Young people with Traumatic Brain Injury in custody

An evaluation of a Linkworker Service for Barrow Cadbury Trust and The Disabilities Trust

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The Linkworker Service was developed and delivered by The Disabilities Trust Foundation.

Declarations

Professor Huw Williams collaborated with The Disabilities Trust to secure additional funding from the Barrow Cadbury Trust for the linkworker project and the production of this report. Professor Huw Williams and Dr Prathiba Chitsabesan provided initial advice and guidance on data collection and service evaluation to The Disabilities Trust for the Youth Linkworker service. Professor Huw Williams also co-ordinated and/or authored some recent reports cited in this report, such as the British Psychological Society (BPS) response to the Justice Committee Inquiry into Young Adult Offenders, and the BPS position paper on Children and Young People in the criminal justice system. Deborah Fortescue of The Disabilities Trust provided feedback on the penultimate draft of this report.

Executive Summary

There is growing evidence that young people (YP) within the youth justice system have high levels of 'needs' with regard to health, education and social and emotional well-being. Studies consistently indicate high levels of mental health needs and neurodevelopmental disorders amongst young offenders including Traumatic Brain Injury – TBI. These needs are often unmet due to a lack of appropriate screening and identification, limited access to evidence based interventions and poor continuity of care. This is particularly apparent amongst YP in custody.

The initial aims of this project were to establish whether it was possible to:

1. **Identify young adults with a brain injury who enter custody**
2. **Develop a care pathway and provide dedicated support to YP with a brain injury**
3. **Raise awareness of brain injury within a Young Offender Institution**

From these aims a 'Linkworker' (LW) service for YP was developed by The Disabilities Trust Foundation. This report describes that service and documents a preliminary service evaluation.

In summary, it was possible to set the service up, evolve it in a dynamic and changing environment, so that it appears to fit the needs of the young person across a wider spectrum of ages. It also appears that it is, with appropriate staffing, feasible to screen for TBI in the population and this may contribute to increased awareness of such issues in a young person's care and management.

In conducting this service evaluation it was not possible to collect data that would show whether there was a change in the trajectory (health, well-being and crime) of YP through LW involvement). However, service level data was available on a sample of YP and in this context it is possible to note the following:

- The LW service was designed, delivered and deployed within what would be expected for a neurorehabilitation and forensic rehabilitation and forensic rehabilitation service 'hybrid'
- Referrals were made to the service and it was supporting YP who had relevant TBI (in terms of severity and neuropsychological impairments)
- Such TBI would be expected to interfere with traditional forensic rehabilitation (FR)
- The young person had significant criminal histories and mental health problems
- Additional input in a range of areas could well have improved outcomes for the young person in terms of mental health, well-being and criminogenic needs

Therefore, the service would appear to be meeting the key aims defined at inception. From the feedback, it appears that the service was acceptable to, and valued, by YP and staff. It is important to emphasise that the YP had complex conditions because TBI is a 'keystone' condition within a constellation of challenges (drug and alcohol, mood disorder, lack of familial coherence (care home etc.), lack of education and work skills and/or experience). This evaluation highlights the need for appropriate key-working for such a vulnerable group.

We would therefore recommend further adoption of linkworker type services within custodial settings and the need to be embed them within larger multi-site studies. Such services could provide a vital link across staff teams working with individuals with TBI and effect change. A linkworker may enable the identification of an underlying TBI, which allows for services to be deployed that are responsive to specific needs and learning styles in order to successfully engage with the young person. This is essential in order to develop support plans and to allow resources to be used cost-effectively, rather than attempting to engage YP in generic interventions which may not take into account their specific profile of needs.

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Introduction

Neurological disability (ND) is a major source of human suffering and socio-health burden. Acquired Brain Injury (ABI) is one main form of ND where the brain is affected by a virus, stroke or trauma. Traumatic brain injury (TBI) is the main form of ABI and the leading cause of death and disability in children and young adults.[1] TBI is widely acknowledged as a major global health and social concern.[2]

This report looks at individuals with ND who are 'at-risk' of offending and entering the Criminal Justice System (CJS). ND is a major issue in this population and TBI is particularly prevalent. For the purposes of this report we draw on the ND literature, in particular with reference to ABI and TBI. Where relevant we note the 'umbrella' of disorders referred to in specific studies and programmes. ABI and TBI are not directly interchangeable, and every individual with a ND may have various degrees of impairment severity, with limits set by society on their optimal life experience. Nevertheless, there is a substantial heterogeneity of experience across and within ND and key themes emerge that may apply to the care, treatment and support of this population.

The development, organisation and evaluation of a service is discussed that addresses the needs of YP, aged 15-21 years with ND, particularly with TBI, and who are in the CJS. The term Young People who Offend (YPO) and/or Service User (SU) will be used as appropriate.

The report draws conclusions from the study and makes recommendations that will optimise care, support and better outcomes for this vulnerable population.

Section 1: Background

There is significant evidence associating TBI with criminal behaviour[3] including earlier onset of offending, repeat offending and greater violence in offences. Children and YP who survive TBI are likely to develop behavioural problems that are linked to an increased vulnerability to offend. Children and YP who are socially disadvantaged are at risk of TBI. If they do also experience a TBI then they may have an increased risk of poor life outcomes, which represents a double 'hazard' for this population.[4] TBI is a major chronic health condition in offender populations; 50% have had some aspect of TBI, and it is more prevalent by a factor of three in this group than in non-offenders. TBI is linked to psychiatric disturbance, and in particular a risk of self-harm[5], and a factor in re-offending.[6]

Generally, re-offending rates are reported to be very high in younger individuals, for example 72% of YPO break the law[7] within 12 months post-release. These offending patterns have a substantial cost implication[8] and currently there is limited support available for offenders with TBI, both in the UK and internationally.

TRAUMATIC BRAIN INJURY: SCALE AND SCOPE OF THE PROBLEM

TBI is the leading form of ABI, and considered to be a 'silent epidemic'. At some point, approximately nine percent of the population have suffered a TBI of some degree of severity, of which 80% are classified as mild. It most frequently occurs in YP, resulting predominantly from falls, sporting injuries, fights and road traffic accidents (RTAs). Both sexes are equally affected when very young (under five years of age), however males are much more at risk than females in teenage years and adulthood.[9]

Depending on the severity, TBI can lead to loss of memory, loss of concentration, decreased awareness of one's own or others' emotional state, poor impulse control, and, particularly, poor social judgment. Unsurprisingly, behavioural problems such as conduct disorder, attention problems, increased aggression, and impulse control problems are prevalent in people with a history of ABIs.

Severity of TBI is classified in a number of ways. As a 'rule of thumb' a loss of consciousness (LOC) following a blow to the head that lasts longer than 30 minutes is considered a moderate to severe TBI. More often than not this kind of injury leads to changes in brain function and behaviour e.g. the person is more irritable and impulsive. A LOC of 10-30 minutes is classified as complicated mild TBI and there may be changes in the brain and some on-going symptoms. Injuries resulting in a LOC of less than 10 minutes are less likely to lead to persisting problems, unless the individual suffers further injury.

During childhood, adolescence and young adulthood the brain is rapidly growing and its connections are shaped and strengthened by experience. Sustaining an injury to the brain before key areas have fully developed, or during development, may result in impaired development. Recent research has shown that the skills that are developing at the time of injury may be the most vulnerable to disruption and established skills may be more robust.[10] For a comprehensive overview of the mechanism of injury see link below.

www.t2a.org.uk/wp-content/uploads/2016/02/Repairing-Shattered-Lives_Report.pdf

IS TRAUMATIC BRAIN INJURY A CAUSE, CONSEQUENCE OR CATALYST FOR RISKY BEHAVIOUR?

The links between TBI and criminal behaviour are complex. YP who offend do so for many reasons including genetics, social disadvantages, abuse, anti-social personality and peer pressure. It is difficult to identify a clear, causal link between TBI and offending, but it does seem to play a role.

Adolescence is marked by increased 'risk taking'. It is a 'life-stage' during which risky behaviour may foster a drift towards criminal activity that may persist throughout a lifetime.[11] The adolescent brain is being sculpted by experience and reward centres evolve to drive goal-oriented behaviours.[12] The systems required to control these drivers are being formed and consolidated in the brain's frontal cortex,[9] but not at the same pace. During the mid to late teens the brain's crucial ability to be able to offset immediate gains[13] for more optimal benefits at a later time by withholding or delaying gratification, is not well developed. Within a judicial context it is important to note that in the late teenage years the last area of the brain to become

'adult-like' appears to be the frontal system, an area responsible for making decisions about long term benefits and the risks of actions (see links below).

www.pnas.org/content/suppl/2004/05/13/0402680101.DC1/02680Movie3.mpg
www.ncbi.nlm.nih.gov/pubmed/15148381/
www.ncbi.nlm.nih.gov/pmc/articles/PMC3432415/
www.ncbi.nlm.nih.gov/pmc/articles/PMC419576/figure/fig3/

TBI is more common amongst YP who take risks, especially in adolescence, but it may be coincidental (i.e. those who offend may do so whether or not they sustain a brain injury). Therefore, TBIs may be the result of high novelty seeking and low harm avoidance in people who are already susceptible to risky behaviours, including antisocial behaviour. However, TBI may still represent a catalyst for further risky behaviour and less harm avoidance.

Longitudinal studies indicate that YP with ND may have an increased risk of developing antisocial behaviour and are more likely to develop early onset and life persistent offending patterns.[14] In a Finnish birth cohort study of approximately 12,000 subjects, a TBI during childhood or adolescence led to a four-fold increased risk of experiencing a mental disorder with co-existing offending in adult males.[15] More recently, Fazel et al[16] showed that in a study of Swedish people over a 35 year period, those with TBI, compared to those who were non-injured, were much more likely to commit violent crimes (8.8% versus 3%). The risk was also greater amongst TBI individuals when compared to siblings. Furthermore, a history of being 'knocked out' amongst YPO has been linked to persistent, rather than adolescence-limited offending.[17]

PEOPLE IN CUSTODY & THE PREVALENCE OF TRAUMATIC BRAIN INJURY

Globally studies notably in Australia,[18] Brazil,[19] Canada,[20] France[21] New Zealand,[22] the UK[23] and the USA[24] have shown that the prevalence of TBI is three to eight times greater in people in custody, compared to non-offenders.[7] A criticism of many studies exploring the prevalence rates of TBI in juvenile justice populations is the lack of control groups. Farrer et al[11] conducted a meta-analysis of nine studies involving TBI in juvenile offenders, five of which included control groups of non-offending youths. The prevalence rate was approximately 30%, which was significantly higher than in the control groups. In a recent systematic review Hughes et al[7] looked at 10 studies (some overlapping with Farrer et al[11]), four of which included control groups. The prevalence rates of TBI among incarcerated youths ranged from 16.5% to 72.1%. Where there were control groups, or directly comparable studies within the general population, there was consistent evidence of a higher prevalence of TBI among incarcerated youths, and this disparity was more pronounced as the injury severity increased. Two recent studies have shown that approximately 50% of young offenders have a history of loss of consciousness,[9, 25] with repeated injury being very common[9, 17] (also see Moffitt 1993 re: risk factors for crime[26]). TBI in offenders, albeit mostly in adult studies, has been associated with higher rates of infractions while in custody and higher levels of re-offending and engagement in violent crimes.[6, 9, 11, 15, 27, 28, 6, 11, 9, 15, 27, 28]

Managing TBI may be important for improving engagement in forensic rehabilitation (FR) and reducing recidivism. Guidance on how best to support YP people with TBI is currently being developed for the juvenile justice system.[9] However, there are few, if any, studies evaluating the effectiveness of interventions. Hence, the evidence base for guiding intervention design, development and delivery is inadequate. Furthermore, and crucially, the needs of these YP are complex, with multiple needs requiring a multi-agency co-ordinated approach.

CO-MORBIDITIES AND COMPLEXITIES OF TRAUMATIC BRAIN INJURY

TBI is one of many challenges for YPO. They often have other forms of ND and a very high prevalence of mental health issues, together with problematic drug and alcohol usage.

The ND could be due to a compromised central or peripheral nervous system, which could be genetic, occur pre-birth, the result of a birth trauma, and/or injury or illness in childhood. There may be a range of resulting disorders including learning disabilities (e.g. dyslexia, communication disorders, Attention

Deficit Hyperactivity Disorder (ADHD), autistic spectrum disorders, non-TBI e.g. epilepsy, or foetal alcohol syndrome disorders[29]). The rates of these disorders are typically much higher in offender than in non-offender groups.[29] A report from the Office for the Children's Commissioner (OCC) documents evidence across a range of international contexts and reveals a consistently high incidence rate of neuro-developmental impairment among incarcerated youths. Indeed, there was a disproportionate prevalence in the range of conditions amongst this group (see link below).

www.childrenscommissioner.gov.uk/sites/default/files/publications/Nobody%20made%20the%20connection.pdf

Mental health issues are also very common in offenders.[30, 31, 32] Alcohol and drug misuse is often a complicating factor in violent crime.[33] Mental health and drug misuse issues may be present irrespective of a history of TBI, but they may also be a result of TBI.[34, 35] All these problems may start at an early age.[36, 37] Fazel et al[38] looked at the psychopathology in adolescent offenders aged 15 to 17 years and young adults aged 18 to 21 years. Data on 3,058 offenders was analysed. The younger offenders had high rates of depression or mood disorders and/or childhood developmental disorders, including ADHD or disruptive behaviour difficulties.

A recent UK study of the mental health needs of 301 young offenders aged 13 to 18 years reported that one in five had significant symptoms of depression, one in ten had anxiety or symptoms of post-traumatic stress disorder (PTSD) and one in ten had self-harmed in the previous month.[39] The same study showed that one in ten had alcohol problems and one in five had drug problems. Furthermore, aggressive behaviour towards people and property was reported in one in four and one in five respectively. A recent study of 197 juvenile offenders in a custodial secure facility in England found that YP who reported having experienced a TBI were more likely to misuse cannabis and suffer from mental health difficulties.[6, 23] Crucially, another recent study by Chitsabesan et al[5] found that of 93 incarcerated boys, 44% had on-going neuro-psychological symptoms, 18% had moderate to severe post-concussion symptoms - primarily irritability, poor concentration and impulsiveness - and 50% were assessed as being at risk of deliberate self-harm or suicide. Suicide risk factors were more common when the symptoms of TBI were greater. ADHD, communication problems, alcohol and drug misuse were all highly prevalent.

It is particularly interesting to note that ADHD appears to be a factor in the profile of younger offenders. A recent study by Max et al[40] showed that ADHD is a commonly occurring syndrome after TBI during childhood or adolescence. It is also a risk factor for TBI[27] and therefore likely to contribute to problematic behaviour. A recent consensus review from the UK Adult ADHD Network provided a helpful overview of how such neurodevelopmental disorders can be managed within the criminal justice process.[41] Generally, in the complex 'mix' of issues that present in YPO, TBI and ND may not only increase the chance that someone develops such neurodevelopmental disorders, but they also make intervention more complicated.

Clearly the needs of younger offenders, compared to older groups, are different and require specific management. In the context of TBI, the effects of the brain injury may not be fully realised because the functions that might be developing may also be compromised. This underlines the importance of assessment and management of TBI in such groups in order to improve and maximise outcomes[42, 43] (see link below).

www.bps.org.uk/system/files/Public%20files/cyp_with_neurodisabilities_in_the_cjs.pdf

ROLE OF NEUROREHABILITATION

Neurorehabilitation (NR) encompasses a wide range of approaches that aim to improve the quality of life for individuals with ABI. The main role of NR is to enable a person to have a positive role in society through family life, employment, or in other ways that are self-sustaining, rewarding and protective of future well-being.[34, 44] NR is a process by which an individual with ABI can identify key life goals they may achieve with guided support, circumvent the deficits they have acquired with strengths that they may still have, and develop new strategies they find helpful in managing

cognitive, emotional and behavioural issues.

There are various time points to implement NR, from the acute stage and pre-discharge from hospital, through to outpatient and community support. Post-acute NR for YPO would be relevant within inpatient and outpatient programmes and in community/ outreach settings, particularly given the scope for addressing issues within an institutional setting (i.e. in prison, through to resettlement and community environments, such as probation).

Evidence shows that it is possible to address and manage underlying cognitive impairments such as attention, memory and executive functions.[44] There is also evidence of improved outcomes for emotional distress, behavioural problems and socialisation, including employment.[45]

Cognitive Neurorehabilitation (CNR) is one of the main traditional forms of NR and enables 'clients or patients and their families to live with, manage, bypass, or reduce, or come to terms with cognitive deficits precipitated by injury to the brain'.[46] There are two main approaches to CNR; compensatory or restitution. The compensatory approach aims to improve functioning in everyday life by providing an aid or strategy that compensates for the deficit, such as a memory aid (e.g. diary or smart phone prompt), or a mnemonic strategy (e.g. using paced rehearsal to recall numbers). The restitution approach aims to restore normal functioning through repetitive practice (e.g. computerised cognitive training packages). The latter may be delivered by therapy staff, individually, or in group based programmes. Addressing the cognitive problems is vital, however, given the high rate of mental health, drug and alcohol misuse issues, relationship breakdowns and anger problems in ABI survivors, there is also a need to address the emotional, psychosocial and behavioural problems.[46]

Metacognitive awareness is a consistent theme in effective NR.[47] A metacognitive strategy instruction is a term frequently used and is a 'direct instruction to teach individuals to regulate their own behaviour by breaking complex tasks into steps while thinking strategically. To self-regulate, individuals need to identify an appropriate goal and predict their performance in advance of the activity, identify possible solutions based on their general predictions, one of which will work based on past experience. They also need to self-monitor or assess their performance during an activity and change behaviour by choosing a different strategy (i.e. use self-control) if the goal has not been met through self-assessment'.[48]

It is beyond the scope of this report to address the evidence for NR in detail. However, this report summarises the key findings from two recent sets of NR reviews; The Scottish Intercollegiate Network (SIGN)[47] guidelines and those developed by an international group of researchers and clinicians known as INCOG.[49]

Memory

Memory deficits are the most common sequela of ABI, resulting in significant functional problems. SIGN noted that there is evidence to support the use of compensatory approaches, including memory strategy training and electronic aids such as NeuroPage and personal digital assistants.[50, 51, 52] However, there is insubstantial evidence that repetitive practice improves memory impairment. SIGN recommended memory impairment rehabilitation and supported the integration of internal (e.g. mnemonics) and external compensatory strategies when appropriate instructional techniques are provided, and the use of these strategies in a social role or everyday situations. SIGN also noted that the evidence for restorative measures is weak.

Executive function and attention

Impairments in executive function and self-awareness (the ability to understand one's own problems and the impact these have on function) are some of the most characteristic neuropsychological sequela of ABI and can have a profound effect on resuming previous life roles.[53]

SIGN noted that there are very few systematic reviews or Randomised Controlled Trials (RCTs) in the area. However, treatment approaches based on training patients in metacognitive strategies are effective at improving performance in practical or functional settings. These interventions do not necessarily restore normal executive ability but can improve functioning in everyday problem solving. The INCOG group

emphasised the solid evidence base for intervention programmes that incorporate metacognitive strategy instructions for planning, problem solving and other cognitive-executive impairments. They also noted that there is new evidence to support the use of strategies to improve reasoning skills, and substantial support for the use of direct corrective feedback in improving self-awareness.

With regard to attention, SIGN noted that there is evidence that impairment focused training (e.g. computerised attention training) may produce small beneficial effects in the post-acute phase of brain injury, but generalisation of these effects is weak. However, larger effects are found when interventions focus on training specific functional skills, which make demands on attention through repetitive practice, or teaching strategies that compensate for attention impairments in everyday tasks. INCOG noted that metacognitive training appears to improve attention outcomes, whilst other approaches such as dual task training, environmental modifications and cognitive behavioural therapy may offer some benefits. However, there is insufficient evidence to support mindfulness meditation and practice on de-contextualised computer-based tasks.

Socio-communication

ABI may result in a variety of communication impairments from dysarthria or poor clarity of speech, to social communication disorders such as reduced use of facial expression, poor eye contact, poor listening skills and a reduced ability to read emotional expressions.[48] Additionally, YPO are more likely to have communication disorders.[29] Several studies reviewed by SIGN suggest language deficits and/or functional communication deficits can be remedied through techniques such as pitch biofeedback and expression modelling. Conversation group therapy can also have beneficial effects. Emotion reading (e.g. of facial expressions) can often be affected by TBI, but there is limited evidence on the best treatment for emotional perception deficits.

Mood and behaviour

Due to the heterogeneity of issues that present in ABI, there have been significant problems developing interventions that are based on 'typical' presenting cases. When developing CBT for mood disorders in 'neuro-typical' people, RCTs include individuals that meet certain criteria for a disorder (e.g. anxiety or depression) and do not have co-morbidity conditions. However, individuals with ABI will have some degree of co-morbidity conditions (e.g. they will present with TBI, Organic Personality Disorder, anxiety and alcohol abuse). They are likely to have pre-existing conditions, together with a level of de novo mood and alcohol disorders,[54] including PTSD[9] and as well as presenting with cognitive/affective changes such as executive function and memory problems. These are just some of the factors that may lead to a diversity of needs and outcomes. Management interventions are not very advanced but case illustrations and, increasingly controlled studies, do indicate which interventions can be effective.

Williams and Evans[44] provided an overview on the use of cognitive behavioural therapy (CBT) to enhance NR and provided a range of case illustrations for anxiety management, depression and PTSD, with complicating factors such as alcohol issues. These approaches may be described as comprehensive or holistic as they aim to simultaneously address cognitive, emotional and behavioural difficulties in the context of returning the individual to participate in meaningful activities.

Interventions that target mood and behaviour issues may be considered as overlapping with traditional psychiatric and CBT-based therapies. Typically, indeed crucially, therapies are modified to take account of the cognitive and self-regulatory deficits common in ABI.[44]

Depression

SIGN noted that there are few studies specifically designed to evaluate psychotherapy for depression in ABI. The studies suggest that depression was improved in the context of multimodal interventions and that the best preliminary evidence was the use of cognitive behavioural interventions. Other approaches, such as telephone counselling had different findings, with contrasting results in terms of improved outcomes.

Anxiety

SIGN reported a Cochrane review[55] that identified

some evidence supporting CBT for the treatment of acute stress disorder following TBI, and for CBT combined with NR to alleviate anxiety symptoms following mild to moderate TBI. There is, however, a lack of RCTs in the area.

Anger

SIGN noted that a wide range of non-pharmacological interventions have been used for adults with challenging behaviours following ABI. These tend to be based on the principles of Applied Behavioural Analysis such as contingency management, operant learning theory, positive behaviour interventions focusing on proactive prevention of maladaptive behaviours, environmental modifications and CBT.

Elements of different therapeutic models are often combined within a multimodal treatment programme. However, there was inconsistent evidence for any positive effects. Although in one study[56] of 76 individuals with ABI of mixed causes, who had persistent aggressive behaviour and were unable to live independently, there were positive outcomes regarding improved living arrangements, hours of care required and employment. These effects were maintained at nearly three years follow-up.

Holistic and vocational approaches

SIGN noted that there was sufficient evidence to recommend the use of comprehensive, holistic neuropsychological rehabilitation during post-acute NR to minimise the impact of moderate or severe TBI. They also noted that there can be benefits in return to employment. In one study, The Intensive Cognitive Rehabilitation Programme, which consisted of 15 hours of individual and group therapies conducted three days per week, individuals used a variety of functional and social problem-solving tasks to tackle their individual problems. They also addressed interpersonal communication issues through role play and videotaped feedback, as well as the application and monitoring of strategies within each participant's home and community, with regular homework exercises. On completion, significantly more individuals in the neuropsychological rehabilitation programme group (47%) were engaged in community-based employment than in the standard rehabilitation group (21%).[45]

NR and children/young people

Although much of the work in NR has focused on adults, there has been some work systematically examining the role of NR for children and YP.[57] The authors noted that there was limited evidence for effective interventions regarding cognitive outcomes (i.e. attention, memory and learning difficulties). There was however evidence that interventions can alleviate internalising symptoms for psychosocial outcomes.

One interesting study in relation to crime was conducted by Leon Carrion et al[58] who investigated whether adult prisoners with ABI in childhood had received any form of NR. Those who had an ABI and NR were more likely to be in prison for less violent offences[58] than those who had an ABI but no NR.

FORENSIC REHABILITATION

A number of approaches have been developed with YPO over the past decade that have led to improvements in wellbeing and crime reduction.[59] However, to date, ND issues have received very little attention.

The Harris Review[60] of the number of young adult offender deaths in custody identified a range of factors that converge to increase the risk of such events. However, in considering vulnerability, the role of ND was not highlighted. A recent response to the Harris Review by the Ministry of Justice noted a range of actions that need to be addressed[61] including maturity factors. But again, there was insufficient consideration of ND issues (see link below).

www.gov.uk/government/uploads/system/uploads/attachment_data/file/486564/gov-response-harris-review.pdf

The Justice Committee Inquiry into Young Adult Offenders is currently looking into the Harris Review findings. A response submitted to the inquiry by the British Psychological Society (BPS) identified areas in FR that may reduce the likelihood of self-harm and suicide and also noted the role of ND in terms of vulnerability. The BPS report[42] noted that socio-educational and healthcare based needs, which feed into criminogenic

risk factors, need to be targeted and can be, through a range of interventions. The Risk, Needs and Responsivity (RNR) approach is an example of an intervention[62] which takes account of the risk of re-offending, criminogenic needs and the YPO's psychological preparedness to respond to interventions. CBT is consistently associated with improved institutional behaviour, lower recidivism rates and a longer time to re-arrest.

The BPS report also noted that these types of approaches are not necessarily routinely or widely available to YP in the CJS. This raises the question of what systematic and service level factors need to be addressed so that appropriate interventions are deployed, and more importantly, how such approaches can be delivered in ways to benefit those with ND and TBI.

BPS response to the Justice Committee Inquiry

1. Screen for ND and TBI: Although screening may be conducted on admission into forensic services, it is not routinely used to identify ND issues. There are screening tools that could be used and/or developed further to identify vulnerability in the young adult population. For example the Comprehensive Health Assessment Tool (CHAT) was developed for young offenders in custody and community settings, and screens for both mental health and ND issues.[28]

2. Modify and enhance treatments: Research suggests that individuals with a history of TBI may find it more difficult to engage with offence-related rehabilitation due to information processing difficulties or disinhibited behaviour.[6] Any interventions that are used, guided by the principles used for RNR and CBT, would need to be tailored for individuals and take account of age, development factors and ND issues. Support would be required for individuals with TBI to enable impulse control, recall of coping strategies and better planning. A substantial majority of young adult offenders will have speech and language problems so modifications would be required to enhance communication and engagement.

3. Transfer of training: Programmes are designed to prepare YP for the challenges 'on the out'. The 'out' contains threats and problems, which these individuals lack the skills to manage, especially after TBI. It is vital that the recipients of interventions are either provided with skills that lead to transfer, such as metacognitive training, and/or compensatory aids (e.g. prompts to enable them to use new strategies in the external environment).

4. Support across, and into, services: Considering the range of services involved, or sometimes lack of services when people are 'in transition' (from youth to adult), multi-systemic interventions (MSI) are needed. MSI can have positive outcomes whether directed at first time entrants,[63] or those at risk of violent re-offending,[64] with a decrease in recidivism and other beneficial outcomes. The multi-systemic team (MST) develops positive working relationships with YP and between services. For example, as part of the transition 'package' it is helpful for the MST to have management board representation and well-structured partnerships between referral services, stakeholders and other agencies, such as housing. Skilled mentors and well-trained transition co-ordinators can help facilitate this.

5. Staff awareness and action: Effective training is required for staff and services to help address mental health and ND needs that are present in the prison population. Staff working in custodial secure facilities need to be educated about the impact of TBI and the management strategies available to support people. This can have positive outcomes for both staff and offenders leading to a reduction in the number of negative interactions between the two.[65]

Section 2: The Linkworker Service

In 2013, The Disabilities Trust introduced a brain injury Linkworker (LW) Service in two custodial secure facilities in England to provide specialist support to YP with a history of TBI. The LW was incorporated into a service pathway and based on an existing service for adult offenders with TBI in an adult custodial secure facility, HMP Leeds[66] (see link below).

www.thedtgroup.org/foundation/brain-injury-and-offending/prison-linkworker-service/

The LW programme was developed in a dynamic and challenging service during a time of general cultural shift in justice and society. The number of YPO entering the Secure Estate has dropped significantly in recent years from 2,059 in March 2010 to 966 in March 2015.[67] (see link below).

www.gov.uk/government/statistics/youth-custody-data

This decrease is due to complex reasons[68] summarised by Rob Allen (previously director for International Centre for Prison Studies, King's College London and member of the Youth Justice Board) as follows:

"The fall in the use of custody for children is accounted for both by a drop in overall numbers being sentenced by the courts, and by a drop in the proportion sentenced to custody. There have been changes to the way that children are dealt with by the police, which may have reduced their prospects of re-offending, and have certainly provided more opportunities for them to grow out of crime. The overall level of crime has fallen during this period indicating that reductions in the use of custody can be achieved without a negative effect on community safety. There have also been changes in the way the courts have sentenced those aged under 18 years, stimulated in part by changes in the law and sentencing guidance, and also in part by the improved performance and focus of the Youth Offending Team (YOT). This in turn has been stimulated and sustained in a low profile but effective way by the Youth Justice Board and by campaign groups including Out of Trouble. If the changes have not been directly stimulated by political leadership nor have they been impeded" (p25)[68] (see link below).

www.prisonreformtrust.org.uk/Portals/0/Documents/lastresort.pdf

Initially, two Young Offender Institutes (YOI) were selected for a LW service. However, one YOI was decommissioned during the study. The LW service at this site was then modified to meet the needs of those aged 18 to 21 years. It was noted via a telephone call with a representative from Prison Psychology/Welfare that initially there was some ambiguity regarding the potential roles of LWs with YPO, compared to the LW service in adults in the CJS. The ambiguity affected personnel whose roles potentially overlapped with the LW (i.e. social workers and educational, clinical and/or forensic psychologists). In response to raising awareness, a ND programme was initiated in one YOI.

SERVICE ORGANISATION

The LWs and Clinical Psychologist were managed by a project manager. The Clinical Psychologist provided two hours of supervision per week to the LW and in turn received clinical supervision, from a Consultant Clinical Neuropsychologist. The LW also had access to a specialist brain injury trainer, using a neurobehavioural approach of rehabilitation. The team provided awareness training to staff at both YOIs and training to the LWs as part of their induction into the role.

ASSESSMENT

YP under the age of 18 years on admission had an initial assessment of their health needs. This screening was conducted routinely within 10 days of the young person's admission into custody by a nurse. There are five parts to the CHAT; an initial assessment of immediate risk in relation to physical health, mental health, substance misuse and safety as well as subsequent comprehensive assessments of physical health, substance misuse, mental health and neurodevelopment disorders and TBI[28]. The full CHAT (e.g. Neurodisability section) was used in some settings (Young Offenders and Adult Male Category C), but not in another (Male Young Person Centre (15-17). For those institutions where the CHAT was not available, referrals were made by a mental health nurse to the LW service following positive screening, using a screening tool, the Brain Injury Screening Index® (BISI) (see link below).

www.thedtgroup.org/foundation/about-the-foundation/brain-injury-screening-index

The BISI is an 11 item questionnaire to help identify people with a brain injury, which gives an indication of the level of severity of the injury. Referrals were also made by a wide range of professionals working with the young person in custody following consultation, or by the YP themselves. All referrals were subsequently triaged allowing prioritisation based on the severity of symptoms and the impact on the functioning of the YP. Those identified as having mild difficulties due to TBI and possible other ND were 'signposted' and given educational material on useful services and support. If the difficulties were rated as moderate to severe, the YP was accepted for further assessment. For further information see link below.

www.thedtgroup.org/media/4082/160115_linkworker_service_report.pdf

Initial assessment

All YP accepted into the service had an initial assessment or clinical interview, which provided an opportunity for them to report any concerns or difficulties. In addition, mental health and self-esteem measures were completed and information collected regarding alcohol and drug use.

All parts of the CHAT assessment were reviewed, as well as information held by the juvenile justice system and education services. Liaison took place with family members and the professionals involved in the care of the YP to determine any relevant developmental history and possible co-morbidity needs.

At the initial assessment a priority was to assess the YPO's current level of functioning within the prison. This information helped determine their ability to engage with daily living activities, health needs, self-management e.g. medication, potential safety and risk issues. This would highlight for example the need for physical assistance or adaptation, and also the need to be placed in a safe environment such as the healthcare wing due to vulnerability.

Some YP required further assessment to identify strengths and deficits in cognitive functioning, which may have impacted on their symptoms and motivation to engage. Neurocognitive tests were administered, including standardised tests of visual and verbal learning, memory, executive functioning and speed of information processing, as well as standardised rating scales of behaviour. As the assessment of cognition in such institutions is more focused on intellectual abilities, the LW focused on areas more pertinent to brain injury, such as executive functioning and memory. 'Portable profiles' of the YP's strengths and needs were developed to help summarise issues relevant to their care and rehabilitation for the YP and other staff. This extended assessment also included identification of the YP's 'development goals'. These goals were based on the YP's opinion of their needs and developed ensuring that they were relevant and achievable.

INTERVENTION

One-to-one support: A wide range of support could be provided to the YP including education about their brain injury and its effects, cognitive strategies involving functional intervention aids (e.g. a diary to aid memory, attention and thought records). Behavioural management plans and guidelines were developed with the YP's involvement, which could involve drawing up contracts with the YP. In addition support was provided in the form of psychological approaches to emotional regulation (e.g. mindfulness exercises, relaxation, increased awareness and the identification of triggers for anger). Support was also provided for education (e.g. a review of learning strategies with the YP through problem solving difficulties encountered in a classroom setting). All the plans were reviewed in accordance with goal attainment and, where appropriate, this became part of their custodial sentence plan. In addition, one-to-one support was provided to help the young person engage in, prepare for and attend professional meetings and court appearances (e.g. YOT).

Staff liaison: YP were provided with indirect support through the LW working with education personnel, mental health nurses, their keyworker and the YOT. The LW provided advice on specific issues relating to the impact of the TBI. This included developing behavioural intervention plans, general advice about how to engage and support them and ensuring the YP's education was adapted to account for the difficulties associated with their brain injury (e.g. regular breaks,

provision of written material and the re-wording of questions).

Multi-agency work: The LW could participate in the support planning process to gather relevant information and provide feedback to the wider multidisciplinary team. The LW also provided information and support referrals for further assessment or treatment e.g. neurology and physiotherapy. Individualised support plans were produced for those professionals working with the YP to supplement their overall plan and goals.

Staff training: The brain injury trainer delivered staff training to raise awareness of brain injury and to support service delivery. The LW provided ongoing support to staff throughout the duration of the project.

Discharge planning and community interventions: When a YP was near the end of their sentence, interventions were adapted in preparation for their release, including the development of a support plan for maintaining any improvements made. During discharge planning the YP was supported to problem solve i.e. to look at reducing re-offending, set goals and plans of how to achieve these on release, the development of contracts between the YP and their family and relapse prevention plans. A discharge summary was completed and shared with community support e.g. the YOT and the General Practitioner (GP) to ensure TBI health-related needs were supported continuously in the community. YP identified as having severe impairment following a TBI would be referred to a specialist brain injury rehabilitation service on release or if access to specialist brain injury services was unavailable, they were helped to identify an appropriate treatment, NR or support network.

The LWs also worked closely with the voluntary sector to support the YP on release in their education e.g. attending college, occupation e.g. attending interviews, and housing e.g. arranging accommodation. The LW worked with the SU and their YOT as appropriate, for up to eight weeks following release. They worked on strategies and a plan to address and support any underlying TBI related needs, to help them organise and attend relevant appointments in the community, re-engage with education and training, as well as signposting the YP to community services for additional support. The LW also provided telephone support to the YP and their family where appropriate.

Section 3: Service Evaluation

The study was designed as a preliminary service evaluation to examine the feasibility of providing the LW service within the CJS. It determined the feasibility of collecting relevant information about the service and from its recipients to inform future intervention outcome evaluation projects. The study also looked at the possibility of investigating a change in needs arising from the interventions provided and whether this would be linked to a change in criminal behaviour. Service delivery was assessed and designed to be open-ended (i.e. at the service inception it was not feasible to determine exactly what data would be available for analysis). This was a major barrier to conducting a quasi-experimental analysis. The study was approved by the National Offender Management Service (NOMS) and each institution. SUs were asked to provide informed consent for their data, including crime information, to be shared with the researchers.

RESEARCH QUESTIONS

There were two primary research questions:

1. Is the LW service designed in accordance with best practice evidence from NR and FR?
2. Is the LW service meeting its key aims in terms of the identification and management of TBI in YPO?

STUDY DESIGN

The study design was based on descriptive data. Information was gathered to assess trends and to identify the following:

- Did the process of assessment and intervention follow a care pathway relevant to NR and FR?
- Number of accepted referrals
- Frequency and nature of identified TBI and other co-morbidity problems
- Background information on social, educational and offending histories of the YPO

DATA CAPTURE

The LWs co-ordinated and collated the relevant data for the purposes of supporting and re-settling the YPO with TBI. They also gathered relevant information for the service evaluation and data was collected routinely within the YOIs. The main areas of data gathered were:

- Demographics: age, ethnicity, first language
- Offending information: remand/sentenced, length of sentence (months), length of custody (weeks), previous history of custody (frequency, years), nature of offences
- Social history: living arrangements prior to custody e.g. foster care
- Education history: school attendance (mainstream or other), history of exclusion(s)
- Relevant information from CHAT (e.g. what services were involved prior to custody, Child Adolescent and Mental Health Service/substance misuse, GP, presence of physical health problems relevant to TBI, headaches, or prior medical history relevant to TBI, stroke, any disability or impairment, any mental health or substance misuse, presence and nature of ND, including TBI (noting symptoms reported and nature of an event e.g. fall or assault, length of coma)
- Level of 'need' prior to admission
- Cognitive testing outcome: whether cognitive testing occurred and any impairment functions identified during assessment
- Goals agreed, and if achieved
- Interventions provided
- YPO service feedback on discharge: questions asked included:
  - What was your experience of the service?
  - Was the service beneficial?
- Post-release review: two months post-release after the LW service discharged the YPO, where possible the YP was asked (via telephone contact) about:
  - Any involvement in services (e.g. YOT)
  - Any offences that breached licence
  - Satisfaction with the service provided including follow-up questions regarding specific aspects that helped community re-integration
- LW also collated any responses from YOT or probation workers and other feedback on the service in terms of whether it was beneficial, or not

Section 4: Results

The service was assessed in accordance with the key principles identified in section 1.

The LW could draw on supervision from relevant specialised professionals to enable NR within a goal-planning format that facilitated skills learning to manage the cognitive, emotional and behavioural consequences of ND/TBI. From initial incarceration through to re-settlement, the LW navigated the services with the YP to establish and facilitate the required support which was based on the severity of injury and level of need.

The service was constructed to adhere to the evidence base (reviewed in Section 1). Specifically, in terms of its key elements (overall pathway, assessments, interventions, discharge plans and community liaison) there was:

- Screening for ND/TBI
- Modification of treatments to account for ND/TBI
- Methods for promoting transfer of training
- Provision of support across, and into, services
- Provision of staff awareness training and actions

To address more fully the issue of whether the service was designed appropriately, it was important to consider how it was delivered and the outcomes.

SERVICE USER DESCRIPTIONS

The information below was provided by The Disabilities Trust as contextual information for the SU population supported at HMYOI 'A' and HMP and YOI 'B' in the second year of the LW service pilot, ending in September/October 2015.

SUs at Male Young Person Centre

Thirty-two SUs were supported in 18 months of service, aged from 16-18 years, and many had multiple injuries of varying causes (see Table 1).

Table 1: Cause of injury

- Fall when sober = 10 injuries
- Fall when under the influence = 4 injuries
- Road traffic accident = 7 injuries
- Fight = 7 injuries
- Sports injury = 6 injuries
- Other (includes assault, accidental injury, injury at work, restraint by police and traumatic birth) = 24 injuries
- Total number of injuries = 58

The mean age at first head injury was 10.9 years (n = 24 SUs); 34% had mild TBI, 66% moderate to severe TBI. The average length of time spent in the LW service was 68 days/10 weeks (n = 21 SUs).

SUs at Young Offender Institutions and Adult Male Category C

There were 33 SUs supported in 19 months of service, 10 aged 15 to 18 years, 23 aged 18 to 22 years, and many had multiple injuries of varying causes (see Table 2).

Table 2: Cause of injury

- Fall when sober = 16 injuries
- Fall when under the influence = 14 injuries
- Road traffic accident = 13 injuries
- Assault = 10 injuries
- Other = 5 injuries
- Total = 58 injuries

The mean age at first head injury was 10.5 years (n = 33); 30% had mild TBI, 70% had moderate to severe TBI. The average length of time spent in the LW service was 61 days/9 weeks (n = 29 SUs).

Of the 65 SUs seen, 14 provided fully informed consent for their data to be shared with the researchers; seven SUs were aged 15 to 18 years and seven aged 18 to 22 years. The mean age of their first head injury was 9.8 years (range from 6 months to 20 years).

Figures 1 to 13 profile the SUs with regard to the causes of head injury, injury severity, ethnicity, referral source, pre-custody living arrangements, attending school/college or work prior to custody, frequency of previous custody, current offence, neuropsychological impairments, anxiety levels as well as depression levels, alcohol misuse and drug use on initial assessment.

Figure 1: Cause of (main) injuries (n=14 with multiple injuries)

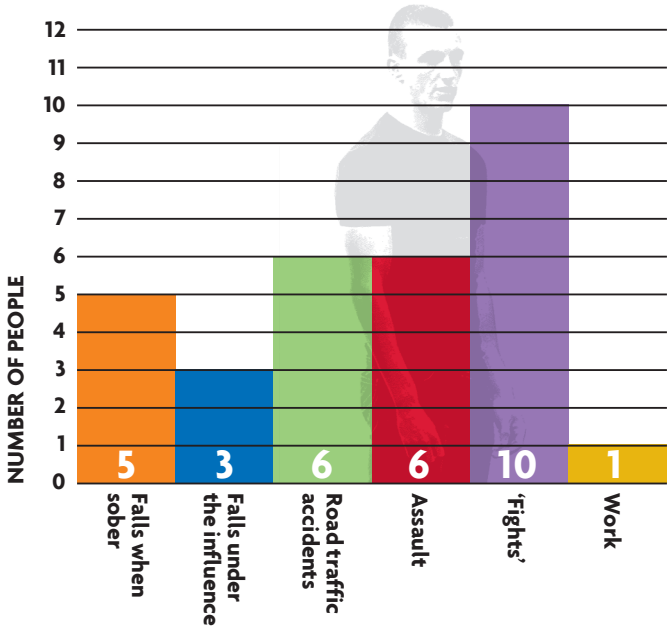


Figure 2: Injury severity

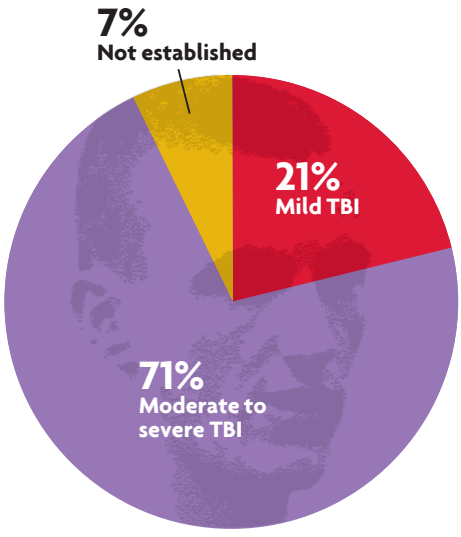


Figure 3: Ethnicity

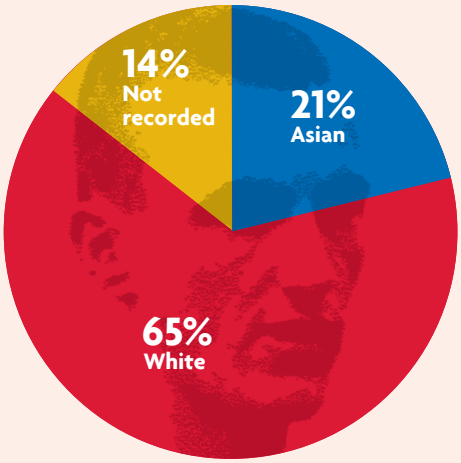


Figure 4: referral source

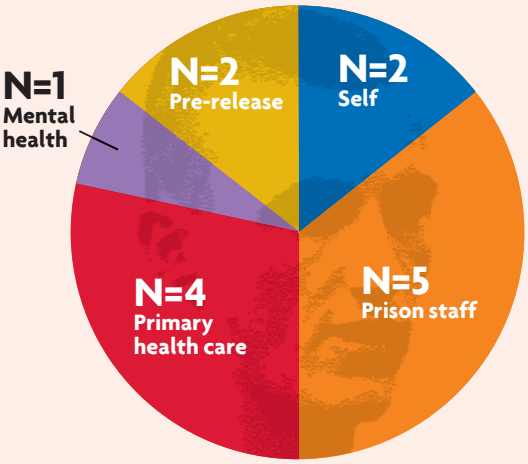


Figure 5: pre-custody living arrangements

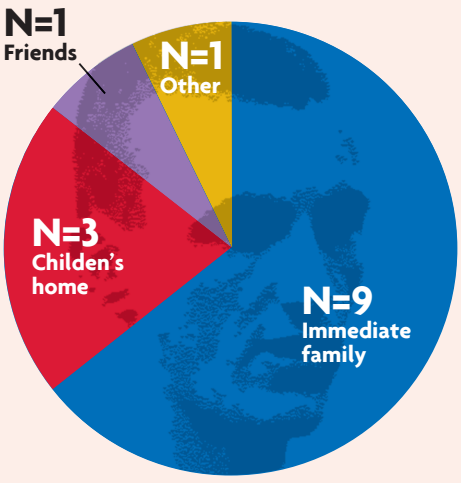


Figure 6: school/college or work prior to custody

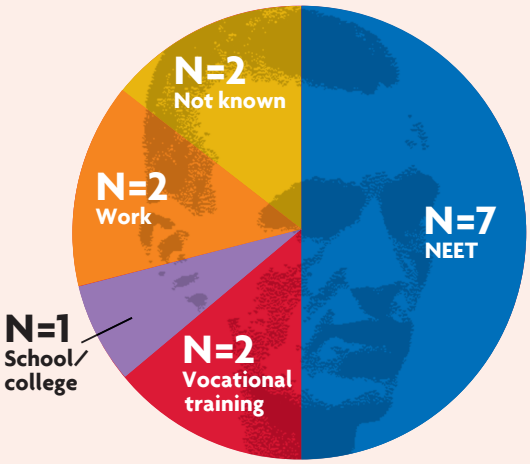


Figure 7: frequency of previous custody

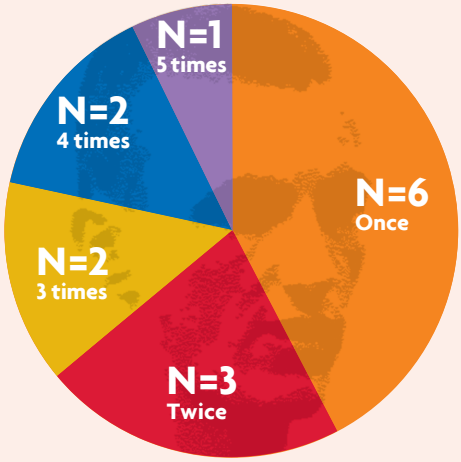


Figure 8: Current offence

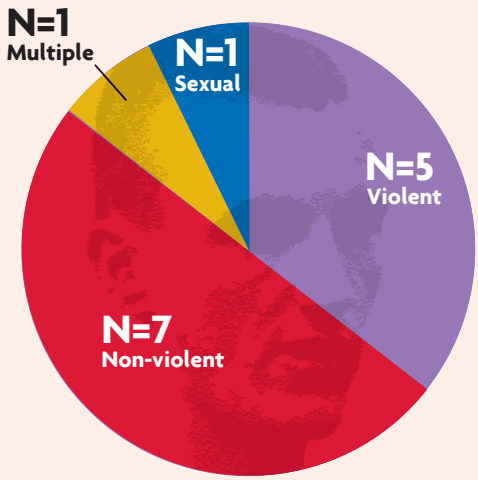


Figure 9: Neuropsychological impairments

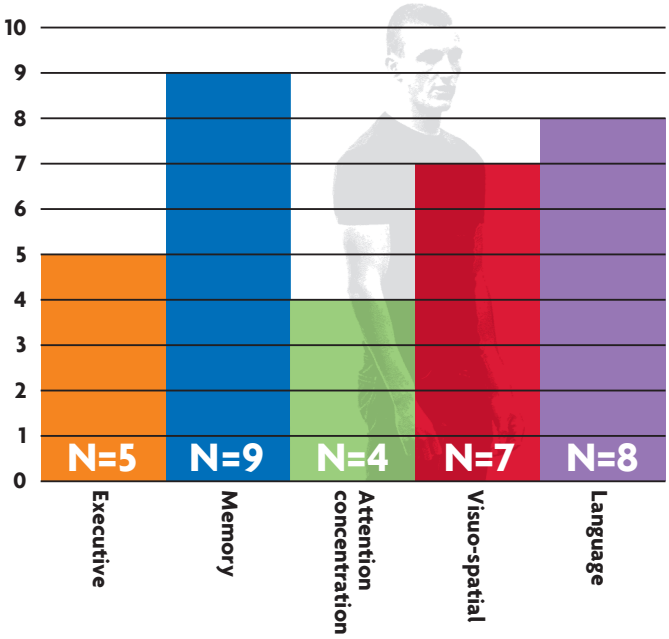
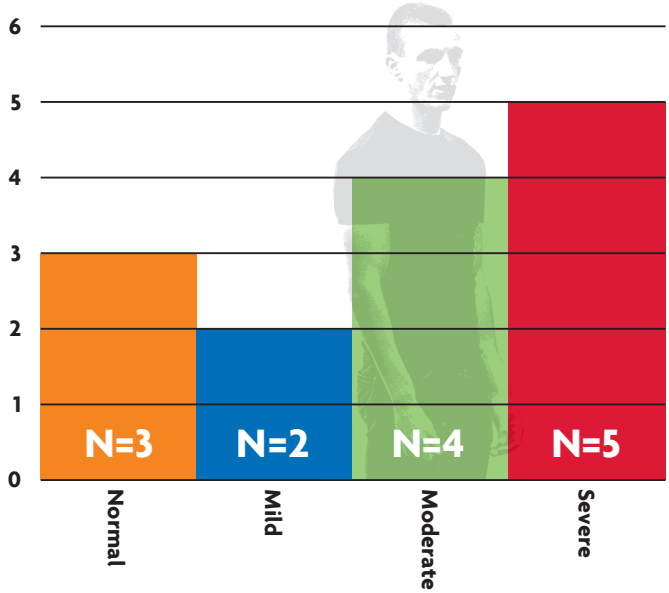
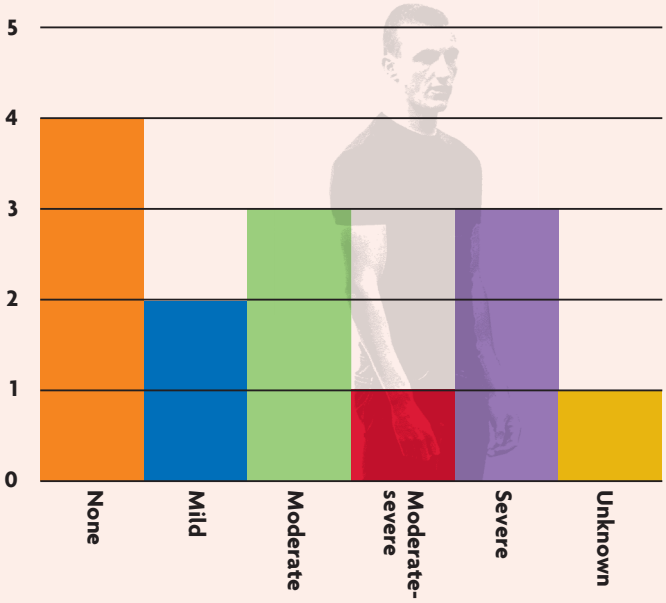


Figure 10: Anxiety levels on initial assessment (GAD-7)



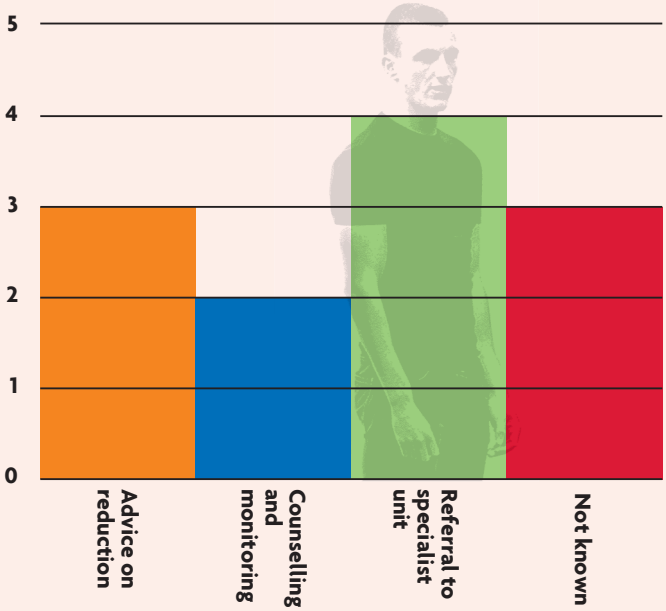
See www.patient.info/doctor/generalised-anxiety-disorder-assessment-gad-7[69]

Figure 11: Depression levels on initial assessment (PHQ9)



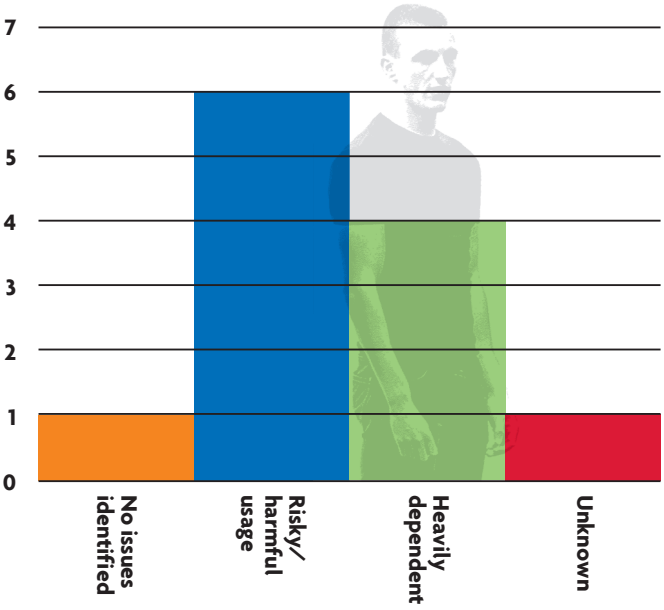
See www.cqaimh.org/pdf/tool_phq9.pdf [70]

Figure 12: Alcohol misuse (AUDIT)



See www.alcohollearningcentre.org.uk/_library/WHO_-_AUDIT.pdf [71]

Figure 13: Drug use on initial assessment



See www.emcdda.europa.eu/attachements.cfm/att_10455_EN_DUDIT.pdf [72]

See www.paihdelinkki.fi/sites/default/files/duditmanual.pdf [73]

GOALS AND GOAL ATTAINMENT

The goals were agreed with the SUs prior to the commencement of their rehabilitation programme and goal attainment monitored.

Emotion and behaviour (all achieved as expected)
Examples of goals included:

- Work on emotions (e.g. anger and staying calm)
- Achieving gold level status
- Implement a behaviour reward plan
- Support and work around anger
- Have more confidence following brain injury

Cognitive (achieved – 3 more than expected, 1 less than expected)
Examples of goals included:

- To learn concentration strategies
- To learn memory strategies
- To improve memory
- To learn and practice memory strategies
- To use memory aids to improve memory
- Support with decision making

Detailed assessment/referral (achieved – as expected)
Examples of assessments included:

- Memory assessment
- Cognitive assessment regarding difficulties with problem solving
- To find out if I have ADHD
- To see mental health regarding feelings of anger
- Medical investigation into dizziness/blackouts

Re-settlement: (achieved – more than expected)

- Structure and routine for release

SUMMARY AND COMMENTS ON SU AND LW SERVICE PROVISION

Traumatic Brain Injury
A substantial number of SUs (71%) had moderate to severe TBI, mostly sustained in fights, falls and Road Traffic Accidents (RTAs)(see Figures 1 and 2). This is in accordance with the trends in those individuals seen within the service as a whole. However, in the context of approximately 15% of the overall prison population having moderate to severe TBI and 40% mild TBI, it indicates that the LW service received a larger number of SUs with moderate to severe TBI. This indicates the appropriate use of the LWs to provide support for rehabilitation, rather than signposting to other services and educational input.

Referral
The high proportion of referrals from prison staff could be a result of increased TBI awareness following the service implementation (see Figure 4). However, the relatively low number of those coming from screening may indicate more effort is required to identify pathways into services following positive screening, including ensuring consistent use of, e.g. CHAT-Part 5 (neurodisability section).

Pre-custody factors
Five YP had previously been in care and seven were not in education or employment, which is in line with general population trends (see Figures 5 and 6). This reinforces the need to address the lack of secure social roles in this population. The lack of success at school and in work settings may be criminogenic and TBI may confer extra risk for such issues such as school exclusion.

Offences
Violence was second to other offences and the substantial majority of SUs were in custody on multiple occasions, which is consistent with the literature (see Figures 7 and 8).

Neuropsychological problems
Memory and language impairments, as well as executive dysfunction, were prevalent (see Figure 9). This would be consistent with the severity of injuries reported. If these factors are not addressed they are likely to lead to poor uptake of interventions for behaviour change and contribute to re-offending.

Anxiety and depression/alcohol and drug misuse
The majority of SUs screened had moderate to severe anxiety and depression (see Figures 10 and 11). The rate of alcohol and drug issues was high; with a substantial number scoring in the 'harmful' and 'needing specialist care' level (see Figures 12 and 13). This level of psychiatric disturbance and its severity is in line with expected trends. This supports the need to look at comorbidity 'vulnerabilities' in this population and address them through appropriate interventions.

Indeed, secure settings do appear to offer an opportunity, if it is taken, to provide a means to address the complex needs of this population in a 'therapeutic' manner.

Goal planning

The goals were relevant to functions in a range of areas (managing emotion, improving cognitive function using aids) and focussed on outcomes such as improved insight and more appropriate behaviour in context. These goals were largely, partially or fully met. However, the goals agreed were not noted in the database because the focus was on end points (e.g. to have a job or be at college). In future goals should be specific and focused on behaviour towards a social role.

CASE ILLUSTRATIONS

The following four cases illustrate the typical issues presented by YPO and demonstrate the range of work conducted by the LWs.

YOUNG PERSON ONE

TRAUMATIC BRAIN INJURY AND ANXIETY

Male, aged 18+ years with TBI and comorbid anxiety. He was sentenced for theft.

Reason for referral

Screened by LD nurse on reception using CHAT and TBI history was noted.

Initial assessment

YP One reported that he had had a CT scan which came back 'clear'. He had visible symptoms of anxiety including sweating, shaking and stuttering. The LW noted that the brain scans may not always show damage, therefore, it would be beneficial to complete cognitive assessments as soon as he had received medication and significantly reduced his anxiety symptoms.

Detailed assessment

Neuropsychological impairments were found in immediate and delayed verbal memory, and divided attention and planning. Co-morbidities were identified as well as exacerbating anxiety disorder (agitated, racing thoughts).

Actions and outcomes

- YP One was referred to the Mental Health team for medication, taught relaxation techniques (deep breathing, guided imagery and muscle relaxation) and psychoeducation was provided around anxiety, which gave the client a better understanding of his symptoms.
- During a support session, YP One reported feeling extremely anxious since his 'pad mate' had been released. He was going to have to share with a person who he did not know. The LW requested a cell move via the prison wing staff and YP One was able to move into a cell with another young person that he was friends with. This significantly reduced his anxiety. YP subsequently stated he was able to sleep better at night, which, in turn, had a positive effect on his daily functioning.
- A template was developed to support decision-making. YP One could list in the table the positives and negatives of making decisions and the effect this would have on himself and others around him.

A weekly planner was discussed prior to release and hypothetical activities were added to the planner as examples of how he could keep himself busy and out of trouble. It was noted that YP engaged very well with both activities. YP One stated he would have 'suffered in silence' had it not been for the input of LW.

- Following his diagnosis and treatment for Generalised Anxiety Disorder (GAD), YP One was able to begin working in a restaurant, face to face with customers, and as part of a team, which he stated he would have not been able to do before. This experience also taught him a variety of new skills that he could add to his curriculum vitae and use in future employment.

Comments

Mood disorders are common in YOP, particularly when there is a TBI that compromises functions. This case illustrates how anxiety can be better managed when TBI factors are also addressed, which can lead to increased opportunities for developing work and life skills. Interestingly, the YP seems to have benefited from a 'metacognitive' element (developing ways to support decision making) and emotion control which are key features of NR and FR. The LW was also an advocate for the YP.

YOUNG PERSON TWO

MULTIPLE TRAUMATIC BRAIN INJURY AND ANGER

Male, aged 18 years with multiple TBIs and difficulty controlling anger. He was sentenced for Grievous Bodily Harm.

Reason for referral

YP Two reported in a sports session that he had been involved in un-licenced martial sports/arts bouts with possible multiple TBIs.

Initial assessment

Assessment revealed a many mild TBIs (over 50), three with LOC and TBI symptoms in at least the moderate range. Medical records confirmed further 'head injuries' aged three, four and five years of which YP Two had no recollection.

Detailed assessment

Neuropsychological assessments identified cognitive difficulties in executive function, memory (immediate and delayed, visual and verbal) and language. YP Two reported problems in anger management and engaging in negative behaviour from a young age (primary school), which included fighting. He was excluded and transferred to a Specialist school where he received support and behaviour management. YP Two reported becoming easily annoyed and impulsive; he stated he was often unable to control this.

Actions and outcomes

- The LW provided YP Two with support for his anger and aggression including psychoeducation. YP Two identified how this reflected his issues and he gained an understanding of how to identify physiological and psychological warning signs of anger. During subsequent support sessions, the LW and YP Two identified specific triggers of anger. He was provided with an anger diary to monitor the frequency of these occurrences and his reactions to them.
- LW developed an 'incident log report' to document the frequency and details of aggressive outbursts.

The frequency of outbursts fluctuated and included aggressive and abusive behaviour towards staff. When these were discussed with YP Two he sometimes recognised that he could/should have reacted differently but stated he felt unable to control the escalation of his anger. He also stated he felt that staff treated him like 'nothing but a prisoner' and 'looked down' on him. YP Two reported feelings of paranoia which contributed towards his behaviour. The incident log was then used to create a behaviour reward scheme. Unfortunately, due to the client's release and date/time restrictions, the scheme was not fully implemented.

Comments

This case is noteworthy as there are substantial mild TBI events that may have contributed to a neurological picture of 'moderate-severe' chronic impairment (as evidenced on neuropsychological tests). Injury in young brains can lead to atrophy and this is more likely with repeated injury. These events may well have disrupted the life trajectory of this YP – such as away from mainstream schooling, and a life role detrimental to his wellbeing. The LW appears, within a limited time frame, to have assisted him in understanding the nature of his issues, and provided coping strategies.

YOUNG PERSON THREE

TRAUMATIC BRAIN INJURY AND ATTENTION DEFICIT HYPERACTIVITY DISORDER

Male, aged 18 years with TBI and ADHD. He was sentenced for theft.

Reason for referral
The LD team screened with CHAT 5, and YP Three reported a history of head injury.

Initial assessment
YP Three had many visible behavioural idiosyncrasies (easily flustered especially when being questioned), word finding problems, involuntary movements and sound-making and limited attention span. YP Three exhibited negative behaviour in class due to an inability to cope with the demands and reported difficulties with memory, attention, decision making, planning and organising. No prior support had been provided for a head injury. YP Three was diagnosed with Behaviour Disorder aged 14 years but did not receive any medication. YP Three was also taking medication for anxiety.

Detailed assessment
Negative behaviour started in primary school which coincided with the age at which YP Three sustained his first head injury. His current difficulties were related to his moderate-severe TBI, which are further confounded by anxiety and possible ADHD.

Actions and outcomes
- LW spoke to tutors regarding YP Three's behaviour during class. The tutors spoke of behavioural observations in keeping with ADHD (e.g. inability to complete tasks, easily distracted, short attention/focus span etc). Liaison with the Mental Health team lead to a diagnosis of ADHD and medication.
- LW arranged an activity change for YP Three outside the classroom so he could cope better with the demands being placed on him. Other interventions included the completion of activities to improve different types of attention and discussing/identifying and practicing strategies that could help client to concentrate better in difficult situations.
- YP Three has progressed significantly in terms of attitude and behaviour. He received many positive comments from staff and was moved to an enhanced behaviour regime (he received all the privileges available to him on the wing, including extra visits).
- Following the improvements made the LW determined that continued support was required for YP Three when he was released. Unfortunately, due to the end of the LW service, this was not possible. However, the LW produced a behaviour traffic light system that YP Three could keep and use on his return home. The client engaged really well with this system and was able to identify ways in which he could de-escalate any aggressive reactions/behaviours.

Comments
- ADHD is a risk factor for TBI, and is also made much worse by TBI. It is often hard to 'unpick' one from the other. This case suggests that ADHD was largely consequential to TBI, and a 'slide' from schooling with probable difficulties in managing the transition from primary to secondary schools.
- LW appeared to have helped YP Three develop awareness of his issues and identified a range of coping strategies with the benefit of the YP having rewards within custody. YP Three was also enabled to improve his chances of re-settling into the community with a cognitive strategy. Unfortunately we do not know whether this actually worked.

YOUNG PERSON FOUR

TRAUMATIC BRAIN INJURY AND SUICIDALITY

Male, aged 18+ years with TBI and suicidality. His crime was not noted.

Reason for referral
YP Four self-referred because he had suffered multiple TBIs.

Detailed assessment
YP Four reported suffering from both depression and anxiety during the completion of the BISI. YP Four reported that he was under the care of the Mental Health team. He appeared extremely chaotic, unable to understand or organise his own thoughts. YP Four referred to himself as 'weird', stating that he did not know what his thoughts were about. He was diagnosed with ADHD aged 13-14 years. YP Four reported that his grandmother's death had had a negative effect on both himself and his family resulting in his mother having alcohol issues, as well as a breakdown in their relationship. YP Four stated that his depression 'comes in waves' and he also reported a history of heavy substance misuse, and appeared to have no regard for his physical health. During the completion of mood screens relating to anxiety and depression, the client disclosed that he had thoughts about self-harm but had clearly not self-harmed at that stage. The client made statements about his thoughts on committing suicide and said he had made some plans on how to do this.

Actions and outcomes
LW followed the protocol to report this information to all the necessary staff (safeguards, security, wing staff, and mental health team). A meeting followed with the client to determine strength of risk and the possible motives for suicidal ideation; the latter were established to relate to problematic relationship with family members.

Comments
Suicidality is a key issue in a SU with TBI. A substantial number of SUs in custody are at serious risk of self-harm. In this instance it appears that the LW identified that it was an issue and was related to his home life. This underscores the need to explore the environments that SUs come from, and may be re-settled into. It appeared that a move back to home environment with family was likely to be highly problematic for YP Four.

FEEDBACK FROM LINKWORKERS

Further information was gathered from one of the LWs in a question and answer format to assess whether the service was appropriate for identifying and managing TBI in YP.

Please describe the young people that were referred to your service
The majority of clients that I saw at HMP A had memory problems, drug use was common and behavioural problems (anger issues). Almost all of my clients presented with memory and attention/concentration problems. Many of my clients came from backgrounds where the themes of drugs/alcohol and mental health problems were prevalent.

From your experience were they similar or different from other young people in custody?
Most other YP (which the LW had worked with previously in custody) had a history of drug use and behavioural problems. However, clients with brain injury were more likely to have complex needs, and were often seen by more than one service.

What do you feel were the key/important aspects of your role and intervention and why?
Developing a therapeutic relationship with the client because they often distrusted the services and professionals. The clients responded well to the LW's approach and being a point of contact for them.

What aspects of the role did you find difficult and why?
Fitting in with the prison regime because such a small service could be difficult and there was a lack of communication and often missed appointments.
I never felt part of a team which could be quite difficult at times. At first, no one really knew much about my role or what it entailed and I found it hard to integrate for this reason. [Following the decommissioning of the youth service and move to 18-21 year olds] I learned there are far less services involved with adult offenders, and therefore I didn't feel as involved with the external agencies (i.e. probation) and no meetings were held by them that I could attend. The CHAT 5 was no longer being used due to staffing levels, therefore, my referrals became less and less frequent. Therefore, I had to create alternative referral pathways which involved having to search for clients.

Did you obtain any feedback (formal/informal) from young people about your role/intervention?
The YP valued having the LW to talk to, someone that would understand brain injury and some of its effects as well as understanding their difficulties and the interventions that work e.g. memory and concentration strategies. Getting referrals to other departments was a problem.

Was there anything young people didn't like or found difficult?
Having to complete so much assessment/paperwork in the initial stages and having to sign so many consent forms.

Was there anything other professionals didn't like or found difficult?
They didn't like the fact that I couldn't work with adult offenders and I had around six or seven referrals for these. [Service was restricted to 18-21 only]

Did you obtain feedback (formal/informal) from families (within the community) about your role/intervention?
That their family member was no longer labelled as a 'bad kid' and there was a bit more understanding of his difficulties.

Was there anything families didn't like or found difficult?
Families and clients often commented on community visits and that they would prefer to have visits at their home rather than at YOT services.

What did you find were the barriers to implementation of the LW service?
There was difficulty in establishing the service at first and accessing prison training. The IT systems took time to set up.

What facilitated implementation of the service (consider practical and process issues as before)?
The multidisciplinary meetings that took place facilitated making links with other services.

FEEDBACK FROM SERVICE USERS AND PROVIDERS

The Disabilities Trust provided feedback gathered from YP and service providers/stakeholders (see Tables 3 and 4).

TABLE 3: SU FEEDBACK OVERVIEW (N=3)

Service experience

- 2 YP rated their experience as 'very helpful'
- 1 YP rated their experience as 'helpful'

Areas endorsed by 3 YP for having helped

- Managing mood
- Remembering
- Stopping to think
- To be less aggressive

Main areas where intervention was helpful for the future

- Getting a job
- Avoiding fights
- Getting into less trouble
- Having better relationships

TABLE 4: THEMES FROM SERVICE PROVIDER FEEDBACK

- LW filled a gap that was important in healthcare
- Improved awareness of a key issue for staff
- Important for understanding behaviour in TBI
- Key for developing coping strategies and ways of working around presenting issues
- Improved integration of services around a person
- Provided assistance to the YP for managing behaviour, including through staff and external providers on release
- Important to have such workers embedded and needs to be integral to OM service

REPORTS FROM HER MAJESTY'S INSPECTORATE FOR PRISONS

It is interesting to note that Her Majesty's Inspectorate for Prisons (HMIP) have begun to routinely inquire into the management of TBI in prisons and commented on the provision of the service as follows:

"Joint working with the brain injury link worker service provided by the Disabilities Trust Foundation was effective. The full-time worker used SystmOne to record her interventions with boys, demonstrating a proactive joint approach with health services. Important issues were addressed, including sleep, memory, anger and the behaviours that may have led to criminal activity. Engagement with existing rehabilitation programmes within the prison such as education and training was encouraged."[i]
Inspection Report by HM Chief Inspector of Prisons, 2015.

See www.justiceinspectorates.gov.uk/hmiprisons/wp-content/uploads/sites/4/2015/08/Keppel-web-2015.pdf

Section 5: Key Findings and Recommendations

The development of antisocial behaviour involves a complex interaction of intrinsic and psychosocial factors. For example, deficits in executive function can affect the young person's ability to regulate their behaviours, plan and generate alternative strategies. Antisocial behaviour also shows strong associations with psychosocial adversity (parental mental illness, family breakdown, parenting style and association with other antisocial peers influence outcomes).[74, 75] The association between academic problems and antisocial behaviour has also been well established. Detachment from school increases the risk of offending through reduced supervision, loss of any positive socialisation effects of school and by creating delinquent groups of YP.[76]

This report notes a range of studies that identify rates of TBI amongst YP within the youth justice system. Identifying and comparing such rates can be problematic due to differences in methodologies between studies. However, the studies described consistently indicate a higher prevalence of TBI amongst young offenders and an association with earlier and more violent offending. This suggests a number of implications for the youth justice system, from screening to effective intervention and multi-disciplinary and multi-agency collaboration.

There is growing evidence that YP within the youth justice system have high levels of 'needs' with regard to health, education and social and emotional well-being. Studies consistently suggest high levels of mental health needs and neurodevelopmental disorders amongst young offenders including TBI. These needs are often unmet due to a lack of appropriate screening and identification, limited access to evidence based interventions and poor continuity of care.[75] This is particularly apparent amongst YP in custody. A review by the OCC raised concerns about the lack of provision in place for supporting emotional well-being and the mental health of children and YP in the youth justice system.[77]

Considering, therefore, the role of TBI within offending and how NR can change the lives of people with TBI, it could be viewed that there is a missed opportunity in a system that does not provide some form of NR to those with TBI within its remit. However, introducing NR into FR to create a 'hybrid' is not straightforward. In this final section of the report the development of the LW service is considered and its implications for approaches to screening, assessment and the intervention of YP with TBI within custody.

The initial aims of this project were to establish whether it was possible to:

1. Identify young adults with a brain injury who enter custody
2. Develop a care pathway and provide dedicated support to YP with a brain injury
3. Raise awareness of brain injury within an HMYOI

From these aims a service was developed. This report describes the service and documents a preliminary service evaluation whilst addressing two key questions:

1. Is the LW service designed in accordance with best practice evidence from NR and FR?
2. Is the LW service meeting its key aims in terms of the identification and management of TBI in YPO?

Taking the broad view of the service, it has certainly been possible to set the service up, evolve it in a dynamic and changing environment and it appears to fit the needs of the YP across a wider spectrum of ages. It also appears that it is, with appropriate staffing, possible to screen for TBI in the population and this may contribute to increased awareness of such issues in YPs' care and management.

The key issue is whether the service 'adds' value to the rehabilitation process. In conducting this service evaluation it was not possible to collect data that would show whether there was a change in the trajectory (health, well-being and crime) of YP through LW involvement (either in a planned Randomised Controlled Study or in a post-hoc quasi experimental design). However service level data was available on 65 YP and detailed information was gathered on 14 and in this context it is possible to note the following:

- The LW service was designed, delivered and deployed within what would be expected for a NR and FR service 'hybrid'
- Referrals were made to the service and it was supporting YP who had relevant TBI (in terms of severity and neuropsychological impairments)

- Such TBI would be expected to interfere with their FR
- The YP had significant criminal histories and mental health problems
- Additional input in a range of areas could well have improved outcomes for the YP in terms of mental health, well-being and criminogenic needs (as noted in goals and feedback).

Therefore, broadly, the service would appear to be meeting the key aims defined at inception. From the feedback, it appears that the service was acceptable to, and valued, by YP and staff. It is important to emphasise that the YP had complex conditions because TBI is a 'keystone' condition within a constellation of challenges (drug and alcohol, mood disorder, lack of familial coherence (care home etc), lack of education and work skills and/or experience). This highlights the need for appropriate keyworking for such a vulnerable group.

In the main, we would therefore recommend further adoption of LW type services within custodial systems and the need to embed them within larger multi-site studies. Such services could provide a vital link across staff teams working with individuals with TBI and effect change. A LW may enable the identification of an underlying TBI, which allows for services to be deployed that are responsive to specific needs and learning styles in order to successfully engage with the YP. This is essential in order to develop support plans and to allow resources to be used more cost-effectively, rather than attempting to engage YP in generic interventions which may not take into account their specific profile of needs.

To determine whether the service met its aims in an effective and efficient manner would require a much larger dataset, with greater capacity to explore the effects of LW input in the 'climate' of factors within such organisations and in the community. Indeed, such work would be important in future, particularly to elucidate potential social, economic and health benefits.

Clearly there are a number of limitations within the study which need to be considered when evaluating the report. The sample (and sub sample) comprised adolescent boys and young men and therefore the results may not be applicable to the wider secure estate which includes adolescent girls and women (see McCabe, 2002[78]). Additionally, the pilot study had insufficient power to fully assess the effectiveness of the intervention due to the small study sample. More data is required about the YP in the service, the overall services and on community re-integration. With more systematically collected and 'shareable' data it would be more possible to map how YP in the audit were representative of the overall numbers of YP within the organisations and how their needs may have been different to those with less significant or no TBI. It would then be possible to look longitudinally at whether they maintained any benefits and the likelihood of recidivism decreased. There is a great deal of data collected within custodial systems and thought needs to be given to how such data can be more fully integrated to identify trends, including treatment effects.

CONCLUDING COMMENTS

As the long-term costs of offending to society become increasingly apparent, politicians and professionals have acknowledged the importance of meeting the needs of offenders. The Bradley Report[79] highlighted a number of problems within the criminal justice system in England and Wales, from difficulties identifying offenders with mental health needs and learning difficulties, to problems accessing appropriate treatment. Such reviews have precipitated change within the youth justice system, including the development of health standards and universal health screening. Assessing and managing unmet health needs can inform individual support plans, help to address offending behaviour and provide a valuable opportunity to re-engage YP with health and educational services to address unmet needs.

Within the current financial climate, and with competing priorities for commissioners and agencies at all levels, the needs of YPO are at risk of being overshadowed. We are pleased that there are, now, guidelines for the commissioner to ensure that neurodisabilities are assessed and managed within secure settings for young offenders.[80] Services such as those delivered by the LW from 'screening' and 'triage' to 'formulating and treating' may provide a way to meet the complex needs of persistent offenders and

may lead to a better use of resources. The LW role is very much one that lends itself to multi-agency partnerships, being a pivot in a complex wheel of health and well-being systems for these multiply-challenged YP. Indeed, early coordinated care is essential in meeting the complex needs of this group of young people, highlighting the important role of a multi-agency public health strategy with cross-departmental government support and assigned resources.

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Young people with Traumatic Brain Injury in custody

An evaluation of a Linkworker Service for Barrow Cadbury Trust and The Disabilities Trust

2016

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Charity number 1115476

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