|  |  |  |  |
| --- | --- | --- | --- |
| Supplemental Table 1. Predictor Measurement by Social Ecological Dimension | | | |
| Measure | Description | # Items | Reliability |
| *Individual dimension* | | | |
| Impulsivity | The 4-item Impulsivity subscale from the Teen Conflict Survey (Bosworth, Espelage, & Simon, 1999) assesses the self-reported impulsivity of respondents. Students were asked how often they would say the following statements about themselves: “I have a hard time sitting still,” “I start things but have a hard time finishing them,” “I do things without thinking,” and “I need to use a lot of self-control to keep out of trouble.” Response options included “Never,” “Seldom,” “Sometimes,” “Often,” and “Always.” | 4 | α = .84 |
| Alcohol Use | To assess alcohol use, we used items from the Problem Behavior Frequency Scale (Farrell, Kung, White, & Valois, 2000) that ask participants about their past year alcohol use, binge drinking (e.g., drinking 5 or more drinks in one sitting), and experiences of drinking to intoxication (e.g., getting drunk). Each participant answered on a 4-point Likert scale. Options included “Never,” “1 or 2 times,” “3 to 5 times,” “6 to 9 times,” and “10 or more times.” | 5 | α = .86 |
| Drug Use | To assess drug use, we used items from the Problem Behavior Frequency Scale (Farrell, Kung, White, & Valois, 2000) that asked participants about their past year use of marijuana, inhalants, and other illicit drugs (excluding marijuana). Each participant answered on a 4-point Likert scale. Options included “Never,” “1 or 2 times,” “3 to 5 times,” “6 to 9 times,” and “10 or more times.” | 4 | α = .74 |
| Depression | The 6-item Orpinas Modified Depression scale (Orpinas, 1993) asked adolescents to indicate how often they felt or acted certain ways in the previous 30 days. Examples include: “Did you feel happy,” and “Did you feel hopeless about your future.” Response options ranged from “Never” through “Almost Always.” Higher scores indicated more depressive symptoms Response options include “Never,” “Seldom,” “Sometimes,” “Often,” and “Always.” | 6 | α = .87 |
| Empathy | The 5-item Empathy subscale of the Teen Conflict Scale (Bosworth & Espelage, 1995) measured adolescents’ ability to listen to, care for, and trust others. Students were asked to indicate how often they would use items in the scale to describe themselves: (1) “I can listen to others;” (2) “Kids I don’t like can have good ideas;” (3) “I get upset when my friends are sad;” (4) “I trust people who are not my friends;” and (5) “I am sensitive to other people’s feelings, even if they are not my friends.” Response options include “Never,” “Seldom,” “Sometimes,” “Often,” and “Always.” | 5 | α = .82 |
| Self-esteem | Four items from Feldman & Weinberger (1994)’s scale assessed self-esteem. Students were asked how often they agree with the following statements: (1) “I usually feel I’m the kind of person I want to be;” (2) “I feel I can do things as well as other people can;” (3) “I feel that I am a special or important person.” Response options were “Never,” “Seldom,” “Sometimes,” “Often,” and “Always.” | 4 | α = .87 |
| Anger | Self-reported anger was assessed using the University of Illinois Anger Scale (Espelage & Stein, 2006). Students were asked how often the following things happened to them in the past 30 days: “I got in a physical fight because I was angry;” “I lost my temper for no reason;” “I was mean to someone when I was angry;” and “I was angry all day.” Response options included “Never,” “1 or 2 times,” “3 or 4 times,” “5 or 6 times,” and “7 or more times.” | 4 | α = .74 |
| Pornography  Exposure | Two items assessed pornography exposure: (1) Have you visited a sexually explicit website during the past 30 days?: (2) Have you ever read a pornographic magazine, seen a pornographic film, or pornography on the internet? Response options were “No” or “Yes.” | 2 | α = .77 |
| Traditional  Masculinity | The traditional masculinity scale of the Adolescent Masculinity Ideology in Relationships Scale (AMIRS; Chu, Porche, & Tolman, 2005) assesses the level of traditional masculinity attitudes held by an individual. It can be used to assess either males or females on their traditional masculinity attitudes. Examples of items are: “It’s important for a boy to act like nothing is wrong, even when something is bothering him.” Response options include “Strongly Disagree,” “Disagree,” “Agree,” and “Strongly Agree.” | 7 | α = .70 |
| Dismissiveness  of Sexual  Harassment | An adapted version of the National Institute of Justice’s Survey of Attitudes and Behaviors Related to Sexual Harassment (Taylor & Stein, 2007) was used to measure dismissive attitudes toward sexual harassment. Eleven items assess attitudes toward sexual harassment. Respondents were asked to indicate how much they agree or disagree with each statement on a scale from 1 (Strongly disagree) to 4 (Strongly agree). Example items included, “Sexual harassment is just having fun” and “Ignoring sexual harassment will make it go away.” Response options include “Strongly Disagree,” “Disagree,” “Agree,” and “Strongly Agree.” | 11 | α = .81 |
| *Relational Dimension* | | | |
| Peer delinquency | The Friend’s Delinquent Behavior-Denver Youth Survey is a 7-item scale (Institute of Behavioral Science, 1987), which asks participants to report how many of their friends, in the past year engaged in delinquent behaviors, such as “Hit or threatened to hit someone,” “Purposely damaged or destroyed property that did not belong to them,” and “Used alcohol.” Response options include “None,” “Very Few,” “Some of them,” “Most of them,” and “All of them.” | 7 | α = .90 |
| Family Conflict & Hostility | The Family Conﬂict and Hostility Scale (Thornberry, Krohn, Lizotte, Smith, & Tobin, 2003) was used to measure the level of perceived conﬂict and hostility in a student’s family environment. This scale contains three items from a larger survey designed for the Rochester Youth Development Study. Students are asked: (1) “How often is there yelling, quarreling, or arguing in your household?,” (2) “How often do family members lose their temper or blow up for no good reason?,” and (3) “How often are there physical ﬁghts in the household, like people hitting, shoving, or throwing things?” Response options include “Never,” “Seldom,” “Sometimes,” “Often,” and “Always.” | 3 | α = .86 |
| Family Violence | Three items were adapted from a previous Centers for Disease Control and Prevention study (Hamburger, Leeb, & Swahn, 2008) to measure past abuse in the family. Students were presented with the following stem “Before you were 9 years old, did you ever…” followed by three items to assess domestic violence exposure and history of childhood maltreatment: (1) see or hear one of your parents or guardians being hit, slapped, punched, shoved, kicked or otherwise physically hurt by their spouse or partner?; (2) have injuries, such as bruises, cuts, or broken bones, as a result of being spanked, struck, or shoved by your parents or guardians or their partners?; and (3) did someone ever force you to have sex or to do something sexual that you did not want to? Response options are “yes” or “no.” | 3 | α = .84 |
| Parental Monitoring | The Parental Supervision subscale (4 items) from the Seattle Social Development Project (Arthur, Hawkins, Pollard, Catalano, & Baglioni, 2002) was used to measure respondents’ perceptions of established familial rules and perceived parental awareness regarding school work and attendance, peer relationships, alcohol or drug use, and weapon possession. Response options include “Never,” “Seldom,” “Often,” and “Always.” Example items include, “My family has clear rules about alcohol and drug use” and “My parents ask if I’ve gotten my homework done.” | 4 | α = .91 |
| Social  Support | The Vaux Social Support Record (VSSR) is a 9-item questionnaire adapted from Vaux's Social Support Appraisals (SSA) 23-item scale that was designed to assess the degree to which a person feels cared for, respected, and involved (Vaux, 1988). The VSSR is comprised of three 3-item subscales that measure the support available from family, peers, and school respectively. Students were asked how many of each fit the description of each item (e.g., "I have friends I can talk to, who care about my feelings and what happens to me"). Response options include “None,” “Some,” and “All.” | 9 | α = .89 |
| *Community/School Dimension* | | | |
| Positive  Neighborhood | Positive neighborhood was measured with three items. Students are asked “How much to you agree with the following statements?:” (1) My neighbors notice when I am doing good things; (2) There are people in my neighborhood who encourage me to do my best, and (3) There are people in my neighborhood who are proud of me when I do something well. Response options include “Strongly Disagree,” “Disagree,” “Agree,” and “Strongly Agree.” | 3 | α = .89 |
| Exposure to Community Violence | Exposure to community violence was measured with five items (Low & Espelage, 2014) from the 12-item Children’s Exposure to Community Violence scale (Richters & Martinez, 1990). Students are asked “How often do you hear or see the following in your neighborhood, school, or at your home?:” (1) I have heard guns being shot; (2) I have seen somebody arrested; (3) I have seen drug deals; (4) I have seen somebody being beaten up; and (5) I have seen gangs. Response options include “Never,” “Rarely,” “Sometimes,” and “Often.” | 5 | α = .92 |
| School  Belonging | Perceived belonging at school was assessed with 4 of the 20 items from the Psychological Sense of School Members Scale (Goodenow, 1993). Students were asked how much they agree with the following four statements: 1) “I feel proud of belonging to this school,” 2) “I am treated with as much respect as other students,” 3) “The teachers here respect me,” and 4) “There is at least one teacher or other adult in this school I can talk to if I have a problem.*”* Response options include “Strongly Disagree,” “Disagree,” “Agree,” and “Strongly Agree.” | 4 | α = .77 |

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|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 1 Impulsivity | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2 Alcohol | **.43** | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3 Drug | **.29** | **.67** | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4 Depression | **.60** | **.37** | **.26** | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5 Empathy | .02 | **-.21** | **-.19** | **.18** | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 6 Self Esteem | **-.16** | **-.22** | **-.21** | **-.12** | **.43** | 1 |  |  |  |  |  |  |  |  |  |  |  |  |
| 7 Anger | **.54** | **.44** | **.40** | **.47** | **-.17** | **.20** | 1 |  |  |  |  |  |  |  |  |  |  |  |
| 8 Pornography Exposure | **.33** | **.41** | **.34** | **.18** | **-.09** | **-.18** | **.20** | 1 |  |  |  |  |  |  |  |  |  |  |
| 9 Traditional Masculinity | **.25** | **.32** | **.33** | **.18** | **.34** | **-.21** | **.32** | .**26** | 1 |  |  |  |  |  |  |  |  |  |
| 10 Dis. Sex Harassment | **.32** | **.44** | **.39** | **.27** | **-.21** | **-.18** | **.33** | **.21** | **.59** | 1 |  |  |  |  |  |  |  |  |
| 11 Peer Delinquency | **.49** | **.65** | **.53** | **.47** | **-.26** | **-.16** | **.58** | **.42** | **.46** | **.51** | 1 |  |  |  |  |  |  |  |
| 12 Family Conflict | **.41** | **.46** | **.38** | **.46** | **-.08** | **-.28** | **.40** | **.35** | **.25** | **.25** | **.46** | 1 |  |  |  |  |  |  |
| 13 Family Violence | **.60** | **.57** | **.39** | **.57** | -.04 | **-.15** | **.55** | **.36** | **.32** | **.38** | **.59** | **.54** | 1 |  |  |  |  |  |
| 14 Parental Monitoring | **-.24** | **-.54** | **-.45** | **-.51** | **.45** | **.43** | **-.41** | **-.23** | **-.38** | **-.42** | **-.51** | **-.35** | **-.43** | 1 |  |  |  |  |
| 15 Social Support | **-.23** | **-.32** | **-.29** | **-.14** | **.56** | **.54** | **-.28** | **-.21** | **-.34** | **-.31** | **-.32** | **-.24** | **-.27** | **.61** | 1 |  |  |  |
| 16 Positive Neighborhood | **-.11** | **-.21** | **-.18** | -.03 | **.23** | **.29** | **-.15** | **-.13** | **-.23** | **-.21** | **-.18** | **-.07** | **-.11** | **.38** | **.41** | 1 |  |  |
| 17 Community Violence | **.34** | **.47** | **.42** | **.26** | **-.47** | **-.23** | **.52** | **.22** | **.42** | **.36** | **.63** | **.41** | **.63** | **-.48** | **-.37** | **-.16** | 1 |  |
| 18 School Belongingness | **-.23** | **-.37** | **-.30** | **-.21** | **.48** | **.48** | **-.33** | **-.20** | **-.35** | **-.31** | **-.38** | **-.23** | **-.29** | **.55** | **.70** | **.43** | **.38** | 1 |

Supplemental Table 2. Correlations between all variables used in regression models

**Bold** indicates *p* < 0.05