

Long-Term Outcomes of MST With Serious Juvenile Offenders and Their Siblings: Clinical and Cost-Effectiveness Through Midlife

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Missouri Delinquency Project Mission

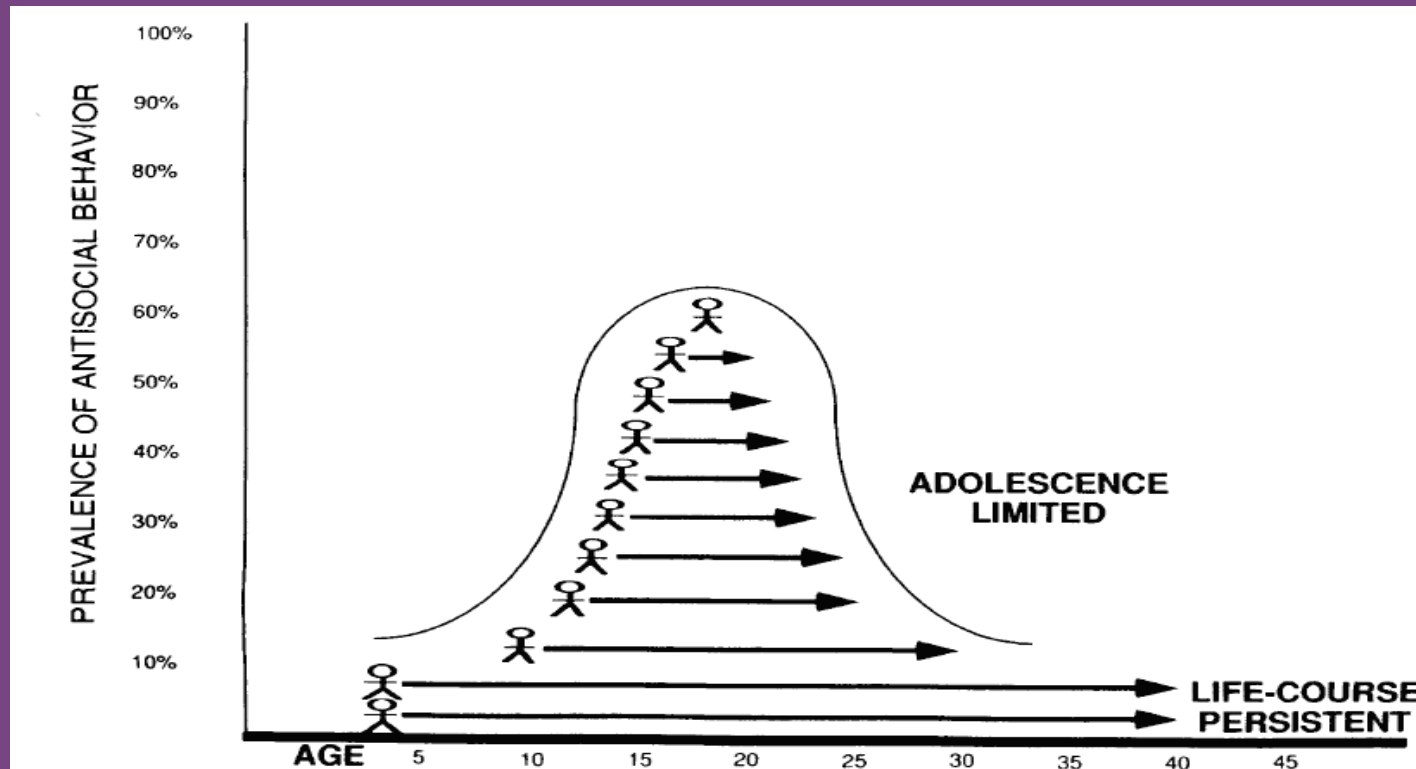
- ◆ **To develop and validate clinically effective and cost effective mental health services for youths presenting violent and other serious antisocial behaviors**



Where is Missouri Located?



Serious Juvenile Offenders Need Treatments That Can Change the Course of Their Lives



Juveniles with histories of serious antisocial behavior are at high risk of becoming life-course-persistent offenders (Moffitt, 1993)



*"It seems like only yesterday
you were a juvenile offender."*

Is There Evidence That Any Treatment Has Lasting Effects on the Lives of Youths?

- ◆ Only 50% of randomized trials of evidence-based treatments (EBTs) for youth behavioral and psychological problems have follow-ups, and these average 65.4 weeks from the beginning of treatment (Weisz et al., 2006).
- ◆ Thus, we know little about the lasting effects of most EBTs for youth behavioral and psychological problems.
- ◆ Among organizations that rate EBTs for youth, only CSPV (Blueprints) requires at least a 1-year follow-up for a maximum evidence grade.
- ◆ Some of the longest follow-up studies in the literature have examined the efficacy and effectiveness of MST with serious juvenile offenders.

Why Continue to Follow-Up MST Participants?

- ◆ Until recently, the mean age (28.8 years) of participants from the longest (13.7-year) follow-up of MST was still well short of midlife (about age 40), when serious criminal offending largely but not entirely disappears (Moffitt, 1993).



Why a Longer-Term Follow-Up?

- ◆ Even into midlife, other indicators of an antisocial lifestyle besides arrests for serious crimes may be evident (e.g., misdemeanor crimes, civil suits related to family and financial problems) and should be examined.
- ◆ To the extent that the positive effects of MST are sustainable over longer periods of time, funding for MST programs should be increased by policymakers.

Original Outcome Study: Borduin et al. (1995)

Sample Characteristics

- ◆ 200 serious and violent juvenile offenders ($M = 14.8$ years old)
 - ◆ 67% male; 70% Caucasian and 30% African American; 47% lived with one caregiver
 - ◆ Averaged 4.2 previous criminal arrests
 - ◆ 49% violent offenders (e.g., rape, aggravated assault, assault & battery with intent to kill)
 - ◆ 100% previously incarcerated

Design

- ◆ Pretest--posttest control group design
- ◆ Random assignment to MST or individual therapy (usual services)
- ◆ Follow-up for 4 years

Multiagent, Multimethod Battery

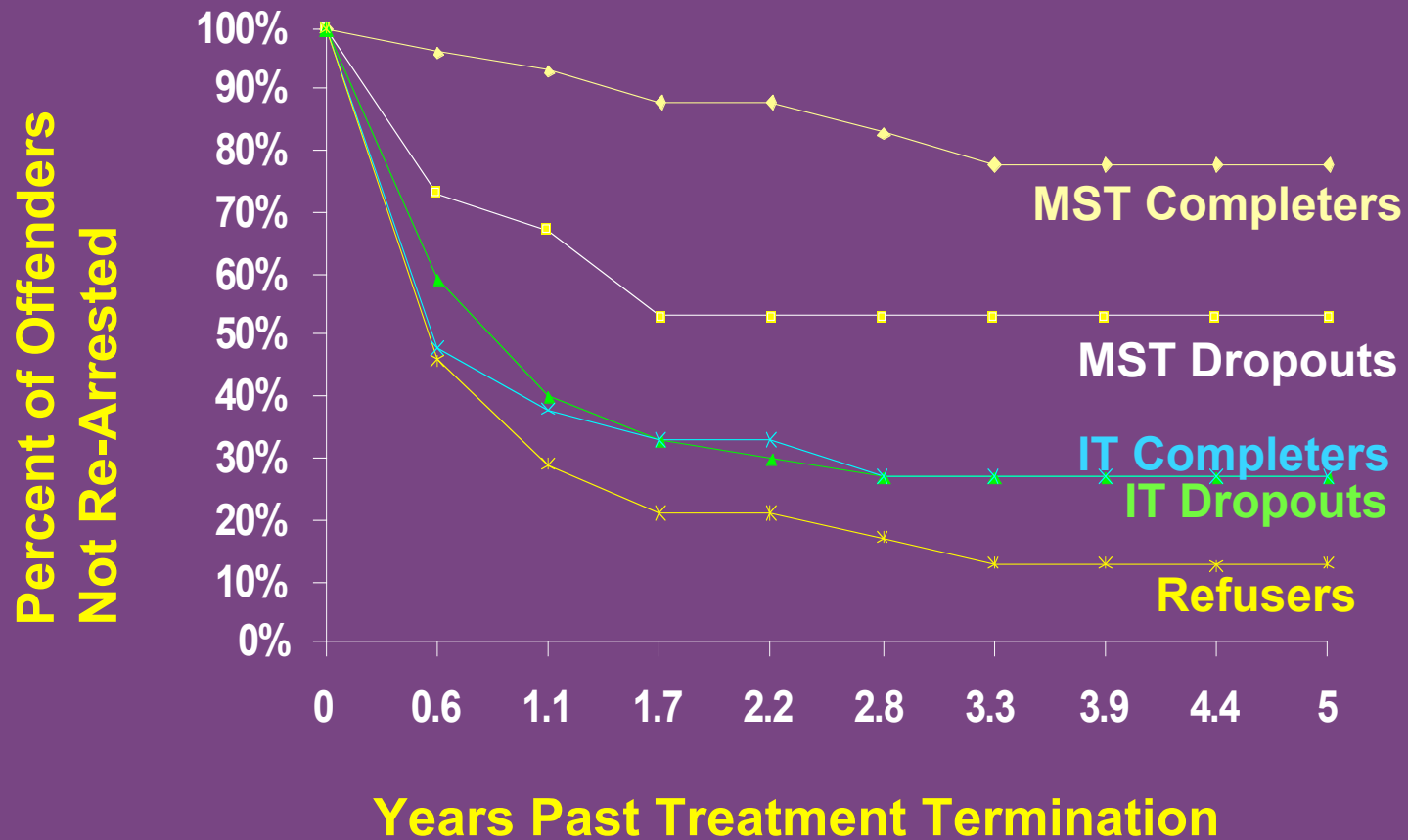
- ◆ Instrumental outcomes (youth, family, peer)
- ◆ Ultimate outcomes (criminal activity)

Study published in *Journal of Consulting and Clinical Psychology*

4-Year Recidivism

◆ Multisystemic Completers (<i>n</i> = 77)	22.1%
◆ Multisystemic Dropouts (<i>n</i> = 15)	46.6%
◆ Individual Therapy Completers (<i>n</i> = 63)	74.1%
◆ Individual Therapy Dropouts (<i>n</i> = 21)	74.1%
◆ Treatment Refusers (<i>n</i> = 24)	87.5%

Time to First Arrest

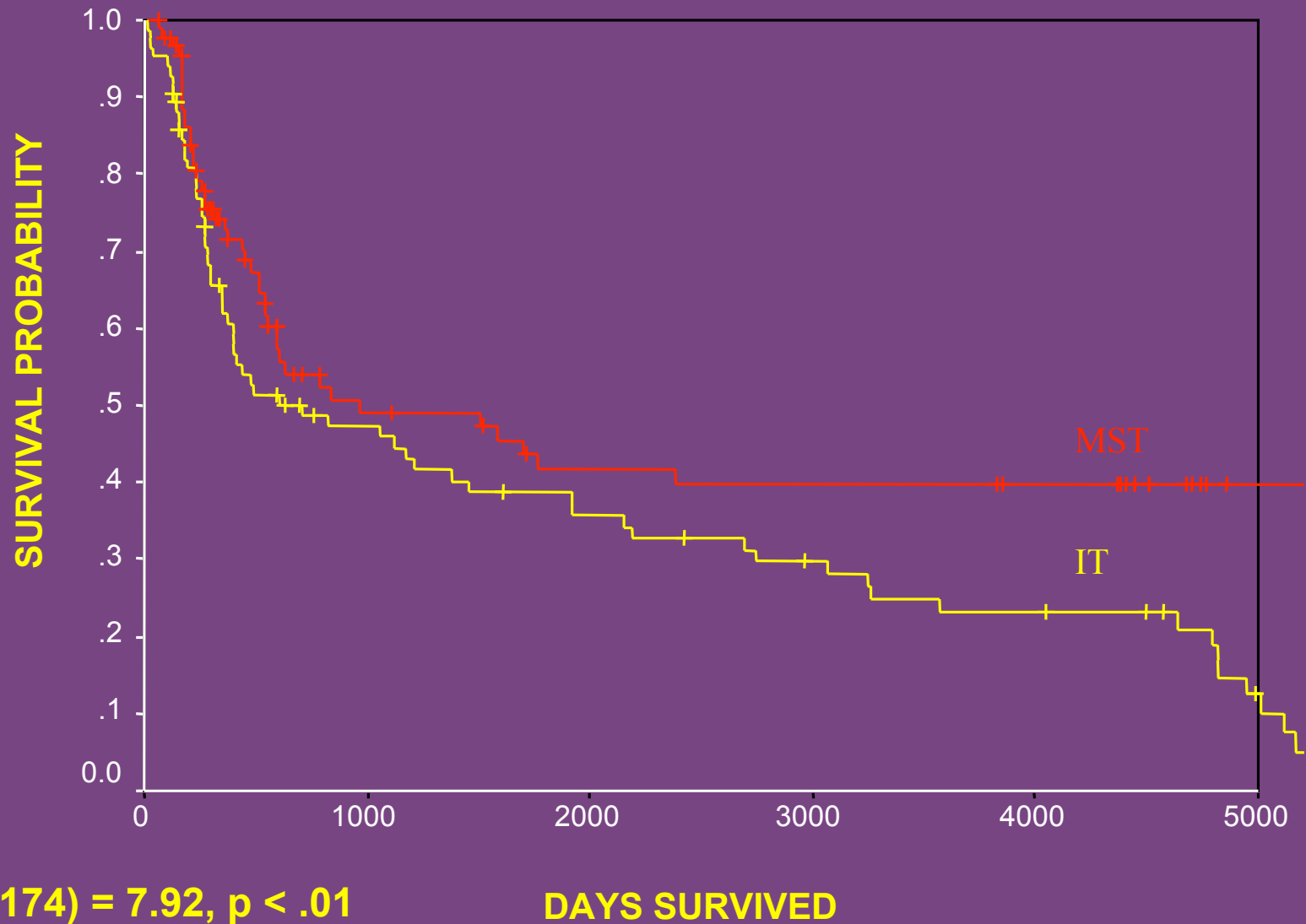


13.7-Year Follow-Up: Schaeffer & Borduin (2005)

- ◆ Successfully located 165 (94%) of participants ($N = 176$) who were randomly assigned to MST or individual therapy in the Borduin et al. (1995) clinical trial
- ◆ Average age at follow-up: 28.8 years
- ◆ Outcomes examined: criminal recidivism and days incarcerated in adulthood

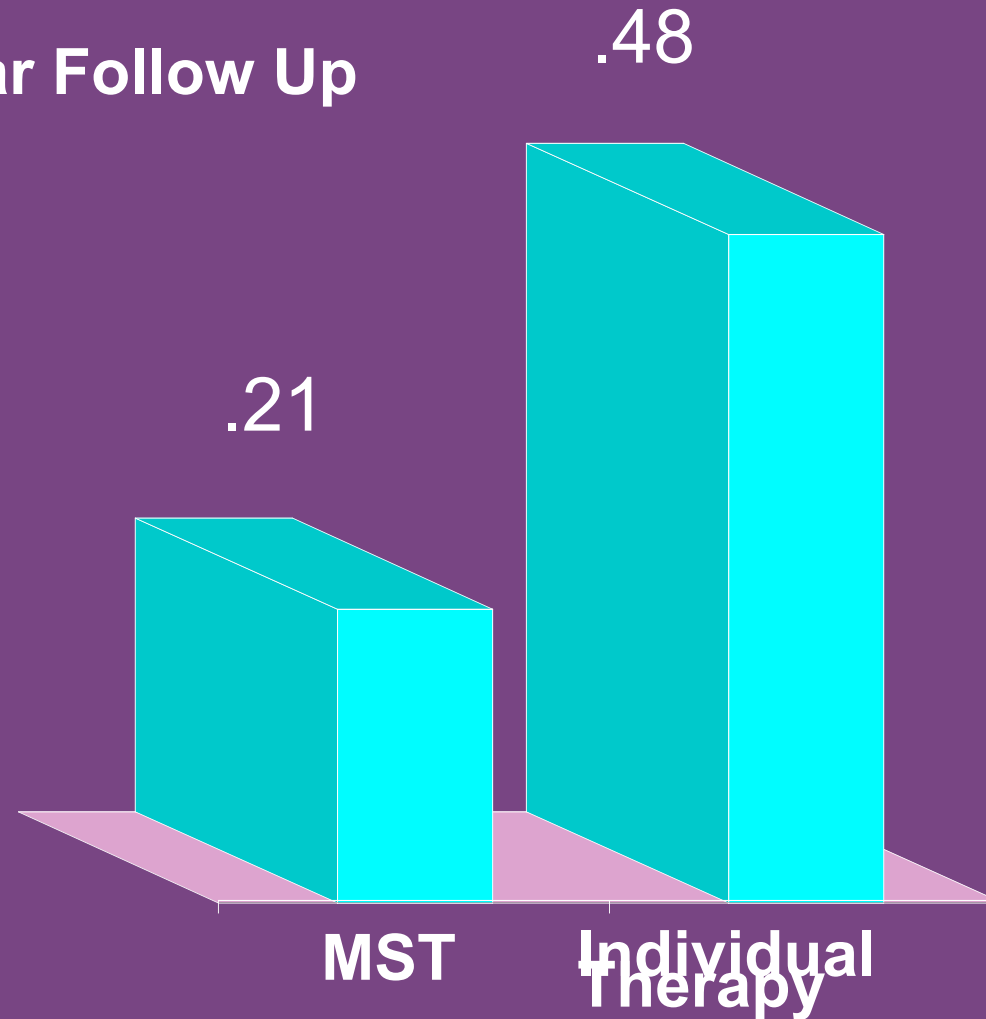
Study published in *Journal of Consulting and Clinical Psychology*

Time to First Arrest (Any)



Violent Arrests

- 13.7-Year Follow Up



MST Cost-Benefits Per Offender at 13.7-Year Follow-Up

(Klietz, Borduin, & Schaeffer, 2010)

	Assumes One Victim	Assumes Multiple Victims
Taxpayer Cost-Benefit	\$49,443	\$49,443
Crime Victim Cost-Benefit	\$25,667	\$149,931
Total Cost-Benefit of MST	\$75,110	\$199,374

Study published in *Journal of Family Psychology*

MST Benefit-to-Cost Ratio at 13.7-Year Follow-Up

(Klietz, Borduin, & Schaeffer, 2010)

- ◆ The estimated benefit-to-cost ratio for MST ranges from:

\$9.51

to

\$23.59

Taxpayer Benefits
Only

Taxpayer & Crime Victim
Benefits

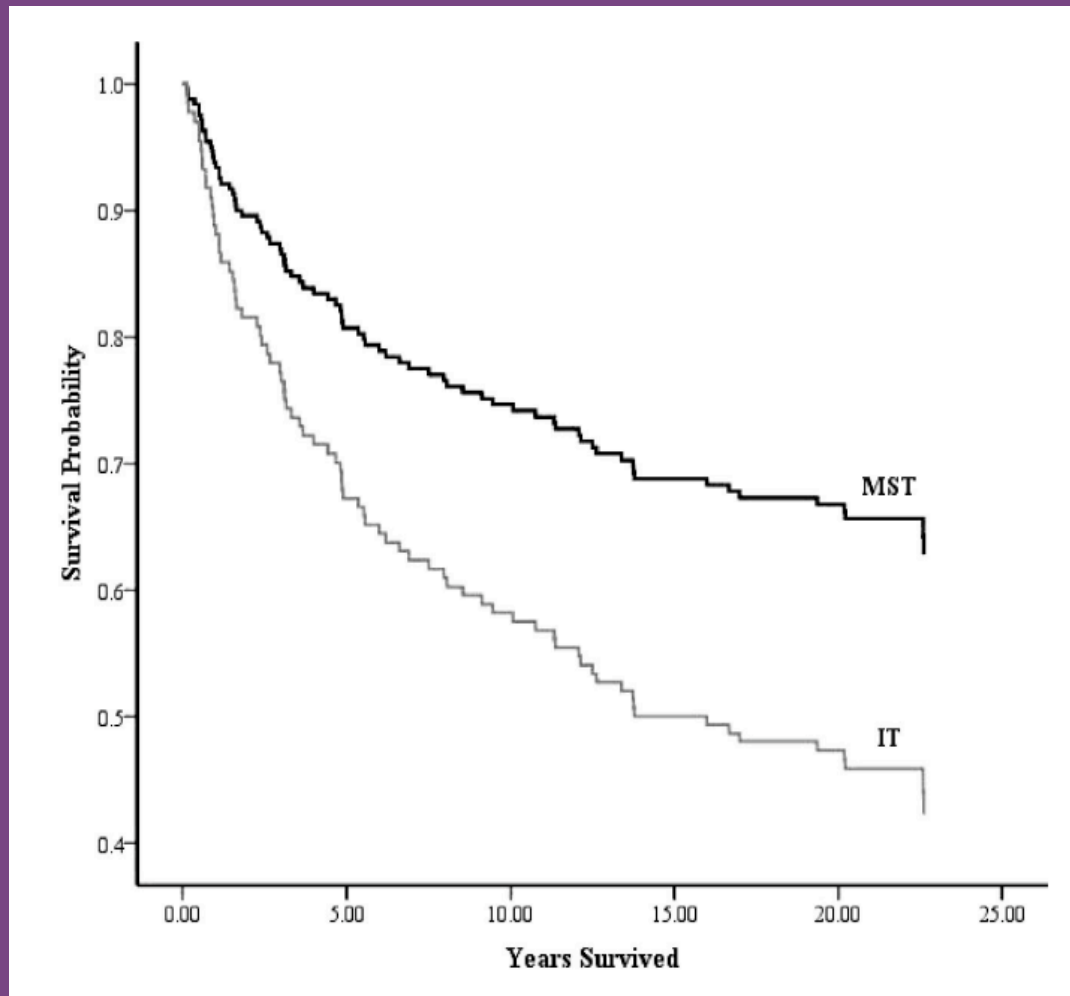
That is, **\$1.00** spent on MST today can be expected to return **\$9.51** to **\$23.59** to taxpayers and crime victims in the years ahead

21.9-Year Follow-Up: Sawyer & Borduin (2011)

- Attempted to locate all participants ($N = 176$) who were randomly assigned to MST or individual therapy in Borduin et al. (1995) clinical trial
- Successfully located 148 (84%) of the original participants
- Average age at follow-up: 37.3 years old (range = 34.6 to 40.8 years)
- Outcomes examined: criminal recidivism (felonies and misdemeanors), days incarcerated, and civil suits (family and financial)

Study published in *Journal of Consulting and Clinical Psychology*

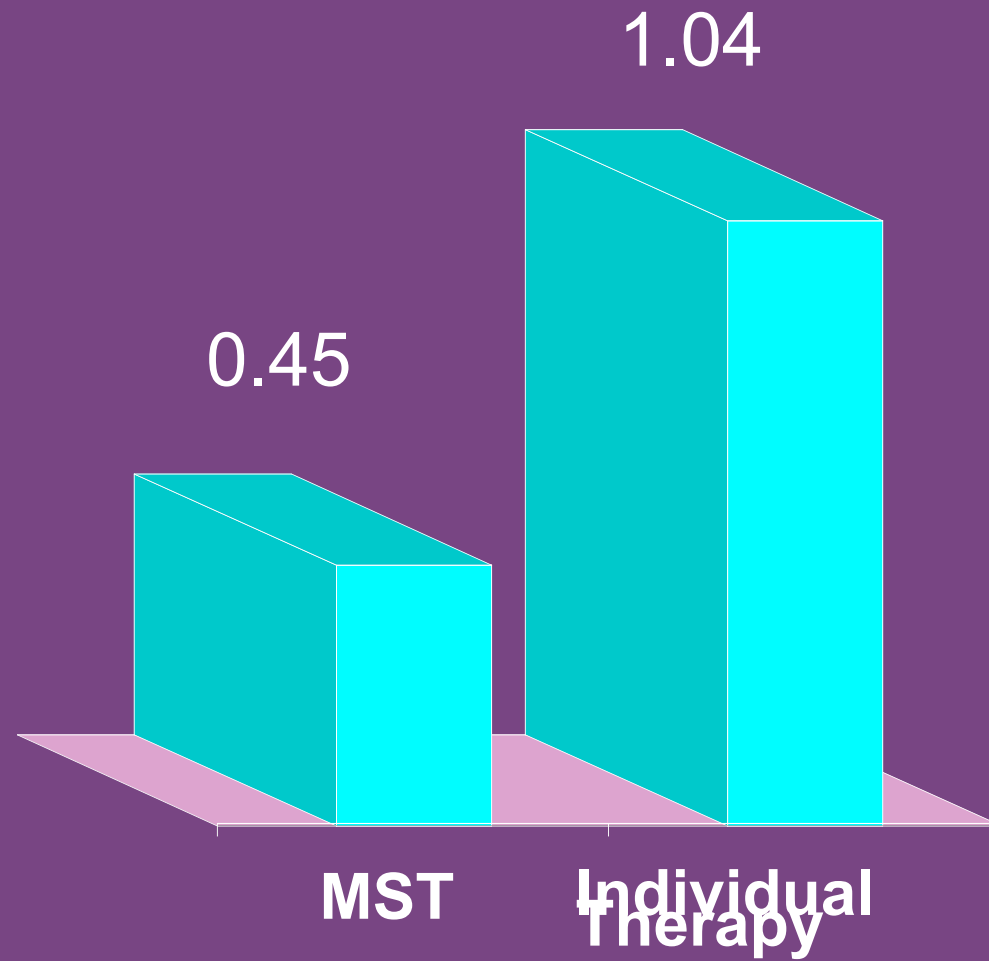
Time to First Felony Arrest



$$\chi^2 (1, N = 176) = 6.89, p = .01$$

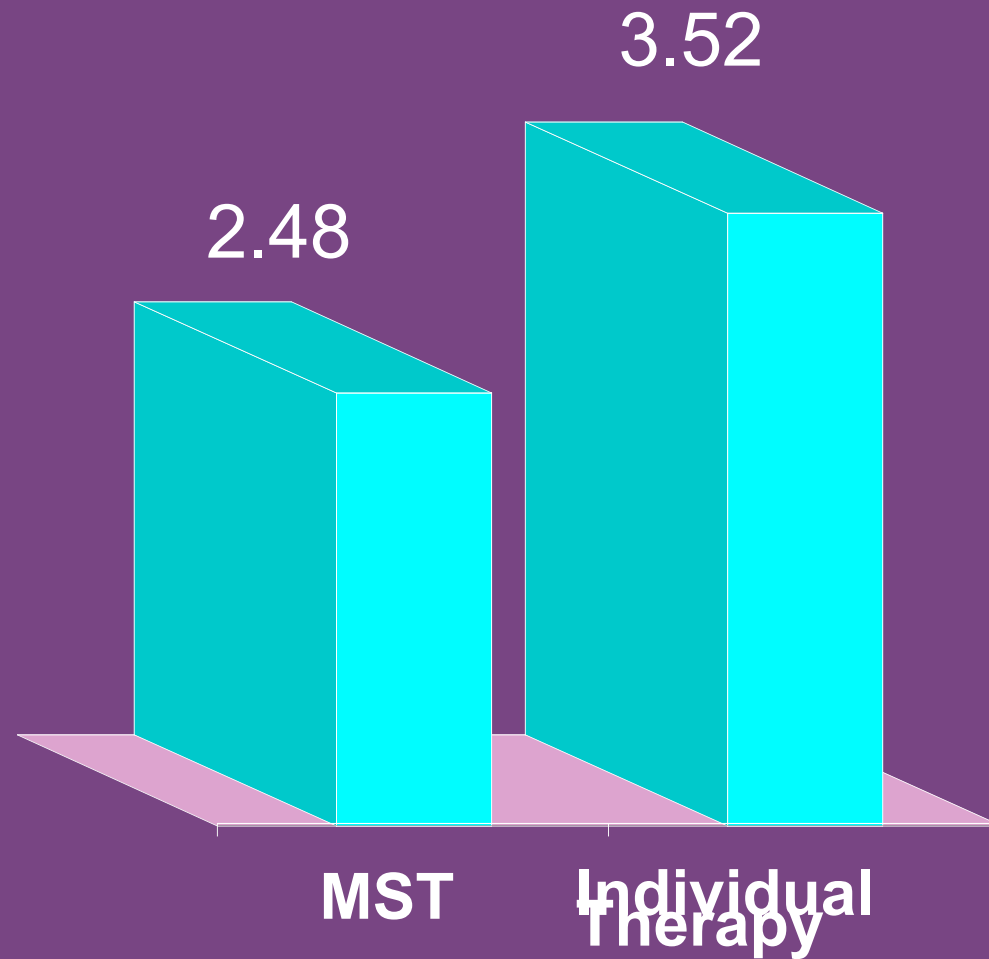
Violent Arrests

- 21.9-Year Follow Up



Nonviolent Arrests

- 21.9-Year Follow Up



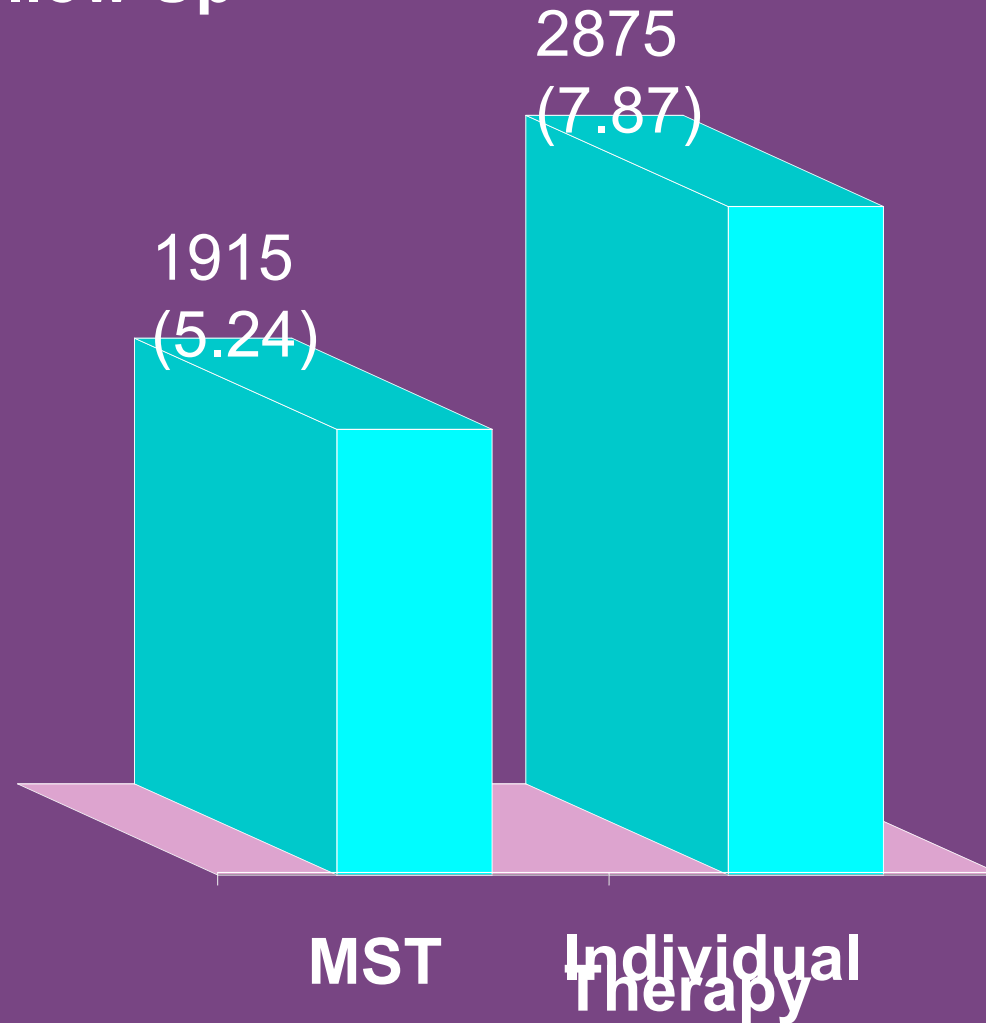
Odds of Rearrest for Individual Therapy Participants Relative to MST Participants

Type of arrest	Odds Ratio	95% CI
Any arrest	1.88*	(1.02 – 3.47)
Any violent arrest	2.24*	(1.19 – 4.21)
Any nonviolent arrest	1.63 ⁺	(0.93 – 2.88)
Any felony arrest	2.27**	(1.28 – 4.01)

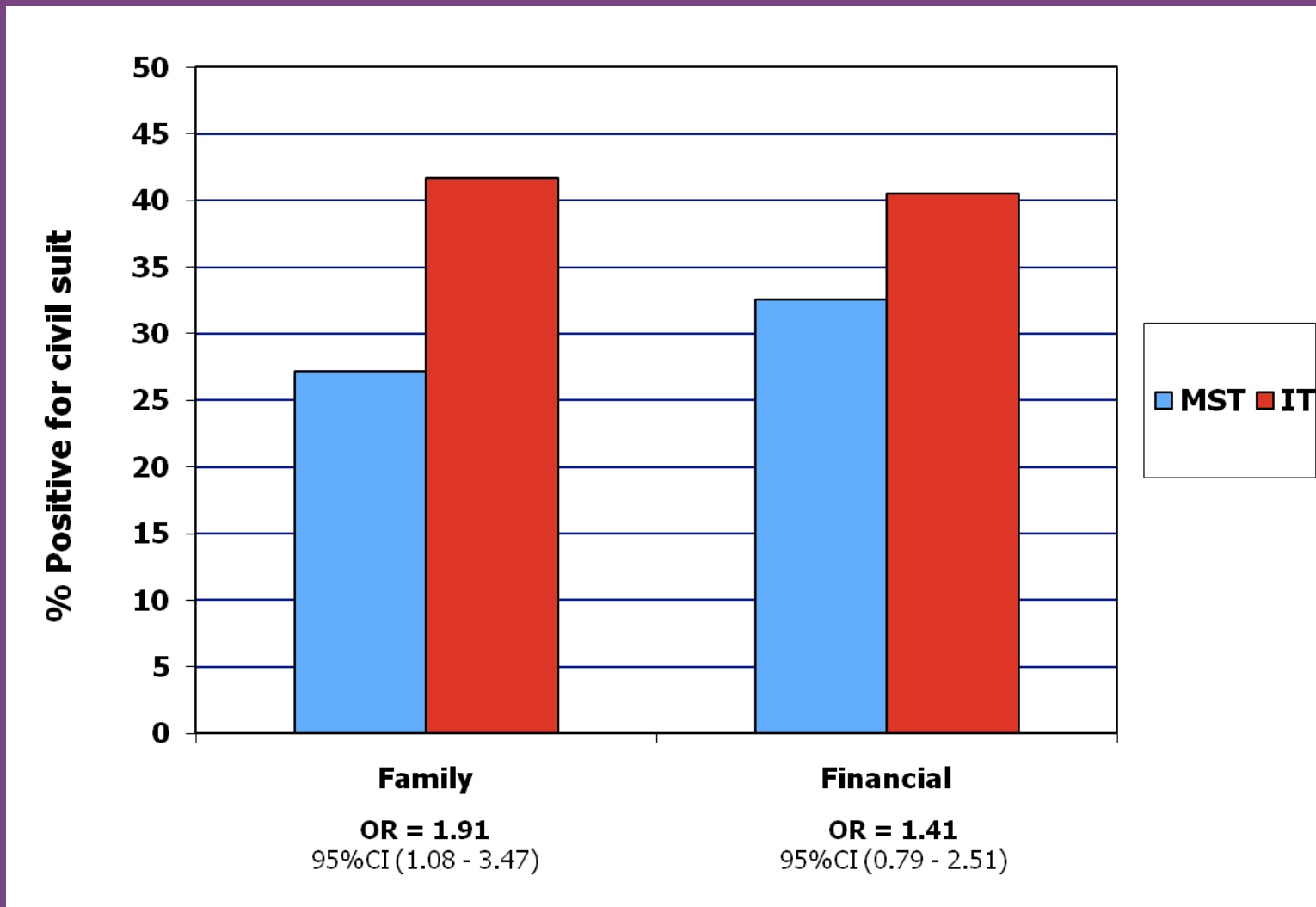
* $p < .05$ ** $p < .01$ ⁺ $p = .06$

Adult Days (Years) Confined

- 21.9-Year Follow Up

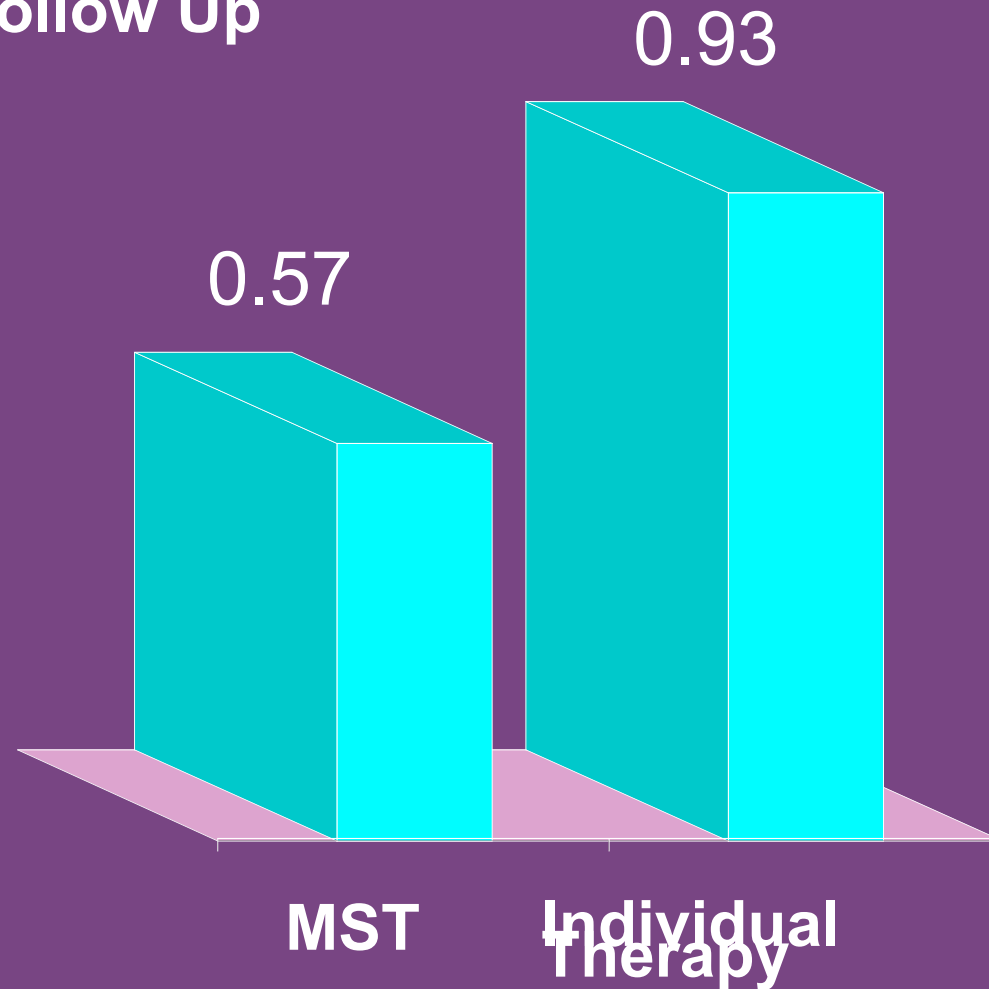


Civil Suits by Type



Civil Suits Reflecting Family Instability (divorce, paternity)

- 21.9-Year Follow Up

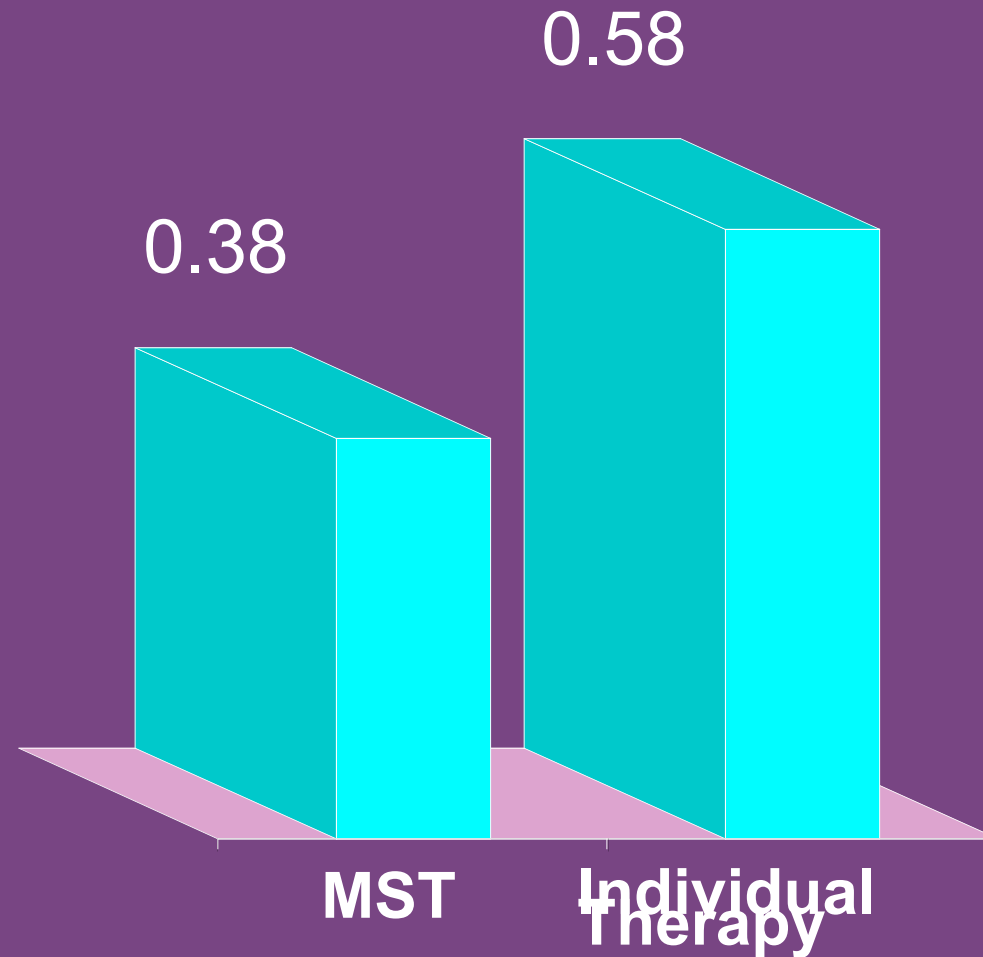


25.0-Year Follow-Up of Siblings: Wagner & Borduin (2012)

- Attempted to locate all closest-in-age siblings of participants ($N = 129$) in Borduin et al. (1995) clinical trial
- Successfully located 110 (85.3%) of siblings
- Average sibling age at follow-up: 39.5 years old ($SD = 1.4$ years)
- Outcomes examined: criminal offending (felonies and misdemeanors) and days incarcerated

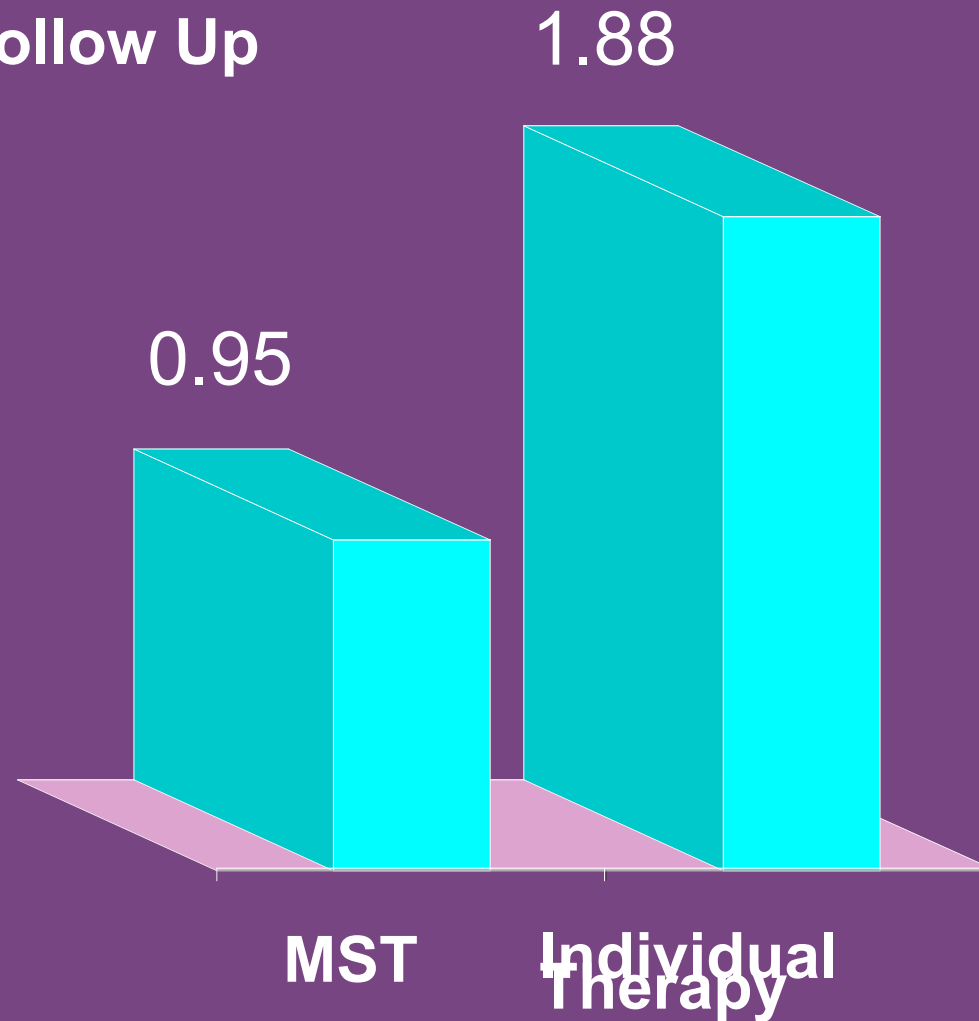
Sibling Felony Arrests

- 25.0-Year Follow Up



Sibling Misdemeanor Arrests

- 25.0-Year Follow Up



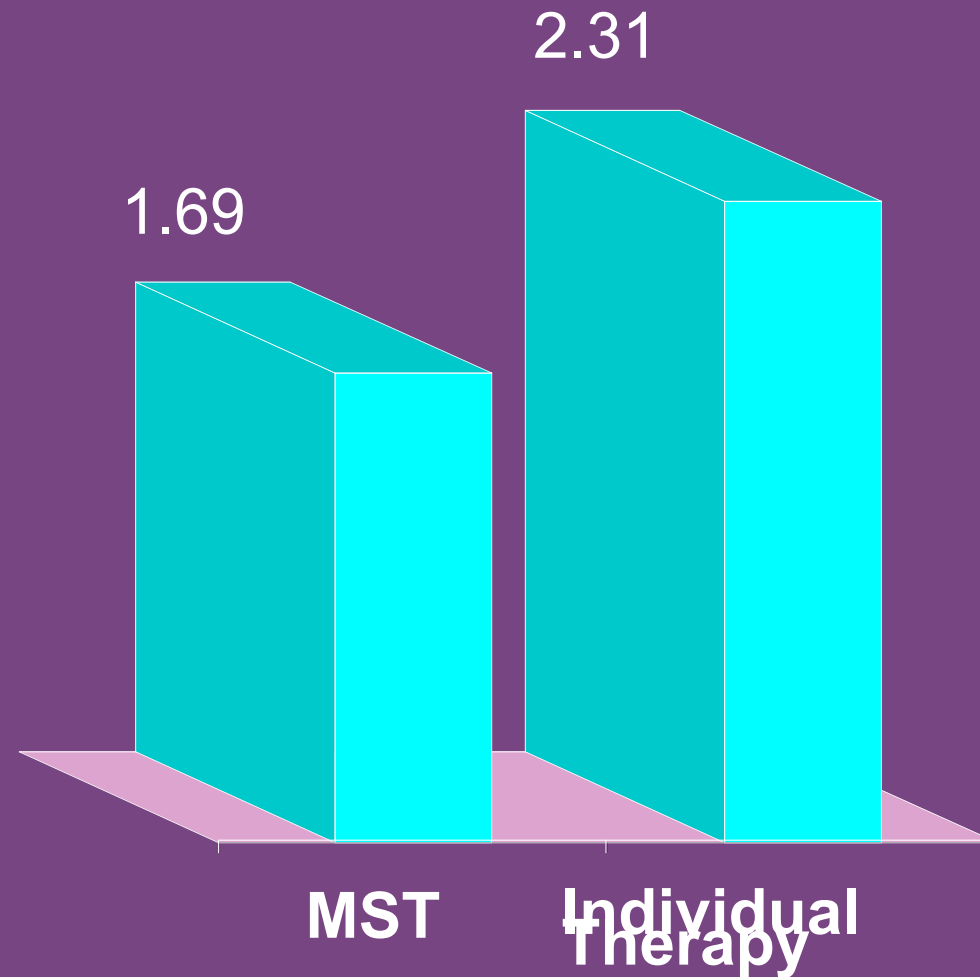
Odds of Arrest for Individual Therapy Siblings Relative to MST Siblings

Type of arrest	Odds Ratio	95% CI
Any arrest	3.36*	(1.52 – 7.49)
Any felony arrest	2.92*	(1.17 – 7.32)
Any misdemeanor arrest	2.63*	(1.21 – 5.68)

* $p < .05$

Sibling Adult Years Confined

- 25.0-Year Follow Up



Conclusions and Directions

- These studies represent the longest follow-ups to date of a MST clinical trial.
- MST reduced criminal activity in serious and violent juvenile offenders and their siblings for more than 20 years (into midlife).
- The odds of (a) rearrest, (b) involvement in family-related civil suits, and (c) incarceration were two to three times lower for MST participants than for usual services participants.
- Consistent with the MST theory of change, the relative efficacy of MST is likely due to:
 - the match between MST interventions and the multiple determinants of criminality and violence in youths
 - the accessibility and ecological validity of services

Conclusions and Directions

- A more comprehensive (in person) follow-up with this sample may reveal how the lives of MST and usual services participants are different.
 - Do better family relations (indexed by lower involvement in family-related civil suits) help to explain the lower risk of reoffending among MST participants?
 - Do other potentially important variables (e.g., post-high school education and employment training) also help to explain the lower risk of rearrest for participants in MST?
 - Do the long-term benefits of MST carry over to the next generation?
- The present results speak to the long-term cost savings and fiscal viability of MST, with ongoing benefits to both taxpayers and crime victims.



The End

8-16-77