

# Exposure to Violence and Deviant Behavior at Age 18 in a Longitudinal Cohort

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# Purpose

*To examine:*

- prevalence of exposure to violence by age 18 of youth selected at birth as at-risk for maltreatment
- Relationship of exposure to violence --at any time in childhood or adolescence-- on deviant behaviors (substance abuse, delinquency, or violent behavior) at age 18
- the moderating effect of gender in the relationship of exposure to violence and deviant behaviors at age 18

# Background-1

- Children's exposure to violence (maltreatment and witnessed violence) - major public health problem
- Prevalence higher than official reports suggest (12.4 per 1000 in 2003) (USDHHS, 2005)
- Retrospective data from national study of 15,000 youths showed much higher rates: neglect (42%), physical abuse (28%), sexual abuse (4.5%) (Hussey, Chang, & Kotch, 2006).
- Witnessed violence less studied, but evidence suggests rates are higher and witnessed violence overlaps with maltreatment (Carlson, 2000).

# Background-2

- Maltreatment & exposure to violence in the home and community associated with adverse outcomes including delinquency, violent behavior, and substance abuse (Osofsky, 1995; Turner, Finkelhor & Ormrod, 2006).
- Males and females appear to have different responses to stress, including exposure to violence (McMillan, et al., 2001; Thompson, Kingree & Desai, 2004; Weiss, Longhurst & Mazure, 1999).

# Longitudinal Studies of Child Abuse and Neglect (LONGSCAN)

- A 20-year study of the causes and consequences of child maltreatment
- A consortium of 5 study sites (EA, SO, MW, NW, SW) sharing data collection methods, instruments, data management and analysis
- 177 publications in print, in press, or under review

# NC Stress & Social Support Study

- 842 mother-infant dyads from across state, selected at birth (1986-87), because of known risk factors:

**INFANT:** low birth weight (< 2,500 g), congenital abnormalities, birth defects, other significant infant medical problems

**MOTHER:** young age (<18 yo), impoverishment, substance abuse, mental illness, social problems.

- Moms interviewed 1<sup>st</sup> week after discharge, on average at child age 7 weeks.

# NC study enters LONGSCAN

- 1991; oldest sample in consortium; southern (SO) site
- Subsample of 242 dyads selected at subject age 4 by matching two controls to each reported subject on age, race, sex and SES.
- Primary caregivers (and children, starting at age 6 years) interviewed every other year until subject age 18 years.

# Measures

# Exposure data

**Maltreatment** data collected on child participants for 18 years. Measures included physical abuse, sexual abuse, & neglect.

Two primary sources:

- Child Protective Services records
- Child self-report beginning at Age 12

In addition, longitudinal measures of **witnessed violence** (self-report only)

# Measures of maltreatment-1

Exposure to any of the 3 types of maltreatment was coded as present if there were:

- Any CPS allegation of that type of maltreatment
- Coded from local CPS case records using LONGSCAN's *Modified Maltreatment Classification System* (Manly, Barnett, and Cichetti, 1993)
- Data abstracted and coded every two years through age 18
- **OR, IF THERE WERE...**

# Measures of maltreatment-2

- Any self-report of maltreatment
- Collected at multiple time points (12, 16, and 18 years)
- Project-developed measures of **Physical Abuse, Sexual Abuse, and Neglect.**

Neglect measure at T12 and T14, adapted from Straus, *About My Parents* (1996)

- Administered using Audio-CASI technique

# Witnessed Violence-1

- Collected through self-report at ages 6, 8, 12, 14, and 16
  - Ages 6 & 8: *Things I've Seen & Heard*  
(Richter & Martinez, 1990; 1992)
  - Ages 12, 14, 16: Project-developed measure
- Items from each administration were selected (a priori) to assess 'exposure to witnessed violence in the home and community'

# Witnessed Violence-2

- The final set of items included 10 possible events.

Examples:

*...seen someone get stabbed?*

*...seen someone get shot?*

*...seen grown-ups in your home hit each other?*

- Any endorsement of any item, at any time point, was scored a '1'. No endorsement of any item at any time received a score of '0'.

# Outcome: Deviant behavior

- Defined as self-report of any substance abuse or delinquent/violent behavior in the last year (dichotomous code)

# Delinquent and Violent Behavior

- LONGSCAN's original scale 29 items (Adapted from Huizinga et al., 1991)
- 6 items dropped because behavior considered relatively minor (e.g., “How often in the last year have you stolen money or things worth \$5 or less”)
- Cronbach's alpha on the remaining 23 items showed good internal consistency ( $\alpha = .91$ ).

# Substance Abuse/Dependency

Based on responses to 2 measures:

- **YA-DISC** (Shaffer, Fisher & Lucas, 1998)  
If youth received a DSM-IV diagnosis of dependence or abuse in the last year for alcohol, marijuana, nicotine, or other substance...
- **Tobacco, Alcohol, and Drug Use Scale** (adapted from Youth Risk Behavior Inventory)  
If youth endorsed significant use of alcohol, marijuana or other substances in last 30 days...

# Results

# Demographic Characteristics of Sample at Age 18

	% Age 18 (N = 162)
<b><i>Gender, Male</i></b>	40.7
<b><i>Ethnicity</i></b>	
Black	69.8
White	29.6
Other	0.6
<b><i>Yrs of Completed Education</i></b>	
11 yrs or less	51.2
12 yrs	43.8
Greater than 12 yrs	4.9
<b><i>Marital Status</i></b>	
Married	0.6
Single	99.4
<b><i>Received Public Assistance (Yes)</i></b>	13.2
<b><i>Young Adult Income</i></b>	
\$14,999 or less	22.1
\$15,000 - \$24,999	18.5
\$25,000 - \$39,999	16.1
\$40,000 or more	10.5
<i>Don't know/not applicable</i>	32.7

## Percentage (n) of participants reporting each exposure type by gender

Abuse Type(s)	Males n=66	Females n=94	Total Sample N=160
No Abuse	15% (10)	13% (13)	14% (23)
Physical Abuse	54% (36)	51% (49)	52% (85)
Sexual Abuse	23% (15)	31% (30)	28% (45)
Neglect	74% (49)	82% (79)	79% (128)
Polyvictimization	50% (33)	53% (51)	52% (84)
Witnessing Violence	74% (49)	77% (74)	76% (123)

Note. There were no significant gender differences for any type of abuse or for polyvictimization.

## Percentage (n) of participants reporting substance use and/or delinquent/violent behaviors by gender

Outcome	Males n=66	Females n=94	Total Sample N=160
None	45% (30)	57% (54)	52% (84)
Substance Abuse Only	6% (4)	7% (7)	7% (11)
Delinquency/Violence Only	27% (18)	21% (20)	24% (38)
Substance Use + Delinquency/Violence	21% (14)	14% (13)	17% (27)
Any Substance Use or Delinquency/Violence	54% (36)	42% (40)	47% (76)

# Logistic regression predicting deviant behavior

<b>Model</b>	<b><u>B</u></b>	<b><u>SE</u></b>	<b>Wald <math>\chi^2</math></b>
Gender (1 = Male)	-0.09	.50	0.03
Physical Abuse	-0.48	.48	0.98
Sexual Abuse	0.75	.42	3.21
Neglect	1.31	.47	7.76**
Gender x Physical Abuse	1.50	.71	4.38*

\* $p < .05$ , \*\* $p < .01$

# Logistic regressions predicting deviant behavior by gender

	Males (n=66)				Females (n=94)			
Model	<u>B</u>	<u>SE</u>	Odds Ratio	Wald $\chi^2$	<u>B</u>	<u>SE</u>	Odds Ratio	Wald $\chi^2$
Physical Abuse	1.13	.55	3.08	4.20*	-0.66	.52	0.51	1.60
Sexual Abuse	0.76	.69	2.15	1.23	0.81	.53	2.25	2.32
Neglect	0.66	.62	1.93	1.11	2.19	.83	8.99	7.06*

\*p<.05

# Conclusions

- Subjects selected as at-risk at birth show extraordinarily high prevalence of exposure.
- High rates deviant behavior at age 18 (no difference between M & F)
- Exposure to neglect related to higher levels of deviant behavior at Age 18.
- Boys who experienced physical abuse at higher risk of deviant behavior at Age 18.

# Discussion

- Preliminary: a first look at the relationship between lifetime exposure in a prospective longitudinal sample and its relationship to outcomes in young adults
- Even with crude measures and small sample size, there is evidence of the impact of child maltreatment, and especially exposure to neglect.
- Gender effects deserve further attention.

# Future directions

- As sample size grows, LONGSCAN will be able to look at **increasing levels of exposure** by examining the severity, frequency, and chronicity of maltreatment.

# Future directions

- LONGSCAN will examine **risk factors** such as exposure to *parental substance abuse, domestic violence, and mental health problems* that may increase risk, and **protective factors** such as *support from a caring adult, intelligence or school success*, that may mitigate the likelihood of deviant outcomes.

# Future directions

- LONGSCAN will examine **cumulative and composite measures** of factors that may moderate the relationship between exposure and deviant outcomes, as well as **how associations** between these factors and deviant outcomes **may change throughout childhood**.

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**LONGSCAN website**

<http://www.iprc.unc.edu/longscan/>