

Evaluation of MST with persistent youth offenders in the UK: Brandon Centre Trial

DATE- 8th November 2010



Background to Brandon Centre MST trial

- Shortcomings of individual treatment for persistent young offenders
- Long term delay of DH and YJB MST initiative
- Applying MST in British youth justice context
- Assessment needs of young offenders (ASSET) + comprehensive YOT services
- Independence of trial from developers of MST



Brandon Centre MST Trial

- Trial was run in partnership with Haringey and Camden YOS
- Over 5-6 year period, 108 young offenders (aged 13-16) and their parent(s)/ carer(s) were randomly allocated to a group receiving MST and YOS services as usual or to a group receiving services as usual without MST
- 4 yr. funding from Atlantic Philanthropies and Tudor Trust, 2.5 years from DH (Department of Health)



Goals of the Brandon Centre MST trial

- 1st UK randomised control trial of MST: Will MST be more effective than current services in reducing persistent youth offending in an urban, British setting?
- Change Mechanisms: What areas of the young person and their family will improve with MST?
- Response to treatment: Are there qualities of the youth & parent that influence the degree to which MST works?
- Delivery of treatment: Will MST be effective when given by trained therapists that were not involved in its development?



MST at the Brandon Centre: A transportability trial

- Treatment implemented in practice conditions
- Exclusion criteria were few (i.e., young people with multiple problems; disadvantaged families)
- Implementation did not involve the developers
- Demonstrating treatment fidelity, or internal validity, crucial for a fair test of the effectiveness of the intervention to occur
- Important to accurately characterise US, as comparison conditions vary across regions/ countries that have tested effectiveness of MST



Research Design

- RCT for young people aged 13 to 16 on a court ordered referral order or supervision order
- Follow-up Offending: 6, 12, 24, 36 months
- Follow-up of custodial sentences
- Pre/post measures: individual, family and psychosocial “risks” (parent and young person)
- School adjustment e.g. attendance, behaviour
- Attempt to better define usual services
- Cost-offset financial analysis
- Qualitative methods to elicit parent/youth views about experiencing MST, about what changes



Who received MST (January 2004 to November 2009)

- 108 families randomised MST=56, US=52
- Sample randomised according to gender, ethnicity and severity of offending
- Age: 15.3 years
- Gender: 83% male; 17% female
- Ethnicity: 48% white; 29% black; 23% other
- Attending school: 37%
- Carers: primarily single-parent households; maternal (70%); paternal (8%); two-parent (14%)



Who received MST (cont'd)

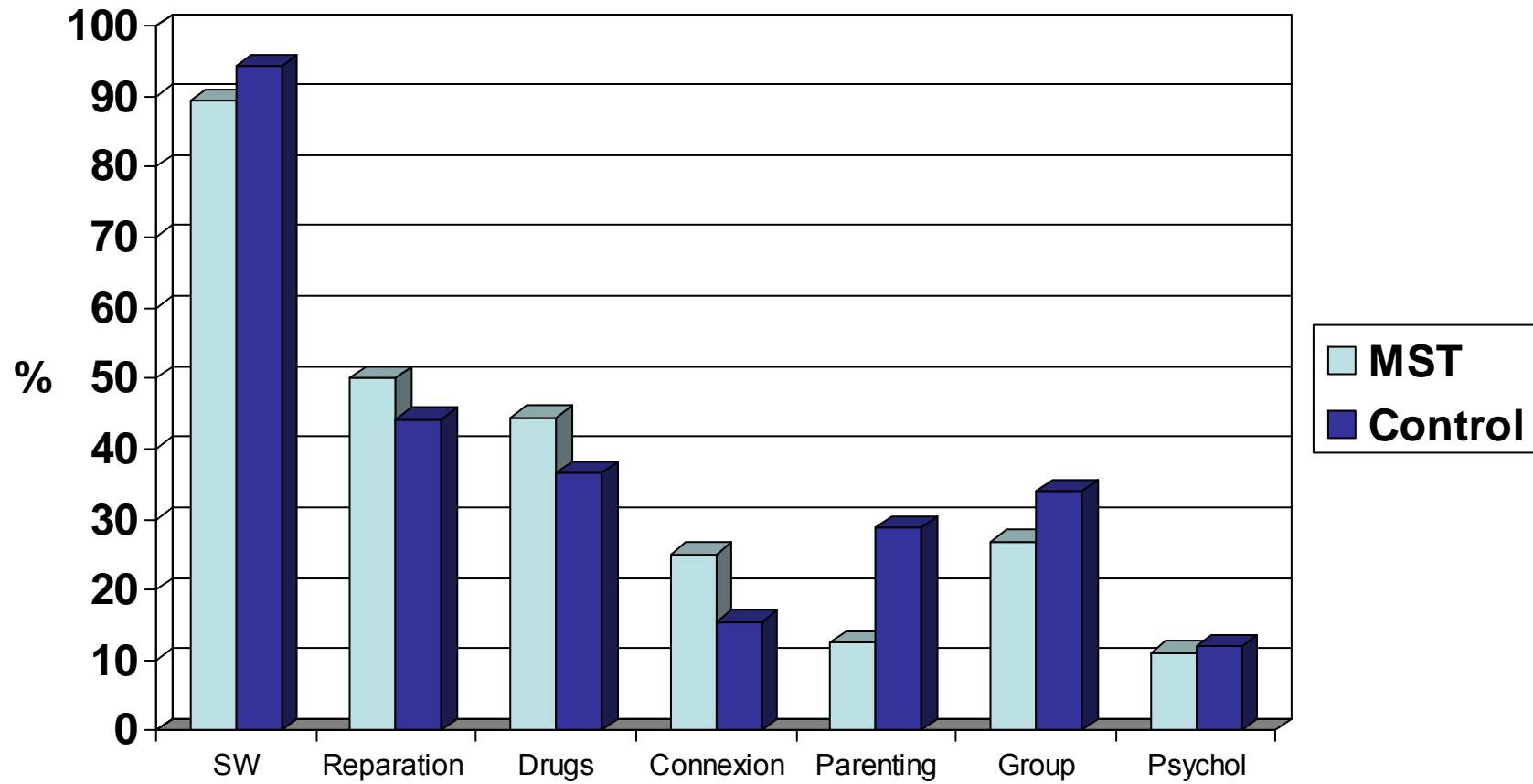
- Criminality: mild to moderate criminal histories (e.g. Convictions: 1.83; charges: 3.1)
- High levels of delinquent and aggressive behaviour, antisocial attitudes and antisocial peers;
- not responding to discipline, angry & misunderstood in their relationships with parents
- parents report clinically significant levels of psychological distress; 10% of families have at least one parent with MHP
- More than 50% of parents lacked jobs, academic qualifications and income



Course of treatment

- Most families were seen during working hours
MST families seen for average 22.5 weeks.
- MST families seen for ave. 29.5 sessions
supplemented by frequent phone contact.
- Roughly 75% of appointments are kept; DNA
rate similar for days/evenings/weekends.
- Initially vast majority of sessions during day;
trend has changed with more evening and
weekend work.

TAU



Initial findings: Health warning

- **Results are tentative:**
 - Sample sizes are smaller as follow-up periods increase, so we become progressively underpowered
 - Our results extrapolate from 18-month follow-up data to predict outcomes three years following treatment
 - Economic analyses similarly extrapolates from limited re-offending data when studying costs saved from reductions in crime
- **Current Analyses that we report on:**
 - Objective offending from police databases
 - ***When is treatment effective:*** impact of gender, ethnicity, and psychopathy on offending outcomes
 - Maternal reports of conduct problems and parenting
 - Cost-offset analyses: Does the intervention reduce later costs associated with re-offending?
 - Qualitative findings: views from YP and parents on how they experienced MST, what facilitated and hindered change



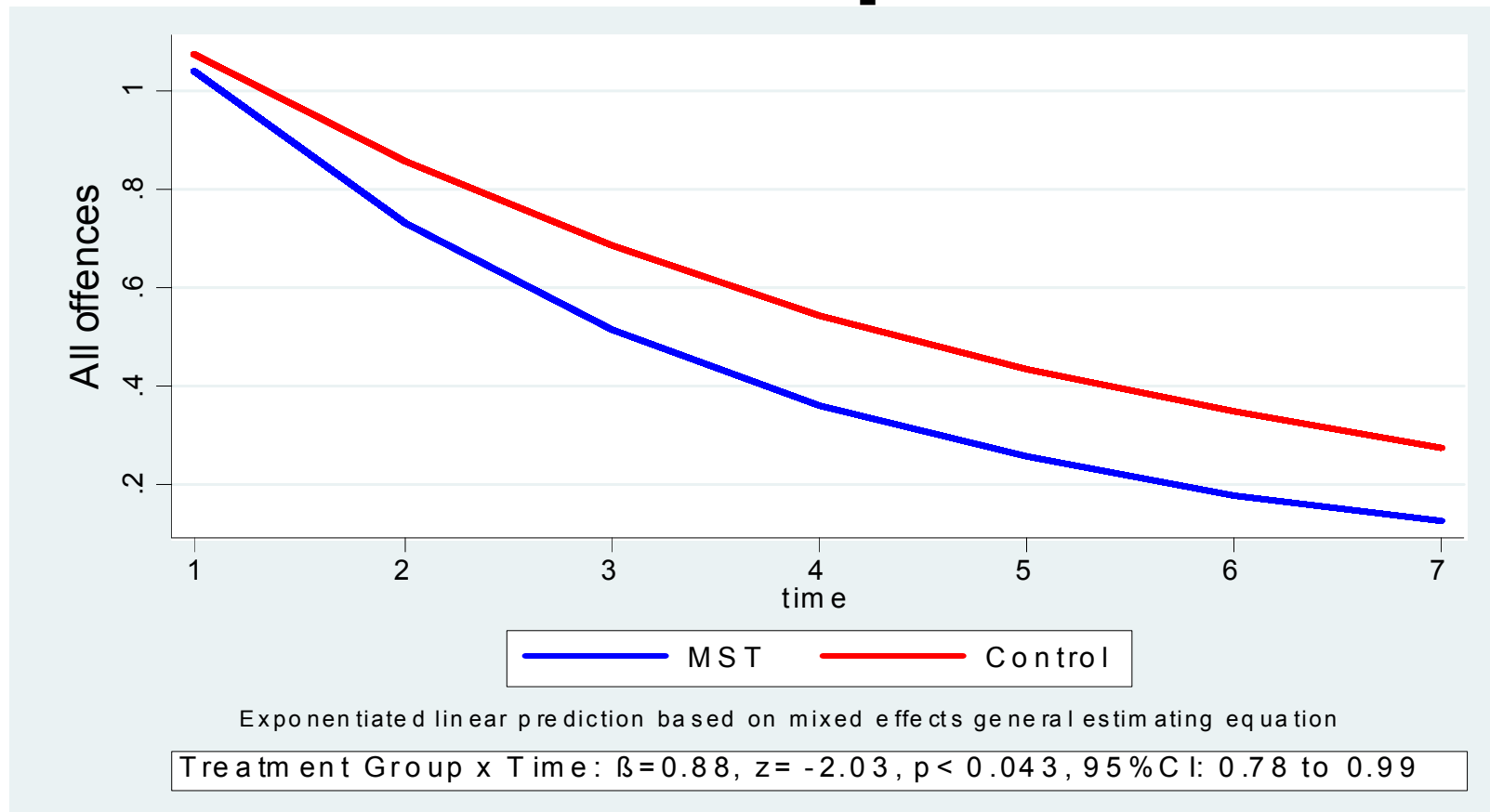
Analyses of Offending Data

- We fitted a multi-level Poisson model for the offending data, recommended when number of instances of an event are relatively small
- Model examined relative risk of re-offending between groups across a three-year period
- For total number of offenses, there was a significant group X time interaction ($p < .04$)

That is, there was a greater reduction in risk of re-offending in the MST group



All Offences: Time by Treatment Group Interaction

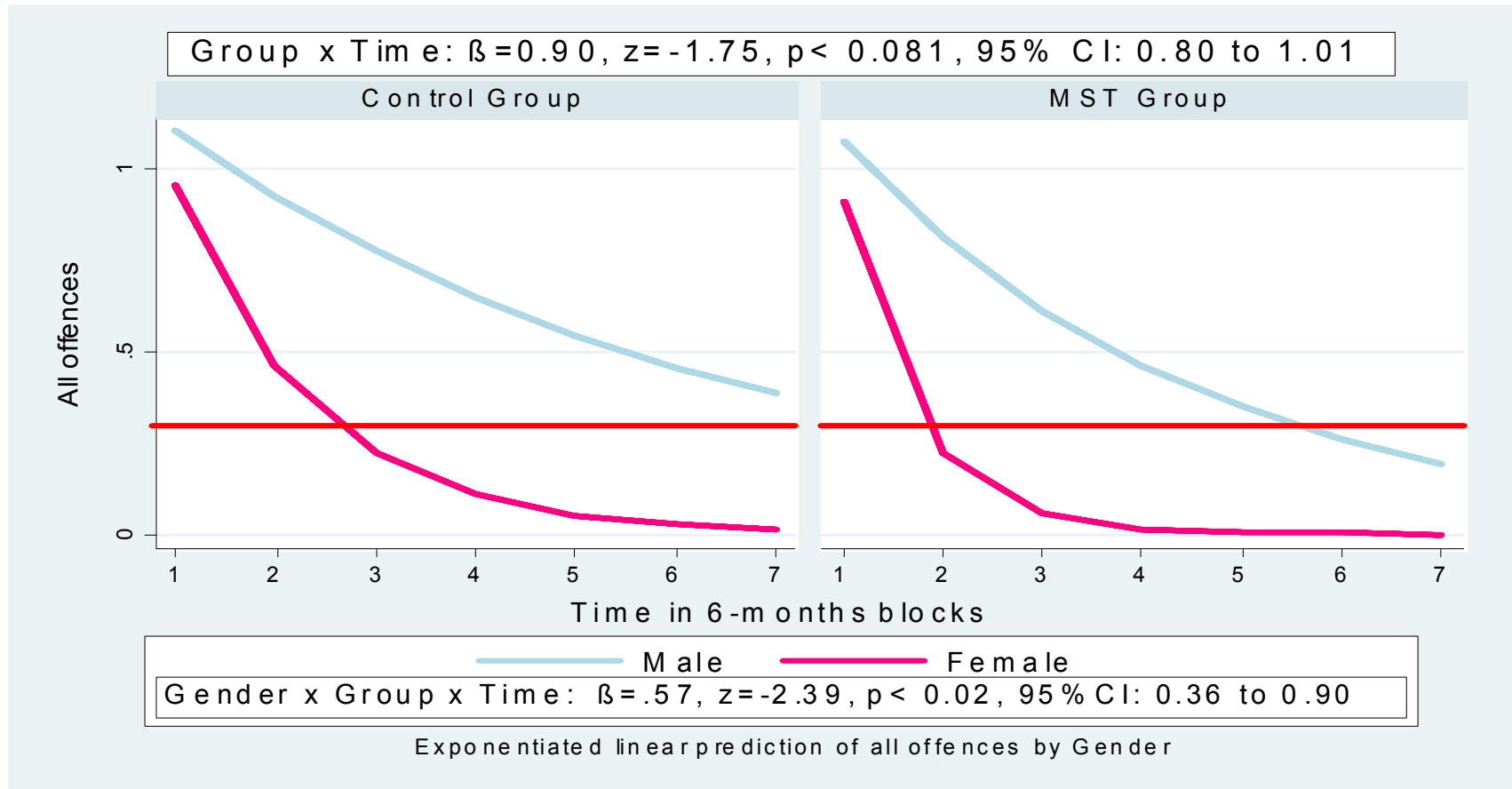


Offending Reductions: Interactions with Gender & Ethnicity

- MST seems to be particularly helpful to boys, as they tend to re-offend less as the follow-up period increases
- Females improve quicker with MST, but with time show little re-offending in either condition
- MST is effective with all ethnicities: Significant improvements relative to US with all types of ethnic groups served by the intervention
- YP with “psychopathic traits” tend to do better with MST than those treated with usual services



All Offences: Interaction with Gender

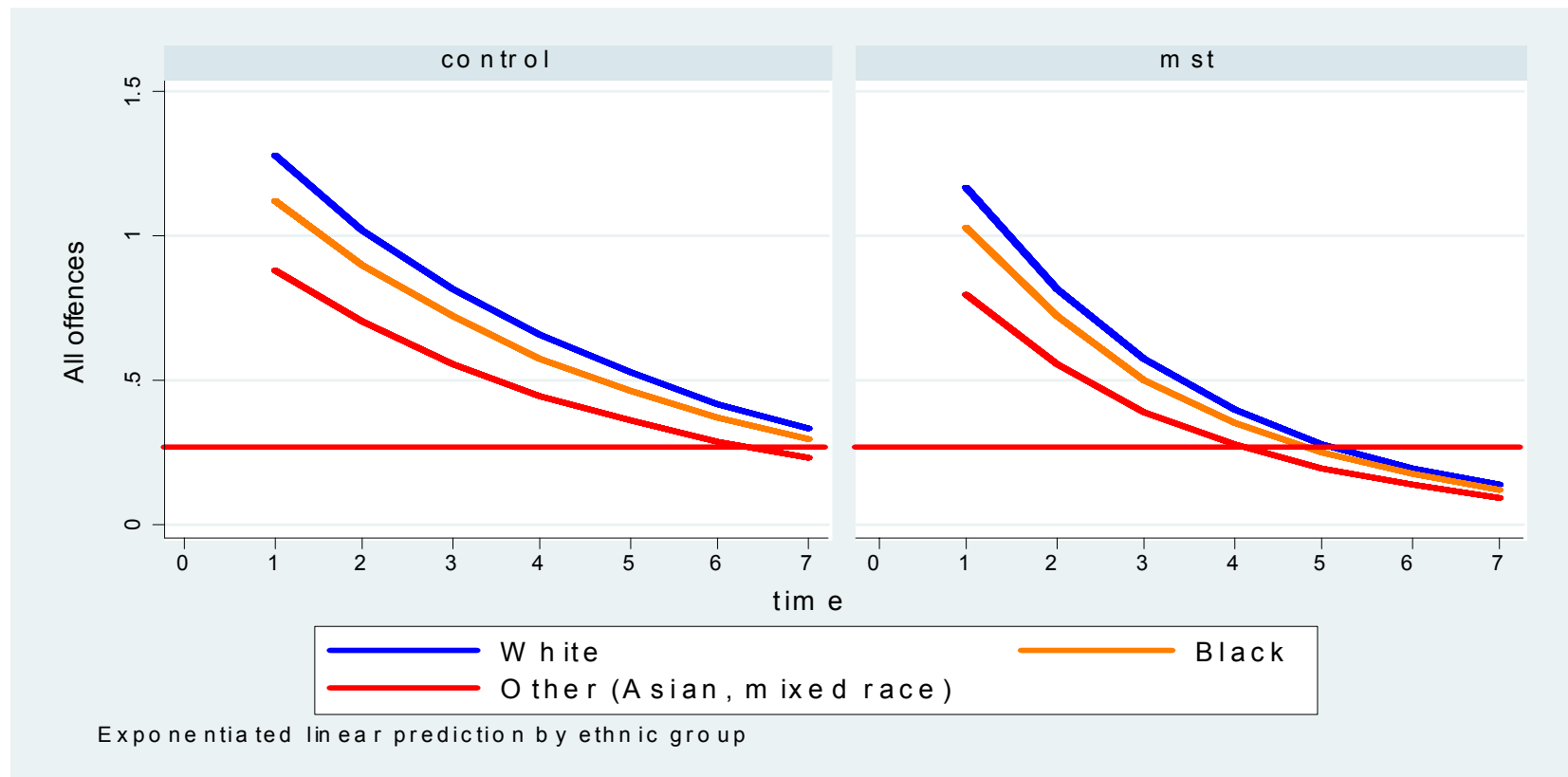


Group x Time – Male: $\beta=0.89$, $z=-1.75$, $p<0.08$, 95%CI: 0.79 to 1.01
 – Female: $\beta=0.43$, $z=-1.84$, $p<0.06$, 95%CI: 0.18 to 1.05



All Offences: Moderating Effect of Ethnicity

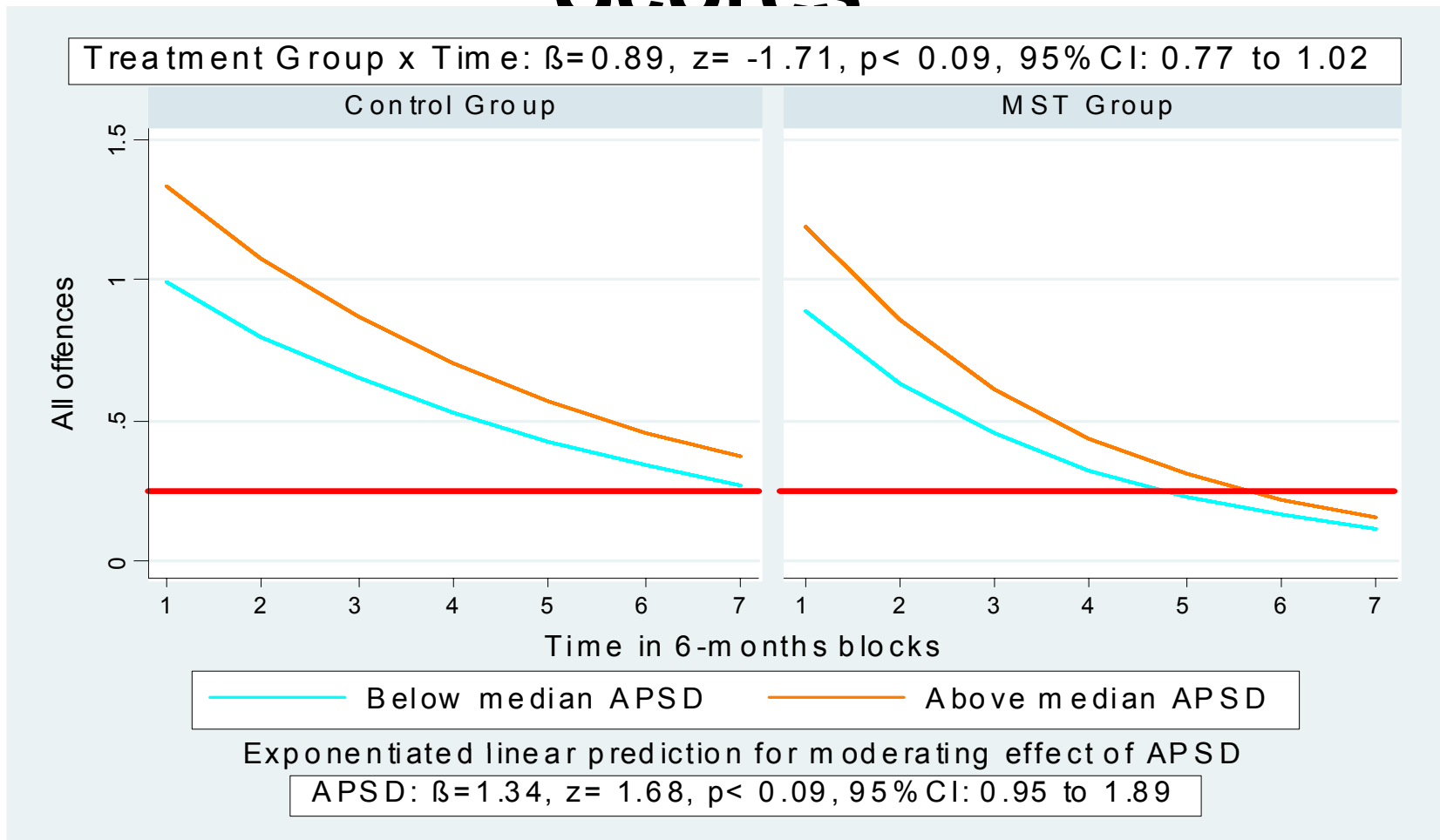
Main effect of ethnic group: Black: $\beta=1.3$, $z=1.4$, n.s.; White: $\beta=1.5$, $z=1.6$, n.s.



Treatment Group x Time: $\beta=0.876$, $z= -2.07$, $p< 0.04$, 95%CI: 0.77 to 0.99

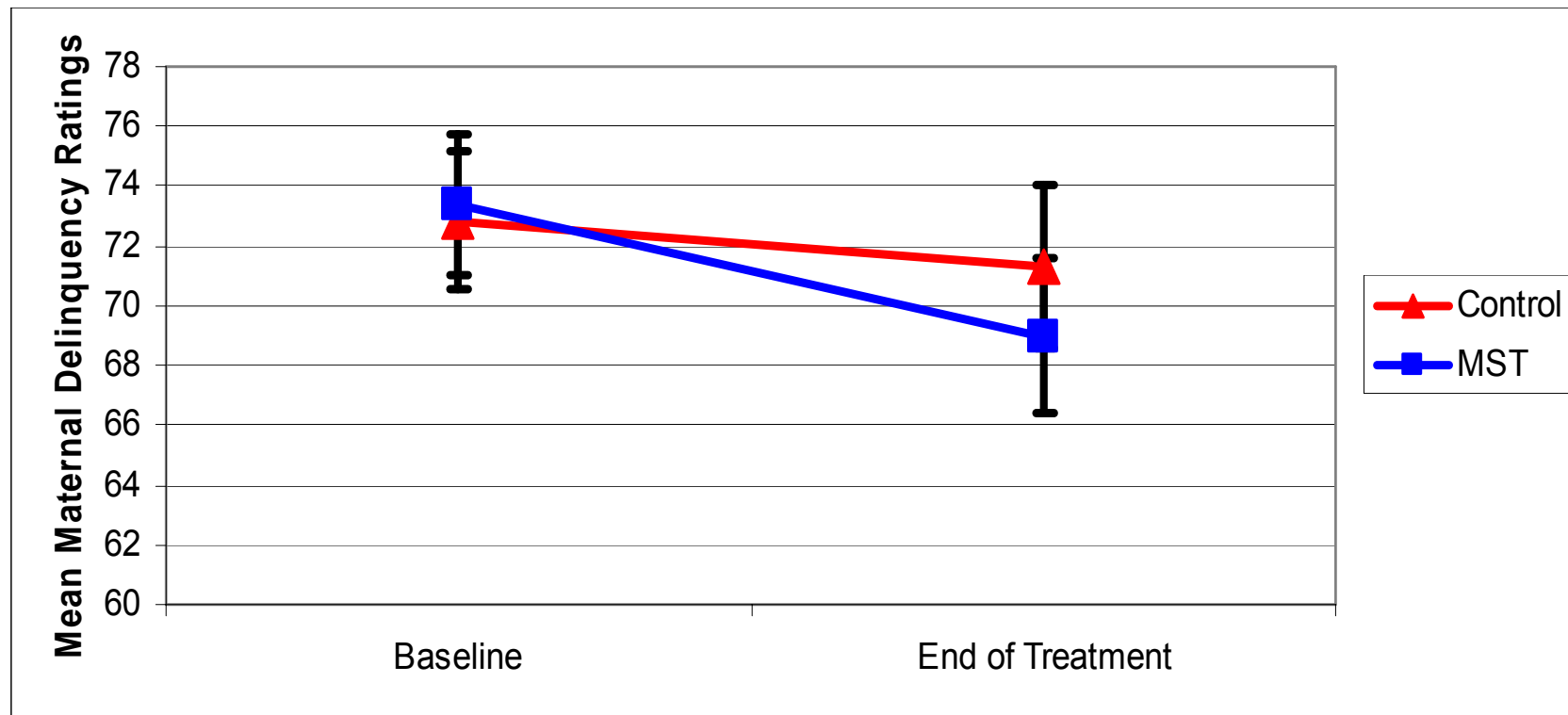


All Offences: Effect of APSD Scores



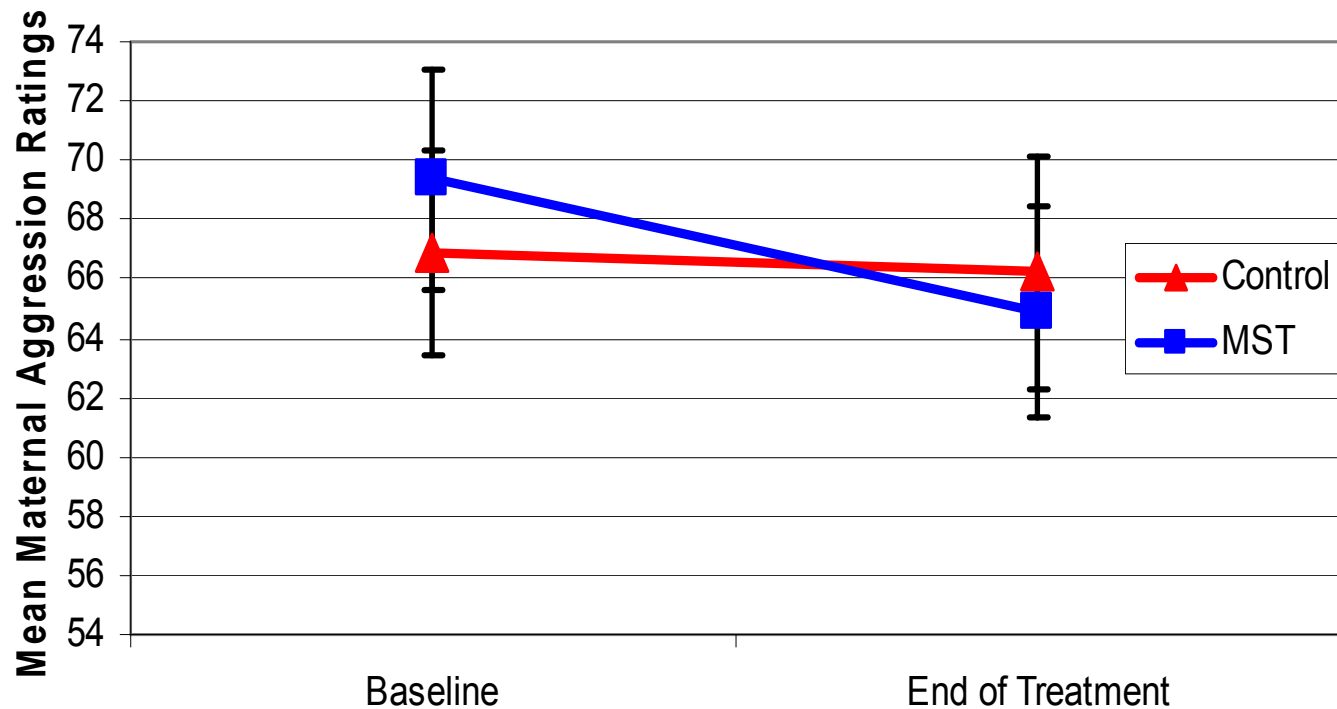
Change in Maternal Delinquency Ratings

Group x Time interaction: $F= 4.11, df=1,77, p<0.046$



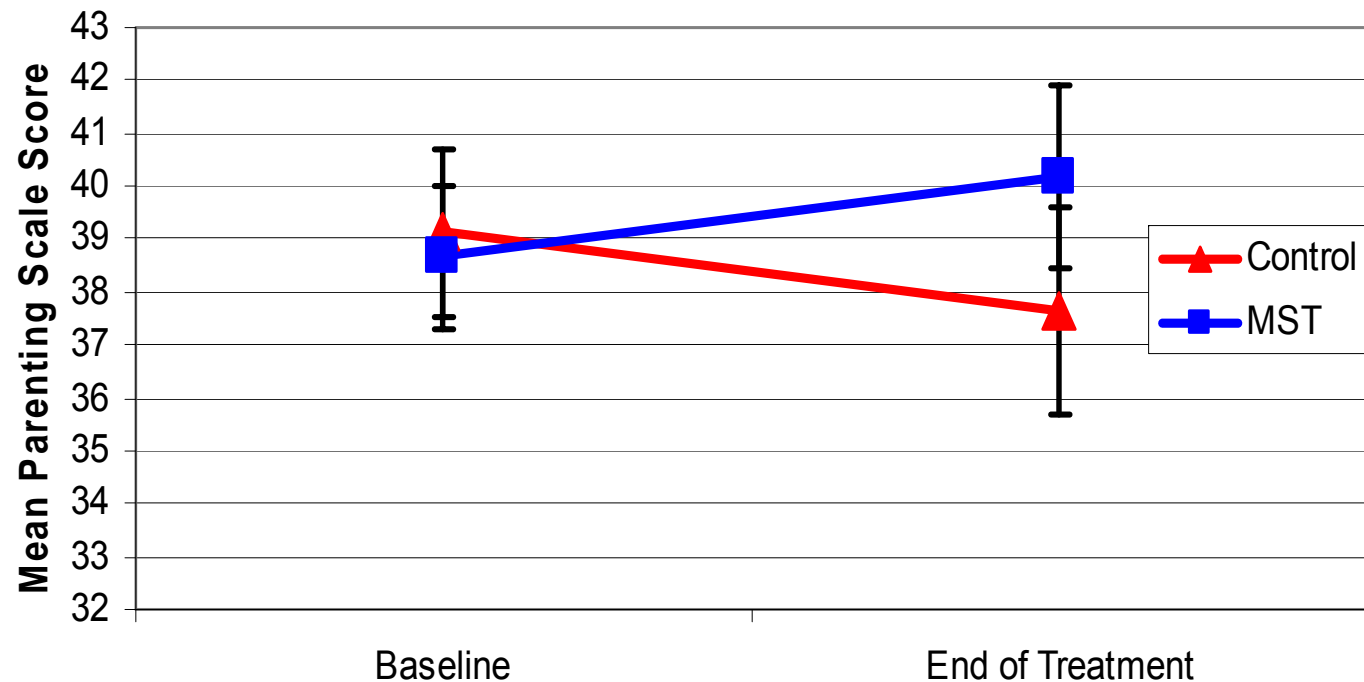
Change in Maternal Aggression Ratings

Group x Time interaction: $F= 3.32, df=1,77, p<0.07$



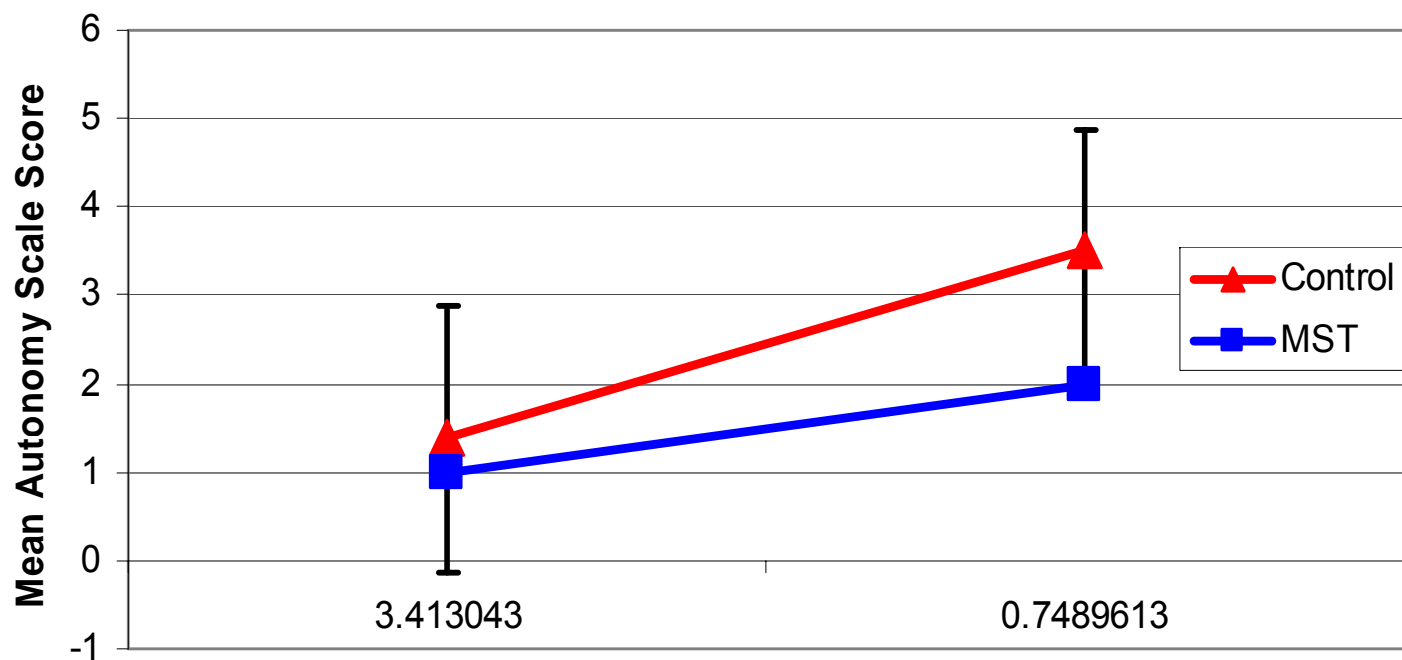
Change in Parenting Scale Scores

Group x Time interaction: $F= 3.25, df=1,75, p<0.08$



Change in Autonomy Scale Scores

Group x Time interaction: $F= 4.68$, $df=1,66$, $p<0.04$



Economic Evaluation : Cost- offset Analysis MST (plus TAU) vs. TAU

- Economic analysis by Maria Cary and Dr. Sarah Byford, Centre for the Economics for Mental Health, IOP, King's College London
- Can the costs of MST be justified in terms of savings through reduced re-offending?
- Over 3 year follow-up period, MST+TAU vs TAU resulted in cost-savings ranging between £1,211.24 to £8,924.76 (conservatively, £1211-£3286)
- Sensitivity Analysis: 0.92 probability that MST+TAU is the alternative that results in greater cost-savings



Qualitative Studies: A New avenue of research in MST literature

- Processes of therapeutic change are rarely studied in child and adolescent therapy (Kazdin & Nock, 2003), with outcome evaluation usually focused on measuring improvement of symptoms
- Understanding which components of a complex intervention are associated with better outcomes helps improve clinical practice and develop more efficient means of service delivery (Stewart-Brown, 2004)
- Very little research exists into process and outcomes of MST from the perspective of the families themselves.
- Qualitative research is a valuable method of addressing complex psychological processes that underlie effective therapeutic interventions



Processes of Change in MST (Tighe and colleagues 2010)

- 22 parents, 19 adolescents were interviewed in 5 areas:
 - (1) About MST (home-based, intensity, etc)
 - (2) Working with their therapist
 - (3) Working on problems
 - (4) Life now
 - (5) Focus on Change: what may have facilitated or hindered change.
- Framework analysis (Ritchie & Spencer, 1994) was used to document prominent themes from parent and youth interviews, including negative case examples
- A coding framework based on these themes was then systematically applied to all 41 transcripts
- Context: interviews took place with families who often described themselves as “exhausted”, “at the end of their tether”, “desperate for help”



Main Themes: Looking at the therapeutic process

- *Engagement*: fitting around the family, seeing benefits early on, person-centred approach (therapist like a friend, on my side, there for me, getting pragmatic help, not blamed)
- *Useful components in bringing change*: having someone to talk to, reinforcing parenting skills, promoting family relationships, working with different systems, getting YP back to school (working with systems)



Main Themes: Looking at clinical outcomes

- For the Young Person
 - Hopes for a more positive future
 - Thinking about how my behavior impacts on my parents

For the Parent/Carer

greater confidence

Better mental health

For the Family

Less conflict, better communication



Main Themes: Outcomes

- Young person: hopes for a more positive future
 - increased self-belief & aspirations (seemed linked to getting back in school)

...I can work hard if I really want to and I can concentrate so, I kind of believe in myself more as well than I did before...now I believe I can get so far and no-one will stop me. (YP41L)

[MST] helped with my...education and getting a reference and getting a job... It made me put my head down and focus on my education, that side of my life like, how to earn, earn a good pay legitimately, yeah...



Outcomes: Young People

- thinking about behaviour and its impact on others (seemed linked YP being involved in sessions)

I think I just like just stopped and just thought about all the things that I'd done and how did my Mum take it when I was listening to my Mum talk to [therapist] and start crying and stuff. I didn't really know that it did like hurt my family so much. (YP41L)

I guess I just put myself in her [mum's] shoes one day and

just thought, 'What if my daughter was doing that to me? I

think it was cos of like working with [therapist] that I actually



Outcomes: Parent

- empowered, more confident and competent, improved mental health
 - *It's quite a frightening experience for a parent to lose total control of their child... so having that list and sticking to the rules and being consistent I feel like I've got some control...*
 - *It's a change, but I'm just assuming it's because I think I've changed... I can't say that when [therapist] left that it had totally changed...but the only thing I know is that I learnt a lot, improved on my parenting skills*
 - *I'm not sort of a woman on the verge of a nervous breakdown. So, you know, I'm a bit more relaxed...I was just desperately anxious...before...I just was extremely tense. So it couldn't have been easy to live with me either...the emotion has been taken out of it, the kind of highly strung, the anxiety. I am able to take his behaviour a bit less personally. You know, to see it as just, you know, behaviour rather than him having a go at me*



Outcomes: Family

- Less conflict, better understanding & communication

- *another one of [son]'s problem was he was very argumentative with everybody. But I find like now I'm in control. So before I used to flip. But now I don't flip. ...Before I used to raise my voice and go into one....and he used to just drive me crazy. But now I'm just cool as a cucumber with him. (P42)*

- *She [mother] would just talk instead of having a little argument and stuff like that...[so] I think I stay calm as well... Yeah it kind of has [impacted me] because less arguments innit so, I'm not really angry that much. (YP51L)*

- *It's kind of like a big, big improvement, like I'm not dreading him coming in ...at the time when MST came in, he just hated me...we were quite far apart at that point. I'd say our relationship is kind of a lot better...from time to time he'll cuddle me and tell me he loves me like he used to before. (P20)*

...sometimes I give her a hug or something...and like you know she's happy (YP51L)



Outcomes: Complexity

- Things can break down *and* improve: objective measures don't always pick up parent/YP reported changes. For example....
 - Parent positive and reports improved relationship with YP, that he is back on track, but he ends up offending
 - Parent eventually places child in care but mother and daughter both report improved relationship
- Long-term follow-up: important for both objective measures and questionnaire data that looks at changes in domains of functioning



Conclusions

- families generally felt MST had helped, even if it did not achieve everything they had hoped
- Outcomes were complex; realistic expectation needs to be maintained of what a short-term intervention for such serious, chronic problems can achieve
- families' accounts point to a wide range of benefits they derived from MST besides the targeted reduction in antisocial behaviour
- When antisocial activity remained a concern, parents mostly attributed this to YP continued contact with deviant peers



Mechanisms of Changes: Confirming and Adding

- Known: support for MST theory of change through enhanced parenting skills and improved family relationships
- Not researched: increased empathy in YP regarding the impact of their behaviour, reflecting on the negative consequences of their antisocial behaviour for their future prospects and consideration of achieving conventional goals
- Emphasized: change through the therapeutic relationship
- Improved parenting: behaviour contract and learning how to manage conflict highlighted

Improved family relationships: useful role the therapist played in mediating different viewpoints; value of involving the young person in the intervention.

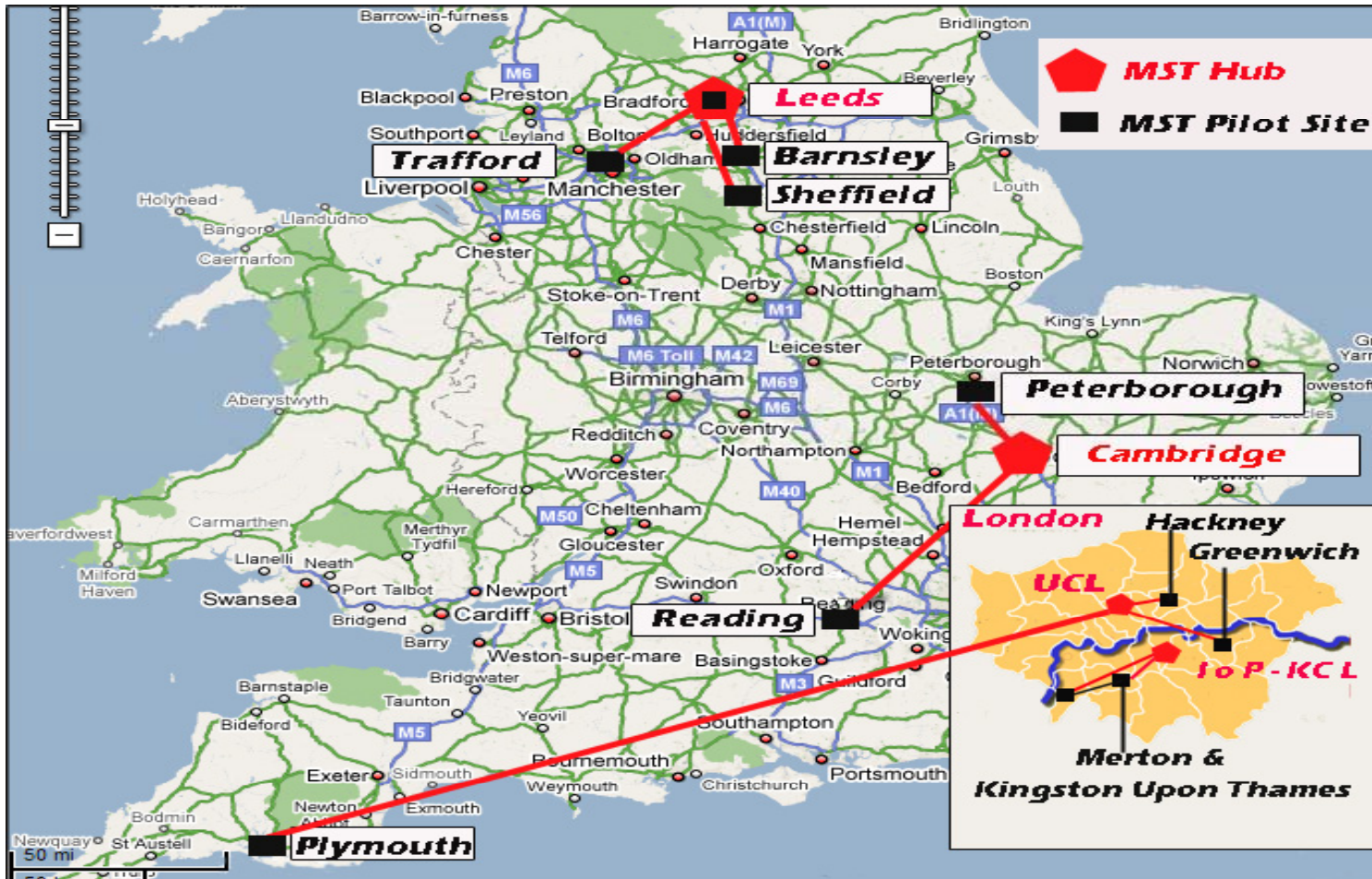


Room for Improvement: Challenges

- Engaging young people (When YP engaged with the therapist, they reported more positive outcomes)
- Keeping young people in school or developing suitable alternatives a key to their self-belief and aspirations for the future
- Antisocial peers: Intervention primarily works through parent influence; this may not be enough and may require integrated, systemic intervention at the community level



START Trial- Sites



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DH Department
of Health

YJB
Youth Justice Board
Bwrdd Cyfiawnder Ieuencid

Implementing MST in the UK: Our research questions

- Will MST be effective in the UK? (transportability trial)
- Will MST reduce out-of-home placement and reduce offending in high-risk youth?
- Will MST lead to improved well-being of young people and their families?
 - Improved emotional/behavioural functioning
 - Closer family relationships
 - Develop better parenting skills
 - Improve educational outcomes
- Will MST cost-effective against MAU?



Addressing these Questions: Research Design

- Administer research protocol prior to group assignment (pre) and follow-up participants at 6 mo., 1 year, and 18 months (post-intervention)
- Objective indicators: out-of-home placement, offending
- Interview data: psychiatric diagnoses, attachment
- Questionnaire data: measures of individual, family and psychosocial “risks” (parent and young person)
- School adjustment e.g. attendance, behaviour
- (Post-treatment) Qualitative methods to elicit parent/youth views about experiencing MST, impact of MST on their lives and relationships, any changes in referring problems



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Strengths of the Research Design

- Randomisation
- large sample
- clear inclusionary and exclusionary criteria
- valid outcome measures
- longer-term follow-up
- cost-benefit financial analysis
- Study naturally occurring implementation differences across communities



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Research Design: Strengths

(cont'd)

- RCT: Also deliver 'gems' of MAU
- Multiple time points to show trajectory of young people
- Multiple perspectives to get full story: e.g. Youth, parent, teacher
- Multiple methods to overcome error: questionnaire, interview, obj. data
- Researchers independent from developers of the intervention



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Learning about MST

- For whom and how does it work?
 - Are there groups of young people that benefit more or are harder to help
 - What changes as a result of treatment: e.g. better family and peer relations
 - MAU: range of sites and service profiles: we assess what actually is delivered

Integrating methodologies

- Experience of MST
- Views of service providers



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