Understanding the Mental Health Needs of Young People involved in Gangs

A Tri-borough Public Health Report produced on behalf of the Westminster Joint Health and Wellbeing Board

London Borough of Hammersmith and Fulham | The Royal Borough of Kensington and Chelsea | Westminster City Council

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"Most mental illness begins before adulthood and often continues through life. Improving mental health early in life will reduce inequalities, improve physical health, reduce health-risk behaviour and increase life expectancy, economic productivity, social functioning and quality of life. The benefits of protecting and promoting mental health are felt across generations and accrue over many years."

- No health without public mental health[1]

Executive Summary

Street gangs and associated serious violence have been a growing concern in the UK over the past decade. They are concentrated in poor, urban areas with high crime rates and multiple social problems. The mental health needs of young people involved in gangs have until recently been overlooked. This report is an attempt to address this situation, and to provide recommendations for local commissioners.

The problem

Young people involved in gangs have much higher rates of a broad range of mental health problems. These higher rates (compared to both the general and young offender populations) include:

- Conduct disorder (in children and adolescents) and antisocial personality disorder in young adults, possibly due to common risk factors for gang membership and conduct disorder
- Anxiety disorders, possibly due to fear of violent victimisation
- Psychosis, possibly due to high cannabis use
- Suicide attempts, possibly due to impulsive violent acts directed inwardly

In addition, young people involved in gangs have higher rates of drug and alcohol misuse.

Box 1: Prevalence of mental health problems in young gang members

In a sample of 100 young gang members, it could be expected that:

- 86 will have conduct problems (<18 years) or antisocial personality disorder (18+ years)
- 67 will have alcohol dependence
- 59 will have anxiety disorders (including post traumatic stress disorder)
- 57 will have drug dependence (mainly cannabis)
- 34 will have attempted suicide
- 25 will have psychosis
- 20 will have depression

Possible solutions

Psychological interventions primarily aim to improve mental health. Many interventions also have the added benefit of reducing re-offending, an important 'wider determinant' of health. There have been virtually no studies on psychological interventions delivered specifically to gang members. As a result, this report draws on the evidence base of psychological interventions delivered to the general population and young offenders in order to improve mental health as well as reduce re-offending.

There is strong evidence of the importance of the relationship with the person providing care (therapist/social worker/key worker). A qualitative study of vulnerable young people in London demonstrated how they valued the role of a key worker in less formal settings, and had not found formal psychotherapy with scheduled appointments helpful.

Where mental health problems require specialist input, there are evidence-based interventions for the treatment of mental health problems in children, adolescents and young adults. These fall into

two major categories: cognitive behavioural interventions and systemic interventions. Cognitive behavioural therapy (CBT) is delivered to individuals or groups, and aims to re-evaluated patterns of thinking and behaving that are considered distressing or unhelpful. Systemic interventions, including family therapy and multi-systemic therapy (MST), are based on socio-ecological theories of human development, and aim to change dysfunctional social environments, including family, school and neighbourhood influences. These two categories of intervention are also effective in reducing reoffending.

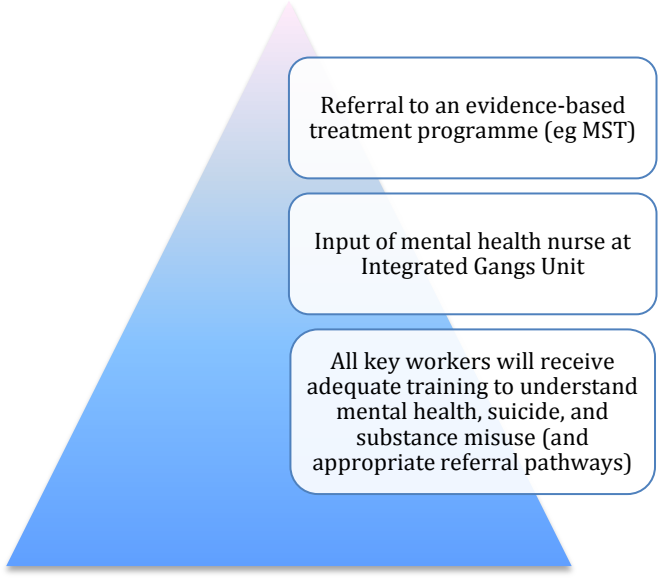
Recommendations

This report has demonstrated extremely high levels of mental health need in young people involved in gangs. Although some of the recommendations are specific to Westminster's Integrated Gangs Unit, they can also be applied across the tri-borough, as part of local young offending teams. A 'ladder of intervention' (Figure 1) is recommended, so that all young gang members who are engaged with tri-borough services, have some level of benefit. The main recommendations are:

- To increase the mental health literacy and skills of key workers working with young people involved in gangs, thus supporting their essential therapeutic role
    - By commissioning a 5 day mental health awareness training course for all key workers who work with young gang members
    - By ensuring that all key workers working with young gang members attend the 3 day tri-borough drug and alcohol awareness training
- To maintain links with local NHS mental health services
    - By commissioning ongoing input of a psychiatrist and mental health nurse into Westminster's Integrated Gangs Unit
- To increase access to multisystemic therapy for young people in gangs
    - By expanding the current tri-borough MST pilot to prioritise gang members (12-17 years, with conduct disorder and a history of offending)

All these recommendations should be fully evaluated when implemented.

Figure 1: Intervention ladder to tackle the mental health needs of young people involved in gangs in Westminster



1 Introduction

1.1 Background

Gangs are defined as 'a relatively durable, predominantly street-based group of young people who see themselves (and are recognised by others) as a discernible group for whom crime and violence is intrinsic to identity and practice'.[2] Street gangs and associated serious violence have been a growing concern in the UK over the past decade, and are concentrated in poor, urban areas, with high crime rates and multiple social problems.[3] It has been reported that almost 50% of shootings and 22% of serious violence in London is committed by known gang members.[3]

It is estimated that around 6% of young people (10-19 years) belong to a gang in the UK.[4] This figure may be higher in certain deprived areas, and peaks at around 15 years.[4] A recent survey of young men (18-34 years) in Hackney, found that 8.6% reported gang membership.[5] Predictors of gang membership include antisocial influences in the community (such as neighbourhood young offending), antisocial influences in the family (such as a sibling involvement in antisocial behaviour) and amongst peers, educational underachievement and early initiation of problem behaviour. These negative exposures act cumulatively, with the greater number of negative influences that a child is exposed to, the greater the likelihood of joining a gang.[6]

People join gangs for many reasons, not least to fulfil the 'universal needs among young people for status, identity and companionship'.[7,8] There is some evidence to suggest that low self-esteem has a significant relationship with the characteristic features of gang membership: aggression, antisocial and offending behaviour.[9] Other important psychological motivations contributing to gang membership include the need for money, protection against victimisation, connectedness to others in the gang, the need for status and respect, and excitement.[10]

This report has been produced by the Public Health Department in Inner North West London, in response to concerns about levels of gang-related serious youth violence in Westminster. The 'Your Choice' Programme was established in 2011 to tackle this issue in the borough for young people aged 10-24 years, and involves prevention, identification, diversion and enforcement strands. [11] A central feature of the programme is the Westminster Integrated Gangs Unit, which employs community outreach workers to work intensively with young people identified as at risk of or involved with gangs. A recent independent peer review of the programme assessed 'Your Choice' to be 'an excellent programme of work', but noted the lack of health sector involvement, particularly the lack of mental health interventions.

1.2 Aims

The main objectives of this report are to answer the following questions:

- What is the prevalence of mental health problems in young people involved in gangs?
- How does this differ to the prevalence of mental health problems in the general population of children, adolescents and young adults in the UK?
- Is substance misuse (drug and alcohol) associated with gang membership?
- Are there effective psychological interventions to tackle the mental health problems in young people involved in gangs?
- What are the recommendations to local commissioners?

The key audience for this report is commissioners of services for young people involved in gangs (primarily for Westminster, but can be applied across the tri-borough). This includes the local council, local clinical commissioning groups, and other sources of funding, such as the Home Office. It will be used in conjunction with findings from a 3 month pilot in Westminster Integrated Gangs Unit (June-September 2013). In this pilot, a community psychiatric nurse based at the Unit works with young people to conduct mental health assessments, in order to determine the mental health needs of this cohort.

1.3 Methods

In order to answer the main research questions, a formal review of the published literature was undertaken using the main medical, psychological and social care databases. In addition, an internet search yielded much of the 'grey literature' (non-peer-reviewed), including key policy documents and research reports. Where necessary, people involved in this area of work were consulted for further information.

1.4 Report structure

The results are outlined in Section 2 ('The Problem') and Section 3 ('Possible Solutions'). A discussion of the findings, including strengths and limitations of the report is given in Section 4. Recommendations for local commissioners are made in Section 5.

1.5 Mental health definitions

Mental health definitions are provided in Appendix 1.

2 The problem:

2.1 Increased prevalence of mental health problems among young people involved in gangs

Six studies were identified that all demonstrate **increased rates of mental health problems amongst gang members**. These rates are higher than both the general population and the young offender population. The first study is based on young men (aged 18-34 years) and demonstrates significantly increased rates of mental health problems across many psychiatric diagnoses.[5] The other five studies are based on a younger cohort (10-19 years) and confirm increased rates of mental health problems amongst gang members.[12,13,14,15,16] across all three major categories of mental health problems in children and adolescents:

- Emotional problems (including anxiety and depression)
- Conduct problems (including aggressive and antisocial behaviour)
- Hyperactivity problems (including inattention and impulsiveness)

The background prevalence of mental health problems among the general population of children, young people (5-16 years) and adults in the UK, and the prevalence in the young offending population, should be noted for comparison (table 1).

Table: 1 Prevalence of mental health problems among children and young people, adults and young offenders in UK community samples

Diagnosis	Prevalence among children and young people (5-16 years)[17]	Prevalence among adults (18+ years) [18]	Prevalence among young offenders (11-15 years)[19]
Conduct disorder	5.8%		
Antisocial personality disorder		0.3% (1.7% in 18-34 years)	
Anxiety disorders	3.3%	14% (9% mixed anxiety and depression, 5% generalised anxiety disorder)	10%
Depression	0.9%	2%	18%
Post Traumatic Stress Disorder	0.2%	3%	9%
Hyperkinetic disorders	1.5%	2.9% had 5 or 6 symptoms of Attention Deficit Hyperactivity Disorder	7% with hyperactivity
Suicide attempts		5.6%	9% history of self harm
Psychosis		0.4%	5%
Alcohol dependence		5.9%	11%
Drug dependence		3.4%	20%

Study 1 (Coid, 2013)[5]

The largest study was a cross-sectional survey administered to a nationally representative sample of 4664 young men (aged 18-34 years) in the UK. The survey also oversampled men from areas with high levels of gang-related violence, such as Glasgow and Hackney in London. Participants were asked about gang violence, attitudes towards and experience of violence, and use of mental health services. Psychiatric diagnoses were measured using standardized screening instruments.

The survey categorised men into three groups: gang members, violent men (not in a gang) and non-violent men.

Compared to non-violent men, gang members had increased rates of:

- **Antisocial personality disorder (57 times higher)**
- **Suicide attempts (13 times higher)**
- **Psychosis (4 times higher)**
- **Anxiety disorder (2 times higher)**

Table: 2 Prevalence and adjusted odds ratios of mental health problems in gang members (n=108)

Diagnosis	Prevalence in gang members (%)	Adjusted Odds Ratio (how much higher the rate is in gang members compared to non violent men)
Antisocial personality disorder	86	57 (Confidence Interval 24,138)
Suicide attempts	34	13 (CI 8,22)
Psychosis	25	4 (CI 2,13)
Anxiety disorder	59	2 (CI 1,5)

The only psychiatric diagnosis that had lower rates amongst gang members, compared to non violent men, was depression (when adjusted for confounding factors).

Table 3: Prevalence and adjusted odds ratios of depression in gang members (n=108)

Diagnosis	Prevalence in gang members (%)	Adjusted Odds Ratio
Depression	20	0.18 (CI 0.05, 0.63)

The study also found that **gang members were significantly more likely than non-violent men to have utilised mental health services**, with gang members being:

- 8 times more likely to have consulted a psychiatrist or psychologist
- 8 times more likely to have been admitted as a mental health inpatient
- 5 times more likely to have used psychotropic medication

The study found that **gang members' attitudes and experience of violence were significantly different to non-violent men**, with gang members being:

- 68 times more likely to be violent if disrespected
- 62 times more likely to have violent ruminations
- 10 times more likely to experience violent victimization.
- 9 times more likely to fear violent victimization

Study 2 (Padmore, 2013)[12]

This UK study is based on data yet to be published (Padmore, 2013). It is also a cross-sectional survey, but of a younger age group (11-17 year olds) from two inner city secondary schools and one young offenders' institution. It found that gang members:

- were **significantly more hyperactive and inattentive** than both non-gang offenders and the general population.
- were **significantly more likely to report frequent serious offences** than any other group.

- had **significantly more emotional problems** than the general population.

Study 3 (Centre for Mental Health, 2013)[13]
This UK report is based on an analysis of data collected for more than 8000 young people (10-18 years) from 37 youth point of arrest health screening initiatives in England in 2011-12. It found that, of the sample of girls involved in gangs:

- 26% were identified as having a suspected diagnosable mental health problem
- 30% were identified as self-harming or at risk of suicide
- 40% showed signs of behavioural problems before the age of 12 years.

In addition, compared to other women in the sample, young women linked to gangs were:

- **3 times more likely to be identified with signs of early persistent conduct problems**
- **5 times more likely to be involved in sexually risky or harmful behaviour**. The report identified these behaviours to include sexual activity as a gateway or initiation into gangs, sexual activity with multiple partners, regular exposure to sexually degrading experiences, young women feeling under threat to comply with sexual demands from male gang members and rape. Such experiences will have an impact on mental health.
- **2 times more likely to use violence**

Study 4 (Corcoran, 2005)[14]
A US study of 83 young people (aged 13-19 years) in prison, found that compared to non-gang members, gang members had:

- **significantly more mental health symptoms** (including anxiety, suicidal attempts and thought problems)
- **significantly more 'external' behaviour problems** (such as offending behaviour and self-destructiveness)

Study 5 (Macdaniel, 2011)[15]
Another US study used data from the 2004 Youth Violence Survey of 4131 high school students (aged 12-16 years) found that gang membership was:

- **associated with depressed mood and suicidal ideation** (the only two mental health symptoms assessed in the survey).

Study 6 (Madan 2011)[16]
The final US survey of 589 young people using data from the 2004 Youth Violence Survey found that gang membership was:

- **associated with suicidal behaviour and offending behaviour**, but not with anxiety or depression.

Appendix 2 provides a more detailed description of these studies.

2.2 Increased prevalence of drug and alcohol misuse among young people involved in gangs

There are only two UK studies of drug/alcohol use among gang members.

Coid, 2013 [5]
The major UK study on the prevalence of mental health problems among gang members also assessed for alcohol and drug dependence. Compared to non-violent men, gang members had increased rates of:

- **Drug dependence (13 times higher)**
- **Alcohol dependence (6 times higher)**

Table 4: Prevalence and adjusted odds ratio (compared to non violent men) of drug and alcohol dependence in gang members

Diagnosis	Prevalence in gang members (%)	Adjusted Odds Ratio
Drug dependence	57	13 (CI 4,44)
Alcohol dependence	67	6 (CI 3,14)

The survey did not assess which drugs gang members were dependent on. However, a second older UK study assessed this.

Bennett and Holloway, 2004 [20]
This study used data from the New English and Welsh Arrestee Drug Abuse Monitoring (NEW-ADAM) programme. This programme collected a wide range of information on the criminal behaviour of 2725 eligible arrestees across 16 representative sites in England and Wales between 1999 and 2002. The results demonstrated that, compared to arrested non-gang members, arrested gang members were:

- **significantly more likely to have used cannabis** in the past 12 months
- **not significantly different with regards to drug dependency or expenditure** on drugs in the past week
- **significantly less likely to both use heroin and to report injecting a drug**
- **less likely (but not significantly) to have used crack and cocaine**

Most evidence regarding substance misuse among gang members comes from the USA, and shows mixed results.[21] Some studies suggest increased use of drugs and alcohol, particularly in association with frequent 'partying'[21] while others describe how gangs do not permit excessive drug use as their members will be unreliable in criminal activity.[22] The current literature search yielded 12 US studies investigating the issue of drug and alcohol misuse in the USA, and on the whole demonstrate increased drug use among gang members. Appendix 3 provides more a more detailed summary from these US studies.

2.3 Increased prevalence of learning disabilities among young gang members

Learning disabilities may be a contributing factor to poor educational attainment, gang membership, poor mental health and substance misuse. A learning disability is defined by three criteria: an IQ score of less than 70, significant difficulties with everyday tasks, and onset prior to

adulthood.[23] While there are no specific studies investigating the prevalence of learning disabilities in gang members, there are studies that suggest increased prevalence among young offenders. It is estimated that the prevalence of general learning disability in custody is 23-32% (compared to 2-4% in the general population) and specific learning difficulties such as dyslexia may be as high as 43-57% in young offenders (compared with around 10% of the general population).[23] In addition, young offenders also have poorer speech and language skills, compared to the general population.[23] It is likely that many young offenders with learning disability, particularly in the mild range of impairment, may go undiagnosed, due to the predominance of their challenging behaviour.

2.4 Stigma associated with mental health problems

Stigma is defined as a sign of disgrace or discredit, which sets a person apart from others.[24] Stigma is a major reason why people who would benefit from mental health services do not pursue or disengage from them.[25] A study of 472 secondary students in the UK showed that most of the vocabulary used to describe mental health problems was derogatory.[26] While there is no study investigating stigma of mental illness among gang members, it is likely that there will be reluctance to engage with 'mental health' services.

2.5 Possible explanations for the increased prevalence of mental health problems and substance misuse among young gang members

The high prevalence of mental health problems in young people involved in gangs is not surprising given the shared risk factors for gang membership and mental health problems.

Possible explanations for this increased prevalence of mental health problems amongst gang members include the following:

- Overlapping risk factors for gang membership and mental health problems (Box 2)
- Young people with mental health problems join gangs: 'the selection hypothesis'
- Gang membership facilitates mental health problems: 'facilitation hypothesis'
- 'Selection and facilitation' work interactivity: 'enhancement hypothesis.[27]

Box 2: Risk factors for mental health problems in childhood

- From low-income households
- From families where parents are unemployed
- From families where parents have low educational attainment
- Are looked after by the local authority
- Have disabilities (including learning disabilities)
- From black and other ethnic minority groups
- Are in the criminal justice system
- Have a parent with a mental health problem
- Are misusing substances
- Are refugees or asylum seekers
- Are being abused/history of abuse

Source: National Psychiatric Morbidity Survey [17]

Conduct disorder and antisocial personality disorder: The high prevalence of these mental health problems is not surprising given the common risk factors for gang membership and these mental health problems. Violence before age 15 years persisting into adulthood is a criterion for the diagnosis of antisocial personality disorder.[5] It is known that violence and offending behaviour escalate during gang membership.[28] It is also known that early behaviour problems are a significant risk factor for prolonged gang involvement.[29]

Anxiety disorders, post traumatic stress disorder (PTSD) and psychosis: Coid et al investigated whether the high rates of mental health problems amongst gang members were due to their attitudes and experiences of violence.[5] Only anxiety disorders and psychosis could be partly explained by these factors, including violent ruminative thinking, violent victimization and fear of further victimization. It should be noted that the symptoms of anxiety and occasionally psychotic symptoms can be associated with PTSD.[5] The study authors hypothesise that exposure to violence may contribute to the development of PTSD in gang members. This has been corroborated by other studies which demonstrate that exposure to community violence, especially by victimisation or witnessing violence, has been associated with post traumatic stress and internalising (e.g. anxiety) and externalising (e.g. aggression) problems in young people.[30]

Psychosis and drug dependence: The above literature suggests that gang members experience elevated rates of cannabis use and elevated rates of psychosis. The former may be due to links with the local drugs economy.[20] Although the evidence has not investigated whether high rates of cannabis use among gang members leads to the development of psychosis in gang members, it is known that cannabis is a risk factor for the development of psychosis.[31] Indeed Coid's study suggested that violent ruminative thinking, violent victimization and fear of violent victimization could only partly explain the high rates of psychosis among gang members, but this study did not investigate cannabis as a potential contributing factor to the development of psychosis. Anecdotal comments from Westminster's Integrated Gangs Unit outreach workers suggest high use of high potency cannabis ('skunk') among young gang members in the area. It is known that 'skunk' users have an even higher risk of psychosis than those smoking cannabis of lower strengths.[32]

ADHD symptoms and substance misuse: Padmore et al found higher rates of hyperactivity and inattention in young gang members.[12] There is evidence to suggest that young people with ADHD symptoms are more likely to misuse drugs.[33]

Attempted suicide: The high rates of suicide among gang members may partly reflect other psychiatric morbidity, such as anxiety disorders and psychosis. However, it can be hypothesised that impulsive acts of violence can be directed both outward and inward.[5]

Depression: A lower rate of depression among gang members was seen in the major study[5] (when adjusted for confounding factors) and corroborated in some,[16] but not all,[15] of the other studies. The authors hypothesise two possible explanations for this. Firstly, violence is a 'displacement activity' that enhances self-esteem in order to reduce the negative effects of damaging childhood (ie gang membership and its associated behaviours reduces depression). The second hypothesis is that depressed individuals are less likely to join a gang. Since these studies are all cross-sectional studies, we are unable to determine the sequence of events between depression and gang membership.

3 Possible solutions:

What are the effective interventions to tackle the mental health problems in young people involved in gangs?

This report focuses on psychological interventions that target the cognitive, emotional and behavioural problems experienced by young people involved in gangs. While the evidence base around effective non-psychological interventions to tackle gang-related crime (including educational, vocational skills training, diversion, enforcement, criminal justice and social inclusion interventions) is minimal,[34] there is **virtually no research around the delivery of psychological therapy to gang members**. Indeed, the literature review found only one such study, [35] which was small and of low methodological quality.

It should be noted that the **primary outcome for any psychological intervention, is improvement in mental health**. Most studies on psychological interventions delivered to young offenders, however, **use a reduction in re-offending or antisocial behaviour as the primary outcome**. Both these outcomes are useful for the purposes of this report. The Public Health Outcomes Framework 2013-16 prioritises the reduction in first time entrants to the youth justice system, reduction in violent crime and reduction in re-offending levels, since these are all wider determinants of health, with both individual and population health benefits.[36]

This section will include:

- the role of the therapeutic relationship
- the role of cognitive-behavioural therapies
- the role of systemic therapies
- the role of other promising psychological approaches.

3.1 The role of the therapeutic relationship with a key worker

3.1.1 What is a key worker?

In the context of working with young people involved with gangs, key workers/outreach workers provide support and assistance to their caseload of clients. This includes support to exit the gang and to stop offending behaviour, and also to promote positive activities such as education, employment and training. Key workers help young people link up with other services, and reduce the number of professionals that the young person and their family have to deal with. Key workers/outreach workers may have a background is youth work or social work, and may be from the communities being targeted.

3.1.2 The value of the therapeutic relationship

It has been suggested that the **quality of the interpersonal encounter with the client is the most significant element in determining effectiveness in therapy**.[37] This has been demonstrated by numerous studies, which show that the quality of the relationship between the therapist and client is a consistent and strong predictor of outcomes across various forms of psychotherapy.[38] This is also the case for a wide range of professionals whose primary work

involves relationships with people, including teachers and social workers. The 'person-centred approach' widely used in counselling values being genuine, empathetic and fostering 'unconditional positive regard' for the client.[37] Key working is also based on attachment theory – which conceptualises the propensity of humans to make strong affectional bonds to particular others and explains various forms of emotional distress.[39]

3.1.3 The value of therapeutic relationships in young people involved in gangs

This report describes the work of two community-based charities working with vulnerable and excluded young people in London, including those involved in gangs: Kids Company and Music and Change UK (MAC-UK) – see boxes 3 and 4. Central to both charities is the role of a key worker, particularly in working with young people in less formal settings. These charities take a holistic, community focused approach, and incorporate the provision of psychological therapy into a broader model of care. There is evidence that gang members hold more negative attitudes towards authority [40] and as such, these charities may be more appealing to vulnerable young people.

The Kids Company approach in particular is based on psychodynamic theory, including attachment theory. It is felt that due to traumatic experiences in early childhood, there is a need for young people to feel powerful and in control. As such, acknowledging the need for psychological help, and accessing such help in a formal therapy setting, is challenging for these young people.[41]

Qualitative research, in the form of 18 semi-structured interviews of young people and key workers from Kids Company, highlighted important themes of what they valued. Some key findings:[41]

- **Young people valued centres as a 'place to hang out'**. Such a view serves to reduce their sense of exposure and vulnerability that may arise when using more formal health and social care services. Furthermore, the physical environment is seen as the first, safe 'attachment' – the so-called 'brick mother'.
- The **attachment process occurs gradually**, with initial practical assistance provided by the key worker forming the basis for trust and further more emotional engagement.
- **Young people appreciated the key worker's use of humour, flexible availability (including during times of crisis) and flexible modes of delivery**, all of which help the young person to feel safe. Conducting so-called 'corridor therapy' – conversations whilst out walking or in less formal settings (such as cafes) were particularly valued. Such encounters may feel 'safer' as the young person can move away/leave if the conversation becomes too emotionally-charged. They are also not associated with traditional power dynamics that occur in the therapy room ('patient' vs 'therapist'/'expert').
- The **majority of young people interviewed in this study had not found formal counselling and psychotherapy helpful when it involved scheduled appointments**. According to mentalization theory,[42] such a setting may be too emotionally-charged for the young person, inhibiting their capacity to 'mentalize'[a]

[a] 'Mentalization' is a form of imaginative mental activity about others or oneself, whereby the person who 'mentalizes' perceives and interprets human behaviour in terms of intentional mental states (such as desires, feelings, beliefs, purposes, etc). In mentalization theory, a failure to mentalize may damage interpersonal relationships, and may result in damaging actions/behaviours, as these actions are rarely considered accurately in mental state terms.[42]

Box 3

'Kids Company'

Kids Company is a community based charity founded in 1996, aiming to provide practical, emotional and educational support to inner-city children and young people, who have been the victims of abuse and deprivation of various kinds. Many of these children have social, emotional and behavioural problems, and at the core of Kids Company is the provision of a loving, supportive environment. Most of the work is based on 'attachment theory' and the therapeutic relationship with a key worker is a central part of the work. The charity has expanded since its origins, and its services currently reach 36 000 and intensively support 18 000 children across sites in London.

Kids Company has 3 centres in London, providing a safe, caring, family environmental in which support is tailored to the needs of the individual child/young person, providing food, activities and education. There is also an 'outreach' component, whereby Kids Company staff and volunteers reach out to young people in local estates and in schools.

Kids Company collaborates with several academic research centres, including neuroscientists. Research has focused on demonstrating the structural and physiological anomalies associated with prolonged stress response/hyper-arousal in children – the so-called 'violence adapting syndrome' in response to a chronic adversity including violence, abuse and neglect.[43]

Box 4

'Music and Change UK (MAC-UK)'

MAC-UK is a community-based charity founded in 2008 that works to deliver mental health interventions to young people involved in antisocial and/or gang-related activity.[44] MAC-UK has developed a model called Integrate© with the aim of reaching out to excluded young people. This approach is being piloted by multi-agency teams on three sites in London. The aims of the Integrate model are reducing serious youth violence and re-offending, getting young people engaged in training, education and/or employment or getting them back into existing services.

At the centre of the Integrate model, is a multidisciplinary team of youth workers, gang specialists, social workers and clinical psychologists, who engage young people in a community to help them lead a range of activities such as cooking, football or making music. Co-production of services is key. The team also assists in gaining qualifications and training. As such, Integrate seeks to address some of the social inequalities that may contribute to engaging in offending and antisocial behaviour.

Another component is delivering 'street therapy', in places where these young people spend time (often in cafes or stairwells in estates). As the young people get to know the professionals during their activities, this is hoped to shift their opinions of them, in order to engage in psychological therapy (such as CBT or counselling techniques).

Preliminary evaluation from the first 2 years of the charity shows promising findings: high levels of engagement, including participation in activities and street therapy. Due to the small sample size, the impact of the MAC-UK on offending behaviour is not yet established. However the Mental Health Foundation is currently evaluating the impact of MAC-UK interventions.

In Westminster, as part of the council's 'Your Choice' programme to tackle serious youth violence, there are 4 key workers at Integrated Gangs Unit working with young men, each with a caseload of 10-15 young people. There is also a women's advocate working with girls affiliated with gangs (particularly those who have experienced sexual violence). Since it was established, there has been a 59% reduction in serious youth violence in Westminster (between 2011/12 and 2012/13). It is unknown to what extent the work of the Integrated Gangs Unit, and the key workers, are involved in this decline. An evaluation of the 'Your Choice' programme, is currently being undertaken.

3.2 Role of cognitive behavioural interventions

3.2.1 What is Cognitive Behavioural Therapy (CBT)?

Cognitive Behavioural Therapy (CBT) is a brief, problem-oriented therapy, **based on the idea that thoughts, emotions and behaviours are linked**.[45] CBT aims to re-evaluate particular thoughts and patterns of thinking and behaving that are considered distressing or unhelpful. It is one of the most extensively researched forms of psychotherapy.[46]

3.2.2 The use of CBT for mental health problems

CBT is effective for the treatment of several psychiatric disorders. As such NICE recommends CBT for the treatment of depression,[47] PTSD,[48] ADHD,[49] conduct disorder,[50] psychosis[51] and alcohol dependence[52] in children and adolescents and for depression,[53] anxiety disorders,[54] PTSD,[48] psychosis,[55] antisocial personality disorder[56] and alcohol dependence in adults.[52] The evidence (section 2.1) suggests that these mental health problems are experienced at higher levels in gang members. However, there are no studies on the use of CBT to treat these mental health problems among gang members specifically. A Cochrane systematic review and meta-analysis of data from randomised controlled trials of young offenders experiencing emotional problems demonstrated that group-based CBT was effective in treating 'internalizing' problems of depression, anxiety and self harm.[57]

3.2.3 The use of CBT in reducing re-offending in young offenders

There is evidence to suggest **maladaptive patterns of thinking among young people who offend**. These include poor choice of solutions to social dilemmas, inability to exert self control and poor long term planning.[58] A large UK-based cross sectional study demonstrated that self-control and morality were the two key individual factors associated with young offending.[59]
Research suggests there are certain patterns of thinking associated with gang membership, such as inability to refuse, a fatalistic view of the world and positive attitudes towards antisocial behaviour or gang membership.[58]

As described, CBT is based on the tenet that adapting patterns of thinking can impact on behaviour – including offending behaviour. There are several varieties of CBT for young offenders, most widely implemented as group therapy in detention, and targeting different aspects of cognition, emotion and behaviour.[60] These include:

- Anger management – addressing the ability to respond effectively to stressful situations
- Cognitive skills training – enhancing reasoning and decision-making skills in order to reduce impulsivity, increase the consideration of alternative solutions and influence an individual's choice of action
- Moral reasoning – enhance awareness of the moral implications of an individual's actions
- Social skills training – addresses interpersonal issues such as the ability to interpret and respond to the behaviour of others

The effectiveness of CBT has been demonstrated in several meta-analyses, which report a 20-30% reduction in re-offending rates.[60] It should be noted that the effectiveness is much greater in demonstration sites (49%), than in routine practice (11%) possibly due to higher quality implementation in the former. Other factors that influence the effectiveness of CBT include the type of offender (more effective for more frequent offenders) and intensity of treatment (more

effective if more hours per week). However, the duration of treatment and setting (detention vs community) does not influence effectiveness.[60]

There is only one study of the use of CBT among gang members.[35] This study found that treatment of 80 adult men in prison with high intensity CBT resulted in significantly lower re-offending rates in both gang and non gang members than their untreated matched controls. However, this study was of poor methodological quality and based in a detention setting (see appendix 4).

A community group-based CBT programme ('Reasoning and Rehabilitation 2', R&R2) is currently being evaluated in South London (Box 5).

Box 5

'The Star Project'

In 2013, an exploratory pilot project, coordinated by a South London Child and Adolescent Mental Health Service (CAMHS) team and run in 4 young offending services, 2 CAMHS teams and 2 schools in South London, was established in order to address the 'gap in current multi agency provision in relation to the strong association between mental health problems in young people who commit or are at risk of committing serious youth violence and young people involved in street gangs'.

In this pilot, young people with a history or at risk of committing serious youth violence, are involved in street gangs or have conduct disorder, are referred to the project for assessment and intervention. The young person then receives the 'Reasoning and Rehabilitation 2' intervention (R and R 2).[61] This programme is designed for groups of adolescents with conduct problems at home and/or school, ADHD symptoms, have poor behaviour control and exhibit disruptive behaviour.

R and R 2 provides neuro-cognitive skills training techniques to improve attentional control, memory, impulse control and to develop achievement strategies by teaching constructive planning and management techniques. The behavioural control and listening skills they acquire help the participants to focus on the exercises that have been designed to develop pro-social attitudes, skills and values.

The 15 session programme is manualised and highly structured. A variety of training techniques are used to engage the individual by incorporating games, individual and group exercises and role-playing, and includes out-of-class assignments. Sessions may be delivered once a week or more frequently. The programme can be delivered in schools, learning centres, counselling centres, social service agencies, and in probation, prison or hospital settings. A key component of the programme is the use of mentors to provide support in between sessions.

The impact of this intervention has not yet been evaluated.

3.3 The role of systemic interventions

3.3.1 What are systemic interventions?

While CBT focuses on changing dysfunctional patterns of thinking, **systemic therapy focuses on changing dysfunctional social environments, including family, school and neighbourhood influences**. Systemic therapy is linked to socio-ecological theories of human development,[62] which include the notion that individuals do not act in a social vacuum. Understanding relationships, interactions and dynamics of groups, is central to treatment. Problematic behaviour within the group/family is identified and addressed practically rather than analytically. The main types of systemic interventions are parent training, family therapy and multi-modal therapies (such as multisystemic therapy).

3.3.2 The use of systemic therapy for mental health problems

Systemic interventions are effective for the treatment of several mental health problems in children and adolescents. As such, NICE recommends systemic interventions for the treatment of child and adolescent depression (family therapy),[47] ADHD (parent training),[49] conduct disorder (parent training, brief strategic family therapy, functional family therapy, multisystemic therapy)[50] and alcohol dependence/harmful alcohol use (brief strategic family therapy, functional family therapy, multisystemic therapy).[52] These mental health problems are experienced at higher levels in gang members. However there are no studies on the use of systemic interventions to treat these mental health problems among gang members specifically. There is evidence of the effectiveness of systemic interventions (such as multisystemic therapy and functional family therapy) in reducing mental health symptoms in young offenders.[63]

3.3.3 The use of systemic therapy in reducing re-offending in young offenders

Research suggests the **importance of systemic factors, especially the role of parents, in influencing gang membership**. For example, in a longitudinal study of 300 13-18 year old students in the USA, it was found that parental factors – especially behavioural control and warmth – moderated the relationship between gang involvement and problem behaviour.[64]

Multisystemic Therapy (MST)

MST is an intensive, short-term, home based intervention for young people with social, emotional and behavioural problems and their families.[65] It was initially developed to prevent re-offending and out-of-home placements. After initial assessment by the MST therapist, a set of treatment goals are defined to address specific needs for the young person and their family, which also includes liaising with other social systems such as peers and schools. Treatment can incorporate elements of CBT, communication skills, parenting skills, family relations, peer relations and improving school performance. MST therapists are available to their clients 24 hours a day, 7 days a week during the duration of treatment.

The Allen 'Early intervention' review reports the **effectiveness of MST in in reducing re-offending (25-70%), reducing out-of-home placements (47-64%), improving family functioning and decreasing mental health problems.**[66] There is one published study from the UK reporting the effectiveness of MST (appendix 5)[63] and an ongoing multi-site RCT currently being conducted in the UK by the Brandon Centre. MST is believed to be cost-effective. The Allen report

suggests a benefit to cost ratio of 2.5 to 1.[66] A recent Tri-borough public health report reviewed interim findings from the Brandon Centre Trial of MST and identified a net cost saving from MST to the public purse of £2223 per family (over 3 years), based on reductions in offending.[67]

However it should be noted that there is some debate about the true effectiveness of MST,[68] with a Cochrane review using pooled analyses of data from studies of varying quality suggesting that MST is not significantly different to alternative services.[65] It is clear that effectiveness is much higher in demonstration sites, run by MST developers. [65] As such, NICE guidelines recommends high quality implementation/treatment fidelity.

Functional Family Therapy (FFT)

While MST is focused on the individual, family and wider environment (school, community), FFT focuses more on the immediate family environment and uses family resources to change patterns of antisocial behaviour. [69] It is structured intervention, that aims to enhance protective factors and reduce risk factors in the family. It has three phases: the first to motivate the family towards change, the second teaches the family how to change a specific problem identified in the first phase and the final phase helps the family to generalise their problem-solving skills.

FFT is recommended by NICE guidelines and in the Allen report for the treatment of children and young people (11-17 years) with severe conduct problems and/or a history of offending. [50,66] It is also recommended as an option for children and young people who misuse alcohol and have significant co-morbidities and/or limited social support.[52] There are no UK studies published to date, but there is an ongoing RCT in Brighton.

While MST and FFT are two evidence-based interventions that are effective in treating adolescents with conduct disorder, there have been no studies directly comparing their clinical and cost effectiveness.[50] However, a recent review conducted by the Inner North West London Tri-borough Public Health Team, concluded that **both MST and FFT are effective for the needs of vulnerable families, however MST has a more robust evidence base than FFT**. It also concluded that although both MST and FFT are cost-effective, **MST appears to have a greater benefit to cost ratio**.[67]

Other family interventions

In addition to MST and FFT, there are several family-based interventions that occur locally. The Troubled Families Programme and Westminster's Family Recovery Programme are such examples. Three outreach workers from the Family Recovery Programme work closely with the Integrated Gangs Unit and work intensively with gang involved families. A review of family interventions (delivered to disadvantaged families in English local authorities between 2007 and 2011) highlighted that these family interventions provided a successful outcome in 50-65% of the families for the following issues:[70]

- Poor parenting
- Relationship or family breakdown
- Involvement in crime or antisocial behaviour
- Drug or alcohol misuse
- Truancy, exclusion or bad behaviour in school

3.4 The role of other approaches

Three other promising psychological approaches will be briefly described. They do not have an evidence base applied to young people in gangs, but have a theoretical base.

1) **Adolescent Mentalization-Based Integrative Therapy (AMBIT):**
AMBIT is a new approach to working with the most hard to reach adolescents with severe complex mental health needs[70] and is currently being used by several teams across the UK, including the Star Project in South London (Box 5). It has received promising initial feedback, although formal evaluation and trials have not yet been conducted. Central to AMBIT is the use of 'mentalization'- a form of imaginative mental activity about others or oneself, whereby the person who 'mentalizes' perceives and interprets human behaviour in terms of intentional mental states (such as desires, feelings, beliefs, purposes, etc).[42] In mentalization theory, a failure to mentalize may damage interpersonal relationships, and may result in damaging actions/behaviours, as these actions are rarely considered accurately in mental state terms. Conversely, being able to mentalize can improve interpersonal relationships and improve ability to regulate emotions. Since mentalization is 'relational' in nature, there is emphasis not only on the therapeutic relationship between worker and client, but also other relationships such as families and professional teams.[71]

2) **Motivational Interviewing:**
Motivational Interviewing is a directive client-centred counselling style, which aims to encourage refection on the risks associated with harmful behaviours, in the context of personal values and goals.[72] It has also been described as 'a non-authoritive approach to helping people to free up their own motivations and resources'.[73] It was originally developed for problem drinkers, but can be used in other contexts, such as for drug dependency and perhaps even for gang membership, although the latter has not been formally researched. There is evidence of effectiveness for the delivery of Motivational Interviewing by youth workers in routine conditions.[74]

3) **Solution-focused approaches:**
Solution-focused brief therapy is an approach based on solution-building rather than problem-solving. It explores current resources and future hopes, rather than present problems and past causes. It is typically conducted in three to five sessions, and utilises goal setting. Solution-focused brief therapy has proved to be effective across a range of problems and groups of people, although no specific study has been done on delivering solution-focused therapy to gang members.[75]

4 Discussion

4.1 Strengths of the report

The mental health needs of young people involved in gangs have until recently been overlooked. This report is an attempt to address this situation, in order to influence local commissioning of services to tackle these unmet needs. It is an example of how public health departments in local authorities can work with colleagues in other sectors (such as criminal justice), to effectively target those at greatest need, thus improving the health of the population and reducing health inequalities.

The results were based on a comprehensive search of the literature. This includes data from one of the largest studies investigating psychiatric morbidity among gang members, which is both recent and UK-based.[5] The findings were further shaped by discussions with a wide range of colleagues working in this field. These included key workers in Westminster Integrated Gangs Unit and their Manager, the CAMHS nurse and consultant psychiatrist involved in the 3 month pilot at the Unit, a senior staff member of Kids Company (box 3) and a consultant nurse involved in establishing the 'Star Project' (box 5).

4.2 Limitations of the report

There are several limitations of the report. Firstly, there are limitations of the evidence base. The prevalence data all come from cross-sectional studies, and so little is known about whether mental health problems are the cause or consequence of gang membership (or both). Further longitudinal studies are warranted. In addition, the large prevalence study used in the report is based on young adults (18-34 years). It is known that the peak age of gang membership is around 15 years.[4] It is unknown whether these older (perhaps more entrenched) gang members have a different mental health profile to younger gang members. The lack of evidence about psychological interventions delivered to gang members, therefore extrapolating from evidence of interventions delivered to young offenders, is another limitation of the evidence base.

The scope of this report was to investigate the mental health problems of young people involved in gangs and effective psychological interventions to tackle these problems. This excludes more upstream primary prevention measures, which are fundamental to tackle the interacting problems of mental health, substance misuse, youth offending and violence. Many key policy documents recommend adopting a 'life course' approach to preventing mental health problems,[76] preventing violence[3,77] and reducing health inequalities.[78] The importance of early years initiative such as the Family Nurse Partnership and parenting programmes, early identification of mental health problems in childhood and school based interventions, should all be acknowledged.

It is important to note that young gang members also have physical health needs that need to be tackled, but was beyond the scope of this report. Risky behaviours include unsafe sexual practices, smoking, poor diet and activity levels, and poor engagement with primary care (including inadequate childhood vaccinations).[79]

5 Recommendations

There are five main recommendations to tackle the unmet mental health needs of young people involved in gangs:

1) **To increase the mental health literacy and skills of key workers working with young people involved in gangs, thus supporting their essential therapeutic role**
2) **To maintain links with local NHS mental health services by regular input of a mental health nurse in the Integrated Gangs Unit**
3) **To fund MST specifically for young gang members and their families**
4) **To evaluate the above interventions**
5) **To conduct further research to address research gaps identified in this report**

1) **To increase the mental health literacy and skills of key workers:**

   Rationale:

   - This report demonstrates the high rates of mental health problems and substance misuse in young people involved in gangs.[5] It also highlights the therapeutic value of the relationship with a key worker.[41]
   - This key worker model is a resource that already exists in Westminster Integrated Gangs Unit, and needs to be built on. Currently, the 'flexible gang workers' only receive safeguarding training. The sexual health advocate at the Gangs Unit receives well structured training (funded by the Home Office and devised by 'Against Violence and Abuse' and 'Women and Girls Network') to understand the issues faced by young women involved in gang-related sexual violence. This includes modules on the impact of trauma and young women's coping strategies. The flexible gang workers need to receive similar training, on a par with best practice nationally.

   Specific recommendation: to commission a 5 day training course for all key workers working with young people in gangs

   - MAC-UK (box 4) offers a 5 day training course for staff working with excluded young people, including those involved in gangs, which is particularly relevant to increase awareness of mental health and psychological issues. This course tackles many of the issues and approaches mentioned in this report, including an overview of psychiatric diagnoses, suicide awareness, psychological motivations for gang membership, attachment theory, mentalization and motivational interviewing.[80]

   Specific recommendation: to ensure that all key workers working with young people involved in gangs attend the tri-borough drug and alcohol training days

   - The tri-borough substance misuse team is currently commissioning training for tri-borough council staff who work with people at risk of drug and alcohol problems. Up to 3 days of training are available (on drug awareness, alcohol awareness and brief intervention/motivational interviewing). These training days, delivered by Turning Point, are available several times a year. In addition a 2 hour bespoke training (delivered by Turning Point) can be delivered to the Gangs Unit, based on the specific needs of the Unit.
   - Once these 'fundamental' courses are delivered to the key workers, it may be beneficial for them to undergo further training, such as enhanced motivational interviewing training, to assist outreach workers to explore motivations for gang membership and may be used as a technique to help young people exit gangs.

Specific recommendation: key workers in the gangs unit should receive regular supervision from a CAMHS psychiatrist and mental health nurse

- Ongoing input of the psychiatrist and mental health nurse to the Integrated Gangs Unit would benefit the key workers, as supervision will increase their awareness of the mental health issues.

2) **To maintain links with local NHS mental health services (CAMHS)**

Rationale:

- This report demonstrates the high rates of mental health problems and substance misuse in young people involved in gangs. NICE guidelines make recommendations about how these problems should be tackled.
- In June-September 2013, a mental health nurse (with consultant psychiatrist supervision) has been based in the Integrated Gangs Unit, mainly conducting mental health assessments on young people involved in gangs, in order to identify unmet need.

Specific recommendation: ongoing input of the mental health nurse (with psychiatrist supervision) at the Integrated Gangs Unit

- The proposed model will have the nurse based part time at the Unit, conducting mental health assessments, including finding out about substance misuse and screening for learning difficulties. The nurse will also conduct basic interventions or refer on to more specialist services if required.
- The nurse and consultant will also provide supervision to key workers to increase their awareness of mental health problems.
- The nurse could additionally perform a health promotion function. As part of the 3 month pilot, the nurse reported how she built up relationships with young people by discussing physical health issues, such as smoking and sexual health, before asking questions about emotions. This approach may be necessary in order to deal with the stigma and reluctance of young people to discuss their 'mental' health problems.

3) **To commission an evidence-based treatment programme for young people (12-17 years) with conduct disorder/antisocial behaviour**

Rationale:

- This report has highlighted increased rates of conduct disorder and antisocial problems among gang members.[5,12]
- The report suggests that cognitive and systemic interventions are effective at reducing offending behaviour. However, due to the community and systemic nature of gang membership, and evidence of effectiveness (including cost-effectiveness) MST would be the recommended choice.

Specific recommendation: to commission additional places on the tri-borough MST pilot for young people involved in gangs, who fulfil criteria for MST, based on referrals from the gangs unit.

- Gang membership is currently a low priority for entry into this pilot, although some gang members may fit the other criteria for MST.
- Further funding should be sought to enable a certain number of young people from the Integrated Gangs Unit to received MST each year.
- The effectiveness of MST in gang members should be analysed as part of the tri-borough MST evaluation

Recommendations 1-3 are also depicted in figure 1 and table 5 below.

4) **To evaluate the above recommendations (key worker training, mental health input in Gangs Unit and MST delivered to gang members) when implemented**

5) **To conduct further research to address research gaps**

Rationale:

- This report has highlighted a number of research gaps, perhaps due to the difficulty in conducting research on gang members.
- Westminster's Integrated Gangs Unit is ideally placed to fill some of the research gaps.

Specific recommendations:

- Box 6 highlights possible future research questions to be conducting in Westminster Integrated Gangs Unit

Box 6: Potential research questions

Prevalence of mental health problems:

- What is the prevalence of suicide attempts among young gang members in the unit?
- What is the prevalence of PTSD in young gang members?
- What are the mental health needs of young women affiliated with gang members who have experienced sexual violence/abuse by gang members?

Longitudinal studies:

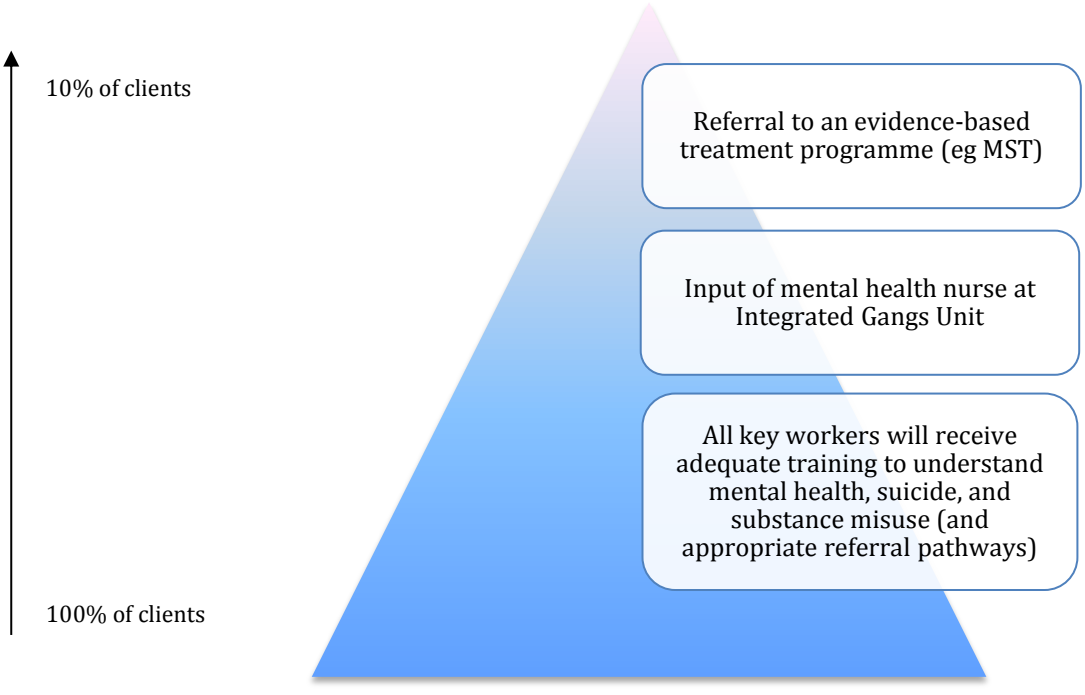
- Of those gang members who smoke cannabis (mild/moderate/heavy use), how many go on to develop psychosis?

Qualitative studies:

- What are the reasons for young gang members attempting suicide?

Figure 1: Intervention ladder to tackle the mental health needs of young people involved in gangs in Westminster

(Note: All young people at the Unit will benefit from key worker training, only few will be assessed by the mental health nurse and fewer still will be referred to a treatment programme such as MST)



Since tackling mental health problems in young gang members has a range of benefits, beyond health outcomes (particularly a reduction in re-offending), it is important that this is recognised when pooling together resources across departments and agencies (table 5).

Table 5: Recommendations and potential source of funding

Recommendations	Potential funders
1. To improve the mental health literacy and skills of key workers All key workers at the Integrated Gangs Unit (currently 5 workers) should attend a 5 day training course delivered by MAC-UK (costing £3600-£4000) All key workers at the Integrated Gangs Unit should attend all 3 days of the Tri-borough drug and alcohol awareness training, including training on brief intervention and motivational interviewing. The cost of the course is already covered by tri-borough substance misuse commissioners All key workers at the Integrated Gangs Unit should have regular supervision from a CAMHS psychiatrist and nurse (as part of their regular work in the unit)	Local authority Public health/Children's Services/Criminal Justice Substance Misuse commissioners (under Public Health directorate) CAMHS commissioners (Clinical Commissioning Groups, Commissioning Support Units)
2**. To maintain links with local NHS mental health services** A mental health nurse, with supervision from a psychiatrist, should be based (at least part-time) at the Integrated Gangs Unit in order to: • conduct mental health assessments on some of the young people in the Unit • deliver basic interventions to these young people, including psycho-education • refer on to secondary care services if required • provide advice and support to the key workers	CAMHS commissioners
3. Commission an evidence-based treatment programme for young people with conduct problems and a history of offending A number of gang members (12-17 years) with conduct problems and a history of offending, should receive Multisystemic therapy.	Home Office (eg Ending Gang and Youth Violence funding) Local authority departments CAMHS commissioners

Although the above recommendations are specific to Westminster (and its Integrated Gangs Unit), many of the **recommendations can be applied across the tri-borough**. For example, all youth workers who have regular contact with young people involved in gangs, should have their mental health literacy and skills increased by attending the training programme described above. In addition, local youth offending teams should have adequate mental health input, and should refer into the tri-borough MST pilot.

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Appendix 1: Mental health definitions for conditions prevalent in gang members

Anxiety disorders:

Generalised anxiety disorder is a common disorder and one of a range of anxiety disorders that includes panic disorder (with and without agoraphobia), post-traumatic stress disorder, obsessive–compulsive disorder, social phobia, specific phobias (for example, of spiders) and acute stress disorder. Anxiety disorders can exist in isolation but more commonly occur with other anxiety and depressive disorders. . The central feature of generalised anxiety disorder is excessive worry about a number of different events associated with heightened tension. Symptoms should be present for at least 6 months and should cause clinically significant distress or impairment in social, occupational or other important areas of functioning.

Post-traumatic stress disorder (PTSD) develops following a stressful event or situation of an exceptionally threatening or catastrophic nature. Characteristic symptoms include re-experiencing symptoms (e.g. flashbacks), avoidance of reminder of the trauma and hyperarousal and hyper-vigilance for threat (e.g. exaggerated startle responses, irritability and difficulty concentrating) and emotional numbing.

Conduct disorders:
Conduct disorders are characterised by repeated and persistent misbehaviour much worse than would normally be expected in a child of that age. This may include stealing, fighting, vandalism and harming people or animals. These disorders are the most common reason for children to be referred to mental health services. Conduct disorders also often coexist with other mental health disorders, most commonly attention deficit hyperactivity disorder (ADHD).

Attention Deficit Hyperactivity Disorder (ADHD) of Hyperkinetic disorders:
ADHD is a heterogeneous behavioural syndrome characterised by the core symptoms of hyperactivity, impulsivity and inattention. While these symptoms tend to cluster together, some people are predominantly hyperactive and impulsive, while others are principally inattentive. Only those with significant impairment meet criteria for a diagnosis of ADHD.

Psychosis:
The term psychosis is used to describe a group of severe mental health disorders characterised by the presence of delusions and hallucinations that disrupt a person's perception, thoughts, emotions and behaviour. The main forms of psychosis are schizophrenia (including schizoaffective disorder, schizophreniform disorder and delusional disorder), bipolar disorder or other affective psychosis

Antisocial personality disorder:
People with antisocial personality disorder exhibit traits of impulsivity, high negative emotionality, low conscientiousness and associated behaviours including irresponsible and exploitative behaviour, recklessness and deceitfulness. This is manifest in unstable interpersonal relationships, disregard for the consequences of one's behaviour, a failure to learn from experience, egocentricity and a disregard for the feelings of others. The condition is associated with a wide range of interpersonal and social disturbance. Criminal behaviour is central to the diagnosis of antisocial personality disorder.

Alcohol or drug dependence:
This is characterised by craving, tolerance, a preoccupation with alcohol/drugs and continued drinking/drug-taking in spite of harmful consequences.

Harmful drinking:
A pattern of consumption causing health problems directly related to alcohol (including psychological problems such as depression, alcohol-related accidents or physical illness such as pancreatitis)

Alcohol misuse or substance misuse:
Often includes alcohol/drug dependence and harmful drinking/drug taking

Appendix 2: Studies that demonstrate the increased rates of mental health problems among gang members

Study description	Study results	Strengths and limitations
Coid et al (2013) This major UK study involved a cross-sectional survey of a nationally representative sample of 4664 young men (18-34 years), with oversampling of men from areas with high levels of gang-related violence. Participants completed questionnaires covering gang membership, violence, use of mental health services and psychiatric diagnoses measured using standardized screening instruments (Psychosis Screening Questionnaire, Personality Disorders Screening Questionnaire, Hospital Anxiety and Depression Scale, Alcohol Use Disorders Identification Test and Drug Use Disorders Identification Test).	Of the 4664 men sampled in the survey, 108 (2.1%) reported current gang membership. Gang membership was associated with increased psychiatric morbidity and substance misuse. Compared to non-gang members, gang members were 4 times more likely to experience psychosis, 2 times more likely to experience anxiety disorder, 6 times more likely to experience alcohol dependence, 13 times more likely to experience drug dependence, 57 times more likely to have antisocial personality disorder and 13 times more likely to have attempted to commit suicide. The study found that gang members had a much lower prevalence of depression than non violent men (OR 0.18, CI 1.05-0.83). In addition, gang members were much more likely than non-violent men to have utilised medical/psychiatric services. With regards to attitudes and experience of violence, gang members were 68 times more likely to be violent if disrespected, 62 times more likely to have violent ruminations, 9 times more likely to fear violent victimization and 10 times more likely to experience violent victimization. The study found that the high prevalence of anxiety disorders and psychosis among gang members may be due to violent ruminative thinking, violent victimization and fear of further victimization.	This is the largest study to investigate psychiatric morbidity among gang members. Its major strength is its large sample size of young men, chosen mainly by random location sampling. As such, it is a nationally representative sample. In addition, the additional over-sampling in areas of high levels of gang activity was useful to have an increased number of gang members in the sample. The survey uses reliable and validated screening instruments, that compare favourably with clinical interviews (the standard method used for diagnosis). Indeed, the 'baseline' prevalence figures of mental health problems among non-violent men in the sample, compares favourably with other community samples (McManus, 2007). There are some limitations with this study. The study investigates 'current gang membership' and not past membership. In addition, definitions of gang membership vary as gang structures have considerable heterogeneity. In addition, all the measures of gang membership, psychiatric morbidity and experience and attitudes to violence were all self-reported, and so may be under or over reported. As with all cross-sectional surveys, associations do not give further information about the temporal pattern of the association, so further longitudinal studies are warranted.

Padmore et al (2013): Unpublished data This yet to be published study involved a cross-sectional questionnaire survey of a sample of 506 young people from two inner city secondary schools (449) and a Young Offenders Institution (57) in the UK. The questionnaire utilises two instruments, the Eurogang Youth Survey (EYS) and the Strengths and Difficulties Questionnaire (SDQ).	Preliminary results indicate that gang members were significantly more hyperactive and inattentive than both non-gang offenders and the general population. These hyperactive and inattentive gang members were also more likely to report frequent serious offences than any other group. In addition, gang members had significantly more emotional problems than the general population. Non-gang offenders did not have a significantly different profile from the general population in this domain.	This is a very useful study for the purpose of this report, as it investigates the mental health needs of UK inner city gang members in the community and custody. It has a good sample size and uses reliable and valid measures. The results are consistent with the study by Corcoran et al (2005)[14], which showed that gang members exhibited more externalising behaviour problems (including delinquency and self-destructiveness) than non-gang offenders.
Corcoran et al (2005) This study compared gang members with non gang members from a sample of 73 young men (13 to 19 years) in prison. Mental health symptoms in the past 6 months, were identified using the Oregon Mental Health Referral Checklist. This instrument assesses 31 symptoms considered representative of the youth in the justice system, and has been shown to have good reliability and validity. Behaviour problems were also identified by the Child Behaviour Check List (CBCL), a widely used and well developed instrument.	The results suggest that gang members report significantly more mental health symptoms, more external behaviour problems (including delinquency and self-destructiveness) and thought problems, than non gang members. With regards to mental health symptoms, gang members were significantly more likely to report suicide attempts, desire to kill another, hallucinations, delusions or bizarre ideas, loss of reality/incoherence not due to drugs or alcohol, sexual acting out, repetitive thoughts or behaviours, to be withdrawn and to report more anxiety than non gang members.	This study is useful as it investigates mental health problems in the correct population (gang members). It demonstrates that gang members have greater mental health needs than young offenders generally, suggesting that any study of the mental health needs of young offenders is likely to be an underestimate. It also demonstrates the high rate of challenging/criminal behaviour, which may mask underlying mental health problems. It has a high response rate (86%) and uses valid and reliable measures. Limitations include the small sample size, the fact that these gang members are in custody (and so may not represent the mental health needs of gang members in the community). Also it is USA-based, and so may not be generalisable to UK gang members.
Macdaniel et al (2011) Macdaniel et al (2011) used data from the Youth Violence Survey conducted in 2004. This survey was administered to over 80% of eligible high school students (aged 12-16 years) – 4131 students in a high risk urban district in the USA.	Adjusting for all factors, gang membership was positively associated with depressed mood (OR 1.43, 95% CI 1.07 to 1.92) and suicidal ideation (OR 2.03, 95% CI 1.62 to 2.55) – the only two mental health problems assessed in the survey	This study's main strengths are the large sample size in a disadvantaged community and the relatively high response rate for the survey. However, there are a number of limitations, including generalisability for a UK context, its cross sectional nature, and the fact that a school based survey will exclude those gang members that do not attend school.
Madan et al (2011) The second study of mental health problems in gang members used data from the Birmingham Youth Violence Study (Mrug et al, 2008), which was conducted in an urban city in Alabama, USA in 2004-5.	The results suggest that 5% reported belonging to a gang, 11% reported suicidal behaviour, 72% reported any delinquent behaviour, and 33% witnessed community violence. Gang membership was positively	The report's authors acknowledged that the cross-sectional design was the major study limitation. As such, it is not possible to know the temporal relationship between gang membership, suicidal behaviour,

This study examined whether gang membership in early adolescence was associated with internalizing mental health problems (depression, anxiety and suicidal behaviour) and whether these associations were mediated by delinquency and witnessing community violence. Data was collected from all 589 participants that had valid data for all variables (out of 603 total participants), with a mean age of 13 years. Anxiety and depression were assessed using established instruments, such as the Revised Children's Manifest Anxiety Scale and the DISC Predictive Scales. Suicidal behaviour, delinquency and witnessing community violence was asked as a series of questions.	associated with suicidal behaviour, delinquency, and witnessing community violence, but not to anxiety or depression. In addition, delinquency and witnessing community violence were both positively related to suicidal behaviour. After adjusting for demographics, gang members were 3.4 times more likely to report suicidal behaviour than non-gang members. After adjusting for demographics, delinquency and exposure to violence, gang members were 2 times more likely to report suicidal behaviour than gang-members. Further test indicated that both mediated effects of gang membership on suicidal behaviour were significant.	delinquent behaviour or exposure to violence. For example, it is possible that those who engage in delinquent behaviour or are exposed to violence, or are more suicidal, are more likely to join gangs. In addition, the small number of youth to report gang membership (31) may have reduced the power of the study to detect a true effect. It is also possible that factors not measured in this study (such as death of friends, hopelessness, weak parental bonds) may also explain the association of suicidal behaviour and gang membership. Another possible mediator between gang membership and suicidal behaviour is PTSD symptoms (since exposure to community violence is associated with increased symptoms of PTSD).

Appendix 3: Studies that demonstrate increased rates of substance misuse in gang members

Study description	Study results	Strengths and limitations
Bennett and Holloway, 2004 This study used data from the New English and Welsh Arrestee Drug Abuse Monitoring (NEW-ADAM) programme. This programme collected a wide range of information on the criminal behaviour of all 2725 eligible arrestees across 16 representative sites in England and Wales between 1999 and 2002. The criteria for ineligibility were aged under 17 years, unfit for interview, unable to comprehend or provide informed consent or a potential danger to the interviewer.	The prevalence of gang membership amongst arrestees was 4% (CI 3, 5) for current gang members and 11% (CI 6.7, 15.3) for ex-gang members. Current gang members were significantly more likely than non gang members to have used cannabis in the past 12 months ($p<0.01$). However, there was no significant difference between gang members and non-gang members with regards to drug dependency or expenditure on drugs in the past week. Indeed, gang members were significantly less likely than non-gang members to both use heroin and to report injecting a drug. They were also less likely (but not significantly) to have used crack and cocaine.	This is very useful data from a UK context, from multiple sites across the country. It shows that gang members were more likely to use cannabis than non-gang offenders, but less likely to use more 'hard' street drugs. A limitation is that the data is over a decade old, and so more recent studies investigating drug use amongst gang members are warranted.

Study description	Study results
De et al (2006) conducted 76 interviews on Latino gang members.	The results indicate that age at the time of interview and lower age of drug onset were associated with a greater number of drug use transitions. Positive family attitudes towards deviance, friend drug use, school truancy, conflict with parents and living in high-crime neighbourhoods, were also found to be associated with increased drug use transitions.

De at al (2005) conducted a retrospective ethnographic study of 76 Latino gang members, who joined gangs when they were younger.	The study found that the average age of onset of drug abuse behaviour was 11.2, which led to a rapid progression to more dangerous drugs, within 6 years.
Facundo et al (2008) conducted a study of 175 young gang members in Mexico.	The results found a significant effect of personal factors on drug use, including gender, age, mental problems, relationship with friends who have maladaptive behaviours and inappropriate relationships with parents.
Gatti et al (2005) conducted one of the few longitudinal studies of gang membership, delinquent behaviour and drug use. The sample initially consisted of 1161 boys in kindergarten classes in deprived areas of Montreal in 1984. Annual evaluations were then undertaken, starting at age 10 (reports made by parents, teachers, classmates and the children themselves). Data was available for 756 participants (aged 10 to 16 years). Questionnaires asked for gang membership, in addition to delinquent behaviour and drug use. Data for confounding factors were also collected (demographic information, disruptive behaviour, delinquency, parental supervision, friends' deviancy and school difficulties).	The study found that gang members displayed far higher rates of delinquent behaviour and drug use than non-gang members. This includes a higher level of involvement in drug sales amongst stable gang members than non gang members. In terms of drug use, the frequency of drug use increases over time for all groups. Transient drug members display an increased frequency of drug use when they join the gang, but no significant decrease when they leave.
Harper et al (2008) interviewed 69 homeless African American young men	The study found that gang members had more frequent lifetime alcohol and marijuana use, compared to non-gang members.
Lanier et al (2010) conducted focus groups and interviews on African American male gang members in prison to identify differences in rates of illicit substance misuse between gang and non-gang members.	The study found that for each illicit substance, use was higher among gang members, whether former or current.
MacKenzie et al (2005) drew data from a larger qualitative study of 383 male street gang members in San Francisco.	The study found the integration and normalization of recreational drug use (specifically marijuana) within their day-to-day activities and cultural practices.
McCoy et al (2010) examined alcohol and marijuana use among 410 Latino adolescents (14-19 years) in San Francisco.	Frequent use of both alcohol and marijuana was associated with being male, sexually active, 'gang exposed' and to have less parental monitoring.
Mouttapa et al (2010) conducted a survey on 91 male young offenders in probation camps in California.	The study found that gang membership was associated with heavy alcohol use in the past 30 days prior to incarceration.
Sanders et al (2010) interviewed 60 young gang members in Los Angeles.	One finding described mixing together of substances, particularly cannabis and alcohol, as well as the use of prescription medication, such as codeine.
Swahn et al (2010) used data from the Youth Violence Survey conducted in 2004. This survey was administered to over 80% of eligible high school students (aged 12-16 years) – 4141 students in a high risk urban district in the USA.	The results demonstrate 8% of students report gang membership. Students who initiated alcohol before 13 years (OR=4.90, 95% CI:3.65-3.58), who drank alcohol 3 or more times per week (OR=9.57, 95% CI:6.09-15.03) and who used drugs 3 or more times per week (OR=6.51. 95% CI 4.59-9.25) were more likely to report gang membership than students who did not report alcohol or drug use.
Macdaniel et al (2011) also used data from the Youth Violence Survey (on 4131 school children aged 12-16 years in a disadvantaged community).	Adjusting for all factors, gang membership was associated with frequent alcohol use (OR 2.62, 95% ci 1.85 to 3.72) and frequent drug use (OR 1.95, 95% CI 1.15 to 3.29).

Appendix 4: Study of CBT in gang members

Study description	Study results	Strengths and limitations
Di Placido et al (2006) This study investigated the use of CBT to 80 male offenders (40 gang members and 40 non gang members) in prison (compared with 80 untreated controls). Treated' offenders were those who received one of three treatment programmes: 'Aggressive Behavioural Control' (form of CBT), Clearwater Sex Offender programme (form of CBT) or Psychiatric Rehabilitation for those with a major psychiatric illness (psychotropic medication, group and individual therapy, occupational therapy).	Treatment of men in prison with high intensity CBT resulted in a significantly lower reoffending rates in both gang and non gang members than their untreated matched controls.	This is the only controlled intervention study investigating the effectiveness of psychological therapy for gang members. However, the sample size is small and it is not randomised. In addition, the study looked at adults (not young offenders) in prison (not the community). Also, the main aim was to investigate 'treatment' vs 'no treatment', although treatment modalities were different.

Appendix 5: Study of MST in UK

Study description	Study results	Strengths and limitations
Butler et al (2011) In this study, 108 families were randomised to either MST or comprehensive and targeted usual services delivered by youth offending teams.	The study found that although young people receiving both MST and YOT interventions showed a reduction in re-offending, MST had several further advantages. Those who received MST had: • Significantly reduced likelihood of non-violent offending during an 18 month follow up • Greater reductions in youth-reported delinquency • Greater reductions in parental reports of aggressive and delinquent behaviour	This randomised control trial is the only UK study to date demonstrating the effectiveness of MST (compared to current services). It should be noted that the lack of difference in rates of violent offending, should be considered in the context of the low rate of violent offending at randomisation, as well as the modest sample size.