

MENTAL ILLNESS, VIOLENCE, AND MASS SHOOTINGS

On finding the haystack in a needle

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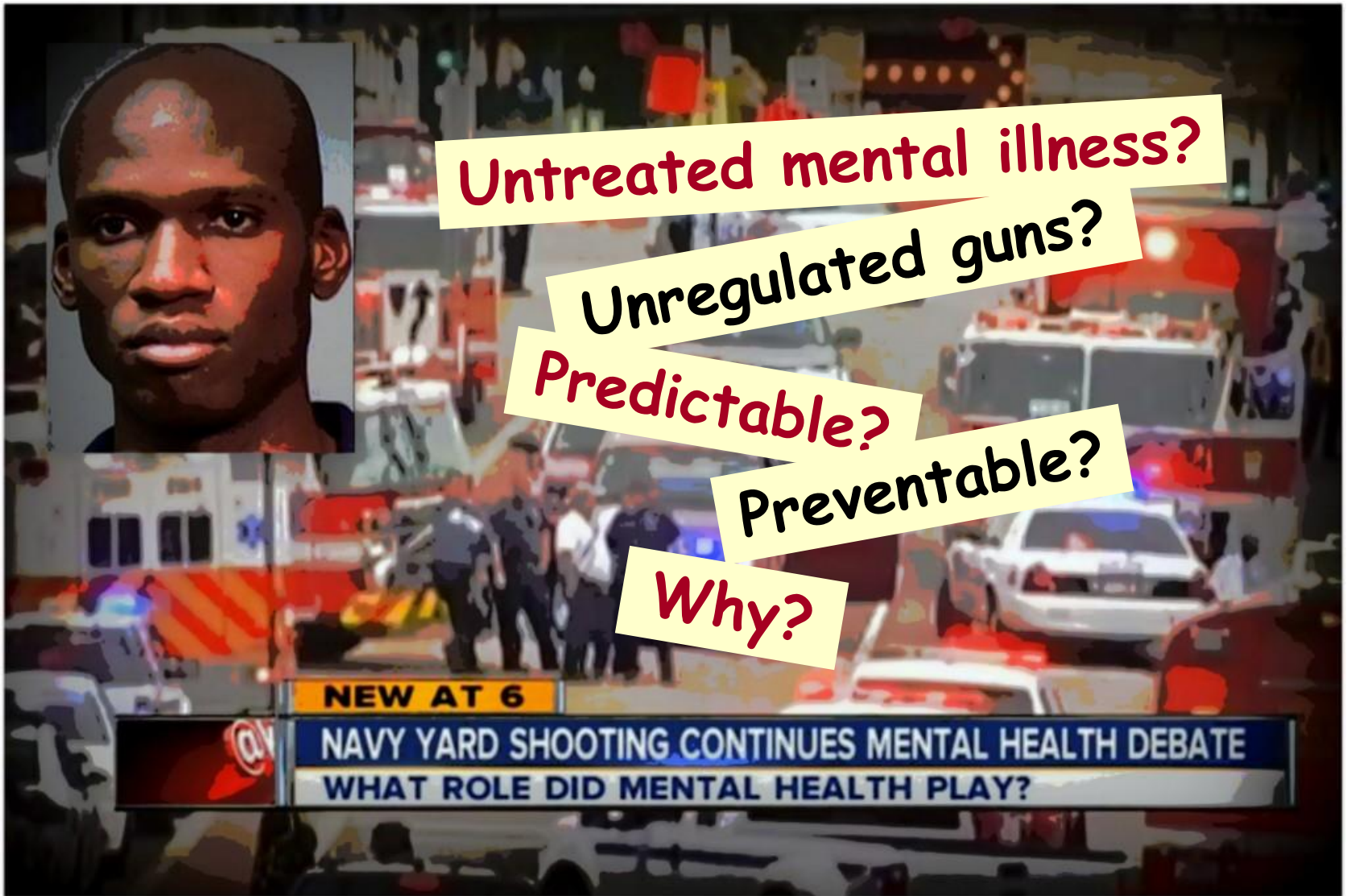
Before the Shooting Starts

Phoenix, AZ

November 22, 2013



Newtown, CT
December 2012



September 16, 2013

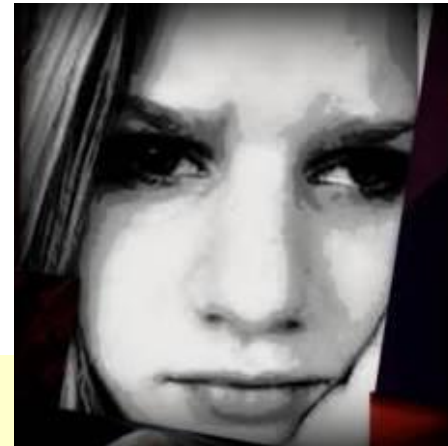


Accuracy of
clinicians'
prospective
predictions of
violence
using structured
risk assessment
instruments

0.41 (0.27-0.60)

(meta-analysis of 73 studies
involving 24,827 people)

**THE AMAZING
RETROSPECT-O-SCOPE!**



What do we mean by
mental illness?



What do we mean by
violence?





What do we mean by

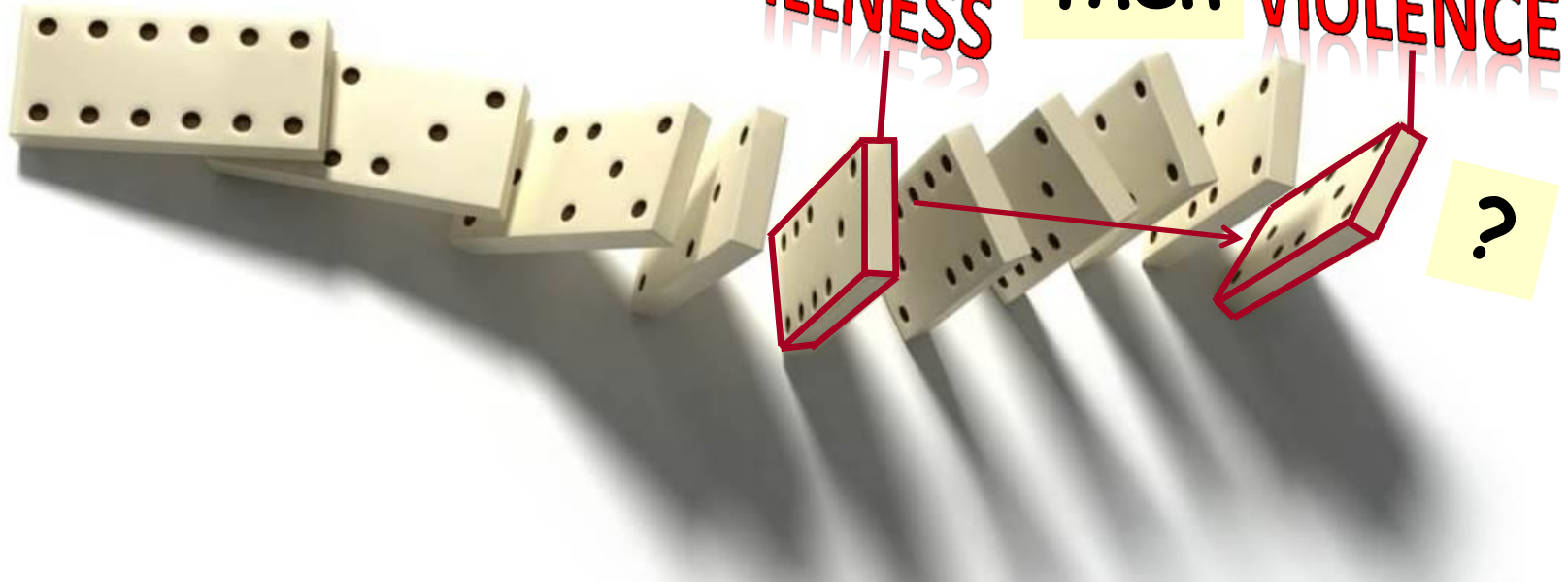
cause?

if

**MENTAL
ILLNESS**

then

VIOLENCE



multiple precursors, co-determinants,
mediators, moderators, interactions =

uncertainty

Percent of US public that **believes** that people with **schizophrenia** are likely or very likely to act **violently**

60%

PUBLIC PERCEPTION

VIOLENCE RISK in SMI only

Absolute:

7%

Relative:

3.5

Attributable:

4%

Victimization:

25%

Prevalence of **any minor or serious violent** behavior in people with **schizophrenia**

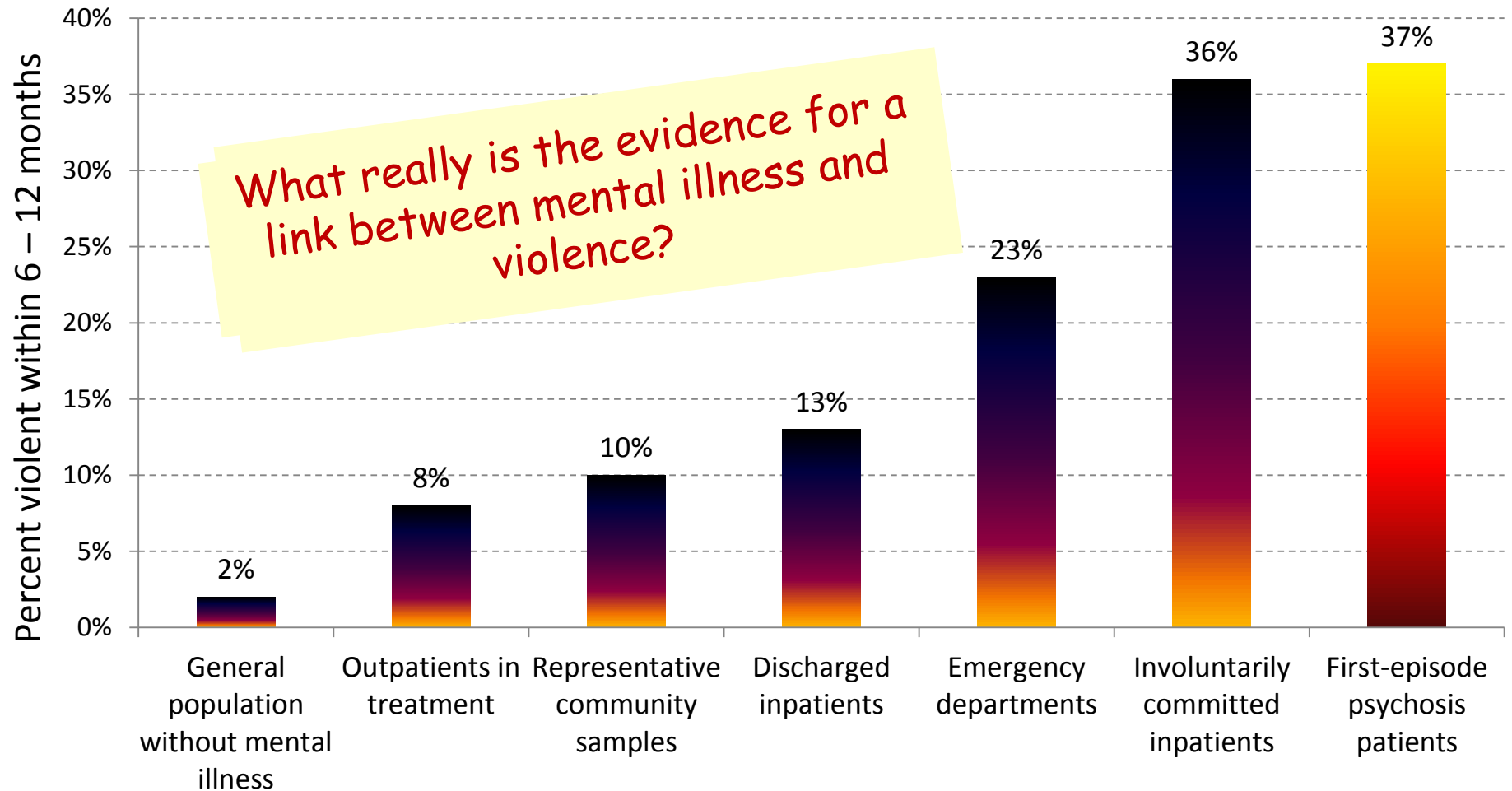
12%

REALITY

Prevalence of **stranger homicide** by people with **schizophrenia**

(1 IN 70,000)

Average prevalence of **minor to serious violence** among persons with serious mental illness by **setting of study** (meta-analysis of many studies)



Sources: Adapted from (1) Choe JY, Teplin LA, Abram KM (2008). Perpetration of violence, violent victimization, and severe mental illness: Balancing public health concerns. *Psychiatric Services* 59, 153-164; (2) Large MM, Niessen O (2011). Violence in first-episode psychosis: A systematic review and meta-analysis. *Schizophrenia Research* 125, 209-220.

Predicted probability of violence in year in lowest- and highest-risk profiles in NIMH Epidemiologic Catchment Area Surveys (Swanson, 1994)

Predicted probability of violent behavior in 1 year

Violence risk is multi-factorial and cumulative: Risk linked to mental illness is embedded in other factors

- Older
- Female
- Middle to upper SES
- No serious mental illness
- No substance abuse
 - No psychiatric hospitalization
- No arrest history

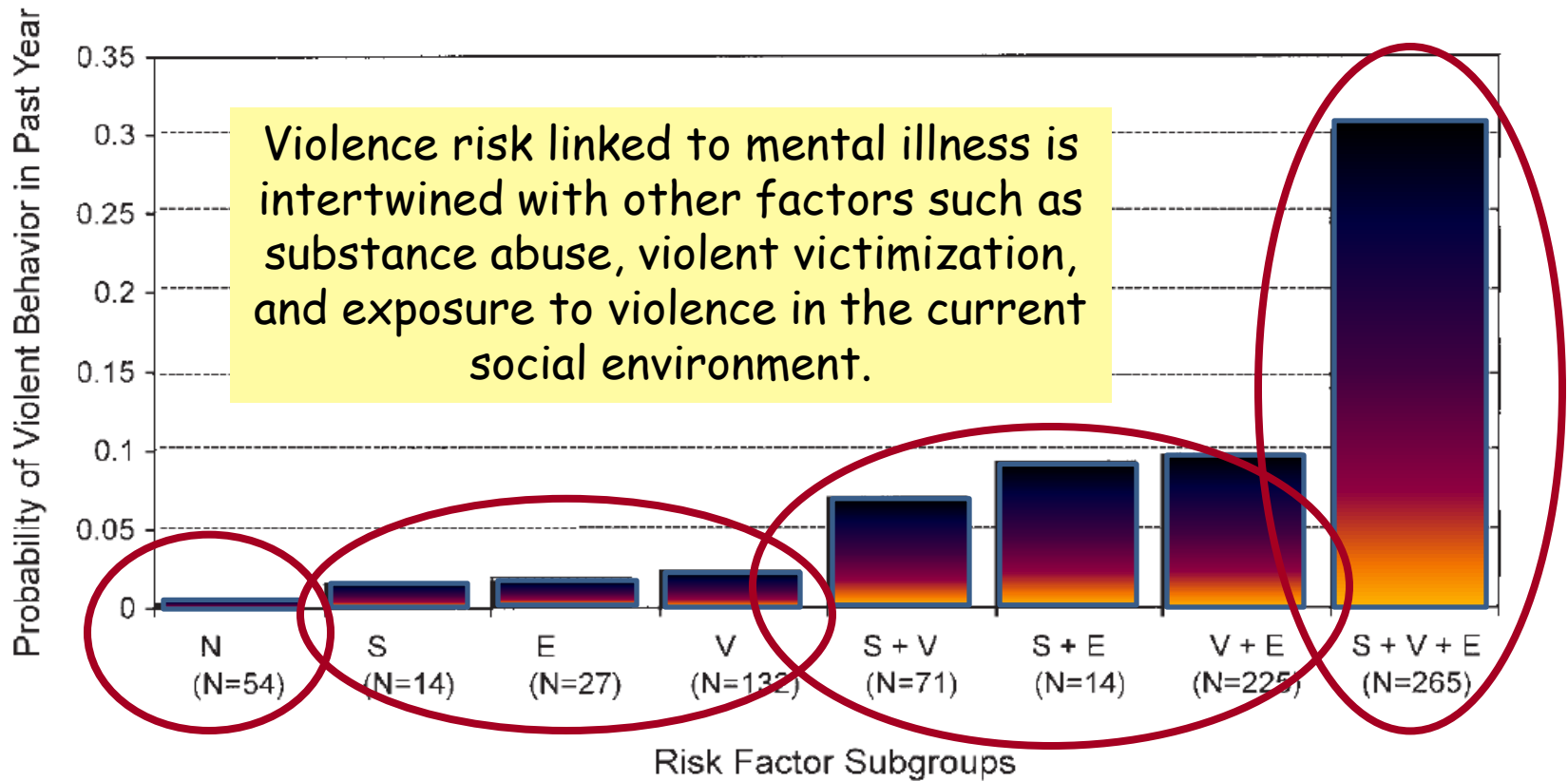
<1 % violent



- Younger
 - Male
- Lower SES
- Serious mental illness
- Substance abuse
- History of psychiatric hospitalization
- History of arrest

65 % violent

Predicted **probability of serious violent behavior** in persons with serious mental illness by combined risk factors, controlling for significant covariates in logistic regression model (N=802)



Note. Risk factors are as follows: N = none; S = substance abuse; V = violent victimization history; E = exposure to violence in current environment.

Source: Swanson JW, Swartz MS, Essock SM, Osher FC, Wagner HR, Goodman LA, Rosenberg SD, Meador KG (2002). The **social-environmental context** of violent behavior in persons treated for severe mental illness. *American Journal of Public Health*, 92(9): 1523-1531.

What about symptoms?

[delusions and violence]

- **Definition**

- **Delusions** are disturbances of thought that produce false beliefs, often bizarre, held with conviction despite disconfirmatory evidence from everyday life.

How might **delusions cause violence?**

Conceptual mechanisms

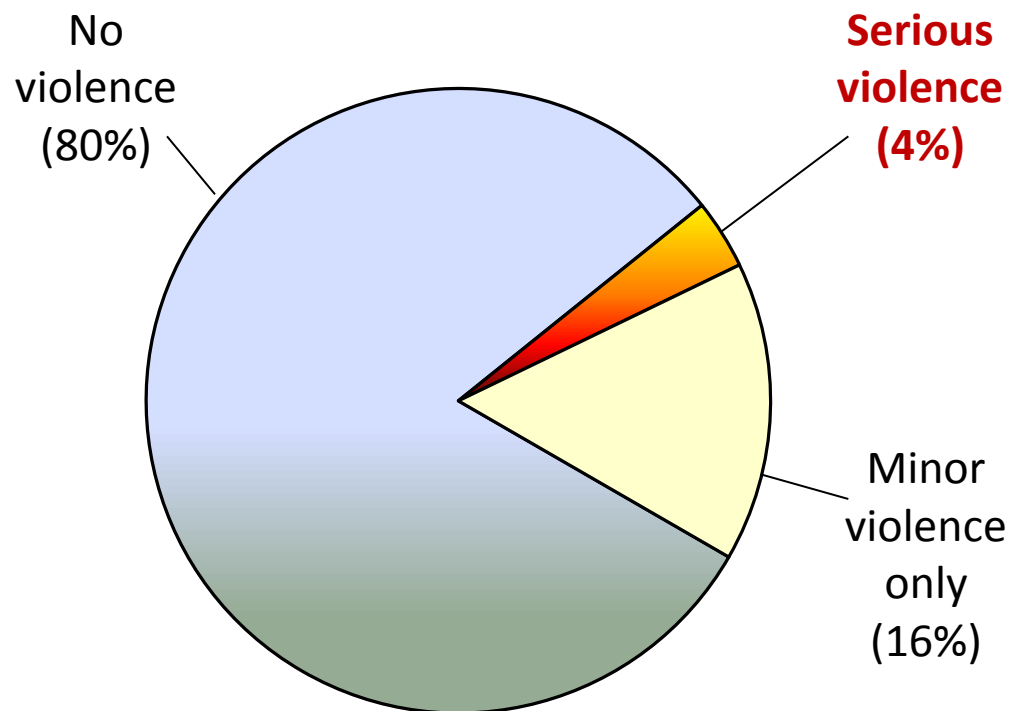
- **Motivating effect:** acts motivated by delusions may be complex, organized, and goal-oriented, even if appearing illogical to outside observers; “principle of rationality within irrationality” (Link & Stueve, 1994).
- **Destabilizing effect:** psychotic symptoms interfere with the ability of individuals to manage interpersonal conflicts; thought disturbance may frustrate psychotic individuals and increase likelihood of impulsive decisions to act violently; “tense situations” (Hiday, 1995); “disorganized/impulsive” violence (Baxter, 1997).
- **Disinhibiting effect:** thought disturbance may remove natural controls on impulses to act violently in certain situations (Douglas et al., 2009.)

NIMH Clinical Antipsychotic Trials of Intervention Effectiveness (CATIE) study: N=1,460 patients with schizophrenia in community treatment; 57 U.S. clinical sites

Measure : MacArthur Community Violence Interview (MCVI)

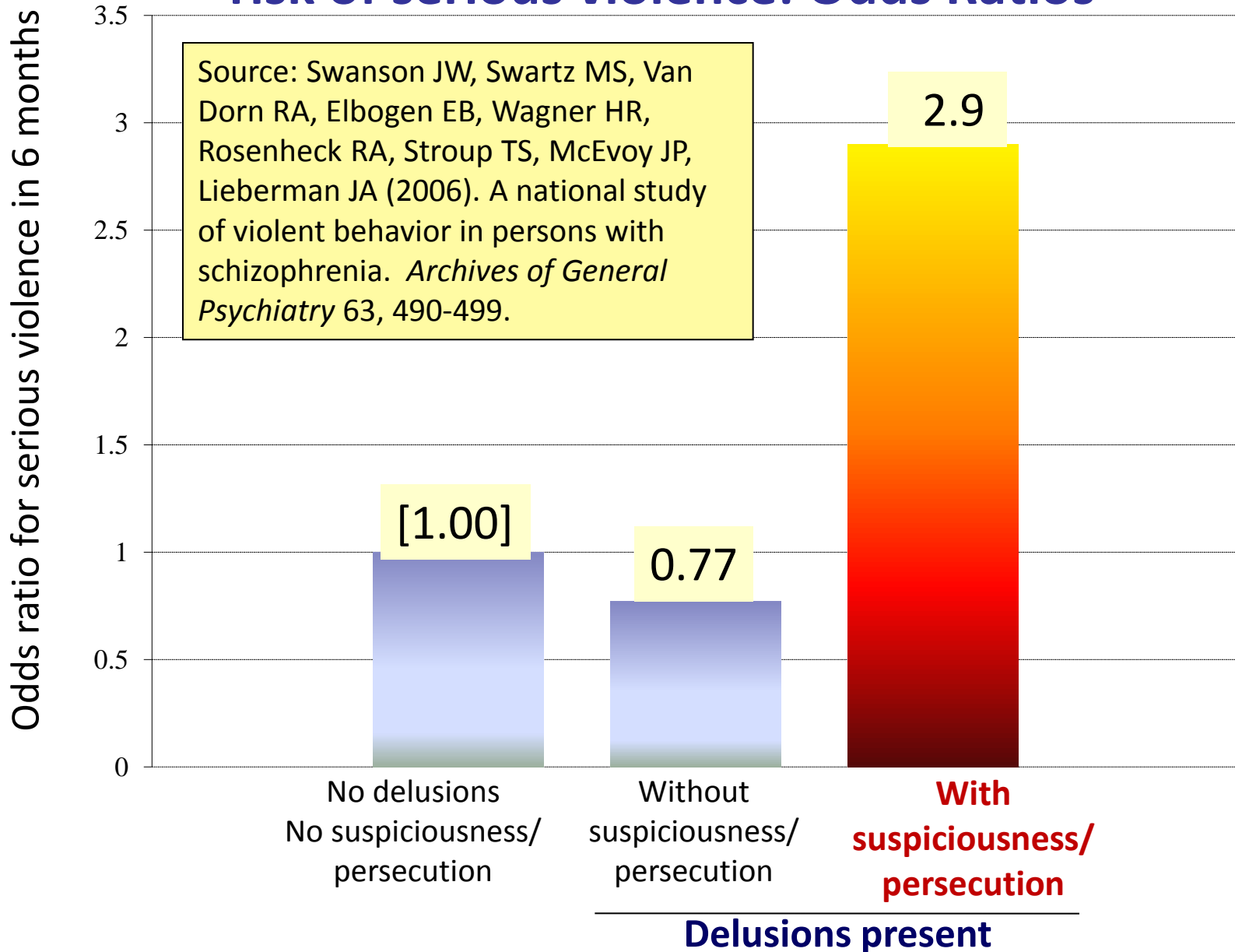
- Structured interview questions about violent behaviors; 2 levels of severity:
 - Minor violence: simple battery without injury or weapon use
 - Serious violence: use of a lethal weapon; acts resulting in physical injury; threats with a lethal weapon in hand; any sexual assault.
- Self-report information supplemented with family collateral reports on parallel questions.
- 6 month period of reference/recall.

6-month **prevalence of violence** at baseline

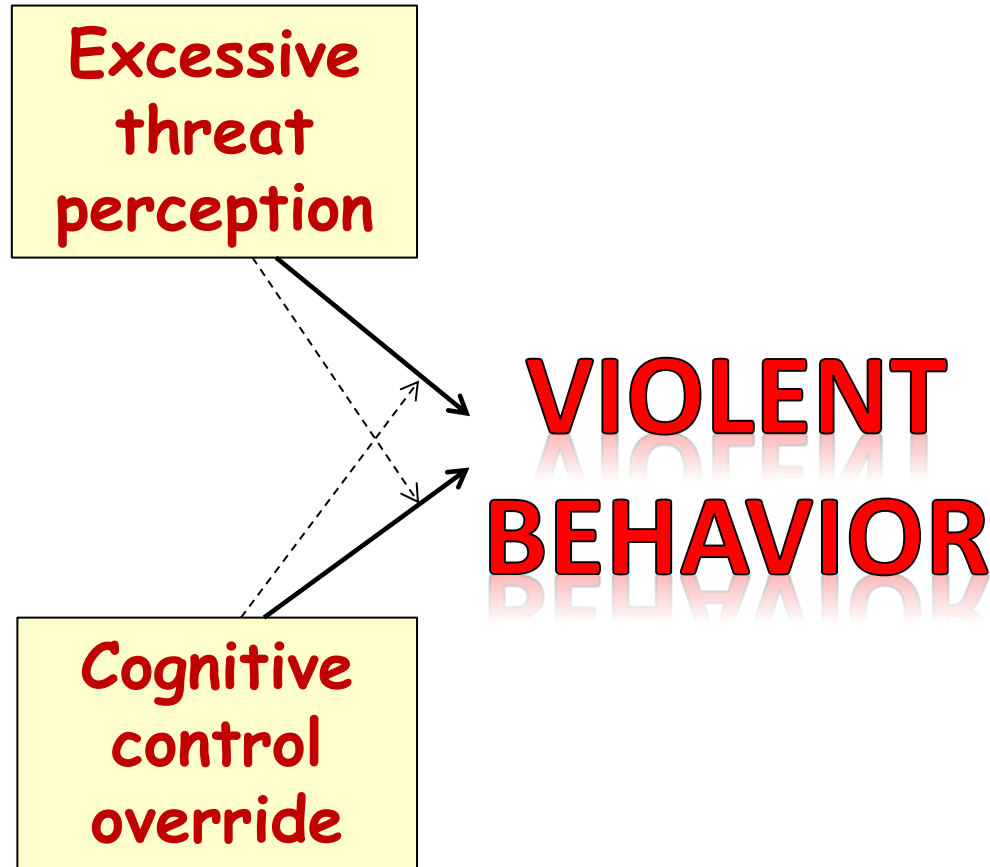


Source: Swanson JW, Swartz MS, Van Dorn RA, Elbogen EB, Wagner HR, Rosenheck RA, Stroup TS, McEvoy JP, Lieberman JA (2006). A national study of violent behavior in persons with schizophrenia. *Archives of General Psychiatry*, 63, 490-499.

Delusions, suspiciousness/persecution interaction in risk of serious violence: Odds Ratios

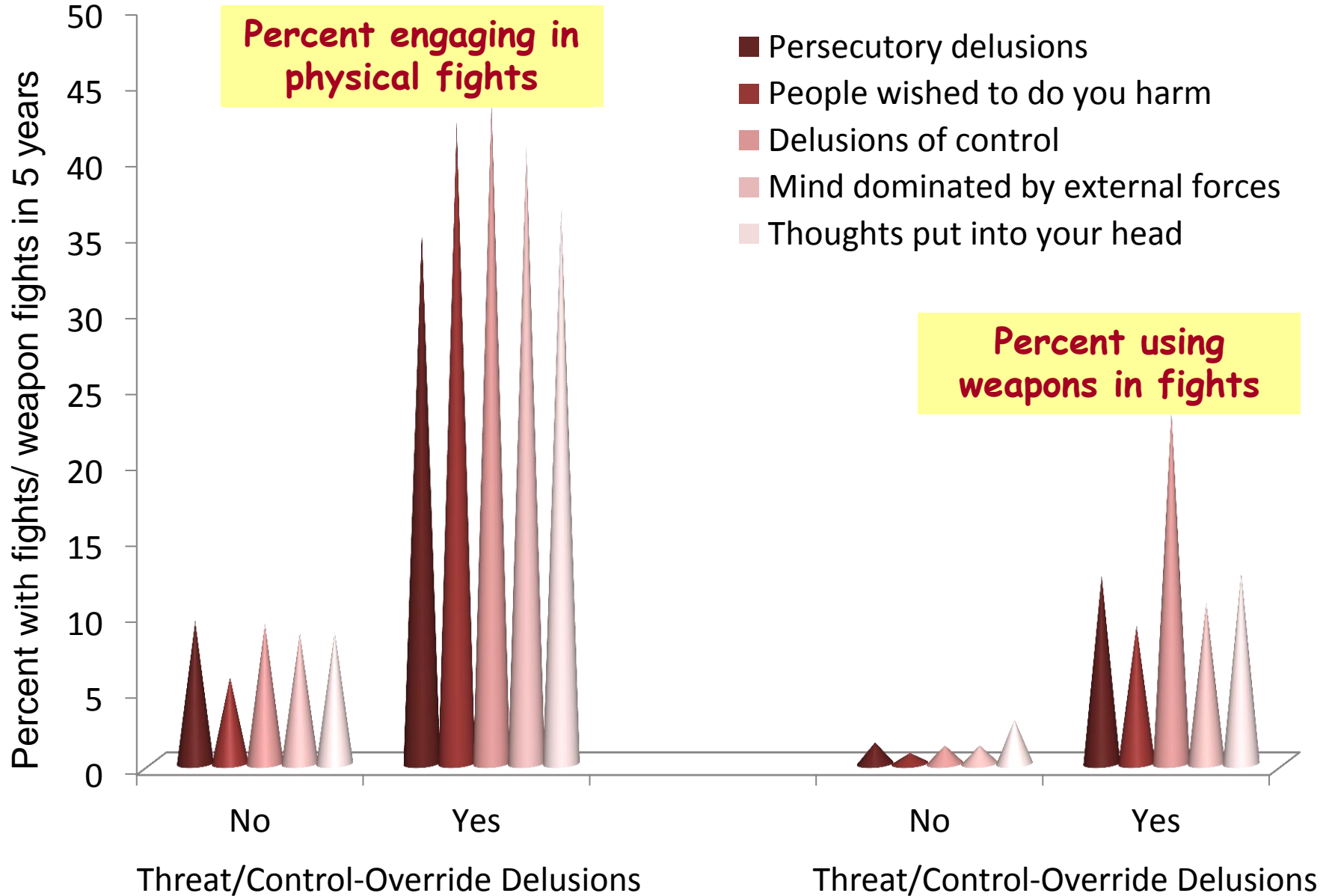


Bruce Link's theory of delusional violence as "rationality within irrationality"

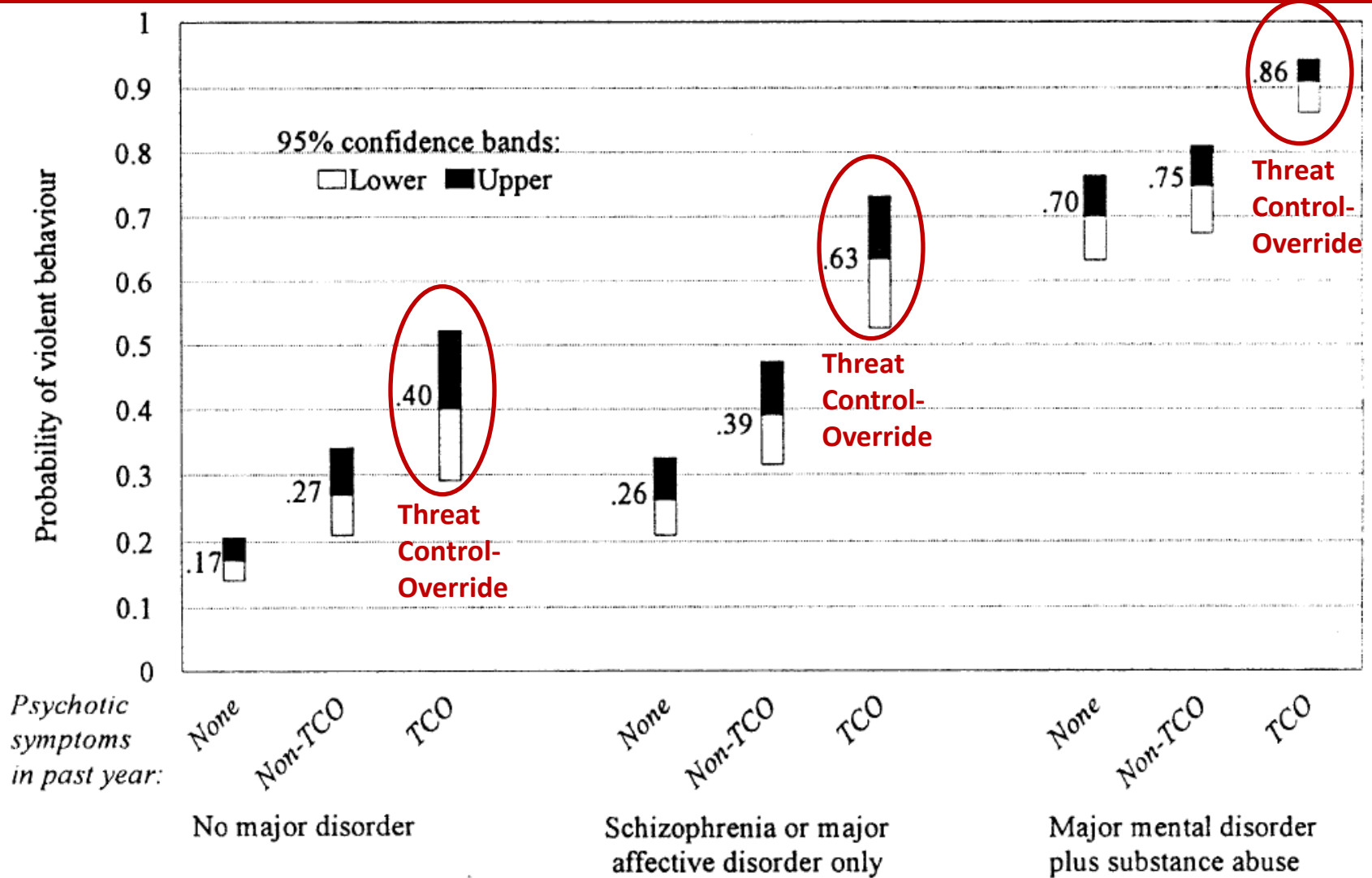


Source: Link BG, Stueve A, Phelan J (1998). Psychotic symptoms and violent behaviors: probing the components of "threat/control-override" symptoms. *Soc Psychiatry Psychiatr Epidemiol* 33: S55-S60

Link's theory of delusional violence as "rationality within irrationality": Association of **threat/control-override delusions** and **violent behavior**



Lifetime probability of any violence for TCO and other symptoms, by presence of major mental illness and substance abuse disorder (Swanson et al., 1996, NIMH Epidemiologic Catchment Area data)



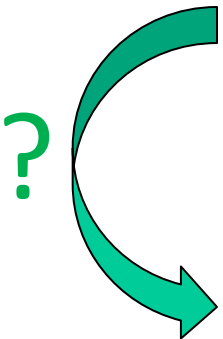
Swanson JW, Borum R, Swartz MS, Monahan J (1996). Psychotic symptoms and disorders and the risk of violent behaviour in the community. *Criminal Behavior & Mental Health*, 6, 317-338.

Subjective feelings when acting violently:

“What were you feeling right before [violent act] happened?” (N=68 persons with serious mental illness)

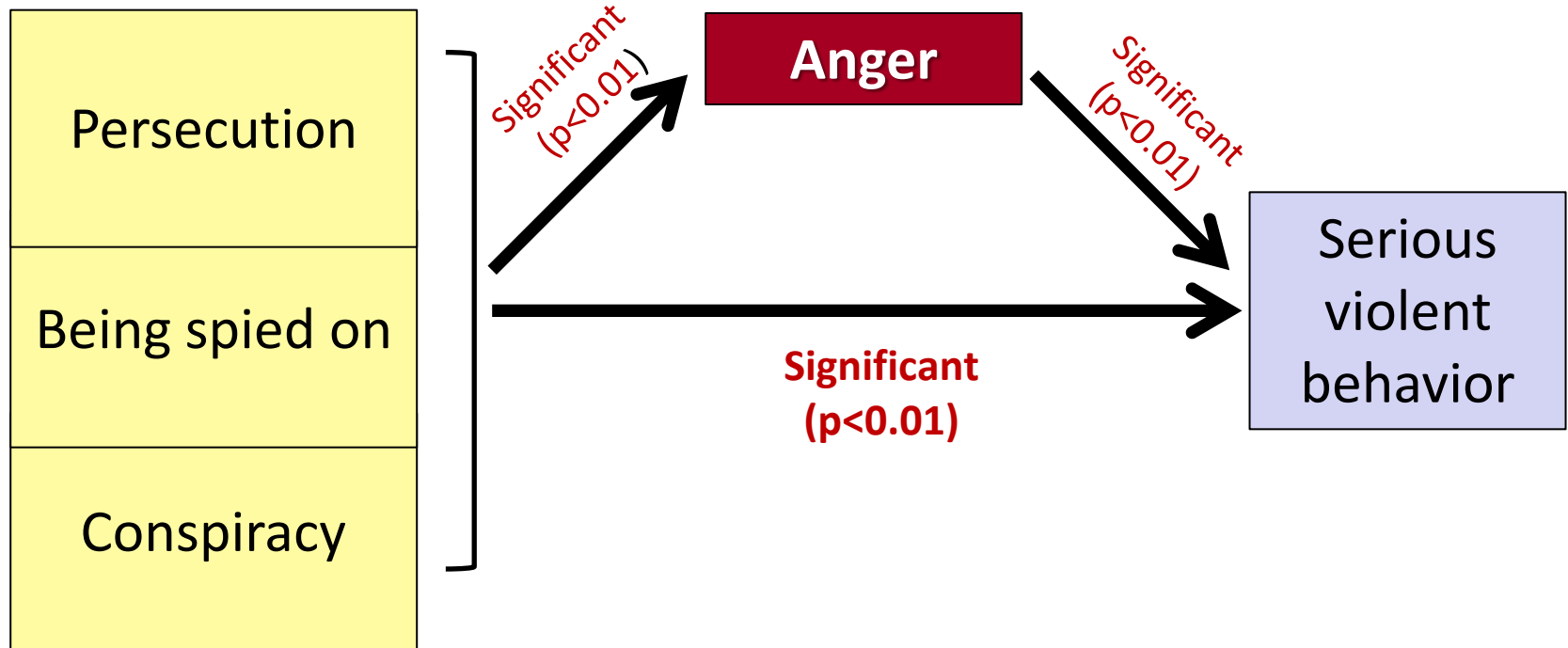
Feeling	Percent ^a
Afraid of being harmed	53
Controlled by outside forces, voices	32
Out of control	38
Nervous, anxious	54
Enraged, about to explode	68
Drunk	16
High on drugs	10

^aPercent reporting each feeling prior to violent incident.



Coid 2013 study of **delusions, anger and violence** in N=458 **first-episode psychosis patients**

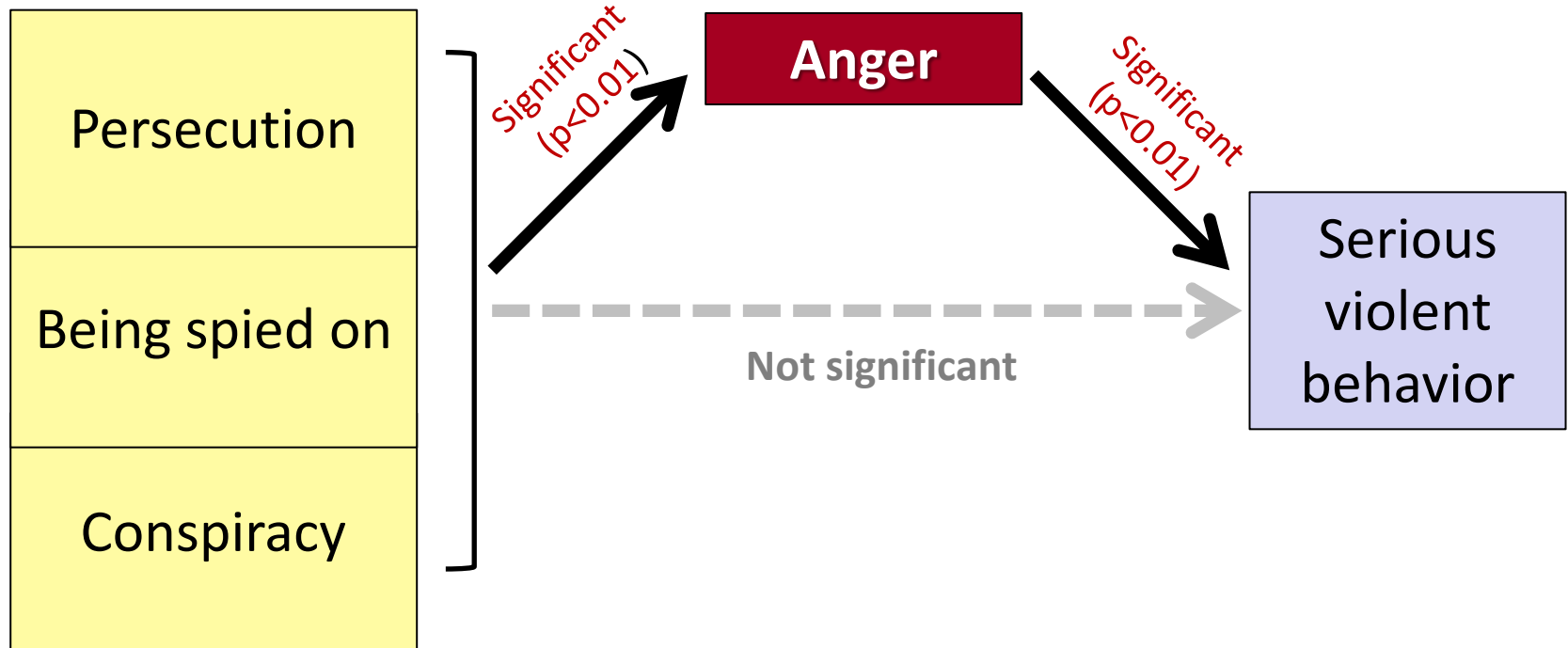
Specific Delusions



Source: Coid JW, Ullrich S, Kallis C, et al. (2013). The relationship between delusions and violence: Findings from the East London first episode psychosis study. *JAMA Psychiatry*. 2013;70 (5):465-471.

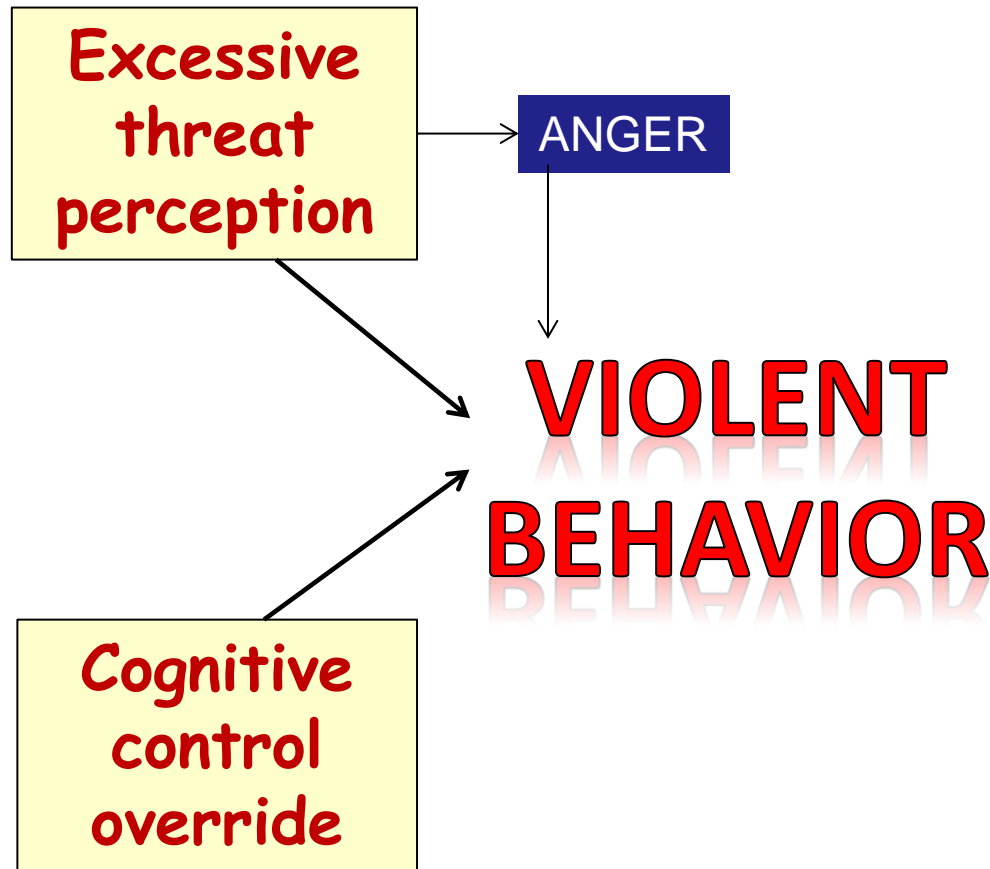
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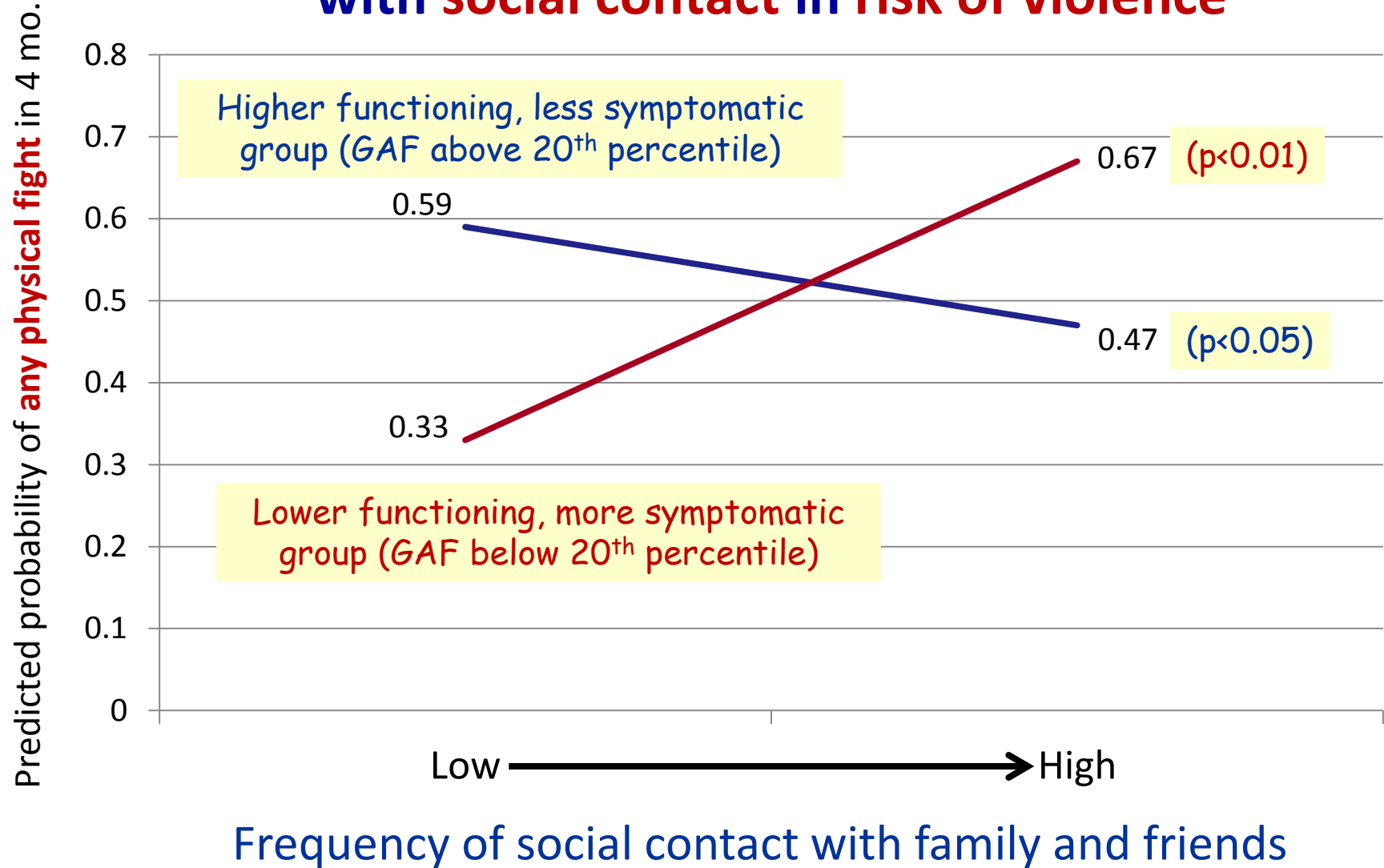
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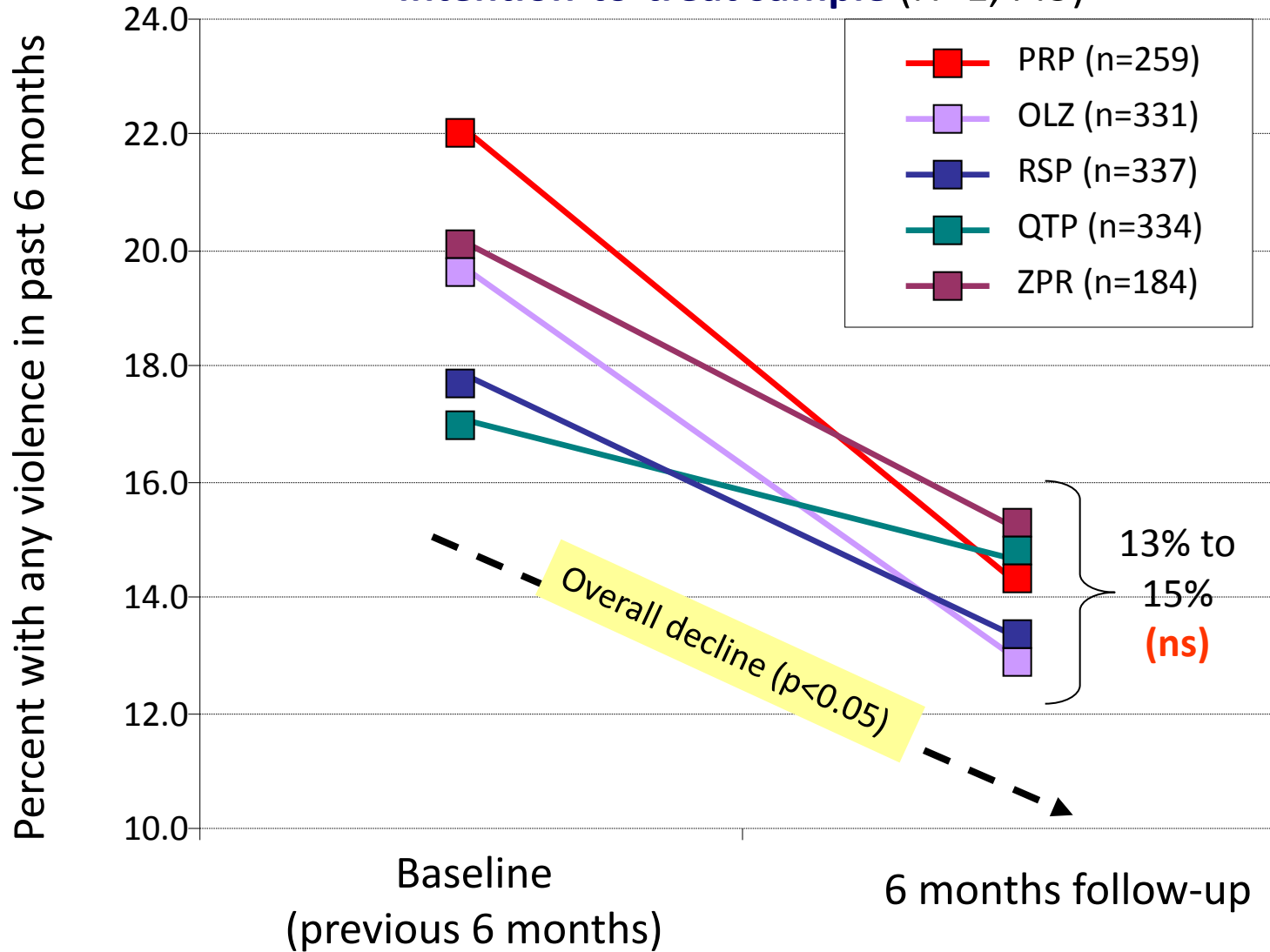
Interaction of severity of psychiatric disturbance with social contact in risk of violence



Source: Swanson JW, Swartz MS, Estroff SE, Borum WR, Wagner HR, Hiday VA (1998). Psychiatric impairment, social contact, and violent behavior. *Social Psychiatry & Psychiatric Epidemiology* 33, S-86-94.

Does treatment work? Violence by assigned CATIE treatment group:

Intention-to-treat sample (N=1,445)



Swanson JW, Swartz MS, Van Dorn RA, Volavka J, Monahan J, Stroup S, McEvoy JP, Wagner HR, Elbogen EB, Lieberman J (2008). Comparing antipsychotic Medication effects on reducing violence in persons with schizophrenia. *British Journal of Psychiatry* 193, 37-43.

CATIE findings on role of premorbid childhood conduct problems in conditioning adult violence risk

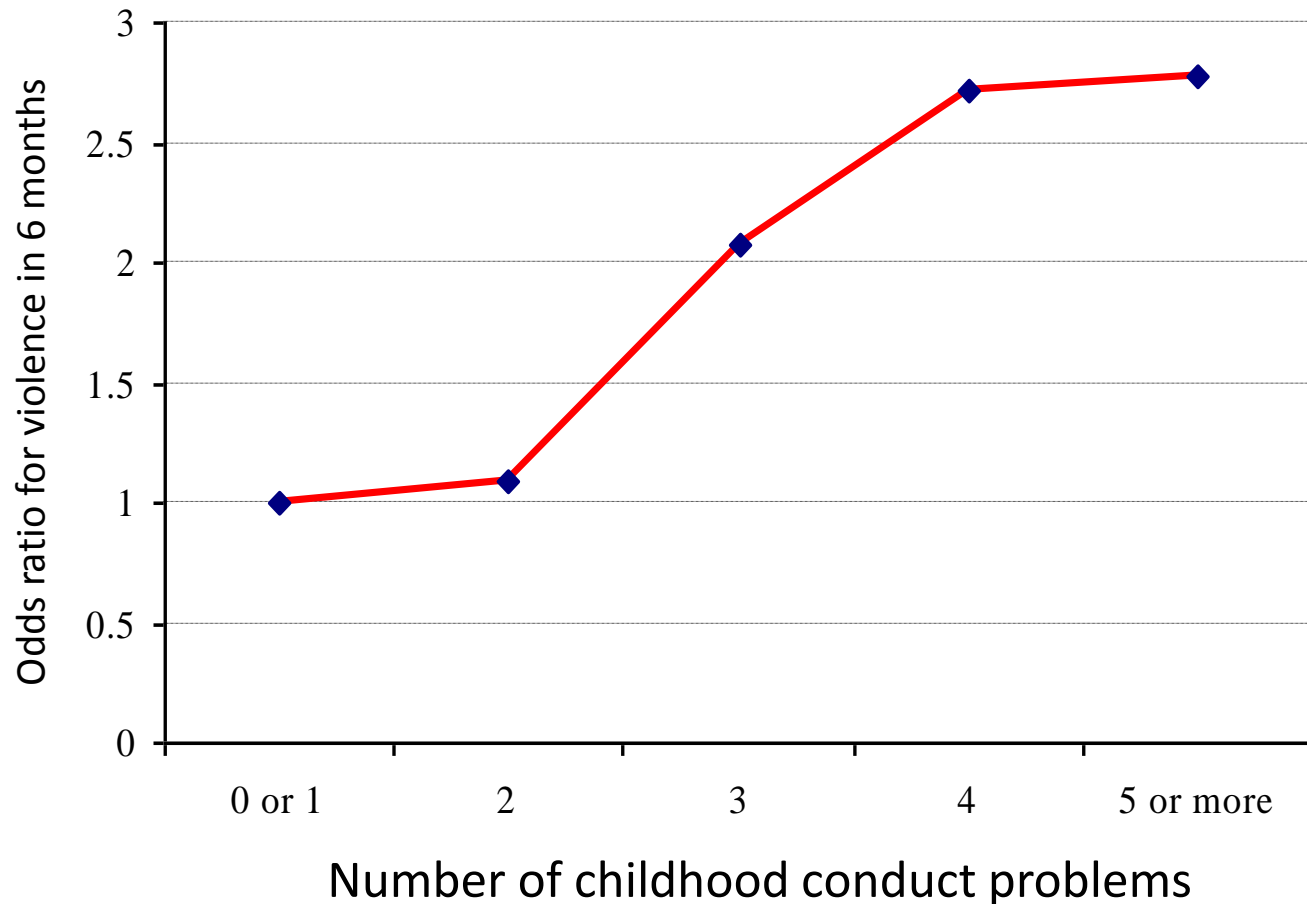
Measure of conduct problems

- Skip school a lot
- Run away from home more than once
- Ever deliberately destroy someone else's property
- Often start physical fights
- Arrested or sent to juvenile court
- Ever suspended from school

This group was
DIFFERENT...

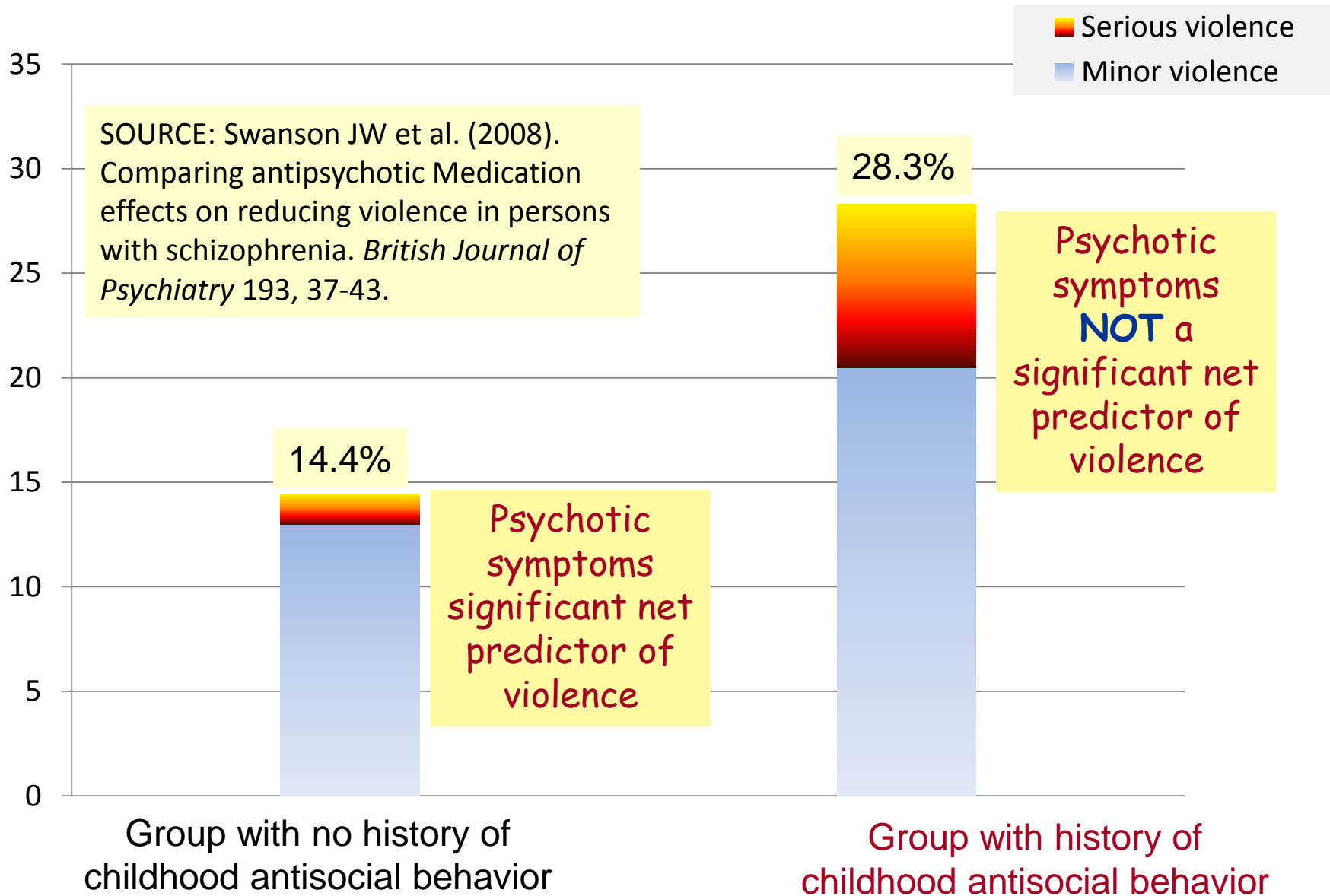
Source: Swanson JW, Van Dorn RA, Swartz MS, Smith A, Elbogen E, Monahan J (2008). Alternative pathways to violence in persons with schizophrenia: The role of childhood antisocial behavior problems. *Law & Human Behavior* 32, 228-40.

Number of childhood antisocial problems and risk of adult violence in CATIE participants

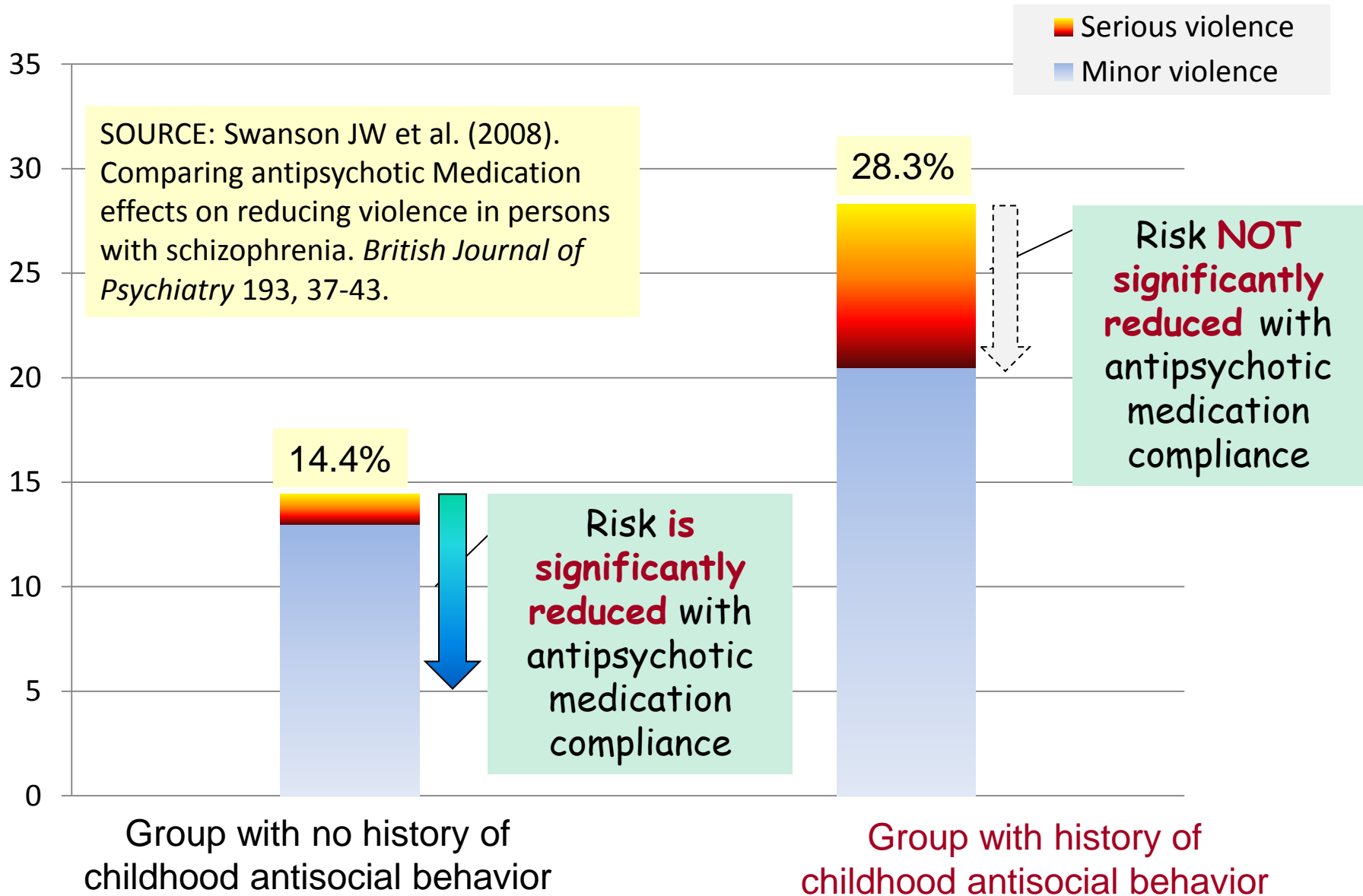


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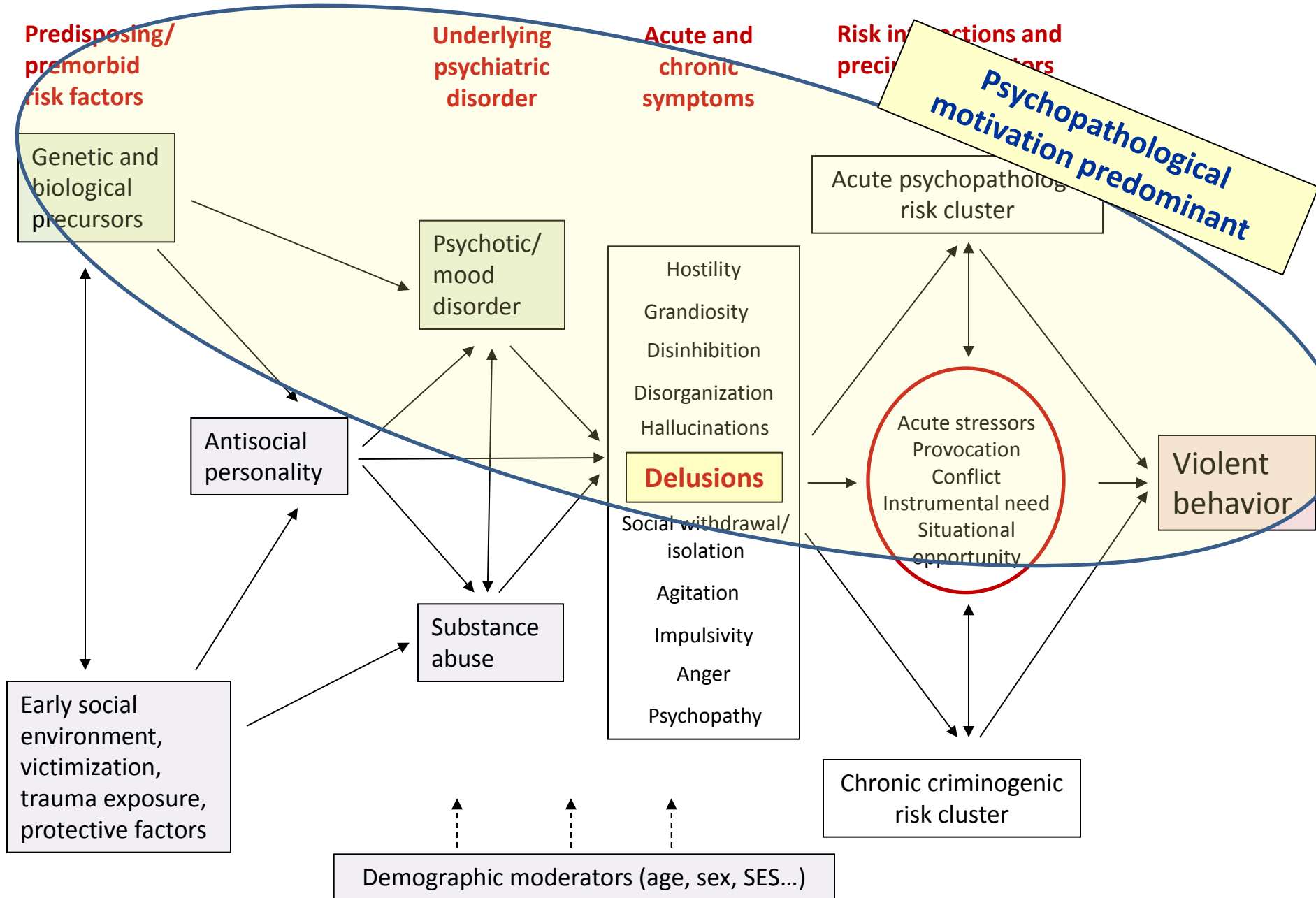
6-month prevalence of minor and serious **violent behavior** in schizophrenia patients, by history of **childhood antisocial behavior**



6-month prevalence of minor and serious **violent behavior** in schizophrenia patients, by history of **childhood antisocial behavior**



Psychotic disorder and risk of violence: Complex comparisons and causal pathways



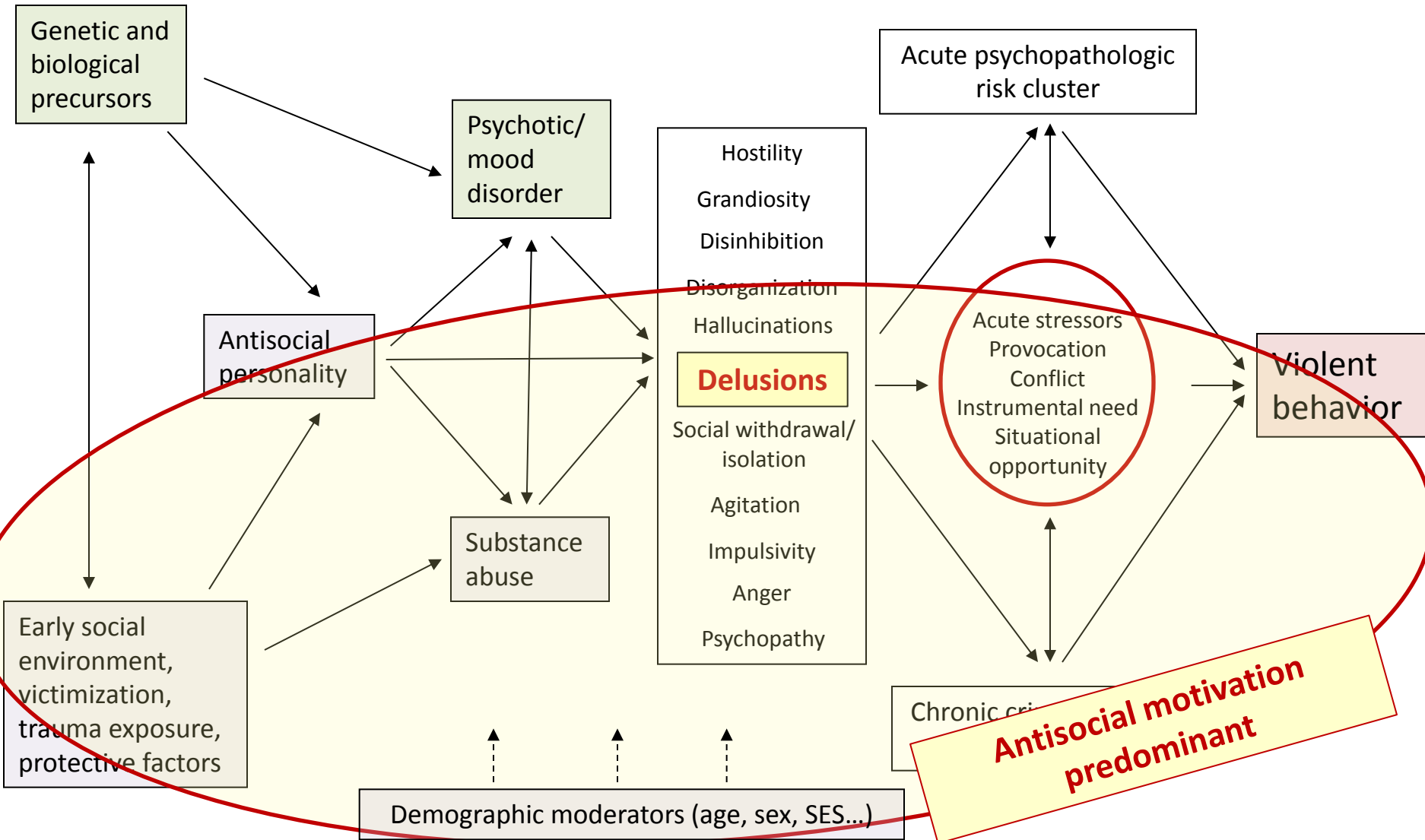
Psychotic disorder and risk of violence: Complex comparisons and causal pathways

Predisposing/ premorbid risk factors

Underlying psychiatric disorder

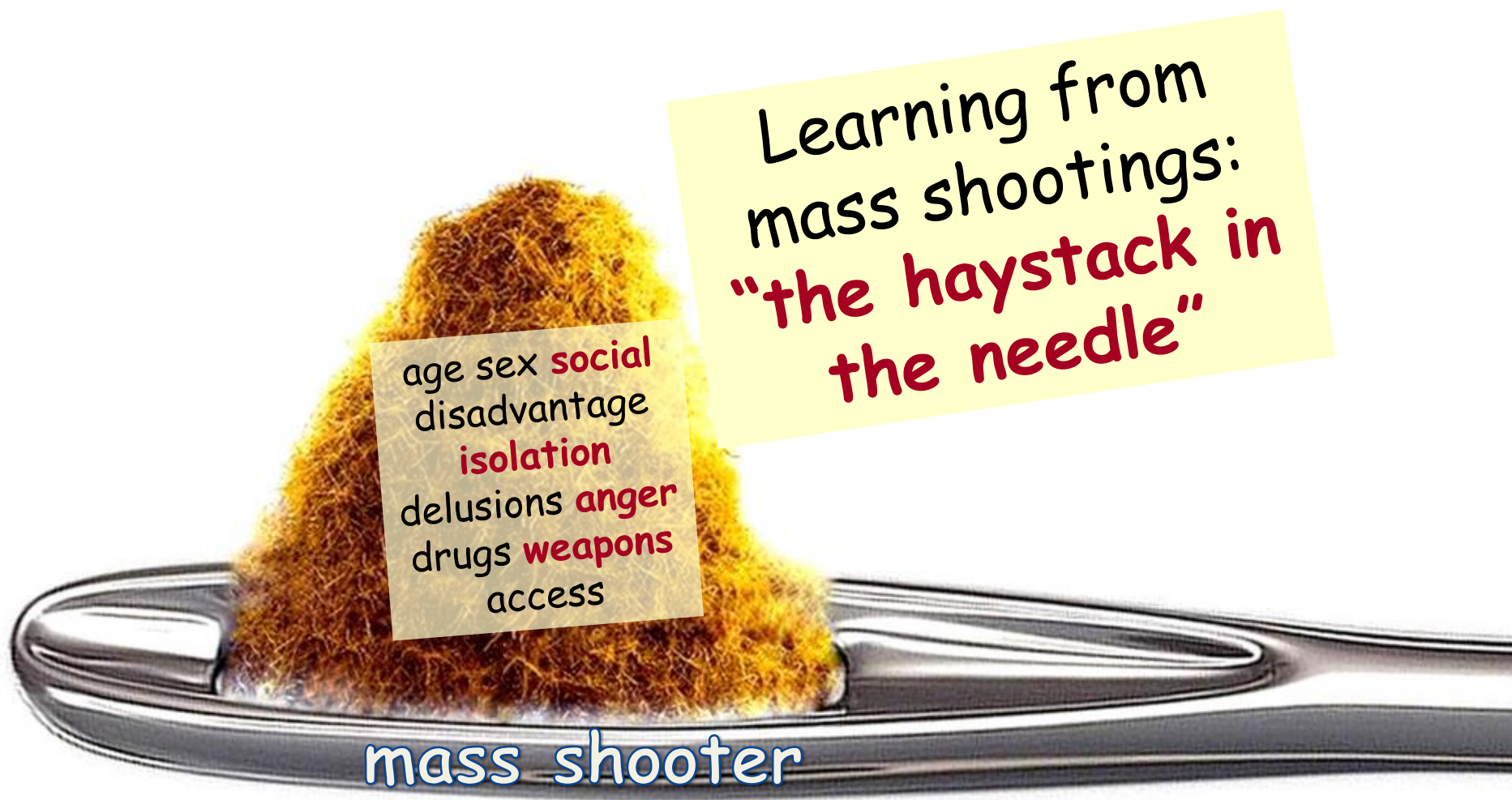
Acute and chronic symptoms

Risk interactions and precipitating factors



Predicting mass
shootings:
"needle in a
haystack"





Learning from
mass shootings:
"the haystack in
the needle"

age sex **social**
disadvantage
isolation
delusions **anger**
drugs **weapons**
access

mass shooter

Preventing the unpredicted