**Appendix A.** Items Included in Each Environmental Factor

Neighborhood socioeconomic status (factor 1)

Median household income (+)

Per capita income (+)

% college education (+)

% population African American (-)

% unemployment (-)

Neighborhood connectedness (factor 2)

Belonging1 (+)

Improvement1 (+)

Neighbors1 (+)

Participation1 (+)

Trust1 (+)

Neighborhood opportunities for crime (factor 3)

Vacant properties (+)

Alcohol outlets (+)

Disorder arrests (+)

Narcotics arrests (+)

Vandalism (+)

Violence (+)

1. Survey question from the Southeastern Pennsylvania Household Health Survey (details below).

Belong: “Please tell me if you strongly agree, agree, disagree, or strongly disagree with the following statement: I feel that I belong and am a part of my neighborhood.” Proportion reporting strongly agree or agree.

Improve: “Have people in your neighborhood ever worked together to improve the neighborhood? For example, through a neighborhood watch, creating a community garden, building a community playground, or participating in a block party.” Proportion yes.

Neighbor: “Using the following scale, please rate how likely people in your neighborhood are willing to help their neighbors with routine activities such as picking up their trash cans, or helping to shovel snow. Would you say that most people in your neighborhood.” Proportion reporting always or often.

Participation: “How many local groups or organizations in your neighborhood do you currently participate in such as social, political, religious, school-related, or athletic organizations?” Number of organizations.

Trust: “Please tell me if you strongly agree, agree, disagree or strongly disagree with the following statement: Most people in my neighborhood can be trusted.” Proportion reporting strongly agree or agree.

Table A1. Results of Conditional Logistic Regressions Comparing 10 to 24-Year-Old Study Subjects’ Levels of Exposure to Situational Elements at the Time of Being Shot Relative to Times Preceding the Gunshot (*Bivariate* and *Multivariate* Relationships)

|  |  |  |
| --- | --- | --- |
| Variables | *Bivariate relationships* | *Multivariate relationships* |
| OR (95% CI) | OR (95% CI) |
| Individual activities |  |  |
| Presence of friends | 1.95 (1.05, 3.62)\* | 1.21 (0.54, 2.72) |
| Absence of guardians | 5.13 (2.29, 11.45)\*\*\* | 1.55 (0.61, 3.97) |
| Outdoor/public space | 38.74 (14.87, 100.93)\*\*\* | 31.56 (11.28, 88.26)\*\*\* |
| Unstructured activities | 2.06 (1.17, 3.64)\* | 1.08 (0.61, 1.90) |
| Weapon carrying | 9.95 (0.51, 193.78) | 6.18 (0.20, 188.58) |
| Substance use | 0.67 (0.19, 2.31) | 0.33 (0.09, 1.29) |
| Environmental characteristics |  |  |
| Low neighborhood SES | 2.68 (1.07, 6.71)\* | 2.28 (1.02, 5.10)\* |
| Low neighborhood connectedness | 0.72 (0.33, 1.57) | 0.75 (0.34, 1.68) |
| Neighborhood opportunities for crime | 1.15 (0.44, 3.05) | 1.24 (0.57, 2.70) |

*Abbreviation*: OR = odds ratio; CI = confidence interval.

\*\*\*p<0.001; \*\*p<0.01; \*p<0.05 (two-tailed)

Table A2. Summary of Information for Selecting Number of Latent Classes of Situational Risk Factors (*N* = 8162)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Number of Latent Classes | Number of Parameters Estimated | *G*2 | *df* | AIC | BIC | Log-likelihood |
| 1 | 9 | 10938.153 | 502 | 10956.153 | 11019.218 | -40387.905 |
| 2 | 19 | 5876.488 | 492 | 5914.488 | 6047.626 | -37857.072 |
| **3** | **29** | **4666.879** | **482** | **4724.879** | **4928.089** | **-37252.268** |
| 4 | 39 | 3984.991 | 472 | 4062.991 | 4336.273 | -36911.324 |
| 5 | 49 | 3503.687 | 462 | 3601.687 | 3945.042 | -36670.672 |

Given the large number of path points included in the latent class analysis, all fit statistics continued to go down as more latent classes were added. Following Collins and Lanza (30), we selected the optimal number of latent classes through the following steps: 1) to ensure a parsimonious solution that does not over fit the data, we imposed the constraint that each class must have a prior probability of at least 0.10 (or 10% of all path points); we thus fit models with one through five latent classes to the data; 2) there was a leveling off after the three-latent-class solution in the *G*2 statistic, the AIC, and the BIC; and 3) examination of the four- and five-latent-class solutions showed that these solutions had poor homogeneity and latent class separation compared to the solution with three latent classes. Based on these considerations we chose the three-latent-class solution, optimizing the balance between model fit and interpretability.