Community-wide Resilience Mitigates Adverse Childhood Experiences:
A study using BRFSS, HYS and archival data

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Overview

Setting the Stage for the Research: Adverse Childhood Experience (ACEs) and Resilience- the importance of Context

How we used BRFSS, HYS, and archival data to examine the buffering role of context

Brief overview of what we found

What needs to be done next:

- More research on "how" and further exploration with multiple data sets

A Supportive Environment Can Play a Buffering Role (Contextual Resilience).

ACEs, specifically NEAR science

Understand context matters

Build a Supportive Environment

How did we get to contextual resilience?

2004

8,782 Chicago residents, all 343 neighborhood clusters from Harvard's Project on Human Development in Chicago Neighborhoods (1994-2005).

- Density,
- Concentrated Disadvantage,
- % Minority,
- Stability

Predict Juvenile delinquency.

Child maltreatment?

Family Policy Council

At DSHS and the Family Policy Council (1997-2012)

Does local community prevention work? Increasing community capacity and increasing overall resilience with what outcomes?

- Prevention work was decentralized to local communities by Washington State legislation, creating the interagency Family Policy Council
- Agreement was reached with Hawkins and Catalano on the urgency of prevention and the adoption of the Risk and Protection framework
- Main features of Community Capacity development were identified and measured across communities (with Laura Porter and Paul Flaspohler)
- The impacts of *individual* resilience were studied (with Paula Nurius)
- No data yet existed on the characteristics of *contextual* resilience and its impact on community wide rates of health, problem behaviors, education and ability to work

How we used BRFSS, HYS, and archival data for this study

Unit of analysis: locale

- Washington State locales (N=118).
- Locales are places defined by boundaries of one or more school districts that have a population of 20,000 or more inhabitants. Locales were defined by researchers in the Department of Social and Health Service (DSHS) since 1998, and reports published on trends of health and behavior problems, including risks and rates for each locale, compared to overall state risks and rates (see Starks et al., 2020).

Data Sources

1. **Behavioral Risk Factor Surveillance System (**the CDC yearly survey of adults)
   - Selected only adult respondents age 18-55 who were of parenting and working age,
   - Combined surveys, 2009-2012, in order to get sufficient sample sizes of respondents for each of the 118 locales.
   - The average number of respondents per locale was 230 for BRFSS adults.
2. **Washington State 2010 Healthy Youth Survey**
   - Aggregated youth measures from the (HYS) that included both CDC's Youth Risk Behavioral Survey (YRBS) in form A and the Communities That Care Youth Survey (CTCYS) in form B.
   - The average number of respondents per locale was 226 for 10th grade youth HYS respondents.
3. **2010 State Archival Data (OSPI and DHHS)**
   - **For example, graduation rates, standardized test scores, poverty.**

Variables with Data Sources

ACEs.

- Adult ACE measure was drawn from CDC-tested questions in a distinct module added to BRFSS. A cumulative average ACE score was calculated for each of the 118 locales.
- Youth ACE measures were drawn from an expanded 'dual ACEs' set of HYS YRBS survey questions on family physical abuse and adult violence plus contextual adversities suffered due to food insecurity, race/ ethnic bullying and boy/ girlfriend violence (Cronholm et al., 2015).

Low income. The prevalence of adults with low income was measured by the proportion of community members living in households with a yearly income of less than $25,000, obtained from BRFSS.

Race/Ethnicity. A majority of Washington State residents are white, but our secondary data analyses controlled for the prevalence of three racial groups, based on BRFSS and HYS YRBS survey self-identification responses

Four health and behavioral outcomes

1. *Mental health.*

- For adults, the BRFSS measure was based on responses to only one question deemed the most valid and reliable mental health level indicator: mean days, in the last 30, that mental health kept you from doing normal activities (see Logan-Green et al., 2014).
- For youth, the factor score summarized the following YRBS components: percent depressed two weeks or more in the previous year, percent unlikely to ask for help if depressed, and the mean suicide index which included questions on suicide ideation, planning and actual attempts.

2. *Physical health.*

- For adults, the BRFSS measure was based on one question: mean days, in the last 30, that physical health kept you from doing normal activities (see Logan-Green et al., 2014).
- For youth, the factor score had three components: mean days in a week having symptoms of asthma, percent diagnosed with diabetes, percent overweight (based on YRBS obesity index).

3. *Problem behaviors.*

- For adults, the factor score had four components: percent smoking, percent using drugs, percent ever incarcerated, percent not employed.
- For youth, the factor score had three component CTC-scale levels: percent violent and substance abusing, percent antisocial behavior and arrest, percent self or friends suspended from or dropped out of school.

4. *School performance/ability to work.*

- For adults, the inability to work was based on a single BRFSS question: percent reporting 'not able to work' with a mean prevalence of 8% and ranging from 1% to 28 % across locales. It was correlated with rates of poor physical and mental health and behavior problems (r= .64, .51 and .60) and with ACEs (r = .45).
- For youth, the school performance score was based on three school system archival indicators and one HYS CTC question: percent unexcused absences, percent high school dropouts, percent failing on the Washington Assessment of Student Learning (WASL), percent grades mostly C and D.

Contextual Resilience

1. Adults (indexes from BFRSS)
   - Social cohesion – People living close to us do favors for each other.
   - Cohesion value – People in our community share the value of caring for children.
   - Collective efficacy – People in the vicinity likely intervene if saw a youth not in school

2. Youth (indexes were calculated from questions and scales in the CTC survey
   - Adults/Family – 'Can ask parents for help' and 'Have adults to turn to if depressed'
   - Peers – two protective factor scales: 'interaction with peers' and 'social skills'
   - Schools – two protective factor scales: 'opportunities for pro-social involvement' and 'rewards for pro-social involvement in schools'
   - Neighborhood/ Community – three protective factor scales: 'opportunities for pro-social involvement in neighborhood,' 'attachment to neighborhood' and 'community laws and norms.'

Overall Individual Resilience - Summary factor scores

Three questions were chosen that were similar in BRFSS for adults and in YRBS for youth, ones that could serve as measures of individual resilience. They were included in Masten's (2018, p. 6) short list of individual youth resilience factors 'commonly implicated in the literature:'

1. Close relationships, emotional security – youth 'not alone,' adults 'feeling socially and emotional supported,'

2. Positive view of the self – both youth and adults 'feeling satisfied with one's life' and

3. Hope, optimism – youth 'feeling hopeful for the future' and adults 'not feeling hopeless.'

Overall Community-Wide Resilience

Similar to summary scales of resilience developed for individuals (see, for example, Ungar, 2013), a summary scale measure was constructed for community-wide resilience, one that included both aggregated individual and contextual resilience factors.

Adults

Two factors emerged composed of individual and contextual:

Factor 1. presence of social cohesion and collective efficacy, and prevalence of adults with individual trust/satisfaction/hope resilience.

Factor 2. was composed of only high prevalence of individually resilient adults, while community social cohesion and collective efficacy were low

Youth Overall Community-Wide Resilience (Factor Scores)

Overall resilience scores for youth included both youth and adult measures since capabilities of care-givers and adult–youth interactions were deemed crucial in the development of youth resilience (Shonkoff, 2014; Masten, 2018).

Youth Factor 1: composed of both youth and adult contextual resilience:

high levels of support for youth in four social domains in communities where adults had high social cohesion and collective efficacy

Youth Factor 2: composed of only youth protective factors in communities with low adult social cohesion and collective efficacy.

Surprisingly, individual resilience did NOT load highly on either of the two youth factors indicating that contextual dimensions are more important than individual ones in determining overall community-wide resilience levels for youth (see Ungar, 2013; Hanson & Hanson, 2018).

Community Capacity and Contextual Resilience

Community capacity and contextual resilience were related (see discriminate analysis as reported in AP 2021)

At the time of this study, many communities in Washington had engaged in ACE prevention efforts for about 10-15 years, starting in 1997, developing higher community capacity aimed at increasing levels of resilience (Hall et al., 2012).

Since the 'study of resilience ultimately has a practical goal, to inform efforts, to change the odds in favor of positive adaptation and development,' as Masten said (2014, p. 19), it was important to see whether there was preliminary evidence that key contextual resilience components were actually built through community capacity efforts (see JPIC 2021).

Major Results

What Types of Resilience Affect Levels of Community Well-being?

Higher levels of community well-being are mainly due to higher levels of contextual resilience:

For adults the effects are due mainly to contextual levels of resilience

- Degree of social cohesion and collective efficacy

For youth the effects are due to both adult and youth contextual resilience factors

- Degree of social cohesion and collective efficacy among adults together with
- Degree of support/protective factors in four social domains among youth (Family, Peers, School and Neighborhood)

What Were Effects of Contextual Resilience on Community-Wide Well-being?

Contextual resilience levels had significant effects on all of the well-being outcomes for both adults and youth

The effects of contextual resilience were independent of the impacts of ACEs, poverty and race/ethnicity in these communities

The well-being outcomes measured in the 118 communities studied were:

- Better mental health for adults and youth
- Better physical health for adults and youth
- Better coping behavior for adults and youth
- Higher work participation among adults
- Higher school performance among youth

Did Contextual Resilience Reduce ACE Impacts? With What Strength?: A translation of the findings for practitioners

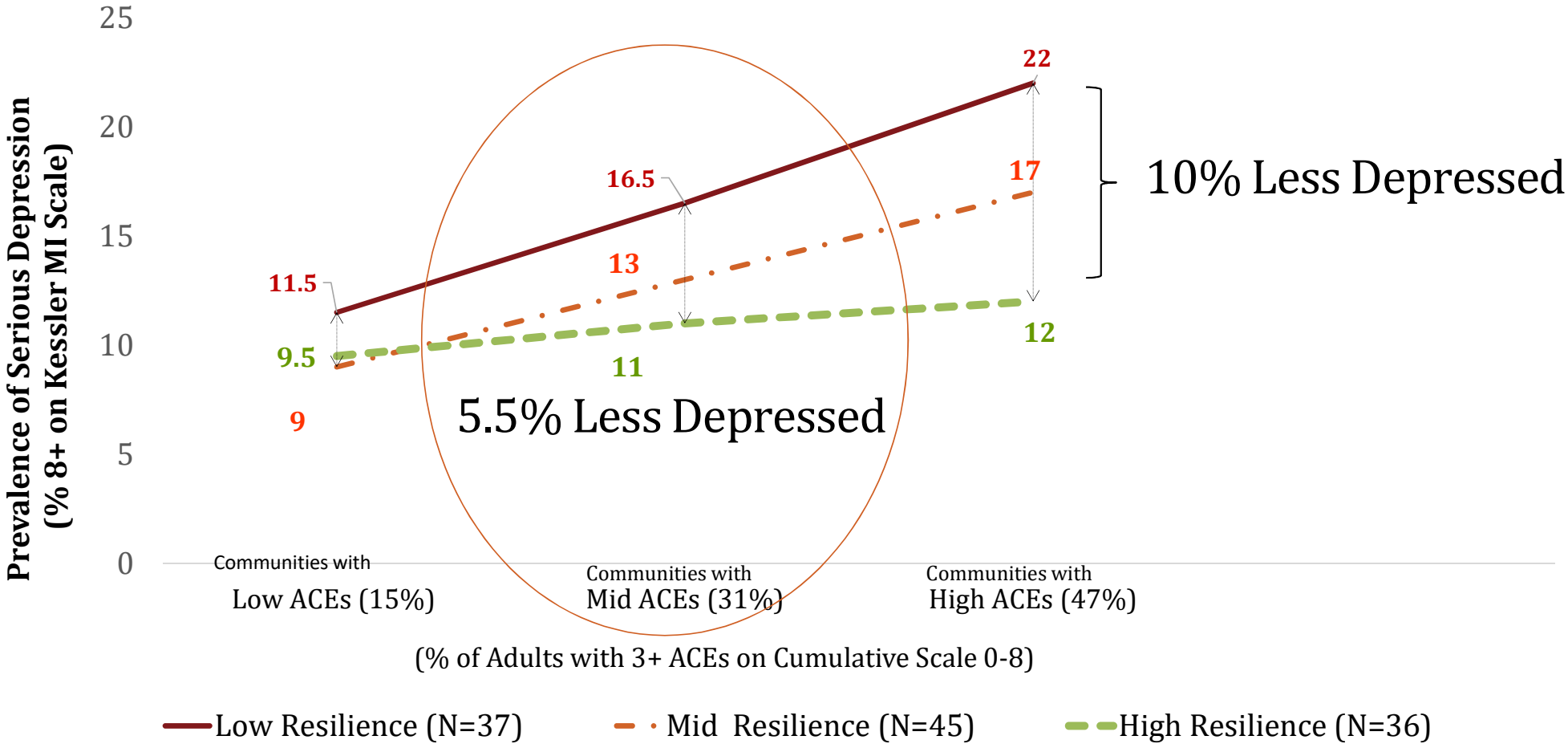
We were able to calculate the percentage reduction of negative impacts of ACEs due to higher levels of community-wide Contextual Resilience

- For adults: Resilience's moderation of effects of ACEs on four community-wide outcomes ranged from 13% to 28%
  - 13% when affecting ability to work,
  - 28% when affecting levels of mental health

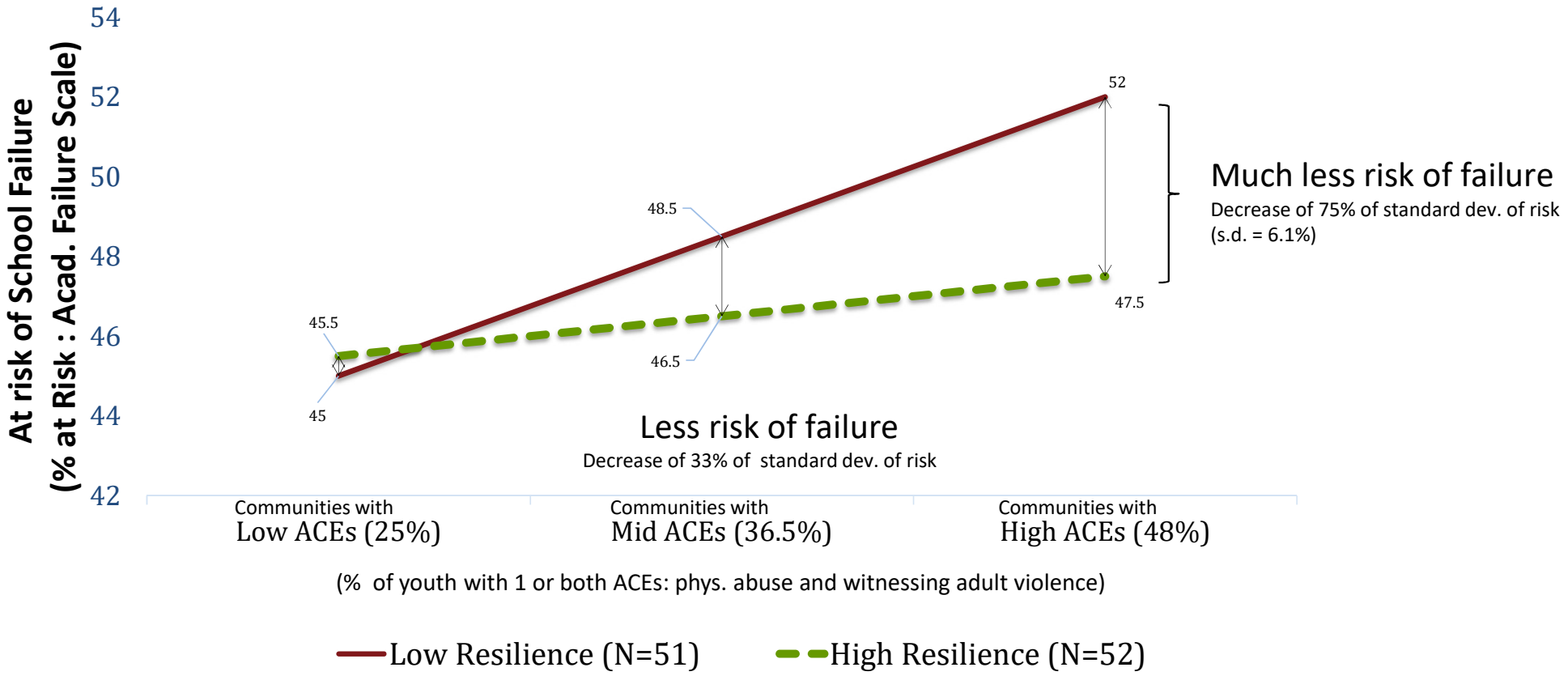
- For youth: Resilience's moderation of effects of ACEs decreased even more, reaching high percentages
  - 50% when affecting mental health,
  - 53% when affecting school performance,
  - 58% when affecting coping behaviors

Resilience's moderation of the effects of ACEs were independent of poverty and race/ethnicity in these communities.

The Promise of Increasing Contextual Resilience for Adults



The Promise of Increasing Contextual Resilience for Youth



ACE Interface

Conclusions from Major Findings

On What Works – Increasing community-wide contextual resilience promises to significantly improve levels of well being, for both adults and youth, moderating ACE impacts (AP 2021)

On How to Make it Happen – Four interrelated community systemic changes are feasible and promise to increase resilience (JPIC, 2021):

1. Stages and processes of building *higher community capacity* have been identified and shown to be associated with higher contextual resilience
2. C*hanges in all four factors, Knowledge, Insights, Strategies and Structures* (KISS factors) promise to increase the implementation of trauma-informed practices
3. Changes in *school cultures* are possible and student resilience improves school performance
4. Social *supports of neighborhood* residents increase resilience and their 'action' for self and other neighbors

What needs to be done?

1. Replication with 2022-25 data (including BRFSS, HYS and archival data) to provide longitudinal comparisons of levels and effects of contextual resilience (with COVID and reduced trust, WA IHME, 2022)
2. Better measures of individual and contextual resilience
3. Additional measures of historical and collective trauma (so called dual ACEs -- e.g., COVID, climate, economic inequality, racial/ethnic divisions)
4. More research on "how" to build community capacity and contextual resilience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Appendix

- See the following slides for more details on operationalization of each of the variables.

Measures of Study Variables Based on Adults (N= 118 Locales)

Control Variables: Prevalence of ACEs Prevalence of Lower Income Race/Ethnic Composition [a]	**Measures:** Average # of ACEs on cumulative ACE score (0-8) % with income less than $25,000 % Black, % Native American, % Hispanic
Resilience Variables: Prevalence of Contextual Resilience [b] Extent of Social Cohesion: 'Mutual Favors' Extent of Cohesion Value: 'Child Safety' Extent of Collective Efficacy: 'Intervene if' **Prevalence of Individual Resilience [b]** Feeling Supported, Masterful, Hopeful	**Measures**: % Neighbors willing to help each other – 'do favors' % Neighbors sharing same value - 'caring for children' % Neighbors intervening if - 'saw a community youth not in school' % feeling socially-emotionally supported, % satisfied with life, % not feeling hopeless
Outcome Variables: Poor Mental Health Poor Physical Health Inability to Work Problem Behaviors [b]	**Measures:** Mean days, in last 30, that 'mental health kept you from doing normal activities' Mean days, in last 30, that 'physical health kept you from doing normal activities' % reporting 'not able to work' % smoking, using drugs, not employed,

Measures of Study Variables Based on Youth (N= 103 Locales)

Control Variables	**Measures:**
Prevalence of Abuse and Adult Violence	Average score of physical abuse and witnessing adult violence (0-2 score: none, one, both)
Contextual Adverse Experiences:	
Extent of Race/Ethnic Harassment	% Bullied due to race/ethnic origin
Experiences of Food Insecurity	% Not knowing whether food would be available
Extent of Boy/Girlfriend Violence	% Injured by boy/girlfriend
Prevalence of lower Income	% On school 'free and reduced lunch program'
Race/Ethnic Composition	% Black, % Native American, % Hispanic
Resilience Variables:	**Measures**:
Prevalence of Contextual Resilience:	Can ask parents for help/Adults to turn to if depressed
Youth Supports in Different Domains	Index of 2 factor scales– 'interaction with peers' and 'social skills'
Adults/Family	Index of 2 factor scales – 'opportunities for and rewards for pro-social involvement in school
Peers	Index from 3 protective factor scales – Opportunities for pro-social involvement in neighborhood,
Schools	Attachment to neighborhood, Community laws/norms
Neighborhood/ Community	% Social-Emotional Support (not alone), % High
Prevalence of Individual Resilience	Satisfaction in Life, % High Hope for the Future
Feeling Supported, Masterful, Hopeful	
Outcome Variables:	**Measures**:
Poor Mental Health	% depressed 2 weeks or more past year; Mean of suicide index; % Unlikely to seek help if depressed
Poor Physical Health	Mean days/ weeks having symptoms of asthma; % Diagnosed with diabetes; % Overweight
Poor School Performance	% Unexcused absences; % High school dropouts; % grades mostly C and D; % Failing on Wash. Assessment of Student Learning (WASL) tests
Problem Behaviors	% Violent and substance abusing; % antisocial behavior/arrested; % Self or friends suspended/ dropped out of school