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# ISSUE BRIEF: COLLEGE STUDENTS' SOCIAL CAPITAL AND THEIR PERCEPTIONS OF LOCAL AND NATIONAL COHESION *

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ABSTRACT: Using Queens College (a four-year college in NYC public system) students' survey data from 2022/23, we find that vulnerable students have less social capital in terms of physical order and social support in their neighborhoods. While social capital is directly related to self-reported neighborhood and national cohesion, resilience, and better mental health, different components of social capital matter for specific demographics.
Physical order is more salient for less vulnerable students while social support is more salient for vulnerable students. Our findings underscore the need for policy action to be tailored to specific groups, rather than following a one-size-fits-all approach.

JEL Codes: I24
Keywords: Social cohesion, social capital, college students, mental health.

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# Introduction

The US Surgeon General warned that 15- to 24-year-olds were facing "devastating" mental health effects due to the challenges experienced by their generation. Previous studies have examined the mental health of college students, including different vulnerable groups (Gopalan & Brady, 2020; Cadenas & Nienhusser, 2020). Separately, there is a literature linking social capital and mental health (Almedom, 2005) along with a literature on social cohesion. For young people, Demack et al. (2010) find a link between the perceived neighborhood cohesion and country cohesion.

Taking advantage of a 2022 survey on students from a commuter four-year college in New York City public university system, we analyze the association between neighborhood social capital and social cohesion, students' resilience and mental health.

# Methods & Results

We used spring and fall 2022 survey responses from 805 students to compile two measures of neighborhood-of-residence social capital (physical order and social support) and two measures of cohesion (local and societal)—see Appendix Table A.1. The physical order measure is based on statements about the physical capital of the neighborhood such as "There are trees along the streets". The social support measure is based on the students' and their neighbors' involvement in group activities and community support. Overall, students had slightly positive views for physical order (M = 1.96 on 0-3 scale, SD = 0.51), and slightly negative views for social support (M = 0.95 on 0-3 scale, SD = 0.69).

Mean levels of social capital were lower for the most vulnerable students (Figure 1). Greater physical-order differences arose between minority and white students, and Pell and non-Pell recipients. Female and first-generation college students also rated physical order lower than their counterparts. Gender and race differences in social support were smaller (and only statistically significant between Blacks and whites), but both Pell and first-generation students reported having less social support than their counterparts.

We also explored associations between students' social capital and their: (a) local cohesion, which captures neighbors' level of tolerance to racial and religious diversity (M = 2.23 on 0-3 scale, SD = 0.65); (b) societal cohesion, which captures the degree of discrimination and opportunity in the U.S. (M = 1.40 on 0-3 scale, SD = 0.63); (c) resilience (M = 0.67 on 0.2-1 scale, SD = 0.13), and (d) mental health[1]. All of our measures have internal validity.

We regressed each outcome on students' reported physical order, social support, and demographic variables. Albeit capturing associations, not causal relationships, these results are useful for understanding which factors of social capital are associated with cohesion, and wellbeing, and for which subgroups.

Overall, higher physical order is associated with higher local and societal cohesion as

[1]Our mental health index is the negative of the sum of students' standardized depression (M = 9.24 on 0-27 scale, SD = 6.20), anxiety (M = 7.73 on 0-21 scale, SD = 5.61), and post-traumatic stress (PTS) scores (M = 22.96 on 0-80 scale, SD = 17.92). Since we take the negative, a positive mental health score means above average mental health.

well as higher resilience and better mental health (column 1, Table 1). Higher social support is also associated with all of these variables except for mental health. Both associations tend to hold across subgroups, but there are important socio-demographic differences.

First, physical order is considerably more salient for males' local cohesion than for females' (column 2, Table 1), whereas social support is salient for females' local cohesion and males' societal cohesion. In the Appendix, Table A.7 shows that access to public transportation and public parks is directly related to males' local cohesion. For females, it is well-lit streets that are associated with local cohesion.

Second, while there are no significant differences across races, there is a clear pattern revealing that physical order is less salient for Blacks' and Hispanics' local cohesion and resilience, whereas social support matters more for their societal cohesion and resilience.

Third, while physical order has a stronger association with local cohesion and mental health for Pell recipients, it is less salient for Pell and first-generation students' societal cohesion. Social support is associated with Pell and first-generation students' societal cohesion but not the societal cohesion of their counterparts.

# Discussion

We find that an increase in social capital is associated with better views of local and national cohesion as well as better mental health. Yet, the type of social capital matters for specific demographics. For non-vulnerable students, physical order tends to be associated with cohesion, resilience, and mental health. It is more associated with local cohesion for males, Asians, and whites; with resilience for Asians and whites; and with societal cohesion for non-Pell recipients and students whose parents graduated from college. In contrast, social support is more salient for vulnerable students' cohesion and wellbeing: it is more associated with societal cohesion for Black, Hispanic, Pell, and first-generation students; with local cohesion for female and Pell students; and with resilience for Blacks and Hispanics. Hence, the relationship between social capital and health is context specific as in Shiell et al. (2020). Efforts at improving cohesion or mental health likely need to consider different approaches depending on the target population.

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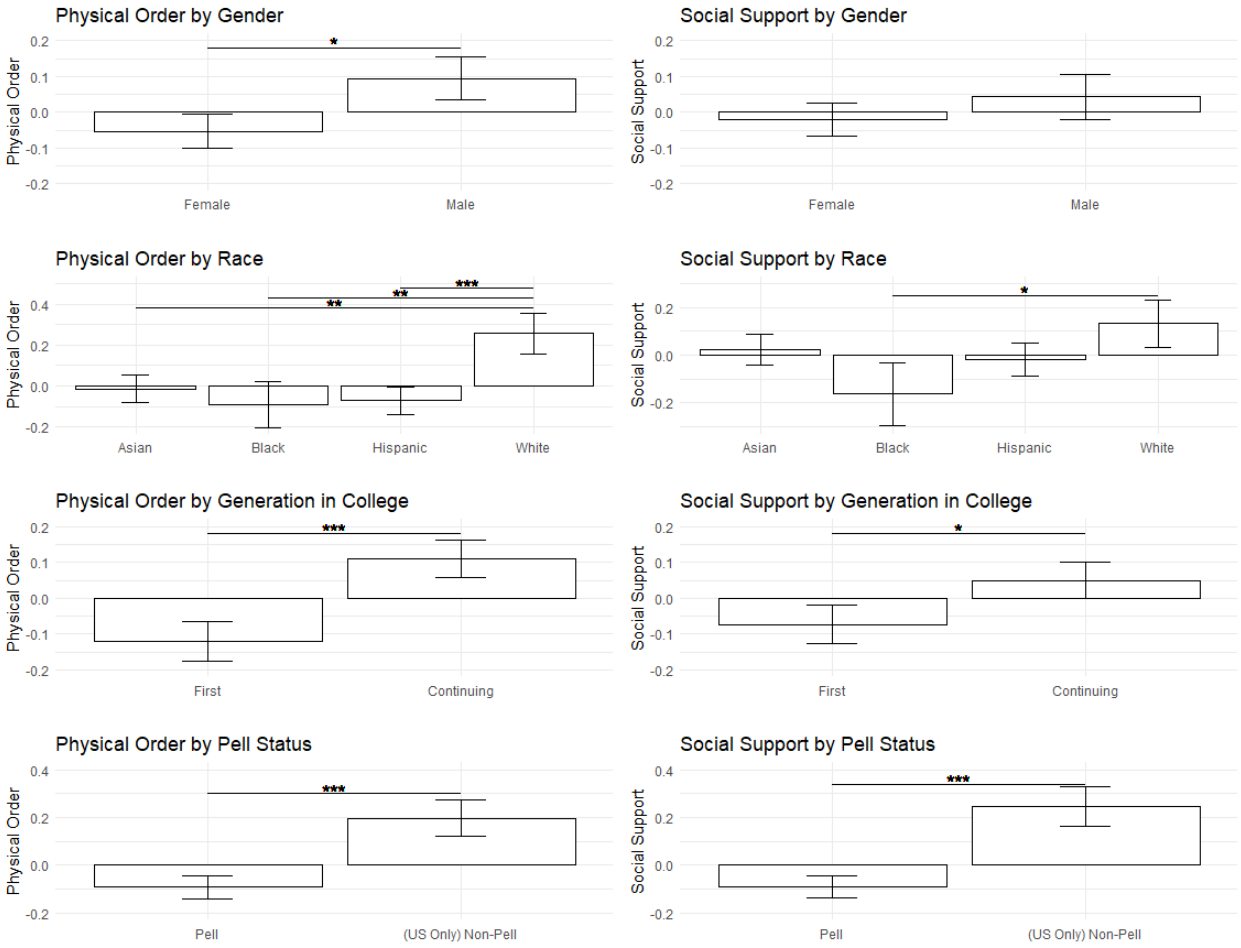



Figure 1: Students' Social Capital by Key Characteristics

*Note*: Physical order and social support are standardized to have means of 0 and standard deviations of 1. Height and placement of boxes show the means for each subgroup. Error bars represent standard errors. Means are significantly different at the 10% (*), 5% (**), and 1% (***) level.

Table 1: Cohesion and Mental Health by Social Capital

| | Whole Sample | Female | Male | Black or Hispanic | Any Other Race | Pell | (US Only) Non-Pell | First Generation | Continuing Generation |
|---|---|---|---|---|---|---|---|---|---|
| *Dependent variable: Local Cohesion* | | | | | | | | | |
| Physical Order | $0.186^{***}$ | $0.125^{***\dagger\dagger}$ | $0.300^{***}$ | $0.120^{**}$ | $0.225^{***}$ | $0.231^{***}$ | 0.058 | $0.183^{***}$ | $0.175^{***}$ |
| | (0.042) | (0.045) | (0.082) | (0.060) | (0.055) | (0.054) | (0.081) | (0.059) | (0.060) |
| Social Support | $0.081^{*}$ | $0.123^{**}$ | −0.006 | 0.067 | $0.105^{*}$ | $0.117^{**}$ | −0.003 | $-0.007^{\dagger}$ | $0.148^{***}$ |
| | (0.042) | (0.055) | (0.064) | (0.060) | (0.056) | (0.052) | (0.084) | (0.069) | (0.052) |
| Observations | 648 | 415 | 233 | 277 | 371 | 402 | 162 | 295 | 353 |
| Adjusted $R^2$ | 0.042 | 0.034 | 0.131 | 0.020 | 0.059 | 0.099 | −0.025 | 0.023 | 0.062 |
| *Dependent variable: Societal Cohesion* | | | | | | | | | |
| Physical Order | $0.118^{***}$ | $0.131^{***}$ | 0.095 | 0.105 | $0.131^{***}$ | $0.043^{\dagger\dagger}$ | $0.257^{***}$ | $0.024^{\dagger}$ | $0.177^{***}$ |
| | (0.038) | (0.048) | (0.066) | (0.065) | (0.048) | (0.048) | (0.082) | (0.061) | (0.049) |
| Social Support | $0.073^{*}$ | 0.048 | $0.121^{*}$ | $0.118^{**}$ | 0.044 | $0.103^{*}$ | −0.015 | $0.156^{***\dagger}$ | 0.034 |
| | (0.040) | (0.050) | (0.068) | (0.058) | (0.058) | (0.053) | (0.069) | (0.058) | (0.056) |
| Observations | 640 | 406 | 234 | 274 | 366 | 396 | 162 | 291 | 349 |
| Adjusted $R^2$ | 0.135 | 0.118 | 0.109 | 0.060 | 0.093 | 0.099 | 0.118 | 0.155 | 0.133 |
| *Dependent variable: Resilience* | | | | | | | | | |
| Physical Order | $0.107^{***}$ | $0.109^{**}$ | $0.139^{**}$ | 0.030 | $0.154^{***}$ | 0.086 | 0.102 | $0.130^{**}$ | 0.082 |
| | (0.041) | (0.050) | (0.070) | (0.069) | (0.050) | (0.054) | (0.082) | (0.061) | (0.056) |
| Social Support | $0.098^{***}$ | 0.062 | $0.175^{***}$ | $0.159^{***}$ | 0.060 | $0.090^{*}$ | $0.125^{*}$ | $0.106^{*}$ | $0.098^{*}$ |
| | (0.037) | (0.046) | (0.065) | (0.056) | (0.053) | (0.050) | (0.064) | (0.055) | (0.054) |
| Observations | 649 | 415 | 234 | 278 | 371 | 403 | 163 | 295 | 354 |
| Adjusted $R^2$ | 0.053 | 0.058 | 0.035 | 0.064 | 0.041 | 0.039 | 0.153 | 0.041 | 0.055 |
| *Dependent variable: Mental Health* | | | | | | | | | |
| Physical Order | $0.173^{***}$ | $0.195^{***}$ | $0.163^{**}$ | $0.130^{**}$ | $0.177^{***}$ | $0.197^{***}$ | 0.096 | $0.195^{***}$ | $0.155^{***}$ |
| | (0.042) | (0.050) | (0.073) | (0.065) | (0.055) | (0.054) | (0.084) | (0.062) | (0.057) |
| Social Support | 0.025 | 0.013 | 0.060 | 0.076 | 0.001 | 0.027 | 0.053 | 0.057 | 0.011 |
| | (0.037) | (0.045) | (0.064) | (0.054) | (0.052) | (0.049) | (0.070) | (0.058) | (0.050) |
| Observations | 599 | 385 | 214 | 251 | 348 | 374 | 150 | 270 | 329 |
| Adjusted $R^2$ | 0.053 | 0.054 | 0.007 | 0.016 | 0.070 | 0.050 | 0.051 | 0.054 | 0.042 |

*Note:* $^{*}$p<0.1; $^{**}$p<0.05; $^{***}$p<0.01

*Note*: Estimates in each column are from OLS regressions run for the whole sample then separately for each subgroup of each outcome variable on the student's physical order, social support and dummies for whether the student is female, Asian, Black, Hispanic, or another race, the first-generation of their family in college, a Pell recipient, younger than 23 years old, a freshman or a sophomore, a transfer student and whether the student has at least one 0-5 year-old child living in the same household or has at least one 6-17 year-old child living in the same household. All regressions use robust standard errors with those reported in parentheses below the estimates. Physical order, social support, and the four outcome variables are standardized to have means of 0 and standard deviations of 1.

The coefficient on physical order or social support is significantly different from the analogous coefficient in the next column at the 10 ($^{\dagger}$), 5 ($^{\dagger\dagger}$), or 1($^{\dagger\dagger\dagger}$)% level. Significance found using same regression as in the first column with physical order and social support interacted with the relevant dummy variable.

$^{*}$p<0.1; $^{**}$p<0.05; $^{***}$p<0.01

# Appendix

This appendix gives additional details about the data and measures used in "College Students' Social Capital and their Perceptions of Local and National Cohesion" as well as some additional analysis. The analysis takes the form of a robustness check for the main results in Table 1 by including zip code data. We find that our main results hold and that the supplemental analysis provides some additional context for students' perceptions of their neighborhood. We will discuss that context below.

# 1 Data

Our main source of data is survey data fielded in Spring and Fall 2022[2]. The survey was sent to a random sample of 18-year old or older students seeking an undergraduate degree at Queens College, a four-year college in the New York City public system.

In the survey, students were asked to: (1) give consent to participate in the workshop and access their administrative records; (2) enter their contact information and CUNY student ID; and (3) respond to questions regarding their resilience, mental health, neighborhood social capital, social cohesion in their neighborhood and in the US, country of birth, and first-generation in college status.

## 1.1 Social Capital and Cohesion

To capture students' perceptions of where they live, we asked them 13 questions about their own neighborhood. The questions are divided into 3 categories: physical order, social support, and local cohesion. Physical order represents personal amenities like access to transit and parks while social support represents social amenities like helpful neighbors and local groups/organizations. Social support was assessed via the *Southeastern Pennsylvania Household Health Survey (SPHHS) 2018–2019* (Ransome et al. 2021 ). Local cohesion refers to how well people within the neighborhood get along and is called local to differentiate from the 5 additional questions about students' views of the United States (societal cohesion). Both local and societal cohesion were assessed via questionnaires from Laurence and Heath (2008). The full set of questions are listed in Table A.1 and the responses are shown in Figures A.1-A.4.

[2]Rodríguez-Planas received IRB approval (IRB file #2021-0586) on August 21st 2021 to conduct this student online survey.

Table A.1: Neighborhood/Social Questions

| Category | Questions |
|---|---|
| Physical Order | (1) There are trees along the streets in my neighborhood.<br><br>(2) My neighborhood is generally free from litter.<br><br>(3) There are many attractive natural sights in my neighborhood (such as landscaping, views).<br><br>(4) There are attractive buildings/homes in my neighborhood.<br><br>(5) It is easy to walk to a transit stop (bus, train) from my home.<br><br>(6) My neighborhood streets are well lit at night.<br><br>(7) There is a high crime rate in my neighborhood.<br><br>(8) I have access to public parks near my neighborhood. |
| Social Support | (1) How likely are people in your neighborhood willing to help their neighbors with routine activities such as picking up their trash cans or helping to shovel snow?<br><br>(2) How many local groups or organizations in your neighborhood do you currently belong to (such as social, political, religious, school-related, or athletic organizations)?<br><br>(3) How often do people in your neighborhood work together to improve your neighborhood (such as picking up litter, planting flowers)? |
| Local Cohesion | (1) My local area is a place where people from different racial, ethnic, and religious backgrounds mix well together.<br><br>(2) The people in my neighborhood usually respect each other's religious differences. |
| Societal Cohesion | (1) In the US, it is easier now for people like me to improve things for myself than it was for my parents.<br><br>(2) The US is a place where people are usually treated fairly no matter what background they come from.<br><br>(3) The US is a free country where everyone's rights are respected no matter what their background.<br><br>(4) In the US today, people like me are discriminated against.<br><br>(5) The Government in the US treats people like me fairly. |

Nearly every question has 4 possible responses[3] ranging from most negative (for which we assign a value of 0) to most positive (for which we assign a value of 3). Students on average rate physical order and local cohesion positively. This fact is really clear when looking at local cohesion (Figure A.3) where only 15.5% said people with different backgrounds did not mix well in their local area and 8.9% said people in their neighborhood did not respect religious differences. As a comparison, those numbers for 17-18 year-old students in England are 26 and 21%[4]. Physical order is harder to compare as studies use a variety of questions, but a nationally representative sample in Australia[5] has similar questions and responses as ours with the average response (most negative 0 to most positive 3) to our 8 questions being 1.96 and to their 5 questions being 1.89 with standard deviations of 0.51 and 0.55 for each[6]. Meanwhile, social support is less positive especially for whether a respondent is in a local group with only 24.7% being in at least one. In a panel of British respondents 16 or older out of 164,661 households, 53% were in at least one group[7]. This discrepancy can partially be explained by the high share of CUNY students who work while in school.

## 1.2 Resilience and Mental Health

We measure resilience and mental health with clinically validated assessment tools. Students' resilience level was measured with the 16-item Predictive 6 Factor Resilience Scale (PR6), from Rossouw & Rossouw (2016) , which incorporates health and six domains of psychological resilience: vision, composure, momentum, tenacity, reasoning, and collaboration. PR6 asks individuals how well the following statement define them as a person, with questions such as "I have clear goals that I am working towards" or "I struggle to stay motivated" where the student chooses to respond with a scale 1 to 5 where 1 is "not at all like me" and 5 is "very much like me"[8]. Average scores are calculated within each domain, and the overall average score across all domains is used to determine each student's overall resilience. If a student did not respond to one of the questions, the average score within that domain for such student is calculated across the responses in that domain for which we have information. The PR6 is a psychological resilience measurement tool with a focus on the psychological aspects of resilience. The PR6 has internal consistency score of 0.8398, with each domain separately validated (Rossouw & Rossouw, 2016).

To measure mental health, we use three, publicly-available questionnaires used to assess depression, anxiety, and post-traumatic stress (PTS). To measure depression, we used the nine-item Patient Health Questionnaire-9 (PHQ-9), which asks individuals whether they have been bothered by different symptoms over the past two weeks as shown in Appendix Table A.1. Each of the 9 items is rated on a 4-point scale ranging from 0 (not at all) to 3 (nearly every day). We add up these values across the 9 questions to get a depression

[3]The exception is question 2 for social support. The negative response (value of 0) is being in no local groups while the positive (value of 3 to match the range of the other variables) is being in at least one.

[4]Source: Demack, S. et al., 2010.

[5]Source: Fong, P. et al., 2019.

[6]Mean and standard deviation converted from their 1-5 scale to our 0-3 scale.

[7]Source: Langella, M. & Manning, A., 2019.

[8]Because of proprietary reasons, we are not allowed to disclose the full set of questions in the PR6 questionnaire. For more information on how to access the questionnaire, see https://home.hellodriven.com/research/pr6-model/

Figure A.1: Responses to Physical Order Questions


Figure A.2: Responses to Social Support Questions

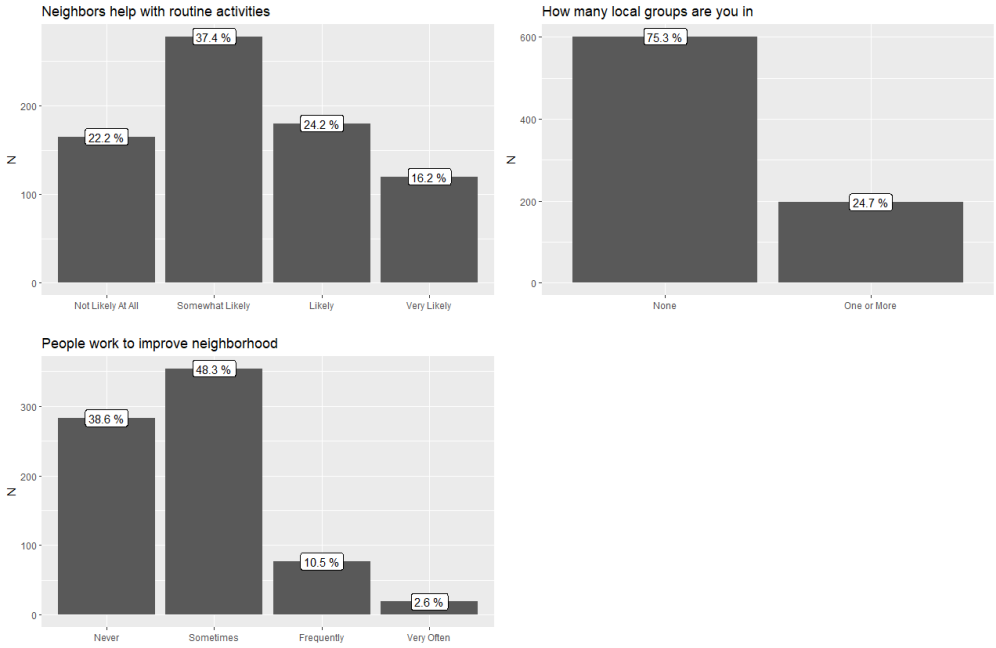


Figure A.3: Responses to Local Cohesion Questions

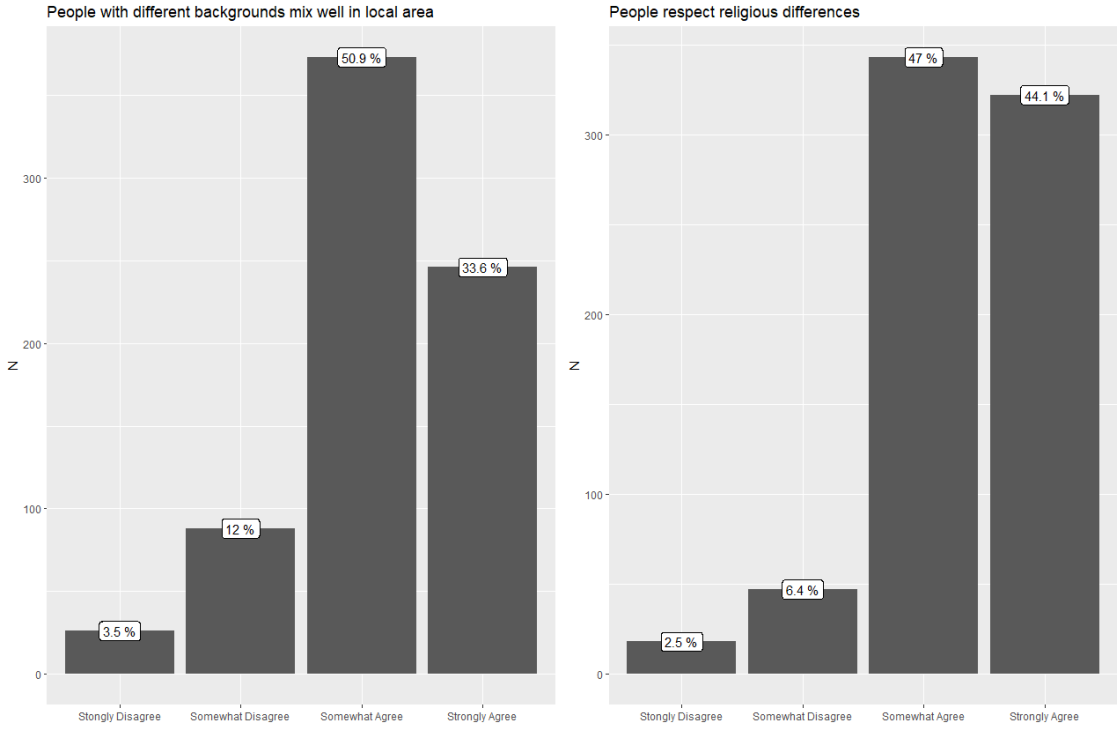
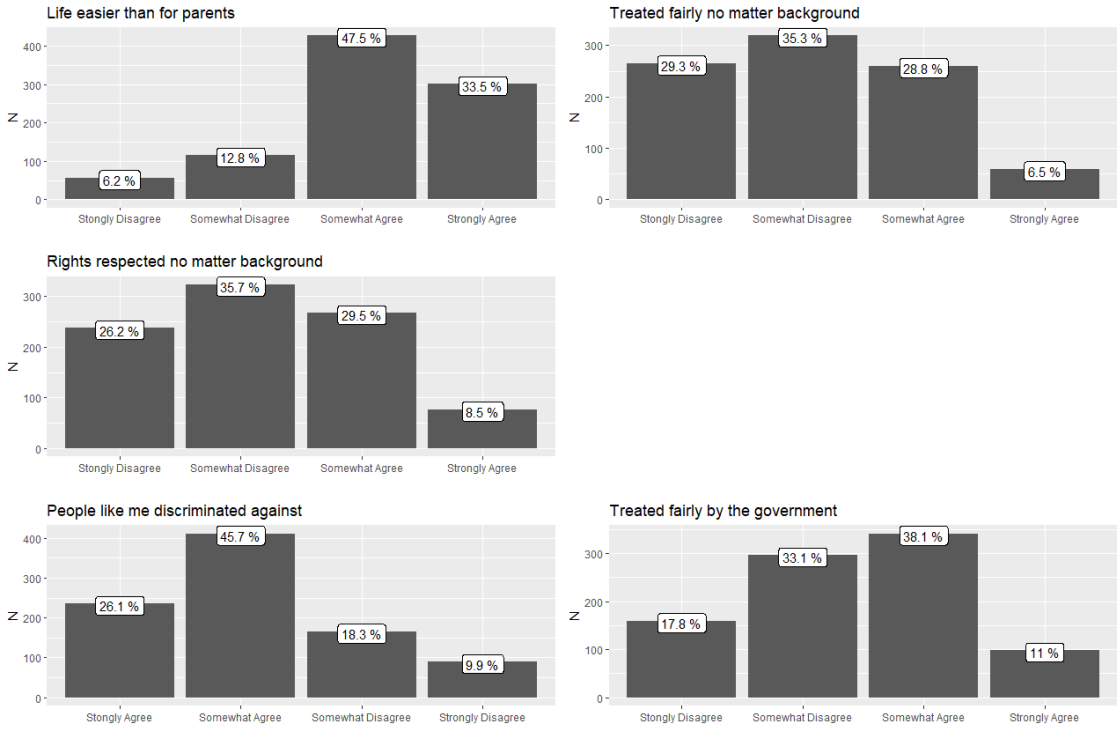



Figure A.4: Responses to Societal Cohesion Questions



score ranging from 0 to 27. The PHQ-9 has demonstrated internal reliability, with previous analyses documenting a Cronbach's alpha value of .89 and a test–retest reliability correlation of .84. It also has demonstrated a sensitivity of 88.0% for scores of 10 and higher (Kroenke et al. 2001 ). To measure anxiety, we used the seven-item Generalized Anxiety Disorder-7 (GAD-7), which asks individuals whether they have been bothered by different problems over the last two weeks as shown in Appendix Table A.2. Respondents rate the seven items using a 4-point scale ranging from 0 (not at all) to 3 (nearly every day). We add up these values across the 7 questions to get an anxiety score ranging from 0 to 21. The GAD-7 has strong internal reliability (Cronbach's $\alpha = .92$) as well as a test–retest correlation of .83. It has demonstrated a sensitivity of 89.0% for a cutoff score of 10 (Spitzer et al. 2006).

We also measure students' post-traumatic stress (PTS) with the PCL-5, a 20-item self-reported measure that assesses the 20 DSM-5 symptoms of post-traumatic stress disorder. The PCL-5 asks individuals whether they have been bothered with a list of problems in the last month, as shown in Appendix Table A.3 (Weathers et al., 2013). Respondents rate each item from 0 ("not at all") to 4 ("extremely") to indicate the degree to which they have been bothered by that particular symptom over the past month (or past week if using the PCL-5 weekly). We add up these values across the 20 questions to get a PTS score ranging from 0 to 80. The PCL-5 test scores have demonstrated strong internal consistency ($\alpha = .94$ to .96), test-retest reliability (rs = .74 to .85), and convergent and discriminant validity (Blevins et al., 2015; Bovin et al., 2016 ).

To construct one measure of mental health, we combine the depression, anxiety, and PTS scores by first standardizing each score to have mean 0 and standard deviation 1, multiplying each by negative one so that a positive score reflects better than average mental health, and then adding up each component and dividing by 3 to get an average standardized mental health measure. The resilience measure just takes the overall resilience score described above (which has a possible range of 0.2 to 1) and standardizes it to have mean 0 and standard deviation 1. The score is already defined so that a positive score would mean better than average resilience.

## 1.3 Demographic Variables and Zip Code

Along with their perceptions of their neighborhood, we have basic demographic variables reported by the students (country of origin, whether she is a first-generation student, and whether a child lives in the same household) or available from academic records (gender, race, age, class, Pell-grant status, and whether she is a transfer student or not). All of these are summarized in Table A.5. For the race variable, Hispanic includes Hispanic students of any race while all others only include non-Hispanic students. For gender, we also have students' self-reported gender but due to a small sample of students who reported something other than male or female (2.1%), we used the gender reported in the academic record which was reported as male or female. The gender reported in the survey responses was still useful in order to input the gender of 25 out of the 26 observations missing gender in their academic records. At the same time, the 84 students that are non-Pell but born outside the U.S. were not included since they may be undocumented or international students and, hence, ineligible for Pell.

Using the zip codes reported in their academic record, we observe that the respondents

Table A.2: Categories and Questions for Depression Index (PHQ-9 Scale)

| | |
|---|---|
| Prompt | Over the LAST TWO WEEKS, how often have you been bothered by any of the following problems? |
| Responses | Not At All (0)<br>Several Days (1)<br>More than Half the Days (2)<br>Nearly Every Day (3) |
| Questions | Statements |
| 1 | Little interest or pleasure in doing things |
| 2 | Feeling down, depressed, or hopeless |
| 3 | Trouble falling or staying asleep, or sleeping too much |
| 4 | Feeling tired or having little energy |
| 5 | Poor appetite or overeating |
| 6 | Feeling bad about yourself - or that you are a failure or have let yourself or your family down |
| 7 | Trouble concentrating on things, such as reading the newspaper or watching television |
| 8 | Moving or speaking so slowly that other people could have noticed. Or the opposite - being so fidgety or restless that you have been moving around a lot more than usual |
| 9 | Thoughts that you would be better off dead, or hurting yourself |

Table A.3: Categories and Questions for Anxiety Index (GAD-7 Scale)

| | |
|---|---|
| Prompt | Over the LAST TWO WEEKS, how often have you been bothered by any of the following problems? |
| Responses | Not At All (0)<br>Several Days (1)<br>More than Half the Days (2)<br>Nearly Every Day (3) |
| Questions | Statements |
| 1 | Feeling nervous, anxious, or on edge |
| 2 | Not being able to stop or control worrying |
| 3 | Worrying too much about different things |
| 4 | Trouble relaxing |
| 5 | Being so restless that it's hard to sit still |
| 6 | Becoming easily annoyed or irritable |
| 7 | Feeling afraid as if something awful might happen |

Table A.4: Questions for PTS Index (PCL-5 Scale)

| Responses | Not At All (0)<br>A Little Bit (1)<br>Moderately (2)<br>Quite A Bit (3)<br>Extremely (4) |
|---|---|
| Questions | Statements |
| 1 | Repeated, disturbing, and unwanted memories of the stressful experience? |
| 2 | Repeated, disturbing dreams of the stressful experience? |
| 3 | Suddenly feeling or acting as if the stressful experience was actually happening again (as if you were actually back there reliving it)? |
| 4 | Feeling very upset when something reminded you of the stressful experience? |
| 5 | Having strong physical reactions when something reminded you of the stressful experience (for example, heart pounding, trouble breathing, sweating)? |
| 6 | Avoiding memories, thoughts, or feelings related to the stressful experience? |
| 7 | Avoiding external reminders of the stressful experience (for example, people, places, conversations, activities, objects, or situations)? |
| 8 | Trouble remembering important parts of the stressful experience? |
| 9 | Having strong negative beliefs about yourself, other people, or the world (for example, having thoughts such as: I am bad, there is something seriously wrong with me, no one can be trusted, the world completely dangerous)? |
| 10 | Blaming yourself or someone else for the stressful experience or what happened after it? |
| 11 | Having strong negative feelings such as fear, horror, anger, guilt, or shame? |
| 12 | Loss of interest in activities that you used to enjoy? |
| 13 | Feeling distant or cut off from other people? |
| 14 | Trouble experiencing positive feelings (for example, being unable to feel happiness or have loving feeling for people close to you)? |
| 15 | Irritable behavior, angry outbursts, or acting aggressively? |
| 16 | Taking too many risks or doing things that could cause you harm? |
| 17 | Being “super-alert” or watchful or on guard? |
| 18 | Feeling jumpy or easily startled? |
| 19 | Having difficulty concentrating? |
| 20 | Trouble fall or staying asleep? |

Table A.5: Sample of 805 Students vs All Undergraduates at Queens College

| Variable | N | Value | % in Sample | % Enrolled at QC Fall 2021[a] |
|---|---|---|---|---|
| GENDER | 804 | Male | 35.6 | 45.9 |
| | | Female | 64.4 | 54.1 |
| RACE | 779 | American Indian or Alaska Native | 0.3 | - |
| | | Asian | 31.7 | 30.8[b] |
| | | Black | 9.6 | 8.8 |
| | | Hispanic | 32.6 | 28.9 |
| | | Native Hawaiian or Other Pacific Islander | 0.3 | - |
| | | White | 13.5 | 23.3 |
| | | Two or more races | 2.8 | 3.0 |
| | | Nonresident alien | 9.2 | 4.8 |
| BORN IN | 695 | USA | 68.3 | 72.2 |
| | | Other Country | 31.7 | 27.8 |
| PELL | 779 | Yes | 62.5 | 48.1 |
| | | No | 37.5 | 51.9 |
| FIRST GENERATION | 697 | Yes | 45.6 | |
| | | No | 54.4 | |
| AGE | 779 | UNDER 19 | 20.2 | 20.1 |
| | | 19 | 16.2 | 12.8 |
| | | 20 - 22 | 38.9 | 35.1 |
| | | 23 - 24 | 8.2 | 10.9 |
| | | 25 - 29 | 8.2 | 12.1 |
| | | 30 - 44 | 6.4 | 7.6 |
| | | 45 & OVER | 1.9 | 1.5 |
| CLASS | 779 | Freshman | 26.8 | |
| | | Sophomore | 17.6 | |
| | | Junior | 25.2 | |
| | | Senior | 30.4 | |
| TRANSFER | 777 | Yes | 38.1 | 40.0 |
| | | No | 61.9 | 60.0 |
| HAS 0-5 y.o. in HOUSE | 798 | Yes | 8.3 | |
| | | No | 91.7 | |
| HAS 6-17 y.o. in HOUSE | 798 | Yes | 32.0 | |
| | | No | 68.0 | |

[a] Source: https://www.qc.cuny.edu/ie/college-profile/. All statistics are from the undergraduate table in the Profile of Enrolled Students page except for transfer status which is found under Enrollment Trends.
[b] Includes Pacific Islander.

to the survey live in a diverse set of neighborhoods. All the zip codes are within the state of New York, and out of the 633 students with zip code data, 480 (75.8%) are in Queens and another 63 are in another borough of New York City leaving only 90 students (14.2%) living outside the city. The furthest zip code is in Poughkeepsie which is less than a 2 hour drive to Queens College.

Using 2016-2020 data for the U.S. Census Bureau's Zip Code Tabulation Areas (ZCTAs) compiled by the American Community Survey, we can compare each zip code by population, race, and poverty level. In Table A.6, you can see that on average our sample lives in more densely populated zip codes than the averages for Queens or New York City. Regarding racial distribution, our sample is comparable to Queens but with slightly higher Asian and Hispanic populations and lower Black and white populations. The standard deviations for each variable show that the zip codes in our sample are at least as varied demographically as Queens or New York City with the exception of the poverty rate which has a lower standard deviation but a higher mean than Queens. In Table A.11, we use these variables as well as a measure of the diversity in each zip code (the entropy score) that simply uses the percentages of the population from each ethnicity[9].

Table A.6: Demographics by Zip Code

| | Mean | | | SD | | |
|---|---|---|---|---|---|---|
| Variable | Students[a] | Queens | NYC | Students[a] | Queens | NYC |
| Population (1000s) | 51.3 | 36.0 | 40.6 | 27.0 | 24.2 | 29.6 |
| % Asian | 26.0 | 24.2 | 14.8 | 19.5 | 17.1 | 14.2 |
| % Black | 15.5 | 18.6 | 19.5 | 21.0 | 26.4 | 19.1 |
| % Hispanic | 27.7 | 24.1 | 26.2 | 17.7 | 14.6 | 19.1 |
| % White | 26.3 | 28.2 | 35.7 | 21.9 | 21.7 | 25.8 |
| % in Poverty | 12.6 | 11.6 | 15.5 | 6.7 | 9.1 | 10.2 |

[a] Means and standard deviations are across the 136 zip codes in sample (including outside NYC) that report the variables in the table weighted by number of students in that zip code (which adds up to 628 students).

# 2 Supplemental Analyses

## 2.1 Social Capital by Individual Items

As mentioned in the brief, we ran regressions like the ones presented in Table 1 but with physical order and social support separated into their individual question items (8 for physical order and 3 for social support). For the regressions in Tables A.7-A.10, we standardized each item to have mean 0 and standard deviation 1. While the brief already mentions that different aspects of physical order are salient for female and male students' perceptions of

[9] From Massey, D.S. & Denton, N.A. (1988), the formula for a zip code's entropy score is $\sum_{r=1}^{R} \pi_r log(\frac{1}{\pi_r})$ for $R$ different ethnic groups where $\pi_r$ is the proportion of the population of ethnicity $r$. For this analysis, we used $R = 4$ with Asian, Black, Hispanic, and white population proportions used for each zip code.

local cohesion (well-lit streets for women and public parks for men), there are other interesting findings in these regressions. Access to public transit had the greatest salience with local cohesion for the whole sample and for nearly all subgroups. For vulnerable students, having people in the neighborhood working on improving it is positively associated with local cohesion and resilience and having helpful neighbors is salient for local cohesion while participating in a local group is only positively associated with the resilience of non-Black or Hispanic students and the mental health of male and first-generation students. To reiterate, these are associations rather than causal effects. Also, since these results are from responses to a set of 11 questions, we do not want to undersell the chance of random error leading to some of the questions being more or less related to the outcomes overall or for certain subgroups.

## 2.2 Controlling for Zip Code Characteristics

For a final robustness check, we add demographic characteristics at the zip code level from the U.S. Census Bureau's Zip Code Tabulation Areas to our original regressions. For these regressions, we standardize each zip code variable to have mean 0 and standard deviation 1 across zip codes. In the odd columns of Table A.11, we show the estimates for the effects of physical order and social support shown in the first column of Table 1 as well as the estimates for all of the other coefficients. In the even columns, we show the estimates from similar regressions that add the demographics of each student's zip code as well as that zip code's entropy score. Comparing the estimates in the first two rows, we see that the main results hold after controlling for the zip code variables with the effect of physical order being significant for all four outcomes and larger than the effects for social support which is significant for local cohesion and resilience. Hence, even when we control for zip-code socio-demographic characteristics such as population, race, poverty and diversity, our results hold suggesting that they are not driven by student living in zip codes with different density, racial distribution, or poverty rates.

Along with being a sensitivity analysis, adding the zip code data allows us to separate students' subjective perceptions of their neighborhood from more objective measures. This helps alleviate concerns of differences between subgroups originating from differences in where subgroups live. For example, living in a zip code with a higher Black or Hispanic population or with higher diversity (entropy score) or population overall is associated with higher reports of local cohesion but the lower reports of local cohesion by transfer students holds even after controlling for these zip code variables. We also see that the lower societal cohesion for female, minority, transfer, and U.S. born students, the lower resilience for young and transfer students, and the worse mental health of freshmen, sophomores, and transfer students largely hold after controlling for the zip code variables. There is some interaction between these zip code measures and students' perceptions, though, with the large drop in reports of societal cohesion by Black and Asian students being somewhat diminished after controlling for zip code demographics and some other associations changing in size and significance.

Table A.7: Local Cohesion by Social Capital

| | *Dependent variable: Local Cohesion* | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Whole Sample | Female | Male | Black or Hispanic | Any Other Race | Pell | (US Only) Non-Pell | First Generation | Continuing Generation |
| More Trees | 0.020 | −0.028 | 0.097 | −0.070 | 0.075 | 0.076 | −0.088 | 0.114* | −0.021 |
| | (0.043) | (0.051) | (0.076) | (0.068) | (0.056) | (0.051) | (0.125) | (0.065) | (0.052) |
| Free from Litter | 0.035 | 0.016 | 0.068 | 0.103 | −0.041 | 0.038 | 0.037 | −0.028 | 0.080 |
| | (0.047) | (0.062) | (0.076) | (0.068) | (0.065) | (0.059) | (0.115) | (0.062) | (0.068) |
| Attractive Sights | −0.110** | −0.117* | −0.058 | −0.111 | −0.112* | −0.120** | −0.049 | −0.150** | −0.095 |
| | (0.048) | (0.062) | (0.081) | (0.077) | (0.061) | (0.059) | (0.106) | (0.071) | (0.063) |
| Attractive Buildings | −0.063 | −0.059 | −0.101 | −0.006 | −0.079 | −0.038 | −0.087 | −0.042 | −0.031 |
| | (0.049) | (0.063) | (0.081) | (0.074) | (0.064) | (0.063) | (0.098) | (0.061) | (0.070) |
| Access to Public Transit | 0.245*** | 0.177*** | 0.344*** | 0.185** | 0.290*** | 0.223*** | 0.299*** | 0.081 | 0.376*** |
| | (0.055) | (0.064) | (0.097) | (0.089) | (0.069) | (0.064) | (0.110) | (0.057) | (0.081) |
| Well-Lit at Night | 0.116** | 0.128** | 0.067 | 0.162* | 0.098 | 0.112** | 0.016 | 0.223*** | −0.005 |
| | (0.052) | (0.064) | (0.088) | (0.088) | (0.064) | (0.057) | (0.130) | (0.069) | (0.076) |
| Low Crime Rate | 0.056 | 0.089 | −0.009 | −0.107 | 0.177*** | 0.057 | −0.004 | −0.014 | 0.120 |
| | (0.052) | (0.068) | (0.080) | (0.071) | (0.068) | (0.066) | (0.107) | (0.065) | (0.081) |
| Access to Public Parks | 0.097** | 0.059 | 0.184* | 0.101 | 0.091 | 0.131** | 0.071 | 0.150** | 0.020 |
| | (0.049) | (0.057) | (0.096) | (0.069) | (0.062) | (0.061) | (0.121) | (0.061) | (0.073) |
| Neighbors that Help | 0.105** | 0.127** | 0.077 | 0.142** | 0.088 | 0.158*** | −0.091 | 0.169*** | 0.054 |
| | (0.045) | (0.055) | (0.077) | (0.063) | (0.065) | (0.056) | (0.094) | (0.063) | (0.062) |
| In a Local Group | −0.031 | 0.007 | −0.104* | −0.080* | 0.010 | −0.033 | −0.027 | −0.155*** | 0.054 |
| | (0.034) | (0.043) | (0.056) | (0.048) | (0.046) | (0.046) | (0.070) | (0.051) | (0.047) |
| People Work to Improve Things | 0.123*** | 0.121* | 0.107 | 0.068 | 0.180*** | 0.102* | 0.188* | 0.084 | 0.151*** |
| | (0.046) | (0.062) | (0.070) | (0.080) | (0.055) | (0.053) | (0.107) | (0.083) | (0.053) |
| Female | 0.107 | | | 0.161 | 0.102 | 0.028 | 0.277 | 0.287** | −0.063 |
| | (0.081) | | | (0.119) | (0.108) | (0.095) | (0.193) | (0.116) | (0.109) |
| Asian | −0.090 | −0.127 | 0.007 | | | −0.359** | 0.104 | −0.183 | −0.009 |
| | (0.130) | (0.161) | (0.209) | | | (0.166) | (0.219) | (0.206) | (0.169) |
| Black | −0.120 | −0.061 | −0.171 | | | −0.285 | −0.063 | −0.109 | −0.059 |
| | (0.148) | (0.182) | (0.247) | | | (0.185) | (0.266) | (0.254) | (0.197) |
| Hispanic | −0.099 | −0.113 | −0.073 | | | −0.280* | −0.104 | −0.192 | −0.042 |
| | (0.130) | (0.157) | (0.214) | | | (0.161) | (0.232) | (0.204) | (0.162) |
| Other Race (Not white) | 0.020 | −0.045 | 0.458 | | | −0.648* | 0.002 | −0.321 | 0.173 |
| | (0.175) | (0.202) | (0.296) | | | (0.387) | (0.361) | (0.306) | (0.208) |
| First Generation in College | −0.049 | 0.075 | −0.310** | −0.075 | −0.070 | −0.007 | −0.333 | | |
| | (0.078) | (0.098) | (0.133) | (0.120) | (0.104) | (0.099) | (0.225) | | |
| Born in U.S.A. | −0.028 | −0.084 | 0.097 | 0.089 | −0.083 | 0.055 | | −0.062 | 0.056 |
| | (0.095) | (0.119) | (0.160) | (0.154) | (0.101) | (0.114) | | (0.138) | (0.127) |
| Pell Recipient | −0.025 | −0.104 | 0.215 | 0.105 | −0.152 | | | −0.003 | −0.095 |
| | (0.090) | (0.109) | (0.160) | (0.137) | (0.105) | | | (0.179) | (0.110) |
| Less than 23 y.o. | −0.046 | 0.050 | −0.177 | −0.042 | −0.039 | −0.075 | −0.098 | 0.082 | −0.201 |
| | (0.110) | (0.150) | (0.150) | (0.155) | (0.158) | (0.130) | (0.327) | (0.149) | (0.167) |
| Freshman or Sophomore | −0.132 | −0.034 | −0.226 | −0.135 | −0.098 | −0.227** | −0.078 | −0.089 | −0.132 |
| | (0.094) | (0.120) | (0.160) | (0.141) | (0.124) | (0.111) | (0.208) | (0.134) | (0.122) |
| Transfer Student | −0.235** | −0.195 | −0.294** | −0.333** | −0.154 | −0.306*** | −0.152 | −0.174 | −0.303** |
| | (0.097) | (0.126) | (0.137) | (0.133) | (0.137) | (0.111) | (0.219) | (0.135) | (0.146) |
| Has 0-5 y.o. in House | 0.065 | 0.225 | −0.403 | −0.223 | 0.249 | −0.022 | 0.047 | 0.007 | 0.201 |
| | (0.162) | (0.181) | (0.332) | (0.223) | (0.218) | (0.207) | (0.376) | (0.231) | (0.209) |
| Has 6-17 y.o. in House | 0.063 | 0.073 | 0.009 | −0.076 | 0.200* | 0.250** | −0.262 | −0.039 | 0.139 |
| | (0.078) | (0.099) | (0.133) | (0.116) | (0.107) | (0.097) | (0.172) | (0.116) | (0.110) |
| Constant | 0.258 | 0.251 | 0.288 | 0.063 | 0.214 | 0.467** | 0.245 | 0.128 | 0.388 |
| | (0.186) | (0.219) | (0.294) | (0.224) | (0.187) | (0.207) | (0.392) | (0.275) | (0.263) |
| Observations | 648 | 415 | 233 | 277 | 371 | 402 | 162 | 295 | 353 |
| $R^2$ | 0.163 | 0.145 | 0.316 | 0.172 | 0.218 | 0.231 | 0.194 | 0.218 | 0.218 |
| Adjusted $R^2$ | 0.131 | 0.095 | 0.241 | 0.108 | 0.174 | 0.184 | 0.066 | 0.151 | 0.163 |

*Note:* *p<0.1; **p<0.05; ***p<0.01

Table A.8: Societal Cohesion by Social Capital

| | *Dependent variable: Societal Cohesion* | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Whole Sample | Female | Male | Black or Hispanic | Any Other Race | Pell | (US Only) Non-Pell | First Generation | Continuing Generation |
| More Trees | −0.022 | −0.044 | 0.013 | −0.155** | 0.032 | −0.007 | −0.049 | −0.048 | −0.005 |
| | (0.045) | (0.052) | (0.086) | (0.073) | (0.057) | (0.052) | (0.122) | (0.079) | (0.061) |
| Free from Litter | 0.098** | 0.100* | 0.111 | 0.124* | 0.089 | 0.079 | 0.085 | 0.162** | 0.033 |
| | (0.050) | (0.058) | (0.098) | (0.073) | (0.069) | (0.064) | (0.099) | (0.079) | (0.069) |
| Attractive Sights | 0.039 | 0.086 | −0.055 | 0.034 | 0.038 | 0.063 | 0.028 | −0.052 | 0.110* |
| | (0.048) | (0.060) | (0.087) | (0.068) | (0.070) | (0.058) | (0.098) | (0.076) | (0.063) |
| Attractive Buildings | −0.018 | 0.001 | −0.070 | 0.094 | −0.059 | −0.067 | 0.081 | 0.006 | −0.053 |
| | (0.051) | (0.065) | (0.090) | (0.082) | (0.068) | (0.063) | (0.105) | (0.078) | (0.068) |
| Access to Public Transit | 0.074 | 0.043 | 0.174* | 0.021 | 0.091 | 0.030 | 0.200** | 0.039 | 0.111* |
| | (0.045) | (0.052) | (0.090) | (0.070) | (0.057) | (0.058) | (0.083) | (0.064) | (0.060) |
| Well-Lit at Night | 0.045 | 0.019 | 0.065 | 0.080 | 0.018 | 0.045 | 0.111 | 0.003 | 0.083 |
| | (0.047) | (0.057) | (0.087) | (0.072) | (0.061) | (0.058) | (0.099) | (0.070) | (0.066) |
| Low Crime Rate | −0.028 | −0.019 | −0.052 | −0.068 | 0.008 | −0.055 | −0.045 | −0.070 | 0.001 |
| | (0.045) | (0.055) | (0.084) | (0.068) | (0.059) | (0.054) | (0.096) | (0.059) | (0.069) |
| Access to Public Parks | 0.024 | 0.032 | 0.018 | −0.002 | 0.047 | −0.002 | 0.027 | −0.034 | 0.057 |
| | (0.048) | (0.058) | (0.091) | (0.075) | (0.062) | (0.060) | (0.116) | (0.072) | (0.061) |
| Neighbors that Help | 0.062 | 0.042 | 0.102 | 0.051 | 0.075 | 0.085 | −0.021 | 0.077 | 0.085 |
| | (0.043) | (0.052) | (0.075) | (0.068) | (0.058) | (0.058) | (0.081) | (0.074) | (0.055) |
| In a Local Group | 0.008 | −0.012 | 0.043 | 0.036 | −0.008 | 0.059 | −0.092 | 0.073 | −0.030 |
| | (0.037) | (0.047) | (0.062) | (0.057) | (0.050) | (0.051) | (0.065) | (0.052) | (0.051) |
| People Work to Improve Things | 0.046 | 0.041 | 0.058 | 0.077 | 0.014 | 0.007 | 0.141* | 0.093 | 0.022 |
| | (0.045) | (0.053) | (0.087) | (0.074) | (0.057) | (0.059) | (0.083) | (0.075) | (0.059) |
| Female | −0.292*** | | | −0.210* | −0.332*** | −0.298*** | −0.173 | −0.259** | −0.296** |
| | (0.082) | | | (0.120) | (0.113) | (0.103) | (0.169) | (0.117) | (0.121) |
| Asian | −0.338** | −0.371** | −0.255 | | | −0.359* | −0.442* | −0.478** | −0.415** |
| | (0.134) | (0.156) | (0.250) | | | (0.187) | (0.246) | (0.215) | (0.178) |
| Black | −0.732*** | −0.810*** | −0.436 | | | −0.674*** | −1.207*** | −0.916*** | −0.777*** |
| | (0.162) | (0.183) | (0.301) | | | (0.224) | (0.237) | (0.275) | (0.205) |
| Hispanic | −0.439*** | −0.433*** | −0.475* | | | −0.546*** | −0.428** | −0.803*** | −0.286* |
| | (0.128) | (0.145) | (0.255) | | | (0.183) | (0.207) | (0.214) | (0.166) |
| Other Race (Not white) | −0.261 | −0.456** | 0.212 | | | −0.679** | −0.876*** | −0.356 | −0.308 |
| | (0.169) | (0.196) | (0.328) | | | (0.265) | (0.273) | (0.281) | (0.220) |
| First Generation in College | 0.124 | 0.162* | 0.070 | −0.016 | 0.189* | 0.112 | 0.165 | | |
| | (0.076) | (0.093) | (0.143) | (0.115) | (0.105) | (0.096) | (0.156) | | |
| Born in U.S.A. | −0.483*** | −0.573*** | −0.374** | −0.498*** | −0.366*** | −0.366*** | | −0.328*** | −0.630*** |
| | (0.090) | (0.109) | (0.180) | (0.143) | (0.109) | (0.104) | | (0.125) | (0.128) |
| Pell Recipient | −0.084 | −0.139 | 0.084 | −0.001 | −0.176 | | | −0.015 | −0.174 |
| | (0.084) | (0.104) | (0.155) | (0.127) | (0.110) | | | (0.119) | (0.112) |
| Less than 23 y.o. | 0.069 | 0.054 | 0.046 | 0.177 | −0.030 | 0.106 | 0.103 | 0.002 | 0.163 |
| | (0.108) | (0.134) | (0.199) | (0.170) | (0.150) | (0.138) | (0.262) | (0.150) | (0.156) |
| Freshman or Sophomore | −0.027 | −0.041 | −0.095 | −0.129 | 0.066 | −0.097 | −0.094 | −0.137 | 0.034 |
| | (0.083) | (0.100) | (0.160) | (0.120) | (0.118) | (0.104) | (0.163) | (0.126) | (0.116) |
| Transfer Student | −0.180* | −0.092 | −0.390** | −0.225 | −0.095 | −0.113 | −0.228 | −0.185 | −0.133 |
| | (0.092) | (0.108) | (0.180) | (0.148) | (0.122) | (0.117) | (0.189) | (0.125) | (0.135) |
| Has 0-5 y.o. in House | 0.026 | 0.115 | −0.120 | −0.130 | 0.088 | −0.047 | 0.068 | −0.174 | 0.159 |
| | (0.138) | (0.169) | (0.268) | (0.215) | (0.193) | (0.167) | (0.436) | (0.172) | (0.220) |
| Has 6-17 y.o. in House | 0.034 | −0.019 | 0.214 | −0.034 | 0.107 | 0.129 | −0.050 | 0.239** | −0.156 |
| | (0.081) | (0.100) | (0.143) | (0.120) | (0.111) | (0.100) | (0.163) | (0.110) | (0.120) |
| Constant | 0.899*** | 0.722*** | 0.741** | 0.391* | 0.610*** | 0.746*** | 0.468 | 1.095*** | 0.983*** |
| | (0.187) | (0.217) | (0.345) | (0.226) | (0.170) | (0.238) | (0.379) | (0.267) | (0.271) |
| Observations | 640 | 406 | 234 | 274 | 366 | 396 | 162 | 291 | 349 |
| $R^2$ | 0.166 | 0.160 | 0.196 | 0.135 | 0.134 | 0.142 | 0.252 | 0.219 | 0.189 |
| Adjusted $R^2$ | 0.133 | 0.110 | 0.108 | 0.067 | 0.083 | 0.089 | 0.134 | 0.152 | 0.131 |

*Note:* *p<0.1; **p<0.05; ***p<0.01

Table A.9: Resilience by Social Capital

| | *Dependent variable: Resilience* | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Whole Sample | Female | Male | Black or Hispanic | Any Other Race | Pell | (US Only) Non-Pell | First Generation | Continuing Generation |
| More Trees | 0.009 | −0.017 | 0.076 | 0.157** | −0.070 | 0.048 | −0.183 | 0.016 | 0.015 |
| | (0.044) | (0.056) | (0.073) | (0.075) | (0.054) | (0.053) | (0.122) | (0.074) | (0.057) |
| Free from Litter | 0.034 | 0.013 | 0.041 | −0.045 | 0.072 | −0.019 | 0.079 | −0.063 | 0.083 |
| | (0.053) | (0.064) | (0.092) | (0.083) | (0.069) | (0.069) | (0.104) | (0.077) | (0.073) |
| Attractive Sights | −0.005 | −0.013 | 0.055 | −0.023 | 0.015 | −0.044 | 0.083 | −0.046 | 0.036 |
| | (0.050) | (0.057) | (0.099) | (0.073) | (0.070) | (0.064) | (0.105) | (0.078) | (0.064) |
| Attractive Buildings | 0.089* | 0.098 | 0.066 | 0.098 | 0.090 | 0.117* | 0.143 | 0.231*** | −0.022 |
| | (0.052) | (0.064) | (0.090) | (0.083) | (0.067) | (0.065) | (0.121) | (0.078) | (0.073) |
| Access to Public Transit | 0.060 | 0.009 | 0.179** | 0.052 | 0.056 | 0.070 | −0.022 | 0.056 | 0.035 |
| | (0.044) | (0.051) | (0.088) | (0.074) | (0.055) | (0.061) | (0.072) | (0.063) | (0.063) |
| Well-Lit at Night | −0.003 | 0.042 | −0.113 | −0.020 | −0.007 | 0.002 | −0.100 | −0.009 | 0.023 |
| | (0.045) | (0.053) | (0.082) | (0.080) | (0.052) | (0.057) | (0.099) | (0.063) | (0.066) |
| Low Crime Rate | −0.054 | −0.032 | −0.069 | −0.188*** | 0.028 | −0.093 | −0.065 | −0.043 | −0.074 |
| | (0.044) | (0.057) | (0.074) | (0.072) | (0.055) | (0.057) | (0.091) | (0.063) | (0.066) |
| Access to Public Parks | 0.082* | 0.105* | 0.038 | 0.053 | 0.126** | 0.091 | 0.183 | 0.094 | 0.078 |
| | (0.046) | (0.057) | (0.081) | (0.071) | (0.060) | (0.057) | (0.118) | (0.071) | (0.063) |
| Neighbors that Help | −0.019 | −0.065 | 0.072 | 0.041 | −0.043 | −0.011 | −0.012 | −0.095 | 0.056 |
| | (0.044) | (0.053) | (0.078) | (0.065) | (0.057) | (0.056) | (0.085) | (0.069) | (0.059) |
| In a Local Group | 0.063* | 0.046 | 0.091 | 0.013 | 0.093* | 0.021 | 0.071 | 0.069 | 0.058 |
| | (0.037) | (0.046) | (0.065) | (0.061) | (0.050) | (0.052) | (0.072) | (0.056) | (0.051) |
| People Work to Improve Things | 0.100** | 0.091* | 0.119 | 0.209*** | 0.029 | 0.119** | 0.082 | 0.192** | 0.030 |
| | (0.049) | (0.052) | (0.096) | (0.068) | (0.064) | (0.057) | (0.101) | (0.078) | (0.062) |
| Female | −0.175** | | | −0.203 | −0.121 | −0.133 | −0.147 | −0.198* | −0.146 |
| | (0.082) | | | (0.125) | (0.109) | (0.103) | (0.176) | (0.117) | (0.116) |
| Asian | −0.198 | −0.395*** | 0.249 | | | −0.138 | −0.189 | −0.081 | −0.365** |
| | (0.127) | (0.150) | (0.234) | | | (0.180) | (0.237) | (0.199) | (0.172) |
| Black | −0.072 | −0.235 | 0.303 | | | −0.376* | 0.624** | −0.090 | −0.082 |
| | (0.174) | (0.215) | (0.296) | | | (0.218) | (0.313) | (0.291) | (0.223) |
| Hispanic | −0.278** | −0.503*** | 0.163 | | | −0.264 | −0.442** | −0.278 | −0.277* |
| | (0.121) | (0.143) | (0.222) | | | (0.171) | (0.203) | (0.195) | (0.157) |
| Other Race (Not white) | −0.021 | −0.282 | 0.510* | | | −0.357 | 0.322 | −0.272 | 0.071 |
| | (0.154) | (0.174) | (0.306) | | | (0.249) | (0.488) | (0.254) | (0.203) |
| First Generation in College | −0.026 | −0.036 | −0.032 | −0.057 | −0.023 | −0.106 | 0.395** | | |
| | (0.078) | (0.098) | (0.134) | (0.119) | (0.105) | (0.098) | (0.176) | | |
| Born in U.S.A. | −0.044 | −0.086 | 0.021 | −0.019 | −0.103 | 0.090 | | −0.033 | −0.100 |
| | (0.091) | (0.110) | (0.176) | (0.149) | (0.106) | (0.109) | | (0.130) | (0.138) |
| Pell Recipient | 0.0001 | 0.047 | −0.026 | −0.099 | −0.010 | | | −0.217 | 0.110 |
| | (0.089) | (0.107) | (0.172) | (0.147) | (0.106) | | | (0.143) | (0.118) |
| Less than 23 y.o. | −0.335*** | −0.378*** | −0.384** | −0.492*** | −0.219 | −0.408*** | −0.247 | −0.352** | −0.290* |
| | (0.111) | (0.143) | (0.183) | (0.154) | (0.153) | (0.141) | (0.245) | (0.162) | (0.162) |
| Freshman or Sophomore | −0.116 | −0.194* | 0.082 | −0.092 | −0.130 | −0.043 | −0.269 | −0.004 | −0.212* |
| | (0.087) | (0.107) | (0.157) | (0.129) | (0.114) | (0.114) | (0.180) | (0.137) | (0.121) |
| Transfer Student | −0.152 | −0.133 | −0.223 | −0.229 | −0.081 | −0.210 | 0.131 | −0.099 | −0.164 |
| | (0.103) | (0.128) | (0.178) | (0.152) | (0.132) | (0.134) | (0.201) | (0.163) | (0.143) |
| Has 0-5 y.o. in House | −0.172 | −0.197 | −0.099 | −0.160 | −0.113 | −0.195 | −0.234 | −0.106 | −0.245 |
| | (0.153) | (0.173) | (0.356) | (0.231) | (0.198) | (0.181) | (0.377) | (0.188) | (0.250) |
| Has 6-17 y.o. in House | 0.080 | 0.094 | 0.098 | −0.227* | 0.270** | 0.112 | 0.128 | 0.136 | 0.024 |
| | (0.082) | (0.101) | (0.149) | (0.121) | (0.110) | (0.108) | (0.178) | (0.123) | (0.117) |
| Constant | 0.684*** | 0.754*** | 0.259 | 0.785*** | 0.381** | 0.649*** | 0.296 | 0.728** | 0.725*** |
| | (0.190) | (0.217) | (0.329) | (0.271) | (0.184) | (0.242) | (0.360) | (0.281) | (0.266) |
| Observations | 649 | 415 | 234 | 278 | 371 | 403 | 163 | 295 | 354 |
| $R^2$ | 0.091 | 0.110 | 0.126 | 0.164 | 0.097 | 0.107 | 0.262 | 0.145 | 0.103 |
| Adjusted $R^2$ | 0.056 | 0.058 | 0.030 | 0.099 | 0.045 | 0.052 | 0.146 | 0.072 | 0.040 |

*Note:* *p<0.1; **p<0.05; ***p<0.01

Table A.10: Mental Health by Social Capital

| | *Dependent variable: Mental Health* | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Whole Sample | Female | Male | Black or Hispanic | Any Other Race | Pell | (US Only) Non-Pell | First Generation | Continuing Generation |
| More Trees | −0.001 | −0.022 | 0.083 | 0.171** | −0.105* | 0.081 | −0.260*** | 0.085 | −0.032 |
| | (0.045) | (0.058) | (0.077) | (0.072) | (0.059) | (0.054) | (0.098) | (0.075) | (0.056) |
| Free from Litter | 0.042 | 0.051 | 0.007 | −0.009 | 0.086 | 0.022 | 0.154 | 0.057 | −0.001 |
| | (0.052) | (0.065) | (0.088) | (0.070) | (0.074) | (0.064) | (0.110) | (0.077) | (0.071) |
| Attractive Sights | 0.041 | 0.046 | 0.090 | 0.054 | 0.014 | 0.034 | 0.046 | 0.084 | 0.010 |
| | (0.046) | (0.056) | (0.081) | (0.069) | (0.061) | (0.058) | (0.101) | (0.072) | (0.062) |
| Attractive Buildings | 0.023 | 0.017 | −0.020 | −0.081 | 0.094 | 0.058 | 0.006 | 0.045 | 0.014 |
| | (0.050) | (0.062) | (0.085) | (0.075) | (0.064) | (0.063) | (0.099) | (0.074) | (0.068) |
| Access to Public Transit | 0.061 | 0.019 | 0.177** | 0.123* | 0.015 | 0.094 | −0.009 | 0.069 | 0.043 |
| | (0.042) | (0.050) | (0.080) | (0.071) | (0.049) | (0.061) | (0.071) | (0.065) | (0.057) |
| Well-Lit at Night | 0.120** | 0.189*** | −0.041 | 0.149* | 0.092 | 0.094 | 0.145 | 0.054 | 0.182*** |
| | (0.048) | (0.060) | (0.082) | (0.083) | (0.057) | (0.060) | (0.106) | (0.070) | (0.067) |
| Low Crime Rate | −0.005 | 0.001 | −0.014 | −0.117* | 0.051 | −0.063 | 0.018 | −0.003 | −0.018 |
| | (0.044) | (0.056) | (0.080) | (0.068) | (0.057) | (0.057) | (0.088) | (0.062) | (0.069) |
| Access to Public Parks | 0.055 | 0.033 | 0.055 | 0.034 | 0.073 | 0.070 | 0.062 | 0.027 | 0.069 |
| | (0.045) | (0.055) | (0.083) | (0.070) | (0.061) | (0.058) | (0.104) | (0.068) | (0.062) |
| Neighbors that Help | −0.015 | 0.009 | −0.054 | −0.024 | 0.003 | 0.007 | −0.043 | −0.005 | 0.019 |
| | (0.042) | (0.053) | (0.071) | (0.066) | (0.054) | (0.058) | (0.085) | (0.071) | (0.059) |
| In a Local Group | 0.052 | 0.026 | 0.111* | 0.062 | 0.051 | 0.037 | 0.082 | 0.118** | −0.012 |
| | (0.036) | (0.046) | (0.063) | (0.056) | (0.049) | (0.050) | (0.065) | (0.056) | (0.049) |
| People Work to Improve Things | −0.003 | −0.023 | 0.066 | 0.106 | −0.070 | −0.004 | −0.037 | −0.071 | 0.025 |
| | (0.048) | (0.056) | (0.089) | (0.073) | (0.059) | (0.062) | (0.102) | (0.088) | (0.059) |
| Female | −0.215*** | | | −0.199* | −0.202* | −0.143 | −0.160 | −0.269** | −0.159 |
| | (0.078) | | | (0.116) | (0.103) | (0.102) | (0.164) | (0.120) | (0.108) |
| Asian | −0.153 | −0.277* | 0.118 | | | −0.028 | −0.213 | 0.020 | −0.289* |
| | (0.119) | (0.152) | (0.199) | | | (0.158) | (0.208) | (0.189) | (0.163) |
| Black | 0.090 | 0.096 | 0.091 | | | 0.028 | 0.483* | 0.336 | −0.082 |
| | (0.156) | (0.195) | (0.270) | | | (0.205) | (0.281) | (0.232) | (0.220) |
| Hispanic | −0.037 | −0.169 | 0.199 | | | 0.021 | −0.178 | 0.045 | −0.100 |
| | (0.114) | (0.144) | (0.189) | | | (0.155) | (0.207) | (0.192) | (0.150) |
| Other Race (Not white) | −0.115 | −0.328* | 0.393 | | | −0.565** | 0.042 | −0.106 | −0.173 |
| | (0.160) | (0.193) | (0.256) | | | (0.250) | (0.555) | (0.255) | (0.217) |
| First Generation in College | 0.051 | 0.040 | 0.015 | 0.085 | 0.047 | −0.026 | 0.316** | | |
| | (0.074) | (0.092) | (0.134) | (0.116) | (0.099) | (0.096) | (0.152) | | |
| Born in U.S.A. | −0.051 | −0.022 | −0.044 | 0.040 | −0.022 | −0.024 | | 0.069 | −0.191 |
| | (0.091) | (0.113) | (0.158) | (0.139) | (0.108) | (0.105) | | (0.133) | (0.129) |
| Pell Recipient | −0.075 | −0.009 | −0.116 | −0.105 | −0.073 | | | −0.213* | −0.012 |
| | (0.080) | (0.102) | (0.137) | (0.126) | (0.101) | | | (0.120) | (0.110) |
| Less than 23 y.o. | −0.089 | −0.092 | −0.133 | −0.143 | −0.098 | −0.163 | 0.268 | −0.128 | −0.084 |
| | (0.107) | (0.134) | (0.177) | (0.143) | (0.152) | (0.134) | (0.240) | (0.161) | (0.150) |
| Freshman or Sophomore | −0.187** | −0.325*** | 0.087 | −0.042 | −0.348*** | −0.090 | −0.337* | −0.044 | −0.258** |
| | (0.086) | (0.108) | (0.148) | (0.118) | (0.122) | (0.110) | (0.184) | (0.140) | (0.114) |
| Transfer Student | −0.198* | −0.304** | −0.043 | −0.052 | −0.369*** | −0.151 | −0.130 | −0.160 | −0.208 |
| | (0.101) | (0.123) | (0.180) | (0.139) | (0.142) | (0.128) | (0.216) | (0.151) | (0.139) |
| Has 0-5 y.o. in House | −0.145 | −0.116 | −0.156 | −0.047 | −0.167 | −0.204 | 0.109 | −0.140 | −0.175 |
| | (0.133) | (0.159) | (0.294) | (0.210) | (0.178) | (0.165) | (0.351) | (0.197) | (0.185) |
| Has 6-17 y.o. in House | 0.084 | 0.043 | 0.142 | −0.060 | 0.151 | 0.066 | 0.139 | 0.047 | 0.114 |
| | (0.077) | (0.097) | (0.138) | (0.109) | (0.107) | (0.101) | (0.163) | (0.117) | (0.104) |
| Constant | 0.471*** | 0.435* | 0.152 | 0.337 | 0.440** | 0.342 | 0.013 | 0.432* | 0.606** |
| | (0.179) | (0.221) | (0.308) | (0.218) | (0.175) | (0.216) | (0.352) | (0.243) | (0.256) |
| Observations | 599 | 385 | 214 | 251 | 348 | 374 | 150 | 270 | 329 |
| $R^2$ | 0.092 | 0.112 | 0.114 | 0.142 | 0.130 | 0.109 | 0.220 | 0.125 | 0.116 |
| Adjusted $R^2$ | 0.054 | 0.056 | 0.007 | 0.068 | 0.077 | 0.051 | 0.085 | 0.043 | 0.049 |

*Note:* *p<0.1; **p<0.05; ***p<0.01

Table A.11: Cohesion and Mental Health Social Capital and Zip Code

| | *Dependent variable:* | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Local Cohesion | | Societal Cohesion | | Resilience | | Mental Health | |
| Physical Order | 0.186*** | 0.231*** | 0.118*** | 0.114** | 0.107*** | 0.123** | 0.173*** | 0.233*** |
| | (0.042) | (0.052) | (0.038) | (0.045) | (0.041) | (0.048) | (0.042) | (0.049) |
| Social Support | 0.081* | 0.070* | 0.073* | 0.051 | 0.098*** | 0.117*** | 0.025 | 0.033 |
| | (0.042) | (0.042) | (0.040) | (0.046) | (0.037) | (0.042) | (0.037) | (0.041) |
| Female | 0.103 | 0.058 | −0.294*** | −0.298*** | −0.162** | −0.111 | −0.223*** | −0.106 |
| | (0.084) | (0.087) | (0.080) | (0.090) | (0.080) | (0.086) | (0.076) | (0.084) |
| Asian | 0.017 | −0.068 | −0.308** | −0.201 | −0.197 | −0.074 | −0.138 | −0.004 |
| | (0.141) | (0.155) | (0.130) | (0.158) | (0.125) | (0.151) | (0.117) | (0.140) |
| Black | 0.009 | −0.177 | −0.720*** | −0.475** | −0.030 | −0.114 | 0.130 | 0.105 |
| | (0.155) | (0.171) | (0.157) | (0.204) | (0.171) | (0.212) | (0.151) | (0.181) |
| Hispanic | −0.026 | −0.183 | −0.421*** | −0.389** | −0.252** | −0.214 | −0.025 | −0.034 |
| | (0.140) | (0.148) | (0.127) | (0.151) | (0.120) | (0.140) | (0.113) | (0.131) |
| Other Race (Not white) | 0.116 | −0.095 | −0.230 | −0.200 | 0.013 | 0.023 | −0.099 | −0.061 |
| | (0.182) | (0.209) | (0.168) | (0.200) | (0.149) | (0.176) | (0.157) | (0.185) |
| First Generation in College | −0.090 | −0.198** | 0.113 | 0.069 | −0.027 | −0.017 | 0.056 | 0.001 |
| | (0.082) | (0.084) | (0.075) | (0.085) | (0.078) | (0.083) | (0.073) | (0.082) |
| Born in U.S.A. | −0.075 | −0.110 | −0.507*** | −0.473*** | −0.025 | 0.030 | −0.044 | −0.058 |
| | (0.099) | (0.098) | (0.088) | (0.093) | (0.089) | (0.097) | (0.090) | (0.099) |
| Pell Recipient | 0.055 | 0.136 | −0.068 | −0.059 | 0.027 | 0.041 | −0.062 | −0.127 |
| | (0.093) | (0.100) | (0.083) | (0.096) | (0.087) | (0.097) | (0.079) | (0.091) |
| Less than 23 y.o. | −0.101 | −0.152 | 0.062 | 0.035 | −0.355*** | −0.336*** | −0.119 | −0.132 |
| | (0.116) | (0.118) | (0.108) | (0.115) | (0.111) | (0.115) | (0.108) | (0.113) |
| Freshman or Sophomore | −0.062 | −0.092 | −0.020 | −0.092 | −0.126 | −0.125 | −0.190** | −0.219** |
| | (0.096) | (0.101) | (0.083) | (0.091) | (0.087) | (0.097) | (0.085) | (0.093) |
| Transfer Student | −0.273*** | −0.346*** | −0.173* | −0.206** | −0.180* | −0.187* | −0.209** | −0.216** |
| | (0.103) | (0.110) | (0.092) | (0.100) | (0.102) | (0.104) | (0.098) | (0.102) |
| Has 0-5 y.o. in House | −0.014 | 0.219 | 0.020 | 0.095 | −0.175 | −0.257 | −0.136 | −0.177 |
| | (0.169) | (0.152) | (0.139) | (0.139) | (0.148) | (0.160) | (0.129) | (0.153) |
| Has 6-17 y.o. in House | 0.047 | 0.042 | 0.018 | 0.031 | 0.078 | 0.166* | 0.083 | 0.098 |
| | (0.081) | (0.088) | (0.081) | (0.091) | (0.081) | (0.091) | (0.078) | (0.088) |
| Population in Zip Code (1000s) | | 0.346* | | 0.140 | | 0.042 | | 0.449** |
| | | (0.198) | | (0.209) | | (0.204) | | (0.187) |
| % of Population Asian in Zip Code | | −0.002 | | −0.001 | | −0.008*** | | −0.007** |
| | | (0.003) | | (0.003) | | (0.003) | | (0.003) |
| % of Population Black in Zip Code | | 0.007** | | −0.004 | | −0.002 | | −0.002 |
| | | (0.003) | | (0.003) | | (0.003) | | (0.003) |
| % of Population Hispanic in Zip Code | | 0.008** | | 0.004 | | −0.001 | | −0.001 |
| | | (0.004) | | (0.004) | | (0.004) | | (0.003) |
| % of Population in Poverty Zip Code | | −0.010 | | −0.008 | | 0.016** | | 0.006 |
| | | (0.009) | | (0.006) | | (0.007) | | (0.006) |
| Entropy Score | | 0.127*** | | 0.00001 | | 0.036 | | 0.010 |
| | | (0.049) | | (0.046) | | (0.050) | | (0.043) |
| Constant | 0.180 | 0.034 | 0.874*** | 0.825*** | 0.637*** | 0.511** | 0.455** | 0.361* |
| | (0.197) | (0.248) | (0.186) | (0.241) | (0.189) | (0.230) | (0.177) | (0.215) |
| Observations | 648 | 520 | 640 | 516 | 649 | 522 | 599 | 485 |
| $R^2$ | 0.064 | 0.122 | 0.155 | 0.149 | 0.075 | 0.096 | 0.077 | 0.114 |
| Adjusted $R^2$ | 0.042 | 0.085 | 0.135 | 0.113 | 0.053 | 0.058 | 0.053 | 0.073 |

*Note:* *p<0.1; **p<0.05; ***p<0.01

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**2019**

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