

Effectiveness of MST with Juvenile Sex Offenders: 1-year Outcomes

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Study Stakeholders



This NIMH-funded randomized clinical trial represented a collaboration between the investigators and

- Cook County State's Attorney's Office
- Circuit Court of Cook County
- Juvenile Probation
- Kids Hope United

Study Design

The principal aim of this study was to examine treatment effectiveness of MST compared to treatment as usual for juvenile sex offenders (TAU-JSO).

Youth were randomized to MST ($n = 67$) or TAU-JSO ($n = 60$).

Eligibility Criteria

- Youth adjudicated or diverted for serious sexual offense between January 2004 – June 2006
- Youth ordered to community-based sex offender-specific treatment
- Age 11 to 17 years
- Caregiver resided in the county
- Youth and caregivers speak English or Spanish
- Limited exclusion criteria (severe MR, psychosis)

Recruitment and Retention

- 194 youth were referred by the State's Attorney
- 178 youth were eligible (92% eligibility rate)
- 131 youth and families recruited (74% recruitment rate); 2 provided no data, 2 removed due to degenerative brain disorder
- 127 participants retained for intent-to-treat analyses
 - 67 (53%) MST
 - 60 (47%) TAU-JSO

Methodology

Research assessments were conducted at baseline and 6, 12, 18, and 24-months post-baseline

Current analyses are based on data from baseline through 12-months post-baseline

Interventions: MST

MST is a caregiver-focused, home based intervention originally designed to target deep end juvenile delinquents

Therapists use well-validated treatment strategies derived from pragmatic family therapies, behavioral parent training, and cognitive-behavioral therapy to address interpersonal, familial, and extrafamilial factors associated with youth antisocial behavior

Interventions: MST

MST for juvenile sex offenders maintained this individualized focus on risk factors associated with juvenile offending but enhanced standard MST by addressing

- Safety planning (to reduce access to victims)
- Youth and caregiver denial of sexual offense
- Age-appropriate social experiences with peers

Intervention: MST

- MST was provided by 1 doctoral and 4 master's level clinicians under the supervision of a doctoral level clinician and in consultation with Drs. Borduin and Letourneau
- Therapist fidelity scores fell below mean scores from of a 45-site MST transportability study and above mean scores from clinicians not providing MST
- The treatment completion rate was 91%, with an average duration of 7 months

Interventions: TAU-JSO

TAU-JSO was a youth-focused, group based intervention that addressed deviant sexual arousal, victim empathy, cognitive distortions, relapse prevention, and family counseling

Key treatment objectives included youth acceptance of responsibility, breaking the cycle of offending by increasing awareness of triggers, identification and exercise of internal and external behavioral controls, and development of a relapse-prevention plan

Interventions: TAU-JSO

- TAU-JSO was provided by 7 specially trained probation officers (4 bachelor's level, 3 master's level) under the supervision of a master's level probation officer
- Treatment fidelity was not formally monitored but caregiver satisfaction ratings indicated high satisfaction with services
- The average duration of treatment was 11 months for youth on probation and 8 months for diverted youth
- 27% of youth remained in treatment at 12 months post-baseline

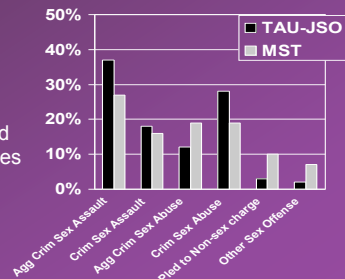
Youth Demographics

Mean Age at Baseline	15 years (<i>SD</i> = 1.7)
Gender	124 boys; 3 girls
Race	
• Black	54%
• White	44%
• Other	2%
Hispanic Ethnicity	31%

Index Sexual Offenses

Three-quarters of index charges were felony sexual offenses

44 (35%) participants had prior non-sexual charges



Outcome Measures

Problem Sexual Behavior

- Adolescent Sexual Behavior Inventory (ASBI) Risk/Misuse and Deviant Sexual Interests scales (youth and caregiver reports)

Antisocial Behavior

- Self Report of Delinquency (SRD) General Delinquency Scale (youth report)
- Personal Experiences Inventory (PEI) Marijuana and Alcohol Scale (youth report)

Outcome Measures

Mental Health Symptoms

- CBCL Externalizing & Internalizing T-scores (youth and caregiver reports)

Out-of-home placements

- Monthly caregiver report of youth placement in detention (detained, jailed, incarcerated), residential treatment (short- or long-term mental health, substance use, or sex offender treatment settings), or formal foster care settings

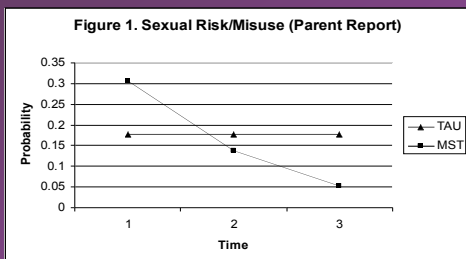
Analytic Strategy

Two-level (time nested within youth) Mixed-Effects Regression Models (MRM) were used to test study hypotheses

Results: Problem Sexual Behaviors

MRMs revealed significant negative linear effects on all four ASBI scales (p s < .001), indicating scores for youth in the MST condition decreased from baseline to 12 months post-baseline

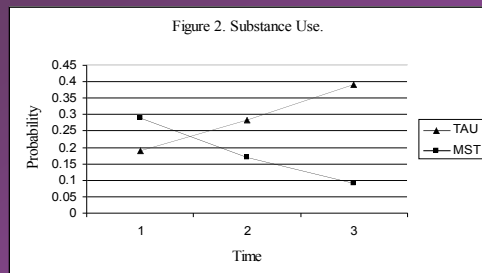
The condition \times linear effects were positive and significant for all scales (p s < .05), indicating that MST youth evidenced significantly greater reductions in problem sexual behaviors over time, relative to TAU-JSO counterparts



Results: Antisocial Behavior

MRM revealed significant negative linear effects on the SRD ($p < .001$) and PEI ($p < .01$), indicating reduced delinquent behavior and substance use over time for youth in the MST condition

The condition \times linear effects were positive and significant in both models ($ps < .05$). In contrast to TAU-JSO youth, MST youth reported significantly greater reductions in delinquent behavior and substance use from baseline to 12-months post-baseline. TAU-JSO youth reported a significant *increase* in substance use over time.



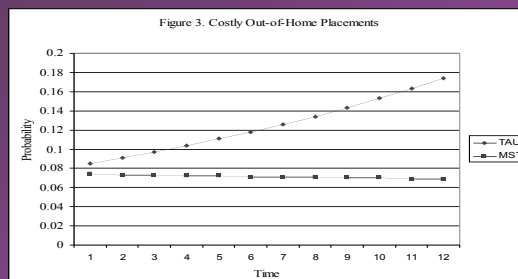
Results: Mental Health Symptoms

MRM yielded a significant negative linear effect ($p < .01$) and a significant positive condition \times linear effect ($p < .05$) on the youth-reported Externalizing scale. This indicates that the MST youth reported a significantly greater reduction in externalizing symptoms over time compared to their TAU-JSO counterparts.

MST and TAU-JSO groups evidenced similar (and significant) reductions on the remaining three CBCL outcomes

Results: Out-of-Home Placements

MRM indicated a significant condition \times linear effect ($p < .001$) for the percentages of youth in out-of-home placements throughout the monthly assessments. The probability that an MST youth was in an out-of-home placement during the past 30 days remained approximately 7% through 12-months post-baseline. The probability that a TAU-JSO youth was in an out-of-home placement during the past 30 days increased from 8% to 17% during the course of follow-up.



Discussion

MST was more effective than TAU-JSO in decreasing deviant sexual interest/risk behaviors, delinquent behaviors and substance use, externalizing symptoms, and costly out-of-home placements

Mechanisms of Change

The MST theory of change posits that adolescent antisocial behavior is driven by the interplay of risk factors associated with the multiple systems in which youth are embedded

In particular, MST focuses on empowering caregivers to gain the resources and skills needed to more effectively parent their children

As caregiver effectiveness increases, therapists guide caregiver efforts to, for example, disengage their children from deviant peers and enhance academic performance

Mechanisms of Change

To test the MST theory of change, key aspects of family relations and peer relations were examined as mediators of antisocial behavior outcomes in general and problem sexual behavior outcomes in particular, using data from the same study.

Analytic Strategy

Tests of mediation were conducted for two types of outcomes

Sexual Deviance and Risk Taking

- ASBI Composite scales (youth and caregiver reports)

Antisocial Behavior

- SRD General Delinquency scale (youth report)
- PEI substance use (youth report)
- Externalizing T-score (youth report)

Hypothesized Mediators

Putative mediators included scales assessing parenting practices & delinquent peer association

Parenting

Pittsburgh Youth Study (PYS) questionnaire scales assessing

- Lax Discipline (youth and caregiver reports)
- Supervision (youth and caregiver reports)
- Communication (youth and caregiver reports)

Peer Relations

PYS scales assessing

- Bad Friends (combines youth and caregiver reported items)
- Peer Delinquency (youth report)
- Peer Conventional Activities (youth report)

Results: Does treatment affect the mediator process (A Path)?

A series of analyses was conducted to evaluate the treatment effect on the putative mediator variables

Results from these models revealed significant treatment effects for two of the mediator variables

- bad friends scale (combines youth & cg report)
- lax discipline scale (youth report)

Results: Does treatment affect the mediator process (A Path)?

Significant treatment effects were not detected on the other putative mediators (p s > .05); thus, they were eliminated from consideration as potential mediators

Results: Does the mediator process affect the outcome process (B Path)?

Next, analyses explored the effect of the bad friends mediator slope on the outcome slopes
Results revealed significant mediator slope effects of bad friends on the SRD, PEI, and ASBI composite (youth report) scales
These models indicated that the rate of change on the bad friends scale was significantly associated with improvement on these three outcome scales from baseline to 12 months post-baseline

Results: Does the mediator process affect the outcome process (B Path)?

Next, analyses explored the effect of the lax discipline (youth report) mediator slope on the outcome slopes
Results showed significant mediator slope effects on the Externalizing, SRD, and ASBI composite (youth and caregiver report) scales
These models indicated that the rate of change on the lax discipline scale was significantly associated with improvement on these outcome scales from baseline to 12 months post-baseline.

Results: Testing Bad Friends and Lax Discipline as Mediators of MST Effects on Outcomes

Mediation is implied when there is a significant treatment effect on the mediator process (A Path) *combined* with a significant effect of the mediator process on the outcome process (B Path)
Results from products of coefficients tests indicated that the bad friends and lax discipline scales significantly mediated the MST outcomes for the SRD, PEI, and ASBI composite scales

Discussion

Bad friends mediated MST effects on offender delinquency, substance use, and youth-reported problem sexual behaviors.
Lax discipline mediated MST effects on delinquency and both youth and caregiver-report problem sexual behaviors.

Discussion

Together, these findings suggest that MST empowered caregivers to

- Better identify friends that were having a negative influence on their adolescents;
- Advise them to stop associating with such friends;
- Follow through on planned discipline.

These behaviors, in turn, led to decreased antisocial behavior and problem sexual behaviors on the part of the adolescent sexual offenders

Discussion

Assuming that this conceptualization of the mediational processes is at least partially correct, these findings support a central emphasis of MST – the empowerment of caregivers to provide more consistent discipline to their delinquent youth and to attempt to extract these youth from their deviant peers.

Conclusions

This study presents the first randomized effectiveness trial with juvenile sex offenders and results have important clinical implications. Consistent with previous MST efficacy research, results support the capacity of MST to achieve favorable outcomes pertaining to problem sexual behavior and antisocial behavior.

Conclusions

Furthermore, the findings suggest that group-based interventions that increase youth association with deviant peers while ignoring caregiver discipline strategies are not likely to be effective.

Conclusions

The findings that lax discipline and bad friends mediated problem sexual and antisocial behavior outcomes supports the contention that the determinants of general antisocial behavior have much in common with the determinants of sexual offending behaviors. Thus, treatments that are effective for delinquency also hold promise in treating adolescent sexual offending.

Future Directions

Results through 2 years post-baseline will be examined. Cost analyses are underway.

We hope to extend follow-up to permit examination of treatment effects on sexual and general recidivism rates.

Sexual recidivism was not examined due to low short-term recidivism rates; yet, these favorable 1-year findings for MST are consistent with long-term reductions in recidivism observed in two prior MST efficacy studies with juvenile sex offenders.

Presenter Contact Information

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