH_PUB_ASSIST	0.00743551	0.01925740	0.386	0.699454
z_AHRF_TXC_SITE_NO_CNTRL	0.02150630	0.01497616	1.436	0.151145

(Intercept)	**
z_ACS_PCT_BLACK	.
z_ACS_PCT_HISPAN	**
z_SVI_RPL_THEME1_SOCIECO	***
z_SVI_RPL_THEME2_HH_DISB	
z_SVI_RPL_THEME3_MINO	
z_SVI_RPL_THEME4_HH_TRANS	
z_ACS_PCT_ENGL_NOT_WELL	
z_ACS_PCT_NON_CITIZEN	
z_ACS_MEDIAN_AGE	***
z_food_afford	
z_fd_enviro_indx	*
z_fi_percent	**
z_ACS_PCT_FOOD_STAMP	
z_childelig_lunch_perc	*
z_shp_percent	
z_shcb_percent	***
z_ACS_PCT_NO_VEH	
z_ACS_PCT_RENTER_HH_CHILD	***
z_ACS_PCT_MOBILE_HOME	
z_ACS_PCT_OWNER_HH_CHILD	*
z_hsg_rate	
z_sc_percent	
z_ms_average	
z_ACS_PCT_BROADBAND	
z_ACS_PCT_NO_PC	
z_ACS_PCT_SMARTPHONE	
z_phys_per_cap	
z_mhp_per_cap	
z_dents_per_cap	
z_uninsur_perc	
z_uc_percent	**
z_opcp_rate	
z_TeenBirths	.
z_phs_rate	
z_ms_perc_ann	*
z_AMFAR_AMATFAC	.
z_MP_PERCPEN	***
z_AHRF_RURAL_H_CLINIC	

```

z_pphd_avgnum          ***
z_pmhd_avgnum          ***
z_lbw_percent_lbw
z_pi_phy_inact
z_cip_perc
z_csph_perc
z_ACS_PCT_CHILD_DISAB
z_unemp_perc           *
z_ACS_GINI_INDEX       ***
z_ACS_MEDIAN_HH_INCOME **
z_ACS_PCT_WORK_NO_CAR  *
z_soc_assoc_num        *
z_aeo_perc_w_acc
z_dwv_presence
z_ACS_PCT_HH_PUB_ASSIST
z_AHRF_TXC_SITE_NO_CNTRL
---

```

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.6072 on 2045 degrees of freedom

(1041 observations deleted due to missingness)

Multiple R-squared: 0.5464, Adjusted R-squared: 0.5344

F-statistic: 45.61 on 54 and 2045 DF, p-value: < 0.000000000000000022

Final Housing Model, Rent 30 Percent

Confidence Intervals

```
confint(z_rent30_levels_12345678)
```

	2.5 %	97.5 %
(Intercept)	0.0125237549	0.0764847664
z_ACS_PCT_BLACK	-0.0005338043	0.1262813902
z_ACS_PCT_HISPAN	0.0348024479	0.1594309038
z_SVI_RPL_THEME1_SOCIECO	0.0692036468	0.2408921135
z_SVI_RPL_THEME2_HH_DISB	-0.0270023126	0.0683454873
z_SVI_RPL_THEME3_MINO	-0.0300929599	0.0859792393
z_SVI_RPL_THEME4_HH_TRANS	-0.0265167391	0.0649888154
z_ACS_PCT_ENGL_NOT_WELL	-0.1588300258	0.0221648052
z_ACS_PCT_NON_CITIZEN	-0.0730726728	0.0918829628

z_ACS_MEDIAN_AGE	0.0835982669	0.2018350135
z_food_afford	-0.0252957269	0.0811480605
z_fd_enviro_indx	0.0114434863	0.1309883262
z_fi_percent	0.0318350745	0.2030313566
z_ACS_PCT_FOOD_STAMP	-0.0482438385	0.0965303403
z_childelig_lunch_perc	-0.1364445412	-0.0173877313
z_shp_percent	-0.0855655765	0.0539301645
z_shcb_percent	0.4354215225	0.5591664397
z_ACS_PCT_NO_VEH	-0.1120116294	0.0930103550
z_ACS_PCT_RENTER_HH_CHILD	-0.1105421272	-0.0294022736
z_ACS_PCT_MOBILE_HOME	-0.0160459194	0.0742623511
z_ACS_PCT_OWNER_HH_CHILD	0.0038244277	0.1188962536
z_hsg_rate	-0.0465102598	0.0240746978
z_sc_percent	-0.0531723714	0.0530311326
z_ms_average	-0.0334942389	0.0881199282
z_ACS_PCT_BROADBAND	-0.0938251417	0.0695839647
z_ACS_PCT_NO_PC	-0.1367191519	0.0286800025
z_ACS_PCT_SMARTPHONE	-0.0592737923	0.0281535678
z_phys_per_cap	-0.0562338014	0.0374368698
z_mhp_per_cap	-0.0457907666	0.0364832498
z_dents_per_cap	-0.0411460897	0.0520279707
z_uninsur_perc	-0.0133770618	0.1497859279
z_uc_percent	-0.3049053788	-0.0688281485
z_opcp_rate	-0.0338338226	0.0390435382
z_TeenBirths	-0.0064684126	0.1803535589
z_phs_rate	-0.0306414895	0.0363484474
z_ms_perc_ann	0.0028819864	0.0811239893
z_AMFAR_AMATFAC	-0.0792780152	0.0007559683
z_MP_PERCPEN	0.0607628241	0.1223967586
z_AHRF_RURAL_H_CLINIC	-0.0414324691	0.0136312966
z_pphd_avgnum	-0.3250274938	-0.1200145938
z_pmhd_avgnum	0.2394434927	0.4182437451
z_lbwt_percent_lbwt	-0.0535896165	0.0409531509
z_pi_phy_inact	-0.0521876884	0.0256850889
z_cip_perc	-0.0772173673	0.0830887041
z_csph_perc	-0.0638865219	0.0481638808
z_ACS_PCT_CHILD_DISAB	-0.0474597368	0.0162528711
z_unemp_perc	0.0101870308	0.1017643785
z_ACS_GINI_INDEX	0.0297936931	0.1122409438
z_ACS_MEDIAN_HH_INCOME	0.0399393737	0.1977341739
z_ACS_PCT_WORK_NO_CAR	-0.1829833365	-0.0102801508
z_soc_assoc_num	-0.2165413621	-0.0065023820
z_aeo_perc_w_acc	-0.0181862363	0.0604386392

z_dwv_presence	-0.0293379640	0.0277635456
z_ACS_PCT_HH_PUB_ASSIST	-0.0303306453	0.0452016720
z_AHRF_TXC_SITE_NO_CNTRL	-0.0078638246	0.0508764221

Final Housing Model, Rent 30 Percent

VIF

```
vif(z_rent30_levels_12345678)
```

z_ACS_PCT_BLACK	z_ACS_PCT_HISPAN	z_SVI_RPL_THEME1_SOCIECO
6.956429	5.715010	10.936117
z_SVI_RPL_THEME2_HH_DISB	z_SVI_RPL_THEME3_MINO	z_SVI_RPL_THEME4_HH_TRANS
3.255296	4.682666	2.933058
z_ACS_PCT_ENGL_NOT_WELL	z_ACS_PCT_NON_CITIZEN	z_ACS_MEDIAN_AGE
11.304401	9.020750	4.619171
z_food_afford	z_fd_enviro_indx	z_fi_percent
4.016008	4.455559	10.918442
z_ACS_PCT_FOOD_STAMP	z_childelig_lunch_perc	z_shp_percent
6.933360	4.024957	4.519669
z_shcb_percent	z_ACS_PCT_NO_VEH	z_ACS_PCT_RENTER_HH_CHILD
4.617491	6.786551	2.234374
z_ACS_PCT_MOBILE_HOME	z_ACS_PCT_OWNER_HH_CHILD	z_hsg_rate
3.161852	4.442151	1.563298
z_sc_percent	z_ms_average	z_ACS_PCT_BROADBAND
3.881719	1.831286	10.013244
z_ACS_PCT_NO_PC	z_ACS_PCT_SMARTPHONE	z_phys_per_cap
10.204497	2.871651	2.669997
z_mhp_per_cap	z_dents_per_cap	z_uninsur_perc
2.047125	2.541099	10.300622
z_uc_percent	z_opcp_rate	z_TeenBirths
7.586248	1.754162	14.337099
z_phs_rate	z_ms_perc_ann	z_AMFAR_AMATFAC
1.614182	2.157372	1.842692
z_MP_PERCPEN	z_AHRF_RURAL_H_CLINIC	z_pphd_avgnum
1.326066	1.199983	15.513153
z_pmhd_avgnum	z_lbw_percent_lbw	z_pi_phy_inact
11.630150	3.388931	2.283449
z_cip_perc	z_csph_perc	z_ACS_PCT_CHILD_DISAB
9.967904	4.474292	1.374727

z_unemp_perc	z_ACS_GINI_INDEX	z_ACS_MEDIAN_HH_INCOME
2.466421	2.420498	8.218594
z_ACS_PCT_WORK_NO_CAR	z_soc_assoc_num	z_aeo_perc_w_acc
3.177198	15.808452	2.084639
z_dwv_presence	z_ACS_PCT_HH_PUB_ASSIST	z_AHRF_TXC_SITE_NO_CNTRL
1.176820	1.500470	1.067789

Final Housing Model

DV: Median Home Value

**IVs: Excludes those IVs that serve as DVs in the housing models –
z_ACS_PCT_RENT_COST_30PCT, z_ACS_MEDIAN_HOME_VALUE,
z_ACS_PCT_OWNED_HH – and the three problematic VIF IVs**

Note: Building final model below (R markdown housing doc had groupings only)

```
z_median_levels_12345678 <- lm(formula = z_ACS_MEDIAN_HOME_VALUE ~
  z_ACS_PCT_BLACK + z_ACS_PCT_HISPAN + z_SVI_RPL_THEME1_SOCIECO +
  z_SVI_RPL_THEME2_HH_DISB + z_SVI_RPL_THEME3_MINO + z_SVI_RPL_THEME4_HH_TRANS +
  z_ACS_PCT_ENGL_NOT_WELL + z_ACS_PCT_NON_CITIZEN + z_ACS_MEDIAN_AGE +
  z_food_afford + z_fd_enviro_indx + z_fi_percent + z_ACS_PCT_FOOD_STAMP +
  z_childelig_lunch_perc + z_shp_percent + z_shcb_percent +
  z_ACS_PCT_NO_VEH + z_ACS_PCT_RENTER_HH_CHILD + z_ACS_PCT_MOBILE_HOME +
  z_ACS_PCT_OWNER_HH_CHILD + z_hsg_rate + z_sc_percent +
  z_ms_average + z_ACS_PCT_BROADBAND + z_ACS_PCT_NO_PC +
  z_ACS_PCT_SMARTPHONE + z_phys_per_cap + z_mhp_per_cap +
  z_dents_per_cap + z_uninsur_perc + z_uc_percent + z_opcp_rate +
  z_TeenBirths + z_phs_rate + z_ms_perc_ann + z_AMFAR_AMATFAC +
  z_MP_PERCPEN + z_AHRF_RURAL_H_CLINIC + z_pphd_avgnum +
  z_pmhd_avgnum + z_lbw_percent_lbw + z_pi_phy_inact +
  z_cip_perc + z_csph_perc + z_ACS_PCT_CHILD_DISAB + z_unemp_perc +
  z_ACS_GINI_INDEX + z_ACS_MEDIAN_HH_INCOME + z_ACS_PCT_WORK_NO_CAR +
  z_soc_assoc_num + z_aeo_perc_w_acc + z_dwv_presence +
  z_ACS_PCT_HH_PUB_ASSIST + z_AHRF_TXC_SITE_NO_CNTRL, data = Z_and_Final_Variables_1
summary(z_median_levels_12345678)
```

Call:


```
lm(formula = z_ACS_MEDIAN_HOME_VALUE ~ z_ACS_PCT_BLACK + z_ACS_PCT_HISPAN +
    z_SVI_RPL_THEME1_SOCIECO + z_SVI_RPL_THEME2_HH_DISB + z_SVI_RPL_THEME3_MINO +
    z_SVI_RPL_THEME4_HH_TRANS + z_ACS_PCT_ENGL_NOT_WELL + z_ACS_PCT_NON_CITIZEN +
    z_ACS_MEDIAN_AGE + z_food_afford + z_fd_enviro_indx + z_fi_percent +
    z_ACS_PCT_FOOD_STAMP + z_childelig_lunch_perc + z_shp_percent +
    z_shcb_percent + z_ACS_PCT_NO_VEH + z_ACS_PCT_RENTER_HH_CHILD +
    z_ACS_PCT_MOBILE_HOME + z_ACS_PCT_OWNER_HH_CHILD + z_hsg_rate +
    z_sc_percent + z_ms_average + z_ACS_PCT_BROADBAND + z_ACS_PCT_NO_PC +
    z_ACS_PCT_SMARTPHONE + z_phys_per_cap + z_mhp_per_cap + z_dents_per_cap +
    z_uninsur_perc + z_uc_percent + z_opcp_rate + z_TeenBirths +
    z_phs_rate + z_ms_perc_ann + z_AMFAR_AMATFAC + z_MP_PERCPEN +
    z_AHRF_RURAL_H_CLINIC + z_pphd_avgnum + z_pmhd_avgnum + z_lbw_percent_lbw +
    z_pi_phy_inact + z_cip_perc + z_csph_perc + z_ACS_PCT_CHILD_DISAB +
    z_unemp_perc + z_ACS_GINI_INDEX + z_ACS_MEDIAN_HH_INCOME +
    z_ACS_PCT_WORK_NO_CAR + z_soc_assoc_num + z_aeo_perc_w_acc +
    z_dwv_presence + z_ACS_PCT_HH_PUB_ASSIST + z_AHRF_TXC_SITE_NO_CNTRL,
    data = Z_and_Final_Variables_10.28.22)
```

Residuals:

Min	1Q	Median	3Q	Max
-1.4263	-0.1907	-0.0176	0.1611	4.7732

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	0.0023982	0.0097914	0.245	0.806534
z_ACS_PCT_BLACK	-0.0764774	0.0194133	-3.939	0.000084416640309501
z_ACS_PCT_HISPAN	-0.1488379	0.0190786	-7.801	0.0000000000000009691
z_SVI_RPL_THEME1_SOCIECO	0.0714839	0.0262827	2.720	0.006587
z_SVI_RPL_THEME2_HH_DISB	0.0104591	0.0145962	0.717	0.473725
z_SVI_RPL_THEME3_MINO	-0.0274865	0.0177688	-1.547	0.122041
z_SVI_RPL_THEME4_HH_TRANS	0.0212081	0.0140080	1.514	0.130180
z_ACS_PCT_ENGL_NOT_WELL	0.0978929	0.0277073	3.533	0.000420
z_ACS_PCT_NON_CITIZEN	0.0381186	0.0252520	1.510	0.131319
z_ACS_MEDIAN_AGE	0.0801250	0.0181001	4.427	0.000010069340428849
z_food_afford	0.0911829	0.0162948	5.596	0.000000024909768444
z_fd_enviro_indx	0.0813733	0.0183004	4.447	0.000009194033966777
z_fi_percent	-0.0111787	0.0262073	-0.427	0.669753
z_ACS_PCT_FOOD_STAMP	-0.0832476	0.0221626	-3.756	0.000177
z_childelig_lunch_perc	-0.0482749	0.0182256	-2.649	0.008141
z_shp_percent	0.1736891	0.0213545	8.134	0.000000000000000715
z_shcb_percent	0.1382684	0.0189433	7.299	0.0000000000000412805
z_ACS_PCT_NO_VEH	0.0071025	0.0313855	0.226	0.820991
z_ACS_PCT_RENTER_HH_CHILD	0.0011847	0.0124212	0.095	0.924026

z_ACS_PCT_MOBILE_HOME	0.0411062	0.0138247	2.973	0.002980
z_ACS_PCT_OWNER_HH_CHILD	-0.1308670	0.0176156	-7.429	0.000000000000159807
z_hsg_rate	-0.0337594	0.0108054	-3.124	0.001807
z_sc_percent	0.0193851	0.0162580	1.192	0.233266
z_ms_average	-0.0077957	0.0186171	-0.419	0.675450
z_ACS_PCT_BROADBAND	-0.0204352	0.0250153	-0.817	0.414076
z_ACS_PCT_NO_PC	-0.0391788	0.0253199	-1.547	0.121933
z_ACS_PCT_SMARTPHONE	-0.0290705	0.0133837	-2.172	0.029964
z_phys_per_cap	0.0454547	0.0143394	3.170	0.001547
z_mhp_per_cap	0.0163452	0.0125948	1.298	0.194512
z_dents_per_cap	0.0512062	0.0142634	3.590	0.000338
z_uninsur_perc	0.0953832	0.0249776	3.819	0.000138
z_uc_percent	-0.1788483	0.0361396	-4.949	0.000000807686846990
z_opcp_rate	-0.0513623	0.0111563	-4.604	0.000004401741885919
z_TeenBirths	0.1088973	0.0285994	3.808	0.000144
z_phs_rate	-0.0586044	0.0102551	-5.715	0.000000012602753621
z_ms_perc_ann	-0.0527988	0.0119776	-4.408	0.000010966520346657
z_AMFAR_AMATFAC	-0.0064840	0.0122519	-0.529	0.596710
z_MP_PERCPEN	-0.0413029	0.0094351	-4.378	0.000012606613299365
z_AHRF_RURAL_H_CLINIC	0.0026184	0.0084294	0.311	0.756114
z_pphd_avgnum	0.1564180	0.0313841	4.984	0.000000675276399401
z_pmhd_avgnum	-0.0872322	0.0273714	-3.187	0.001459
z_lbw_percent_lbw	0.0767208	0.0144729	5.301	0.000000127600791956
z_pi_phy_inact	-0.0830964	0.0119210	-6.971	0.0000000000004243238
z_cip_perc	-0.0411466	0.0245402	-1.677	0.093754
z_csph_perc	-0.0166985	0.0171531	-0.974	0.330419
z_ACS_PCT_CHILD_DISAB	-0.0075425	0.0097534	-0.773	0.439420
z_unemp_perc	0.0502003	0.0140190	3.581	0.000350
z_ACS_GINI_INDEX	0.0922498	0.0126213	7.309	0.000000000000383992
z_ACS_MEDIAN_HH_INCOME	0.7832863	0.0241558	32.426	< 0.00000000000000002
z_ACS_PCT_WORK_NO_CAR	0.0868246	0.0264380	3.284	0.001040
z_soc_assoc_num	-0.1065315	0.0321535	-3.313	0.000938
z_aeo_perc_w_acc	-0.0067981	0.0120362	-0.565	0.572269
z_dwv_presence	0.0251572	0.0087413	2.878	0.004044
z_ACS_PCT_HH_PUB_ASSIST	-0.0059009	0.0115628	-0.510	0.609873
z_AHRF_TXC_SITE_NO_CNTRL	0.0005827	0.0089922	0.065	0.948339
(Intercept)				
z_ACS_PCT_BLACK	***			
z_ACS_PCT_HISPAN	***			
z_SVI_RPL_THEME1_SOCIECO	**			
z_SVI_RPL_THEME2_HH_DISB				
z_SVI_RPL_THEME3_MINO				

z_SVI_RPL_THEME4_HH_TRANS	
z_ACS_PCT_ENGL_NOT_WELL	***
z_ACS_PCT_NON_CITIZEN	
z_ACS_MEDIAN_AGE	***
z_food_afford	***
z_fd_enviro_indx	***
z_fi_percent	
z_ACS_PCT_FOOD_STAMP	***
z_childelig_lunch_perc	**
z_shp_percent	***
z_shcb_percent	***
z_ACS_PCT_NO_VEH	
z_ACS_PCT_RENTER_HH_CHILD	
z_ACS_PCT_MOBILE_HOME	**
z_ACS_PCT_OWNER_HH_CHILD	***
z_hsg_rate	**
z_sc_percent	
z_ms_average	
z_ACS_PCT_BROADBAND	
z_ACS_PCT_NO_PC	
z_ACS_PCT_SMARTPHONE	*
z_phys_per_cap	**
z_mhp_per_cap	
z_dents_per_cap	***
z_uninsur_perc	***
z_uc_percent	***
z_opcp_rate	***
z_TeenBirths	***
z_phs_rate	***
z_ms_perc_ann	***
z_AMFAR_AMATFAC	
z_MP_PERCPEN	***
z_AHRF_RURAL_H_CLINIC	
z_pphd_avgnum	***
z_pmhd_avgnum	**
z_lbwt_percent_lbwt	***
z_pi_phy_inact	***
z_cip_perc	.
z_csph_perc	
z_ACS_PCT_CHILD_DISAB	
z_unemp_perc	***
z_ACS_GINI_INDEX	***
z_ACS_MEDIAN_HH_INCOME	***

```

z_ACS_PCT_WORK_NO_CAR      **
z_soc_assoc_num            ***
z_aeo_perc_w_acc
z_dwv_presence             **
z_ACS_PCT_HH_PUB_ASSIST
z_AHRF_TXC_SITE_NO_CNTRL
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.3646 on 2045 degrees of freedom
(1041 observations deleted due to missingness)
Multiple R-squared:  0.8106,    Adjusted R-squared:  0.8056
F-statistic:   162 on 54 and 2045 DF,  p-value: < 0.00000000000000022

```

Final Housing Model, Median Home Value

Confidence Intervals

```
confint(z_median_levels_12345678)
```

	2.5 %	97.5 %
(Intercept)	-0.016803901	0.021600341
z_ACS_PCT_BLACK	-0.114549320	-0.038405411
z_ACS_PCT_HISPAN	-0.186253323	-0.111422402
z_SVI_RPL_THEME1_SOCIECO	0.019940292	0.123027553
z_SVI_RPL_THEME2_HH_DISB	-0.018165848	0.039084028
z_SVI_RPL_THEME3_MINO	-0.062333262	0.007360208
z_SVI_RPL_THEME4_HH_TRANS	-0.006263304	0.048679565
z_ACS_PCT_ENGL_NOT_WELL	0.043555314	0.152230414
z_ACS_PCT_NON_CITIZEN	-0.011403740	0.087640913
z_ACS_MEDIAN_AGE	0.044628420	0.115621554
z_food_afford	0.059226732	0.123138996
z_fd_enviro_indx	0.045484027	0.117262582
z_fi_percent	-0.062574577	0.040217160
z_ACS_PCT_FOOD_STAMP	-0.126711105	-0.039784046
z_childelig_lunch_perc	-0.084017697	-0.012532171
z_shp_percent	0.131810254	0.215567970
z_shcb_percent	0.101118188	0.175418604
z_ACS_PCT_NO_VEH	-0.054448377	0.068653397
z_ACS_PCT_RENTER_HH_CHILD	-0.023174805	0.025544164

z_ACS_PCT_MOBILE_HOME	0.013994238	0.068218219
z_ACS_PCT_OWNER_HH_CHILD	-0.165413360	-0.096320546
z_hsg_rate	-0.054950168	-0.012568697
z_sc_percent	-0.012498891	0.051269098
z_ms_average	-0.044306268	0.028714777
z_ACS_PCT_BROADBAND	-0.069493206	0.028622861
z_ACS_PCT_NO_PC	-0.088834241	0.010476714
z_ACS_PCT_SMARTPHONE	-0.055317630	-0.002823439
z_phys_per_cap	0.017333258	0.073576132
z_mhp_per_cap	-0.008354792	0.041045166
z_dents_per_cap	0.023233902	0.079178595
z_uninsur_perc	0.046399036	0.144367326
z_uc_percent	-0.249722485	-0.107974146
z_opcp_rate	-0.073241297	-0.029483393
z_TeenBirths	0.052810394	0.164984296
z_phs_rate	-0.078715845	-0.038492939
z_ms_perc_ann	-0.076288269	-0.029309262
z_AMFAR_AMATFAC	-0.030511437	0.017543533
z_MP_PERCPEN	-0.059806417	-0.022799427
z_AHRF_RURAL_H_CLINIC	-0.013912621	0.019149429
z_pphd_avgnum	0.094869798	0.217966117
z_pmhd_avgnum	-0.140910904	-0.033553499
z_lbw_percent_lbw	0.048337546	0.105104055
z_pi_phy_inact	-0.106475011	-0.059717699
z_cip_perc	-0.089273025	0.006979881
z_csph_perc	-0.050337876	0.016940779
z_ACS_PCT_CHILD_DISAB	-0.026670052	0.011585041
z_unemp_perc	0.022707283	0.077693259
z_ACS_GINI_INDEX	0.067497801	0.117001774
z_ACS_MEDIAN_HH_INCOME	0.735913758	0.830658815
z_ACS_PCT_WORK_NO_CAR	0.034976357	0.138672887
z_soc_assoc_num	-0.169588602	-0.043474464
z_aeo_perc_w_acc	-0.030402522	0.016806374
z_dwv_presence	0.008014404	0.042299982
z_ACS_PCT_HH_PUB_ASSIST	-0.028576869	0.016775157
z_AHRF_TXC_SITE_NO_CNTRL	-0.017052064	0.018217464

Final Housing Model, Median Home Value

VIF

```
vif(z_median_levels_12345678)
```

z_ACS_PCT_BLACK	z_ACS_PCT_HISPAN	z_SVI_RPL_THEME1_SOCIECO
6.956429	5.715010	10.936117
z_SVI_RPL_THEME2_HH_DISB	z_SVI_RPL_THEME3_MINO	z_SVI_RPL_THEME4_HH_TRANS
3.255296	4.682666	2.933058
z_ACS_PCT_ENGL_NOT_WELL	z_ACS_PCT_NON_CITIZEN	z_ACS_MEDIAN_AGE
11.304401	9.020750	4.619171
z_food_afford	z_fd_enviro_indx	z_fi_percent
4.016008	4.455559	10.918442
z_ACS_PCT_FOOD_STAMP	z_childelig_lunch_perc	z_shp_percent
6.933360	4.024957	4.519669
z_shcb_percent	z_ACS_PCT_NO_VEH	z_ACS_PCT_RENTER_HH_CHILD
4.617491	6.786551	2.234374
z_ACS_PCT_MOBILE_HOME	z_ACS_PCT_OWNER_HH_CHILD	z_hsg_rate
3.161852	4.442151	1.563298
z_sc_percent	z_ms_average	z_ACS_PCT_BROADBAND
3.881719	1.831286	10.013244
z_ACS_PCT_NO_PC	z_ACS_PCT_SMARTPHONE	z_phys_per_cap
10.204497	2.871651	2.669997
z_mhp_per_cap	z_dents_per_cap	z_uninsur_perc
2.047125	2.541099	10.300622
z_uc_percent	z_opcp_rate	z_TeenBirths
7.586248	1.754162	14.337099
z_phs_rate	z_ms_perc_ann	z_AMFAR_AMATFAC
1.614182	2.157372	1.842692
z_MP_PERCPEN	z_AHRF_RURAL_H_CLINIC	z_pphd_avgnum
1.326066	1.199983	15.513153
z_pmhd_avgnum	z_lbw_percent_lbw	z_pi_phy_inact
11.630150	3.388931	2.283449
z_cip_perc	z_csph_perc	z_ACS_PCT_CHILD_DISAB
9.967904	4.474292	1.374727
z_unemp_perc	z_ACS_GINI_INDEX	z_ACS_MEDIAN_HH_INCOME
2.466421	2.420498	8.218594
z_ACS_PCT_WORK_NO_CAR	z_soc_assoc_num	z_aeo_perc_w_acc
3.177198	15.808452	2.084639
z_dwv_presence	z_ACS_PCT_HH_PUB_ASSIST	z_AHRF_TXC_SITE_NO_CNTRL

1.176820

1.500470

1.067789

Final Housing Model

DV: Owned HH

IVs: Excludes those IVs that serve as DVs in the housing models –
z_ACS_PCT_RENT_COST_30PCT, z_ACS_MEDIAN_HOME_VALUE,
z_ACS_PCT_OWNED_HH – and the three problematic VIF IVs

Note: Building final model below (R markdown housing doc had groupings only)

```
z_owned_levels_12345678 <- lm(formula = z_ACS_PCT_OWNED_HH ~
  z_ACS_PCT_BLACK + z_ACS_PCT_HISPAN + z_SVI_RPL_THEME1_SOCIECO +
    z_SVI_RPL_THEME2_HH_DISB + z_SVI_RPL_THEME3_MINO + z_SVI_RPL_THEME4_HH_TRANS +
    z_ACS_PCT_ENGL_NOT_WELL + z_ACS_PCT_NON_CITIZEN + z_ACS_MEDIAN_AGE +
    z_food_afford + z_fd_enviro_indx + z_fi_percent + z_ACS_PCT_FOOD_STAMP +
    z_childelig_lunch_perc + z_shp_percent + z_shcb_percent +
    z_ACS_PCT_NO_VEH + z_ACS_PCT_RENTER_HH_CHILD + z_ACS_PCT_MOBILE_HOME +
    z_ACS_PCT_OWNER_HH_CHILD + z_hsg_rate + z_sc_percent +
    z_ms_average + z_ACS_PCT_BROADBAND + z_ACS_PCT_NO_PC +
    z_ACS_PCT_SMARTPHONE + z_phys_per_cap + z_mhp_per_cap +
    z_dents_per_cap + z_uninsur_perc + z_uc_percent + z_opcp_rate +
    z_TeenBirths + z_phs_rate + z_ms_perc_ann + z_AMFAR_AMATFAC +
    z_MP_PERCPEN + z_AHRF_RURAL_H_CLINIC + z_pphd_avgnum +
    z_pmhd_avgnum + z_lbw_percent_lbw + z_pi_phy_inact +
    z_cip_perc + z_csph_perc + z_ACS_PCT_CHILD_DISAB + z_unemp_perc +
    z_ACS_GINI_INDEX + z_ACS_MEDIAN_HH_INCOME + z_ACS_PCT_WORK_NO_CAR +
    z_soc_assoc_num + z_aeo_perc_w_acc + z_dwv_presence +
    z_ACS_PCT_HH_PUB_ASSIST + z_AHRF_TXC_SITE_NO_CNTRL, data = Z_and_Final_Variables_1
summary(z_owned_levels_12345678)
```

Call:

```
lm(formula = z_ACS_PCT_OWNED_HH ~ z_ACS_PCT_BLACK + z_ACS_PCT_HISPAN +
  z_SVI_RPL_THEME1_SOCIECO + z_SVI_RPL_THEME2_HH_DISB + z_SVI_RPL_THEME3_MINO +
  z_SVI_RPL_THEME4_HH_TRANS + z_ACS_PCT_ENGL_NOT_WELL + z_ACS_PCT_NON_CITIZEN +
  z_ACS_MEDIAN_AGE + z_food_afford + z_fd_enviro_indx + z_fi_percent +
  z_ACS_PCT_FOOD_STAMP + z_childelig_lunch_perc + z_shp_percent +
```

```

z_shcb_percent + z_ACS_PCT_NO_VEH + z_ACS_PCT_RENTER_HH_CHILD +
z_ACS_PCT_MOBILE_HOME + z_ACS_PCT_OWNER_HH_CHILD + z_hsg_rate +
z_sc_percent + z_ms_average + z_ACS_PCT_BROADBAND + z_ACS_PCT_NO_PC +
z_ACS_PCT_SMARTPHONE + z_phys_per_cap + z_mhp_per_cap + z_dents_per_cap +
z_uninsur_perc + z_uc_percent + z_opcp_rate + z_TeenBirths +
z_phs_rate + z_ms_perc_ann + z_AMFAR_AMATFAC + z_MP_PERCPEN +
z_AHRF_RURAL_H_CLINIC + z_pphd_avgnum + z_pmhd_avgnum + z_lbw_percent_lbw +
z_pi_phy_inact + z_cip_perc + z_csph_perc + z_ACS_PCT_CHILD_DISAB +
z_unemp_perc + z_ACS_GINI_INDEX + z_ACS_MEDIAN_HH_INCOME +
z_ACS_PCT_WORK_NO_CAR + z_soc_assoc_num + z_aeo_perc_w_acc +
z_dwv_presence + z_ACS_PCT_HH_PUB_ASSIST + z_AHRF_TXC_SITE_NO_CNTRL,
data = Z_and_Final_Variables_10.28.22)

```

Residuals:

Min	1Q	Median	3Q	Max
-3.10220	-0.26273	0.00229	0.26997	2.56469

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	0.0315216	0.0122880	2.565	0.010381
z_ACS_PCT_BLACK	0.1231307	0.0243633	5.054	0.0000004712688492
z_ACS_PCT_HISPAN	0.0086710	0.0239432	0.362	0.717279
z_SVI_RPL_THEME1_SOCIECO	0.0091729	0.0329842	0.278	0.780964
z_SVI_RPL_THEME2_HH_DISB	-0.0472687	0.0183179	-2.580	0.009936
z_SVI_RPL_THEME3_MINO	-0.0489995	0.0222994	-2.197	0.028107
z_SVI_RPL_THEME4_HH_TRANS	-0.0712552	0.0175797	-4.053	0.0000523986156092
z_ACS_PCT_ENGL_NOT_WELL	0.0219432	0.0347721	0.631	0.528072
z_ACS_PCT_NON_CITIZEN	-0.1601764	0.0316907	-5.054	0.0000004702382326
z_ACS_MEDIAN_AGE	0.5003989	0.0227152	22.029	< 0.00000000000000002
z_food_afford	0.0840176	0.0204496	4.109	0.0000413897521466
z_fd_enviro_indx	0.0791299	0.0229665	3.445	0.000582
z_fi_percent	-0.1382390	0.0328896	-4.203	0.0000274592922681
z_ACS_PCT_FOOD_STAMP	-0.0788256	0.0278135	-2.834	0.004641
z_childelig_lunch_perc	0.0302073	0.0228728	1.321	0.186760
z_shp_percent	-0.0386756	0.0267994	-1.443	0.149131
z_shcb_percent	-0.1814494	0.0237734	-7.632	0.0000000000000351
z_ACS_PCT_NO_VEH	-0.1551139	0.0393881	-3.938	0.0000848836201286
z_ACS_PCT_RENTER_HH_CHILD	0.0368198	0.0155883	2.362	0.018269
z_ACS_PCT_MOBILE_HOME	0.1087919	0.0173497	6.271	0.0000000004377235
z_ACS_PCT_OWNER_HH_CHILD	0.2163138	0.0221072	9.785	< 0.00000000000000002
z_hsg_rate	-0.0022723	0.0135605	-0.168	0.866938
z_sc_percent	-0.0607149	0.0204034	-2.976	0.002957
z_ms_average	-0.0128605	0.0233641	-0.550	0.582078

z_ACS_PCT_BROADBAND	-0.0873067	0.0313936	-2.781	0.005468
z_ACS_PCT_NO_PC	-0.0232219	0.0317759	-0.731	0.464984
z_ACS_PCT_SMARTPHONE	0.0154858	0.0167962	0.922	0.356647
z_phys_per_cap	-0.0381167	0.0179957	-2.118	0.034287
z_mhp_per_cap	-0.0063288	0.0158062	-0.400	0.688904
z_dents_per_cap	-0.0555266	0.0179003	-3.102	0.001948
z_uninsur_perc	-0.0426607	0.0313463	-1.361	0.173680
z_uc_percent	0.1423444	0.0453543	3.138	0.001722
z_opcp_rate	-0.0183999	0.0140009	-1.314	0.188929
z_TeenBirths	0.0280699	0.0358916	0.782	0.434260
z_phs_rate	-0.0075966	0.0128699	-0.590	0.555082
z_ms_perc_ann	0.0246894	0.0150316	1.643	0.100639
z_AMFAR_AMATFAC	0.0233972	0.0153758	1.522	0.128243
z_MP_PERCPEN	0.0877825	0.0118409	7.414	0.0000000000001791
z_AHRF_RURAL_H_CLINIC	0.0110666	0.0105786	1.046	0.295628
z_pphd_avgnum	-0.1125025	0.0393863	-2.856	0.004328
z_pmhd_avgnum	0.1720522	0.0343505	5.009	0.0000005949153147
z_lbwr_percent_lbwr	-0.0578723	0.0181632	-3.186	0.001463
z_pi_phy_inact	-0.0290600	0.0149606	-1.942	0.052222
z_cip_perc	0.0070287	0.0307974	0.228	0.819495
z_csph_perc	-0.0888178	0.0215267	-4.126	0.0000384034814516
z_ACS_PCT_CHILD_DISAB	0.0147904	0.0122402	1.208	0.227055
z_unemp_perc	0.1101517	0.0175935	6.261	0.0000000004650198
z_ACS_GINI_INDEX	-0.0033199	0.0158395	-0.210	0.834003
z_ACS_MEDIAN_HH_INCOME	0.1390220	0.0303150	4.586	0.0000047933017209
z_ACS_PCT_WORK_NO_CAR	-0.0552674	0.0331791	-1.666	0.095921
z_soc_assoc_num	-0.1055779	0.0403519	-2.616	0.008951
z_aeo_perc_w_acc	-0.0421766	0.0151051	-2.792	0.005284
z_dwv_presence	-0.0001606	0.0109701	-0.015	0.988321
z_ACS_PCT_HH_PUB_ASSIST	-0.0031208	0.0145110	-0.215	0.829738
z_AHRF_TXC_SITE_NO_CNTRL	0.0129042	0.0112850	1.143	0.252969
(Intercept)	*			
z_ACS_PCT_BLACK	***			
z_ACS_PCT_HISPAN				
z_SVI_RPL_THEME1_SOCIECO				
z_SVI_RPL_THEME2_HH_DISB	**			
z_SVI_RPL_THEME3_MINO	*			
z_SVI_RPL_THEME4_HH_TRANS	***			
z_ACS_PCT_ENGL_NOT_WELL				
z_ACS_PCT_NON_CITIZEN	***			
z_ACS_MEDIAN_AGE	***			
z_food_afford	***			

z_fd_enviro_indx	***
z_fi_percent	***
z_ACS_PCT_FOOD_STAMP	**
z_childelig_lunch_perc	
z_shp_percent	
z_shcb_percent	***
z_ACS_PCT_NO_VEH	***
z_ACS_PCT_RENTER_HH_CHILD	*
z_ACS_PCT_MOBILE_HOME	***
z_ACS_PCT_OWNER_HH_CHILD	***
z_hsg_rate	
z_sc_percent	**
z_ms_average	
z_ACS_PCT_BROADBAND	**
z_ACS_PCT_NO_PC	
z_ACS_PCT_SMARTPHONE	
z_phys_per_cap	*
z_mhp_per_cap	
z_dents_per_cap	**
z_uninsur_perc	
z_uc_percent	**
z_opcp_rate	
z_TeenBirths	
z_phs_rate	
z_ms_perc_ann	
z_AMFAR_AMATFAC	
z_MP_PERCPEN	***
z_AHRF_RURAL_H_CLINIC	
z_pphd_avgnum	**
z_pmhd_avgnum	***
z_lbwt_percent_lbwt	**
z_pi_phy_inact	.
z_cip_perc	
z_csph_perc	***
z_ACS_PCT_CHILD_DISAB	
z_unemp_perc	***
z_ACS_GINI_INDEX	
z_ACS_MEDIAN_HH_INCOME	***
z_ACS_PCT_WORK_NO_CAR	.
z_soc_assoc_num	**
z_aeo_perc_w_acc	**
z_dvw_presence	
z_ACS_PCT_HH_PUB_ASSIST	

z_AHRF_TXC_SITE_NO_CNTRL

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.4576 on 2045 degrees of freedom

(1041 observations deleted due to missingness)

Multiple R-squared: 0.757, Adjusted R-squared: 0.7506

F-statistic: 118 on 54 and 2045 DF, p-value: < 0.00000000000000022

Final Housing Model, Owned HH

Confidence Intervals

```
confint(z_owned_levels_12345678)
```

	2.5 %	97.5 %
(Intercept)	0.007423372	0.0556198013
z_ACS_PCT_BLACK	0.075351248	0.1709100804
z_ACS_PCT_HISPAN	-0.038284581	0.0556264816
z_SVI_RPL_THEME1_SOCIECO	-0.055513167	0.0738589439
z_SVI_RPL_THEME2_HH_DISB	-0.083192340	-0.0113450786
z_SVI_RPL_THEME3_MINO	-0.092731360	-0.0052676779
z_SVI_RPL_THEME4_HH_TRANS	-0.105731192	-0.0367791715
z_ACS_PCT_ENGL_NOT_WELL	-0.046249131	0.0901355885
z_ACS_PCT_NON_CITIZEN	-0.222325736	-0.0980270033
z_ACS_MEDIAN_AGE	0.455851535	0.5449462640
z_food_afford	0.043913422	0.1241218232
z_fd_enviro_indx	0.034089725	0.1241701398
z_fi_percent	-0.202739642	-0.0737384057
z_ACS_PCT_FOOD_STAMP	-0.133371355	-0.0242799209
z_childelig_lunch_perc	-0.014648994	0.0750636764
z_shp_percent	-0.091232633	0.0138813492
z_shcb_percent	-0.228072048	-0.1348267568
z_ACS_PCT_NO_VEH	-0.232358805	-0.0778689468
z_ACS_PCT_RENTER_HH_CHILD	0.006249227	0.0673903998
z_ACS_PCT_MOBILE_HOME	0.074767018	0.1428168512
z_ACS_PCT_OWNER_HH_CHILD	0.172958823	0.2596686958
z_hsg_rate	-0.028866212	0.0243215477
z_sc_percent	-0.100728565	-0.0207012239
z_ms_average	-0.058680354	0.0329593576

z_ACS_PCT_BROADBAND	-0.148873423	-0.0257400444
z_ACS_PCT_NO_PC	-0.085538363	0.0390945738
z_ACS_PCT_SMARTPHONE	-0.017453688	0.0484252977
z_phys_per_cap	-0.073408452	-0.0028249541
z_mhp_per_cap	-0.037326693	0.0246691032
z_dents_per_cap	-0.090631256	-0.0204219691
z_uninsur_perc	-0.104134662	0.0188132605
z_uc_percent	0.053398932	0.2312897960
z_opcp_rate	-0.045857469	0.0090576812
z_TeenBirths	-0.042317887	0.0984577474
z_phs_rate	-0.032835959	0.0176428515
z_ms_perc_ann	-0.004789351	0.0541682090
z_AMFAR_AMATFAC	-0.006756754	0.0535511139
z_MP_PERCPEN	0.064560999	0.1110039104
z_AHRF_RURAL_H_CLINIC	-0.009679482	0.0318126213
z_pphd_avgnum	-0.189743979	-0.0352609660
z_pmhd_avgnum	0.104686636	0.2394176780
z_lbwt_percent_lbwt	-0.093492591	-0.0222519448
z_pi_phy_inact	-0.058399694	0.0002796443
z_cip_perc	-0.053368861	0.0674262929
z_csph_perc	-0.131034325	-0.0466011801
z_ACS_PCT_CHILD_DISAB	-0.009214213	0.0387950376
z_unemp_perc	0.075648686	0.1446548055
z_ACS_GINI_INDEX	-0.034383070	0.0277432634
z_ACS_MEDIAN_HH_INCOME	0.079570591	0.1984734319
z_ACS_PCT_WORK_NO_CAR	-0.120335734	0.0098009967
z_soc_assoc_num	-0.184713019	-0.0264427125
z_aeo_perc_w_acc	-0.071799624	-0.0125535583
z_dwt_presence	-0.021674405	0.0213531960
z_ACS_PCT_HH_PUB_ASSIST	-0.031578672	0.0253370630
z_AHRF_TXC_SITE_NO_CNTRL	-0.009226987	0.0350354484

Final Housing Model, Owned HH

VIF

```
vif(z_owned_levels_12345678)
```

z_ACS_PCT_BLACK
6.956429

z_ACS_PCT_HISPAN
5.715010

z_SVI_RPL_THEME1_SOCIECO
10.936117

z_SVI_RPL_THEME2_HH_DISB	z_SVI_RPL_THEME3_MINO	z_SVI_RPL_THEME4_HH_TRANS
3.255296	4.682666	2.933058
z_ACS_PCT_ENGL_NOT_WELL	z_ACS_PCT_NON_CITIZEN	z_ACS_MEDIAN_AGE
11.304401	9.020750	4.619171
z_food_afford	z_fd_enviro_indx	z_fi_percent
4.016008	4.455559	10.918442
z_ACS_PCT_FOOD_STAMP	z_childelig_lunch_perc	z_shp_percent
6.933360	4.024957	4.519669
z_shcb_percent	z_ACS_PCT_NO_VEH	z_ACS_PCT_RENTER_HH_CHILD
4.617491	6.786551	2.234374
z_ACS_PCT_MOBILE_HOME	z_ACS_PCT_OWNER_HH_CHILD	z_hsg_rate
3.161852	4.442151	1.563298
z_sc_percent	z_ms_average	z_ACS_PCT_BROADBAND
3.881719	1.831286	10.013244
z_ACS_PCT_NO_PC	z_ACS_PCT_SMARTPHONE	z_phys_per_cap
10.204497	2.871651	2.669997
z_mhp_per_cap	z_dents_per_cap	z_uninsur_perc
2.047125	2.541099	10.300622
z_uc_percent	z_opcp_rate	z_TeenBirths
7.586248	1.754162	14.337099
z_phs_rate	z_ms_perc_ann	z_AMFAR_AMATFAC
1.614182	2.157372	1.842692
z_MP_PERCPEN	z_AHRF_RURAL_H_CLINIC	z_pphd_avgnum
1.326066	1.199983	15.513153
z_pmhd_avgnum	z_lbw_percent_lbw	z_pi_phy_inact
11.630150	3.388931	2.283449
z_cip_perc	z_csph_perc	z_ACS_PCT_CHILD_DISAB
9.967904	4.474292	1.374727
z_unemp_perc	z_ACS_GINI_INDEX	z_ACS_MEDIAN_HH_INCOME
2.466421	2.420498	8.218594
z_ACS_PCT_WORK_NO_CAR	z_soc_assoc_num	z_aeo_perc_w_acc
3.177198	15.808452	2.084639
z_dwv_presence	z_ACS_PCT_HH_PUB_ASSIST	z_AHRF_TXC_SITE_NO_CNTRL
1.176820	1.500470	1.067789