

### Youth Violence Prevention and the Ecological Model of Health Behavior

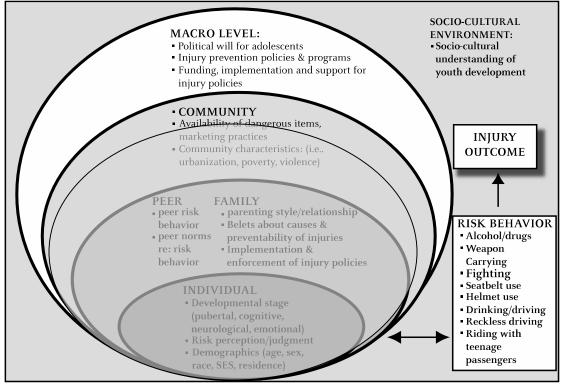
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# Objective

 Identify key components of the Ecological approach for adolescent injury prevention program development.

### Ecological Model of Injury Risk in Adolescence

**Figure 1** An ecological model of adolescent development and injury risk, which highlights the role of multiple levels of social organisation in shaping both developmental biology and risk of injury.



Johnson, S & Jones, V (2011) Adolescent development and risk of injury: Using developmental science to improve interventions. Injury Prevention. 17(1) 50-54.

# Assumptions of the ecological approach

- Health is influenced by multiple facets of the environment
- Environments themselves are multidimensional
- There is feedback across different levels of environments and aggregates of persons

# Adolescence

Individual/ Intrapersonal

Adolescence begins with the onset of physiologically normal puberty and ends when an adult identity and behavior are accepted. This period of development corresponds roughly to the period between the ages of 10 and 19 years. World Health Organization

### Adolescence

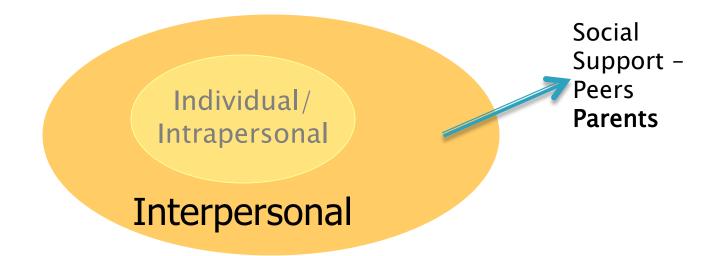
- Defining Self
  - Developing autonomy
- Cognitive Development
  - Physical changes
  - Skills development
- Emotional Reactivity
  - Heightened physical responses
    - Low pressure vs. high pressure decision making

### Individual Attributes Associated with Fighting

- Age
  - Youth Held Back
- Sex
  - Males vs. Females
- Substance Use/Abuse
  - Circumstances vs. Under the Influence Behaviors
- Previous Violence Involvement
  - Victims vs. Perpetrators

### Interpersonal Intervention Implication

- Teach skills in incremental steps
  - Skills building
    - Mitigating conflict
      - Identifying anger
    - Talent and professional development
      - Navigating tasks and accomplishing goals
- Reduce environmental demands for stress while learning skills
  - Role Playing
  - Observational learning
  - Small tasks



- Peers
  - Peer behavior is correlated with individual behavior
    - Perception of peer violent behavior
    - Peer-group effect

#### Interpersonal Attributes Associated with Youth Violence

- Parents
  - Parental involvement



- Parental acceptance of violence- adolescents' perceptions of their parents' attitudes toward fighting are a strong predictor of their own attitudes toward violence
- Parental communication- Parental coaching or advice about how to resolve interpersonal conflict is correlated with youth behavior

# Results of a qualitative study of 6<sup>th</sup> grade parents in Baltimore City

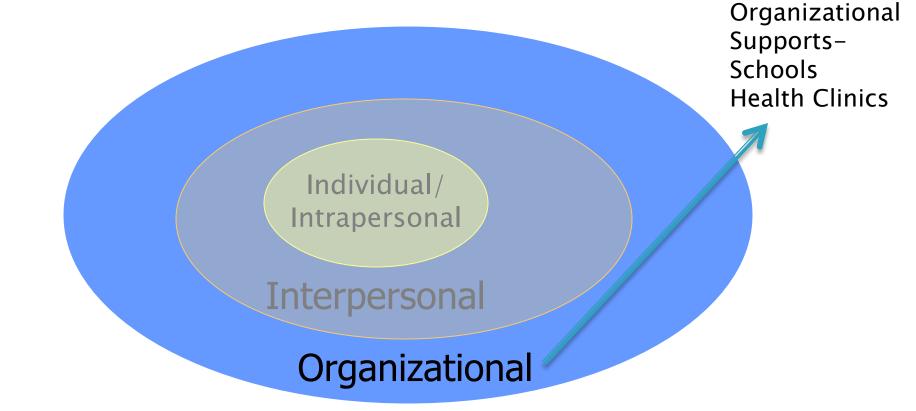
- Parental roles in reducing violence
  - A sense of helplessness
- Their environment presents challenges to preventing adolescent violence
  - Peers and other adults
- They talk with their adolescent about fighting
  - Television and firsthand witness
  - Try alternatives to conflict resolution

### Interpersonal Intervention Considerations

#### Parents

- Succinct message about fighting
  - Role modeling
- Clear expectations for youth behavior
  - Discussion of expectation

### **Ecological Model of Preventing Youth Violence**



Organizations with relationships to youth in communities with increased adolescents violence

### Pediatric Clinics

- Parents look to pediatricians for advise on injury preventions strategies, including violence and safety
- A relationship with youth and their families from varying SES levels

### Schools

### Schools

- More engaged in school the lower involvement violence
- School suspension and expulsion significantly increase the likelihood that students will be held back a grade, not graduate, and become involved in the justice system

### Urban Youth and School Engagement

- Graduation and school performance are lowest among children from the poorest of families; many of whom are racial minorities
- > 28% of graduates from poor schools attend a 4 year university
- In 2012-2013 in Baltimore City Public Schools there was a 65% graduation rate, much lower than the 84% state wide

# Maryland Definition:

<u>A Persistently Dangerous School</u> is "a school in which each year for three consecutive years the total number of student suspensions for more than 10 days or expulsions for violent offenses equals 2½ percent or more of the total number of students enrolled in a school." (Maryland State Department of Education) Result of a survey of 6<sup>th</sup> graders in schools on Probation for Persistently dangerous status

- 41% of students fought, indicating fighting is a common behavior among this population
  - Boys and girls fought at similar rates
- Peer Fighting
  - The current data support existing research that having peers who engage in violent and aggressive behavior is correlated with an individual engaging in similar behavior
- Parental Acceptance of Fighting
  - The current study supports the association between youth perceptions of parental acceptance of fighting and their behavior

# Intervention Considerations

- Schools
  - Academic engagement
  - Parental involvement
  - Persistently Dangerous designation policies

# Intervention Considerations

- Youth Engagement
  - Attendance
  - Participation
- Parental Engagement
  - Communication
    - Updates
      - Program
      - Progress
  - Program activities
    - Parent communication building with their child

### **Ecological Model of Preventing Youth Violence**

Community– Neighborhoods Cities

Individual/ Intrapersonal

Interpersonal

Organizational

Community

# Youth Violence Disparities

- Homicide is the third leading cause of death in the United States for ages 15 to 24, but it is the leading cause of death among African American males 15 to 24 year olds
  - 44% of African American Youth report having been in a fight compared to 31% of Caucasian youth

### **Environmental Context**

- 38% of African American youth (birth to 18) live in poverty as compared to 17% for Caucasians
  - Populations of poverty are concentrated in urban and rural areas
- Violent injury disproportionately affects youth who live in urban communities
- Studies suggest that more than 80% of youth living in urban environments have witnessed violence and that more than 70% of them have been victims of this violence – "Urban War Zones"

# **Environmental Context**

#### Relationships

- Neighbors to Neighbors
  - Formal
    - Neighborhood associations
  - Informal
    - Neighbor relationships
- Neighbors to businesses
- Leaders
  - Elected
    - City officials
    - Neighborhood associations
  - Unofficial
    - Respected neighbor or Business owner

# Intervention Considerations

#### Community Partnerships

- Businesses
- Churches and other religious centers
- Individual participation in community events
  - Neighborhood associations
- Engaging Adolescents
  - Employment
  - Other Activities e.g. sponsor of youth sports

# **Multi-level Approaches**

- Growing consensus that interventions derived from ecological models are a promising approach for addressing improvements in health – however reports of such multi-level approaches are rare
- Challenge is how to operationalize and apply ecological frameworks to health behavior change and to evaluate the effectiveness of multi-level interventions

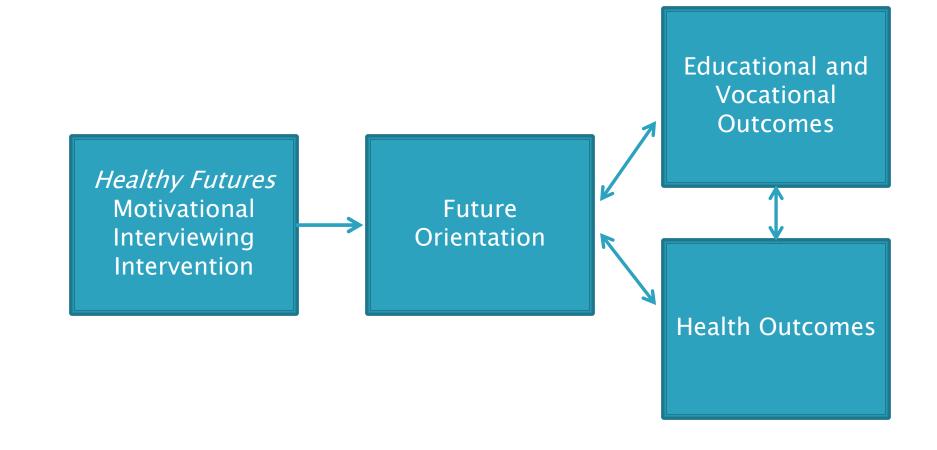


### Creating "Healthy Futures": Results from a motivational interviewing intervention to promote future orientation

Vanya Jones, PhD, MPH, Sarah Lindstrom Johnson, PhD, Tina L. Cheng, MD, MPH



### Hypothesized *Healthy Futures* Pathway



# **Research Questions**

- 1) Is a motivational interviewing intervention for urban youth feasible in a clinic setting?
- 2) Can a clinic based motivational interviewing intervention modify future orientation for urban youth?
- 3)Can an intervention focused on future orientation reduce unhealthy behaviors among an urban population?

# **Healthy Futures Intervention**

- Randomized controlled trial
  - Baseline recruitment n=200
- Harriet Lane Clinic patients
  - Between the ages of 14-21
  - Must attend or have attended a Baltimore City School
  - Not currently receiving educational instruction in a self-contained classroom
- Interested in college/job support program

# **Healthy Futures Intervention**

#### All participants

- Assigned a "career coach" andrReceive monthly college/job tips email newsletters <u>– individual level</u>
- Parents were invited all sessions/activities <u>-</u> interpersonal level
- Clinic-sponsored college and job fairs <u>- community</u> <u>level</u>

#### Intervention participants

- Receive 3 in-person motivational interviewing sessions
  skill building focused
- At least 1 phone/email follow-up contact between sessions - encouragement and facilitation of process

# **Example Intervention Session**

- Rapport building
- Assess future orientation
  - Existence of plans for the future
  - Planning/activities supporting this future
- Assess barriers to accomplishing this future
  - Including involvement in delinquent behaviors
- Tangible accomplishments
  - Resumes
  - PSAT/SAT prep



# **Data Collection**

- Baseline, 6 month, and 15 month follow-ups
- Audio Computer Assisted Interviews (ACASI)
- Questions include:
  - Demographics
  - Future orientation
  - Involvement in risk behaviors
  - Educational and job outcomes
- Remuneration for Survey not for Sessions

### Participant Demographics (n=200)

Characteristics	Comparison Participants	Intervention Participants
Mean Age	16.77 (1.98)	16.59 (2.08)
Gender		
Male	38 (38.4%)	42 (41.6%)
Female	61 (61.6%)	59 (58.4%)
Race		
African American	94(94.9%)	98 (97.0%)
Other	5 (5.1%)	3 (3.0%)
Maternal Education		
<u>&lt;</u> High School	55 (57.9%)	57 (60.6%)
> High School	40(42.1%)	37 (39.1%)
Academic Achievement		
Mostly A's and B's	56 (57.1%)	62 (61.4%)
Mostly C's and D's	42 (42.9%)	39 (38.6%)

### Preliminary 6 Month Results: Future Orientation Outcomes

Future Orientation Outcomes (n=103) Linear Regression	Intent to Treat (Baseline vs Comparison) Beta
Career Knowledge	2.54*
My Vocational Situation	1.95**

Adjusted for age and gender t p<.10;\* p $\leq$ .05; \*\* p<.01

### Preliminary 6 month results: Health Outcomes

Negative Binomial Regression	Intent to Treat (Baseline vs. Comparison) Rate Ratio
No. fights in past 30 days	.27**
No. times used marijuana past 30 days <sup>a</sup>	.55*

Adjusted for age, gender, and baseline values t p<.10;\* p $\leq$ .05; \*\* p<.01 a evidence of mediation by future orientation

# Discussion

- Future orientation appears to be a modifiable construct
- Improvement in future orientation related to a reduction in risk behaviors
  - Most strongly for violence
- See change in health outcomes prior to change in educational or vocational outcomes

# **Study Considerations**

#### Limitations

- Selection criteria included being interested in program
- Wide range of ages- developmental stages
- Clinic-based population
- Study Strengths
  - Capitalizing on the relationship with a health care provider
  - Addressing social issues related to health



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### Thank You!