Multisystemic Therapy for Young People Involved in or at Risk of Criminal or

Sexual Exploitation: Young People and Carers' Perspectives.

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June 2021

Research submitted in partial fulfilment of the requirements for the degree of Doctor in

Clinical Psychology (DClinPsy), Royal Holloway, University of London.

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Firstly, I would like to thank the young people and carers who participated in this research, as without them, this thesis would not have been possible. I would like to thank my two supervisors Dr Simone Fox and Dr Emily Glorney for their unwavering support throughout this process. To the 2018 cohort, you have been a regular source of comfort and guidance over the last three years, and I feel lucky to have met and shared my training experience with you. To my closest friends, thank you for always checking in on me and offering me much needed distractions, and for supporting me throughout. Thank you to my Mum and Dad for always being on the end of the phone to listen and guide me. Lastly and most importantly to my partner. You have always believed in me. I am so immensely grateful for the love and encouragement you have shown me throughout this course. Without you and our much-loved dog this thesis would not have been possible.

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Introduction

Young people involved in gangs are more likely to commit crime and be victims of crime and violent behaviour than those not involved in gangs. Vulnerable young people from care homes or those who have been excluded from schools are often targeted, groomed and exploited by gangs who coerce them into committing crimes on behalf of others. Some young people are sexually exploited, whereby they are coerced into sexual activity in exchange for items desirable to the young person such as gifts, money or drugs. There is a large amount of existing research exploring what treatments are helpful for reducing criminal and antisocial behaviour for young people generally. However, there has been limited research about which treatments are helpful for young people at risk of exploitation or gang involvement.

Systematic Review

Introduction: Most of the existing research addressing youth gang involvement has focused on the use of preventative interventions, typically delivered in schools to reduce the risk of later gang involvement as opposed to interventions which specifically target young people who are at high risk of entering gangs, or those who are already gang members. Several treatments have been shown to be helpful in reducing youth antisocial and criminal behaviour for young people more generally. Many of these are systemic interventions. Systemic interventions understand people's behaviour within the social context that they live, and work with

the multiple different systems which surround an individual such as their family, their school and the wider community. It is possible that systemic treatments may also be helpful for young people involved in gangs or at risk of exploitation, where there are higher levels of violence and victimisation.

Method: A systematic literature search was carried out to explore what systemic interventions have been used with young people at risk of gang involvement or exploitation. This review also explored whether systemic interventions were helpful in reducing problematic behaviours associated with exploitation and gang involvement such as association with negative peers, offending behaviour, substance use, school attendance/exclusion issues, going missing or aggressive behaviour. Relevant studies were identified through a systematic search of two large online databases to ensure all the evidence in this specific subject area was captured. After screening 3728 papers, four studies met inclusion criteria to be included in the review.

Results: Three different systemic treatments were identified that had been used with gang involved young people:

1. Functional Family Therapy for gangs (FFT-G)
2. Adapted Brief Strategic Family Therapy for gangs (BSFT)
3. Multisystemic Therapy (MST)

Key Findings:

- FFT-G and adapted BSFT showed some evidence that they reduced gang involved youth's frequency of alcohol use, but not illicit drug use.

- FFT-G was helpful in reducing rates of re-arrest for gang involved youths, however, it did not help to reduce youth's self-reported behavioural problems.

- Adapted BSFT did not help to reduce young people's level of gang involvement, but it did help to reduce parent reported conduct problems.

- 2 out of 4 papers explored the use of Multisystemic Therapy (MST) and the findings for how helpful it was were mixed.

- Two studies showed that the chance of completing MST successfully, was lower for gang involved youth compared to uninvolved youth, suggesting that MST may not be useful treatment for gang involved youths.

- One paper showed that gang involved youths were no more likely to be rearrested twelve months after MST than uninvolved youths, suggesting that MST may be just as helpful for reducing arrests for gang involved youths as those uninvolved.

Conclusions: Overall, the findings from the systematic review showed some evidence that systemic interventions can reduce problems associated with gang involvement such as offending behaviour, substance use and young people's conduct problems. The evidence for the usefulness of MST was mixed and it remains unclear whether MST is a helpful treatment for gang involved youth. All the studies included in the review used high quality research methods. However, studies used several different methods of determining youth gang involvement, and changes in behaviour were measured using different tools with different informants. The differences in the research methods between studies made it difficult to draw direct comparisons. Systemic treatments show promise, however more research is needed to reach a firm conclusion about how useful they are for gang involved youths.

Empirical Paper

Introduction: Existing studies of Multisystemic Therapy (MST) have produced mixed findings about whether it is a useful intervention for young people involved in gangs. MST is an intensive family-based intervention to support young people displaying antisocial behaviour. All of the existing research into its use is with gang involved young people in the United States. Child exploitation is the terminology used in the United Kingdom (UK) to describe young people who may be involved in youth gangs, but who are being coerced into criminal activity or sexual activity for the benefit of others. Child exploitation has been linked to various problematic behaviours such as substance use, going missing from home, school exclusions as well as criminal and antisocial behaviour. No studies from the UK have explored whether MST is helpful for gang involved youth or those at risk of exploitation. When previous research has shown mixed findings about how effective a treatment can be, it can be useful to interview those who have received the treatment to explore their experience and what they found most and least helpful about the intervention.

Method: Young people aged 11-17 years at risk of exploitation or gang involvement and their carers were interviewed about their experiences of MST. Six carers and four young people were recruited from MST services across the UK. Interview questions explored young people and carers perspectives of which aspects of MST helped to make changes in the young person's contact with negative peers and antisocial behaviour, and what got in the way of making changes. All interviews

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were transcribed and key ideas from the interviews were organised into themes to describe participants experiences of MST.

Results: Four key themes and fourteen sub-themes emerged from young people and carer interviews.

- Theme 1: 'Changes experienced', included three subthemes: (i) changes in referral behaviours, (ii) parental empowerment and (iii) young person's change in perspective.
- Theme 2: 'Improved carer-young person relationship' included three subthemes: (i) increased pulls into the home, (ii) parental warmth and (iii) adjustment to parenting practice.
- Theme 3: 'Facilitators of change', included six subthemes: (i) therapeutic relationship, (ii) intensity of support, (iii) setting clearer boundaries and expectations, (iv) power of multiagency involvement, (v) developing a network of other parents, and (vi) changing peers changed behaviour.
- Theme 4: 'Barriers to change', included two subthemes: (i) associations with negative adults and (ii) frequent changes in peer group.

Impact, Integration and Dissemination Plan

The systematic review and the empirical paper both focused on systemic treatments for young people at risk of exploitation or gang involvement. The systematic review showed that there are a limited number of systemic treatments which have been applied to gang involved young people and families. The empirical paper highlighted which aspects of Multisystemic Therapy (MST) were perceived by young people and

carers to be barriers and facilitators to reducing young people's involvement with negative peers and antisocial behaviour. Young people and carers reported experiencing positive changes after MST in terms of family well-being and in the problematic behaviours which prompted the involvement of MST services. This thesis explored an important but under-researched area. The findings from both the systematic review and the empirical study are important to young people, families, MST professionals and those involved in planning services and policy for young people and families. A summary of the findings from the research will be shared with the participants. The findings will be shared with MST therapists and the MST UK & Ireland network, a body of professionals who oversee and offer consultation to all MST teams. The research may also be presented at a conference to those who specialise in MST research. The thesis project will be submitted to academic journals to ensure the research reaches a wide audience.

Chapter 1: Systematic Review

Systemic Treatments for Young People at Risk of Exploitation or Gang

Involvement and their Families: A Systematic Review.

Abstract

Despite a large existing evidence base of effective treatments for youth antisocial and criminal behaviour, there is less research into the effectiveness of interventions for gang involved young people. Existing reviews have largely focused on universal preventative programmes designed to reduce the risk of future gang involvement, as opposed to targeted interventions for young people who are at high risk of gang involvement. Several systemic interventions have been shown to be effective in reducing antisocial and criminal behaviour for youth generally and may also be a promising intervention for gang involved youth. This review evaluated what targeted systemic interventions have been used with young people at risk of exploitation or gang involvement, and whether these interventions are effective in reducing behaviours associated with youth gang involvement such as substance use, aggressive behaviour, association with negative peers and offending. A systematic literature search of PsychINFO and Web of Science resulted in 3728 articles after the removal of duplicates. 3666 articles were excluded on the basis of title and abstract and 61 papers were identified for full text review. After applying eligibility criteria, four studies were included in the review. The Quality Appraisal Checklist for Quantitative Intervention Studies (NICE, 2012) was used to critically appraise the methodological quality of articles. Three different systemic interventions were identified; Functional Family Therapy for Gangs (FFT-G), adapted Brief Strategic Family Therapy (BSFT) and Multisystemic Therapy (MST). FFT-G and adapted BSFT were both more effective than control groups in reducing the frequency of alcohol use for gang involved youths. The potential of FFT-G and MST in reducing rates of re-arrest for gang involved youth was demonstrated.

Adapted BSFT resulted in fewer parent reported conduct problems in comparison to the control group. FFT-G did not significantly reduce youth's self-reported behavioural problems. There were no changes to young people's self-reported gang affiliation before and after engaging in adapted BSFT. Two studies evaluating MST produced mixed findings. Two studies showed that gang involvement significantly reduced the likelihood of successful MST treatment outcomes. One paper showed no significant differences in rates or counts of re-arrest twelve months after engagement in MST, for gang involved and uninvolved youths, suggesting that MST may be equally effective for gang involved and uninvolved youths. Overall, included studies were of high methodological quality. Systemic interventions were highlighted as a promising treatment for gang involved youth. Further high-quality research is required, particularly studies outside of the United States.

Introduction

Prevalence of Youth Gangs

Youth gang membership and associated antisocial behaviour and criminal activity is a serious issue locally, nationally and internationally. The London Metropolitan Police Service in 2012 reported that 259 youth gangs and 4,800 gang members had been identified in 19 gang affected boroughs (Pitts, 2012). It was estimated in a more recent report that 27,000 10-17-year olds in England are street gang members (Children's Commissioner, 2018). In the United States (US) gang presence has been reported in approximately 30% of US law enforcement jurisdictions and in 16% of US secondary schools (Dinkes, Kemp, Baum & Snyder, 2009). A large proportion of the literature related to gang involved youth is from the US, however due to widespread attention about gang related violence in the mainstream media, there has been an emergence of more recent literature from the UK.

Defining Youth Gangs

Despite the prevalence of gang activity, there is no single widely accepted definition of a 'youth gang'. However, youth gangs can typically be distinguished from other youth groups or organised crime groups primarily through their involvement in a range of criminal activity, a shared sense of identity or through association with economical or geographical territory (Carlsson & Decker, 2005). Consistent definitions for gang-affiliation and gang-related crime are important

because a lack of a universal definition has implications for gang related research and policy. The risk is overestimating the prevalence if the definition is too broad and underestimating if it is too narrow in definition. Under or over estimation is problematic for resource allocation which is determined by the scale of the problem (Ebensen, Winfree & Taylor, 2001). Definition of gang involvement is crucial to enabling discourse. For the purposes of this review the definition set out in the Centre for Social Justice's report "Dying to belong" (2009) will be used: "a relatively durable, predominantly street-based group of young people who: 1. See themselves (and are seen by others) as a discernible group; 2. Engage in criminal activity and violence; and may also 3. Lay claim over territory (not necessarily geographical but can include an illegal economy territory); 4. Have some form of identifying structural feature; and/or 5. Be in conflict with other, similar, gangs." (The Centre for Social Justice, 2009, p.48).

Consequences of Gang Involvement

Gang involved youth, when compared to those who are not involved in gangs, engage in more violent and non-violent antisocial behaviour (Barnes, Beaver & Miller, 2010) and have higher levels of personal (sex, minority status, problem behaviour, externalising behaviour, risk taking propensity) and contextual (household income, carer education level, peer deviance, carer knowledge of youth behaviour, victimisation, neighbourhood violence) risk (Boxer et al, 2014). Gang involved youth commit more crime than young people who are not gang involved, and the use of violence is an important component of gang membership (Klein & Maxson, 2006). Adolescent gang members are more likely to experience violent victimisation,

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including serious violence in comparison to uninvolved youth (Peterson, Taylor & Esbensen, 2004) and exposure to violence is significantly associated with youth behavioural and emotional problems including antisocial behaviour, aggression and depression (Schilling, Aseltine & Gore, 2007).

Youth Gangs and Child Exploitation

Research has shown that risk factors for gang membership are similar to those of involvement in antisocial behaviour more broadly such as parental absence or abuse, school related difficulties and socio-economic disadvantage (Boxer, Verysey, Ostermann & Kubik, 2015). However, risk factors for gang membership are considered greater in intensity as gang involvement is associated with a significantly increased risk of violent and non-violent offending, mental health problems and violent victimisation (Gordon et al, 2014). Child exploitation is highly connected with youth gang involvement. The terminology of exploitation is much more commonly used in the UK to describe a similar population of young people who may have links to gangs, but who are being criminally or sexually exploited for the benefit of others. Young people may be criminally exploited, whereby they are coerced or threatened into carrying out criminal behaviour on behalf of others. Young people may also be sexually exploited, a form of child sexual abuse in which a person of any age takes advantage of their power imbalance to force or entice a child to engage in sexual activity (Scottish Government, 2016).

Interventions for Youth at Risk of Exploitation or Gang Involvement

Gang related interventions for young people have typically been organised into two categories (McDaniel & Sayegh, 2020). The first, universal prevention programmes are typically offered to large groups of school aged youth regardless of their risk of gang involvement. The second are targeted interventions aimed at young people who are at an increased risk of gang involvement or those who are already involved in gang related violence. Most of the available research has centred on interventions designed to prevent youth gang involvement. Preventative interventions focus on capacity building and social prevention to stop involvement in gang related violence before it occurs (O'Connor & Waddell, 2015). There is less research exploring the use of targeted interventions for gang involved youth. Two systematic reviews published in the Campbell library explored cognitive-behavioural and opportunities provision interventions to prevent youth gang involvement and gang related violence (Fischer, Montgomery & Gardner, 2008a, 2008b). However, both reviews were unable to identify any studies which met their strict inclusion criteria of randomised control trials or quasi-randomised trials. Similarly, Higginson et al (2015), whilst operating strict inclusion criteria in their systematic review, did not identify any studies assessing the effect of preventative gang interventions in low- and middle-income countries that used an experimental or quasi-experimental design.

Wong, Gravel, Bouchard, Descormiers and Morselli (2016) conducted a meta-analysis to systematically evaluate the evidence available for both school-based preventative awareness programmes and gang membership prevention programmes

for at risk youth. Due to the focus on prevention, this review did not include studies which evaluated programmes with known gang members. The inclusion criteria specified that studies must have used a true experimental, randomised or quasi-experimental research design with a comparison group to be included in the review. Two universal prevention programmes and four gang membership prevention programmes targeted at 'at risk' youth living in gang infiltrated communities were identified. Taken together, the pooled results of these six studies demonstrated that prevention programmes were effective in preventing gang membership as the odds of gang membership in the comparison group was 26% higher than the odds of gang membership in the control group.

In 2015, a rapid review was conducted by the Early Intervention Foundation which aimed to identify and evaluate specific preventative programmes with a good evidence base for reducing gang involvement and youth violence (O'Connor & Waddell, 2015). The narrative synthesis of findings did report on some targeted interventions, however the review focused both on youth violence and gang involvement and did not report a breakdown of findings between interventions for gang involved youth and those for youth violence more broadly. This rapid review was not conducted systematically and therefore it is possible that some studies were not captured in the literature search.

Systemic Interventions for Antisocial Behaviour

A range of interventions have been developed to address general youth antisocial behaviour, many of which are systemically informed. Systemic therapy is a

key psychotherapeutic orientation which is distinguishable from other therapeutic methods (von Sydow, Retzlaff, Beher, Haun & Schweitzer, 2013). Systemic therapy understands people within their social context and can typically be defined by its inclusion of important others in one's life such as family, schools and other professionals into the process of therapy (von Sydow et al, 2013). The term 'systemic intervention' in this review is used to refer to the systemically informed therapeutic orientation which is different from individual therapy with the young person.

A number of specific systemic interventions have been shown to be effective in reducing childhood antisocial behaviour and adolescent offending including Multidimensional Family Therapy (MDFT; van der Pol et al, 2017), Functional Family Therapy (FFT; Alexander, Waldron, Robbins, Neeb, 2013; Sexton, 2011), Brief Strategic Family Therapy (BSFT; Szapocznick, Schwartz, Muir & Brown, 2012) and Multisystemic Therapy (MST; Hennegler, Schoenwald, Bourduin, Rowland, Cunningham, 2009). The MDFT approach assesses and intervenes to promote change at multiple levels including with the young person themselves, the way parents relate to and influence their children, and how the family solves problems and interacts with one another. MDFT also addresses how the family interacts with other systems such as school, juvenile justice and the community (Liddle & Kareem, 2019). FFT is an evidenced based treatment targeted at young people with problem behaviour such as substance use and delinquency and their families (Alexander & Robbins, 2011). The intervention involves the entire family to address dysfunctional inter-relationship patterns within the family system with the aim to reduce youth's substance use and delinquent behaviour, whilst improving family cohesion and

family relationships. BSFT is an integrative intervention which combines structural and strategic family therapy techniques and theory to address within-family relationships and relationships between family members and other important systems such as school and peers in order to reduce young people substance use and other problematic behaviours (Szapocznick & Kurtines, 1989). MST is a community intervention developed for children and young people aged 11-17 years of age displaying antisocial behaviour, and their families (Henggeler, 1999). Within MST, the carer is the primary driver for change and interventions are focused on empowering carers with skills to manage the young person's behaviour and to intervene across multiple systems which may be driving antisocial behaviour such as school, peers, and the community (Henngler et al, 2009). MST draws upon many different evidence-based approaches such as family therapy, cognitive behavioural therapy and behavioural based approaches when working with young people and families (Henggeler, et al, 2009).

Potential of Systemic Interventions for Gang Involved Youth

Family risk factors for both adolescent antisocial behaviour and offending are very similar to risk factors for joining a gang (Thornberry, 1998). In comparison to non-gang involved young people, those involved with gangs are more likely to have reduced parental supervision and inconsistent discipline, lower levels of parental warmth and increased family conflict (Belitz & Valdez, 1994; Dukes, Martinez & Stein, 1997; Klein & Maxson, 2006). It is possible that systemic interventions which focus on improving supervision, monitoring, emotional warmth and family conflict may provide a useful intervention for young people at risk of exploitation or gang involvement (Shute, 2008). Existing best practice models for antisocial behaviour

such as FFT, MDFT, BSFT and MST might hold promise for young people at risk of exploitation or gang involvement.

Rationale for Review

Previous reviews have predominately focused on the effectiveness of preventative interventions in reducing future gang involvement in young people. At present there are no empirically supported, best practice models for targeted interventions with gang involved youth (Boxer & Goldstein, 2012). Existing research clearly shows that the risk of adverse outcomes including serious and violent offending is significantly elevated if you are a member of a gang. Youth gang involvement has been shown to be predicted by risk factors across multiple domains in the young person's life. Systemic interventions have been used and widely evaluated with youth antisocial behaviour more broadly and may prove a valuable intervention tool for gang involved youth. Despite the importance of family, school and community level variables being highlighted in the gang risk factor research, the usefulness of systemic interventions for this population has received comparatively little research and formal evaluation. Therefore, there is a need to evaluate the existing evidence base of targeted systemic interventions for young people at risk of exploitation or gang involvement. This review will take a systematic approach to reviewing the available literature for targeted systemic interventions for young people who are at risk of exploitation or gang involvement and their families, with specific emphasis on whether these interventions are effective in reducing known behavioural indicators of gang involvement and exploitation.

Systematic Review Questions

The review aimed to answer the following questions:

1. What targeted systemic interventions exist for young people who are at risk of exploitation or gang involvement?

2. Are targeted systemic interventions effective in reducing behaviours which are associated with young people's involvement in gangs or exploitation risk (*association with negative peers, offending behaviour, substance misuse, attendance at school, aggressive behaviour, going missing/absconding*)?

Method

The Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) guidelines were adhered to for this systematic review (Moher, Liberati, Tetzlaff, Altman & Prisma Group, 2009).

Eligibility Criteria

The inclusion criteria for studies were:

1. Empirical research investigating the use of targeted systemic interventions with young people who are at risk of exploitation or gang involvement.

2. Young people must be at risk of criminal/sexual exploitation and/or gang involvement (either identified through direct measures of gang association/gang related crime, or self-report, or through associated problems such as association with negative peers, frequently going missing, aggressive behaviour, school exclusion/attendance issues).

3. Participants must be young people aged between 10-17 years of age.

4. Interventions must be family or system focused.

5. The studies must report quantitative outcomes related to associated problems of exploitation or gang involvement such as peer association, offending behaviour, substance misuse, aggressive behaviour, attendance at school or going missing/absconding.

6. The participants could be from both community or institutional settings.

7. The study should be empirically based rather than a review of existing literature.

8. Studies from other English-speaking countries and studies from non-English speaking counties were included if they had been translated into English.

9. There was no limit on publication date.

10. Empirical study designs could include randomised control trials, quasi-randomised trials, non-randomised trials and before and after studies.

11. Comparators could include: no intervention, wait list control, or another intervention.

The exclusion criteria for studies were:

1. Studies with participants under the age of 10 years and over the age of 17 years.
2. Studies which investigated youth violence broadly but did not have a specific focus on youth gang involvement or child exploitation.
3. Qualitative studies
4. Case study designs
5. Studies which were not reported in English.
6. Interventions which were not targeted towards at risk groups eg universal preventative interventions.

Search Strategy

PsychINFO and Web of Science databases were searched for published and unpublished articles. Full searches were carried out in December 2020. The reference lists of eligible papers were reviewed, and existing systematic reviews and meta-analyses were searched for additional studies. Search terms for each concept were generated from terminology typically used in the literature to identify relevant studies. Boolean operators and truncations were used, with the asterisk following the root term initiating the search for variations of the truncated term. The following terms were used for electronic searches of databases:

[Subject/keyword]

"young people" OR teen* or adolescen* OR "young person* OR child* OR youth OR juvenile

AND

exploit* OR gang OR "sexual harm" OR "child sexual exploitation" OR "child criminal exploitation" OR CSE OR CCE OR "county lines"

AND

System* OR structural* OR strategic* OR "solution focused" OR narrative OR Milan OR famil* therap* OR famil* intervention OR famil* work OR "attachment-based family therapy" OR ABFT OR "family systems therapy" OR "behaviour* family systems therapy" OR "behaviour* family intervention*" OR BFI or "behaviour* family therapy" OR 'functional family therapy" OR FFT or "multisystemic therapy" OR MST OR "multidimensional family therapy" OR MDFT

Study Selection

The process of study selection took place in two stages as recommended by PRISMA (Moher et al, 2009). Electronic database searches of Web of Science and PsychINFO identified 4171 records. Zotero referencing managing software was used to import all references and to remove duplicates, leaving 3728 remaining papers to be screened. These articles were screened by title and abstract against the eligibility

criteria and studies which were not relevant were excluded (n=3666). The second stage was to review the full text of articles identified as potentially relevant (n=61). Of the 62 papers, 19 of the papers reviewed at full text were identified from hand searches of reference lists. Each of the 61 articles were read in full to ensure they met the reviews inclusion criteria. After applying the eligibility criteria, 57 records were excluded for the following reasons: 21 records were not intervention studies that were empirically based, nine records did not describe a systemic intervention, seven records were book chapters, five records did not use an at risk of exploitation or gang involved sample, five records were qualitative studies, three records were case studies, three records did not have a quantitative evaluation component, three records did not provide sufficient information about quantitative outcomes to make effective interpretations of the results and one study was an evaluation of a universal preventative programme. See Appendix A. for a list of studies excluded at full text and the reason for exclusion. The study selection process is illustrated in Figure 1. Any queries about whether specific papers met inclusion criteria for the review were discussed and resolved with research supervisors. A total of four papers met inclusion criteria to be included in the review.

Figure 1

PRISMA Flow diagram showing study selection process
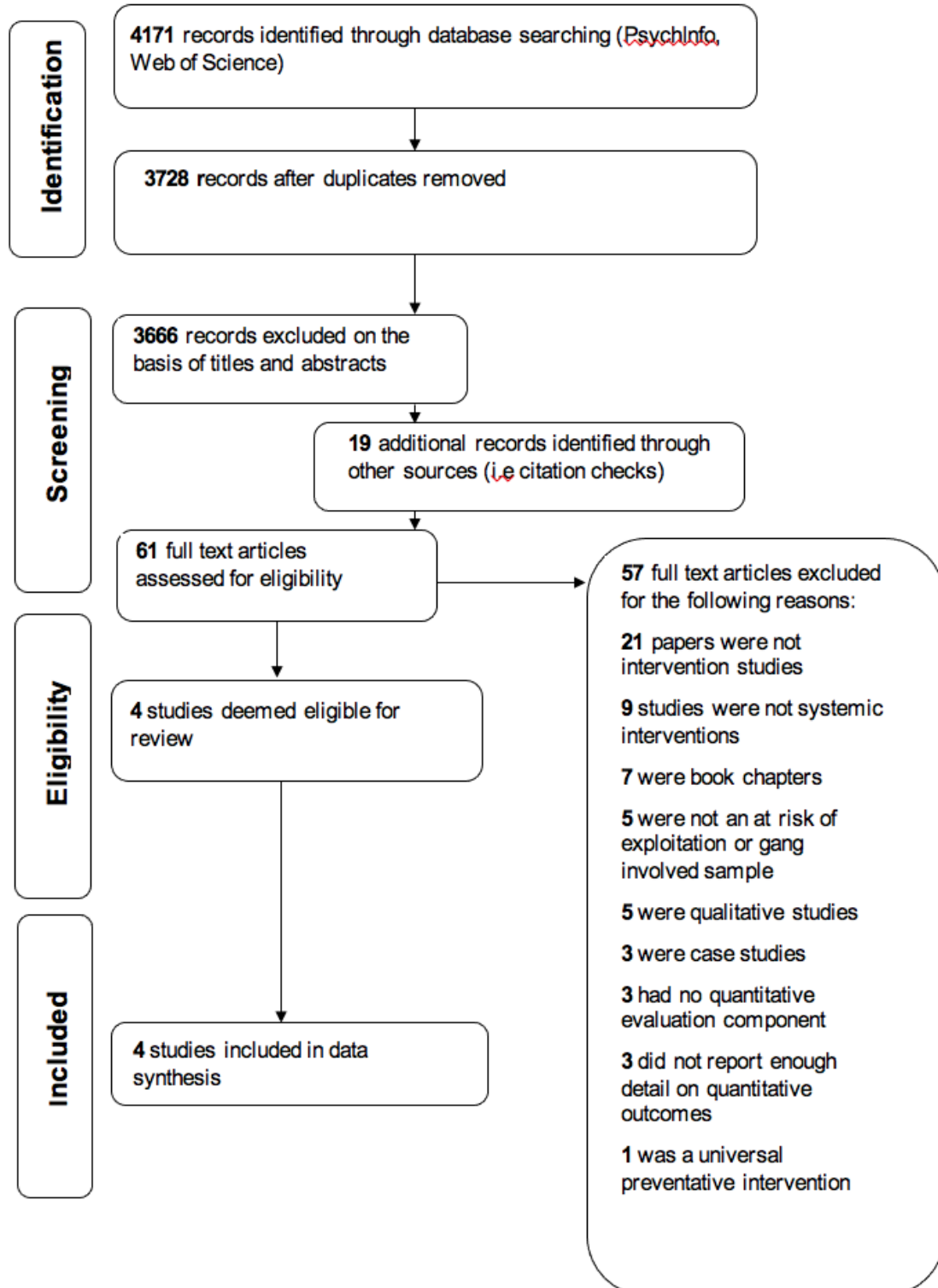
Data Extraction

Each paper was reviewed with reference to the aims of the systematic review and only findings of relevance were extracted. Author, data, title, country of origin, number of participants, demographic details of participants, intervention details, intervention outcomes, and method of data analysis were extracted from the final studies.

Quality Appraisal

The methodological quality of the final studies were assessed using the quality appraisal checklist for quantitative intervention studies (QACQIS; National Institute of Clinical Excellence, NICE, 2012). The QACQIS is a critical appraisal tool designed to evaluative the methodological quality of quantitative intervention studies. Given that this systematic review exclusively reviewed quantitative intervention studies, the QACQIS was deemed the most appropriate tool for this task. The tool has four main sections. Section 1 assesses key population criteria to determine the studies external validity, that is the extent to which the study's findings are generalisable beyond the confines of the study's source population. Sections 2-4 assess key criteria for determining the study's internal validity to assess the extent to which the study outcomes are attributable to the intervention being assessed, other than some other, often unidentified factor (see Appendix B). Each of the critical appraisal checklist questions were designed to cover an aspect of methodology that research has demonstrated significantly impacts the conclusions of a study (NICE, 2012). A comprehensive guide accompanies the tool which was used to inform the

process. The researcher's supervisor reviewed 1/5th of the final studies to ensure agreement on methodological quality.

Data Synthesis

A narrative synthesis of the data is reported due to the heterogeneity of the study designs and methodologies implemented**.** A summary of the characteristics of the included studies is provided, differentiations in measurement of gang involvement across the four studies is discussed and the structure and content of each of the interventions used is provided. The methods used to evaluate the systemic interventions is reviewed and the methodological quality of each study and potential threats to internal and external validity are discussed. The results from each of the four studies is presented according to the specific different outcomes reported: arrest data, substance misuse, young people's behaviour, gang affiliation and treatment success or failure.

<div align="center">

Results

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Characteristics of Included Studies

Four studies published between 2011 and 2018 were included in the review (See Table 1 for study characteristics). All four studies took place in the United States and evaluated targeted systemic interventions for gang involved young people between 10-17 years of age. Two of the studies (Gottfredson et al, 2018; Valdez, Cepeda, Parrish, Horowitz & Kaplan, 2013) were randomised control trials

evaluating pre- and post-treatment outcomes. One of these studies assessed

changes in outcomes at 6 months, and the other assessed changes at 18 months

after treatment exit. Two studies used naturalistic prospective quasi-experimental

designs (Boxer 2011; Boxer, Kubik, Ostermann & Veysey, 2015).

Two of the studies evaluated MST (Boxer 2011; Boxer et al, 2015), one study

evaluated FFT adapted for use with gangs (FFT-G; Gottfredson et al, 2018) and one

study evaluated the use of BSFT adapted for use with gangs (Valdez et al, 2013).

One study used an opportunity sample of young people attending a youth court and

their families (Gottfredson et al, 2018). One study used an outreach sampling

method to target gang affiliated young people (Valdez et al, 2013) and two studies

utilised secondary electronic data from gang involved and uninvolved young people

who had completed MST (Boxer 2011; Boxer et al 2015). There was a total of

2091participants, with sample sizes ranging from 129 to 1341.

One of the studies (Boxer et al, 2015) produced an additional later paper

(Boxer et al, 2017) using the same sample. The Boxer et al (2017) paper reported on

arrest data for gang involved versus non gang involved young people who had

engaged in MST which was not reported on the 2015 paper. These two papers will

be referred to as one single study carried out by Boxer (2015), however the different

outcomes reported in the different papers will be discussed in further detail in the

results section.

The participants were all young people aged between 11-17 years of age.

Two studies (Boxer 2011; Boxer et al, 2015) exclusively used a sample of young

people, whereas the other two studies (Gottfredson et al 2018; Valdez et al 2013)

recruited and reported outcomes for both young people and their carers.

Table 1

Characteristics of included studies

Author, Date, Title, Country of origin	Study design	Intervention and control details	Participants	Participant demographics	Study outcomes	Method of data analysis	Results
Gottfredson et al (2018) Scaling-Up Evidence-Based Programs Using a Public Funding Stream: a Randomized Trial of Functional Family Therapy for Court-Involved Youth USA	Randomised control trial	FFT-G Duration: 12-15 face to face sessions 1hr, delivered over 3-month period Control group received TAU= probation and referral to alternative family therapy treatment programme	n=129 families from Philadelphia youth court 11-17 years old and their families 66 allocated to FFT-G (n=53 received allocated intervention) 63 allocated to TAU (n=11 received allocated intervention) Youth deemed "at risk" of gang involvement on basis of living in Philadelphia (a city with high	Caregiver sample – 79% female, 80% African American, 19% Hispanic/Latino, 25% married, mean age: 41.1for caregivers, mean youth age: 15.4 years. Families disproportionately of lower income 58% of caregivers in employment 83% receiving public assistance	Primary outcomes: youth delinquency and youth substance use Measured using youth self-reports, parent reports, official records of arrests, dispositions and residential placements interviews (N.B *Specific scales used not reported*) All ptps interviewed at study intake and repeated at 6 months	Intention to treat analysis Regression models – models used to create adjusted means for each outcome Continuous outcome measures – standardised mean difference effect size statistics (d) reported Odd's ratios for binary outcomes	<u>Substance use</u> Reduction in the frequency of alcohol use for FFT-G compared to TAU,- not statistically significant and small effect size <u>Arrests</u> FFT-G effective for reducing official recorded crime. Recidivism during the 18-month follow-up was lower for FFT-G group than controls

Author, Date, Title, Country of origin	Study design	Intervention and control details	Participants	Participant demographics	Study outcomes	Method of data analysis	Results
			gang prevalence) and their own prior criminal involvement – youths selected were slightly younger (4-5 months) and had been involved in a higher % of crimes against persons (40.3% v 35.4%) than was typical of cases disposed in the family court during the same period.		post randomisation and 18month follow up and official records		FFT-group less likely to receive drug charges, property charges or be adjudicated in comparison to the control group. Youth behaviour No significant differences in self-reported general and violent delinquency between FFT-G and control group

Author, Date, Title, Country of origin	Study design	Intervention and control details	Participant details	Participant demographics	Study outcomes	Method of data analysis	Results
Valdez et al (2013) An Adapted Brief Strategic Family Therapy for Gang-Affiliated Mexican American Adolescents USA	Randomised control trial	Adapted BSFT 16 sessions (1-1.5 hr each) Control group received referrals to social and behavioural health services and substance abuse counselling on request.	n=200 Mexican American gang affiliated adolescents aged 12-17 and family dyads of primary parent/guardian caregiver Youth gang involvement was determined by either self-identifying as a gang member or by having a friend or family member in a gang	59% male and 41% female in adolescent sample. Mean age = 15.25 (SD=1.36) Carers – 92% female, 84% born in US , mean age 39.18 (SD=8.31)	Measures administered to young people and carers at 4 points in study – treatment entry, treatment exit at 16 weeks, and 6-month follow-up. <u>Youth measures</u> Centre for Substance Abuse Treatment's Government Performance and Results Act Client Outcome Questionnaire Gang identification scale for adolescents	Intention to treat analysis, successive repeated measures general linear mixed models were fitted with 3 waves of longitudinal continuous data – baseline, treatment exit at 16 weeks and 6 months follow up	<u>Substance use</u> No significant differences in illicit drug use between adapted BSFT and control group Alcohol use for adapted BSFT group significantly declined over the course of the intervention. Adapted BSFT group reported less frequency of alcohol used than control condition at 30 day and 6-month follow-up.

Author, Date, Title, Country of origin	Study design	Intervention and control details	Participant details	Participant demographics	Study outcomes	Method of data analysis	Results
					<u>Caregiver measures</u> 48-item version of Connors Rating Scale-Parent Version to assess behavioural problems		<u>Youth behaviour</u> Parents rating of conduct problems reduced over time for BSFT group compared to control <u>Gang affiliation</u> No significant differences in gang affiliation between adapted BSFT group and control group at post-test or 6-month follow up

Author, Date, Title, Country of origin	Study design	Intervention and control details	Participant details	Participant demographics	Study outcomes	Method of data analysis	Results
Boxer (2011) Negative Peer Involvement in Multisystemic Therapy for the Treatment of Youth Problem Behaviour: Exploring Outcome and Process Variables in "Real-World" Practice USA	Quasi-experimental	MST	Sample of n=1341 (n=24 gang involved) youth drawn from computerised clinical records Youth categorised as gang involved if referral description included any mention of gang membership, association or activity	Combined demographics of samples: 69% male, 31% female, mean age: 15.3 years (SD = 1.5 years), 42% white non-Hispanic, 40% black African American, 16% Hispanic/Latino, 3% multiracial.	Negative case closure – lack of engagement, in out of home placement, been arrested, probation revocation Positive case closure – successful closure with all agreed treatment goals between family and therapist met	Chi squared analysis Logistic regression analyses controlling for sex, ethnicity and Medicaid status	Rate of negative case closure was significantly higher for gang involved youth compared to uninvolved youths Rate of negative case closures for gang involved youth almost 3 times higher than uninvolved youth Gang involvement was a significant predictor of negative case closure

Author, Date, Title, Country of origin	Study design	Intervention and control details	Participant details	Participant demographics	Study outcomes	Method of data analysis	Results
Boxer et al (2015, 2017) Gang involvement moderates the effectiveness of evidence-based intervention for justice-involved youth USA	Quasi-experimental	MST	n=421 young people admitted to intensive home-based intervention in non-profit youth service agency across 7 eastern US states (All youth referred by local justice authorities for MST) Gang involved youth identified via a multifactored classification metric & matched to uninvolved youth on demographic variables via propensity score matching analysis (PSM. n=168)	69% male, mean age = 15.08 yrs, 38% black/African American, 18% latino, 34% white, 10% other)	<u>Case closure status</u> Negative case closure – lack of engagement, in out of home placement, been arrested, probation revocation Positive case closure – successful closure with all agreed treatment goals between family and therapist met <u>Arrests</u> Data on arrest events occurring between date of discharge from MST (inclusive) and the date	Chi square significance tests Logistic regression Survival analysis	<u>Treatment success/failure</u> Gang involved youth less likely than uninvolved youth to complete treatment successfully PSM sample: Gang involved had lower treatment success rate than uninvolved youth <u>Arrests</u> Effects of MST equivalent for gang involved and uninvolved youth No significant differences in arrests rates between gang involved and

	exactly 12 months after date of discharge. Arrest data classified as violent (crime against a person) or non-violent (not against a person) Excluded those without recidivism data	uninvolved youths Gang involvement was not a significant predictor of general or violent arrest Statistically equivalent survival functions for days to arrest from treatment initiation between gang involved and uninvolved youths Statistically equivalent survival functions for days to arrest from treatment initiation between gang involved and uninvolved youths

Determining Youth Gang Involvement

There was variation amongst the four studies in the methods used to identify a sample of gang involved youth. Two studies (Boxer, 2011; Boxer et al 2015) compared a sample of gang involved young people to a sample of non-gang involved young people to determine whether there were differences in treatment outcomes and arrest data after engagement in MST between these two groups. One study (Boxer et al, 2015) used propensity score matching analysis to match gang involved youth with uninvolved youth on multiple risk factors and demographic variables (gender, age, ethnicity, treatment site location, substance use involvement, carer knowledge of youth behaviour via self-report, risk taking, impulsivity, beliefs about education, peer involvement in deviant behaviour problem behaviour and violent victimisation). Gang involved youth were identified using a multifactored classification metric with five different indicators of gang involvement. Three of these indicators were young people's responses to three survey questions about their gang involvement (1. Have you ever been involved in a gang? 2. Are you now in a gang? 3. Have you been involved in gang fights?). All three items were scored as yes or no with affirmative answers indicating gang involvement. To supplement young people's self-reported gang involvement, two further indicators from participants records were used which was whether gang involvement in any form was part of the young person's presenting problem or and whether gang involvement in any form was identified as a treatment need or contributory factor the young person's problem behaviour. Determining gang involvement using this multifactored classification metric reduced the possibility of contamination between gang involved and uninvolved youth. Boxer (2011) examined differences in MST treatment outcomes

for gang involved and uninvolved youth using a different method of determining gang involvement and did not match gang involved and non-gang involved youth. Youth were categorised as gang involved if the referral description for MST detailed in their clinical records had any mention of gang membership, association or activity. This relies heavily on the accurate recording of information which may have biased and contaminated the sample.

Gottfredson et al (2018) and Valdez et al (2013) both exclusively used a sample of gang involved young people. These two studies took different approaches to identifying young people at high risk of gang involvement. Gottfredson et al (2018) did not screen participants for gang involvement prior to study entry, instead, youth were deemed "at risk" of gang involvement based on living in the city of Philadelphia with a high prevalence of gang activity and based on the young person's own criminal involvement. In an attempt to target "at risk youth" for gang involvement, young people who were slightly younger (4-5 months younger) and those who had been involved in in a higher percentage of crimes against a person than was typical for cases disposed in that family court during the same period were eligible to participate in the study. Valdez et al (2013) identified a sample they term 'gang affiliated' by including young people who either self-identified as being in a gang or had a friend or family member in a gang.

Both of the approaches taken to identifying a gang involved sample by Gottfredson et al (2018) and Valdez et al (2013) have potential issues. It raises the question of whether either sample was truly at risk of gang involvement. Gottfredson et al's (2018) method of identifying gang involved young people may have been

improved by an additional self-report measure of gang involvement or a review of specific known gang risk factors. In contrast Valdez et al's (2013) sample relied entirely on self-report measures of own identification or family and friends gang affiliations. Young people may not have been entirely honest about their gang connections or could have falsified affiliations which may have contaminated the sample.

There is continual and wide debate in literature about the best methods to accurately identify gang members and the validity of several gang affiliation measures. There is variation within the literature on how studies define and classify youth gang involvement which makes it difficult to draw direct comparisons between studies.

Intervention and Methods of Evaluation

Two studies evaluated the impact of gang involvement on MST treatment success and failure for justice involved youth (Boxer 2011; Boxer et al, 2015). Treatment success was defined in both studies as a positive case closure indicated by the therapist and family being in agreement that treatment goals were met satisfactorily. Positive case closure in MST is typically achieved if the following three goals have been met; the young person has not offended, the young person is in education and is living at home (Personal Communication with MST Consultant, May 2021). However, neither paper explicitly reported details on the specific treatment goals which were agreed by families. Treatment failure was defined as a negative case closure as indicated by either a lack of engagement or the young person was not at home but in a placement (either removed from home by authorities or living in

restrictive residential care). In both studies, only participants where there were clear

indications of either treatment success or failure were entered into the analyses.

Boxer et al (2011) hypothesised that the short-term effectiveness of MST would be

reduced for gang involved young people compared to non-gang involved young

people.

The Boxer (2015) study later produced a paper which reported the longer-

term outcomes of gang involved and non-gang involved young people who received

MST, using re-arrest data (Boxer et al, 2017). Information about each young

person's arrest events occurring between the date of discharge from MST (inclusive)

and the exact date 12 months post discharge was collected. Arrest data was

classified as a violent offence if the offence was against a person and a non-violent

offence when it was not against a person. Young people without available recidivism

data were excluded. The two studies which evaluated MST (Boxer, 2011; Boxer et

al, 2015) did not adapt the existing intervention.

Gottfredson et al (2018) evaluated whether young people at high risk of

involvement or involved with gangs who received an adapted version of FFT (FFT-G)

experienced any changes post treatment in primary outcome measures of self-

reported and parent reported youth delinquency, substance misuse and incidents of

arrest in comparison to the 'treatment as usual' (TAU) control group. The TAU

control group consisted of probation as usual and a referral to an alternative family

therapy programme - Family Therapy Treatment Programme (FTTP) which was

approximately the same intensity and duration as FFT-G but was not manualised,

nor had it received extensive evaluation. The study conducted by Gottfredson et al

(2018) evaluated an adapted version of Functional Family Therapy that was

amended to accommodate for the needs of gang involved youth (FFT-G). Adaptations were decided by members of the projects advisory board who held meetings with FFT developers. Modifications to the FFT manual and training materials were made to include risk factors and reasons for young people joining gangs, gang types, understanding and debunking myths about gangs, the role of violence and guns in gang activity and patterns of retaliatory violence. Participants receiving FFT-G had between 12-15, one-hour face to face sessions over a three-month period, delivered by trained family therapists who had all received additional training in the FFT-G adaptations.

The Valdez et al (2013) study evaluated whether there were changes in a range of youth and carer measures at four different time points: at treatment entry, treatment exit, 16 weeks post exit and 6-months post exit from adapted BSFT in comparison to a control group. The control group received referrals to social and behavioural health services and substance use counselling upon request which was individual psychoeducational sessions with young people and family members. Youth measures examined whether there were any differences in gang involved youths self-reported substance misuse before and after receiving adapted BSFT relative to the control group. Carer measures were used to explore whether there were changes in carers' ratings of the young person's behavioural problems. The Valdez et al (2013) study used a modified version of the BSFT model in an attempt to adapt to the sociocultural context of gang affiliated youths. Four specific intervention components were supplemented into the BSFT model: 1) an educational intervention to build oral communication skills in young people and their carers to target increased school engagement and improved performance at school. 2) gang diversion and awareness counselling were provided to weaken adolescent's

identification with the gang and raising carers awareness of gang culture. The final

additional component to the BSFT model was family resource referral counselling

with case management which provided opportunities for check-ups, assessment for

psychosocial problems such as mental health, house, employment and criminal

behaviour. Families receiving adapted BSFT were offered 16 treatment sessions

focused on one to two specific problem areas identified at assessment which were

pertinent to each family. Sessions typically lasted for 60-90 minutes and were

delivered by licensed therapists trained in BSFT.

Methodological Quality of Included studies

The QACQIS (NICE,2012) tool was used to assess the methodological quality

of the studies included in the review. The methodological quality of each included

study will be discussed in relation to the different study designs which were included

in the review: randomised control trials and prospective studies. Four studies were

identified through the search and screen process. One of these studies (Boxer et al

2015) produced a further paper two years later using the same sample (Boxer et al,

2017). Due to differences in the outcomes and data analysis methods reported

between Boxer et al (2015) and Boxer et al (2016), the methodological quality of

each paper will be reviewed and reported separately. A summary of the quality

appraisal ratings is presented in Table 2.

Table 2

Summary of ratings using Quality Appraisal Checklist for Quantitative Intervention Studies (QACQIS)

	Boxer (2011)	Boxer et al (2015)	Boxer et al (2017)	Gottfredson et al (2018)	Valdez et al (2013)
Study design	Quasi-experimental	Quasi-experimental	Consecutive cohort	RCT	RCT
1. Population					
1.1 Is the source population or source area well described?	++	++	++	++	+
1.2 Is the eligible population or area representative of the source population or area?	+	+	+	+	++
1.3 Do the selected participants or areas represent the eligible population or area?	++	++	++	+	+
2. Method of allocation to intervention					
2.1 Allocation to intervention (or comparison). How was selection bias minimised?	NA (due to study design)	NA (due to study design)	NA (due to study design)	++	++
2.2 Were interventions (and comparisons) well described and appropriate?	++	++	++	++	+
2.3 Was the allocation concealed?	+	++	++	++	++

2.4 Were participants or investigators blind to exposure and comparison?	+	+	+	++	NR
2.5 Was the exposure to the intervention (and comparison) adequate?	+	+	+	++	++
2.6 Was contamination acceptably low?	+	+	+	-	NR

2.7 Were other interventions similar in both groups?	++	++	++	+	NR
2.8 Were all participants accounted for at study conclusion?	++	++	++	+	+
2.9 Did the setting reflect usual UK practice?	++	++	++	++	++
2.10 Did the intervention or control comparison reflect usual UK practice?	++	++	++	++	++

3. Outcomes

3.1 Were outcome measures reliable?	+	+	+	-	+
3.2 Were all outcome measures complete?	++	+	+	NR	NR
3.3 Were all important outcomes assessed?	+	+	+	++	+
3.4 Were outcome relevant?	+	+	+	-	++
3.5 Were there similar follow-up times in exposure and comparison groups?	++	++	++	++	++
3.6 Was follow up time meaningful?	+	+	+	++	+

4. Analyses

4.1 Were exposure and comparison groups similar at baseline? If not, were they adjusted?	+	++	++	++	++
4.2 Was intention to treat analysis conducted?	NA (due to study design)	NA (due to study design)	NA (due to study design)	++	++
4.3 Was the study sufficiently powered to detect an intervention effect (if one exists)?	NR	NR	NR	++	NR
4.4 Were the estimate of effect size given or calculable?	++	++	++	++	++
4.5 Were analytic methods appropriate?	++	++	++	++	++
4.6 Was the precision of intervention effects given or calculable? Were they meaningful?	++	++	+	+	++

5. Summary

5.1 Are the results of the study internally valid (i.e., unbiased)?	++	++	++	++	++
5.2 Are the findings generalisable to the source population (i.e., externally valid)?	+	++	++	+	+

++ = High Quality -Indicates that for that particular aspect of study design, the study has been designed or conducted in such a way as to minimise the risk of bias.
+ = Moderate Quality -Indicates that either the answer to the checklist question is not clear from the way the study is reported, or that the study may not have addressed all potential sources of bias for that particular aspect of study design.
- = Low Quality -Should be reserved for those aspects of the study design in which significant sources of bias may persist.
NA = not applicable
NR = not reported

Randomised Control Trials

Based on ratings from the QACQIS, both the Gottfredson et al (2018) and Valdez et al (2013) studies were overall rated as high quality in terms of internal validity. The Gottfredson sample was limited to males residing in the city of Philadelphia at one point in time. The carer sample was 79% female, and the majority (80%) were African American and 19% were Hispanic/Latino. Results may not be generalisable to other areas with different race and ethnicity demographics. Valdez et al (2013) utilised a specific sample of Mexican American gang affiliated adolescents and their families, therefore, similarly results may not be generalisable outside of the Mexican American community.

Both studies used true random allocation methods to determine treatment allocation. As both studies used computer generated randomisation methods, there was no possible bias of researcher influence over treatment allocation. In the Gottfredson et al (2018) paper, researcher blinding was achieved. However, therapists delivering the intervention were not blinded as they received additional training in the adaptation to the model for the gang affiliated population. It is unclear whether families were aware of whether they were receiving FFTP or FFT-G. Blinding is not adequately discussed or accounted for in the Valdez et al (2013) study. There is no mention in the paper of whether researchers were blinded to randomisation result. This is a major threat to the internal validity of the study and may have resulted in overestimation of BSFT treatment effects.

Contamination was an important source of bias in the Gottfredson et al (2018) study. This pragmatic trial was delivered in a real-world setting enabling wider

generalisability and acceptability, but less control over trial conditions. Of participants allocated to FFT-G, 20% did not receive FFT-G and 21% of control participants received FFT. This contamination is likely to have diluted the treatment contrast making the control arm more similar to the intervention arm. It is possible that this minimised observed differences in outcomes between the intervention and control groups, resulting in an underestimation of FFT-G effects. Contamination bias was not present in the Valdez et al (2013) study as the control group received referrals to social and behavioural health services and substance abuse counselling upon request, as opposed to Gottfredson et al (2018) where there was a possibility that they received an alternative but similar family therapy intervention.

The retention rate at study exit in the Valdez et al (2013) study was 75% and 58% at 6-month follow up. Attrition was due to discontinued participation, inability to locate and relocation of participants. In the Gottfredson et al (2018) study, post-test response rates were high for both youths (92%) and parents (90%) and response rates were similar for treatment, 92% for both treatment and control youth and 88% for FFT-G and 92% for control parents. There were also similar levels of drop out in the intervention and control groups in the study by Valdez et al (2013. As the proportion of dropouts were similar for the intervention and control groups in both studies there is less impact on the distribution of confounding variables amongst the two groups, and therefore the impact of attrition bias is reduced. In order to retain sample size and maintain adequate statistical power intention to treat (ITT) analysis was used in both studies, in which all participants who were randomised were included in the final analysis, irrespective of non-compliance or withdrawal from the study.

Fidelity to the FFT-G model was closely monitored in the Gottfredson et al (2018) trial. The study site delivering the intervention was chosen due to previously high-fidelity ratings to FFT. The national consultant reviewed fidelity for each case during weekly supervision meetings and a fidelity rating for all clients who began FFT-G was 4.1 out of 6. Fidelity in the Valdez et al (2013) trial was monitored by the clinical researcher who provided supervision sessions where fidelity to the BSFT protocol was emphasised. A fidelity rating checklist was used, and ongoing staff training was delivered in order to maintain fidelity. It is unclear however, how often supervision and training were delivered to therapists and there is no specific data reported in the paper on the fidelity rating checklist. Adherence to the treatment model is vital in RCTs to ensure confidence that differences in participants outcomes can be ascribed to the intervention delivered. Fidelity to the BSFT model was not adequately reported in the Valdez et al (2013) trial.

In the Gottfredson et al (2018) trial, both participants receiving FFT-G and the control condition were both concurrently receiving a range of other services. A higher percentage of treatment cases received at least one other service (97%) in comparison to the control group (73%). Control cases were more likely to receive mental health outpatient treatment (40% vs 66%) and control cases were more likely to receive residential placement (32%vs 25%). Differences in the use of additional services between treatment and control groups is not reported in the Valdez et al (2013) paper which makes it difficult to decipher the true impact of the treatment effect. Potential differences in service use amongst treatment and control groups questions whether any observed differences in outcomes between treatment and control groups are attributable solely to the specific intervention delivered.

Despite randomisation procedures, the BSFT group had a significantly higher proportion of females relative to the control group in the Valdez et al (2013) trial which could have affected comparisons between these two groups. This difference was accounted for by controlling for gender in all the analyses. In the Gottfredson et al (2018) trial there were no significant baseline differences in demographic variables across experimental groups. At pre- test, the FFT-G group reported higher levels of general and violent delinquency and greater variety in use of hard drugs in the last 6 months. A higher proportion of control youth reported residential facility use during the past 6 months. In order to account for this, the pre-treatment scales which differed between experimental groups were included as covariates in outcome analyses.

Gottfredson et al (2018) trial used a mixture of subjective and objective outcome measures. The primary outcomes of youth delinquency and substance use were gathered from self-reports, parent reports, official records of arrest, dispositions and residential placements. It is unclear whether self-report measures used existing questionnaires to gather this information. As the specific questionnaires used are not detailed in the paper, it is not possible to determine whether the methods used to gather this data were valid or reliable. Valdez et al (2013) also used self-report measures for both young people and carers. The Cronbach alpha levels for some questionnaires used were reported, whereas others were not. The Cronbach alpha level for the anxiety subscale of the Connor's Rating Scale (Conners, Sitarenios, Parker & Epstein, 1998) was low (.48). The Cronbach alpha level for the questionnaire used to determine youth's self-reported substance use (Centre for Substance Abuse Treatment's Government Performance and Results Act Client Outcome Questionnaire) was not reported.

Prospective Studies

Both Boxer (2011) and Boxer et al (2015) studies used a naturalistic prospective quasi-experimental design. Using ratings from the QACQIS, Boxer (2011), Boxer et al (2015) and the later Boxer et al (2017) paper overall were of high methodological quality in determining internal validity (++). 38% of participants were black/African American, 34% were white, 18% were Latino and 10% identified as other. The sample was however, predominately made up of males (69%). The sample used in the Boxer et (2011) comprised of 69% male and 31% females. 42% of the sample were white non-Hispanic, 40% were black African American, 16% were Hispanic/Latino and 3% were multiracial. All the three studies included a racially and ethnically diverse sample with gender breakdowns consistent with typical justice referral streams in urban and rural communities in Northeast, mid-Atlantic and South-Eastern regions of the US. Cases were drawn from routine service provision as opposed to random selection which is more reflective of the population of interest and is ecologically valid. The ethnically diverse samples and ecologically valid method of drawing participants from routine service provisions suggest that the findings are generalisable to the wider field.

Propensity score matching was used to eliminate significant differences on covariates shown to discriminate between gang involved and non-gang involved youth, and appropriate adjustments were made to the statistical analysis to account for this. Gang involved and uninvolved samples were not matched in the earlier Boxer (2011) study which presents a credible threat the internal validity of the study as the impact of confounders was not minimised effectively.

In all three studies the research team were based separately to the clinical team delivering MST which reduced possible bias in evaluating outcomes. Families were informed at the time of intake into the MST service that the service provider routinely engages in performance analyses of client data and the acquisition of follow up data. Therefore, there was limited risk of bias in participant engagement and impact on outcomes. It is unclear whether clinicians delivering MST were blinded to the research aims of comparing effectiveness of MST for gang involved and non-gang involved youth.

Treatment fidelity is not explicitly mentioned in any of the papers. However, given that treatment was delivered in a specialised, large, clinical MST service with licensed therapists, a good level of treatment fidelity can be assumed. However, it is important to note that gang involved young people may have presented additional challenges to treatment, and therapists may have deviated from the MST model when working with these families, which is not accounted for as no explicit fidelity checks were carried out in either of the three MST studies.

The Boxer et al (2017) paper only included those with available recidivism data, so it is not possible to account for bias in police recording of offences or the possibility of criminal behaviour that was not reported or known to police. The treatment outcomes of positive case closure and negative case closure used in the Boxer (2011) and Boxer et al (2015) studies were subjective and the reduction of the outcome variable to treatment success or failure ignores the complexity of possible changes that may have resulted from engaging in MST. What constituted a positive case closure is unclear from the study as success is described as the therapist and

family reaching agreed treatment goals, however it is unclear what these goals were and there is likely to be large variation in treatment goals for different families.

Study Outcomes

Each of the four studies included in the review evaluated a range of different outcomes. There was wide variety in the use of measures which collected both categorical and continuous data. This section of the review focused on grouping similar outcomes and making comparisons between studies.

Arrests

Two papers (Boxer et al, 2017; Gottfredson et al, 2018) examined arrest data from official records. Gottfredson et al (2018) reviewed data at 18-months post FFT-G for a sample of youth who were all gang involved whereas Boxer et al (2017) reported differences in arrest data between gang involved and uninvolved youth 12 months post discharge from MST. Both papers showed the potential of systemic interventions in reducing rates of arrest for gang involved youths. No significant differences were observed between gang involved and uninvolved youths who had received MST on rates, counts and time to arrest. Overall, the Boxer et al (2017) paper reported an arrest rate of 30% which did not differ significantly as a function of gang involvement. Gang involved youth had higher rates of violent arrests (18%) than non-involved youth (13%) however this was not statistically significant (p=0.22). Arrest data in the Boxer et al (2017) paper showed that gang involved youth were no more likely to be re-arrested over the 12-months post discharge than uninvolved youths. Overall arrest rates between gang involved (35%) and non-gang involved

(29%) youths were similar and not statistically significant ($p=0.25$). There was no significant difference in the predicted number of general re-arrests for gang involved (0.37) and uninvolved youths (0.57) ($p=0.155$). Furthermore, there were no differences in timing of arrests during post intervention period. Survival analysis showed that there were no significant differences in time to arrest between gang involved and uninvolved youth. This was true for both general arrests ($p=0.77$) and violent arrest ($p=0.529$). Taken together, the findings from the Boxer et al (2017) paper suggest that the MST may be equally as effective in reducing arrests for gang and non-gang involved youth.

Gottfredson et al (2018) trial showed that gang involved youth who had received FFT-G were less likely to be arrested over 18 months when compared with the control group. Across the entire 18-month follow up period, all of the recidivism measures favoured the FFT-G group relative to the control group. Significant differences were observed for the percentage of drug charges between those receiving FFT-G compared to the control group (11% v 22%, $p<.05$), for the percentage of adjudicated delinquent (23% v 38%, $p<.05$) and the percentage with property charges (14% v 23%, $p=.06$). No significant differences were observed between offences against a person between treatment and control group at 18 months (18% v 23%, $p=0.386$).

It is difficult to draw direct comparisons between the two studies due to differences in study designs, with the Gottfredson et al (2018) trial using a sample who were all gang involved, compared to the Boxer et al (2017) paper which who compared differences in arrest data between gang involved and uninvolved youth.

The two papers differed in whether the treatment had been specifically adapted for gang involved youths. The FFT-G intervention was specifically adapted for use with the gang population, whereas MST standard was delivered which did not include any specific adaptations. The method of determining gang affiliation in the Gottfredson et al (2018) paper relied on drawing participants from Philadelphia, a city with high levels of gang involvement and those who had committed more crimes against a person. Boxer et al (2017) however, used a more comprehensive measure of gang involvement which was a multifactored classification metric with five different indicators. Gottfredson's method of determining gang affiliation was open to bias and may not have adequately captured the target population of gang involved youth. The study sample in Boxer et al (2017) was both ethnically and racially diverse and was representative of urban and rural communities in the north-east, mid-Atlantic and south eastern regions of the US. Therefore, the study's findings are likely to be fairly generalisable. The Gottfredson et al (2018) sample, however, was less representative and was limited to males residing in just one city at one point in time, therefore the findings from this study have limited generalisability.

Substance Use

Two RCTs evaluated the impact of different interventions on gang involved youth's substance misuse (Gottfredson et al, 2018; Valdez et al, 2013). Both studies reported reductions in the frequency of alcohol use between treatment and control groups, however this result was only statistically significant in the Valdez et al (2013) trial of adapted BSFT. Both studies showed no significant differences in illicit drug use amongst gang involved youth who received FFT-G or adapted BSFT in

comparison to control groups. Valdez et al (2013) however, did show a statistically meaningful trend towards reduced frequency in illicit drug use at post-test for those who had received adapted BSFT relative to the control group.

Results from the Gottfredson et al (2018) study showed that at 6 months post random assignment, data from young people's self-report revealed no significant differences in marijuana frequency between those receiving FFT-G and the control group. Effect sizes for the frequency of alcohol use favoured the FFT-G group, however they were small (d= - .27) and not statistically significant (p=0.142). General linear mixed effects models were used in the Valdez et al (2013) trial to compare the adapted BSFT group use of substances compared to the control group after controlling for gender (as this was found to significantly differ between treatment and control groups at baseline). Alcohol use amongst young people who had received BSFT significantly declined over the course of the intervention. Those in the BSFT group reported significantly fewer days using alcohol use than the control condition, both during the last 30 days and at 6-month follow up (p=.05, d=.5). Significant improvement over time as a result of the intervention was not demonstrated for illicit drug use, however, a statistically meaningful trend was observed in which the BSFT group had fewer days of illicit drug use (5 days) in comparison to the control condition (9 days) at post-test (p=.074). However, this trend was not observed at 6-month follow up.

A difference in effect sizes for reduction in alcohol use was observed across the two studies. A small non-significant effect size was observed for FFT-G and medium significant effect sizes were reported for BSFT in terms of reduction in

alcohol use for gang involved youths. Both studies were of high methodological

quality, however methodological differences between studies may explain the

difference in findings. Contamination was a significant threat to internal validity in the

Gottfredson trial of FFT-G, which is likely to have made the control and intervention

arm more similar. Diluted treatment contrast is likely to have minimised observed

differences in outcomes between intervention and control groups, resulting in an

underestimation of FFT-G treatment effects. In contrast to this, the Valdez et al

(2013) was more likely to have overestimated the effects of BSFT as the study did

not report on blinding which suggests that researchers were not blinded to treatment

allocation. Caution should be observed in making comparisons between the

effectiveness of FFT-G and adapted BSFT in reducing gang involved youth's

substance use, as there were differences in the way substance use was measured

across the two studies. It is unclear what measure was used to evaluate self-

reported substance use in the Gottfredson et al (2018) trial as specific details of

outcome measures used are not reported in the paper.

In terms of the representativeness of the substance misuse findings. A

significant limitation of the Gottfredson et al (2018) FFT-G trial was that sample that

the sample was restricted to those living in one US city. The sample in the BSFT trial

were exclusively Mexican American adolescents which suggests that neither study

was particularly representative of the wider field which limits the generalisability of

the results.

Young Person's Behaviour

Both the Gottfredson et al (2013) and Valdez et al (2013) trials assessed changes in gang involved youth's behaviour before and after receiving the FFT-G and adapted BSFT interventions. The two studies produced differing results in terms of the impact of FFT-G and adapted BSFT on reducing young people's problematic behaviour. The Gottfredson et al (2018) study evaluated youth's self-reported changes in general and violent delinquency between those receiving FFT-G and the control group. No significant differences were observed in either general (p=0.303) or violent delinquency (p=0.392) between the treatment and the control group. The study did not report specific details on how delinquency was measured which makes it difficult to assess the validity of tools used to assess changes in young people's behaviour and to interpret the findings overall. The Valdez et al (2013) study evaluated pre- and post-BSFT changes in ratings of their child's behaviour using the Connor rating scale parent version. Results showed a significant group by time interaction for parental reported child conduct (p=.009). Parents in the BSFT group reported significantly fewer conduct problems than the control group at 6-months post-test (p=.01). A medium effect size was observed (d=.57). Although not statistically significant, it is important to note that further statistical trends were observed on parent rated measures of child behaviour. There was a marginally significant group time interaction for parent reported hyperactivity (p=.06). Parents receiving BSFT reported significantly lower levels of hyperactivity in comparison to the control group at 6-months (p=.01), a medium effect size was observed (d=.52). There was also a marginally significant group by time interaction for parents'

impulsivity ratings (p=.07). BSFT parents reported significantly lower levels of impulsivity at 6-months relative to the control group (p=.003).

For families receiving FFT-G there were no differences in young people's self-reported delinquency, whereas for families receiving BSFT in the Valdez et al (2013) study, parents reported significant reductions in conduct issues. A medium effect size (d=.57) was observed for reductions in parent reported behavioural issues following BSFT, whereas a very small effect size (d=.08) was reported for youth's self-reported reductions in behavioural issues after FFT-G. The two studies used different informants to rate the young person's behavioural issues and also used different scales to measure behavioural issues. The adapted BSFT trial used the Connors rating scale, whereas the exact scale used in the FFT-G trial was not reported. Differences in informant ratings and measurement differences make it difficult to draw direct comparisons between behavioural outcomes in these two studies. As the BSFT trial by Valdez did not operate blinding, it is possible that the treatment effects for BSFT in reduction of child conduct problems has been overestimated in comparison to the findings of FFT-G in which the study did blind researchers to treatment allocation. The generalisability of findings from both studies is limited due to samples being limited to only Mexican American families and the other sample only being families from Philadelphia.

Gang Affiliation

The Valdez et al (2013) trial was the only study to measure changes in gang affiliation over time. The 14-item gang identification scale for adolescents (Mancillas,

1986) was used to measure behavioural and attitudinal indicators of the strength of gang affiliation and identification. Gang affiliation was measured using this outcome at baseline, post-test and at 6-month follow up. Results did not demonstrate a significant group by time interaction for gang identification (p=0.387). There were no significant differences in gang affiliation between the BSFT treatment and control group at post-test (p=0.132) or 6-month follow up (p=0.218). Although the scale used to assess gang affiliation has a good level of reliability (Cronbach alpha = .88), the tool has not been validated so may be subject to measurement error. It is therefore unclear whether the questionnaire is an accurate determinant of gang affiliation. The BSFT model was adapted in this trial to include intervention components that focused on gang diversion, awareness counselling and weakening gang identification. Despite this, no changes in gang affiliation were reported between treatment and control groups.

Treatment Success and Failure

Both Boxer (2011) and Boxer et al (2015) examined the effect of gang involvement on a categorically determined indicator of treatment success (positive case closure versus negative case closure). Both studies demonstrated that gang involvement reduced the likelihood of successful MST treatment outcomes. In the Boxer (2011) study, the rate of successful case closure was significantly lower for gang involved youth (62%) in comparison to non-involved (85%) youth, (p=.003). Rate of successful case closures in the context of gang involvement was almost three times lower than the rate of negative case closures in context of gang involvement. Gang involvement was shown to be a significant predictor of negative

case closure (OR=.372, p=.035). These effects were held after controlling for sex, ethnicity and Medicaid status. It is important to note that the base rate of gang involvement was very low (<2%) which may reflect general underreporting of gang involvement from young people and families.

The follow up study by Boxer et al (2015) replicated the initial findings from Boxer (2011). Gang involved youth as determined by the broad multifaceted classifier, were less likely to complete treatment successfully (69% success rate) than non-involved youths (78% success rate), (p=.065). A small effect size was observed (d=.187). The difference in success rates were most prominent for youth who self-identified as a current gang member. 38% of current gang members completed treatment successfully compared to 78% of youth who were not gang members (p<.000). A small effect size was observed (d=.430). Similarly, results from the reduced propensity matched sample, showed the largest difference for the self-report classifier of gang membership (33% treatment success for gang involved and 80% treatment success for uninvolved), (p<.001), with a large effect size (d=.706). However, within the reduced propensity matched sample, gang-involved youth as determined by the broad multifaceted classifier of gang involvement did not have significantly different success rates compared to uninvolved youth (69% for gang involved, 81% for non-involved, p=.090).

Despite various differences in study design, the findings from both studies demonstrate some evidence that gang involvement interferes with the ability of MST to meet treatment goals effectively. The Boxer (2011) study did not report enough information and raw data to compute effect sizes and to transform them to compare

with the effect sizes reported in the Boxer et al (2015) paper. No differences in treatment success rates were observed for the reduced propensity matched sample between gang involved and uninvolved youth. The reduced sample size in the propensity scored matched sample is likely to have reduced the power to detect statistically significant differences across groups. The larger effect sizes observed in treatment success rates for gang involved and uninvolved youth as determined by youth self-report could be attributed to misclassification bias overestimating differences in successful treatment outcomes between gang involved and uninvolved youth. Self-reporting gang involvement is subjective and susceptible to measurement error. It is possible that some participants were incorrectly categorised as gang involved or uninvolved. The multifaceted indicator of gang involvement which combined both self-report and therapist indicators is less susceptible to misclassification bias and may offer a better representation of true differences in treatment outcomes between gang involved and uninvolved youth. It is unclear from the study what exactly constituted treatment success as no further details other than the family and therapist agreeing that treatment goals were met are reported. This study also combined those who did not engage in the intervention with those who had poor treatment outcomes (arrested, in out of home placement or probation revoked), which makes it difficult to decipher whether gang involved youth did really have poorer treatment outcomes or whether they struggled to engage in the intervention, relative to non-gang involved youth.

Discussion

Summary

The aim of this review was to identify what targeted systemic interventions exist for young people who are at risk of exploitation or gang involvement, and their families, and to critically review the outcomes of the available empirical research. No previous systematic reviews had been conducted in this area; therefore, the present review was crucial in establishing whether systemic interventions are effective in reducing problematic behaviour amongst young people at risk of exploitation or gang involvement. The systematic search, which targeted two databases (Web of Science, PsychINFO) identified four studies which met the inclusion criteria. Information from these studies was extracted and presented, characteristics of the studies were discussed, and a summary of findings were presented. All five papers produced from the four studies were subject to a quality appraisal using the QACQIS to assess methodological rigour.

Main Findings

Overall, three different targeted systemic interventions were identified which have been evaluated for use with young people at risk of gang involvement (FFT-G, adapted BSFT and MST). No studies explored the use of Multidimensional Family Therapy with gang involved youth. The findings demonstrated some evidence that targeted systemic interventions can reduce problematic behaviour amongst gang involved young people. There was some evidence to suggest that both FFT-G and

adapted BSFT are effective in reducing frequency of alcohol use, but not illicit drug use. FFT-G was also shown to reduce parent reported conduct problems. The evidence reviewed highlighted some potential of both FFT-G and MST in reducing rates of arrest for gang involved youths. Findings from the MST research with gang involved youth as a whole, produced mixed findings, with Boxer et al (2011) and Boxer et al (2015) showing that gang involvement significantly moderated successful treatment outcomes in comparison to young people not involved in gangs. However, utilising the same sample, Boxer et al (2017) showed re-arrest rate did not differ as a function of gang involvement as there were no significant differences in rates, counts and time to rearrest between gang involved and non-gang involved youth, suggesting that MST may be a viable intervention for gang involved youth in reducing problematic behaviour. It is important to note, however, that the methods used across studies was varied, and the inclusion of five studies meant that only tentative conclusions can be drawn.

Methodological Issues

One of the major issues which made it difficult to draw direct comparisons between studies was wide variation in the methods used to determine young people's gang involvement. The studies which compared gang involved and uninvolved youth utilised a multifactored classification metric which drew on multiple sources of information including therapist and youth self-report. The RCTs included in the review used exclusively gang involved samples and investigated differences in their outcomes after receiving the intervention in comparison to control groups. Two different methods of identifying gang involved youths were used. One study used an

outreach recruitment method to target gang involved young people in a Mexican American community with high levels of gang involvement. This recruitment method was supplemented with additional self-report indicators of gang involvement. The importance of method used to determine gang involvement was highlighted in two of the studies which evaluated the use of MST. In both the Boxer (2011) and Boxer et al (2015) studies, a breakdown of differences in positive case closures versus negative case closures dependent on the method used to determine gang involvement was reported. Larger effect sizes were observed when gang involvement was determined by self-report. Determining gang affiliation purely by self-report may result in misclassification between gang involved and uninvolved youth which may overestimate treatment effects. This finding highlights the need for a high-quality tool to assess gang affiliation or involvement. Greater consistency in the methods used to determine youth gang involvement would enable better comparisons to be drawn across studies.

Two of the studies included in the review utilised systemic treatments which had been specifically adapted for the use with gang involved youth. Both FFT and BSFT had been adapted in studies included in this review, however MST standard was used to compare outcomes between gang involved and uninvolved youth in the two studies identified which reviewed MST. FFT-G was shown to be more effective than a non-adapted family therapy intervention in reducing gang involved youth's arrests and in reducing their use of alcohol (Gottfredson et al, 2018). This finding highlights the potential usefulness of systemic interventions which have been specifically adapted for the youth gang population. Adapted BSFT was not compared to standard BSFT in the Valdez et al (2013) trial so conclusions about the usefulness

of the adapted form of the intervention cannot be drawn. The two studies which evaluated the use of MST used a standard, non-adapted version of MST. The findings from these studies produced mixed results and it remains unclear whether MST is an effective treatment for gang involved youth. The findings from the review raise questions about the usefulness of adapted models for this group. Further research exploring the usefulness of adapted systemic interventions for the youth gang population is warranted.

There was wide variety in the type of outcome measures used and the informant used to rate changes in behaviour between studies. Two studies evaluated changes in substance use following the intervention, however both used different questionnaires. Similarly, two studies explored changes in youth's behaviour pre- and post-intervention. However, these studies used different tools to assess changes in behaviour as well as different informants, with one study using parent ratings and the other using youth self-report. Arrest data was evaluated in two studies, and comparisons were more easily drawn due to the objective measure of behaviour gathered from official police records.

Two of the four studies used a RCT design which is considered the most rigorous and robust research method for determining whether a cause-and-effect relationship exists between an intervention and an outcome (Bhide, Shah & Achayra, 2018). Arguably firmer conclusions can be drawn from the randomised trials of FFT-G and adapted BSFT in this review as causal inference between the interventions and outcomes can be better established due to randomisation procedures minimising the effects of confounders. Two studies used a quasi-experimental

design. The two RCTs evaluated the impact of the systemic interventions on various outcome measures in comparison to a control group. However, the other two studies evaluated the effectiveness of MST by comparing gang involved and non-involved samples. For example, Gottfredson et al (2018) and the Boxer et al (2017) paper both reported arrest data, however one study was an exclusive sample of gang involved youths, and the other compared gang involved and uninvolved youths. Differing study designs made it difficult to drawn direct comparisons between studies despite evaluating similar outcomes.

An important limitation across several of the included studies was their limited generalisability and poor external validity. The study samples from two studies were particularly limited to specific populations of Mexican Americans and those living in Philadelphia. All four studies took place in the US. It is therefore unclear how the findings from the review may apply outside of the US context.

Strengths and Limitations of the Review

This is the first systematic literature review to explore what systemic interventions are available for young people at risk of exploitation and gang involvement, and whether these interventions were effective in reducing behaviours that are associated with exploitation and gang involvement such as offending behaviour, substance misuse and antisocial behaviour. Due to the eligibility criteria used, only four papers were included in the review. Despite only including a small number of studies, this review was able to synthesise some of the key findings to provide an understanding of the effectiveness of different targeted systemic

interventions for reducing problem behaviour for gang involved young people. A greater understanding of what works to reduce problematic behaviour for young people where there are exploitation or gang involvement concerns, and their families is needed and is very important given rising public and professional interest in gang related youth violence and child exploitation.   This review highlighted that there is limited empirical research which evaluates targeted systemic treatments for young people at risk of gang involvement or exploitation, and their families.

This review conducted searches using two major databases in the field and also completed hand searches and citation checks to access the available literature. Therefore, we can be confident that this review captured and synthesised all the relevant literature in this specific area. A second reviewer was used to verify study eligibility of the four included studies, which further strengthened the review. A quality appraisal tool was used to assess the methodological quality of the four studies. A second reviewer also assessed the methodological quality of one of the papers included in the review, however this was a relatively small proportion of the final papers included. This review has detailed the exact methodology used to conduct the review including specifying the search terms used to ensure replication.

There are a number of limitations to consider when evaluating this review. A second reviewer was not used to support screening, selection or data extraction. There was substantial variation in the included studies, particularly in relation to study design, the outcome measures used and the measurement of young people's gang involvement. There was methodological heterogeneity across the included studies in the study design used, the method used to determine gang involvement, in

their use of questionnaires to evaluate changes in outcomes and in whether changes were self-reported by young people or parent reported which limited fair comparisons to be made across studies. A general limitation for many of the studies included in the review was their reliance on self-reporting of gang involvement.

Clinical Implications

The findings from the review provide valuable insight into the different systemic treatments that have been applied to gang involved youths and how effective these were in reducing problematic behaviours with this population. This has the potential to impact families, professionals working with young people and families, the criminal justice system as well as commissioners and policy makers. This review highlights a potential need for existing systemic interventions to be adapted and modified to better suit the complex needs of gang involved youths and their families. Two interventions, FFT-G and BSFT were adapted in the studies to account for the specific needs of gang populations. However, mixed findings from these studies suggest that the existing adaptations to the model may need reviewing to ensure the intervention is best meeting the needs of the gang involved youth population. This mixed findings regarding the effectiveness of MST for gang involved youth is suggestive that MST may need to be adapted to better meet the unique needs of young people at risk of exploitation or gang involvement, and their families.

Future Research

Systemic interventions hold promise for the youth gang population due to their focus on the multiple systems which young people are embedded within which may be driving their behaviour. This systematic review has highlighted that there is a lack of research evaluating systemic interventions for young people who are at risk of gang involvement and their families. Research which further explores existing interventions effectiveness with gang involved populations is warranted. Despite including search terms to capture the child exploitation literature, no existing research relating to the use of systemic interventions for young people who are at risk of sexual or exploitation was found. Although there is overlap between gang involvement and child exploitation, child exploitation is increasingly the terminology being used in UK to describe this vulnerable group of young people. All of the eligible studies included in the review were US based, which highlights a need for further studies outside of the US. Another area of future research would be to develop a reliable and valid tool for both identifying young people who are at risk of gang involvement or exploitation, and measuring changes in their exploitation risk or gang affiliation. The development of a robust gang or exploitation identification measure which could be applied to all research would increase confidence that research is including participants who really are gang involved or at risk of exploitation.

This review has shown that the evidence about the impact of gang involvement on the effectiveness of MST is mixed with successful treatment outcomes shown to be less likely for gang involved young people, whilst rates and counts of rearrest were similar for gang involved and non-involved youth. These

contrasting findings highlight the need for research which further explores whether MST is effective in reducing key behaviours related to exploitation or gang involvement such as offending behaviour, substance use, missing episodes, association with negative peers and adults, school exclusion and attendance issues. Qualitative research may be useful to explore which parts of MST are helpful components of treatment for gang involved youth and what helps to reduce young people's gang affiliations and negative peer associations.

Conclusion

This review summarised the available empirical research evaluating the use of systemic intervention for young people at risk of gang involvement or exploitation and their families. The findings showed that there are a small number of targeted systemic interventions which have either been adapted for use with this group or existing systemic interventions that have been applied and empirically evaluated with young people involved in gangs. Three different systemic interventions were identified; MST, FFT-G and adapted BSFT. Although the findings produced were very mixed, there is some evidence to suggest that systemic interventions are able to reduce rates of offending, alcohol use and problematic youth behaviour. In synthesising the key findings, the review highlighted that systemic interventions which are effective in reducing antisocial behaviour more broadly, may also be useful with gang involved youths with high levels of negative peer associations. Due to the limited number of studies in this area, variations in methods used to determine gang involvement and wide variation in outcome measures used across studies, it is not possible to reach a definitive conclusion about the effectiveness of systemic

interventions in reducing problematic behaviour associated with youth gang

involvement. However, undoubtedly this review has demonstrated a real need for

further evaluations of the effectiveness of systemic interventions for young people

involved in gangs and at risk of exploitation, both in the short and long term.

Chapter 2: Empirical Paper

Multisystemic Therapy for Young People Involved in or at Risk of Criminal or Sexual Exploitation: Young People and Carers' Perspectives.

Abstract

Existing studies which have evaluated the effectiveness of Multisystemic Therapy (MST) with gang involved youth in the United States (US) have produced mixed findings. Child criminal and sexual exploitation is a serious form of child abuse, highly linked to youth gang involvement which has serious and long-lasting consequences for whole communities. This study qualitatively explored young people at risk of exploitation and their caregivers experience of MST in order to understand the barriers and facilitators to reducing young people's involvement with negative peers and subsequent antisocial and criminal behaviour. A sample of six carers and four young people who were at risk of criminal or sexual exploitation and had received involvement from MST services in the last two years were recruited from MST sites across the United Kingdom (UK). Semi-structured interviews were conducted, and thematic analysis identified four themes; changes experienced, improved carer-young person relationship, facilitators of change and barriers to change. Key facilitators to change were identified including: the therapeutic alliance, intensity of support, setting clearer boundaries and expectations, power of multiagency involvement, creating a network of other parents and changing peers changed behaviour. Barriers to change were revealed including young people's association with negative adults and their frequent changes in peer relationships. An additional research aim was to explore the impact of Covid-19 on the behaviours young people at risk of exploitation engage in, and how MST accommodated these changes. However, this aim was not achieved due to the small sample size of

participants who received MST during the pandemic. Future research is needed to further explore young people at risk of exploitations complex associations with negative adults.

Introduction

Youth antisocial and criminal behaviour is a global public health and social problem. Youth violence has serious and lifelong impacts on the psychological and social functioning of victims, families, perpetrators and entire communities. Meta-analysis has shown that negative peer associations are the most powerful predictor of antisocial behaviour amongst young people (Lipsey & Derzon, 1998). Youth gang involvement can be considered an extreme manifestation of negative peer associations (Carson, Wiley & Esbensen, 2017). There is considerable debate in the literature regarding the definition of a 'youth gang'. Youth gangs can typically be distinguished from other organised or informal groups by their organisation around criminal activity. Data from the Office for National Statistics and the British Crime Survey estimated that 34,000 young people were on the periphery, or at risk of gang involvement and had experienced some form of violence in the last 12 months (Children's Commissioner, 2019). Only a small proportion of these young people (6500) were already known to youth offending teams, suggesting that many young people experiencing gang related violence are not known to services. Gangs use coercion and violence to advance goals shared by the group such as acquiring goods, promoting the status of the gang or engaging in violent retaliation (Boxer, 2019). Young people in gangs commit more crime than those not in gangs, and the instrumental use of violence is an important part of gang membership (Klein & Maxson, 2006). Youth gang affiliation is also associated with an increased likelihood of violent victimisation (Gordon et al, 2014).

Gang Related Exploitation of Young People

Child exploitation is highly connected with youth gang involvement. Vulnerable children are being targeted, groomed and exploited by gangs. There is a wide body of existing literature, predominately from the US, which focuses on gang involved young people and there is a large overlap with child exploitation. The terminology of exploitation is much more commonly used in the UK to describe a similar population of young people who may be 'gang involved' but ultimately are being criminally or sexually exploited for the benefit of others. Child criminal exploitation (CCE) is an issue which is in its infancy in terms of being defined and understood. CCE is a relatively new term to describe a process which has been happening throughout society for centuries (Children's Society, 2019). There is no legal definition of child criminal exploitation (CCE), however it has been described as *"when an individual or group takes advantage of an imbalance of power to coerce, control, manipulate or deceive a child or young person under the age of 18 into any criminal activity"* (Home Office, 2018). Young people are cajoled, coerced or threatened into carrying out criminal behaviour for the benefit of others with the promise of desirable rewards such as new clothes, mobile phones, food, accommodation, drugs or alcohol (Children's Society, 2019). They are subsequently controlled through the use of overt threats, violence and psychological coercion (Robinson McLean & Densley, 2018). Children as young as ten years of age are being groomed by gangs to commit crime on behalf of older criminals, with perpetrators taking advantage of their mental, physical and emotional vulnerability (Home Office, 2018). Gangs are recruiting or enticing vulnerable young people into

violent criminal exploitation by targeting pupil referral units, care homes, young

people who are missing or out on the street, and those excluded from school

(Violence & Vulnerability Unit, 2018). Figures from the National Crime Agency

(2016) reported that 80% of surveyed police forces in England and Wales had

observed and recorded instances of exploitation of children by gangs. Research has

shown that there are several known risk factors which increase the risk of young

people becoming victims of CCE. These include children with difficult family

relationships with experience of abuse or neglect (Spicer, Moyle & Coomber, 2018),

children with learning difficulties, those who are looked after children (Children's

Society, 2019) and children who have been excluded from school (Violence &

Vulnerability Unit, 2018).

The county lines model of drug dealing, which is highly connected with youth

gangs is one major example of CCE that has received recent prominence due to

high profile court cases and media attention. Organised criminal networks are

exporting illegal drugs from urban towns and cities to more rural and coastal

locations across the UK. In order to mitigate risk to themselves, criminal gangs

recruit young people, using them as runners to transport and distribute drugs using

dedicated mobile phones or 'lines' (National Crime Agency, 2017). High levels of

coercion, intimidation and control are used by county lines groups and young people

involved in this are at a substantially increased risk of physical and sexual violence

and exploitation, gang retributions and trafficking (National Crime Agency, 2017).

CCE often occurs alongside sexual or other forms of exploitation (Children's

Society, 2019). Several high profile enquires (Jay, 2014; Marshall, 2014) in the last

decade has led to an increase in both public and professional awareness and understanding of child sexual exploitation (CSE). Historically, victims of CSE have been criminalised and stigmatised rather than provided with support and were more likely to be viewed as offenders than victims (Jay 2014). There has been a shift in perspective from that of juvenile prostitution to viewing young people as victims of serious exploitative child abuse (Arthur & Down, 2019). There is currently no agreed UK definition of CSE, with police and practice frameworks for CSE in England and Wales operating with different definitions (Hallett, 2017). CSE is a complex form of child sexual abuse in which a person of any age takes advantage of the power imbalance to force or entice a child to engage in sexual activity (Scottish Government, 2016). Both criminal and sexual exploitation involves children being exposed to exploitative situations, contexts or relationships where the young person receives an exchange of goods (Kelly & Karsna, 2017).

Research has identified several vulnerability risk factors for CSE which include disrupted family relationships, disengagement from education and problematic parenting (Clutton and Coles, 2007). A major inquiry into CSE in Rotherham revealed that perpetrators typically groomed vulnerable young people from difficult family backgrounds who had experienced abuse or neglect and had parents with addiction problems or their own mental health needs (Jay, 2014). As part of a two-year evaluation into CSE, case studies of 42 service users demonstrated that young people's histories were characterised by difficult family relationships, abuse and disadvantage, exploitative relationships, drug and alcohol misuse, going missing and poor health and wellbeing (Scott & Skidmore, 2006).

Findings have shown that victims of CCE are predominately male, whereas those experiencing CSE are mainly female (National Crime Agency, 2017). There is considerable overlap in the tactics used by exploiters to coerce young people into CCE and CSE. Mobile phones and social networking sites have become common ways for exploiters to identify and target vulnerable children (Robinson et al, 2019). Young people may also be coerced into what they believe is a mutually loving relationship with an older man who supplies them with gifts such as new clothes or mobiles phones. The offer of a 'normal' romantic relationship acts as a disguise for grooming, sexual abuse and criminal exploitation (Spicer, Moyle, & Coomer, 2019).

There are strong links between CCE, CSE and antisocial and offending behaviour. Victims of grooming and exploitation may offend either as a consequence of their abuse, or due to coercion and threats from those exploiting them (Cockbain & Brayley, 2012). Many young victims of exploitation may be known to youth offending services for their involvement in criminal activities such as shoplifting and criminal damage (Arthur & Down, 2019). Of a sample of CSE victims, forty percent had official records of offending (Cockbain & Brayley, 2012). Victims of exploitation may struggle to come forward through fear of prosecution and reprisal from their exploiters. Children going missing or running away from home or care is a key indicator of potential exploitation and gang involvement (National Crime Agency, 2016). There are a range of reasons why young people go missing, however one major reason for this is that they must do so in order to fulfil their role within the exploitative network they are embedded within (Children's Society, 2019).

For many young people, there are various perceived benefits associated with gang life (Simon et al, 2013). Understanding the motivators for gang involvement is important for families, schools and professionals working with young people to enable strategies to support desistance from the gang and associated anti-social behaviour. Young people may be attracted into gangs to gain a sense of belonging, an identity and status at a time in adolescent development when susceptibility to peer group influence is at its highest (Schute, 2008). Young people may also be drawn in by economic benefit, a perceived sense of protection and a relief from boredom (Brown, Hippensteele & Lawrence, 2014). The push-pull framework of gang involvement (Decker & Van Winkle, 1996) divided the reasons for joining gangs into internal 'push' factors related to aspects of gang membership such as the prestige or social status it gives people, and the 'pulls' which are factors external to the gang such social, economic or cultural forces which pull adolescents in the direction of gangs (Roman, Decker & Pyroz, 2017). Similarly, there are a number of factors which can both push and pull vulnerable young people into being sexually or criminally exploited. Push factors include disrupted family relationships, parents with mental health and substance misuse issues and physical abuse, emotional abuse and neglect. Pull factors are those such as receiving alcohol, money or gifts, the offer of staying somewhere where there are no rules or boundaries or being liked by people who are older (Northamptonshire Safeguarding Children's Board, n.d.). Due to the complex reasons for young people entering into gangs and some of the positives it can provide for them, intervention with this group in terms of reducing their violent and non-violent offending and antisocial behaviour is complicated.

Multisystemic Therapy

A number of systemic interventions have been shown to be effective in reducing childhood antisocial behaviour and adolescent offending more broadly including Multidimensional Family Therapy (MDFT; van der Pol et al, 2017), Functional Family Therapy (FFT; Alexander et al, 2013), Brief Strategic Family Therapy (BSFT; Szapocznick et al, 2012) and Multisystemic Therapy (MST; Heneggler et al, 2009). There are individual pieces of research which have investigated the effectiveness of adapted versions of FFT (Gottfredson et al, 2018) and BSFT (Valdez et al, 2013) for gang involved young people. However, research focused on targeted interventions for gang involved youth has mainly focused on investigating the effectiveness of MST (Boxer, 2011; Boxer et al, 2015; Boxer et al, 2017). The existing research evaluating the use of MST with gang involved youths is reviewed in more detail later.

MST was originally developed in the 1970s in the United States (Henggeler & Borduin, 1990). It is an evidence-based community intervention for children and young people aged 11-17 years of age and their families. It was originally developed with young people displaying antisocial behaviour who were either at risk of going into custody or care, or other out of home placements, and for families who had not engaged with other services. MST is an intensive and ecologically valid approach which is designed to improve engagement and accessibility. Sessions take place several times a week, within the family home and families have access to 'on call' support 24 hours a day (Ashmore & Fox, 2011).

The theoretical underpinnings of MST are founded on Bronfenbrenner's (1977) theory of social ecology which proposes that human behaviour is impacted by the multiple systems young people are embedded within, most notably their family, peer group, school and community. A key assumption underlying MST is that the carer is the primary driver for change. Interventions with MST are focused on empowering carers with skills to manage their children's challenging behaviours (Heneggler et al, 2009). MST addresses drivers across the multiple systems which contribute towards problematic behaviour (Ashmore and Fox, 2011). According to the MST theory of change (Henggeler et al, 2009) as depicted in Figure 2, families are empowered, and family functioning is improved which enables parents to effectively address young people's negative peer associations. MST therapists support the family to address factors which affect parenting and the management of the child's behaviour. Parent's increased effectiveness has a subsequent impact on school, community and peer systems, which in turn reduces the young person's involvement in antisocial behaviour (Ashmore and Fox, 2015).

Figure 2

MST Theory of Change (MST Services, 2016)
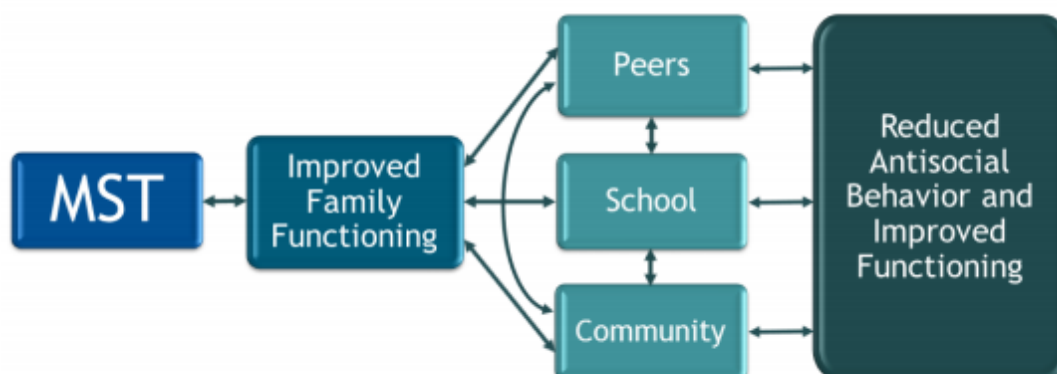
MST therapists draw upon a variety of different evidence-based approaches such as structural and strategic family therapy, cognitive behavioural therapy and behavioural based approaches in their work with young people and families. The model's aims are to increase the young person's involvement in education and training, to reduce young people's antisocial and offending behaviour, to increase positive parenting behaviours, enhance family cohesion and to encourage engagement in positive activities for both parent and child (Henggeler & Borduin, 1990).

MST Evidence Base

MST has been extensively implemented and evaluated worldwide. Several good quality RCTs have demonstrated that MST is an effective treatment for adolescent antisocial behaviour, both in reducing recidivism rates and improving individual and family functioning (Henggeler, Cunningham, Pickrel, Schoenwald, & Brondino, 1996; Henggeler, Melton, & Smith, 1992). Research has shown that at 4-year follow up post treatment, recidivism risk was significantly lower for those who had received MST (21%), compared to those receiving individual therapy (71.4%) (Bourduin, 1999). One of MST's strengths is the ability of the approach to engage families. It has been found to reduce attrition rates for families of antisocial young people with whom services have previously found it difficult to engage (Heneggeler et al, 1996). The two most recent quantitative systematic reviews of more than 20 RCTs demonstrated that MST is an effective intervention to reduce youth antisocial

and offending behaviour (NICE, 2013, Van der Stouwe, Asscher, Stams, Doreleriiers, van der Laan, 2014).

Outside of the US, evaluations have produced mixed results when studies have been replicated (Littell, Popa & Forsythe, 2005). Large scale RCTs in Sweden (Sundell et al, 2008) and Canada (Leschied & Cunningham, 2002) have shown that MST did not reduce antisocial behaviour significantly more than usual services. Littell et al (2005) meta-analysis which found inconclusive evidence for the effectiveness of MST criticised the methodological quality of previous systematic reviews for failing to implement adequate randomisation procedures which may have overestimated treatment effects. Little et al (2005) further highlighted that few studies investigating the effectiveness of MST have been carried out independent of the original programme developers. The first RCT conducted without the direct involvement of MST developers showed that MST did not significantly reduce reoffending rates compared with treatment as usual (TAU) (Timmons-Mitchell, Bender, Kishna & Mitchell, 2006). Reported effect sizes of MST are much higher in trials carried out by developers in comparison to studies carried out without their involvement, suggesting developer effects (Curtis, Ronan & Bourduin, 2004). Most recently, results from the first large scale RCT of MST in the UK (Fonagy et al, 2020) found no significant differences at 18-month follow up in the proportion of young people in out of home placements or in the time to first offence in those who received MST when compared to management as usual. However, it has been shown that treatment fidelity and therapist adherence to MST significantly predict treatment outcomes (Lofholm, Eichas, & Sundell, 2014). The recent RCT by Fonagy et al (2020) was carried out very early on into the implementation of MST teams where there was

limited chance for teams to embed and establish themselves into a different context which would have reduced therapist adherence to the model.

Despite a large evidence base supporting the effectiveness of MST for antisocial youth, there has been limited research that has focused specifically on the usefulness of MST in reducing antisocial and criminal behaviour amongst gang involved youth. The ending gang and youth violence strategy document (HM Government, 2011) advocates for the promotion of intensive family work with the most troubled families including gang members and highlights the potential usefulness of MST for young people with behavioural difficulties and their families. The Serious Violence Strategy (HM Government, 2018) echoed this guidance and also endorsed MST as an intervention of choice for gang involved youth. Studies which have investigated the use of MST for gang involved youth have produced mixed findings. Both Boxer (2011) and Boxer et al (2015) evaluated the impact of gang involvement on the effectiveness of MST treatment outcomes. Boxer (2011) showed that gang involved youths were significantly less likely to have successful case closures after engaging in MST in comparison to uninvolved youths. A follow up study by Boxer et al (2015) replicated these initial findings. However, two years later, utilising the same sample as the Boxer et al (2015) paper, Boxer et al (2017) showed that there were no significant differences in rates of re-arrest between gang and non-gang involved youth suggesting that MST was equally as effective in reducing offending for gang involved and uninvolved youths. These contrasting findings highlight the need for further research exploring the barriers and facilitators within MST to reducing young people's involvement in criminal and antisocial behaviour where there are exploitation or gang concerns.

It is important to consider the impact of negative peer associations on the available literature investigating the effectiveness of MST for gang involved youth. Regular negative peer contact has been shown to be a predictor of treatment drop out amongst young people (De Haan, Boon, de Jong, Hoeve, Vermeiren, 2013) and it has been shown that negative peer involvement is the most powerful predictor of antisocial behaviour amongst young people (Lipsey & Derzon, 1998). Tiernman, Foster, Cunningham, Brennan and Whitmore (2015) showed that less negative peer associations were predictive of positive outcomes in MST. Curtis et al's (2004) meta-analysis also supported this finding by demonstrating that MST was less successful in making changes to peer relationships than it was to making changes to family relations or individual adjustment. Qualitative research has also shown that one of the least successful aspects of MST and most difficult aspect within which to intervene, from the perspectives of carers, was negative peer associations (Tighe, Pistrang, Casdagli, Baruch & Butler, 2012). This existing body of research highlights the importance of further research exploring the barriers within MST to reducing young people's negative peer associations.

To date, there has been one qualitative study exploring MST and gang involvement. The UK based study (Packer 2014) explored MST therapists experiences of working with gang involved young people and their families. Findings from this study highlighted therapists' perspectives that the gang acted as a rival to the intervention as the gang's resources to draw the young person in outweighed the resources of the parents. Viewing young people as part of a separate and more powerful system led to a sense of hopelessness for therapists. Therapists also felt that these young people presented with an increased risk of violence and criminal behaviour, including risk of reprisal to the young person removing themselves from

the gang. Therapists found it difficult to hold this elevated level of risk and felt that there was limited space to think about the additional complexity and the emotional impact of working with this population. This study highlighted the need for further support for MST therapists when working with gang involved young people and their families.

Several adaptations of the MST model have been developed to better target the unique challenges of specific vulnerable populations, including MST-Problem Sexual Behaviour, MST-Substance Abuse, MST-Child Abuse and Neglect (MST Services, 2017). These programme adaptions are effective in reducing antisocial behaviour in adolescents (Curtis et al, 2004, Henggeler et al, 2009, Henggeler & Sheidow, 2012, MST Services, 2017). Most recently in the UK, funding from the Youth Endowment Fund was secured to expand provision and develop an enhanced version of MST (MST-YEF). Unlike previous adaptations, this does not involve a major programme shift but provides an enhanced version of MST focused on children aged 10-14 at high risk of, or already involved in offending or criminal exploitation and living in high-risk communities. These newly developed specialist MST teams provide a network of potential families to participate in research to further explore how MST works with young people and families where there are exploitation concerns.

Present Study

Despite a broad evidence base showing the effectiveness of MST for antisocial behaviour broadly, there has been little research exploring the effectiveness of this treatment for gang involved youth. Research in this area has

emerged in the last ten years, however, it is still in its infancy. All existing studies are US based and exclusively focus on gang involved youth. No specific research to date has explored the usefulness of MST for young people at risk of exploitation and their families. Existing MST outcome studies with gang involved populations have yielded mixed results about whether gang involved youth exhibit poorer outcomes compared to those not involved in gangs. It is unclear whether MST is effective for families with exploitation concerns, and which components of MST may help to reduce young people's contact with exploitative and gang involved peers. It is important to understand which aspects of MST are perceived to be most and least helpful for those at risk of exploitation, as this will help to enhance clinical practice and service delivery of MST for this group. Only one qualitative study has focused on MST for gang involved youth which explored therapist experiences (Packer, 2014). The present study builds on those initial findings and is the first qualitative exploration of young people and carer experiences of MST where there are exploitation or gang involvement concerns.

An inductive qualitative approach was used in this study to ensure young people and carers' meanings were flexibly explored and refined into themes, as opposed to using predetermined categories (Smith, 2007). This approach is recommended when there has been little research conducted in the area (Pistrang & Barker, 2012) as it encourages researchers to develop a rich and in-depth interpretation of participants experiences. The study aims to contribute to the MST knowledge base and to inform MST programme developers, services, and therapists around potential practice modifications to better meet the needs of young people and carers who are involved in gangs or at risk of being criminally or sexually exploited.

This study aims to generate a theoretical understanding of the processes within MST that facilitate engagement with therapists and desistance from negative peer associations and associated antisocial and criminal behaviour. This study was designed and carried out during the Covid-19 global pandemic. The impact of Covid-19 on the behaviours young people engaged in during this period of increased social restriction was explored. This study also explored how MST adapted to accommodate for changes in young people's behaviour due to Covid-19 restrictions.

Research Questions

This study had three main research questions:

1. What are carers' and young people's experiences of MST where there have been concerns around risk of involvement in gangs and/or criminal/sexual exploitation?

2. What do young people and carers believe are the barriers and facilitators within MST to reducing young people's contact with others involved in antisocial and criminal behaviour?

3. What are young people and their carers' perceptions of how Covid-19 has affected the behaviours young people at risk of exploitation or gang involvement engage in? How did MST adapt to accommodate for these changes?

Method

Research Design

This study adopted a qualitative, reflexive thematic analysis (Braun & Clarke, 2006) methodology.

Ethics

Royal Holloway University of London Ethics Committee (REC Project ID 1957) granted ethical approval for this project on the 7th September 2019 (see Appendix D). Ethical approval from the Health and Research Authority within the NHS was not required because all recruitment sites were either charities or local authorities. Each recruitment site approved the research within their local area. Study details were reviewed amongst senior managers and leadership teams and approvals at each recruitment site were provided via e-mail confirmation from named contacts in the specific teams after consultation with information governance and workforce/learning development teams (see Appendix E).

Recruitment

Participants were recruited from MST sites within charities and local authorities across three geographical locations in the UK (West Midlands, East Midlands, and the North of England). Recruitment sites included both MST standard teams and enhanced teams who had received extra training in child exploitation.

MST therapists at each of the three sites were provided with information about the study, including specific inclusion and exclusion criteria, and were responsible for identifying potential families to participate in the study. Therapists made first contact with participants to gain consent to be contacted further about the project by the researcher. Therapists completed demographic forms for each participant (see Appendix F).

Sample

A total of 37 potential participants were identified by MST therapists including 21 caregivers and 16 young people. Six of these people did not want to take part in the research, 20 were unable to be contacted and one person consented to take part in the study but did not proceed with an interview. A total of 10 participants were recruited into the study, including six carers and four young people. The final sample included three carer-young person dyads. Caregiver 1, 2 and 3 (CG1, CG2 and CG3) are linked dyad pairs with young person 1, 2 and 3 (YP1, YP2, YP3) i.e. YP1 is the child of CG1. Demographic information about each participant is provided in Tables 3 and 4 to 'situate the sample' (Elliot, Fischer & Rennie, 1999) and allow for the consideration of the generalisability and relevance of the study. The mean age of carers was 44.5 years, and the mean age of young people was 15.25 years. Four carers were White British, one was White Other, and one was Mixed White and Black Caribbean. Three young people were White British, and one was Mixed White and Black Caribbean. Four carers had involvement from MST standard services and two were seen by MST enhanced teams. Two young people were involved with MST standard teams and two were involved with enhanced teams. There is no

requirement for young people to attend MST as the main driver of change is the

carer. Young people who participated in the study had varying levels of engagement

with the intervention. One young person reported that they had attended all MST

sessions, whereas the other three young people did not regularly attend and met

with the therapist on a few occasions. A small number of participants (n=4, 3 carers

and 1 young person) received MST during Covid-19 lockdown restrictions.

Table 3

Demographic information for carer sample

Participant	Gender	Ethnicity	Age	Recruited from MST enhanced or standard team?	Received treatment during Covid-19 lockdown?	Gender of carers child
CG 1	Female	White British	54	Standard	No	Male
CG 2	Female	White British	55	Enhanced	Yes	Female
CG 3	Female	White British	38	Standard	No	Male
CG 4	Female	Mixed - White and Black Caribbean	41	Standard	Yes	Female
CG 5	Female	White British	35	Enhanced	Yes	Male
CG 6	Female	White Other	44	Standard	No	Female

Table 4

Demographic information for young person sample

Participant	Gender	Ethnicity	Age	Recruited from MST enhanced or standard team?	Received treatment during Covid-19 lockdown?
YP 1	Male	White British	16	Standard	No
YP 2	Female	White British	15	Enhanced	Yes
YP 3	Male	Mixed - White and Black Caribbean	16	Standard	No
YP 4	Male	White British	14	Enhanced	No

Materials

Two semi-structured interview schedules were developed, one for use with carers and one for young people. The design of the interview schedule was based on the projects research questions, existing literature and feedback from supervisors. A semi-structured interview design allowed participants to give detailed accounts of their experiences and perceptions (Smith, 2007). Expert by experience feedback was obtained on the semi-structured interview schedules that were developed. Expert by experience consultation meetings were facilitated, one with a young person and one with a carer. Experts were asked to advise on whether the questions made sense, whether they felt any questions were missing and whether they would be able to form an answer to the questions if they were taking part in an interview. Feedback on the carer interview schedule was incorporated to make the

questions more accessible and easily understandable for carers. Following feedback

from a young expert, the order of questions in the young person interview schedule

was restructured and more context was provided to introduce the interview.

The interview schedules consisted of open-ended questions designed to

explore both young people and carers' experiences of MST and what they thought

were the barriers and facilitators within MST in reducing young people's involvement

with negative peers, antisocial and criminal behaviour. The questions also explored

participants views on how the Covid-19 pandemic and lockdown restrictions had

affected the behaviours young people were engaging in, and how MST adapted to

accommodate changes in behaviour. Prompts were used when needed and

appropriate throughout the interview (see Appendix G and H for full interview

schedules). Carers and young people were both initially given £10 shopping

vouchers for taking part in an interview. Due to difficulties recruiting young people,

participant payment was increased to a £25 shopping voucher to further incentivise

young people's involvement in the research.

Procedure

Interviews were held between December 2020 and February 2021 and were

conducted using 'Zoom' video calling platform or over the telephone, depending on

participant preference. All four young people chose to conduct the interview over the

telephone. Four interviews with carers took place on Zoom and two were carried out

on the telephone. All participants were provided with the study information sheet

prior to the interview. Two information sheets were developed, one for carers and

one for young people (see Appendix I and J). The information sheets provided details about what participation in the research would involve and detailed the limits of confidentiality to ensure participants were informed about how disclosures concerning risk to themselves or others would be managed. Informed verbal consent was obtained from each participant. All participants were provided with the opportunity to ask questions both before consenting to the research, and at the start of the interview.

Informed consent was obtained prior to the interview. Informed consent was taken by discussing the study and the consent form with each participant and either audio recording verbal consent with participants, or by participants remotely completing the consent form and emailing the completed form to the researcher (Appendix K and L). For young people under 16 years of age, both the young person's consent and the carer's assent was obtained (see Appendix M for carer assent form). All participants were informed that they could withdraw from the research at any time without providing a reason. All participants verbally consented to the interview being audio recorded on a Dictaphone. No interviews were terminated, and no participants withdrew from the study. The duration of the interviews ranged from 40 minutes to 1 hour and 27 minutes. Each participant was allocated a study number and all participant data was saved using their allocated number. Participant data was stored securely and separately to ensure confidentiality and anonymity.

A debrief information sheet (see Appendix N) was given to participants following the interview. This provided a summary of study aims and detailed the

contact details of the primary researcher and both her academic and research supervisors. Telephone and website links to charitable organisations such as the Samaritans and Barnardo's, and the phone number of the specific recruitment sites safeguarding children's duty team were provided.

Analytic Approach

All 10 interviews were transcribed verbatim to ensure full immersion and in depth understanding of the data. Reflexive thematic analysis (TA) was selected for use in this study over other qualitative methods as it offers flexibility in the theoretical framework that can be applied as opposed to other qualitative methods which have a predetermined theoretical position. TA provided the opportunity for patterns and meaning in the data set to be identified and analysed (Braun & Clarke, 2006). TA has been suggested as the most appropriate analytic method for under-researched areas as it enables a rich description of data to be developed (Braun & Clarke, 2006). Reflexive TA views researcher subjectivity as a valuable resource in the analytic process and highlights the importance of the researcher reflexively engaging in theory, data and interpretation (Braun & Clarke, 2020).

An inductive analytic process was carried out in which analysis was primarily grounded in the data as opposed to pre-existing concepts and theories. A latent approach was taken in order to understand participants experiences within their broader social context. This approach enabled the researcher to move from a surface level description towards an interpretative level encompassing the underlying meanings, assumptions and frameworks underpinning the data. A critical realist

position was adopted by the researcher which combined both an ontological realist stance with a constructionist epistemological stance (Maxwell, 2012). Within this theoretical position the researcher accepts that there is an external world where things exist outside their awareness, however there is also a socially constructed world where our knowledge is constructed and influenced by our own multiple perspectives (Taylor, 2018).

Full transcripts were analysed using Braun and Clarke (2006) guide to TA. The procedure details six steps; (i) familiarisation with the data which involves reading and re-reading interview transcripts and noting any initial ideas, (ii) creating initial codes whereby meaningful segments of the data relating to the research questions are coded across the entire data set (see Appendix O for transcript extracts and initial codes examples) (iii) searching for themes; where codes are collated into themes, (iv) reviewing themes which involves checking themes both in relation to individual extracts and with the data set in its entirety. These themes can then be organised into a thematic map to explain the relationship between themes (v) naming and defining themes whereby each theme is refined to ensure a coherent story of the data is produced and reviewed by research supervisors, (vi) producing the report where extracts of data are presented as examples of the themes developed. It is important to note, however that the process of TA is iterative, and the researcher often moves fluidly between different stages to produce a comprehensive thematic framework (Braun & Clarke, 2006). NVivo software was used to complete the coding process. This tool allowed the researcher to manually review each interview transcript in a systematic way and organise meaningful segments of transcripts into code files (Welsh 2002). As suggested by Braun & Clarke (2006),

there was no limit on the number of codes that could be generated from the data. This ensured that a comprehensive and inclusive list of codes were developed.

Quality Assurance

To ensure optimal standards of qualitative research quality were maintained throughout the analytic process, Elliot et al's (1999) six specific guidelines for good quality qualitative research were followed:

1. Owning one's perspective - the researcher explicitly specified their theoretical position from the outset. The researcher's own perspective was owned through the use of a reflective log to enable reflection on how their perspective influenced the analytic process.

2. Situating the sample – descriptive and demographic information of participants are reported to situate the sample and ensure the reader can consider the generalisability of findings.

3. Grounding in examples – direct quotations from interviews are provided throughout the results section for each identified theme, allowing the reader to explore the fit between the data and the researchers own interpretation. An interview transcription extract with initial codes developed from the raw data is provided in Appendix O.

4. Providing credibility checks – a transcription of the first interview was reviewed by supervisors to establish the level of richness in the data collection. Initial codes developed from the first interview transcript were shared with the project's clinical supervisor who had extensive clinical

experience with MST. Research supervisors offered feedback on whether the themes were supported by quotes within the data and provided verification of themes and subthemes. This process ensured that codes and themes were grounded in the data.

5. Coherence and resonating with the reader – a thematic map is provided as a graphical representation of the overall conceptualisation of themes and subthemes to enable a coherent understanding of the data, alongside a narrative summary. A participant was consulted with to ensure the themes developed resonated with their experience. Recommendations based on the findings of this study are provided which will be relevant to the readers of this study.

6. Accomplishing general versus specific tasks – the sample included both carers and young people who were recruited from three geographical regions in the UK (North England, East and West Midlands) to ensure a more diverse sample and to increase the generalisability of the study's findings.

Reflexivity

The researcher is a white British, twenty-eight-year-old woman from a middle-class background who is employed as a Trainee Clinical Psychologist. Unlike the carers involved in the study, the researcher is not a parent. The researcher was conducting this study as part of her doctoral thesis. A continual reflexive journal was kept throughout the entire research process. This enabled personal reflections, assumptions and biases to be detailed during the facilitation of interviews with participants, when transcribing interviews and when analysing transcripts. The
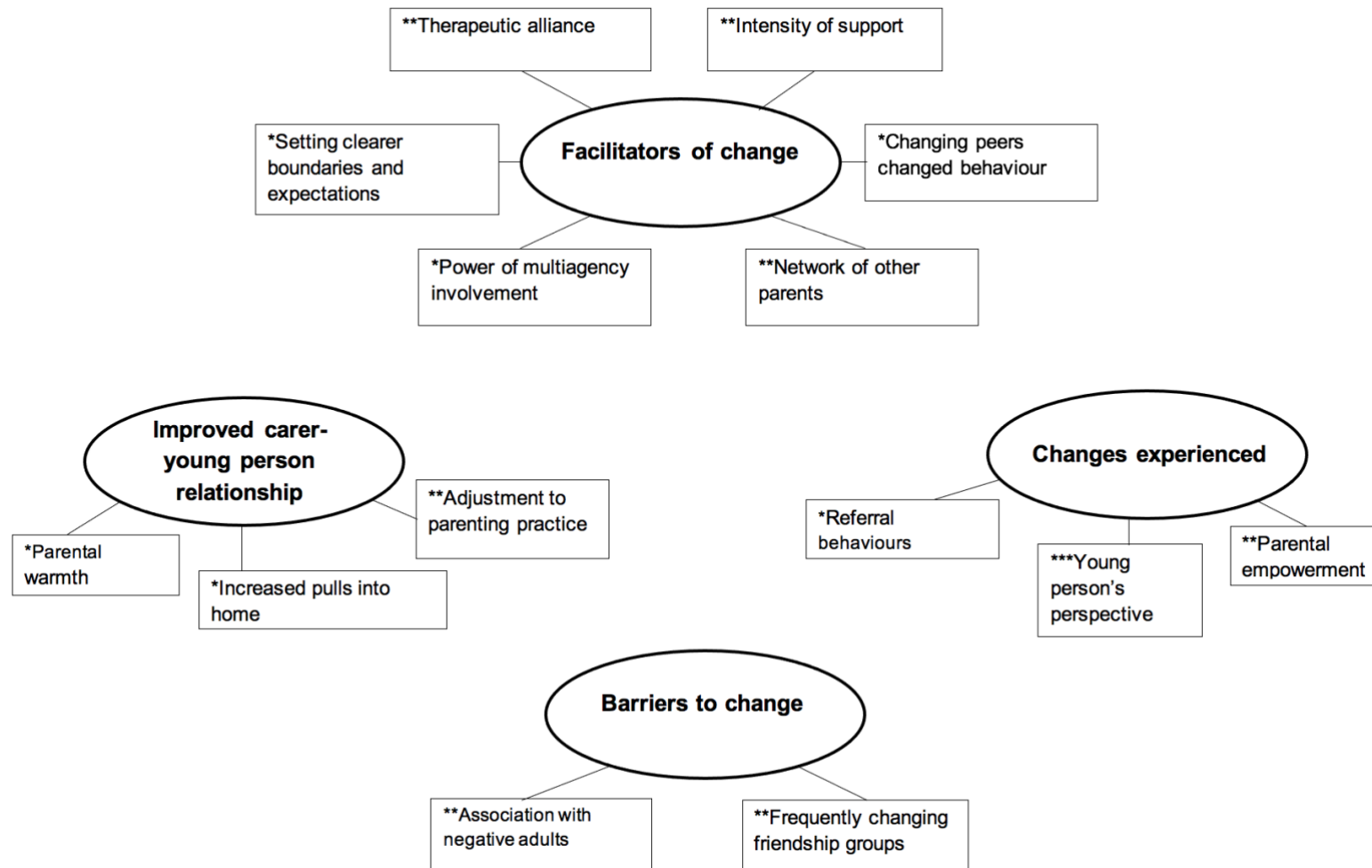
reflexive journal also provided an opportunity to record decision making processes about the research as it developed.

Results

Four main themes and fourteen sub-themes emerged from the combined thematic analysis of ten participants; six carers and four young people (see Figure 3).

Figure 3

Thematic map illustrating themes and subthemes from thematic analysis

Facilitators of change
- **Therapeutic alliance
- **Intensity of support
- *Setting clearer boundaries and expectations
- *Changing peers changed behaviour
- *Power of multiagency involvement
- **Network of other parents

Improved carer-young person relationship
- **Adjustment to parenting practice
- *Parental warmth
- *Increased pulls into home

Changes experienced
- *Referral behaviours
- ***Young person's perspective
- **Parental empowerment

Barriers to change
- **Association with negative adults
- **Frequently changing friendship groups

*Carer and young person
**Carer only
***Young person only

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Changes experienced

This theme described the changes that participants experienced as a result of engaging in MST. These included changes in referral behaviours, parental empowerment and a change in young people's perspective.

Referral behaviours

Both carers and young people reported reductions in the referral behaviours which prompted their initial involvement in MST (violence, aggression, going missing, criminal behaviour, and substance use). Carer's experiences of behaviour change ranged from a reduction, to a complete stopping of certain behaviours:

"... the aggression and violence all reduced massively. Errmm particularly the violence that's completely stopped now, certainly in the home and at school… he doesn't go missing anymore. Yeah so, it's definitely reduced, we haven't seen any bouts of violence in the home and obviously with the aggression it is minimal" (CG5)*.*

"Errr the drugs, the violence, she wasn't stealing stuff out the house, she wasn't disappearing in the night, I wasn't having to call the police, ermm she was letting me know where she was, and she was going to school for a period of time as well" (CG2).

Some carer's felt that change took time and that there were fluctuations in the young person's engagement in referral behaviours, but that some changes had been

maintained over time: "*Ermm, it took a long time, only took until last year to sort of recognise, it took a while for her to realise that certain people aren't good for her…It's been over a year since X has absconded so I can only say positive things about MST, it helped me so, yeah, it's changed my home life for the better*" (CG4).

Young people also noticed that their behaviour changed after MST involvement. Young people discussed that that there were changes to their peer group, their behaviour at school, their ability to stick to their curfew, how often they went missing and their involvement with the police. For some young people they experienced reductions in these behaviours: *"I started behaving a lot more in school… I calmed down the amount I was smoking and that, like a lot…stopped getting involved with like the wrong crowd, getting involved with the police* (YP1). For other young people they reported a compete stop in problematic behaviours*: "I wasn't going missing…it was less often and then I stopped"* (YP4).

Parental empowerment

Carers felt that MST had offered them respite from the challenges they were facing with their children: *"I'd come home from work early, it was like a weight lifted off my shoulders, it was only an hour, but that hour…it wasn't only helping me and X, it was helping me and my husband"* (CG1). Having this respite allowed carers to manage their own mental wellbeing by recuperating and regrouping: *"I was so tired and sometimes I say oh my god I don't want to live because it's too much for me, but always the therapist say look, go away, get fresh air, charge your battery and come*

back again… because I don't want to lose my patience, so I charge my battery, I cry and start again with X to sort out this problem" (CG6).

As well as offering a period of respite, carers felt that engaging in MST had normalised their experiences of the difficulties they were experiencing with their child, and that they felt less alone in managing the situation. Carers were less critical of themselves and their parenting abilities which empowered them to manage the difficulties they were experiencing with their child:

"Ermm and like I said it made me realise I'm not a bad parent you know and it was just, I'd lost a lot of confidence as a parent so it was getting that confidence back and being reassured that I was doing the right things when certain things were happening, so…I mean it was massive because I felt so alone, so having that intense support constantly was big, it was really, really big, it made a massive impact and it also kind of empowered me again as a parent" (CG4).

"Yeah, because I didn't feel so bad about myself about what she was doing, I know it sounds really funny, but she did things and I didn't rise up to it, I was calmer when I spoke to her, I wasn't getting so stressed out about what she was doing, and I'd just stepped back and in the end she was coming to me and telling me what she was doing because I wasn't asking so much" (CG2).

Carers felt that they were able to take back control of the situation with their child and that they were able to learn skills to manage difficult behaviours: *"I just felt*

like I'd lost control and I didn't know how to get the control back, whereas MST kind of gave me that power" (CG4).

Young person's perspective

Young people experienced a perspective shift and changes in their attitude following MST. MST involvement with the family had increased young people's insight into the impact that their behaviour, particularly going missing, was having on the family system, which motivated them to change their behaviour: *"The fact that they said like that it were putting them through that much stress, that's what really like stopped me going missing because I was like, I know when my mum's going through stress and that she can have epileptic fits and that and that's the main thing, the main reason I stopped if you know what I mean"* (YP1).

As well as developing an understanding of the impact of their behaviour on their family, young people developed insight into the potential impact that their behaviour may have on future opportunities and the life they wanted to build for themselves. Young people became more future oriented after engaging in MST, a change which they noticed had occurred after the intervention had finished: *"When I thought of it before I was like no I don't care but now I've actually thought I do want a future because I love money…before I didn't think twice, but now like I've realised why would I hang out with those tramps…I don't think they (MST) help at the time but like after you start to think, and you do realise it's had an effect"* (YP2). Furthermore, young people noticed a change in their perspective with regards to their peer relationships, becoming more aware of the impact that their negative peers

were having on their behaviour: *"They were a bad influence and I never realised that…getting me to do things I shouldn't be doing... well not getting me to do things but doing things with me that I shouldn't be doing at my age"* (YP4).

Improved carer – young person relationship

Both carers and young people noticed improvements in their relationship with each other following MST involvement. Carers described trying to encourage the young person to want to be at home more by increasing the pulls for the young person into the family home. Carers spoke about increasing their warmth towards their child and young people describe noticing an increased warmth from their parents in return. Carers had to make changes to the way they parented their children, shifting from previous ways of interacting, and trying out new ways of responding to the young person's behaviour. Young people increasingly valued the relationship they had with their parent noticing that the relationship had become more positive and that their parents were more understanding of their situation and difficulties.

Increased pulls into the home

Carers and young people both felt they were spending more time together as a family: "*We just started doing more stuff together, activities and that, whatever really…. I started bowling and that, and my mum and dad used to come and support me, not all of the time, so yeah*" (YP1). Carers described encouraging their child to participate in activities in the family home as an alternative to going out and

socialising with negative peers: *"Instead of him going out with his friends it was like trying to do activities with him in the house, you know like have games nights, cooking, stuff like that, trying to keep him in the house"* (CG3).

As well as encouraging their child to spend more time at home and doing more activities together as a family, carers described a process of drawing their child into the home by making it a more homely place to be where they would want to spend more time: *"Because, with MST, we sat there, we did a plan, we planned what I was going to do when she absconded and also like they gave me ideas of… they made me think about things. So, I know that X loves food, so it was kind of ways I could entice X to come back home but making it feel like it was her decision rather than me kind of forcing her to come back home. So, we went through all those kinds of things that X likes about being at home"* (CG4).

Carers encouraged their child to socialise with their peers in the family home as an alternative to them being out on the streets with negative peers or unknown others: *"I think with MST…that was another thing that I did, rather than X going out, why don't your friends come here, because before then, I didn't really let her have her friends over, because I'm quite funny about who I have in my house so it was, well I'd rather her be at home, in her home environment where I know where she is"* (CG4).

Encouraging socialisation within the home allowed some carers to supervise their child's whereabouts and behaviour, and also enabled greater parental insight in their child's peer relationships: *"I wasn't keen on these friendships, at least I could*

keep an eye on it and then make my own judgements. Then I could say to X, I think that person is quite rude, I think that persons really disrespectful, so I was able to gauge the kind of people she was around" (CG4).

Parental warmth

This subtheme describes how carers adapted their interaction style with their children, increasing their affection towards them to ensure that their child felt loved, wanted and safe: "*So rather than sort of going mad just sort of sending her a message to say you know I really love you and I hope you are safe. It was a case of letting her know that I loved her and that I wanted her to come home and sort of getting in her favourite foods …. MST made me see that to make sure she was safe and when she was at home she felt safe and wanted at home….MST would say to me, so just remind her and say I hope you're ok, are you on your way home, rather than being like I told you to be home at this time wahhh and I'm sick of this"* (CG4).

Carers offered warmth and support to their child by shifting the focus of their interactions from the negative to the positive: *"I kind of stopped the you know "why are you late" to kind of "I'm really glad that you are home" kind of thing"* (CG5).

As well as carers describing themselves as becoming increasingly warm to their child, young people in turn noticed an increase in how warm their parent was towards them and reported that their parent's interaction style changed:

"Yeah, my mum is better now, like she's nicer to me. My mum started… like when we would argue, she would like stay calm, basically my mum used to be a bitch and like wrap me out every time but she wants to get rid of them now so she's listening to (MST therapist) and every time we argued she was like "stay calm, this and that" (YP2)*.*

"Just … there was a lot of things she'd moan about, it was her approach to things I guess, just... she seemed to become a bit nicer (YP3)*.*

Adjustment to parenting practices

This subtheme refers to carers experience of shifting the way they were approaching the situation with their child. Carers describe having to adjust the way they were responding to the behaviours their child was engaging in. One way in which carers changed their parenting approach was by shifting the focus away from negatives, towards positives: *"It was easier for him to interact with us, rather than him being angry that we were angry with him, it was that we were pleased to see him home and you know that he was pleased that we didn't have that negative reaction"* (CG5).

Carers discussed their difficulties adjusting to new ways of parenting their child which conflicted with their previous ideas about parenting: "*Then they got me to look at it in a different way really, because I was going "no you've got to come in, you can't go out!", which is what you'd normally do isn't it? but it just antagonised the situation"* (CG2).

Carers discussed being advised not to react with anger when their child would go missing and recognised the importance of containing their reactions to their child's missing episodes: *"I remember the first time she absconded and she come back, I was like "how could you do this to me, I've been worried sick", I absolutely went mad and she went again, and she was gone again for another three days."* (CG4).

Although carers recognised the significance of their emotional reaction in managing their child's behaviour, it was very difficult for carers to contain their own emotions about their child's missing episodes: "*So it was a case of, when she came back, as much as I was hurt, angry…so I was hurt because she'd done it to me because she was going away, absconding in the first place, then I was angry when she come back for putting me through that do you know what I mean. Then, because I couldn't say anything or talk about it, because out of fear of her going again, that's what was the hardest thing."* (CG4)

Carers described a tension between balancing the safety of their child and implementing clear and consistent boundaries: *"It was really difficult as well because every time the police brought her back, they would say well don't have a go at her about it because she'll leave again, so then I felt as a parent well you're getting away with it."* (CG4). Carers felt that by not reacting negatively to their child going missing they may have been *"just letting her do what she wants to do"* (CG2).

Facilitators of change

Both carers and young people felt that involvement in MST had resulted in change for their family. Several factors were identified as helping to facilitate these changes. Carers identified the therapeutic alliance and the intensity of support offered by MST as important facilitators of change. The therapeutic alliance was a powerful tool for change for carers as they felt they had developed trust with the therapist who was non-judgemental, used a collaborative approach with the family, offered emotional containment, and was able to relate and understand the difficulties the family were experiencing. The intensity of support offered by MST was also experienced as a key facilitator of change in the young person's behaviour. Carers valued the containment that 24-hour support offered them, allowing them to seek immediate support for difficult situations, particularly when the young person had gone missing. In addition to the therapeutic alliance and the intensity of support, this theme also encompasses the more specific factors which helped to facilitate changes in the young person's negative peer relationships and in addressing them going missing. These specific subthemes were; setting clearer boundaries and expectations, creating a network of other parents, power of multi-agency involvement and changing peers changed behaviour.

Setting clearer boundaries and expectations to address missing episodes

This subtheme describes the process by which parents implemented more consistent boundaries with their children to ensure that they were keeping in constant contact when they were out of the house, so that they always knew where

their child was, who they were with and what time they would be home: *"Yes I worked with MST about knowing exactly where she was and when she was coming home. Yes, plan always was I have to know where she go, which address, when she come back, always I have to know exactly where she go, because before that she don't want to tell me because she hide the address"* (CG6)*.*

Carers spoke about setting up clear expectations for the young person about staying in contact when they were out of the house, highlighting the importance of staying in contact with each other to ensure the young person's safety: *"It wasn't about telling her not to do something, it was like if you're going to do it you've got to be safe when you're out and about. It was more like we need to know where you're going, that your safe and you need to answer your phone and you need to speak to us. If she goes out, I know where she's gone, I know she's not wondering the streets, I know she's safe. So, in that respect that was good because it did work" (*CG2)*.*

In response to clear boundaries being put in place about maintaining contact when out of the house, young people were more open to communicating their whereabouts with their parents: *"If I'm staying somewhere, I'll tell her now instead of just not telling her and making her worried"* (YP2).

Both carers and young people talked about a time curfew being introduced to set explicit boundaries about when the young person was expected to be home at night: *"Well if she went out, she needed to be back in the house by 10 and…if I'd phone her she needed to answer the phone, before she was coming in early hours of the morning and then obviously, she's tired, wouldn't go to school. We put it in place*

so that she was coming in and if she was going to be late, she'd phone me up and I'd know what time she was coming in. Sounds like a small thing, but it really was quite massive to be fair" (CG2).

Despite limited engagement with the therapist or the intervention, young people recognised stricter boundaries being put in place by their parents regarding what time they had to be home at night, which they recognised was linked to the involvement of MST: *"I had to be back by half 10…she'd be like make sure your back but I don't think at the time ….I think it's when she (MST therapist) started speaking to my mum that they tried to put a time in"* (YP2). Carers reported that they tried to reinforce the curfew expectations for their child by introducing a behaviour management plan: "*There was a timescale, right if you go out, you have to be home at this time, if you're a minute over… we used to have a point system, if you were a minute over your time with friends, he would lose his PlayStation for an hour and when you've done good you will get it back"* (CG1).

Network of other parents in addressing going missing

This subtheme relates to carers increasing the monitoring of their child's whereabouts by connecting with other parents in their local area. Carers describe utilising the support of other parents to create a network of other parents that they could contact when their child went missing:

"We built up a bit of a kind of a contact base for his friends and friends' parents, where they all live and stuff like that so if for any instance he was to go missing or we

didn't know where he was, they were our first kind of point of call before calling the police" (CG1). Parents talked about connecting with other parents when their child had disappeared, and not communicated their whereabouts: *"We were phoning up parents to try and find her when she didn't want to tell me anything because it just got passed on"* (CG2).

"We were trying to get X to let us know where he was going to go, what peers he was seeing, whether there was a contact number for the parents so we could get in touch with them" (CG3)

Power of multi-agency involvement in addressing missing episodes

Both carers and young people spoke about multiple agencies being involved when the young person went missing, including the police, social services, specialist exploitation teams, support workers and schools: *"So through MST we got other people involved erm there was like the police and I was working with one of the community police workers as well, and as a group with services, they put the ban from the local area, and the harbouring notices and ermm the ban from the peers he was hanging around with, so it was a group effort, but they did help to get those things into place" (*CG3).

Carers acknowledged the importance of professional teamwork in managing the young person's missing episodes: *"No, no, I don't know I tell you, I can't do this by myself, everybody was involved and helped me, MST, police, school teacher, so everybody help little, little, little, it was very constructive and good"* (CG6).

Carers highlighted the importance of good communication between multiple agencies to ensure information about missing episodes was being shared across the network involved with the young person: *"I think it helped also for everyone to know what was going on, for everyone to share information so I don't have to notify school that he's gone missing, they already know, MST already know so we can work on that in the next session, so it's easy for everyone to know"* (CG5).

Carers recognised that the involvement of multiple agency's was intrusive for their children and that their child was frustrated by the number of professionals who were involved in their care: *"Besides MST we had police coming obviously and we had someone from (specialist exploitation team) which came out, someone from the council who came out to discuss what had happened when he was missing, had he been taken advantage of, was anything untoward…specifically about county lines. Errm and that quite helped. He's not particularly a talkative person, he didn't particularly like the police or us or other people coming to the house. One of the big points was if you're not going missing and you're not going out, I'm not going to have to call the police and these people are not going to have to come out. So that was a good thing as well, so that really helped him to kind of not disappear off"* (CG5).

Frustrations with the intrusiveness of professional involvement motivated young people to change their behaviour in the hope that this would reduce professional's involvement with their family: *"I just don't like feds always….I don't want feds on my back, I don't want to be known like on the register or whatever it is they do… the only thing now to get rid of my social workers is going to school and*

she was like if you just go to school and try to do it, like they will be gone, because that's all I want is like for them to go and leave me alone" (YP2).

For young people, heavy police involvement was an important factor in them reducing their antisocial and criminal behaviour, and in stopping them from going missing:

"I couldn't be bothered with all the drama, everyone having a go… I'd have three police cars looking for me, I'd have police dogs looking for me, I'd have police vans looking for me, helicopter out for me, everything" (YP4).

"Because of everything, all this shit… I have to talk to loads of people and I got a tag, looking at going to prison, got to go to court, loads of stuff to do, and after that I'd have to go to YOT (youth offending team) and talk to loads more people every single day. I just didn't want to get in to trouble anymore as what's the point?" (YP3).

Carers described the value of consistency of the professionals involved in managing the young person's missing episodes as this enabled the young person to build a connection with the professionals supporting them: *"We had the police officers supporting me as well so anything to do with crime or CSE we were just reporting it to police officers and they were keeping an eye on it …because we had the two female police officers who dealt with the CSE and county lines, so if she absconded again, that day they would engage, so she wasn't being picked up by different police officers all the time, she was able to build a relationship with these police officers as well"* (CG4).

Changing peer group changed behaviour

Carers describe encouraging their child to build new relationships with positive peers. Carers created opportunities for their child and positive peers to socialise and spend time together in the hope that this would solidify new positive friendships: *"I introduced him to like his old group of friends which were better peers and errrm suggesting that during summer when it was a bit of a break out of the lockdown that if we were having a BBQ or something like that, to invite some of his older friends over, or if you know, there was a chance to have a sleepover or something like that to invite a friend over to say look, you know "why don't you invite so and so to come over"* (CG5).

Encouraging new positive friendships had a noticeable impact on young people's behaviour. New positive peers acted as pro-social role models and young people changed their behaviour to fit in with the social norms of their new, more positive peer group: *"I certainly noticed changes in X's behaviour. I think because he was hanging around with those better peers, his anger was less and his violence was certainly less because I think he kind of thought if I'm really angry and nasty to these people, they are probably not going to want to hang around with me anymore"* (CG5).

Young people also recognised that their parents were encouraging them to spend more time with friends of their own age and that changes to their peer group resulted in them participating in more age-appropriate activities: *"I was with my*

cousins, and people more around my age …they were more around my age group and more wanted to do stuff that I wanted to do… going out playing, riding bikes, playing football, all stuff along those lines" (YP4).

Adaptations to young people's peer groups meant that young people were spending less time with negative peers and therefore not getting into trouble or engaging in previously problematic behaviours. When young people were asked whether they had noticed changes in their drug use after MST, they recognised that their use had reduced, attributing this change to "*not being around those kind of people"* (YP4).

Some carers who received MST during the Covid-19 pandemic felt that lockdown had had a positive impact on the young person as ties with the young person's negative peer group had been severed:

"And then lockdown happened because she couldn't go out anyway, to be honest that's done me a favour (laughs), with her not being able to go out. She couldn't go out, because obviously I'd said to her look it's the pandemic, and because no one was going out so she couldn't see certain friends, so it's kind of like with those friends they've fallen apart, so those kids from (location) or (location) she doesn't have anything to do with them anymore…I think the lockdown has helped overall because she's not been able to go out, and I think she's kind of realised as well that those people aren't good for her" (CG4).

"Errmmm the only thing I think it impacted was he wasn't out and about as much; he wasn't with those people who were smoking cannabis and stuff like that. I think that helped so he wasn't into any bad behaviour out and about in the community" (CG5).

Barriers to change

This theme describes the factors which carers perceived as barriers to reducing young people's contact with negative peers and their involvement in antisocial and criminal behaviour. This included young people's associations with negative adults and young people's frequently changing peer groups.

Associations with negative adults

This sub-theme describes carer's perspectives of the impact that young people's associations with adults had on stopping their child from going missing and engaging in antisocial and criminal behaviour. Carers described young people associating with older peers, often adults in the local area: *"I think they were about a year and half older, then obviously they knew other undesirable older people in the local area, like people who used to stand and drink on the canal, older people, drug users, stuff like that…. he was missing a lot of the time, mixing with local drug users and stuff like that and hanging round with people he shouldn't even be in contact with"* (CG3).

One carer described the strong pulls and techniques used by men in their mid to late twenties to groom and criminally exploit her daughter into selling drugs via the

county lines network: *"Ok so they were older, because X was only 14, she was 13 the first time she went missing. So, they were older. When she was coming back after disappearing she was coming back with new clothes which was like where have you got them from because I haven't give you the money for them, and what was happening was, two guys, 24 and 27, who basically were trying to get X to run the county lines and then started to buy her clothes and say look you can have the latest phone, you can have this and at 14, she was obviously quite drawn in by the idea of a new phone, you know being given these clothes for free but obviously nothing comes for free when your involved with those kind of things"* (CG4).

Young people had built up connections with antisocial adults and when carers encountered these adults, they experienced them as intimidating and threatening. Carers describe becoming involved in dangerous situations when they confronted these adults whilst out looking for their missing child: *"My dad went with my brother to try to get X back from his friends' property and my dad was chased by some Asian men in a car and they tried to drive him off the road at 100 miles an hour, it was stuff like that. Like it was totally, unbelievable, my dad was on the phone to the police whilst my brother was driving and stuff, and he got chased out the area kind of thing"* (CG3).

One carer, with the support of MST tried to disrupt the houses where the young person was associating with antisocial and criminal peers. This led to these houses no longer wanting the child at their property for fear of the police showing up to search for the missing child: *"And I was ringing friends and messaging people that knew of her, and it was really hard when they would say you know I haven't seen*

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her. People didn't want X to stay at their house anymore because they knew the police would be coming, because I was following the plan of what I'd spoke about with MST by constantly ringing the parents up or messaging them" (CG4).

Some carers felt that as well as young people's association with negative peers of a similar age to them, that these peer's parents were a barrier to stopping their child from going missing and engaging in antisocial or criminal behaviour. The peer's parents were encouraging antisocial and criminal behaviour by providing their child and other peers with alcohol, drugs and food despite harbouring notices being placed on the property and were also encouraging the young person to sell drugs on their behalf:

"X had one friend and always go to her house, her mother selling the drugs and make a part for the kids, so I knock on her door and ask, when I go near the house, I already smell the drug, so I say oh my god, and she coming out, she look like oh what happened, and I say my daughter is in your house and she was oh yes X is here, can you call her to come out, and please close the door for X, I don't want her to come back here, I was very angry and I said I don't like what I smell here, it was difficult because my English… I was saying please give me my daughter and she say no I like to live here" (CG6).

"He'd go to this one house, but then they couldn't really do much because I was there, being a parent, she was just letting X in the house, feeding him and stuff like that, even though the harbouring notice was there, she was making it difficult, she

was working with MST as well for her son, so it was like, she wasn't trying to do the steps, that made it difficult" (CG3).

Frequent changes in the young person's peer group

Carer's felt young people had transient relationships with their peers, relationships which were often changing: *"He's not hanging around with the same person or people all the time. So, for example he might react in a certain way where people think woooahhh I don't like that so he then might move onto a different group of friends for you know a couple of days or weeks whilst those other friends come to terms with what's happened. He might lash out at them, shout at them or something like that. Then he'd move onto another group and then another group, then maybe come back to the original group"* (CG5).

The frequent changes in friendship groups made it difficult for carers to keep track of who their child was associating with and the whereabouts of their child: *"She'd move from groups of friends; she sort of stopped seeing them and had met some other people. It lasts for about three or four weeks and then she'd move onto another group of people, so we never really knew where she was or the people she was with. She changed her friendship groups all the time, so it was very difficult to track her"* (CG2).

Carers describe their child being involved with multiple different groups of peers that were influencing them to go missing or to engage in antisocial behaviour. Carers reported that intervening with their child's peer group was challenging

because they would address one set of friends but then the young person would move on to another peer group who were also a negative influence: "*So rather than just being with kind of one set of friends who are kind of influencing him or him going missing and stuff like that, it wasn't the case, he was moving around from group to group, moving around from different areas, hanging around with different people*" (CG5).

Frequent changes in young people's friendship groups seemed to demotivate carers to address problematic friendships and associated behaviour: "*So the school and social workers were trying to find out who her friends were and it's like well I'm not going to bother with that because they'll change in a few weeks' time when she gets fed up with them*" (CG2).

Discussion

This study was a qualitative exploration of carer's and young people's experience of Multisystemic Therapy (MST) where there were concerns about exploitation or gang involvement. The primary aim of the research was to explore what young people and carers believed were the barriers and facilitators within MST to reducing young people's contact with others involved in criminal and antisocial behaviour. Four main themes were extracted from the interviews with carers and young people which were: changes experienced, improved carer-young person relationship, facilitators of change and barriers to change.

A secondary aim of this study was to explore young people and carers' perceptions of how the Covid-19 pandemic affected the behaviours young people at risk of exploitation or gang involvement engage in, and how MST adapted to accommodate these changes. Due to a very limited sample of participants who received MST during Coivd-19 lockdown restrictions, it was not possible to comprehensively answer this research question.

1. **What were young people at risk of exploitations and their carers' experience of MST?**

Changes experienced

Both carers and young people described their experience of changes to the referral behaviours that initially prompted their involvement in MST. Carers and young people reported reductions in substance use, associations with negative peers, reductions in missing episodes and in use of violence and aggression. This finding is consistent with previous meta-analytic research showing significant treatment effects for MST in reducing substance use and delinquency (van der Stouwe et al, 2014). Both carers and young people reporting changes in referral behaviours is suggestive that MST may also be effective in reducing problematic behaviour among young people at risk of exploitation or gang involvement. This is consistent with Boxer et al (2017) who showed that the effects of MST were equivalent for gang involved and uninvolved youth suggesting that gang involved youth can also benefit from MST and it can also be effective in reducing antisocial and criminal behaviour. However, the current study used qualitative methods, so

reductions in referral behaviours were based on self-report as opposed to quantitative measures of changes in referral behaviours.

A powerful theme that emerged from carer interviews was that involvement with MST resulted in an increased sense of parental empowerment. Carers felt more able to take back control of their child's behaviour and were less critical and judgemental of themselves in their parenting abilities and developed skills to manage their child's challenging behaviours. Parental and more broadly, family empowerment is central to the MST theory of change (Henggeler et al, 2009) in which carers are viewed as the key facilitator of change in their increased ability to intervene in key parts of the child ecology which is influencing their involvement in antisocial behaviour. Findings of increased parental confidence and strength were also found in previous qualitative research exploring the experience of MST for adoptive parents (Harrison-Stewart, Fox & Millar, 2018). Similarly, Kaur, Pote, Fox and Paradisopoulos's (2015) research exploring carers' perspectives on sustaining change in MST highlight increased personal resilience to new challenges as a key theme emerging from the data. This encompassed the idea that carers felt empowered to believe in their abilities and capacity to change the young person's behaviour. Similarly, to the Kaur et al's (2015) study, parental empowerment was facilitated through the therapeutic alliance with the MST therapist and their experience of them as non-judgemental, containing and validating.

A change in perspective was experienced by young people after MST involvement. Young people were more considerate of the future life they wanted for themselves and the impact that their behaviour may have on future life chances.

Tighe et al (2012) also demonstrated that positive goals and aspirations for the future were important processes of change in MST. Similarly, Paradisopoulous, Pote, Fox and Kaur (2015) qualitatively explored young people's perspective of change after MST and found that young people were increasingly thinking about their goals for the future and their life direction. Further to this, a large RCT in the UK exploring the long-term impact of MST versus management as usual (MAU) used qualitative interviews to explore differences between young people receiving MST and MAU. Young people who had received MST were more forward thinking, hopeful and mature than those who had received MAU (Fonagy et al, 2020).

Improved carer-young person relationship

Central to both young people's and carers experience of MST was the improved relationship between the carer and the young person. Participants described spending more time together doing activities as a family that the young person enjoyed and reported improvements in communication and understanding of each other. Improved family relationships and functioning is key to the MST theory of change (Henggeler et al, 2009). Carers are crucial agents in changing parent and child relations as the child's behaviour can be maintained by ineffective parenting styles such as passive or authoritarian parenting practices (Henggeler et al, 2009). Kaur et al's (2015) qualitative study also found that MST improved carers' perspectives of family functioning and that the relationship between their child had increased in reciprocity.

Carers put measures in place in order to increase pulls for the young person into the home. Carers tried to encourage or entice the young person to come home in an attempt to limit their contact with negative peers and missing episodes. Parents attempted this by becoming increasingly loving and nurturing towards the young person to make them feel safe and wanted at home. Young people in return described wanting to be home more, describing home as a more positive environment to be in, and described a process whereby they were pulled into the family home. The sub-theme of 'increased pulls into the home' relates to existing literature on the push-pull framework of gang involvement (Decker & Van Winkle, 1996). One carer in the present study spoke about negative adults grooming their child into criminal behaviour via the county lines network by giving them new clothes and phones. The sub-theme of increased pulls into the home can be conceptualised as attempt to counteract the push and pulls into exploitation and gang involvement for young people by encouraging the young person away from the negative exploitative peers and drawing them into family life.

Young people described their parent as becoming warmer towards them and parents described trying to be more loving and nurturing towards the young person in an attempt to make them feel appreciated and wanted. Increased parental warmth was an important sub theme that contributed to improved carer and child relationships. Parental knowledge of a young person's whereabouts and the young person's willingness to disclose this information was predicted by adolescents' perceptions of parental warmth. Parental warmth was also shown to have a direct effect on youth delinquency (Klevens & Hall, 2014). Other research has reported a

significant association between high levels of parent warmth and lower levels of externalising behaviour in children (Garber, Robinson, & Valentiner, 1997).

Carers described having to make adjustments to the way they parented their children, moving away from previous parenting practices and trying out new ways of responding to the young person's problematic behaviour. Carers reported experiencing difficulties balancing parental warmth with the implementation of clear boundaries. Baumrind (2005) defined different styles of parenting based on differing configurations of affect and control in parent and child relations. Authoritative parenting was defined as parents exhibiting high control alongside high parental warmth, where carers are responsive to the needs of the child whilst developing and maintaining clear and well-defined expectations for the young person. The development of an authoritative parenting style is often an important family-based intervention in MST (Henggler et al, 2009) as research findings have demonstrated that an authoritative parenting style is associated with more pro-social behaviour in comparison to authoritarian, permissive or neglectful parenting styles (Mensah & Kuranchie, 2013).

2. **What do young people and carers believe are the barriers and facilitators within MST to reducing young people's contact with others involved in antisocial and criminal behaviour?**

Facilitators of change

The therapeutic alliance developed between carers and the therapist was a key facilitator in supporting parents to manage their child's challenging behaviour and reduce their contact with negative peers. MST places great value on the therapeutic alliance in maintaining family engagement in the intervention (Henggeler et al, 2009). The role of the therapeutic relationship was shown to be an important factor in both carer's (Tighe et al, 2012, Harrison-Stewart et al, 2018, Kaur et al, 2015, Fox et al, 2016) and young peoples (Paradisopoulos, et al, 2015) experience of MST in previous qualitative studies. Carers felt that MST offered intense support and that the therapist and team were available at any time to offer on demand support when parents became stuck and were unsure how to manage a situation with their child. The flexible, individualised and intensive approach of MST contrasts with more traditional models of services for young people displaying antisocial behaviour (Ashmore & Fox, 2011).

Both carers and young people discussed that clearer boundaries and expectations were put in place regarding when they were expected to be home by introducing a time curfew. Young people reported being more open with their parents about their whereabouts and kept in better contact with them when they were out of the home. Parental knowledge, which is the extent to which parents are aware of the

young person's whereabouts and activities has been shown to be a key predictor of antisocial behaviour (Laird, Pettit, Bates &Dodge 2003, Trentacosta, Hyde, Shaw & Cheong, 2010). Research has shown that interventions which specifically target parents' skills in monitoring their child's behaviour are effective in improving the young person's behaviour (Dishion & McMahon, 1998). Within the context of MST, studies have shown successful treatment outcomes are predicted by parental monitoring (Henggeler et al, 2009) and that improved parental monitoring decreased negative peer associations (Huey, Henggeler, Brondino & Pickrel, 2000).

The findings of this study highlight the importance of a consistent multi-agency approach to addressing young people going missing. The involvement of multiple agencies was a common experience for families and their involvement acted as a motivator for young people to change their behaviour to reduce the number of professionals involved with their family. Carers talked about the value of consistency in the professionals supporting them to enable young people to develop meaningful relationships with them and the importance of shared communication between agencies. The importance of professionals building relationships with young people in order to identify those at risk and protect them was highlighted by the 2016 Government report which detailed the importance of a joined-up response to child sexual exploitation and missing children (Ofsted, 2014). The value of multi-agency working has also been highlighted elsewhere as an important approach to ensure a co-ordinated response to mapping, identifying and safeguarding children at risk of exploitation (Children's Society, 2019).

Carers spoke about connecting with other parents in their local area in an attempt to create a network of other parents to approach as a first point of call when their chid went missing. Utilising the support of other parents to manage the young person's risk was also shown to be helpful for parents in a review of cases of criminal exploitation, where parents set up 'WhatsApp' groups to communicate with each other about the whereabouts and safety of their children (Child Safeguarding Review Panel, 2020). MST highlights increased carer monitoring as an important component and therapists encourage carers to be contact with their peer's carers. Regular contact with young people's carers enables parents to determine how prosocial that peer is and whether their parent is equally concerned about monitoring the young person's whereabouts and peer associations (Henggeler et al, 2009).

Carers encouraged new relationships with positive peers which served to role model more positive and pro-social behaviour for the young person. Young people also experienced their parents encouraging a change in their friendship groups and recognised that changes in peer relationships resulted in them engaging in less antisocial behaviour and more age appropriate, pro-social behaviour. Decreasing association with negative peers and increasing affiliations with prosocial peers is a key aspect of the MST model (Henggeler et al, 2009). However, qualitative research has shown that intervening with negative peer associations was one of the most difficult and least successful aspects of the model to achieve (Tighe et al. 2012). The findings of the present study suggest that for young people at risk of exploitation who have multiple and complex peer associations, existing MST interventions such as facilitating peer activities in the home and introducing young people into a new

positive peer group were experienced as helpful in reducing these associations and involvement in antisocial behaviour.

The specific subthemes within the facilitators of change theme were reflective of the multiple systems young people are embedded within and the impact of these interacting systems on their behaviour. Multiagency involvement, networks of other carers and changes in peer associations were highlighted as key facilitators of change in young people's negative peer associations and subsequent involvement in criminal and antisocial behaviour. The facilitators of change theme representing multiple interacting systems is consistent with Bronfenbrenner's (1977) theory of social ecology that underpins MST, which suggests that adolescent behaviour is influenced by multiple ecologies including their peer group, their family and their community.

Barriers to change

Carers identified their child's association with negative adults as a significant barrier to reducing their involvement in antisocial and criminal behaviour. Carers report being threatened by negative adults that the young person associated with when they were looking for their missing child. Some carers also felt that the parents of their child's peers were sometimes an important barrier to change. The parents would provide food and shelter for young people, as well as encouraging the use and selling of drugs. The MST model is very focused on intervening with negative peer associations as this is central to the model's theory of change (Henggeler, et al 2009). The findings of this study highlight that children's relationship with negative,

antisocial adults also needs to be considered within the context of exploitation and parents need to be further supported to weaken these associations. Relationships with controlling adults or older peers are known vulnerabilities for child exploitation (Home Office, 2018). Evidence of families and carers colluding with drug dealing and criminal exploitation as a means to earn extra money for the household has been shown previously (Violence & Vulnerability Unit, 2018). One carer discussed that by continually calling and messaging the parents of negative peers and the police, these parents no longer wanted their child at their property as the police would attend to search for the missing child. This intervention in MST is referred to as 'poisoning safe houses' (MST Services UK, 2015) where the therapist and family try to disrupt the locations where young people are socialising with antisocial and criminal peers and adults.

Carers in this study felt that their child had complex relationships with multiple different peer and adult groups who were a negative influence on them. Carers described the young person's peer relationships as being transient and continually changing which made it difficult to completely reduce the impact of negative peers. Tighe et al (2012) also found that parents felt their child's contact with antisocial peers was difficult to change and that parents felt powerless in addressing this.

Novel Findings

There are several new findings which have been derived from this study. Firstly, the finding that young people experienced a perspective shift, enabling them greater insight into the impact of their behaviour on the family system has not been demonstrated in previous MST research. The perspective shared by carers that

young people's association with negative adults, particularly the parents of negative peers as intimidating which created a barrier to change has not been demonstrated in previous studies investigating the use of MST. It is possible that the impact of negative adults is a particular concern for families where there are exploitation concerns. This finding suggests that families may benefit from further support in how to safely manage the barrier that negative adults present. Finally, carers reported that young people had transient and ever-changing friendship groups, making it difficult to intervene at the peer level as there were multiple different peer groups influencing the young person to go missing or engage in antisocial and criminal behaviour.

Clinical Implications

The findings from this study highlight a number of important clinical implications. There are potential benefits to the existing MST model to supporting families with exploitation concerns. However, there may also be some limitations to the standard MST model to addressing the complex needs of this population. It is clear from this study that existing MST interventions which are regularly implemented also have utility with young people at risk of exploitation and their families. Setting clearer expectations, adjustments to more authoritative parenting style, improving the relationship between children and parents and weakening association with negative peers by introducing more positive, pro-social peers were effective facilitators of behaviour change for young people. These are strategies MST therapists regularly use to address antisocial behaviour and negative peer associations, and these findings suggest that these approaches may also be useful

to young people and families where there are exploitation concerns. These existing strategies appear to work well for this group and may be particularly powerful ingredients of MST for families with exploitation concerns.

Association with negative adults is a key risk factor for exploitation (Home Office, 2018) and may represent a unique challenge for this population which is difficult and complicated to intervene with. Young people's connections with negative adults, particularly parents of other peers creates a powerful network of negative peer associations. The power and influence of the parents of young people's peers in encouraging and normalising antisocial and criminal behaviour may offset and challenge the work done between parents and therapists in MST to intervene with young people's problematic behaviour and negative peer associations.

Young people's frequent changes in peer relationships and their associations with negative adults presents a complex problem for MST therapists and services which may be difficult to intervene effectively within the standard MST model. The findings about the barriers to change highlight the need for potential modifications or enhancements to the MST model to address the unique challenges that those at risk of exploitation present with. MST has previously been adapted to suit the needs of other groups exhibiting particular problematic behaviours such as substance use (Sheidow & Houston, 2013) and problem sexual behaviour (Bouduin, Henggeler, Blaske & Stein, 1990). Adaptations to the MST model for these groups were developed to account for the unique challenges they presented to MST services and to target factors underlying those specific behaviours. MST therapists working with these families with exploitation concerns should direct particular attention to the

multiple negative peers' groups and adult associations young people are embedded within in order to make effective and lasting changes to young people's behaviour and to reduce their risk of exploitation.

Strengths and Limitations

This is the first study to qualitatively explore young people at risk of exploitation and their carers' perspectives of MST. Exploring and highlighting the voices of both carers and young people has provided an important contribution to the limited existing evidence base in this area. Interviewing young people and carers about their experiences of this intervention provided a valuable insight into factors which facilitated change and those which were barriers to change in young people's association with negative peers involved in criminal and antisocial behaviour.

A number of MST teams across the UK were contacted about becoming recruitment sites for this project, however only three teams were able to commit and provide locally based ethical approval to authorise them as a recruitment site. As a result, the final sample was drawn from three MST sites in the West and East Midlands, and the North of England. The representativeness of the sample and the subsequent external validity of the study's findings could have been improved if it was possible to draw participants from a wider pool of MST sites across the UK. Further to this, there was a lack of ethnic diversity in the sample as the majority of participants were white British, which limits the generalisability of the findings. The final carer sample were all mothers. A lack of fathers as participants in this research project mirrors previous research which shows that fathers are underrepresented in

child and family orientated research (Phares, 1996). Due to recruitment challenges, only a relatively small sample of young people agreed to take part in the study. The study could have been improved with a larger sample of young people, particularly young females.

Another limitation of this study is the potential for selection bias as a purposive recruitment method was used. Those who were identified by MST therapists, and those who agreed to take part may have been more motivated to participate in the study and may have differed from those who did not wish to express their views on MST. Therapists may have been more likely to contact families with whom they had had positive treatment outcomes and those with whom they were able to establish good therapeutic rapport with. This selection bias may have potentially positively skewed the data collected and ignored important information about barriers to reducing young people's engagement with negative peers involved in antisocial and criminal behaviour. However, purposive sampling in qualitative research can be beneficial as it can identity 'information rich cases' who are able to provide richly textured information about their experiences that supports the expansion of knowledge about a research topic (Vasileiou, Barnett, Thorpe & Young, 2018). The exclusive use of treatment completers in the study meant that potential barriers to engagement in MST for this population were not able to be explored.

There is no requirement in MST for the young person to engage in the intervention. Within the young person sample, there was considerable variation in the extent to which the young people participated in the intervention. One young

person reported that they attended every session, whilst the other three young people in the sample only met with the therapist very occasionally and were not as heavily involved in sessions. Young people's limited involvement in the intervention is likely to have affected the richness in the accounts they were able to give in the interview about their experience of MST.

Due to the Covid-19 pandemic, all participant interviews were conducted remotely. Four interviews with carers took place using Zoom video conferencing platform, and two took place over the telephone. All the interviews with young people took place over the telephone. For some participants they did not have the means to enable a video call, however for others they did not want to engage in a video call and preferred to conduct the interview over the telephone. Reflections from the researcher highlighted that it was more challenging to build rapport with the participant over the telephone in comparison to video call. This is consistent with findings from research into the use of telephone interviews in qualitative research which has shown that the absence of visual cues may deter disclosure of sensitive information (Moum, 1998), and that the use of telephone interviews may decrease rapport (Smith, 2005). Establishing rapport at the start of a research interview is important in minimising social distance and shaping the outcome of the interview (King, Horrocks & Brooks, 2010). It is possible that the absence of body language or emotional responses in telephone interviews inhibited a richer interpretation of participant data. However, the informality of a telephone call as opposed to a video call or face to face interview, particularly for young people may have relieved any pressure or anxiety and potentially put the participant at greater ease (Weller, 2017).

In terms of adhering to quality guidelines for qualitive research (Elliot et al, 1999), this study could have been improved by carrying out more rigorous credibility checks through additional researchers reviewing more of the coded transcripts.

Future Research

It is important that future research further explores the impact of exploitation or gang involvement on MST outcomes and process, using both quantitative and qualitative research methods. The present study particularly highlights the need for further qualitative research exploring young people at risk of exploitations associations with negative adults, particularly the barrier that parents of negative peers pose in reducing antisocial and criminal behaviour. There are established links between gang involvement and exploitation, however despite several earlier studies comparing arrest data (Boxer et al, 2017) and treatment success rates (Boxer 2011; Boxer et al, 2015) following MST for gang involved and uninvolved youth, there have been no quantitative evaluations of MST that have specifically focused on families with exploitation concerns. Research related to this this is currently in development. The RESET trial (reducing the risk of criminal exploitation using multisystemic therapy) is a pilot trial to investigate the feasibility and acceptability of an enhanced version of MST focused on young people at risk of exploitation within existing MST services in England (Warwick University, 2020). The RESET project is also exploring what enhancements have been made to the MST model and what further enhancements made be needed for the specific population.

Due to a small sample size of participants who received MST during Covid-19 restrictions, it was not possible to draw reliable conclusions about the impact of Covid-19 on young people's behaviour or the impact on MST delivery. Further research with carers and young people who engaged in MST during lockdown restrictions is needed to further explore the impact of the pandemic on the behaviour of young people at risk of exploitation and MST's response to this.

Conclusion

This study using a qualitative, thematic analysis approach provides an initial exploration of young people at risk of exploitation and their carers perspectives of MST. Despite the limitations which have been acknowledged, this study enabled the perspectives of carers and young people to be explored in depth to produce a detailed understanding of what helps to facilitate, and what can be a barrier to young people's association with negative peers involved in antisocial and criminal behaviour. Whilst the findings highlight some potential for modifications to the MST model to better meet the needs of exploited young people and their families, the utility of existing interventions widely used in MST are highlighted for this population. These findings add to the existing and expanding UK evidence base of the efficacy of MST for the at risk of exploitation population. It is hoped that the clinical implications of the study's findings are able to enhance the clinical practice of MST therapists working with families where there are exploitation concerns.

Chapter 3: Integration, Impact and Dissemination

Integration

The systematic review and the empirical paper were closely related. Both focused on systemic treatments for young people at risk of exploitation or gang involvement, and their families. Existing empirical studies exploring the effectiveness of systemic treatments for this population were synthesised in the systematic review. The aim of the review was to understand what systemic interventions exist that have been empirically evaluated with young people at risk of exploitation or gang involvement, and what treatment outcomes these interventions produced. The review highlighted a limited number of systemic interventions that had been applied to and evaluated with gang involved young people. This subsequently provided a sound rationale for the empirical paper which explored young people and carers experience of Multisystemic Therapy (MST) where there were exploitation or gang involvement concerns. The development of the empirical project was informed by a number of gaps and inconsistencies in the literature which were highlighted by the systematic review. The systematic review identified two papers evaluating differences in treatment and recidivism outcomes following MST between gang involved and uninvolved youths. The two papers produced contradictory findings, with successful treatment outcomes shown to be less likely for gang involved young people, whilst rates and counts of rearrest were similar for gang involved and non-involved youth after MST. Therefore, further qualitative research is required to explore what parts of MST young people at risk of exploitation and their carers feel are barriers and facilitators to reducing contact with negative peers involved in antisocial and criminal behaviour. Furthermore, all the studies included in the review

took place in the US which highlighted the need for more UK based research exploring this topic.

Child criminal exploitation is an issue which is in its infancy in terms of being defined and understood. However, there is a wide body of existing literature focused on gang involved young people with which there is great overlap with child exploitation. The population of 'gang involved' young people identified in the review papers was reflective of the terminology used in the US. No studies were identified which explored the use of systemic interventions for young people at risk of exploitation specifically.

Integrating the findings from the systematic review and the empirical study, suggested that both studies demonstrated the potential of systemic interventions to reduce young people's substance use, violence, aggression and antisocial behaviour. The findings from the systematic review were all quantitative outcomes whereas the empirical study reported on the qualitative descriptions of reductions in MST referral behaviours from the perspective of young people and carers. Comparisons drawn between the two studies should be interpreted with caution due to the different research methodologies used, with the exclusive use of quantitative outcomes in the systematic review and analysis of qualitative data only in the empirical study.

The empirical paper highlighted the perceived value of MST in reducing referral behaviours such as substance use, aggression, violence, association with negative peers and missing episodes for families with exploitation concerns. The

empirical paper was able to expand on some of the initial quantitative findings for MST outcomes with gang involved young people that were demonstrated from the systematic review. The qualitative study highlighted which aspects of MST young people and carers perceived to facilitate these changes in referral behaviours. This included more general facilitators such as the therapeutic alliance between carer and therapist and the intensity of support offered in the MST model. Specific facilitators were also identified which highlighted the usefulness of setting clearer boundaries and expectations, multi-agency involvement and building a network of other parents in addressing missing episodes. The importance of young people developing new, more positive and pro-social friendship groups to weaken negative peer associations and the resultant impact this had on the young person's antisocial and criminal behaviour, was also highlighted as an important facilitator of change in the empirical study.

Further Methodological Considerations.

It was not possible to adequately answer the empirical paper's third research question: what are young people and their carers perceptions of how Covid-19 has affected the behaviours young people at risk of exploitation/gang involvement engage in, and how did MST accommodate for these changes? There was a very small sample of four participants who received MST during the pandemic and associated lockdown restrictions. It is recommended that qualitative sample sizes are large enough to allow a rich and textured understanding of the phenomena being studied (Sandelowski, 1995). The sample of participants who had experience of MST during the pandemic was not large enough to obtain a rich understanding of how the

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Covid-19 lockdown impacted young people's behaviour and therapist modifications of MST. Further to this, the structuring of questions in the qualitative interviews has been shown to affect the richness of participant data (Ogden & Cornwell, 2010). There were a small number of questions in the semi-structured interview schedules that related to the impact of Covid-19 as this was not the main focus of the empirical project. It is possible that questions related to the impact of Covid-19 need to be further developed to give the best chance of rich and textured data to be obtained from participants.

There were some challenges in recruiting young people to participate in the study which resulted in a smaller final sample of young people than initially hoped for. It was difficult to get in contact with young people as they often would not answer their phone or would hang up the phone when I explained who I was and why I was calling. Several of the young people who had initially expressed an interest in the research with MST therapists, who acted as the first point of contact with participants about the study, no longer wanted to take part in the research when I made contact with them. To increase the incentive for young people to participate in the research, a decision was made with research supervisors and MST-UK, who were supporting with funding the project, to increase participant payment from £10 to £25 per person. This decision had a positive impact on young people's engagement in the research and meant I was able to recruit a further two young people to participate in the study. To further encourage MST therapists to reach out to families about this project, I attended weekly team meetings at the recruitment site to raise the profile of my research. Furthermore, an incentive of a prize draw of an Amazon voucher was introduced to encourage MST therapists to identify suitable families for the project.

On reflection, the initial time frame specified for recruitment and data collection was unrealistic as it took longer than anticipated to make initial contact with both young people and carers. I had several last-minute cancellations of interviews from both carers and young people due to urgent family related issues which further delayed the recruitment and data collection time frame. If I were to recruit for a research study from a similar population again, I would allocate more time to the recruitment process and if possible, I would establish more recruitment sites to ensure a wider pool from which to select participants.

Some participants (n= 4, 2 young people and 2 carers) were recruited from specialist MST teams set up for families with exploitation concerns called MST-YEF teams. It is important to note that some families received MST from enhanced teams who received specific training in issues of exploitation or gang involvement, and other families were seen by MST standard teams who did not receive formal training in exploitation, however, may have received supervision from MST supervisors to address issues of exploitation.

As data analysis progressed it became increasingly apparent that there were many overlapping sub themes emerging from carer and young people's data. Carers and young people both spoke about the following factors as important in their experiences of MST which were combined together to reflect carer and young people subthemes: changes in referral behaviours, setting clearer boundaries and expectations to address missing episodes, changing peer groups changed behaviour, power of multiagency involvement in addressing missing episodes, increased pulls into the home and parental warmth. Due to these overlapping

subthemes, a decision was made to carry out a collective thematic analysis combining both young person and carer perspectives into a single thematic map. Combining perspectives was deemed appropriate as both interview schedules addressed the same research questions and doing so enhanced the richness of the themes and subthemes developed.

This study carried out reflexive TA which was inductive and latent in its approach with a critical realist stance. This theoretical orientation was adopted because it enabled the deeper meanings which lie beneath the surface of the data to be revealed. The assumptions and views which underpin the data that participants may not have been explicitly communicating were explored and meanings from this became apparent from my interpretations of the data. This research took a critical realist position which asserts that reality is out there to be discovered but that it is mediated by both the socio-cultural meanings of the participant and researcher (Maxwell, 2012). Critical realism was adopted as the position for the empirical study as it has explanatory strengths in supporting explanations of social events or phenomena and suggesting practice policy recommendations to address social problems (Fletcher, 2017).

Data saturation has previously been viewed as an important indicator of validity for qualitative research (Constantinou, Georgiou & Perdikogianni, 2017. Data saturation has been defined as the point in data collection and analysis when new information results in little or no changes to the coding framework (Guest, Bunce & Johnson, 2006). There is ongoing critical discussion about the imprecise use of data saturation as a gold standard in assessing the quality of all qualitative research. The

present study utilised a reflective thematic analysis (TA) approach to the data in which codes were continually evolving, expanding and some abandoned which reflected my deepening engagement with the data and my interpretative account of young people and carers voices. It has been argued that the concept of data saturation is best applied to realist or discovery orientated thematic analysis approaches such coding reliability or code book thematic analysis. Data saturation is arguably not a useful or theoretically coherent way to evaluate reflexive TA (Braun & Clarke, 2021).

Expert by Experience Involvement

Involving experts by experience is a core component of good health research (Wright, Foster, Amir, Elliot & Wilson, 2010). Experts were approached to initially pilot the content, wording and structure of the interview schedules. One carer and one young person took part in a meeting to discuss the two different semi-structured interview schedules. Feedback on the carer interview schedule was incorporated to make the questions more accessible and easily understandable for carers. Feedback on the young person interview schedule centred on how to better set the context for the interview and restructure the order of questions to better engage young people. Both carer and young person feedback was incorporated into the final interview schedules. Involving experts by experience in this stage of the research was important as it ensured the interview schedules explored relevant clinical issues and their involvement enriched both the process and outcomes of the study. The credibility of themes and sub-themes was explored with a carer who participated in

the study to ensure that the themes developed were an accurate representation of participants experiences.

Personal Reflections

In terms of the empirical project, this was my first time conducting and analysing qualitative interviews. My lack of qualitative research experienced and limited clinical experience working with young people and families with exploitation concerns may have limited the findings. Many different skills are required to carry out high quality qualitative interviews. I found it difficult to strike a balance between ensuring that the interview was focused on obtaining information relevant to the research questions, whilst allowing flexibility to further explore important issues when they were raised by participants. I found that my confidence and ability to be flexible improved as I conducted more interviews. The transcript from the first participant interview was sent to research supervisors for comment and suggestions on how to improve the interview were provided.

In my clinical work I would usually have time to establish therapeutic relationships with clients before asking difficult questions about their life experiences. Conducting the interviews remotely using telephone and video calls due to the Covid-19 pandemic, made it difficult to establish a good rapport with participants. I initially found it difficult within the context of the research interviews to ask very personal and highly emotive questions without the same level of therapeutic rapport being built. I noticed myself drawing on my core therapeutic skills to improve participants engagement in the interview, using validation, empathy and

summarising skills. Participants generally responded well when I utilised these therapeutic skills and at times, I noticed that it supported participants to elaborate on their answers to questions and describe their experiences in more detail.

Supervision was used throughout the research process to discuss key elements of the design and implementation of the study, but also to discuss my experiences of conducting the research. Supervision was a useful space to reflect on any difficulties I was experiencing in designing, carrying out, interpreting and writing up this thesis.

The developers of reflexive TA emphasise the importance of researcher subjectivity in shaping the interpretation of data with this approach (Braun & Clarke, 2019). On reflection, my various privileges particularly in terms of my education and class meant I had different life experiences to the families who took part in this research, which would have impacted the sense I made of participants experiences. There is large media attention directed towards youth gangs in the UK, particularly in London. Living in London whilst completing the doctorate may have biased my view of gangs and exploitation which may have impacted on my interpretation of participants experiences. My training experiences have included involvement in delivering systemic interventions where I have witnessed the positive impact this approach can have with families. This experience may have biased me to view participant data or direct my questioning in interviews through a positive lens, which may have resulted in me paying less attention to aspects of MST which participants found less helpful.

Impact and Dissemination

This thesis explored an under-researched area which is of important public and professional concern. The findings from both the systematic review and the empirical study provide a valuable contribution to the field and have the potential to impact a range of stakeholders; young people, families, MST professionals and teams, other professionals (youth offending, social care, police, criminal justice system, voluntary organisations) as well as commissioners, policy makes and the MST UK and Ireland Network. The systematic review was the first time the literature on systemic interventions for young people at risk of gang involvement or exploitation had been synthesised.

Both the empirical paper and the systematic review have direct impact for young people and families who have been affected by criminal and sexual exploitation. The findings provided insight into the different systemic treatments that have been used with gang involved youth and how effective these were in reducing problematic behaviours in this population. The empirical study then furthered this to explore which aspects within MST specifically, young people and carers believe are barriers or facilitators to reducing young people's associations with others involved in antisocial behaviour and criminal activity. It was evident from young people's and carers data that they generally perceived experiencing positive changes following the intervention both in terms of referral behaviours but also in parental and family wellbeing. A summary of the study's findings will be disseminated to all participants. This written communication will be modified into lay language to ensure it is accessible to participants. It would be useful to carry out a piece of expert by

experience consultation on how best to summarise and present the findings of the research to families.

The findings have the potential to make a significant contribution to MST services, including therapists, consultants, and the national MST UK and Ireland Network. For MST teams, the findings provide an understanding of both young people's and carers perspectives of which elements of MST they found helpful in reducing young people's involvement with negative peers involved in criminal and antisocial behaviour which can be used to guide professionals working with this population. The research provides insight into which aspects of MST are perceived to facilitate change with this group and which existing MST interventions that are routinely used with families were perceived as helpful with this specific subgroup of families where there are exploitation concerns. The findings also highlight potentially unique barriers to the success of MST for this specific group such as the association with negative adults, particularly parents of their child's negative peers and young people's frequent changes in friendship groups. This information could be used to inform modifications to the MST model to better meet the needs of young people and families where there are exploitation concerns.

A summary of key findings will be distributed to MST team supervisors with the view to them sharing this information with MST therapists. To promote impact at a national level, a presentation summarising the key findings will be delivered to MST consultants and the MST-UK and Ireland network partner lead. This dissemination plan will ensure that the research is being appropriately disseminated to MST clinicians as well as programme developers. It may be possible to present

the research at the MST European Research Collaboration Conference. This is a bi-annual event which is attended by researchers across Europe who have a special interest in MST. Disseminating the research at this event will ensure that the findings are shared with the MST academic community. I will also be sharing the findings of this study and linking in with the research team conducting the RESET trial (reducing the risk of criminal exploitation using multisystemic therapy) to ensure that they can act on the recommendations of this research.

The integrated findings of both studies have the potential to make a wider impact on other professional disciplines including social care, youth offending, police, criminal justice system and voluntary organisations, as well as policy makers and commissioners. The findings from this thesis can help guide professionals and services who are working with families affected by gang involvement, and child exploitation. The findings highlighted the importance for both carers and young peoples of multi-agency involvement in managing young people's missing episodes. The findings emphasise the importance of good relations with external agencies as well as collaboration and high levels of communication and information sharing between services to effectively manage and deter young people from going missing. The systematic review highlighted that there are very few well validated systemic interventions being used with gang involved young people, and none specifically targeted at young people at risk of criminal and sexual exploitation. There was limited robust empirical evidence evaluating the use of systemic intervention for this population. It is important that practitioners and professionals working with youths at risk of exploitation are aware of the value and benefits of systemic interventions, including MST in addressing the complex needs of these families.

The research findings were virtually presented to staff and students at Royal Holloway, University of London. Sharing the research in this way meant that first and second year trainees could take the knowledge gained from the presentation to inform the development of their own thesis projects. It is hoped that the findings presented also enabled the audience to gain an understanding of the barriers and facilitators within MST to working with young people at risk of exploitation and their families.

To maximise the impact of the findings from both parts of the thesis to a wide audience, both the systematic review and empirical study will be prepared for submission to peer-reviewed academic journals to ensure dissemination to the academic community. Separate publication of the systematic review and empirical study as two distinct papers will increase the impact of the research in its entirety. The research will be submitted to both national and international journals with wide reaching academic and clinical target audiences. The Scimago Journal and Country Rank website (www.scimagorj.com) was used to assess the impact factor of journals by comparing the number of citations of an article in each journal in 2019. The journals which will be approached for publication in order of impact factor are: Journal of Marital and Family Therapy, Clinical Child Psychology and Psychiatry, Children and Youth Services Review, Journal of Forensic Psychology and Psychiatry: Research and Practice, and Journal of Family Therapy.

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guidelines for assessing the quality and impact of user involvement in

research. *Health Expectations*, *13*(4), 359-368. https://doi.org/10.1111/j.1369-

7625.2010.00607.x

Appendices

Appendix A: *Articles excluded at full text from systematic review and reasons for exclusion*

Not intervention studies 21 articles	Barnes et al, 2010; Boxer, 2014; Decker et al, 2014; Gordon et al, 2014; Simon et al, 2013; Ebensen et al, 2013; Mallion & Wool, 2020; Lefevre, Hickle & Luckock, 2019; McDonald & Middleton, 2019; Bhatt & Tweed, 2018; Lile et al, 2016; Landers et al, 2017; Gibbs et al, 2015; McNeil et al, 2013; Melde et al, 2011; Sahl & Knoepkem 2018; Grekul, 2011, Kenny, Helpingstine, Harris, 2019; Deza, 2008; Rodriguez 2010; Gonzalez, 1998.
Not systemic 9 articles	Diaz et al, 2020; Brage et al, 2008; Harris, Fried & Arana, 1995; Ebensen et al, 1999; Ebensen et al, 2002; Ebensen et al, 2012; Healy, 2014, Seller et al, 1998, Hickle & Roe- Sepowitz, 2014
Book chapters 7 articles	Branch, 1997; Resiter & Deegaer, 1997; Kodluboy, 2004; Capuzzi & Gross, 2000; Branch, 1999; Kudloboy, 1993; Parker et al, 2008
Not at risk of exploitation or gang involved sample 5 articles	Regan, 2009; Terry, 1999; Slesnick 2009, Glisson et al, 2010; Vazsoni et al, 2004
Qualitative studies 5 articles	Weston & Gabe, 2020; Bounds et al, 2020; Fisher & Buckner, 2018; Corbet, 2018; Bridgewater et al, 2011
Case studies 3 articles	Van de Vijver & Harvey, 2019; Jennings-Bey, 2015; Bloom 2018

No quantitative evaluation component 3 articles	Grekul & Sanderson, 2011; Battin et al, 1998; Winfree et al, 1996
Not enough information about quantitative outcomes 3 articles	Cohen et al, 1995, Koffman et al, 2009; Pope, 1997
Universal prevention programme 1 article	Fleming 2018

Appendix B: *The Quality Appraisal Checklist for Quantitative Intervention Studies (NICE, 2012)*

Checklist items are worded so that 1 of 5 responses is possible:

++	Indicates that for that particular aspect of study design, the study has been designed or conducted in such a way as to minimise the risk of bias.
+	Indicates that either the answer to the checklist question is not clear from the way the study is reported, or that the study may not have addressed all potential sources of bias for that particular aspect of study design.
−	Should be reserved for those aspects of the study design in which significant sources of bias may persist.
Not reported (NR)	Should be reserved for those aspects in which the study under review fails to report how they have (or might have) been considered.
Not applicable (NA)	Should be reserved for those study design aspects that are not applicable given the study design under review (for example, allocation concealment would not be applicable for case control studies).

In addition, the reviewer is requested to complete in detail the comments section of the quality appraisal form so that the grade awarded for each study aspect is as transparent as possible.

Each study is then awarded an overall study quality grading for internal validity (IV) and a separate one for external validity (EV):

++ All or most of the checklist criteria have been fulfilled, where they have not been fulfilled the conclusions are very unlikely to alter.

+ Some of the checklist criteria have been fulfilled, where they have not been fulfilled, or not adequately described, the conclusions are unlikely to alter.

− Few or no checklist criteria have been fulfilled and the conclusions are likely or very likely to alter.

Checklist

Study identification: (Include full citation details)	
Study design: Refer to the glossary of study designs (appendix D) and the algorithm for classifying experimental and observational study designs (appendix E) to best describe the paper's underpinning study design	
Guidance topic:	
Assessed by:	

Section 1: Population		
1.1 Is the source population or source area well described? Was the country (e.g. developed or non-developed, type of healthcare system), setting (primary schools, community centres etc.), location (urban, rural), population demographics etc. adequately described?	++ + − NR NA	Comments:
1.2 Is the eligible population or area representative of the source population or area? Was the recruitment of individuals, clusters or areas well defined (e.g. advertisement, birth register)? Was the eligible population representative of the source? Were important groups under-represented?	++ + − NR NA	Comments:
1.3 Do the selected participants or areas represent the eligible population or area? Was the method of selection of participants from the eligible population well described?	++ +	Comments:

What % of selected individuals or clusters agreed to participate? Were there any sources of bias? Were the inclusion or exclusion criteria explicit and appropriate?	− NR NA	
Section 2: Method of allocation to intervention (or comparison)		
2.1 Allocation to intervention (or comparison). How was selection bias minimised? Was allocation to exposure and comparison randomised? Was it truly random ++ or pseudo-randomised + (e.g. consecutive admissions)? If not randomised, was significant confounding likely (−) or not (+)? If a cross-over, was order of intervention randomised?	++ + − NR NA	Comments:
2.2 Were interventions (and comparisons) well described and appropriate? Were interventions and comparisons described in sufficient detail (i.e. enough for study to be replicated)? Was comparisons appropriate (e.g. usual practice rather than no intervention)?	++ + -− NR	Comments:

	NA	
2.3 Was the allocation concealed? Could the person(s) determining allocation of participants or clusters to intervention or comparison groups have influenced the allocation? Adequate allocation concealment (++) would include centralised allocation or computerised allocation systems.	++ + − NR NA	Comments:
2.4 Were participants or investigators blind to exposure and comparison? Were participants **and** investigators – those delivering or assessing the intervention kept blind to intervention allocation? (Triple or double blinding score ++) If lack of blinding is likely to cause important bias, score −.	++ + − NR NA	Comments:
2.5 Was the exposure to the intervention and comparison adequate?	++ +	Comments:

Is reduced exposure to intervention or control related to the intervention (e.g. adverse effects leading to reduced compliance) or fidelity of implementation (e.g. reduced adherence to protocol)? Was lack of exposure sufficient to cause important bias?	− NR NA	
2.6 Was contamination acceptably low? Did any in the comparison group receive the intervention or vice versa? If so, was it sufficient to cause important bias? If a cross-over trial, was there a sufficient wash-out period between interventions?	++ + − NR NA	Comments:
2.7 Were other interventions similar in both groups? Did either group receive additional interventions or have services provided in a different manner? Were the groups treated equally by researchers or other professionals? Was this sufficient to cause important bias?	++ + − NR NA	Comments:

2.8 Were all participants accounted for at study conclusion? Were those lost-to-follow-up (i.e. dropped or lost pre-,during or post-intervention) acceptably low (i.e. typically <20%)? Did the proportion dropped differ by group? For example, were drop-outs related to the adverse effects of the intervention?	++ + – NR NA	Comments:
2.9 Did the setting reflect usual UK practice? Did the setting in which the intervention or comparison was delivered differ significantly from usual practice in the UK? For example, did participants receive intervention (or comparison) condition in a hospital rather than a community-based setting?	++ + – NR NA	Comments:
2.10 Did the intervention or control comparison reflect usual UK practice? Did the intervention or comparison differ significantly from usual practice in the UK? For example, did participants receive intervention (or comparison) delivered by specialists rather than GPs? Were participants monitored more closely?	++ + – NR	Comments:

	NA	
Section 3: Outcomes		
3.1 Were outcome measures reliable? Were outcome measures subjective or objective (e.g. biochemically validated nicotine levels ++ vs self-reported smoking −)? How reliable were outcome measures (e.g. inter- or intra-rater reliability scores)? Was there any indication that measures had been validated (e.g. validated against a gold standard measure or assessed for content validity)?	++ + − NR NA	Comments:
3.2 Were all outcome measurements complete? Were all or most study participants who met the defined study outcome definitions likely to have been identified?	++ + − NR NA	Comments:

3.3 Were all important outcomes assessed? Were all important benefits and harms assessed? Was it possible to determine the overall balance of benefits and harms of the intervention versus comparison?	++ + − NR NA	Comments:
3.4 Were outcomes relevant? Where surrogate outcome measures were used, did they measure what they set out to measure? (e.g. a study to assess impact on physical activity assesses gym membership – a potentially objective outcome measure – but is it a reliable predictor of physical activity?)	++ + NR NA	Comments:
3.5 Were there similar follow-up times in exposure and comparison groups? If groups are followed for different lengths of time, then more events are likely to occur in the group followed-up for longer distorting the comparison. Analyses can be adjusted to allow for differences in length of follow-up (e.g. using person-years).	++ + NR NA	Comments:

3.6 Was follow-up time meaningful? Was follow-up long enough to assess long-term benefits or harms? Was it too long, e.g. participants lost to follow-up?	++ + − NR NA	Comments:
Section 4: Analyses		
4.1 Were exposure and comparison groups similar at baseline? If not, were these adjusted? Were there any differences between groups in important confounders at baseline? If so, were these adjusted for in the analyses (e.g. multivariate analyses or stratification). Were there likely to be any residual differences of relevance?	++ + − NR NA	Comments:
4.2 Was intention to treat (ITT) analysis conducted?	++ +	Comments:

Were all participants (including those that dropped out or did not fully complete the intervention course) analysed in the groups (i.e. intervention or comparison) to which they were originally allocated?	− NR NA	
4.3 Was the study sufficiently powered to detect an intervention effect (if one exists)? A power of 0.8 (that is, it is likely to see an effect of a given size if one exists, 80% of the time) is the conventionally accepted standard. Is a power calculation presented? If not, what is the expected effect size? Is the sample size adequate?	++ + − NR NA	Comments:
4.4 Were the estimates of effect size given or calculable? Were effect estimates (e.g. relative risks, absolute risks) given or possible to calculate?	++ + − NR NA	Comments:

4.5 Were the analytical methods appropriate? Were important differences in follow-up time and likely confounders adjusted for? If a cluster design, were analyses of sample size (and power), and effect size performed on clusters (and not individuals)? Were subgroup analyses pre-specified?	++ + − NR NA	Comments:
4.6 Was the precision of intervention effects given or calculable? Were they meaningful? Were confidence intervals or p values for effect estimates given or possible to calculate? Were CI's wide or were they sufficiently precise to aid decision-making? If precision is lacking, is this because the study is under-powered?	++ + − NR NA	Comments:
Section 5: Summary		
5.1 Are the study results internally valid (i.e. unbiased)? How well did the study minimise sources of bias (i.e. adjusting for potential confounders)?	++ +	Comments:

Were there significant flaws in the study design?	−	
5.2 Are the findings generalisable to the source population (i.e. externally valid)? Are there sufficient details given about the study to determine if the findings are generalisable to the source population? Consider: participants, interventions and comparisons, outcomes, resource and policy implications.	++ + −	Comments:

Appendix C: *Royal Holloway University of London Ethics Application*

Ethics Review Details

You have chosen to submit your project to the REC for review.	
Name:	Wake, Holly (2018)
Email:	NFJT024@live.rhul.ac.uk
Title of research project or grant:	Young people at risk of criminal or sexual exploitation and their caregiver's experiences of Multisystemic Therapy (MST).
Project type:	Royal Holloway postgraduate research project/grant
Department:	Psychology
Academic supervisor:	Emily Glorney
Email address of Academic Supervisor:	Emily.Glorney@rhul.ac.uk
Funding Body Category:	No external funder
Funding Body:	
Start date:	06/01/2020
End date:	30/10/2021

Research question summary:
What are caregivers' and young people's experiences of Multisystemic Therapy where there have been concerns around risk of involvement in gangs and/or criminal/sexual exploitation?

What do young people and caregivers believe are the barriers and facilitators within MST to reducing young people's contact with others involved in antisocial and criminal behaviour?

What are young people and their caregivers perceptions of how covid-19 has affected the behaviours young people at risk of exploitation/gang involvement engage in? How was MST adapted to accommodate for these changes?

Research method summary:
Qualitative project using semi-structured interviews to gather data from both young people and their caregivers.

Two different qualitative interview schedules have been developed, one for young people and one for caregivers - (please see attachment)

A sample of 10 young people and 10 caregivers will be recruited.

Participants will be recruited remotely from multiple charity and local authority sites across the UK. Site supervisors at each recruitment site will support the remote recruitment of participants who have engaged in MST.

Interviews will be conducted remotely using video calling platforms. During covid-19 MST therapists have been conducting therapy sessions with service users using multiple platforms eg facetime and WhatsApp. I will interview participants using the same video calling platform they used for MST treatment.

Interviews will be recorded, digitally transcribed and analysed using thematic analysis.

Risks to participants

Does your research involve any of the below? Children (under the age of 16),
Yes

Participants with cognitive or physical impairment that may render them unable to give informed consent, No

Participants who may be vulnerable for personal, emotional, psychological or other reasons, Yes

Participants who may become vulnerable as a result of the conduct of the study (e.g. because it raises sensitive issues) or as a result of what is revealed in the study (e.g. criminal behaviour, or behaviour which is culturally or socially questionable),
Yes

Participants in unequal power relations (e.g. groups that you teach or work with, in which participants may feel coerced or unable to withdraw),
No

Participants who are likely to suffer negative consequences if identified (e.g. professional censure, exposure to stigma or abuse, damage to professional or social standing),
Yes

Details,
All data will be anonymised and stored securely to ensure participants are not identifiable. Only myself and my supervisors will access the data collected.

The risk of distress will be mitigated by ensuring participants are aware that they can choose to not answer certain questions and that they can stop the interview at any time without it affecting their care. Participants will be signposted to appropriate support services if they become distressed with the content of the interview.

Young people and their caregivers will both have to consent to take part in the research for them to be eligible to participate.

Design and Data

Does your study include any of the following?

Will it be necessary for participants to take part in the study without their knowledge and/or informed consent at the time?, No

Is there a risk that participants may be or become identifiable?, No

Is pain or discomfort likely to result from the study?, No

Could the study induce psychological stress or anxiety, or cause harm or negative consequences beyond the risks encountered in normal life?,
No

Does this research require approval from the NHS?, No

If so what is the NHS Approval number,

Are drugs, placebos or other substances to be administered to the study participants, or will the study involve invasive, intrusive or potentially harmful procedures of any kind?,

No

Will human tissue including blood, saliva, urine, faeces, sperm or eggs be collected or used in the project?, No

Will the research involve the use of administrative or secure data that requires permission from the appropriate authorities before use?, No

Will financial inducements (other than reasonable expenses and compensation for time) be offered to participants?, No

Is there a risk that any of the material, data, or outcomes to be used in this study has been derived from ethically-unsound procedures?, No

Details,
Participants will be recruited from multiple MST teams which are based in charities or local authorities. Local ethical procedures will be followed. Each recruitment site will provide a letter of consent to RHUL agreeing to participate in the project stating their role as a recruitment site for this project. This letter will be written and signed by the relevant staff member with authority to sign off research projects in the service.

Risks to the Environment / Society

Will the conduct of the research pose risks to the environment, site, society, or artifacts?, No

Will the research be undertaken on private or government property without permission?, No

Will geological or sedimentological samples be removed without permission?, No

Will cultural or archaeological artifacts be removed without permission?, No

Details,

Risks to Researchers/Institution

Does your research present any of the following risks to researchers or to the institution?

Is there a possibility that the researcher could be placed in a vulnerable situation either emotionally or physically (e.g. by being alone with vulnerable, or potentially aggressive participants, by entering an unsafe environment, or by working in countries in which there is unrest)?, No

Is the topic of the research sensitive or controversial such that the researcher could be ethically or legally compromised (e.g. as a result of disclosures made during the research)?,
No

Will the research involve the investigation or observation of illegal practices, or the participation in illegal practices?, No

Could any aspects of the research mean that the University has failed in its duty to care for researchers, participants, or the environment / society?,
No

Is there any reputational risk concerning the source of your funding?, No

Is there any other ethical issue that may arise during the conduct of this study that could bring the institution into disrepute?, No

Details,

Declaration
By submitting this form, I declare that the questions above have been answered truthfully and to the best of my knowledge and belief, and that I take full responsibility for these responses. I undertake to observe ethical principles throughout the research project and to report any changes that affect the ethics of the project to the University Research Ethics Committee for review.

Certificate produced for user ID, NFJT024

Date:	04/06/2020 15:06
Signed by:	Wake, Holly (2018)
Digital Signature:	HMWake
Certificate dated:	04/06/2020
Files uploaded:	Full-Review-1957-2020-02-18-11-50-NFJT024.pdf INTERVIEW SCHEDULES.docx Full-Review-1957-2020-05-12-16-16-NFJT024.pdf Full-Review-1957-2020-06-03-14-24-NFJT024.pdf Full-Review-1957-2020-06-03-14-26-NFJT024.pdf Caregiver Consent Form.docx Consent Form Caregiver and Child.docx Consent Form Participants under 16 years. Version 1.docx Information for Caregivers.doc Information Sheet Participants under 16 years. Version 1.doc Full-Review-1957-2020-06-03-14-44-NFJT024.pdf Full-Review-1957-2020-06-03-14-47-NFJT024.pdf Caregiver information sheet V2.doc

Appendix D: *Royal Holloway University of London Ethical Approval*

Ethics Application System   7 September 2020 at 17:43   ES

Result of your application to the Research Ethics Committee (application ID 1957)

To: NFJT024@live.rhul.ac.uk,   Emily.Glorney@rhul.ac.uk,   Ethics

---

PI: Emily Glorney
Project title: Young people at risk of criminal or sexual exploitation and their caregiver's experiences of Multisystemic Therapy (MST).

REC ProjectID: 1957

Your application has been approved by the Research Ethics Committee.
Please report any subsequent changes that affect the ethics of the project to the University Research Ethics Committee ethics@rhul.ac.uk

Appendix E: *Example of local recruitment site ethical approval*

Dear Holly & Simone,

I have reviewed the study details with our Leadership team, Information Governance and Workforce/Learning Development teams, and today clarified the research with our Corporate Research team and following these discussions I can confirm we are happy to facilitate this research as per the study design and ethical approval. As long as the initial contact is facilitated by us (MST staff) we are happy to give approval to begin recruitment. I would also ask that families that will be contacted to participate in the YEF-funded research are excluded from this study so as not to overburden or confuse them, and we would of course ask that all relevant learning is shared with us.

Please can you contact ▇▇▇▇▇▇ to inform the next steps,

Regards,

▇▇▇

▇▇▇▇

Head of Service for Complex Response & MST

▇▇▇▇
▇▇▇▇▇▇

Appendix F: *Demographic form completed by MST therapists on behalf of participants*

DEMOGRAPHIC FORM

To be completed by MST therapist

Please complete the form with as much detail as possible. Please highlight the responses as appropriate:

Name:

Age: ……..years

Gender: Male/Female/Other (if other please specify) ……..

Ethnicity: *Please tick as appropriate*

White	
English/Welsh/Scottish/Northern Irish/British	
Irish	
Gipsy or Irish Traveller	
Other white	
Mixed/Multiple ethnic groups	
White and Black Caribbean	
White and Black African	
White and Asian	
Other mixed	
Asian/Asian British	
Indian	
Pakistani	
Bangladeshi	
Chinese	
Other Asian	
Black/African/Caribbean/Black British	
African	
Caribbean	
Other black	
Other ethnic group	
Arab	
Other ethnic group	

When did they receive MST?
Start month/year: ……………..
End month/year……………….

Outcome of MST

Treatment completer / dropped out of treatment

Is the young person living at home?

Yes/No/Other (please detail) ………………….

Is the young person in education, training or employment?

Education/training/employment/other

If other, please provide further detail here ……………

Young person's previous offending behaviour:

Please tick those which apply

None	
Violent offence	
Theft	
Burglary	
Robbery	
Shoplifting	
Sexual offence	
Criminal damage	
Property destruction	
Public order offence	
Possession/use of a weapon	
Other	

If other, please provide further detail here: ………………………………

Please detail more information about offending behaviour if you have this available
…………………..

Did the young person commit the offence(s) alone or with peers? ………..

Has the young person offended in the last 6 months? *(either self-reported or known convictions)*

Yes/No

Please detail what offence if known …………………

Did the young person commit this offence alone or with peers? …………………

Referral behaviours: *please tick those which the young person has engaged in*

Association with negative peers	
Association with criminal adults	
School exclusion	
School attendance concerns	
Absconding/missing from home	
Not coming home for curfew	
Substance misuse	
Physical aggression at home	
Physical aggression in the community	
Verbal aggression at home	
Verbal aggression in the community	
Criminal behaviour	
Property damage	
Self-harm	
Other	

If other, please provide further detail here …………………………..

Appendix G: *Carer Interview Schedule*

Caregiver Interview schedule

Pre-intervention:

- Why were you referred to MST? *(involvement neg peers, criminal activity, school exclusions, going missing, absconding, curfews, aggressive behaviour)*
- What worried you most about your child?
- Was there something going on with peers that caused concern?
- What were you worried might happen?
- Did you have any concerns that your child was involved in criminal activity?
- What was your relationship like with your child prior to MST? How was home life?
- What did you hope would happen after engaging in MST?
- What held you back from being involved with MST? (*eg worries about other professional involvement, not sure what consequences would be)*

Intervention:

- Did anything change following MST generally? *(peer group, criminal activity, school attendance/ exclusion, absconding, substance misuse, aggressive behaviour)*
- Was this what you were expecting or hoping would change/be achieved?
- What helped to make these changes? *(engagement, relationship with therapist, specific interventions, accessibility of therapist, frequency of sessions?)*

    - What was helpful/unhelpful in making changes?

- What did you do with your MST therapist to improve the relationship with your child?
- Did you notice any changes in your relationship with your child following MST?

    - What changes did you notice? *(amount of time spent at home, arguments, communication)*
    - What do you think helped/did not help in making these changes?

- What individual support did your MST therapist offer to you as a parent?

Ask as appropriate based on referral concerns:

PEER GROUP

- What did you do with your MST therapist around your child's peer group?
- What changes were noticed in your child's peer group as a result of MST?
- What was helpful/unhelpful in reducing contact with negative peers?
- What was difficult in reducing your child's contact with negative peers?

CRIMINAL ACTIVITY

- What did you do with the MST therapist focused on reducing involvement in criminal activity?
- What was helpful and unhelpful in addressing your child's involvement in criminal activity?
- What was difficult when addressing involvement in criminal activity?

SCHOOL EXCLUSION/ATTENDANCE CONCERNS

- What did you do with the MST therapist on improving your child's school attendance/exclusions*? (how did the MST therapist work with the school to address this issue?)*
- What was helpful/unhelpful in addressing schooling concerns?
- What was difficult in addressing schooling concerns?

SUBSTANCE MISUSE

- What did you do with the MST therapist about your child's substance use?
- What was helpful/unhelpful in addressing substance use?
- What was difficult about addressing substance use?

AGGRESSIVE BEHAVIOUR

- What did you do with the MST therapist about your child's aggressive behaviour?
- What was helpful/unhelpful in what they suggested to address aggression?
- What was difficult about addressing your child's aggressive behaviour?

GOING MISSING/ABSCONDING

- What did you do with your MST therapist about your child going missing or absconding?
- What specific plans were developed to prevent this from happening? (*Any tools you found helpful?)*
- What was helpful/unhelpful in addressing this behaviour?
- What was difficult about addressing this behaviour?

COVID-19 Questions

If any treatment delivered during lockdown period, ask:

- What type of MST sessions did you have – face to face, phone, video – mixure?

- How did Covid-19 and lockdown restrictions impacted the behaviours your child engaged in?

  - (Prompt: any changes in behaviour noticed? Reduction/increase in problem behaviours? New behaviors not present before? Changes in socialising, going out, association with peers, engagement in criminal activity?)

- How did Covid-19 and lockdown restrictions impact your relationship with your child?

  - (Prompt: amount of time spent together, limited social activities, close proximity/living environment, boredom, frustration, enjoyment? improvements/deterioration in relationship?)

- What did the MST therapist do/suggest to address these lockdown related changes in behaviour or child-caregiver relationship?

  - (Prompt: any suggestions to address differing relationship with child/behaviours engaging or not engaging in during lockdown period?)

Post intervention experience:

- Did you feel there was anything missing from MST which was not addressed?

  - What do you think could have been discussed/tried which may have made a difference?

- What do you think could be have been improved generally about the MST approach?

- Having now finished your involvement with MST services, have you continued to use the advice and strategies your MST therapist recommended?

- Has this been effective?
- What in particular has helped?

- What types of activities does your son/daughter engage in now?

  - Has this changed since starting MST?
  - How did MST support/not support changes in your child's activities?
  - Did your MST therapist suggest new activities for you and your child to be involved in?

- Is there anything MST didn't touch on which was relevant to your child's involvement in neg peers/criminal activity etc which needed to be dealt with?

  - What other support may have helped?

Closing questions:

- Is there anything else you would like to say about your experience of MST?
- How have you found talking to me today?
- Do you have any questions for me before we finish today?

Appendix H: *Young person interview schedule*

Young person Interview Schedule

Pre-intervention:

- How were things at home before MST?
- What was your relationship with your parent(s)/caregiver(s) like?
  - *Can you tell me a bit about the issues you had in your relationship?*
- Before MST, what were you doing that caused concern to others? *(staying out late, not going to school, peers, substances, aggressive behavior, trouble with police?)*
- Can you tell me about the people you spent most of your time with?
  - What were they like?
  - What would you do when you were together?
  - Where would you spend your time?

Intervention:

- How involved were you with the MST work, how often did you attend?
- Did anything change for you after MST? If so, what do you think changed?
  - What do you think helped to support this change?
- What do you think your parent(s)/caregiver(s) would say has been the biggest change?
  - What would they say helped to support this change?

- What work was done to improve your relationship with your parent(s)/caregiver(s)?
- Has MST helped your family life?
- Did you notice any changes in your relationship with your parent(s)/caregiver(s) following MST?

  - What changes did you notice? *(amount of time spent at home, arguments, communication)*

- What do you think helped/did not help in making these changes?

- Did you do any work with your MST therapist about communicating with your family?

  - Was this helpful? Why was this helpful/unhelpful?

PEERS
- What did you do with your MST therapist or parents/caregivers about the people you were hanging out with?
  - What was helpful and unhelpful about this?
  - What parts of this were difficult and why?

SCHOOL EXCLUSION/ATTENDANCE
- What did you do with the MST therapist or your parents/caregiver(s) around your attendance at school or missing school?

ABSCONDING
- What did you do with your MST therapist about going missing or coming home after your curfew?
  - What was helpful/unhelpful about this work?
  - What parts of this were difficult and why?

CRIMINAL ACTIVITY
- What did you do with your parents/caregivers or MST therapist around getting into trouble with the police?
  - What was helpful/unhelpful about this work?
  - What parts of this were difficult and why?

SUBSTANCE USE
- What did you do with your parents/caregivers or MST therapist about your use of drugs/alcohol?
- What was helpful/unhelpful about this work?
- What parts of this were difficult and why?

AGGRESSION

- What did you do with your parents/caregivers or MST therapist about getting into fights with others?
- Did MST help with the amount of fights you were getting into with others – family, peers?
- What was helpful/unhelpful about this?
- What parts were difficult and why?

COVID-19 Questions

If any treatment delivered during lockdown period, ask:

- How did Covid-19 and lockdown restrictions affect the behaviors you were engaging in?

  - (Prompt: any changes in behaviour noticed? Reduction/increase in problem behaviours? New behaviors not present before? Changes in socialising, going out, association with peers, engagement in criminal activity?)

- How did Covid-19 and lockdown restrictions impact your relationship with your caregiver?

  - (Prompt: amount of time spent together, limited social activities, close proximity/living environment, boredom, frustration, enjoyment? improvements/deterioration in relationship?)

- What did your MST therapist do/suggest to address these changes in behaviour or child-caregiver relationship?

  - (Prompt: any suggestions to address differing relationship with child/behaviours engaging or not engaging in during lockdown period?)

Post intervention:

- Having now finished your involvement with MST services. Are there aspects of the work which you or your parents/caregivers have continued to do?

  - Has this been effective?

- What is it about this that has helped?

- What types of things do you do with your time now?

  - Has this changed since starting MST?
  - How did MST support/not support changes in how you spend your time?

- Are there other factors which effect who you spend time with which were not addressed with MST?

  - What else may have helped this?

Closing questions:

- Is there anything else you would like to say about your experience of MST?
- How have you found talking to me today?
- Do you have any questions for me before we finish today?

Appendix I: *Carer information sheet*

Information for Caregivers
Royal Holloway University of London

YOUNG PEOPLE AT RISK OF EXPLOITATION OR GANG INVOLVEMENT AND THEIR CAREGIVERS EXPERIENCE OF MULTISYSTEMIC THERAPY.

Introduction
My name is Holly Wake, and I am working on a study which is interested in asking young people who may be at risk of exploitation or gang involvement and their caregivers about their experiences with Multisystemic Therapy (MST).

The Study
This study is interested in exploring your views on what was helpful and unhelpful about MST and what factors influenced positive change for your family now that your involvement in MST is finished.

What will I have to do if I take part?
If you agree to participate, we would like to talk to you about your personal experiences of MST and what has impacted change since finishing MST. Our discussion with you should last about an hour and will be tape recorded with your permission.

Do I have to take part?
No. Participating in this project is completely voluntary. If you do not want to take part, you do not have to give a reason and no pressure will be placed on you to try and change your mind. If you decide to take part, you have the right to pull out of the discussion at any time.

If I agree to take part what happens to what I say?
All the information you give us is confidential. The audio taped recording of our discussion will be stored securely and will only be listened to by the researchers involved in this study. Any specific thoughts or views you have about the MST project will not be disclosed to your individual MST therapist. However, if in the course of our discussions, we learn that someone is seriously planning to harm another or themselves or commit criminal damage then we would need to inform the MST lead at the site in which you received treatment. We will however discuss this with you first to explain why we might have to break confidentiality.

What will happen to the information I give?
A transcript of the interview will be produced by myself as the researcher. Your name and contact details will be kept separately from the transcript and any details that could be used to identify you will be removed from the transcript. Only myself and my research supervisors will have access to the anonymised interview transcripts and

interview recordings. Any extracts from what you say that are quoted in written work will be entirely anonymous. All electronic and personal data will be stored on a password protected computer. All digital recordings will be destroyed after completion of the project. Once the study is completed, transcripts will be stored securely on a password protected and encrypted memory stick for 10 years.

Royal Holloway, University of London is the sponsor for this study and is based in the UK. We will be using information from you and your child in order to undertake this study and will act as the data controller for this study. This means that we are responsible for looking after both you and your child's information and using it properly. Any data provided during the completion of the study will be stored securely on password protected local servers.

Royal Holloway is designated as a public authority and in accordance with the Royal Holloway and Bedford New College Act 1985 and the Statutes which govern the College, we conduct research for the public benefit and in the public interest. Royal Holloway has put in place appropriate technical and organisational security measures to prevent personal data from being accidentally lost, used or accessed in any unauthorised way or altered or disclosed. Royal Holloway has also put in place procedures to deal with any suspected personal data security breach and will notify you and any applicable regulator of a suspected breach where legally required to do so.

To safeguard your and your child's rights, we will use the minimum personally identifiable information possible that is linked to their data (i.e., age, ethnicity). The lead researcher will keep the anonymous data gathered from the study for 10 years after the study has finished. Qualified individuals, with an approved purpose (e.g., data quality and analyses checking) may be permitted to view the anonymised data file. If the study is published in a relevant peer-reviewed journal, the anonymised data may be made available to third parties to allow other researchers to evaluate the conclusions drawn from the data. The people who analyse the information will not be able to identify you or your child.

You can find out more about your rights under the GDPR and Data Protection Act 2018 by visiting https://www.royalholloway.ac.uk/about-us/more/governance-and-strategy/data-protection/ and if you wish to exercise your rights, please contact dataprotection@royalholloway.ac.uk.

Please keep this part of the sheet yourself for reference. Please feel free to ask any questions. You may wish to print a copy of the consent form, or may contact the researchers for a word version of this information. This study has been approved by the Royal Holloway Research Ethics Committee.

Reporting the findings of the study
A report will be written about the findings of this study. In that report the results will be presented in such a way that no one can identify your child, your family or know that you participated. In other words, we can guarantee that information about you will be anonymous because we will talk about groups not individuals.

Conclusions

We hope that what we learn in this study may be used to help other young people and their families. It is not anticipated that you will experience any psychological distress as a result of our discussions. If, however, you become uncomfortable when we talk, we will of course stop discussion and think about any possible support you may need. We also provide you with a debrief sheet which will have links to support after this interview if it is needed.

To thank you for taking part in the discussions we would like to give you a small token of goodwill of a £10 shopping voucher. If your child would also like to take part in an interview, they too will receive a £10 shopping voucher.

Please contact me if you have any further questions about your participation and the study. You can contact me via the number below.

Researcher
Holly Wake
Psychology Department
Royal Holloway University of London
Egham
Surrey
TW20 0EX
Tel: 07502426099

Internal Research Supervisor	**External Research Supervisor**
Dr Emily Glorney	Dr Simone Fox
Law Department	South London and Maudsley NHS
Royal Holloway University of London	Foundation Trust
Egham	Tel: 07825 905384
Surrey	
TW20 0EX	
Tel: 01784 414636	

Department of Psychology

Participant Information Sheet – Young Person

Young people and their caregivers' experiences of Multisystemic therapy.

My name is Holly Wake and I am studying to be a Psychologist. As part of my training, I am doing a project for my course.

I would really like to hear about your experience of Multisystemic Therapy and what you think helped or didn't help you and your family.

Our talk would be private and will be over the phone or video call. I will not tell your teachers or your family what you say.

But, if you tell me something that makes me feel worried about your or someone else's safety I will have to tell someone about this.

You can ask for the interview to stop at any time. It will take no longer than one hour and will be audio recorded.

You can say yes or no. It is up to you whether you take part.

If you do decide to take part you may become a bit upset by some of the things that we talk about. If this happens you can take a break or stop the interview.

If you do want to take part, please ask someone to help you read the form. If you would like to talk to me, I would be very grateful if you could sign the attached form. If you decide to take part and talk with me, I will give you a £25 shopping voucher to thank you for your time.

I will telephone you soon, to ask if you have any questions about the project. Then we can arrange a time to meet and talk about your experience of MST.

Thank you for taking the time to read this letter and for your help.

Yours sincerely,

Holly Wake

Appendix K: *Carer consent form*

Consent Form – Caregiver

Royal Holloway University Department of Psychology

TITLE OF STUDY: YOUNG PEOPLE AT RISK OF EXPLOITATION OR GANG INVOLVEMENT AND THEIR CAREGIVER'S EXPERIENCES OF MULTISYSTEMIC THERAPY (MST).

Please complete the following:

(Please circle answer)

1. I have read the information sheet which describes this study **Yes/No**

2. I have had an opportunity to ask questions and discuss this study **Yes/No**

3. I have received satisfactory answers to all my questions **Yes/No**

4. I understand that I do not have to take part in this study and I can decline my involvement at any time without giving a reason **Yes/No**

5. I agree for my information to be shared with authorised people from Royal Holloway University and understand that all personal data relating to me is held and processed in the strictest confidence, and in accordance with the Data Protection Act (2018). **Yes/No**

6. I agree for the named researcher to access to my demographic information notes from case held within the MST team. **Yes/No**

7. I have read and understood the remits of confidentiality regarding risk **Yes/No**

8. I agree to being contacted for my comments on the findings of the study. **Yes/No**

9. I agree for anonymised quotes from my interview to be used in publications. **Yes/No**

10. Do you agree to take part in this study? **Yes/No**

Signed_____ **Date**_____

Name in Block Letters_____

Signature of researcher

_____

Appendix L: *Young person consent form*

Department of Psychology

Participant Consent Form – Young Person
Young people and their caregivers experience of Multisystemic therapy.

If I talk to Holly about her project:

- I understand that the interview will be recorded.

- I understand that the interview will be private.

- I understand that the information I give will be shared with a small

  number of other people involved in this research.

- I understand that I can stop the interview at any time.

If you understand the statements above, you now need to decide whether you would like to take part in the project.

I have decided that I would like to talk to Holly about her project.

Please put a circle round No or Yes.

No   **Yes**

Signed...

Please print your name...

The researcher also needs to sign the form

Researcher's signature...

Researcher's name..

Appendix M: *Carer assent form*

ROYAL HOLLOWAY UNIVERSITY OF LONDON
Department of Psychology

Consent Form – Caregiver consenting for Young Person

TITLE OF STUDY: YOUNG PEOPLE AT RISK OF EXPLOITATION OR GANG INVOLVEMENT AND THEIR CAREGIVER'S EXPERIENCES OF MULTISYSTEMIC THERAPY (MST).

Please complete the following:

(Please circle answer)

1. I have read the information sheet which describes this study **Yes/No**

2. I have had an opportunity to ask questions and discuss this study **Yes/No**

3. I have received satisfactory answers to all my questions **Yes/No**

4. I understand that my child does not have to take part in this study, and I can decline their involvement at any time without giving a reason **Yes/No**

5. I agree for my child's information to be shared with authorised people from Royal Holloway University and understand that all personal data relating to my child is held and processed in the strictest confidence, and in accordance with the Data Protection Act (2018). **Yes/No**

6. I agree for the named researcher to access to my child's demographic information from case notes held within the MST team. **Yes/No**

7. I have read and understood the remits of confidentiality regarding risk **Yes/No**

8. I agree for my child to be contacted for their comments on the findings of the study. **Yes/No**

9. I agree for anonymised quotes from my child's interview to be used in publications. **Yes/No**

10. Do you agree for your child to take part in this study? **Yes/No**

Signed_____ **Date**_____

**Name in Block
Letters**_____

Signature of researcher

_____

Appendix N: *Debrief sheet*

DEBRIEF INFORMATION

Study title: Young people at risk of exploitation and their caregivers' experience of multisystemic therapy.

Name of researcher: Holly Wake (supervised by Dr Simone Fox & Dr Emily Glorney)

Thank you for your participation in the above research study. The aim of this study is to explore young people's (who are at risk of exploitation) and their caregivers' experience of multisystemic therapy (MST). The study aims to contribute to the MST knowledge base and to enhance the delivery of MST to support the needs of young people and caregivers where there are exploitation concerns. If you have any questions or concerns about your participation in this study or if you would like to withdraw your data, please do not hesitate to contact a member of the research team using the contact details provided below.

Researcher Contact Details:

Holly Wake (Trainee Clinical Psychologist & Chief Investigator)
Email: holly.wake.2018@live.rhul.ac.uk

Dr Simone Fox (Research Supervisor)
Email: simone.fox@kcl.ac.uk

Dr Emily Glorney (Academic Supervisor)
Email: emily.glorney@rhul.ac.uk

We do not expect people to feel worse after participating in this study, but sometimes taking part in research studies can raise difficult thoughts and feelings. If you have experienced this, please contact your GP if you would like support with difficult emotions or if you have concerns about your mental health.

The following organisations may also be able to support you:

The Samaritans - A charity which provides anonymous emotional support over the telephone, which is available 24 hours a day.
Tel: 116 123 (free)
Website: https://www.samaritans.org

Banardos – A charity which supports young people and families with mental health and wellbeing.
Website: https://www.barnardos.org.uk

Young minds – A charity which offers support to young people and their parents

Parents telephone helpline: 0808 802 5544 (Mon-Fri 9.30m-4pm)
Website: https://youngminds.org.uk/

Catch 22 – A service which delivers a wide range of support services to help resolve complex difficulties experienced by young people and their families/carers.
Website: https://www.catch-22.org.uk/expertise/young-people-and-families/

[Insert Local Safeguarding Children's Duty Team] - if you have concerns about a child's wellbeing and need advice and support, please call the duty number on [Insert local telephone number].

Thank you again for taking the time to participate in this study.

Appendix O: *Transcript and coding sample*

Transcription	Initial coding	Focused coding
P: Yeah, yeah, because we were referred to early help first, so I had an early help worker but you know that just, as much as early help are brilliant, it just wasn't enough support as we'd only see them once a week, so it wasn't enough, wasn't the right amount of support, we needed more in depth support and it was actually me who pushed for MST because I heard about them through a friend who had been through a similar situation with her daughter, so it was me who actually sort of said I've heard about MST, is there any chance that we could be referred and that kinda how we got the ball rolling. R: You've mentioned some of the things which were going on, X going missing and being involved with people out of the city, and you said she was getting in with the wrong crowd. Could you tell me a bit more about what you think or what you know those people were involved with or what Y may have been involved with? P: Ok so they were older, because X was only 14, she was 13 the first time she went missing. So they were older. When she was coming back after disappearing she was coming back with new clothes which was like where have you got them from because I haven't give you the money for them, and what was happening was, she was.. two guys, 24 and 27, who basically were trying to get Y to run the county lines and then started to buy her clothes and say look you can have the latest phone, you can have this and at 14, she was obviously quite drawn in by the idea of a new phone, you know being given these clothes for free but obviously nothing comes for free when your involved with those kind of things, so I think initially they were trying to get her to take drugs but she wouldn't take drugs so there was just so many things that were going on. Then there was shop lifting, er so they were telling her what to go in and get from the shops and there was	MST provide high level of support Grooming process Exploited by adults County lines	Intense support Associating with negative adults

a lot of drugs involved, a lot of drugs involved, ecstasy, then there was ermm I don't know what is was but basically it was like a really really strong pain killer erm so and I think, I think it was the November when MST got involved because that's when Y had ended up in hospital because she was given two ecstasy tablets and she was found by a member of in a park, she'd collapsed so then she was taken to hospital in an ambulance and I then pushed for MST to get involved, because it was like I cant do it anymore, I cant, like I feel like I'm.. and it was really difficult as well because every time the police brought her back they would say well don't have a go at her about it because she'll leave again, so then I felt as a parent well your getting away with it. You know its not ok for you to disappear for 2,3,4 days on the trot, me have no idea where you are, she blocked me from her social media and everything, you know and it was.. and I was ringing friends and messaging people that knew of her, and it was really hard when they would say you know I haven't seen her or someone is saying they've seen her in (location) and I'm like what, what do you mean she was in (location), who does she know in (location) erm so but apparently (location) and (location) was the county lines and that's where the drugs and everything were involved, and also (location) as well, apparently she was spotted a few times in (location) so yeah with regards to what she was doing it was the crime, the shoplifting, whether she did ever sell any drugs, I don't know. R: Thank you for explaining that. It's so difficult, it's like what you are saying its difficult as a parent to know what is the best thing to do in that situation, it's so so difficult. What would you say you were most worried about with her? What were you worried might happen? P: Errr CSE, because she was, this is the other thing as well like, they were European, they were Romanian, Lithuanian, and you know the police sort of said to me, don't try and get on to her too much because if she goes, because they run a lot of like sort of gangs, do you know like with young	Not reacting Difficult to not react Feeling like their child is getting away with behaviour Connecting with others parents/community to find the YP	Creating relationships with other parents to manage missing episodes

girls, they just like said the last thing you'd want is if she gets there, if they fully get grips with X, then they said I could lose her forever. Sooo, it was that. So it was a case of, when she came back, as much as I was hurt, angry. So I was hurt because she'd done it to me because she was going away, absconding in the first place, then I was angry when she come back for putting me through that do you know what I mean. Then, because I couldn't say anything or talk about it, because out of fear of her going again, that's what was the hardest thing, because what do we do, do you know what I mean because I remember the first time she absconded and she come back, I was like "how could you do this to me, I've been worried sick", I absolutely went mad and she went again and she was gone again for another three days" and that's when the police said to me just don't do it, find another way, but its so difficult because your emotions are all over the place, your angry, your hurt, your worried, your scared, you know. There were times I just thought, she could be dead, the police are going to knock on the door and she's dead, or she's been raped, do you know what I mean, there was just so many things. It's just, its, just a rollercoaster of emotions.	Don't react with anger Reacting makes it worse Hard not to react to going missing Difficult to control carer emotions	Changing parenting style
P: Yeahh, X stopped absconding. The good thing with MST is that they were more there for me, they were there for X, but more for me to support me. So you know. I think the biggest thing that we noticed is that she stopped absconding, but her self-harm went up. So, you know, but that's because her mental health was getting worse, but yeah and we communicated better. Even if it was through text message, we were communicating better than we were before. Because, with MST we sat there, we did a plan, we planned what I was going to do when she absconded and also like they gave me ideas of, they made me think about things, so I know that X loves food, so it was kind of ways I could entice X to come back home but making it feel like it was her decision that me kind of forcing her to come back home. So we went through all those kind of	Stopped going missing Support for parent Communicated better with daughter Increase draws into the home Not forcing her to come home	Reductions in referral behaviour Improved communication between carer and young person Pulling young person into the home

things that X likes about being at home. It's like MST said to me, she comes home eventually, so she does want to be, she does want to come home in the end but when she was going, she wasn't taking any clothes or anything so she'd be gone for like 4 days and be in the same clothes and she would come back and she was filthy. They just gave me other ideas of how to communicate and how to handle certain situations.	Making YP feel like it was their decision	Enticing young person home