



RCGD

RESEARCH CENTER FOR GROUP DYNAMICS

*University of Michigan
Institute for Social Research*

AGGRESSION RESEARCH GROUP

Consequences of Exposure to War Violence: Discriminating Those with Heightened Risk for Aggression from Those with Heightened Risk for PTS

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Exposure to Violence, PTSD, and Aggression

- Both aggression and PTSD are significantly correlated with cumulative prior exposure to ethnic-political violence
- However, PTSD and Aggression are NOT highly correlated
- Perhaps exposure to violence mostly increases the risk for aggression in some people, while exposure to violence mostly increases the risk for PTSD symptoms in others?
- If so, what might discriminate between the two types of people?

Anxious Arousal to Violence

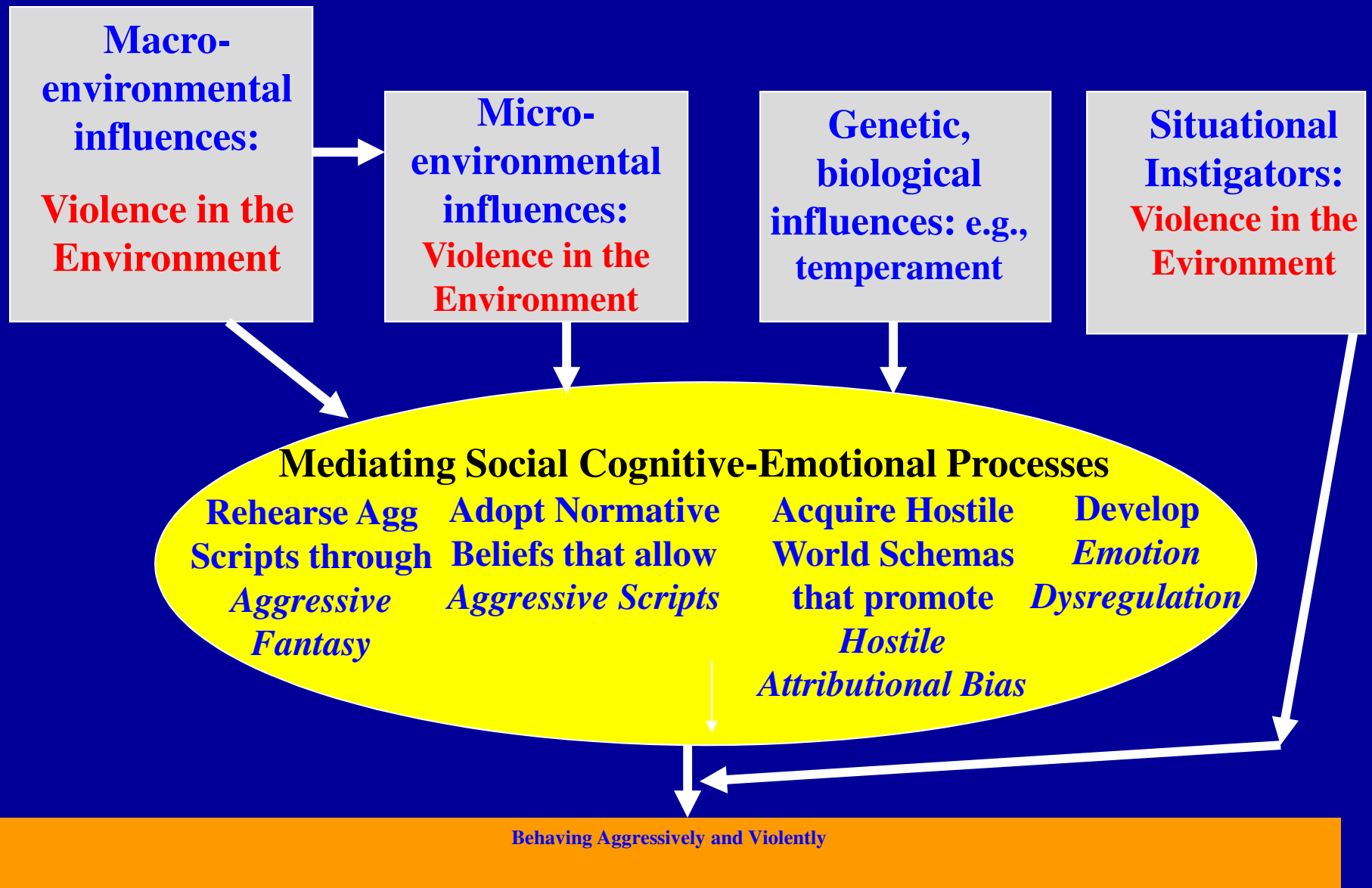
- A person's anxious arousal to violence is the characteristic amount of anxiety a person experiences when the person sees violence or thinks about violence (Huesmann & Kirwil, 2007; Moise, 1998).
- Anxious arousal to violence is viewed as a modifiable individual difference trait that is affected by personal predispositions and experience but that can be relatively stable from situation to situation.
 - Thus, youth who are exposed to a lot of violence during critical periods in their childhood may become “desensitized” to violence and experience lower levels of anxious arousal to violence subsequently (e.g., see Krahe, et al., 2011, *JPSP*)

Why Anxious Arousal Should Moderate the Effects of Exposure to Violence on Agg vs PTS

- Violent scripts that are observed are less likely to be encoded because rehearsing them mentally produces negative arousal.
- If they are encoded in memory, they are less likely to be utilized because they will generate anxiety during the script rehearsal, retrieval & evaluation process.
- Thus, exposure to violence is LESS likely to stimulate aggression for those high on anxious arousal.

- AT THE SAME TIME
- The anxiety one experiences from exposure to violence will be greater for those characteristically high on anxious arousal to violence.
- Thus, those already high on anxious arousal should experience MORE PTS symptoms (anxiety & other internalizing symptoms) after exposure to violence.

How 'Violence Begets Violence' through Observational Learning & Situational Instigators



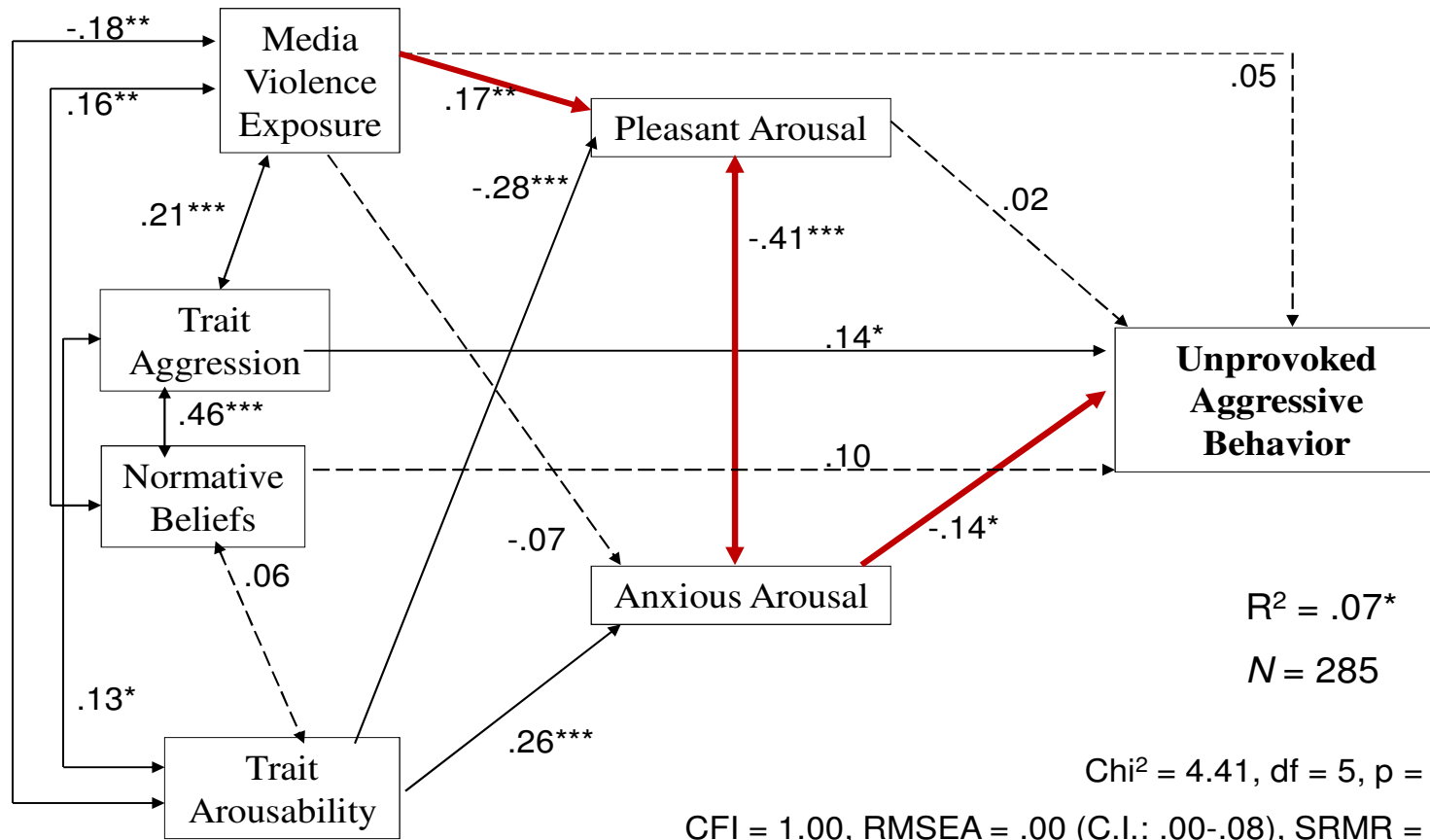
Assessing Anxious Arousal

- Expose person to a short video clip with some highly violent scenes
 - e..g., from the movie “Casino” the 4 minute scene when the protagonist being beaten to a bloody pulp in a wheat field
- Assess their increase in skin conductance while the violent scenes were viewed over their baseline before the violent clip was viewed
 - e. g., the mean increase during the two 30 sec segments when the greatest blood, gore, and violence occurred
- Obtain self-reports of how they interpreted their increase in psychological arousal when they were viewing the clip, e.g., as “anxiety,” “fear,” and “horror” instead of perhaps as “pleasure” or “amusement.”
- Multiply the mean skin conductance response score for a person (scaled .05 to 5.85) by their mean self-report score for “anxiety, fear, and horror” (scaled 0 to 6). **This is defined as their Anxious Arousal.**

Some Prior Studies Using this Measure

- Moise & Huesmann (1999)
 - Those high on anxious arousal behaved less aggressively and watched less media violence
- Kirwil (2004)
 - More aggressive students show less anxious arousal while watching media violence, and policemen show less anxious arousal than students while watching media violence
- Krahe, et al. (2011, JPSP)
 - LOW Anxious Arousal Predicts Unprovoked Aggressive Behavior in Competitive RT Task

Anxious Arousal Predicts Unprovoked Aggressive Behavior in Competitive RT Task (Krahe, et al., 2011, JPSP)

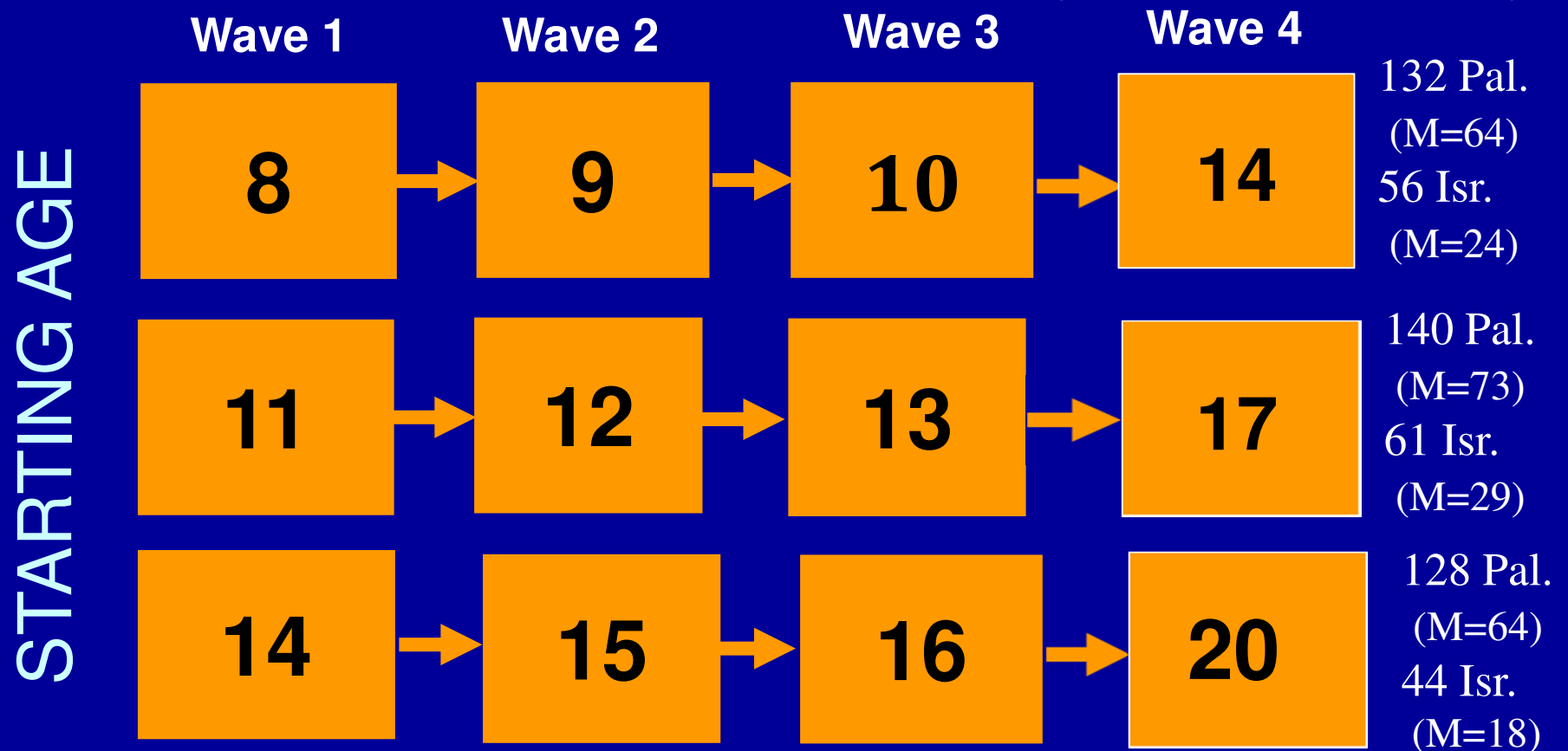


*** $p < .001$, ** $p < .01$, * $p < .05$

Testing this Theory with the 4
Waves of Data on Children
Exposed to War Violence

- **4-Wave Longitudinal Study (began in 2007)**

- First 3 waves, annual; 4th wave, 4 years later
- Samples divided evenly across three age cohorts, with starting ages of 8, 11, and 14; about equal numbers of males and females
- 1,501 youth (and their caregivers) initially sampled (**600 Pal, 451 Isr Jews, 450 Isr Arab**)
- Interviews conducted in homes, separately for parents and children
- 561 w W1toW4 data; 337 with Anx-Arou in W4 (Pal=256, Isr=73; M=167)



Wave 4 Sample

- **Palestinians**

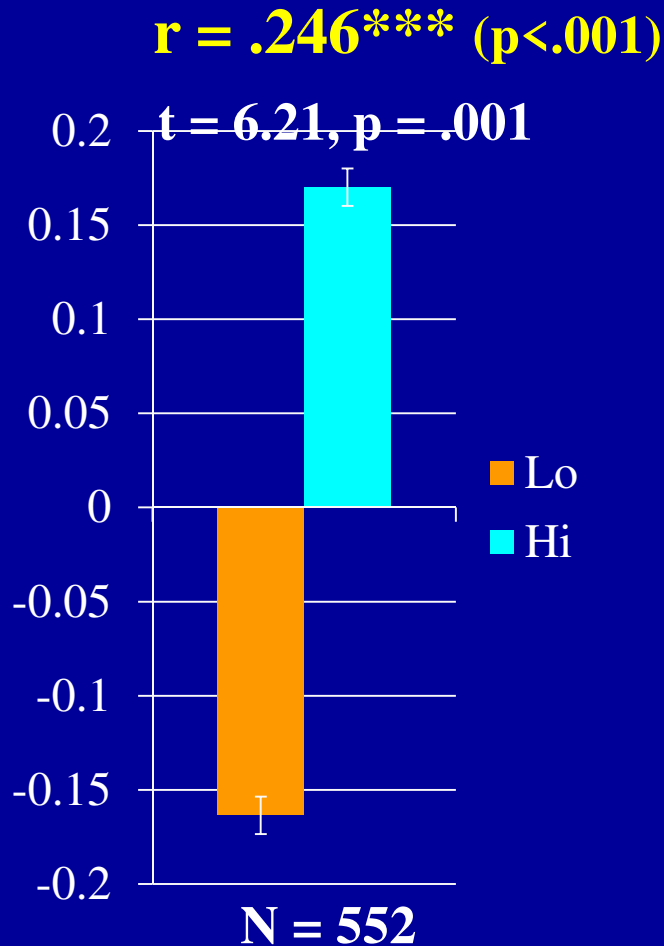
- Random sample of 400 of the original 600 participants (199 females, 201 males; 132 14 year-olds, 140 17 year-olds, 128 20 year-olds)
- No significant differences between those interviewed and not interviewed on child's age or gender, child's Wave 1 exposure to ethnic-political violence or composite aggression score, or parents' Wave 1 average level of education.

- **Israeli Jews (no Israeli Arab sample at Wave 4)**

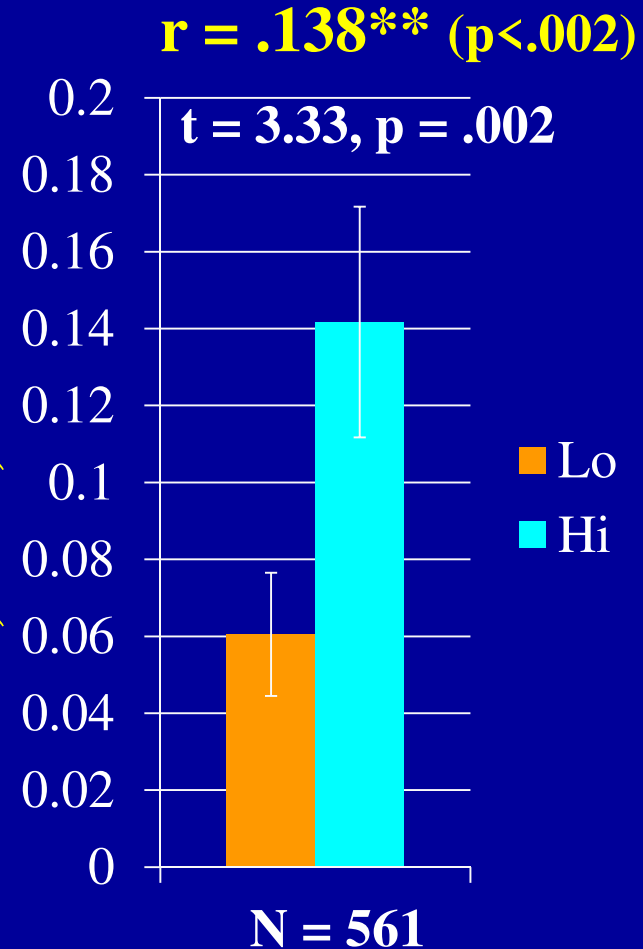
- Random sample of 162 of the original 451 participants (90 females, 72 males; 56 14 year-olds, 62 17 year-olds, 44 20 year-olds)
- No significant differences between those interviewed and not interviewed in Wave 4 on child's age or gender, or child's wave 1 composite aggression score
- Youth who were re-interviewed had been exposed to marginally more ethnic-political violence at wave 1, and their parents at Wave 1 had a higher average educational level

Relation between Cumulative Exposure to Ethnic-Political Violence in Waves 1-3 and Aggression in Wave 4

Overall Aggression (Factor Score)



Serious Physical Aggression
“Choke, Stab, Shoot”

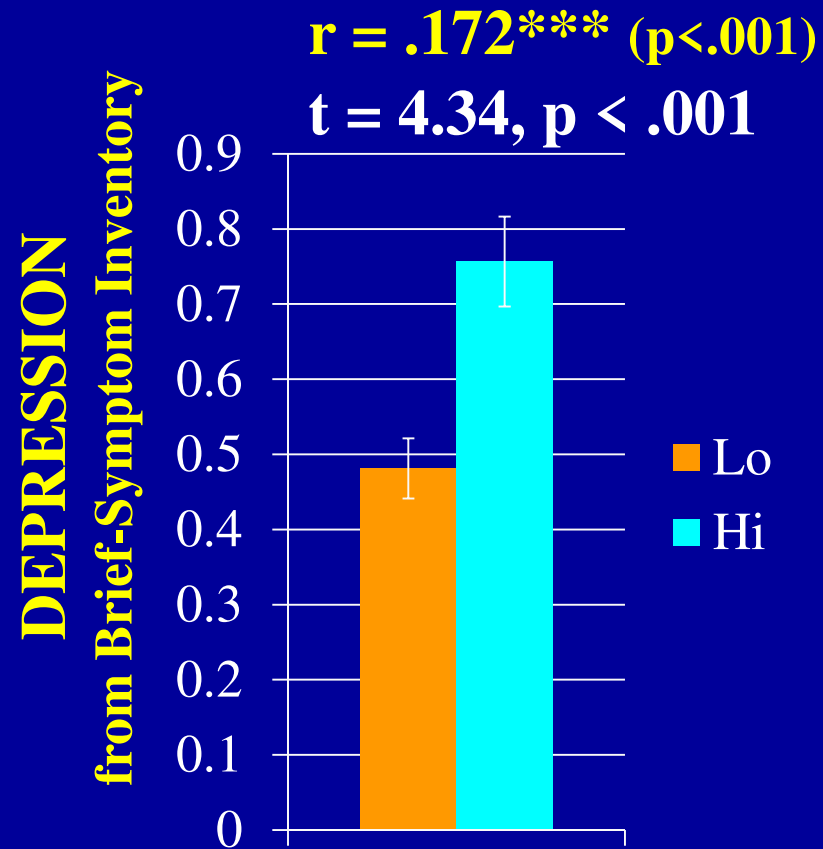
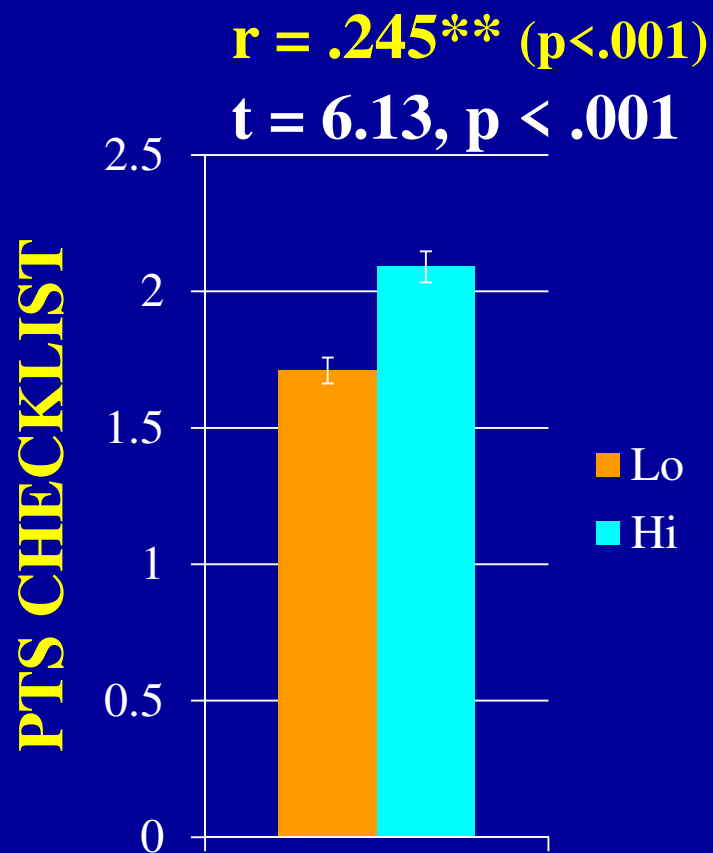


Cumulative Exposure to Ethnic-Political Violence over Waves 1 to 3
(Lo-Hi Median Split)

PTS Symptom Measures

- **Post-traumatic Stress Symptoms Index** (Pynoos et al., 1987)
 - After exposure to a traumatic event....
 - Re-experiencing the event (e.g., intrusive memories, dreams)
 - Avoidance of stimuli associated with the events and emotional numbing;
 - Increased arousal (e.g., hypervigilance, irritability, sleep problems)
 - 9 items, 3 from each of DSM criteria
 - “You have upsetting thoughts, pictures, or sounds of what happened come into your mind when you do not want them to.”
 - Alphas ranged from .70-.91 across ethnic subgroups and time points)
- **Depression**
 - 5 items, Symptom Checklist-90 (Derogatis, 1994)
 - “feeling lonely,” “feeling blue,” “feeling hopeless about the future.”
 - Alphas ranged from .76-.81 across ethnic subgroups at wave 1 and .78-.87 at wave 2. Scores were averaged across waves 1 and 2 ($r = .54, p < .01$).

Relation between Cumulative Exposure to Ethnic-Political Violence in Waves 1-3 and PTS Symptoms in Wave 4 (N = 560)



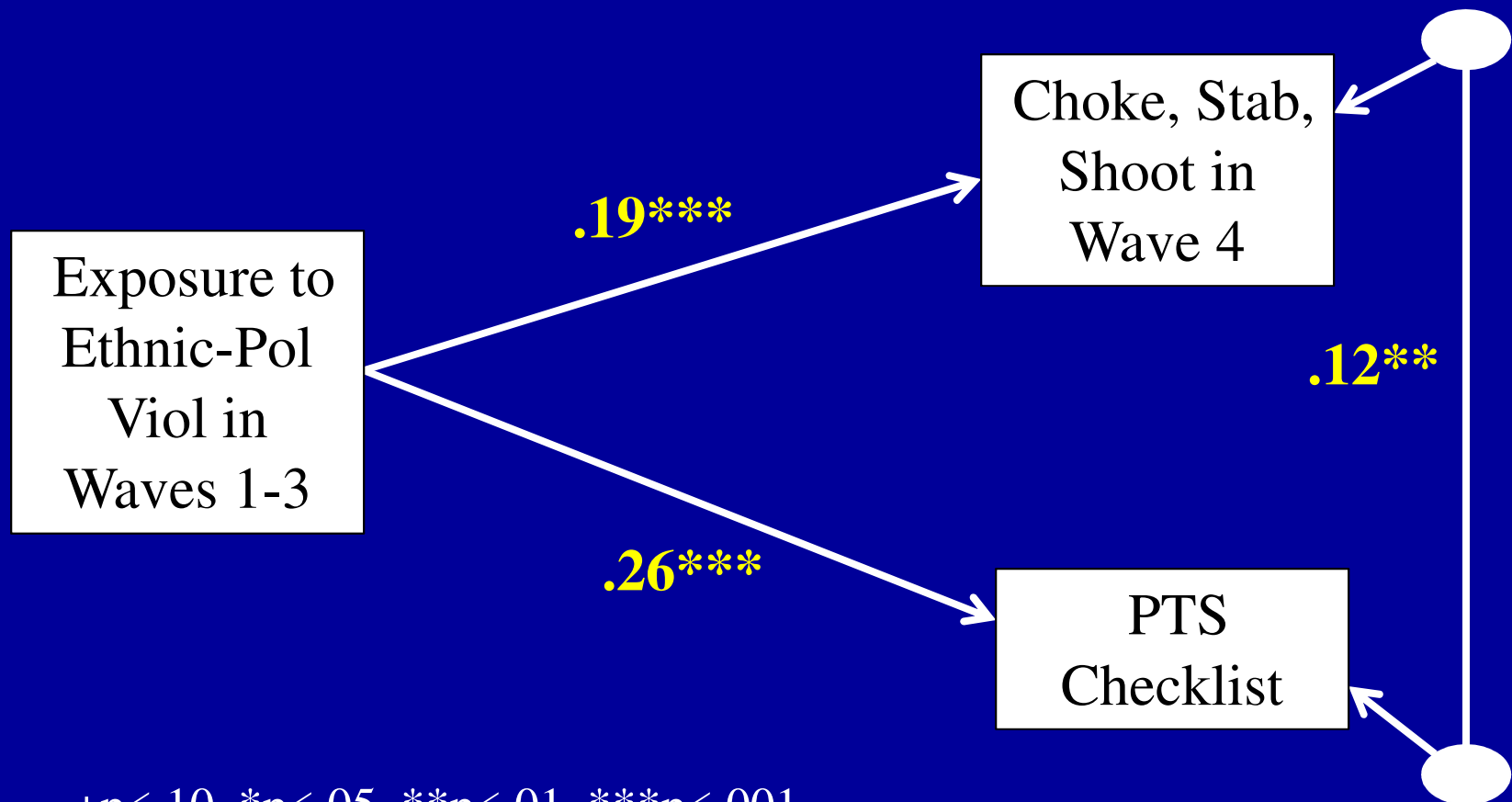
**Cumulative Exposure to Ethnic-Political Violence over Waves 1 to 3
(Lo-Hi Median Split)**

Inter-correlations between Aggression and PTS Symptoms in Wave 4 (N = 560)

	Overall Agg	Choke, Stab, Shoot	Post Traum Checklist	BSI Depression
Overall Agg	1			
Choke, Stab, Shoot	.61***	1		
Post Traum Checklist	.30***	.16**	1	
BSI Depression	.23***	.18***	.62***	1

+p<.10, *p<.05, **p<.01, ***p<.001

Longitudinal Simultaneous Prediction of Violent Behavior and PTS Symptoms from Exposure to Ethnic-Political Violence (N = 560)

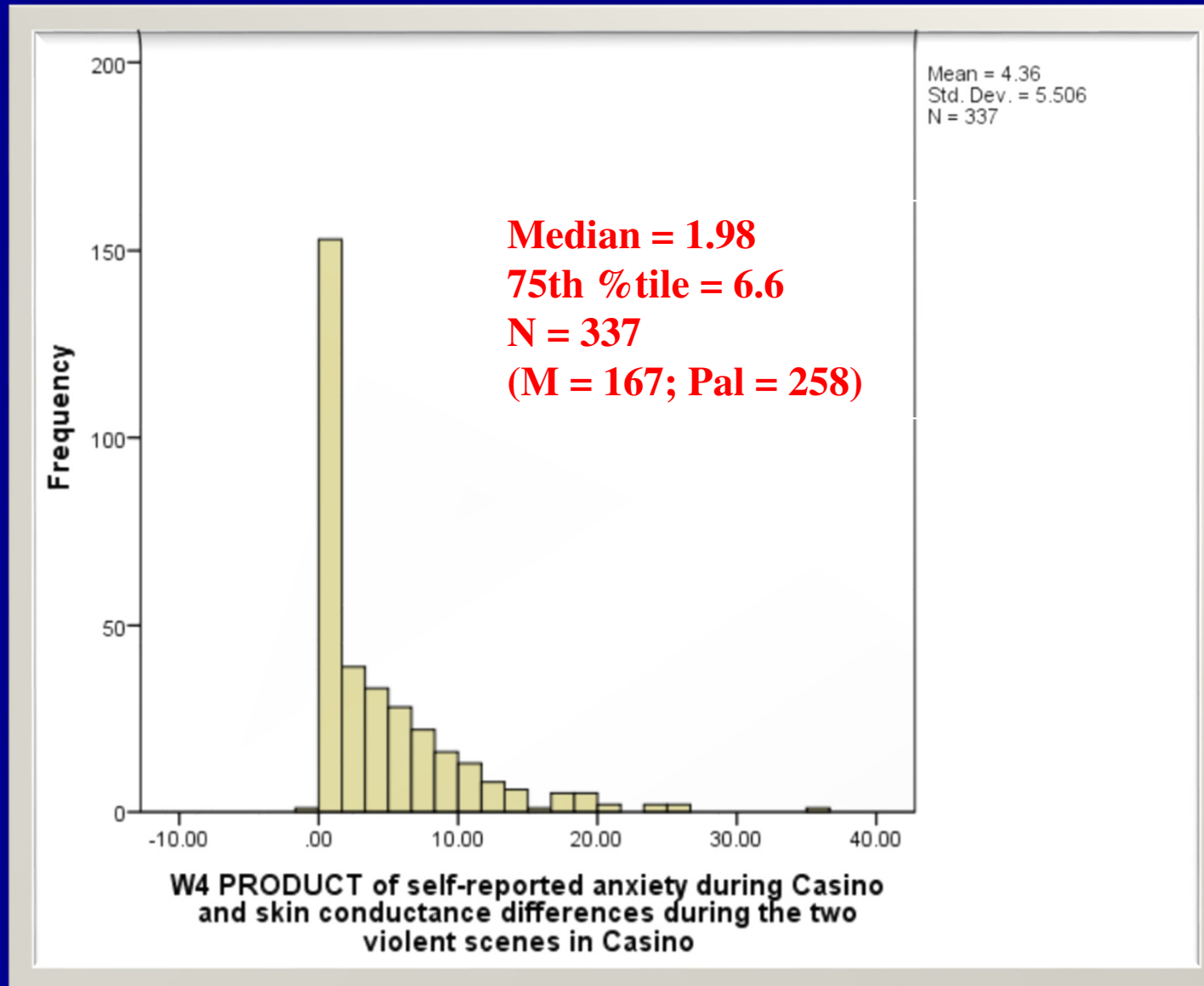


+p<.10, *p<.05, **p<.01, ***p<.001

Relations between Exposure to Violence, PTS Symptoms, and Aggression in Palestinian & Israeli Youth

- Both aggression and PTS are significantly correlated with cumulative prior exposure to ethnic-political violence
- However, PTS and Aggression are NOT highly correlated
- **Does “anxious arousal to violence” moderate the relations from violence exposure to PTS and Aggression as hypothesized?**
 - That is does “anxious arousal” discriminate between those for whom exposure increases aggression and those for whom exposure increases PTS?

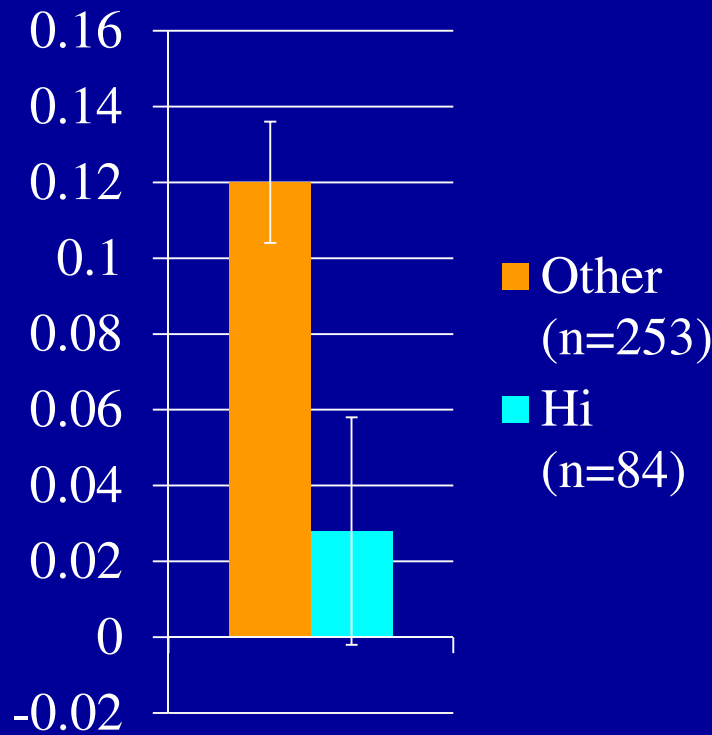
Distribution of Wave 4 “Anxious Arousal” Scores for the 337 Assessed Subjects



Relation between Anxious Arousal to Violent Movie Scenes and Wave 4 Aggression and PTS Symptoms

$r = -.133^{**}$, $n = 337$, $p < .015$

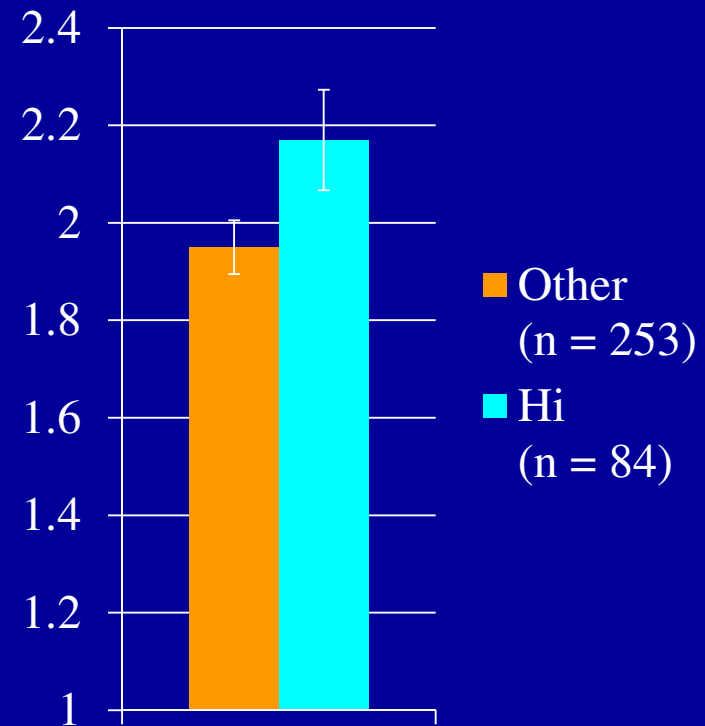
Serious Physical Aggression
“Choke, Stab, Shoot”



$t = 2.45$, $p < .02$

$r = +.115^{**}$, $n = 337$, $p < .035$

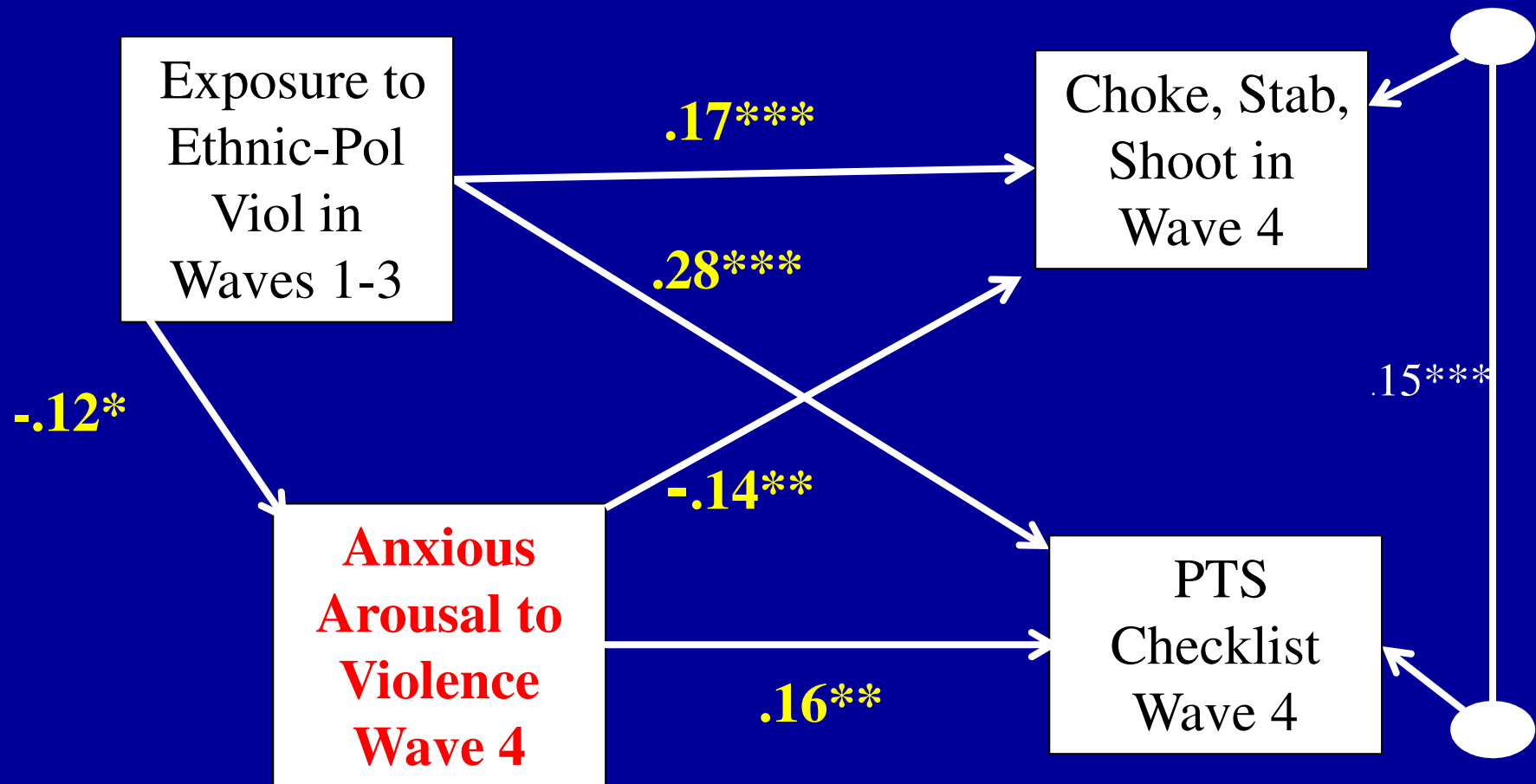
Post-traumatic Stress Checklist



$t = -2.12$, $p < .04$

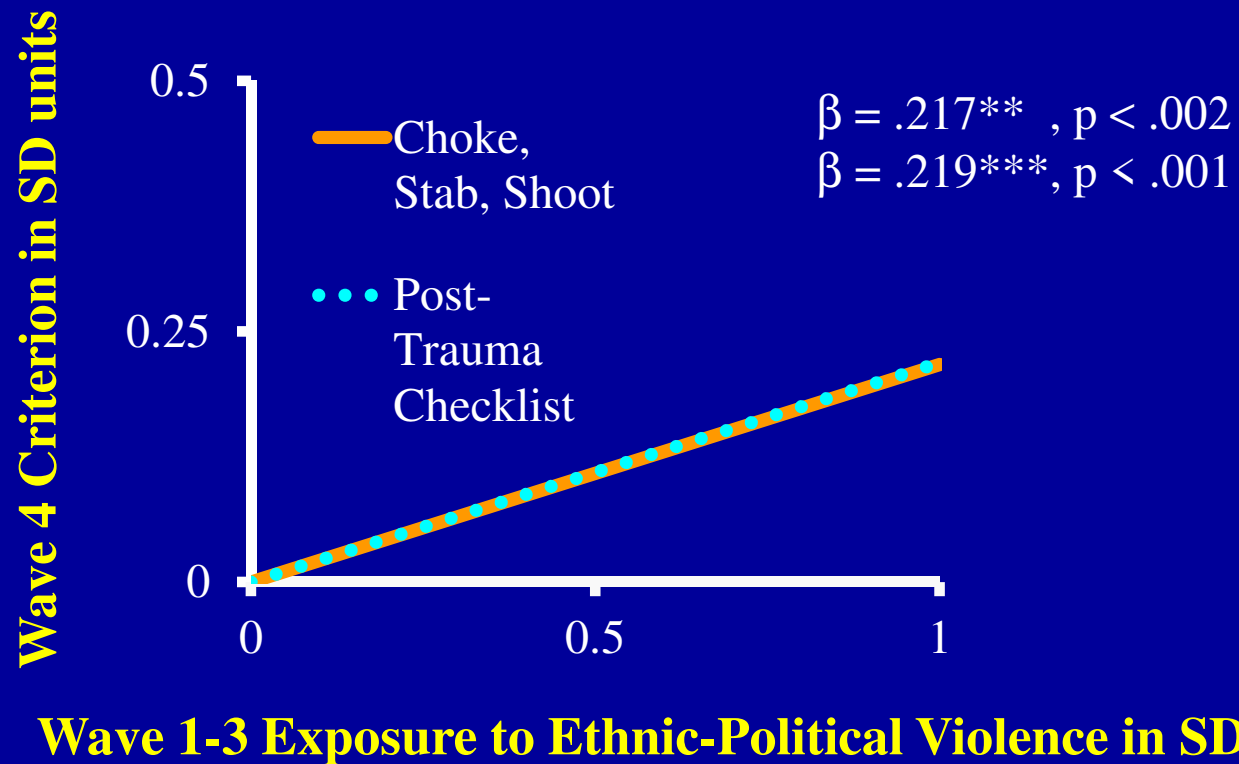
Anxious Arousal to Violent Movie Scenes at Time of Wave 4
(High >75th % vs. Other)

Longitudinal Simultaneous Prediction of Violent Behavior and PTS Symptoms from Exposure to Ethnic-Political Violence and Anxious Arousal to Violence (N = 337)



+p<.10, *p<.05, **p<.01, ***p<.001

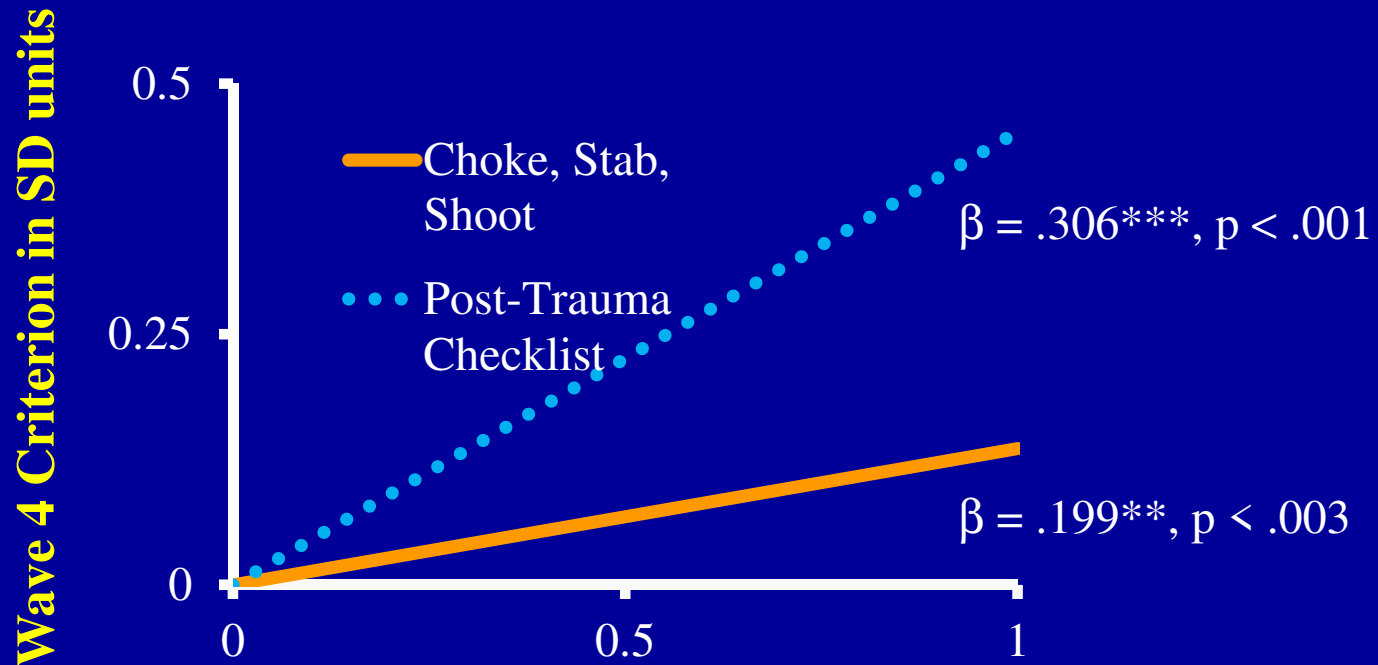
Relation of Wave 1-3 Exposure to Ethnic-Political Violence to Wave 4 Violent Behavior and Wave 4 PTS for Youth LOW (<75%) on Anx Arousal to Violence



Slide 24

+ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

Relation of Wave 1-3 Exposure to Ethnic-Political Violence to Wave 4 Violent Behavior and Wave 4 PTS for Youth HIGH (>75%) on Anx Arousal to Violence

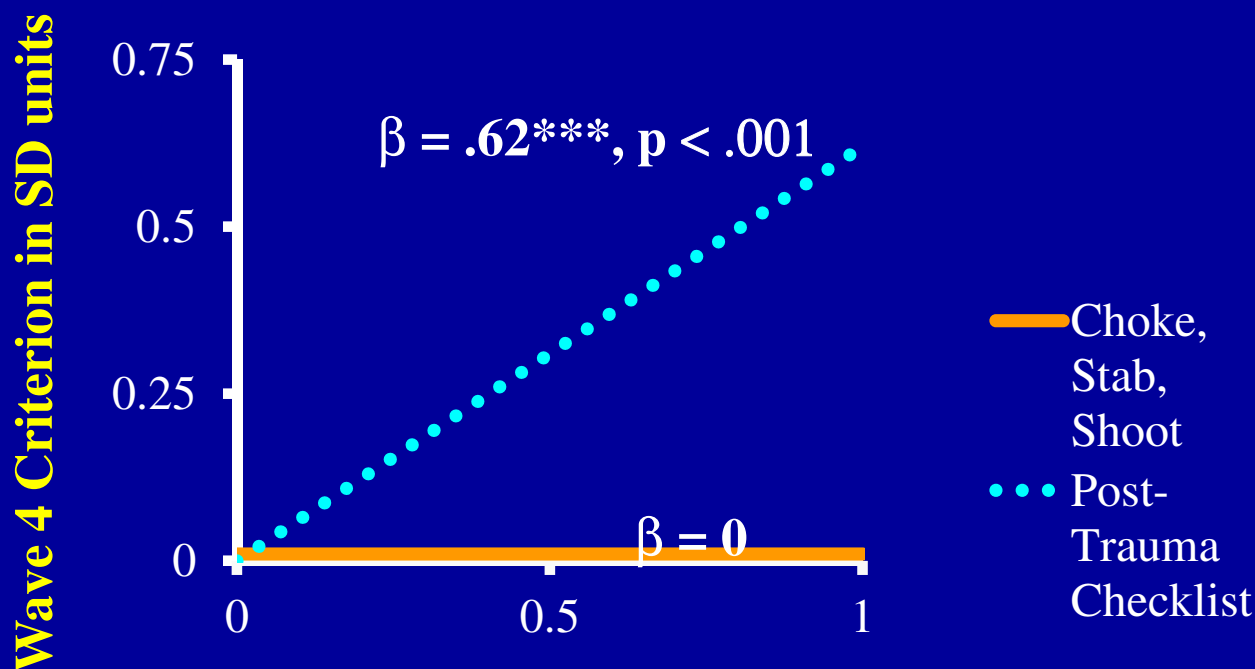


Wave 1-3 Exposure to Ethnic-Political Violence in SD units

Slide 25

+p<.10, *p<.05, **p<.01, ***p<.001

Relation of Wave 1-3 Exposure to Ethnic-Political Violence to Wave 4 Violent Behavior and Wave 4 PTS for Youth **VERY HIGH** (>87%) on Anx Arousal to Violence



Wave 1-3 Exposure to Ethnic-Political Violence in SD units

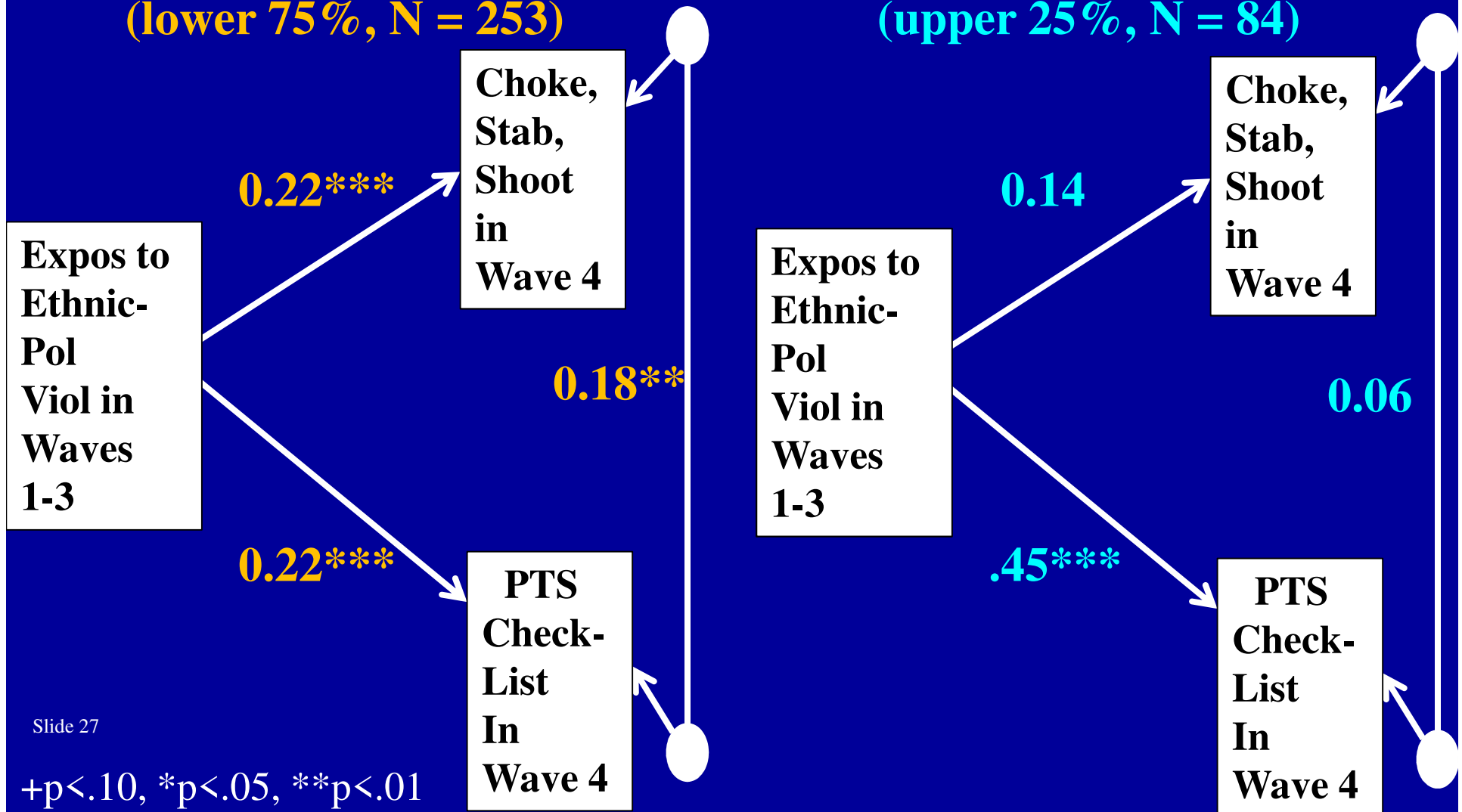
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+p<.10, *p<.05, **p<.01, ***p<.001

Moderation by Anxious Arousal of Effects of Exposure to Violence on Violent Behavior and PTS

LOW Anxious Arousal to Viol
(lower 75%, N = 253)

HI Anxious Arousal to Viol
(upper 25%, N = 84)



Conclusions

- Exposure to ethnic-political violence increases the risk of both serious violent behavior and PTSD internalizing symptoms
- The amount of anxious arousal to violence that a person experiences moderates these effects such that HIGH anxious arousal youth are more likely to increase in PTSD symptoms while LOW anxious arousal youth are equally likely to increase in aggressive and violent behavior against their peers.