Title: Resilience in development: neighborhood context, experiences of discrimination, and children’s mental health

**Supplementary Materials**

Supplementary Table 1. Associations between continuous scores for social capital score and neighborhood resources and children’s mental health, stratified by experiences of racial/ethnic discrimination, National Survey of Children’s Health (n=182,375; 2016-2021)

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Supplementary Figure 1. Association between social capital and mental health conditions stratified by race/ethnicity, National Survey of Children’s Health (n=182,375; 2016-2021)

Supplementary Figure 2. Association between neighborhood resources and mental health conditions stratified by race/ethnicity, National Survey of Children’s Health (n=182,375; 2016-2021)

Supplementary Table 1. Associations between continuous scores for social capital score and neighborhood resources and children’s mental health, stratified by experiences of racial/ethnic discriminationa, National Survey of Children’s Health (n=182,375; 2016-2021)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|   |   | Anxietye | Behavioral Problemse | Depressione |
|   |   | OR  | 95%CI | OR  | 95%CI | OR  | 95%CI |
|   |   | Lower | Upper | Lower | Upper | Lower | Upper |
| Experiences of Discriminationd | Social Capitalb |   |   |   |   |   |   |   |   |   |
| 　Yes | 　Low | Ref |   |   | Ref |   |   | Ref |   |   |
|   | 　Middle | 0.77 | 0.62 | 0.95 | 0.85 | 0.63 | 1.15 | 0.79 | 0.59 | 1.06 |
|   | 　High | 1.21 | 0.74 | 1.98 | 0.81 | 0.51 | 1.29 | 1.41 | 0.78 | 2.56 |
| 　No | 　Low | Ref |   |   | Ref |   |   | Ref |   |   |
|   | 　Middle | 0.68 | 0.62 | 0.74 | 0.61 | 0.56 | 0.67 | 0.57 | 0.51 | 0.63 |
|   | 　High | 0.53 | 0.49 | 0.57 | 0.45 | 0.42 | 0.49 | 0.41 | 0.36 | 0.47 |
| Experiences of Discriminationd | Neighborhood Resourcesc |   |   |   |   |   |   |   |   |   |
| 　Yes | 　Low | Ref |   |   | Ref |   |   | Ref |   |   |
|   | 　Middle | 1.23 | 0.93 | 1.63 | 1.31 | 0.93 | 1.86 | 1.00 | 0.78 | 1.31 |
|   | 　High | 0.84 | 0.56 | 1.27 | 1.07 | 0.73 | 1.57 | 0.76 | 0.48 | 1.28 |
| 　No | 　Low | Ref |   |   | Ref |   |   | Ref |   |   |
|   | 　Middle | 1.03 | 0.95 | 1.11 | 1.00 | 0.90 | 1.10 | 0.79 | 0.59 | 1.06 |
|   | 　High | 0.91 | 0.79 | 1. 04 | 0.90 | 0.83 | 0.98 | 1.41 | 0.78 | 2.56 |

OR; Odds Ratio, CI; Confidence Interval, Ref; Reference

aWe used logistic regression to examine the association between social capital score, the numbers of neighborhood resources, and children’s mental health, and stratified by experiences of racial/ethnic discrimination. The numbers corresponds to the results presented in Figure2

bSocial capital was assessed using 4 items with 4 response options for each item.

cThe number of neighborhood resources were created using 5 items.

dChildren’s experiences of racial/ethnic discrimination due to racial status were reported by parents.

eChildren’s mental health conditions (anxiety, and behavioral problems, depression) were reported by caregivers who were asked if they were ever told by doctors or other professionals that their child had a condition, and if yes, whether their children currently has the condition

P-values for interaction were as follows:

Social capital exposure: anxiety: middle = 0.490, high = 0.0001; behavior problem: middle = 0.121, high = 0.019; depression: middle = 0.057, high = 0.002

Resource exposure: anxiety: middle = 0.077, high = 0.912; behavior problem: middle = 0.152, high = 0.381; depression: middle = 0.221, high = 0.853

Supplementary Table 2. Associations between social capital, neighborhood resources and children’s mental health, stratified by agea, National Survey of Children’s Health (n=182,375; 2016-2021)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|   |   | Anxietyd | Behavioral Problemsd | Depressiond |
|   |   | OR  | 95%CI | OR  | 95%CI | OR  | 95%CI |
|   |   | Lower | Upper | Lower | Upper | Lower | Upper |
| Age | Social Capitalb |   |   |   |   |   |   |   |   |   |
| <14 years | 　Low | Ref |   |   | Ref |   |   | Ref |   |   |
| 　Middle | 0.73 | 0.65 | 0.82 | 0.67 | 0.62 | 0.73 | 0.65 | 0.56 | 0.75 |
| 　High | 0.61 | 0.53 | 0.69 | 0.51 | 0.46 | 0.56 | 0.55 | 0.42 | 0.71 |
| ≥14 years | 　Low | Ref |   |   | Ref |   |   | Ref |   |   |
| 　Middle | 0.69 | 0.63 | 0.76 | 0.58 | 0.51 | 0.66 | 0.60 | 0.51 | 0.69 |
| 　High | 0.55 | 0.49 | 0.61 | 0.39 | 0.34 | 0.45 | 0.43 | 0.37 | 0.50 |
| Age | Neighborhood Resourcesc |   |   |   |   |   |   |   |   |   |
| 　<14 years | 　Low | Ref |   |   | Ref |   |   | Ref |   |   |
| 　Middle | 1.11 | 1.00 | 1.24 | 1.03 | 0.91 | 1.16 | 0.91 | 0.76 | 1.09 |
| 　High | 0.91 | 0.78 | 1.07 | 0.92 | 0.84 | 1.00 | 0.73 | 0.56 | 0.94 |
| 　≥14 years  | 　Low | Ref |   |   | Ref |   |   | Ref |   |   |
| 　Middle | 0.97 | 0.88 | 1.08 | 0.98 | 0.85 | 1.14 | 0.92 | 0.82 | 1.04 |
| 　High | 0.94 | 0.81 | 1.08 | 0.91 | 0.72 | 1.15 | 0.91 | 0.80 | 1.03 |

OR; Odds Ratio, CI; Confidence Interval, Ref; Reference

aWe used logistic regression to examine the association between social capital, neighborhood resources, and children’s mental health, and stratified by age.

bSocial capital was assessed using 4 items with 4 response options for each item.

cThe neighborhood resources inventory was created using 5 items.

dChildren’s mental health problems (i.e., anxiety, behavioral problems, depression) were reported by caregivers who were asked whether they were ever told by doctors or other professionals that their child had a condition, and if yes, whether their children currently has the condition

P-value for interaction with age are following:

Social Capital: anxiety: middle=0.340; high=0.4023, behavior: middle=0.237; high=0.049; depression: middle=0.389; high=0.588

Resources: anxiety: middle=0.182; high=0.047, behavior: middle=0.370; high=0.934; depression: middle=0.812; high=0.001,

Supplementary Table 3. Associations between social capital, neighborhood resources and children’s mental health, stratified by age group and experiences of racial/ethnic discriminationa, National Survey of Children’s Health (n=182,375; 2016-2021)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|   |   | Anxietye | Behavioral Probleme | Depressione |
|   |   | OR  | 95%CI | OR  | 95%CI | OR  | 95%CI |
|   |   | Lower | Upper | Lower | Upper | Lower | Upper |
| Social Capitalb |  |  |  |  |  |  |  |  |  |  |
| <14 years | Discrimination | Lowb | Ref |   |   | Ref |   |   | Ref |   |   |
| Middleb | 0.70 | 0.52 | 0.94 | 0.81 | 0.53 | 1.25 | 0.95 | 0.59 | 1.52 |
| Highb | 1.09 | 0.51 | 2.34 | 0.69 | 0.38 | 1.25 | 1.97 | 0.52 | 7.51 |
| No discrimination | Lowb | Ref |   |   | Ref |   |   | Ref |   |   |
| Middleb | 0.71 | 0.64 | 0.78 | 0.65 | 0.58 | 0.71 | 0.59 | 0.50 | 0.70 |
| Highb | 0.57 | 0.51 | 0.63 | 0.49 | 0.44 | 0.53 | 0.47 | 0.39 | 0.56 |
| ≥14 years | Discrimination | Lowb | Ref |   |   | Ref |   |   | Ref |   |   |
| Middleb | 0.84 | 0.58 | 1.22 | 0.99 | 0.61 | 1.59 | 0.72 | 0.45 | 1.16 |
| Highb | 1.42 | 0.88 | 2.29 | 1.11 | 0.61 | 2.01 | 1.17 | 0.71 | 1.91 |
| No discrimination | Lowb | Ref |   |   | Ref |   |   | Ref |   |   |
| Middleb | 0.67 | 0.60 | 0.73 | 0.54 | 0.47 | 0.62 | 0.57 | 0.50 | 0.66 |
| Highb | 0.50 | 0.45 | 0.55 | 0.35 | 0.31 | 0.39 | 0.39 | 0.34 | 0.45 |
| Neighborhood Resourcesc |  |  |  |  |  |  |  |  |  |  |
| <14 years | Discriminationf | Lowb | Ref |   |   | Ref |   |   | Ref |   |   |
| Middleb | 1.37 | 0.82 | 2.28 | 1.08 | 0.73 | 1.60 | 0.95 | 0.55 | 1.61 |
| Highb | 0.90 | 0.57 | 1.43 | 0.99 | 0.57 | 1.73 | 0.73 | 0.35 | 1.53 |
| No discriminationf | Lowb | Ref |   |   | Ref |   |   | Ref |   |   |
| Middleb | 1.08 | 0.97 | 1.19 | 1.03 | 0.91 | 1.16 | 0.87 | 0.71 | 1.07 |
| Highb | 0.90 | 0.77 | 1.05 | 0.91 | 0.85 | 0.98 | 0.71 | 0.55 | 0.92 |
| ≥14 years | Discriminationf | Lowb | Ref |   |   | Ref |   |   | Ref |   |   |
| Middleb | 1.13 | 0.78 | 1.64 | 1.71 | 1.00 | 2.93 | 1.10 | 0.66 | 1.84 |
| Highb | 0.79 | 0.46 | 1.37 | 1.28 | 0.87 | 1.88 | 0.85 | 0.47 | 1.52 |
| No discriminationf | Lowb | Ref |   |   | Ref |   |   | Ref |   |   |
| Middleb | 0.95 | 0.86 | 1.06 | 0.90 | 0.78 | 1.04 | 0.91 | 0.81 | 1.02 |
| Highb | 0.95 | 0.84 | 1.07 | 0.88 | 0.68 | 1.13 | 0.92 | 0.81 | 1.05 |

OR; Odds Ratio, CI; Confidence Interval, Ref; Reference

a We used logistic regression adjusting for children’s age, sex, race/ethnicity, experiences of racial/ethnic discrimination reported by parents, household poverty level, caregiver educational attainment

b Social capital was assessed using 4 items with 4 response options for each item. We calculated the mean score and categorized into tertile.

cThe neighborhood resources inventory was created using 5 items and categorized into tertile.

eChild mental health status (depression, anxiety, and behavioral problems) was reported by caregivers who were asked if theywere ever told by doctors or other professionals that their child had a condition, and if yes, whether their children currently has the condition.

fChildren’s experiences of racial/ethnic discrimination due to race/ethnicity were reported by parents.

P-value for interaction:

Social Capital:

anxiety: SC(middle)\*age (<14)\*discrimination= 0.442; SC(high)\*age (<14)\*discrimination=0.424, behavior: SC(middle)\*age (<14)\*discrimination= 0.380; SC(high)\*age (<14)\*discrimination=0.043; depression: SC(middle)\*age (<14)\*discrimination= 0.474; SC(high)\*age (<14)\*discrimination=0.775

Resources:

anxiety: SC(middle)\*age (<14)\*discrimination= 0.620; SC(high)\*age (<14)\*discrimination=0.386, behavior: SC(middle)\*age (<14)\*discrimination= 0.203; SC(high)\*age (<14)\*discrimination=0.743; depression: SC(middle)\*age (<14)\*discrimination= 0.867; SC(high)\*age (<14)\*discrimination=0.968



Supplementary Figure 1. Association between social capital and mental health conditions stratified by race/ethnicity, National Survey of Children’s Health (n=182,375; 2016-2021)

Social capital was assessed using 4 items with 4 response options for each item. We took means and categorized into tertiles. We used logistic regression adjusting for children’s age, sex, race/ethnicity, household poverty level, and caregiver educational attainment.

P-value for interactions:

Anxiety: Middle\*Black = 0.862, High\*Black = 0.197; Middle\*Hispanic/Latino = 0.546, High\*Hispanic/Latino = 0.010; Middle\*Others=0.040, High\*Others=0.530; behavioral problems: Middle\*Black = 0.004, High\*Black = 0.040; Middle\*Hispanic/Latino = 0.702, High\*Hispanic/Latino = 0.001; Middle\*Others=0.222, High\*Others=0.005; depression: Middle\*Black = 0.448, High\*Black = 0.0008; Middle\*Hispanic/Latino = 0.207, High\*Hispanic/Latino = 0.014; Middle\*Others=0.502, High\*Others=0.928



Supplementary Figure 2. Association between neighborhood resources and mental health conditions stratified by race/ethnicity, National Survey of Children’s Health (n=182,375; 2016-2021)

The neighborhood resources inventory was created using 5 items, and categorized into tertiles. We used logistic regression adjusting for children’s age, sex, race/ethnicity, household poverty level, and parental educational attainment.

P-value for interactions:

Anxiety: Middle\*Black = 0.077, High\*Black = 0.181; Middle\*Hispanic/Latino = 0.135, High\*Hispanic/Latino = 0.587; Middle\*Others=0.191, High\*Others=0.118; behavioral problems: Middle\*Black = 0.674, High\*Black = 0.609; Middle\*Hispanic/Latino = 0.003, High\*Hispanic/Latino < 0.001; Middle\*Others=0.056, High\*Others=0.978; depression: Middle\*Black = 0.509, High\*Black = 0.208; Middle\*Hispanic/Latino = 0.004, High\*Hispanic/Latino = 0.023; Middle\*Others=0.411, High\*Others=0.30