

Supplement Table 1. Questions used to quantify measures of individual perception of school social capital,

| Variable Descriptor   | Source  | Response Categories   | Eigenvalue  | Factor loading | Cronbach Coefficient Alpha |
|---|---------|---|-------------|----------------|----------------------------|
|   |         |   | <b>2.48</b> |                | <b>0.55</b>                |
| How often do you have trouble getting along with teachers?  | Student | Never, Once in a while, About once a week, Almost every day |             | 0.47           |                            |
| How often do you have trouble getting along with other students?  | Student | Never, Once in a while, About once a week, Almost every day |             | 0.49           |                            |
| The teachers at your school treat students fairly.  | Student | Strongly agree, Agree, Disagree, Stgongly agree             |             | 0.68           |                            |
| You feel safe in your school.   | Student | Strongly agree, Agree, Disagree, Stgongly agree             |             | 0.71           |                            |
| You feel close to people at your school.  | Student | Strongly agree, Agree, Disagree, Stgongly agree             |             | 0.66           |                            |
| You feel like you are part of your school.  | Student | Strongly agree, Agree, Disagree, Stgongly agree             |             | 0.74           |                            |
| During the past 12 months, that is since {insert date}, how often have you or another adult family member attended a scheduled event at {your child}'s school? For example, a PTA meeting, performance, or parent-teacher conference. | Parent  | Almost Never, Sometimes, Often, Almost always               |             | -0.24          |                            |
| During the past 12 months, that is since {insert date}, how often have you or another adult family member volunteered at {your child}'s school?   | Parent  | Almost Never, Sometimes, Often, Almost always               |             | -0.27          |                            |

Supplemental Table 2. Covariates included in the model

| <b>Variables</b>                                  | <b>Explanation</b>  |
|---|---|
| <b>Individual-level factors</b>                   |   |
| Age   | Continuous  |
| Gender  | Male/Female   |
| Race/ethnicity                                    | non-Hispanic White, Non-Hispanic Black, Hispanic, and other   |
| Marital status of primary caregivers              | married or living with partner, and other   |
| Socioeconomic status (SES)                        | Supplement Table 3 summarized the three items used to measure SES, as reported by parents. We created the index by PCA (eigenvalue 1.71).   |
| Peer-influence                                    | We used: "How many of your closest friends do you think have ever smoked cigarettes? (none, a few, or many)" and recoded the variable to have a binary outcome (none/at least some).<br><br>It was captured by the question to parents in Wave 3; "During the past 12 months, how many cigarettes did you smoke per day?" Parents were only asked in Wave 3 about smoking. Jackson et al <sup>a</sup> reported that 15% of the parents who smoked when their children were in 3rd grade stopped smoking when their children were in 6th grade, which suggests parental smoking status at Wave 3 is highly predictive of parental smoking at Wave 1. Therefore, we included this Wave 3 variable about parental smoking, which was dichotomized as any parental smoking in the past 12 months versus none. |
| Parental smoking                                  |   |
| Parental disapproval of smoking                   | Supplement Table 4 summarized the three items used to measure parental disapproval of smoking, as reported by students. We created the index by PCA (eigenvalue 1.68).  |
| Family connectedness                              | Supplement Table 4 summarized the ten items used to quantify family connectedness, as reported by students. Composite indices were created by PCA (eigenvalue 3.87).  |
| Parental oversight                                | Supplement Table 4 summarized the five items used to measure parental oversight, as reported by students. Composite indices were created by PCA (eigenvalue 1.91).  |
| Educational aspirations                           | Measured by asking, "Do you expect to go to college?" (yes or no)   |
| <b>School-level factors</b>                       |   |
| School level demographics                         | Supplement Table 5 summarized the three items used to measure school level demographics. We created the index by PCA (eigenvalue 2.91).   |
| School Climate                                    | Supplement Table 6 summarized the 37 items used to measure school climate, as reported by teachers. We created the index by PCA (eigenvalue 17.64).   |
| <b>Neighborhood level factors<sup>b</sup></b>     |   |
| Neighborhood social exchange <sup>c</sup>         | Supplement Table 7 summarizes the seven items used to quantify measures of neighborhood social exchange. We created the index by PCA (eigenvalue 2.98 ).  |
| Neighborhood informal social control <sup>c</sup> | Supplement Table 7 summarizes the five items used to quantify measures of informal social control. We created the index by PCA (eigenvalue 3.14).   |
| Neighborhood demographics                         | Supplement Table 7 summarized the four items used to quantify measures of neighborhood demographics, as reported by parents. We created the index by PCA (eigenvalue 2.60).   |

a: Jackson C, Dickinson D. Enabling parents who smoke to prevent their children from initiating smoking - Results from a 3-year intervention evaluation. Archives of Pediatrics & Adolescent Medicine. 2006;160(1):56-62.

b: Healthy Passages geocoded participants' addresses and linked respondents' home addresses to Census data at the tract level. Our measures of neighborhood-level SES were derived from tract-level data from the 2000 Census.

c: Individual responses were averaged at the level of the census tract to create neighborhood social exchange and social control scales. These averaged responses and resulting scales were then transformed to standardized z-scores for analyses.

Supplement Table 3: Socioeconomic status (SES)

| Variable Descriptor         | Source  | Response Categories   | Eigenvalue  | Factor Loading | Cronbach Coefficient Alpha |
|-----------------------------|---------|---|-------------|----------------|----------------------------|
|                             |         |   | <b>1.71</b> |                | <b>0.24</b>                |
| Highest household education | Parents | No high school degree, high school degree, some college, and 4-year college degree or greater |             | 0.87           |                            |
| Annual household income     | Parents | <\$25,000; \$25,000-\$49,000; \$50,000-\$99,999; and $\geq$ \$100,000                         |             | 0.89           |                            |
| Use of public assistance    | Parents | Yes/No  |             | -0.43          |                            |

Supplemental Table 4: Questions used to quantify measures of parental disapproval of smoking, family connectedness

| Variable Descriptor  | Source  | Response Categories   | Eigenvalue  | Factor Loading | Cronbach Coefficient Alpha |
|--|---------|---|-------------|----------------|----------------------------|
| <b>Parental disapproval of smoking</b>   |         |   | <b>1.68</b> |                | <b>0.54</b>                |
| How many times have your parents ever told you to not smoke cigarettes?  | Student | Never, Once or twice, Lots of times   |             | 0.90           |                            |
| How many times have your parents ever talked to you about how to say no when other kids ask you to smoke cigarettes? | Student | Never, Once or twice, Lots of times   |             | 0.90           |                            |
| How upset would your parents feel if they found out you smoked cigarettes?   | Student | Not at all upset, a little upset, pretty                                    |             | 0.24           |                            |
| <b>Family connectedness</b>  |         |   | <b>3.87</b> |                | <b>0.82</b>                |
| Family members ask each other for help.  | Student | in a while, Sometimes,  |             | 0.53           |                            |
| We approve of each others friends.   | Student | in a while, Sometimes,  |             | 0.54           |                            |
| We like to do things with just our immediate family.   | Student | in a while, Sometimes,  |             | 0.57           |                            |
| Family members feel closer to other family members that to people outside the family.                                | Student | in a while, Sometimes,  |             | 0.56           |                            |
| Family likes to spend free time with each other.   | Student | in a while, Sometimes,  |             | 0.69           |                            |
| Family members feel very close to each other.  | Student | in a while, Sometimes,  |             | 0.72           |                            |
| When our family gets together for activities, everybody is present.  | Student | in a while, Sometimes,  |             | 0.62           |                            |
| We can easily think of things to do together as a family.  | Student | in a while, Sometimes,  |             | 0.70           |                            |
| Family members consult other family members on their decisions.  | Student | in a while, Sometimes,  |             | 0.66           |                            |
| Family togetherness is very important.   | Student | in a while, Sometimes,  |             | 0.60           |                            |
| <b>Parental oversight</b>  |         |   | <b>1.91</b> |                | <b>0.33</b>                |
| How many of your friends do {your parents} know?   | Student | All of them, Most of them, Some of them,                                    |             | 0.01           |                            |
| How often do {your parents} know what you are doing during your free time like after school, at nights, on weekends? | Student | Almost never, Sometimes, Often, Almost always                               |             | -0.19          |                            |
| How often are you home alone without an adult or babysitter?   | Student | Never, Once in a while, About once a  |             | 0.84           |                            |
| When you get home from school, how long are you usually home alone?  | Student | Never, 1 hour or less, More than 1  |             | 0.81           |                            |
| When you are home on weekends, how long are you usually home alone?  | Student | Never, 1 hour or less, More than 2 hours, Up to 2 hours, More than 2 hours, |             | 0.72           |                            |

Supplement Table 5: School level demographics

| Variable Descriptor  | Source   | Eigenvalue  | Factor Loading | Cronbach Coefficient Alpha |
|--|----------|-------------|----------------|----------------------------|
|  |          | <b>2.91</b> |                | <b>0.79</b>                |
| The percentage of students who were non-Hispanic White   | Students |             | 0.86           |                            |
| The percentage of students with less than a high school education as highest household education | Parents  |             | -0.88          |                            |
| The percentages of students who use public assistance  | Parents  |             | -0.75          |                            |

Note: School level demographic was calculated by aggregating individual reports of race/ethnicity, highest household education, and use of public assistance by school. Median income of each school was calculated from individual reports of annual household income.

Supplement Table 6. Questions used to quantify measures of school climate as reported by teachers

| Variable Descriptor  | Source   | Response Categories   | Eigenvalue   | Factor Loading | Cronbach Coefficient Alpha |
|--|----------|---|--------------|----------------|----------------------------|
|  |          |   | <b>17.64</b> |                | <b>0.90</b>                |
| <b>Teacher trust</b>                                       |          |   |              |                |                            |
| Students in this school are reliable                       | Teachers | Strongly disagree, Disagree, Slightly Disagree, Slightly Agree, Agree, Strongly Agree |              | 0.84           |                            |
| Students are caring toward one another                     | Teachers | Strongly disagree, Disagree, Slightly Disagree, Slightly Agree, Agree, Strongly Agree |              | 0.83           |                            |
| Students in this school can be counted on to do their work | Teachers | Strongly disagree, Disagree, Slightly Disagree, Slightly Agree, Agree, Strongly Agree |              | 0.86           |                            |
| Teachers can count on the parents in this school           | Teachers | Strongly disagree, Disagree, Slightly Disagree, Slightly Agree, Agree, Strongly Agree |              | 0.87           |                            |
| Teachers think most of the parents do a good job           | Teachers | Strongly disagree, Disagree, Slightly Disagree, Slightly Agree, Agree, Strongly Agree |              | 0.85           |                            |
| Teachers in this school trust the parents to support them  | Teachers | Strongly disagree, Disagree, Slightly Disagree, Slightly Agree, Agree, Strongly Agree |              | 0.85           |                            |
| Parents in this school are reliable in their commitments   | Teachers | Strongly disagree, Disagree, Slightly Disagree, Slightly Agree, Agree, Strongly Agree |              | 0.84           |                            |
| Teachers in this school believe what students say          | Teachers | Strongly disagree, Disagree, Slightly Disagree, Slightly Agree, Agree, Strongly Agree |              | 0.76           |                            |
| Teachers in this school trust their students               | Teachers | Strongly disagree, Disagree, Slightly Disagree, Slightly Agree, Agree, Strongly Agree |              | 0.83           |                            |
| Teachers can believe what parents tell them                | Teachers | Strongly disagree, Disagree, Slightly Disagree, Slightly Agree, Agree, Strongly Agree |              | 0.77           |                            |
| The students in this school have to be closely supervised  | Teachers | Strongly disagree, Disagree, Slightly Disagree, Slightly Agree, Agree, Strongly Agree |              | -0.35          |                            |
| Teachers here believe students are competent learners      | Teachers | Strongly disagree, Disagree, Slightly Disagree, Slightly Agree, Agree, Strongly Agree |              | 0.74           |                            |
| Students in this school cheat if they have the chance      | Teachers | Strongly disagree, Disagree, Slightly Disagree, Slightly Agree, Agree, Strongly Agree |              | -0.46          |                            |
| Students here are secretive                                | Teachers | Strongly disagree, Disagree, Slightly Disagree, Slightly Agree, Agree, Strongly Agree |              | -0.30          |                            |

|  |          |   |       |
|--|----------|---|-------|
| The students in this school talk freely about their lives outside of school        | Teachers | Strongly disagree, Disagree, Slightly Disagree, Slightly Agree, Agree, Strongly Agree | 0.25  |
| <b>Teacher efficacy</b>  |          |   |       |
| Teachers in this school are able to get through to difficult students              | Teachers | Strongly disagree, Disagree, Slightly Disagree, Slightly Agree, Agree, Strongly Agree | 0.67  |
| Teachers here are confident they will be able to motivate their students           | Teachers | Strongly disagree, Disagree, Slightly Disagree, Slightly Agree, Agree, Strongly Agree | 0.77  |
| Teachers in this school really believe every child can learn                       | Teachers | Strongly disagree, Disagree, Slightly Disagree, Slightly Agree, Agree, Strongly Agree | 0.59  |
| If a child doesn't want to learn, teachers here give up                            | Teachers | Strongly disagree, Disagree, Slightly Disagree, Slightly Agree, Agree, Strongly Agree | -0.34 |
| Teachers here don't have the skills needed to produce meaningful student learning  | Teachers | Strongly disagree, Disagree, Slightly Disagree, Slightly Agree, Agree, Strongly Agree | -0.27 |
| These students come to school ready to learn                                       | Teachers | Strongly disagree, Disagree, Slightly Disagree, Slightly Agree, Agree, Strongly Agree | 0.79  |
| Home life provides so many advantages the students here are bound to learn         | Teachers | Strongly disagree, Disagree, Slightly Disagree, Slightly Agree, Agree, Strongly Agree | 0.71  |
| Students here just aren't motivated to learn                                       | Teachers | Strongly disagree, Disagree, Slightly Disagree, Slightly Agree, Agree, Strongly Agree | -0.63 |
| The opportunities in this community help ensure that these students will learn     | Teachers | Strongly disagree, Disagree, Slightly Disagree, Slightly Agree, Agree, Strongly Agree | 0.74  |
| Learning is more difficult at this school because students are worried about their | Teachers | Strongly disagree, Disagree, Slightly Disagree, Slightly Agree, Agree, Strongly Agree | -0.50 |
| Drug and alcohol abuse in the community make learning difficult for students       | Teachers | Strongly disagree, Disagree, Slightly Disagree, Slightly Agree, Agree, Strongly Agree | -0.56 |
| Teachers in this school do not have the skills to deal with student disciplinary   | Teachers | Strongly disagree, Disagree, Slightly Disagree, Slightly Agree, Agree, Strongly Agree | -0.48 |
| <b>Achievement press</b>   |          |   |       |
| Students at this school are enthusiastic about learning                            | Teachers | Strongly disagree, Disagree, Slightly Disagree, Slightly Agree, Agree, Strongly Agree | 0.82  |
| Student attendance is good student miss class only for urgent and good reasons     | Teachers | Strongly disagree, Disagree, Slightly Disagree, Slightly Agree, Agree, Strongly Agree | 0.73  |
| Parents at this school are actively involved in promoting academic                 | Teachers | Strongly disagree, Disagree, Slightly Disagree, Slightly Agree, Agree, Strongly Agree | 0.83  |

|   |          |   |       |
|---|----------|---|-------|
| Students respect others who get good grades                     | Teachers | Strongly disagree, Disagree, Slightly Disagree, Slightly Agree, Agree, Strongly Agree | 0.75  |
| Students try hard to improve on previous work                   | Teachers | Strongly disagree, Disagree, Slightly Disagree, Slightly Agree, Agree, Strongly Agree | 0.84  |
| The learning environment is orderly and serious                 | Teachers | Strongly disagree, Disagree, Slightly Disagree, Slightly Agree, Agree, Strongly Agree | 0.80  |
| Students neglect to complete homework                           | Teachers | Strongly disagree, Disagree, Slightly Disagree, Slightly Agree, Agree, Strongly Agree | -0.43 |
| Students make provisions to acquire extra help from teachers    | Teachers | Strongly disagree, Disagree, Slightly Disagree, Slightly Agree, Agree, Strongly Agree | 0.72  |
| Students seek extra work so they can get good grades            | Teachers | Strongly disagree, Disagree, Slightly Disagree, Slightly Agree, Agree, Strongly Agree | 0.67  |
| Academically oriented students are not ridiculed by their peers | Teachers | Strongly disagree, Disagree, Slightly Disagree, Slightly Agree, Agree, Strongly Agree | 0.56  |

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Supplement Table 7: Questions used to quantify measures of neighborhood social exchange, informal social control, and demographics

| Value Descriptor   | Source  | Response Categories   | Eigenvalue  | Factor Loading | Cronbach Coefficient Alpha |
|--|---------|---|-------------|----------------|----------------------------|
| <b>Neighborhood social exchange</b>  |         |   |             |                |                            |
|  |         |   | <b>2.98</b> |                | <b>0.85</b>                |
| If a group of neighborhood children were skipping school and hanging out on a street corner, how likely is it that your neighbors would do something about it?   | Parents | Very likely, Likely, Unsure, Unlikely, Very unlikely                  |             | 0.81           |                            |
| If some children were spray-painting graffiti on a local building, how likely is it that your neighbors would do something about it?   | Parents | Very likely, Likely, Unsure, Unlikely, Very unlikely                  |             | 0.83           |                            |
| If a child was showing disrespect to an adult, how likely is it that people in your neighborhood would scold that child?   | Parents | Very likely, Likely, Unsure, Unlikely, Very unlikely                  |             | 0.69           |                            |
| If there was a fight in front of your house and someone was being beaten or threatened, how likely is it that your neighbors would break it up?  | Parents | Very likely, Likely, Unsure, Unlikely, Very unlikely                  |             | 0.75           |                            |
| Suppose that because of budget cuts the fire station closest to your home was going to be closed down by the city. How likely is it that your neighbors would organize to try to do something to keep the fire station open? | Parents | Very likely, Likely, Unsure, Unlikely, Very unlikely                  |             | 0.70           |                            |
| While you have lived in this neighborhood, have you or anyone in your household had anything stolen or damaged inside or outside your home, including your cars or vehicles parked on the street?                            | Parents | Yes/No  |             | 0.22           |                            |
| How safe is it to walk around alone in your neighborhood after dark?   | Parents | Completely safe, Fairly safe, Somewhat dangerous, Extremely dangerous |             | 0.54           |                            |
| <b>Neighborhood informal social control</b>  |         |   |             |                |                            |
|  |         |   | <b>3.14</b> |                | <b>0.78</b>                |
| About how often do you and people in your neighborhood do favors for each other? For example, watch each others children, help with shopping, lend gardening or house tools  | Parents | Never, Rarely, Sometimes, Often                                       |             | 0.84           |                            |

|  |         |                                 |             |             |
|--|---------|---------------------------------|-------------|-------------|
| When a neighbor is not at home, how often do you and other people in your neighborhood watch over their property?                              | Parents | Never, Rarely, Sometimes, Often | 0.74        |             |
| How often do you and other people in your neighborhood ask each other advice about personal things such as child rearing or job opening?       | Parents | Never, Rarely, Sometimes, Often | 0.80        |             |
| How often do you and other people in your neighborhood have parties or other get-togethers where other people in the neighborhood are invited? | Parents | Never, Rarely, Sometimes, Often | 0.75        |             |
| How often do you and other people in your neighborhood visit in each others homes or on the street?  | Parents | Never, Rarely, Sometimes, Often | 0.83        |             |
| <b>Neighborhood demographics</b>   |         |                                 |             |             |
|  |         |                                 | <b>2.60</b> | <b>0.83</b> |
| The percentage of non-Hispanic White residents   | Parents |                                 | 0.83        |             |
| The percentage of residents with less than a high school education   | Parents |                                 | -0.84       |             |
| The percentage of residents with the use of public assistance  | Parents |                                 | -0.56       |             |
| The median household income  | Parents |                                 | 0.85        |             |

Note: Variables for neighborhood demographics were created from responses collected when asked the four questions above.