



City of
BRADFORD
METROPOLITAN DISTRICT COUNCIL

Health Needs Assessment of Adverse Childhood Experiences in Bradford

August 2019

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*“Adverse childhood experiences are the single greatest unaddressed public health threat
facing our nation today.”*

Dr Robert Block, former President of the American Academy of Pediatrics.

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1. Background

Adverse childhood experiences are defined as traumatic or stressful events occurring within a child’s family or social environment during their first 18 years of life. The prevalence of adverse childhood experiences is high, irrespective of sex and cultural context. Adverse childhood experiences are associated with increased risk of physical and mental ill health throughout the life course. In contrast to other UK countries there is no national approach to ACEs in England.

Adverse childhood experiences are defined as traumatic or stressful events occurring within a child’s family or social environment during their first 18 years of life.(1) Adverse childhood experiences include experiences that cause harm directly (e.g. abuse, neglect) and indirectly as a result of household challenges (e.g. exposure to parental separation, substance misuse, mental illness, domestic violence, and incarceration).(2)

1.1 Prevalence of adverse childhood experiences

The prevalence of adverse childhood experiences is high, irrespective of sex and cultural context.(3) A nationally representative survey of English residents aged 18 to 69 (n = 3,885) found 47% of individuals experienced at least one of the nine adverse childhood experiences included in the questionnaire.(4)

Table 1: Prevalence of self-reported adverse childhood experienced by adults aged 18-69 years in England(4)

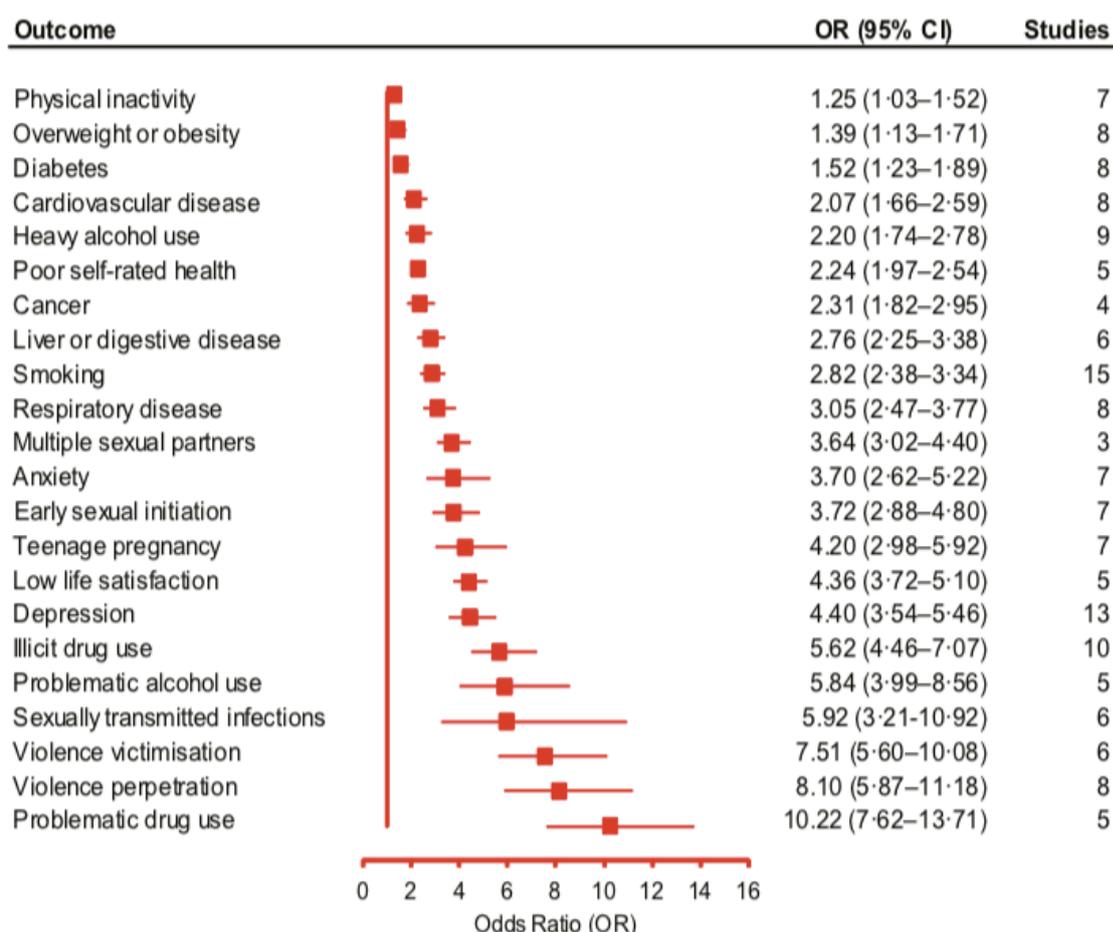
Adverse childhood experience		Prevalence
Child maltreatment	Verbal abuse	17.3%
	Physical abuse	14.3%
	Sexual abuse	6.2%
Childhood household included	Parental separation	22.6%
	Domestic violence	12.1%
	Mental illness	12.1%
	Alcohol abuse	9.1%
	Drug use	3.9%
	Incarceration	4.1%

An NSPCC household survey of 11-17 year olds (n=2275) reported the percentages of children self-reporting a history of emotional abuse (64%), physical abuse (66%), contact sexual abuse (5%) and witnessed domestic violence (18%).(5) Statutory service data suggests an increase in sexual offences towards children; an increase in childhood neglect, abuse and cruelty; and an increase in children placed on a child protection plan (thought to be at risk of harm).(5) While there is possibility that this upward trend may be in part explained by an increase in reporting of offences and a change in the way data is recorded the large numbers of children effected cannot be ignored and are likely to be significant underestimates.

1.2 Adverse childhood experiences and health

There is a wealth of research highlighting the relationship between adverse childhood experiences and lifelong physical and mental health, with estimates that they can lower life expectancy by up to twenty years.(2,6–8)

Figure 1: Summary of studies reporting associations between multiple adverse childhood experiences and selected health outcomes.

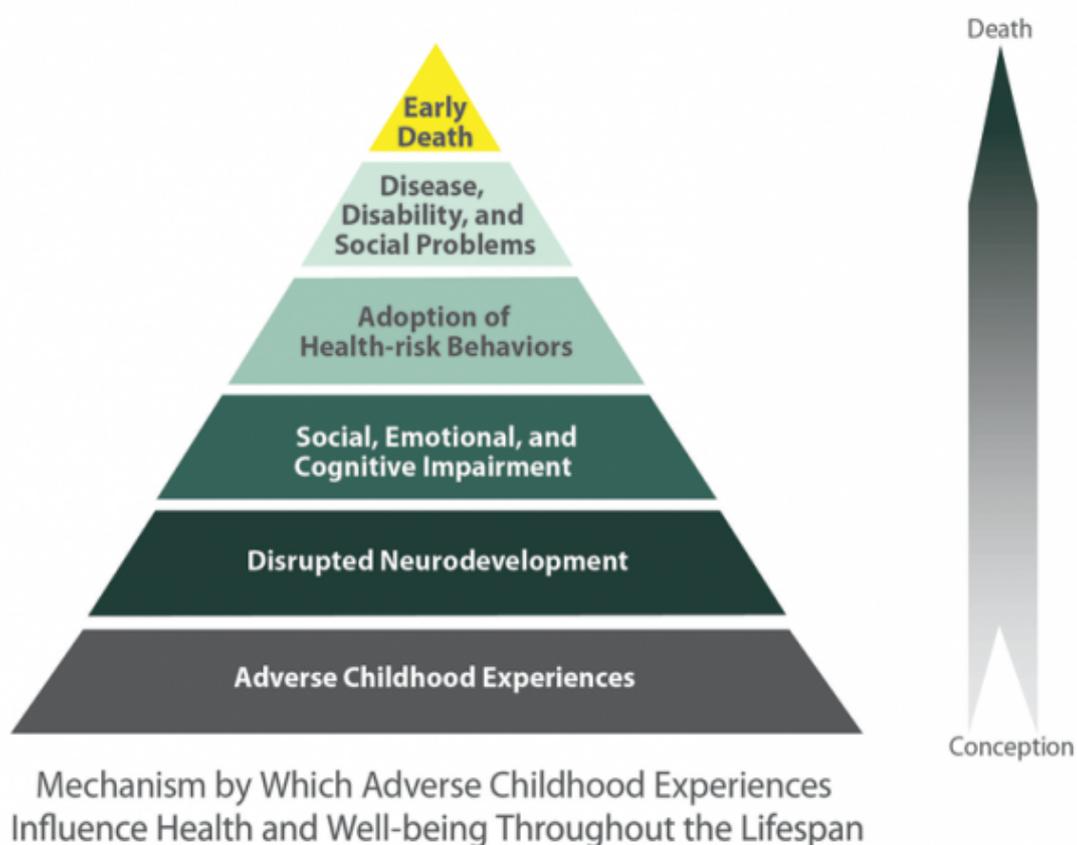


*Figure taken from DPH Scottish Highlands Report 2018 (7) which was drawn from Hughes et al (9). Data for suicide attempt OR 30.14 (95% CI 14.73 – 61.67) based on three studies (not shown) Odds ratios compare cases with zero to multiple (four or more) adverse childhood experiences

Figure 1 presents a summary of a systematic review illustrating the strength of the relationship between adverse childhood experiences and health outcomes.(10) In all studies, the reported risk was cumulative and exhibited a convincing dose-response effect, i.e. the greater the number of ACEs experienced the poorer the health outcome.

The proposed mechanisms as to how adverse childhood experiences impact physical and mental health are complex and multifactorial (Figure 2).

Figure 2: Mechanism by which adverse childhood experiences influence health and well-being throughout the lifespan(11)



1.3 The national context

Adverse childhood experiences has become an increasing public health concern inspiring much discussion and debate as to how best to approach this challenging topic.

Scotland has ambitions to become an 'ACE-aware Nation' and its government has set out its commitment to preventing and mitigating ACEs.(12) A Scottish ACEs Hub has been set up to progress national action on ACEs. In collaboration with the Scottish Government and other partners the hub is involved in raising awareness and understanding about ACEs; contributing

to developing the evidence base on ACEs; policy and practice approaches to prevent ACEs and mitigate their negative impacts.

In Wales, the Public Health Wales collaborative network Cymru Well Wales, has committed to addressing ACEs and their impact in Wales. The Welsh ACE Support Hub aims to increase awareness; share evidence between organisations for prevention and mitigation of ACEs; develop professional skills and knowledge; systems sharing of lessons learnt; and driving change and system transformation at local and national levels. The Welsh Government has shown support through funded projects to help professionals become 'ACE-aware' when working with children and adults, and to prevent and tackle ACEs.

While there is evidence of local work on ACEs being carried out across England, to date there is no central English Government or Public Health England strategy to address ACEs. The Association of Directors of Public Health in partnership with the Association of Police and Crime Commissioners and the Institute of Health Visiting is leading a project to promote whole systems approaches to tackling adverse childhood experiences in local communities. It is hoped that raising the profile of ACEs locally will help to build momentum and push forward the case for national action on ACEs in England.(13)

2. Why adverse childhood experiences should be a public health priority in Bradford

Bradford has a young population.
Bradford's high level of deprivation puts its population at increased risk of ACEs.
ACEs are a significant contribution to disease burden.
ACEs are associated with numerous health inequalities.
A preventative spend approach to ACEs makes economic sense.
Addressing ACEs is necessary if Bradford District is to meet its identified priorities.

Bradford has a young population.

The District's population is a young one, with the fourth highest proportion of under 16 year olds in England. Bradford District has a higher proportion of babies, infants, children and young people than the average for England. The total number of 0-19 year old children living in the Bradford District in 2017 was 155,213, accounting for 29% of the total population. Since 2011 the number of babies and infants has fallen by over 700 from 41,078 in 2011 to just over 40,300 in 2017. The number of children and young people (5-17 year olds) has grown year on year to nearly 101,300 in 2017.

Bradford's high level of deprivation puts its population at increased risk of ACEs.

A family's living environment can precipitate additional risk factors that in combination, contribute to poorer outcomes from adverse childhood experiences. They have been referred to as adverse community experiences, and when combined with adverse childhood experiences they create what has been termed 'A Pair of ACEs' (Figure 3).

While adverse childhood experiences are present across society children living in disadvantaged areas, in poverty, and those of a lower socioeconomic status are at greater risk of exposure to adverse childhood experiences and also of experiencing multiples ACEs compared to their more advantaged peers.(14) Poor and harmful parenting approaches and the relative stress under which families live are additional risk factors for ACEs and are more prevalent lower down the social gradient.(14)

Bradford District is ranked 5th most income deprived and 6th most employment deprived local authority in England. Thirteen percent of the District's households are in fuel poverty, 29% of children are living below the poverty line, and 28% of households find it difficult or very difficult to cope on their incomes.(15) It is likely that Bradford's child population is at relatively high risk of experiencing ACEs and the associated poor health outcomes compared to most of England.

Figure 3: 'A pair of ACES'



ACEs are a significant contribution to disease burden.

The combination of adverse childhood experiences' high prevalence and life-long health impacts indicates a significant but often concealed contribution to disease burden.(2) Bradford has a lower life expectancy at birth for males and females than regional and national averages. Bradford has higher under 75 mortality rates for all causes, cardiovascular disease and all cancers than England and Regional averages. Bradford's admission-episodes for alcohol-specific conditions and intentional self-harm; smoking prevalence; and Year 6 childhood obesity prevalence are all higher than national and regional figures. The Bradford District Plan (2016-2020) aspires to make Bradford District a great place to live for everyone, where children have the best start and people live longer and have healthier lives.(16) The Joint Health and Wellbeing Strategy for Bradford and Airedale 2018-2023 outlines a complementary vision with a focus on prevention and the wider determinants on health and wellbeing.(17)

ACEs are associated with numerous health inequalities.

As discussed above, children living in disadvantaged areas, in poverty, and those of a lower socioeconomic status are at increased risk of exposure to ACEs.(14) There are wide variations in deprivation across the district with 27% of the District's population living in areas classed in the 10% most deprived areas in England and 6% of the population living in areas classed in the 10% least deprived areas in England.(15) Manningham, Little Horton, Bowling &

Barkerend, Tong, Keighley Central, Toller, Bradford Moor and Great Horton wards are in the 10% most deprived wards in England.

Bradford District is an ethnically diverse area. Just over half of Bradford's children and young people describe themselves as White with 95% of this group identifying as White British and the remaining 5% identifying as Irish, Gypsy or Irish Traveller, and Other. Almost 40% of children and young people describe themselves as Asian/Asian British with three quarters of this group identifying as Pakistani, almost 10% as Indian and 7% as Bangladeshi. Whilst the District itself is ethnically diverse, there is a wide variation across the District. The populations of Toller, Manningham and Bradford Moor are 70%- 80% people of Asian/Asian British ethnic origin. Other wards including Ilkley, Wharfedale and Worth Valley have a population which is predominately of white ethnic origin. Figures 4 and 5 show a correlation between increased risk of deprivation in Bradford's non-White child population.

The health inequalities between individuals exposed to adverse childhood experiences and those who are not are profound.(18) A guiding principle of the local Joint Health and Wellbeing strategy is the reduction of health inequalities between different people and different parts of the District.(17) As ACEs are likely to contribute to health inequalities in Bradford their prevention and early management should be a District priority.

Figure 4: Percentage of children living in poverty by LSAO 2014

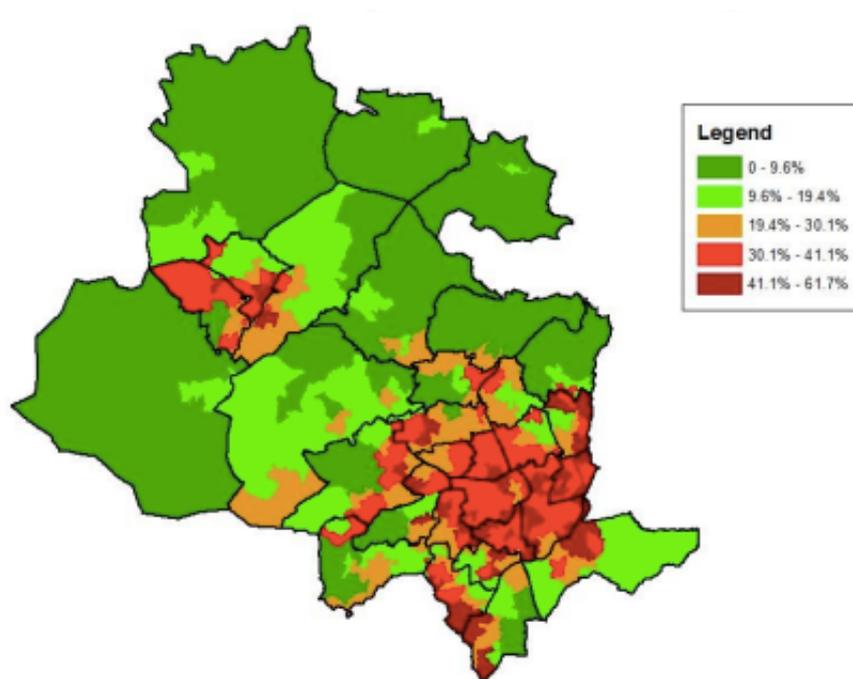
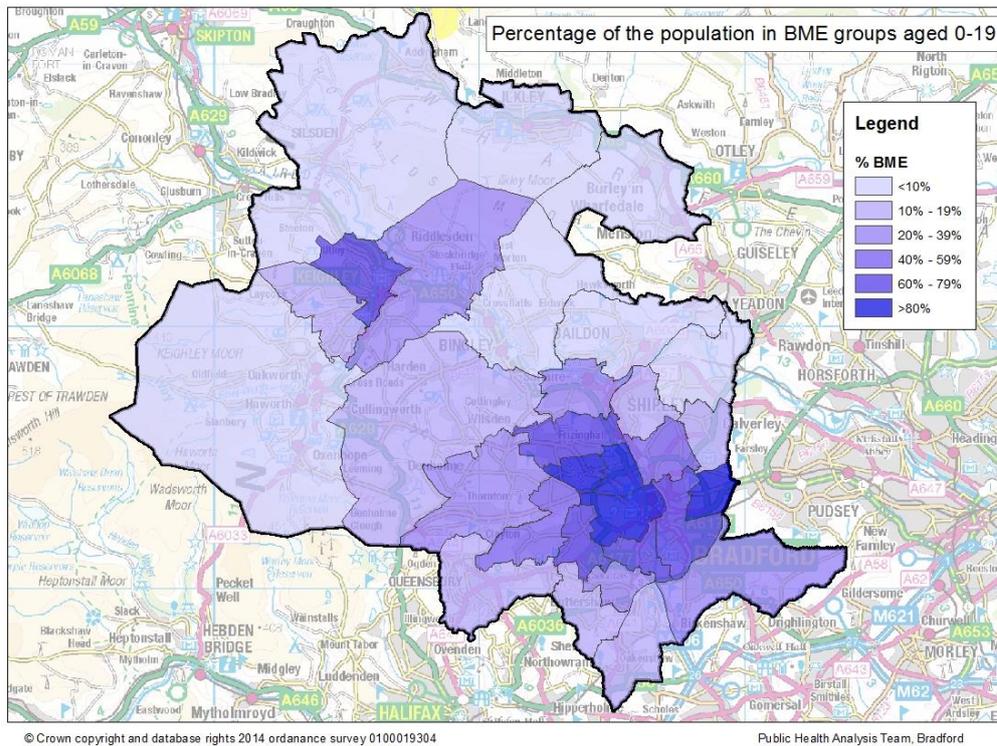


Figure 5: Percentage of the population in Black and Ethnic Minority groups aged 0-19 years



A preventative spend approach to ACEs makes economic sense

Adverse childhood experiences carry an associated cost and burden on society.(19) ACEs are inextricably linked to wider determinants of health. ACEs more than double the risk of having no educational qualifications and those with ACEs are at a much greater risk of unemployment.(20) Evidence demonstrates that tackling ACEs could result in a reduction in violent crime, binge drinking, and cannabis use.(4) Adverse childhood experiences are associated with high healthcare utilisation, increased prescription medication and increased prescription of multiple classes of pharmaceuticals.(21) They are linked with reduced health and functioning, family stress and dysfunction, disability associated societal economic losses and financial burden on the healthcare system.(21) The Joint Health and Wellbeing strategy strives to gain maximum value from the Bradford pound (£).(17) By taking a preventative spend approach to adverse childhood experiences the district could reduce the costs to health, education, social care, police and justice services associated with the consequences of adverse childhood experiences.

Addressing ACEs is necessary if Bradford District is to meet its identified priorities

The 2016 KPMG report ‘Transforming early years and early help: Opportunities for 2020’ commissioned by Bradford Council identified addressing the toxic trio (parental mental ill

health, domestic violence and substance misuse); three commonly cited adverse childhood experiences, as one of the five key priority area for Bradford's children's services. Understanding and addressing adverse childhood experiences is important for realisation of the Bradford District plan and in keeping with the Health and Wellbeing Strategy and KPMG report recommendations.

There is an interagency drive in Bradford to develop a city-wide approach to ACEs

There are opportunities to mitigate the impact of ACEs throughout the life course.(7) However, currently there is no national or local strategy to address ACEs. There is evidence of ACE awareness and good practice in some areas but this is disjointed within and between sectors. There is an interagency drive to develop a city wide approach to ACEs and a health needs assessment is essential in informing the development of this approach. Investment in policies, programs and collaborative trauma-informed sector-wide working to both prevent and manage the outcomes of adverse childhood experiences is required.

3. Scope

This health needs assessment aims to explore the health needs of children and young people aged 0-19 years, and up to 25 years for young people with special educational needs and disabilities who have encountered adverse childhood experiences in Bradford from a life course perspective. It aims to conduct a gap analysis to identify existing resources and areas of unmet need.

Health needs are assessed in both epidemiological*, corporate† and comparative‡ terms.(22) This health needs assessment primarily includes elements of the former two approaches. Included adverse childhood experiences (Table 2) are informed by a literature review of commonly cited ACEs associated with adverse health outcomes and accessibility of local data. The health needs assessment will present the prevalence and impact of each ACE outlined in Table 2 in turn. A life-course perspective has been adopted in recognition that risk factors for adverse childhood experiences may exist from conception (e.g. domestic violence), and health consequences of ACEs persist across an individual’s lifetime. It acknowledges the opportunity for interventions pre-natal to the grave.

The population of Bradford is defined as that served by Bradford Metropolitan District Council.

Table 2: Adverse Childhood Experiences included in the Health Needs Assessment

Adverse Childhood Experiences
Physical abuse
Emotional abuse
Sexual abuse
Neglect
Parents separated/divorced or parental death
Witness to domestic violence
Household mental illness
Household incarceration
Bullying
Household substance misuse

* Considers the epidemiology of the condition, current service provision, and the effectiveness and cost-effectiveness of interventions and services

† Based on eliciting the views of stakeholders e.g. professionals, patients and service-users, the public and politicians on what services are needed.

‡ Compares service provision between different populations.

4. Methods

There are a number of elements to this Health Needs Assessment.

1) Review of the literature

The health impact information presented is evidence based and drawn from a narrative literature review inclusive of 23 systematic reviews investigating the life course health impact of ACEs. The full report including the search strategy and discussion of the strengths and limitations is presented in Appendix A.

2) Data Analysis

The local prevalence data is taken from multiple sources and presented as officially recorded data and self-reported data. The data limitations are discussed within each chapter.

3) Service Mapping

A service mapping exercise was carried out to identify what services relevant to adverse childhood experiences exist in the area. This was informed by stakeholder consultation and internet searches.

4) Stakeholder engagement

The views of key stakeholders were obtained and presented thematically to explore the perceived and experienced challenges, barriers and opportunities to preventing and addressing adverse childhood experiences in the Bradford District.

5. Prevalence of adverse childhood experiences in Bradford and their associated health impact

This chapter presents the evidence on the health impact of different adverse childhood experiences. This is followed by prevalence estimates of each ACE in Bradford using routinely collected data and self-reported data.

5.1 Childhood abuse and neglect

5.1.1 The health and wellbeing impact of childhood abuse and neglect

5.1.1.1 Physical abuse

Physical abuse is exposure to the act of intentional harm by another person, causing injury or trauma including bruising, broken bones, cuts and burns.(104)

Childhood health outcomes

Physical health

Physical abuse has been associated with an increased risk of asthma, non-asthma cardiorespiratory disease and febrile illness.(23)

Development

There is a reported association between interpersonal trauma and significant delays in cognitive development.(23)

Mental health

While literature exploring the impact of childhood physical abuse on mental health outcomes in childhood is limited, it is known that 50% of mental illness first manifests by age 14.(24) Therefore, the evidence of increased risk of mental ill health in adults who experienced physical abuse in childhood is highly suggestive of there being increased adverse mental health outcomes in childhood.

Behaviour

Physical abuse is associated with a doubling of the odds of childhood behavioural[§] and conduct disorders^{**}.(19) Children experiencing behavioural problems are at risk of adverse outcomes which affect the individual and society throughout their life course. Compared with

[§] Behavioural disorders involve a pattern of disruptive behaviours in children that last for at least 6 months and cause problems in school, at home and in social situations.

^{**} Conduct disorders are a type of behavioural disorder. Conduct disorders are characterised by repetitive and persistent patterns of antisocial, aggressive or defiant behaviour that is more frequent and severe than other children of their age.

children without behavioural disorders, children with behavioural disorders are twice as likely to leave school without qualifications, three times more likely to become teenage parents, four times more likely to become drug dependent, six times more likely to die before age thirty, eight times more likely to be on the child protection register and twenty times more likely to end up in prison.(25) A child with serious behavioural disorders are heavy service users, with a lifetime cost to the public purse of £260,000 per affected child.(25)

Adult health outcomes

Physical health

Physical abuse confers a significant increased risk of obesity with a dose-responsive relationship. (19,26,27) Obesity is one of the greatest contributors to ill health both causing and exacerbating multiple health problems. Associated health risks include: metabolic syndrome; type 2 diabetes; hypertension; coronary heart disease; stroke, sleep apnoea; cancer; infertility; osteoarthritis; non-alcoholic fatty liver disease and non-alcoholic steatohepatitis; and gall bladder disease. (28) All of which cause chronic morbidity and carry a significant risk of premature death. Childhood physical abuse further contributes to the UK's non-communicable diseases burden through its association with increased risk of adulthood cancer.(29)

One meta-analysis found that physical abuse was associated with a 1.3 times increased risk of type 2 diabetes.(3) Another reports suggestive evidence of a significant association between child physical abuse and arthritis, ulcers, and headache/migraine in adulthood.(19)

Patients with functional gastrointestinal disorders are more likely to have reported physical abuse in childhood.(30) Functional gastrointestinal disorders encompass a range of chronic conditions that may be disabling, and carry significant social and economic cost.(31)

Mental health

Physical abuse in childhood is associated with mental ill health in adulthood. One study suggests that experiencing physical abuse doubles the likelihood of a person experiencing a mental health problem. (19,21) Specifically, experiencing physical abuse increases the likelihood of a person developing a mood disorder, depression, anxiety, panic disorders as well as mental illnesses such as PTSD, psychosis and schizotypy in later life.(19,32–35) Physical abuse is associated with a threefold increased risk of developing an eating disorder and a five-fold increased risk of developing bulimia nervosa with a dose-response relationship.(19)

Self-harm and suicide

Childhood physical abuse significantly increases an individual's risk of suicide ideation and suicide attempt compared to adults without a history of abuse.(19,21,32) No significant difference between genders for physical abuse and suicidal behaviour is reported.(19)

Smoking, alcohol and drug use

Physical abuse is associated with a significantly increased risk of current smoking.(19) A dose response is reported in one study with individuals who had experienced physical abuse 3-5 times being more likely to smoke than those who had been physically abused 1-2 times in childhood.(19) This dose-responsive relationship ceased when frequency of abuse exceeded six occasions.(19) Smoking is associated with significant morbidity and has both immediate and long-term adverse health outcomes. It causes increased risk of cardiovascular disease, stroke, cancers, respiratory symptoms and disease, and premature death.(36)

Physical abuse significantly increased the risk of alcohol problem drinking (risky drinking, alcohol abuse/dependence, binge drinking) and non-problem alcohol consumption (current or ever alcohol use).(19,32) The effect of physical abuse on problem drinking was stronger among males than females.(19) No dose-response relationships was seen between frequency of abuse and risk of problem drinking.(19) However the evidence was not strongly consistent between studies included in the meta-analysis.(19) Alcohol misuse carries health and social costs. It increases the risk of liver disease, cancer, cardiovascular disease, neurological conditions, accidents and violence.(37)

Sexually transmitted infections and risky sexual behaviour

Physically abused individuals are reported to have a significantly higher risk of sexually transmitted infections (STIs) and/or risky sexual behaviour compared to non-abused individuals.(19) Individuals who have experienced physical abuse were twice as likely to have HIV infection than those who had not, with the difference being statistically significant.(19) The size of risk was dose-responsive.(19)

Sleep

Childhood physical abuse is associated with violent behaviour during sleep (disorder involving self-mutilation, sexual assault, or murder attempt during sleep) and self-reported sleep disturbances (including difficulty falling/staying asleep, feeling tired after sleep and frequent insufficient sleep). Consistently poor sleep increases the risk of obesity, heart disease, hypertension, diabetes, poor mental health, and premature death.(38)

5.1.1.2 Emotional abuse

Emotional abuse is exposure to deliberate psychological harm which may involve intentionally frightening, humiliating, isolating or ignoring a child.(104)

Child health outcomes

Physical health

Childhood maltreatment including emotional abuse has been associated with an increased risk of asthma, non-asthma cardiorespiratory disease and febrile illness.(23)

Development

One systematic review reports an association between interpersonal trauma and significant delays in cognitive development.(23)

Mental health

Children exposed to emotional abuse have been reported to exhibit lower self-esteem than people unexposed, with a dose-response effect.(39) Emotional abuse is also reported to significantly influence depressive symptoms and result in greater emotional dysregulation than controls and children experiencing other forms of abuse.(39)

Behaviour

Externalising features (aggressive/assaultive/destructive/anti-social/delinquent behaviour) have been commonly described amongst children experiencing emotional abuse.(39) Children exposed to emotional abuse are reported to have greater difficulty making friends.(39) Having few or no friends is considered a major diagnostic criterion for numerous psychiatric disorders and may be predictive of adulthood social difficulty and maladjustment.(40)

Adult health outcomes

Physical health

As with physical abuse, childhood emotional abuse is associated with increased risk of obesity, functional gastrointestinal disorders and adulthood cancer.(19,27,29,30)

Mental health

Childhood emotional abuse is associated with multiple psychiatric outcomes.(21) It has been associated with twice the risk of developing adverse mental health outcomes than no exposure to abuse or neglect.(19) Emotional abuse may contribute to the development of some personality disorders (e.g. borderline, narcissistic, paranoid, schizoid, and schizotypal) and dissociative disorders, independent of other risk factors.(32,35) It is also linked to an increased risk of psychosis with findings suggesting a significant role of emotional abuse in the aetiology of schizophrenia.(32,34)

Self-harm and suicide

Emotionally abused individuals in one systematic review had a significantly increased risk of suicide attempt and suicidal ideation than non-abused individuals.(19)

Smoking

Emotional abuse is associated with a significantly increased risk of current smoking.(19)

Sleep

Self-reported sleep disturbances including difficulty falling/staying asleep, feeling tired after sleep and frequent insufficient sleep are associated with a history of childhood emotional abuse.(6)

Sexually transmitted infections and risky sexual behaviour

Emotionally abused individuals were found to have a significantly higher risk of STIs and/or risky sexual behaviour compared to non-abused individuals.(19) Individuals who had experienced emotional abuse were twice as likely to have HIV infection than those who had not, with the difference being statistically significant.(19) The size of risk was dose-responsive.(19)

Inter-generational transfer: parenting

In one systematic review there were inconsistent findings of maternal history of emotional abuse and reduced parenting competency.(41) Cautious associations are reported between maternal history of emotional abuse and subsequent dysfunctional parent-child interactions; lower empathy; lower acceptance; greater psychological control; increased child maltreatment potential; use of infant spanking; and attitudes toward punishment and

punitiveness.(41) However, the authors stress that the evidence suggests most mothers with a history of adverse childhood experiences do not go on to maltreat their own children.(41)

5.1.1.3 Sexual abuse

Sexual abuse is being forced or persuaded to participate in sexual activities. It may or may not involve physical contact.(104)

Child health outcomes

Physical health

Childhood maltreatment including sexual abuse has been associated with an increased risk of asthma, non-asthma cardiorespiratory disease and febrile illness.(23)

Development

One systematic review reported an association between interpersonal trauma and significant delays in cognitive development.(23)

Self-harm and suicide

Females who have experienced childhood sexual abuse are at increased risk of self-harm and suicidal behaviour, with the highest probability of first suicide attempt occurring in adolescence.(42)

Behaviour

Female adolescents who have experienced sexual abuse are reported to be more likely to be violent perpetrators than those who have not experienced abuse.(42) One prospective study estimated that 1 in 8 sexually abused boys go on to become sexual offenders.(43)

Adult health outcomes

Physical health

A systematic review found sexual abuse predicts higher obesity and central adiposity in longitudinal studies and higher-quality cross-sectional studies.(26) It is predictive of a higher

BMI in young adult women with sexually abused women 1.5 times more likely to be obese than matched controls.(26) This association between sexual abuse and obesity on later life is corroborated in another systematic review.(27)

A meta-analysis reported an increased risk of developing type 2 diabetes in individuals exposed to childhood sexual abuse.(3)

Patients with functional gastrointestinal disorders are more likely to have reported sexual abuse in childhood.(30)

Smoking, alcohol and drug use

Sexual abuse has been associated with alcohol use disorder including higher rates of alcohol dependence in adulthood.(32,44)

Mental health

There is a reported higher lifetime prevalence of psychopathology and pathologic behaviours in children exposed to sexual abuse.(42) It is associated with earlier onset and increased severity of psychiatric disorders and symptoms.(42) Mental health problems associated with child sexual abuse include: post traumatic stress disorder; depression; eating disorders; borderline, and paranoid personality disorders; anxiety disorders; dissociative disorders; heightened experience of loneliness; and perception of being overweight and poor body image.(32,42,44) One meta-analysis reported that adults with a history of sexual abuse were twice as likely to suffer depression or anxiety than adults who had no history.(33)

Sexual abuse has also been linked with an increased risk of psychosis and schizotypal disorders.(34,35,45) The reported associated risk is higher with a history of penetrative sexual abuse, abuse after aged 12 years, and more than one perpetrator.(45)

Self-harm and suicide

Sexual abuse is correlated with self-harm.(42,44) It has the greatest association with suicidality compared to other combinations of adverse childhood experiences.(21) Exposure to sexual abuse increases the likelihood of committing suicide by eight-fold.(32) It is a major risk factor for suicidal behaviour and is associated with increased prevalence and severity of repeated suicide attempts.(42) 11-14.5% of suicidal behaviour in females could be prevented by removing the factor of childhood sexual abuse.(42)

Behaviour

In one systematic review 13% of 9,216 participants with histories of child sexual abuse were reported to have a conduct disorder.(46) Additionally, the average prevalence of child sexual abuse among study participants with conduct disorder was significantly higher than among participants without a conduct disorder.(46) It's findings also corroborated other reports to lead to the suggestion that girls with conduct disorder may be more likely than boys to have experienced sexual abuse.(46) It reported that conduct disorders were significantly higher in participants with sexual and physical abuse combined or physical abuse alone than sexual abuse alone.(46) However another study has reported delinquency to have a stronger association with history of childhood sexual abuse than with other Adverse childhood experiences.(21) Another systematic review identified an increased risk of conduct behaviour and antisocial personality disorder in adults who had experienced childhood sexual abuse.(42)

Females who have experienced sexual abuse are at increased risk of becoming victims of intimate partner violence as adults and perpetuating violence themselves thus demonstrating the revictimization and cycle of violence associated with childhood abuse.(42,47)

Sleep disorders

Childhood sexual abuse is associated with violent sleep behaviour and sleep paralysis (occurring when the motor paralysis characteristic of REM sleep persists post awakening, commonly presenting with associated tactile and visual hallucination).(6) Episodes of sleep paralysis are reported to be more frequent and distressing in individuals exposed to abuse compared to individuals who have not.(6)

Risky sexual behaviour

In comparison with other adverse childhood experiences sexual abuse had the strongest association with sexual risk behaviour.(21) Reported examples include increased likelihood of unprotected sex, multiple partners, sex with a stranger, anal intercourse, and having a sexually transmitted disease.(42)

Utilisation of healthcare

Sexual abuse has been associated with increased utilisation of healthcare and psychotropic medications with associated costs to the public purse.(42)

5.1.1.4 Neglect

Neglect is the ongoing failure of a child to have their basic needs met.(104)

Child health outcomes

Development

Neglect has been reported as having a dose dependant significant association with late menarche. (23)The same systematic review reported an association between interpersonal trauma and significant delays in cognitive development.(23)

Physical health

Neglect has been shown to effect weight during adolescence with reports of increased risk of obesity.(23) It is also associated with an increased risk of asthma, non-asthma cardiorespiratory disease and febrile illness.(23)

Mental health

One systematic review explored the association between neglect and issues pertaining to mental health.(48) Children exposed to neglect or emotional abuse reportedly exhibited lower self-esteem than controls, with a dose-response effect.(39) It review found less emotional understanding among children who had experienced neglect when compared to controls, especially in relation to negative emotions and less effective coping strategies.(39) Additionally, it reported depression as being associated with physical neglect with insecure maternal attachments and negative maternal schema showing the greatest associations.(39)

Behaviour

Externalising features were frequently reported amongst children experiencing neglect.(39) Other behavioural features found to be associated with neglect included: internalising features (withdrawn/anxiety/depression/somatic complaints); anxious ambivalent attachment; and impulsivity, inattention and hyperactivity.(39)

One systematic review reported that neglected children exhibit difficulties in being accepted by their peers and struggle to develop reciprocated friendships, a risk factor for psychiatric disorder development and social incompetency in adulthood.(39,40) Compared to controls they are reported to show a delay in personal care skills and ability to complete domestic tasks.(39)

School performance and IQ

Three of 6 studies assessing IQ in one systematic review reported a lower IQ overall in children exposed to neglect with increasing severity of neglect being associated with a lower IQ.(39) Neglect was reported to be associated with poor executive decision making and reduced manual dexterity, auditory attention and visual-motor integration than controls.(39) However they were found to achieve higher at problem solving, abstraction and planning.(39)

Review findings investigating the association between neglect and school performance/increased likelihood of special educational needs compared to controls were contradictory.(39)

Self harm and suicide

Only one study in a systematic review looked at neglect specifically and suicide potential in young children (6-12 year olds).(39) No difference between this group and controls was identified.(39)

Adult health outcomes

Physical well-being

One systematic review reported that childhood emotional and physical abuse has been associated with a lifetime increased risk of obesity.(27) This is in contrast with another systematic review which did not identify a significant association between childhood neglect and adult obesity.(19) A meta-analysis however reported an almost two-fold increased risk of developing type 2 diabetes in adults exposed to childhood neglect when compared to those who had not.(3) Obesity is itself a risk factor for type 2 diabetes.(49)

Smoking, alcohol and drug use

Neglect was not found to increase the risk of problem drinking or current smoking but is reported to possibly be associated with increased risk of drug use.(19)

Mental health

One meta-analysis found childhood neglect was associated with twice the risk of developing adverse mental health outcomes than no exposure to abuse or neglect.(19) Neglect is reported to be related to an increased risk of psychosis and depression.(32,34) Additionally, adults with a dissociative disorder have been found to report physical neglect more frequently.(32)

Self-harm and suicide

Neglected individuals reportedly have a significantly increased risk of suicide attempt and suicidal ideation than non-abused individuals.(19,32)

Sexually transmitted infections and risky sexual behaviour

Adults who have experienced childhood neglect are reported to be at a significantly increased risk of sexually transmitted infections and/or risky sexual behaviour compared to those who have not experienced neglect or abuse.(19)

Inter-generational transfer: parenting

In one systematic review there were inconsistent findings of maternal history of emotional neglect and reduced parenting competency.(41)

5.1.2 Prevalence of abuse and neglect in Bradford

4342 children were assessed for concerns related to abuse and neglect in the year 2017/2018.
Approximately 550 children are subject to a children protection plan within Bradford District each month.
Bradford has a higher rate of physical, emotional and sexual abuse than England and the Yorkshire & Humber region.
10% of reported domestic incident victims in Bradford in the year October 2017 to September 2018 were children.
National self-reported data on maltreatment suggest the true prevalence of abuse and neglect is much higher than officially recorded data suggests.

Determining the prevalence of abuse and neglect occurring within a population is challenging. Reported figure/estimates frequently only include cases where there has been statutory service involvement due to disclosure or service provider identification. Studies examining self-reported abuse histories suggest that the true figure is actually much greater.

5.1.2.1 Routinely collected data

If there are concerns about child abuse the local authority has a responsibility to investigate. Depending on the assessed risk of significant harm to the child they may be managed as a

child in need or made subject to a child protection plan. Examination of data on Children in Need Census provides an insight into statutory service figures.

Child in need assessments

The Children Act 1989 defines a ‘child in need’ as a child who is unlikely to reach or maintain a satisfactory level of health or development, or their health or development will be significantly impaired, without the provision of services, or the child is disabled.

Census data exists detailing the number of Child In Need assessments carried out by the local authority and for what reason. Table 3 presents data from Bradford’s 2017/2018 census. 4342 children were assessed for concerns related to abuse and neglect in the year 2017/2018.

Bradford District is under both the England and statistical neighbour’s rate of Children In Need per 10,000. The data may be representative of a population with fewer children ‘in need’ but concerningly and more likely it may actually demonstrate under identification of children ‘in need’ in the area.

Table 3: Number of children undergoing a Child In Need assessment in Bradford 2017/2018.

Reason for Child In Need assessment	Number of children who underwent at least one assessment for this factor
Physical abuse	822
Female genital mutilation	12
Domestic violence towards child (physical or emotional)	827
Emotional abuse	1127
Sexual abuse	394
Child sexual exploitation	371
Neglect	789

Number of children subject to a child protection plan

A child protection plan sets out what action needs to be taken, by when and by whom (including family members), to keep the child safe from harm and to promote their welfare.

There are on average just under 550 children subject to a children protection plan within Bradford District each month. Latest figures show that in November 2018 there were 684 children subject to a child protection plan, the highest figure currently recorded. The increased figures are more closely aligned with expected levels for local authorities like

Bradford. This trend may not necessarily reflect an increase in maltreatment but perhaps an increase in awareness amongst the public and professionals.

Figure 6: Number of children in Bradford subject to a child protection plan December 2015 to November 2018.

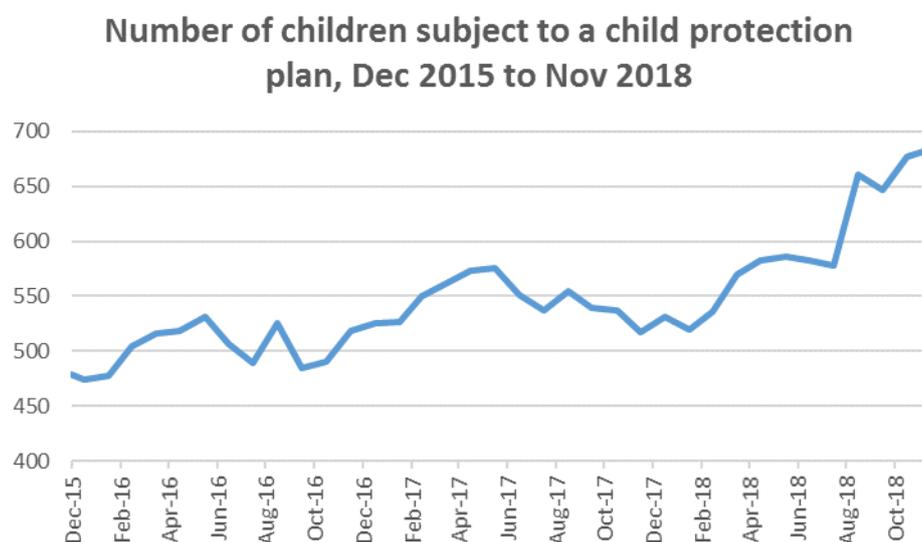


Table 4: Number of children who were the subject of a child protection plan at 31 March 2018, by Bradford local authority, initial and latest category of abuse from 2017-18 Child In Need Census.

Category Of Abuse	Initial*	Latest [§]
Physical abuse	63	49
Emotional abuse	272	300
Sexual abuse	50	44
Neglect	185	177

*Category of abuse as assessed when the child protection plan commenced.
[§]The most recent category of abuse assigned to the child protection plan

Rates of abuse in Bradford can be compared with national and regional data from the 2017/2018 CIN census (Table 5). Bradford has a higher rate of physical, emotional and sexual abuse than England and the Yorkshire & Humber region but a lower recorded rate of neglect.

Table 5: Rates of abuse by area 2017-2018

Area	Rate of initial category of abuse in 2017-2018 per 10,000 children				
	Physical abuse	Emotional abuse	Sexual abuse	Neglect	Multiple

England	3.47	15.89	1.84	21.75	2.38
Yorkshire & Humber	4.32	16.49	1.73	19.51	4.06
Bradford	4.45	19.21	3.53	13.06	0

Hospital admissions and mortality

A group of ICD10 codes have been used to try to identify children at risk. These are T74 – maltreatment syndromes (these include effects of child abuse) and codes X92-Y09 – assault. A limitation of using these codes as a measure of prevalence is that it relies on accurate coding of clinical cases. It is highly probable that the data presented is an under estimate of the true figures.

Hospital admissions data 2016-17

Maltreatment syndromes (T74)

In 2016-17 there were a total of 9 admissions where a primary or secondary diagnosis of maltreatment syndromes were recorded in children aged 0-19yr olds. Eight of these admissions were of babies and infants aged between 0-1 years of age.

Assault (X92-Y09)

In 2016-17 there were a total of 60 admissions where a primary or secondary diagnosis of assaults was recorded in children aged 0-19yr olds. Ten admissions were in children aged 0-4yrs, 11 admissions were in 10-14 yr olds and 39 admissions were in 15-19yr olds.

Mortality

There are no deaths recorded in the last 10 years where child abuse is recorded in the cause of death. Over the past ten years there have been 3 deaths of children aged 0-19 years where assault is recorded as the cause.

Police data

West Yorkshire Police data show just under 10% of reported domestic incident victims in Bradford in the year October 2017 to September 2018 were children; 246 were aged under 16 years and 1177 were aged 16-19 years.

Between April 2017 and March 2018 317 child sexual exploitation offences were recorded on Police systems (Corvus). This is a 9% decrease compared to the previous year.(50)

Families First data

Families First is a government funded programme that works with Bradford families facing serious problems to help them improve their lives. Families are referred by outside agencies (e.g. medical professionals; police; schools; domestic violence services etc) or occasionally families self-refer. In 2018 Families First worked with 420 families (inclusive of 932 children) with domestic abuse histories. A further 10 families (55 children) received support for domestic abuse in conjunction with alcohol, drugs or mental health issues. Engagement with the service is entirely voluntary. These figures are likely to underestimate the prevalence of domestic abuse in the city.

5.1.2.2 Self reported data: inferring from national statistics

A UK-wide NSPCC household survey of 11-17 year olds (n=2275) reported the percentages of children self-reporting a history of maltreatment. Households were randomly selected from the postcode address file and data was weighted for the UK as a whole. It is recognised that survey data is at risk of sampling errors and responder recall bias. Parental consent was required for participation carrying risk of sample bias.

Table 6: Outcome of NSPCC household survey of maltreatment in childhood

Maltreatment and victimisation type	Percentage of surveyed 11-17 year olds who have experienced abuse	
	Past year	Their lifetime
Severe maltreatment	-	18.6%
Any neglect by parent/guardian	-	13.3%
Emotional abuse	31.9%	64.4%
Physical violence	36.0%	65.5%
Sexual abuse	9.4%	16.5%
Contact sexual	1.9%	4.8%

In mid-2017 (most recent available population figures) there were 52,004 children aged 11-17 years of age in Bradford. If we were to apply the findings of the national self reported data to our local population we get the following inferred prevalence of abuse in 11-17 year olds in Bradford.

Table 7: Inferred prevalence of abuse in 11-17 year olds in Bradford

Maltreatment and victimisation type	Inferred number of 11-17 year olds who have experienced abuse in Bradford	
	Past Year	Their lifetime

Severe maltreatment	-	9673
Any neglect by parent/guardian	-	6917
Emotional abuse	16,589	33,490
Physical violence	18,721	34,062
Sexual abuse	4,888	8,580
Contact sexual	988	2,496

5.1.2.3 Data limitations

Self-reported figures are significantly higher than statutory figures. Objective measures of adverse childhood experiences (e.g. CIN census data) removes the bias associated with recall and increases external validity.(26) However, cases reaching child protections agencies represents a small percentage of people who have experienced abuse and this population may be qualitatively different to those whose childhood abuse went undetected and did not receive intervention.(26,51) It has been found that retrospective responses pertaining to adverse childhood experiences tend to be consistent over time and may actually be more reliable than legal documents, police reports and clinical notes that could underestimate the extent of abuse.(52–54) There are claims that retrospective reporting of adverse childhood experiences may be at greater risk of bias toward underreporting than over-reporting.(55)

5.2 Parental separation/divorce and parental death

5.2.1 The health impact of parental separation/divorce and parental death

Child health outcomes

Physical well-being

A systematic review reported that children whose parents have separated are more likely to be overweight or obese between 3 and 5 years, but this weight difference diminishes by age 17.(23)

Development

A weak association between parental divorce/separation and shorter height in both boys and girls is reported but the included study findings were not always statistically significant.(23) The same systematic review reported that parental death/divorce was associated with lower cognitive ability scores at ages 8 and 15 years.(23)

Adult health outcomes

Mental health

Parental divorce has been reported to have a negative impact on mental health but to a lesser extent than other adverse childhood experiences including parental mental illness, emotional and physical abuse and witnessing violence at home.(21) In one systematic review the experience of parental death in childhood was found to be significantly associated with increased psychosis once the potential outlier was excluded.(34)

Sleep

Parental loss or separation is associated with violent behaviour during sleep and self-reported sleep disturbances.(6)

5.2.2 Prevalence of parental separation/divorce and parental death in Bradford

Local data is lacking.

<1% of children in England and Wales have divorced parents but self-reported data suggests 20% of children's parents may be separated.

It is estimated that 460 children a year in Bradford are bereaved of a parent.

5.2.2.1 Routinely collected data

No local data on the number of children with divorced or separated parents or the number who had experienced a death of a parent was identified.

Office for National Statistics data

The most recent data from the Office of National Statistics recording the number of children with divorced parents showed that 0.74% of children in England and Wales had divorced parents in 2013. Limitations of this figure is that it comes from aggregated data and does not include the percentage of children with separated parents.

5.2.2.2 Self-reported data

National household survey data

Prevalence of self-reported parental separation in childhood experienced by adults aged 18-69 years in England was reported to be 22.2%.(4)

5.2.2.3 Data estimates

The Childhood Bereavement Network data

There is no official data on the number of children who have experienced a death of a child. In 2015 the Childhood Bereavement Network used mortality statistics, census data and other sources to estimate the number of bereaved children by local authority. It was estimated that in Bradford each year 250 parents in the area die leaving around 460 dependent children (aged 0-17 years).(56) Around 3160 of current school aged children (5-16 years) in 2015 were estimated to have been bereaved of a parent or sibling at some point in their childhood.(56)

5.3 Witnessing domestic violence

Witness of an incident of threatening behaviour, violence or abuse (psychological, physical, sexual, financial or emotional) between adults who are or have been intimate partners or family members.

5.3.1 Health Impact of witnessing domestic violence

Child health outcomes

Physical health

Children whose mothers reported inter-partner violence (IPV) were found to be more likely to be obese at aged 5 years than children whose mothers reported no IPV. (23) Children exposed to early (<12 months) or late (3 and/or 5 years) maternal IPV did not have a significant increase in risk. (23) Analyses stratified by sex identified an increase in obesity risk among females exposed to maternal chronic IPV as opposed to males.(23)

Adult health outcomes

Physical health

Witnessing domestic violence is reported to have a positive association with adult BMI and obesity.(26,27)

Mental health

Witnessing violence is reported to be significantly associated with multiple adverse psychiatric outcomes.(21) The Organisation for Economic Co-operation and Development's report estimates that mental ill health costs the UK over £94bn every year, including treatment, social support expenses, lower employment and productivity.(57)

Self-harm and suicidal behaviour

Witnessing inter-partner violence significantly impacts upon suicide attempts.(21)

Sleep

Witnessing domestic violence in childhood is associated with self-reported sleep disturbances in adulthood.(6) Insufficient sleep over a prolonged period of time is associated with adverse physical and mental health outcomes.

5.3.2 Prevalence of witnessing domestic violence in childhood in Bradford

In 2017/2018 2216 children in Bradford had Child In Need assessments because of domestic violence.

In 2017/2018 children in Bradford were present at 29.4% (4980) of reported domestic incidents, the second highest rate in West Yorkshire.

In 2018 Families First worked with 430 families where domestic abuse was identified as an issue.

In one year over 100 children were accommodated in a Bradford refuge.

Self-reported data suggests that up to 17.5% of people witness domestic violence at some point in their childhood.

5.3.2.1 Routinely collected data

Child In Need data

The CIN census 2017/2018 reported that 1844 children had child in need assessments because of domestic violence towards a parent and 372 because of domestic violence towards another household member. These statistics include incidents where the child maybe the perpetrator.

Police data

Between October 2017 and September 2018 there were 16941 reported domestic incidents in Bradford. 49.6% of domestic incidents were categorised as 'violence' and 28.7% as 'verbal dispute'. Children were present at 29.4% (4980) of reported domestic incidents, the second highest rate in West Yorkshire after Calderdale.

Council commissioned services data

In 2018 Families First worked with 430 families where domestic abuse was identified as an issue. 111 children were accommodated in a Bradford refuge in 2017/2018, 55% were under 5 years of age. In the same year 370 children lived in households in which the mother was receiving outreach/crisis support. HOPE delivers therapeutic interventions to children who have experienced domestic violence and they worked with 172 children in 2017/2018. As

these commissioned services are provided separately there is risk that the same child have been in contact with more than one service and accounted for in more than one given statistic.

5.3.2.2 Self reported data

The NSPCC household survey reported that 2.5% of 11-17 year old respondents had been exposed to domestic violence in the past year and 17.5% had been exposed to it in their lifetime. Projecting these results onto the Bradford population suggests that 1,300 11-17 year olds may have been exposed to domestic violence in the past year and 9,102 in their lifetime.

5.4 Household member with mental illness

5.4.1 Health impact of having a household member with mental illness

Child health outcomes

Physical well-being

Maternal depression predicts long-term failure in weight reduction for overweight and obese 7-15 year olds. (23) In addition parental mental health has been associated with an increased risk of asthma, non-asthma cardiorespiratory disease and febrile illness.(23)

Sleep

Maternal depression is reported to be associated with reduced infant nocturnal sleep and increased awakenings in the night and maternal PTSD is significantly associated with increased infant waking after sleep onset.(23) Infant sleep plays a critical and positive role in cognition and physical growth.(58)

Adult health outcomes

Mental health

Parental mental illness is significantly associated with multiple psychiatric outcomes, which carry individual and societal costs.(21,57)

Sleep

A history of household mental illness is associated with self-reported sleep disturbances in later life with associated physical and mental health consequences (see chapter 3.1.2).(6)

5.4.2 Prevalence of children with a household member with a mental illness Bradford

5.4.2.1 Routinely collected data

National estimates report 68% of women and 57% of men with mental health problems are parents.
Adults in Bradford have a higher than national average prevalence of long-term mental health problems, depression and intentional self-harm.
In 2017/2018 1463 children were assessed because of parental or household member mental health concerns.

Population mental health data (Fingertips)

Mental illness is common. Approximately 1 in 6 adults in England reported experiencing a mental health problem in the last week.(59) Bradford has a recorded prevalence of depression in adults of 10.5% (national figure is 9.9%). It has higher than national average scores for self-reported low satisfaction, low worthwhile, and low happiness with a greater percentage of the population reporting depression or anxiety compared to national figures. Long term mental health problems as identified by the percentage of adult respondents to GP patient survey is quoted at 5.9%, higher than the national figure of 5.7%. Bradford has higher than national average emergency hospital admissions for intentional self harm (215.7 compared to 185.5 per 100,000). 4.8% of Bradford's adult population is in contact with secondary mental health services compared to 5.4% of England's population. Hospital admissions for mental health conditions is much lower than the national average.

It is estimated that 68% of women and 57% of men with mental health problems are parents.(60) Over 2 million children in the UK are thought to be living with a parent who has a common mental health disorder.(61) While it is challenging to gather precise local data on the number of children in Bradford living with a person with a mental illness the high prevalence of mental illness suggested by population data suggests the figure is likely to be high.

Child in Need census data

The CIN census data 2017-2018 identified 1322 children were assessed because of parental mental health concerns and a further 141 because of the mental health of another person (not self or parent). These accounted for 14.4% of CIN assessments.

Families First data

In 2018 Families First worked with 581 families where mental health was identified as an issue of concern.

5.5 Household member spent time incarcerated

5.5.1 Health impact of a household member having spent time incarcerated

Child health outcomes

Behaviour

One meta-analysis identified parental incarceration as a predictor of increased risk for children's antisocial behaviour, but not mental health problems, drug use, or poor educational performance.(62) The meta-analysis examined studies comparing children of incarcerated parents with children separated from parents for other reasons and results showed a significantly higher risk for antisocial behaviour among the parental incarceration group.(62) It can therefore be concluded that parent-child separation per se is not the main influence explaining children's outcomes after parental incarceration.

Adult health outcomes

Mental health

A systematic review reported parental imprisonment to be associated with adverse psychiatric outcomes but to a lesser extent than parental mental illness, physical, and emotional abuse.(21)

Sleep

A history of household member incarceration is associated with self-reported sleep disturbances in later life which has physical health consequences as.(6)

5.5.2 Prevalence of children living with a household member who has spent time incarcerated

This data is unavailable at a local level. It is estimated that 200,000 children are affected by parental imprisonment each year in England. (63)

5.6 Bullying

5.6.1 Health impact of bullying

Child health outcomes

Physical health

All 14 studies examining peer bullying and obesity in one systematic review identified a relationship between the two.(26) This was found to be true in the case of overt and relational bullying and for both genders.(26) There was some evidence of a dose–response relationship between increasing severity or frequency of bullying and BMI.(26) The likelihood of bidirectional relationships existing between bullying and obesity with potential cyclical interplay is acknowledged.(26)

Mental health

In one systematic review 8/10 studies found a significant association between being bullied at school and non-clinical psychotic symptoms (e.g. hallucinations, delusions) with a reported two-fold risk of experiencing psychotic symptoms in adolescence or adulthood compared to non-bullied children.(64) The association was shown to be dose-responsive with increased frequency and severity of bullying increasing the risk of developing psychotic symptoms and persistence of them.(64) While no difference was reported between overt or relational bullying, experience of both types increased the risk of developing psychotic symptoms when compared to only one.(64) Being both a victim of bullying and a perpetrator showed an increased risk of developing psychotic symptoms compared to being a victim of bullying alone.(64) However the effect of bullying on development of psychotic disorders in clinical samples is reported as inconclusive with apparent associations disappearing after controlling for other variables.(64) The authors postulate that sparse research and lack of power in conducted studies as an explanation for this inconclusiveness.(64)

Sleep

Bullying victimization is reported as significantly associated with nightmares, night terrors, sleepwalking at ages 8 and 10 years, and any type of parasomnia at age 12 years.(23)

Adult health outcomes

Mental health

Bullying has been found to be associated with an increased risk of psychosis and psychotic symptoms.(34,64) Another systematic review found that being a perpetrator or a victim of bullying is associated with greater risk of schizotypy.(35)

5.6.2 Prevalence of bullying in Bradford

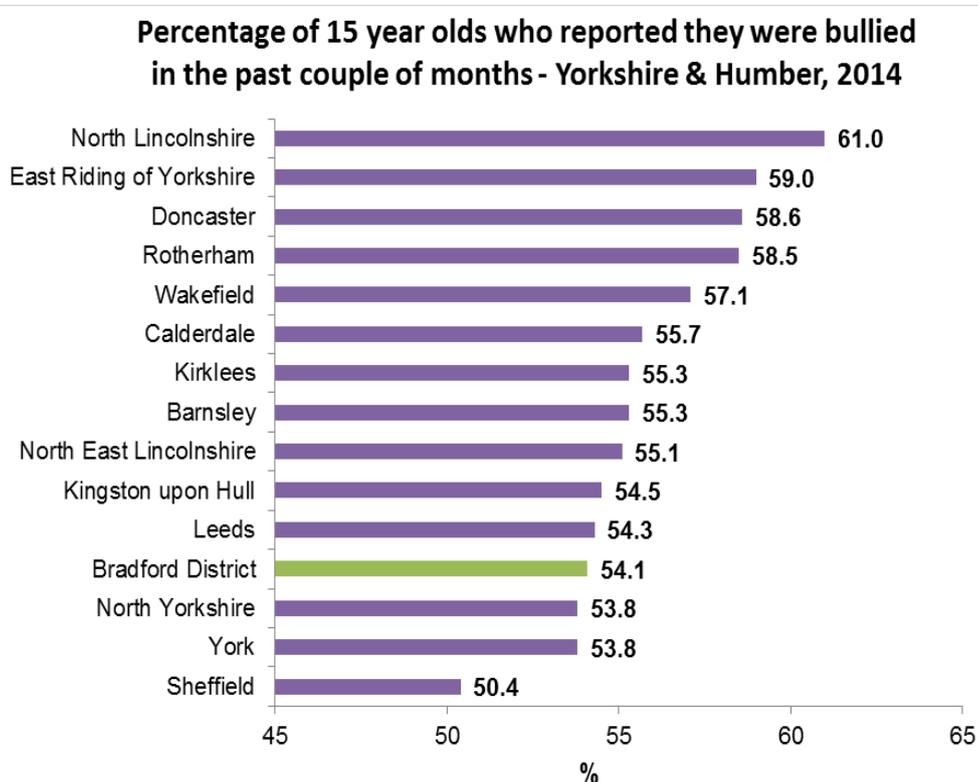
In 2014 54.1% of 15 year olds in Bradford District reported they had been bullied in the previous couple of months.

5.6.2.1 Self-reported data

What About YOUth (WAY) Survey 2014

Results from the What About YOUth Survey 2014 showed that 54.1% of 15 year olds in Bradford District reported they had been bullied in the previous couple of months.(65) This is below both the regional and national average by 1.1 and 0.9 percentage points respectively. Within the region, Bradford District has the fourth lowest percentage of 15 year olds who reported they were bullied in the past couple of months behind North Yorkshire, York and Sheffield (Figure).

Figure 7: Percentage of 15 year-old in 2014 who reported they were bullied in the past couple of months



Ditch The Label: The Annual Bullying Survey 2018

Although the What About YOUTH survey is the most recent local data available it is 5 years old. Ditch The Label charity runs an annual bullying survey and reported the responses of 90125 12-20 year olds from across the UK. 1% of respondents reside in Yorkshire and Humber but the data is aggregated. 22% of respondents reported having been bullied (by their own definition) in the previous 12 months; 22% reported having witnessed bullying and 2% reported being the perpetrators of bullying.

Prevalence of bullying is challenging to measure as it occurs in difference forms and children may interpret the definition differently.

5.7 Household member with a problem with alcohol or substance misuse

5.7.1 Health impact of having a household member with a problem with alcohol or substance misuse

Evidence from systematic reviews specifically investigating the health outcomes of living with a household member with a problem with alcohol or substance misuse is limited to an identified association with self-reported sleep disturbances in later life.(6) However, alcohol and substance misuse has been shown to be associated with other adverse childhood experiences including abuse, neglect, inter-partner violence, mental illness and incarceration.(66–69) Following this logic childhood exposure to a household member with a problem with alcohol or substance misuse may potentially be linked to the adverse health outcomes outlined elsewhere in the report.

5.7.2 Prevalence of having a household member with a problem with alcohol or substance misuse

1695 children received Child In Need Assessments due to parental alcohol and drug misuse in 2017/2018.

The proportion of new presentations of Bradford clients to treatment services who live with children under the age of 18 is higher than the national average for opiate, alcohol, alcohol and non-opiate substance misuse.

149 families received support from Families First in 2018 for alcohol or drug related problems.

5.7.2.1 Routinely collected data

Child in Need Census 2017-2018 data

Alcohol and drug misuse by parents and others related to the child accounted for 16% of 2017/2018 child in need assessments, representing 1695 children.

Table 8: *Child In Need Assessments for substance misuse 2017/2018*

Factor Name	Children assessed with this factor at any time in year	% of all children assessed in Census
Alcohol misuse (parent)	676	6.6%
Alcohol misuse (other)	113	1.1%
Drug misuse (parent)	752	7.4%

Drug misuse (other)	154	1.5%
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Substance Misuse Treatment Services data

1290 clients accessing Bradford substance misuse treatment services between 01/04/2017 and 31/03/2018 had a child under 18 years living with them at the start of their treatment. A breakdown of the percentage of clients living with children at the start of their treatment by substance misuse type is provided in Table 9. Of note, some clients are in treatment for years and therefore this figure may be an overestimate of clients who are currently living with children under 18.

Table 9: Percentage of clients living with children at the start of their treatment by substance misuse type 2017/2018

Proportion of clients accessing substance misuse treatment who were living with children at the start of their treatment (01/04/2017-31/03/2018)		
Substance	All clients living with children at start of treatment/all clients	% of clients living with children at the start of treatment
Opiate*	911/2208	41.2%
Non-opiate	88/402	21.8%
Alcohol	242/714	33.8%
Alcohol and non-opiate	50/163	30.6%

**Opiate coding takes preference over alcohol when categorising clients using both substances*

The proportion of new presentations of Bradford clients to treatment services who live with children under the age of 18 is higher than the national average for opiate, alcohol, alcohol and non-opiate substance misuse (Diagnostic Outcomes Monitoring Executive Summary 2017/2018).

Families First data

149 families received support from Families First in 2018 for alcohol or drug related problems.

6. Bradford's approach to ACEs: Summary of stakeholder engagement

The following chapter outlines the challenges to ACEs work in Bradford and summarises potential opportunities for action as identified through stakeholder engagement. I identified key stakeholders from the Local Authority Children's Services, representatives from the education sector, clinical practitioners, commissioners of child and mental health services, people working in the community and voluntary sector, and the lead for developing a Bradford-wide approach to ACEs and met them on 1:1 basis or in small groups to ask them about their experiences and opinions. I also attended the Regional ACEs Task and Finish Group meeting to hear their perspective. Noticeably absent are the voices of Bradford's children. Consultation with this group is recommended as valuable follow-up to this health needs assessment.

Analysis of stakeholder engagement outcomes identified themes to the discussions around ACEs. These are presented below.

Identified challenges and barriers

- Poor availability of population-based data.
- Health professional capacity limitations.
- Professional concerns about raising issues around ACEs.
- ACEs is considered by some to be a 'reductionist approach'.
- Engaging academy education settings outside of local authority influence.
- Limited public funding to invest in ACEs interventions.
- Lack of common language and understanding around ACEs within the system.
- Insufficient funding of children's mental health services.
- A predominance of silo-working in prevention and management of ACEs.

Potential opportunities for action

System-wide action:

- A high-level approach is necessary.
- ACEs work needs endorsement from the top – e.g. make it a whole-system priority, ACEs strategy that crosses all sectors.
- Ensure everyone is ACE aware
 - *Service-providers and commissioners* – provide work-place training; incorporate ACEs into organisation inductions, policies, mission statements

- *Parents and communities* – ‘make every contact count’; incorporate into routine midwife/health visitor contacts, breastfeeding groups, mother and toddler groups; make information available in different formats e.g. verbal, written and social media (?use of link to animation <https://www.youtube.com/watch?v=XHgLYI9KZ-A>)
- Agree use of common language and understanding of concept of ACEs across services.
- Engage in service-mapping to identify examples of good practice, create a network for joined-up working and identify gaps.
- Regard should be paid to relationship building not only between children/families and professionals but also between sectors.
- There needs to be greater collaboration between different sectors/organisations.
- Service providers need to be aware of other support services, potential referral routes, and opportunities for whole system working.
- Improve referral pathways between services.
- Examine how we can collect routine population-based data on ACEs e.g. as part of the Bradford Children and Young Person Lifestyle Survey and Born in Bradford cohort data.
- Break barriers to accessing support. Parents and children need to know where to go for support and be empowered to access it.
- A city wide campaign to raise awareness. This should involve an official launch; posters; social media platforms; messages on the sides of buses; and a Bradford ACEs video (suggestion of having a Bradford voice over to the Blackburn with Darwen/Public Health Wales ACE animation, or creating a positive case history video of a local individual/family who had experienced ACEs but through accessing support and making certain life choices has avoided the negative health and social outcomes associated with ACEs). There should be information on support services available.
- Develop an ACE awareness App for parents-to-be and parents.
- Develop ACE awareness literature that could be shared with pregnant mothers and parents by midwives and health visitors, third sector organisations engaging with vulnerable families e.g. Bradford Baby Bank

- Promote resilient communities using asset-based approaches.

Health and social care settings:

- Ensure professionals have the time needed to develop relationships with pregnant women, new mothers, families and children to listen and promote and support behaviour change.
- Provide targeted interventions for high risk parents/families in addition the universal approach of education and support to all 0-5yrs and their families.
- Consider use of routine enquiry to identify children at risk for targeted prevention.
- ‘Normalise’ the conversation around ACEs both with parents and children. This opens doors for disclosure, conversation and access to support.
- Recognise the potential of highly skilled but affordable family nurse practitioners and family outreach services in ACEs prevention, identification and management. Good ‘Early Help’ workers anecdotally make a real difference to the vulnerable families they work with.
- Increase investment in children’s mental health services in Bradford.

Education settings:

- Engage with early years settings:
 - They should be part of the child’s extended family.
 - Settings should promote empathy, a loving environment and physical contact (e.g. sitting on knee for stories, hug when sad).
 - Key-worker for continuity of adult relationships.
 - Work closely with parents to support child’s needs.
 - Provide children with opportunity to talk about their worries and fears.....ask through the day....incorporate into play/story-telling.
 - Acknowledge and respond to their worries and fears.
 - Consider ‘Miss Kendra’ approaches (<http://traumainformedschools.org/miss-kendra-program/>)

- Nurseries and schools could facilitate parental ACE awareness. Text messages, social media and website links (e.g. [Blackburn with Darwen/Public Health Wales ACE animation](#)) may be more effective than letters home.
- Build strong relationships between school staff and parents; this can take time.
- Carefully frame the conversation; some parents get angry and take offence when there is a suggestion that their child's behaviour is a reflection of the environment around them or if there is perceived criticism of their parenting.
- Add weight to messages sent to parents through school, e.g. "sending on behalf of WYP/public health team".
- Increase student ACE awareness by incorporating it into PSHE in secondary schools.
- Training for education staff on what actions to take after receipt of a domestic abuse notification from the police.
- There needs to be a culture shift in optimising behaviour in education settings. All head teachers should attend compulsory behaviour management training e.g. [Tom Bennett training](#)
- Target engagement with schools where children are at particular high risk of adverse childhood experiences [list of identified schools given to author of report].
- Work closely with the families most at risk and offer more intense support to them.
- Identify and raise awareness of protective factors to ACEs and promote these within education settings.

Who needs to be involved?

- Policy-makers
- Legislators
- Early years and education settings
- Parents and extended family
- Children
- Communities
- Health professionals/service providers (maternity/child/adult)
- Commissioners

- Third sector organisations
- Criminal justice system
- Drug and alcohol services
- Child and adult mental health services

7. Map of existing services in the Bradford District

This hyper-linked service map has been informed by local stakeholder discussion and includes services designed to prevent the occurrence of one or more of the discussed adverse childhood experiences; resilience building to reduce the impact of certain ACEs; and therapy services to manage adverse health outcomes associated with certain ACEs. Services are located in NHS, community and school settings.

[Banardo's WRAP \(Wellness Recovery Action Planning\)](#)

WRAP is a 10-week peer support programme which aims to build resilience and promote self-care among young people.

[Better Start Bradford](#)

Better Start Bradford is a partnership programme working with families to help give children the best possible start in life in our part of Bradford: Bowling & Barkerend, Bradford Moor and Little Horton. They are developing and commissioning a broad range of projects that support, inform and engage families expecting babies or with children under four, and professionals and organisations working with them. Many of their programmes have potential to reduce adverse childhood experiences through working with families and parents to promote positive parenting practices. Programmes include the following:

[Welcome to the World](#): This is a free, friendly antenatal course provided by Better Start Bradford for any family expecting a baby in Bowling & Barkerend, Bradford Moor and Little Horton. Over eight weeks, it helps pregnant mums, dads and carers prepare for life with a new baby, whether it's their first child or not. Taking place in local community centres, the course enables expectant parents to share experiences with each other and explore the changes that new babies bring, and how families can provide them with the best possible start in life. It aims to help more families in our area access important antenatal advice and meet other families around them.

[Baby Steps](#): is a group-based educational programme designed to help support expectant parents to be able to manage the emotional and physical transition into parenthood. Baby Steps provides important opportunities for families to access care and information about key health issues including mental health and physical wellbeing. It has a strong emphasis on healthy relationships and social support.

[Little Minds Matter](#): This programme helps strengthen the relationship between babies and their parents by delivering the messages about infant mental health to the community, offering training, support and guidance to those working in the area and directly supporting families that need more help.

[Perinatal Support Service](#): This service is aimed at pregnant women who have, or are at risk of developing, mild to moderate mental health issues, such as anxiety and depression. The project provides support to parents through a dedicated trained volunteer 'befriender' who will offer emotional support and support to access other services in the community. It helps women through their pregnancy and up until their baby's first birthday, and can work with their partners too. It supports families according to their needs and situation, through listening and emotional support and linking in with other specialist services and Children Centres.

[Incredible Years](#): Incredible Years Toddler Basic aims to improve parent-infant relationships and attachment by using positive parenting strategies. The project is aimed at parents, grandparents and carers that have a child aged between 12-36 months.

[Home-Start Better Start](#): *Providing support, friendship and practical help to families with children aged under four and during pregnancy.*

[HENRY](#): The HENRY Group Programme is a free 8 week programme which helps you to provide a healthy, happy, supportive environment for the whole family.

[Bevan House](#)

Bevan House offers 1:1 therapy for refugee and asylum-seeking children and young people aged 0-18 years, as well as a range of wellbeing-related services including a targeted programme for unaccompanied child asylum seekers.

[Bradford Counselling Service](#)

Bradford Counselling Services is a professional voluntary sector organisation offering confidential counselling for people aged 16 and over.

[Bradford Nurture Group Network](#)

Nurture groups are in-school, teacher-led psychosocial interventions focused on supporting the social, emotional and behavioural difficulties of children and young people. They are founded on evidence-based practices and offer a short-term, inclusive, targeted intervention that works in the long term.

[Bradford Rape Crisis and Sexual Survivors Service](#)

This service support women and girls in the Bradford District who have experienced rape and other sexual abuse at any point in their lives. Services include a Help Line, free confidential counselling, advocacy and support, Jyoti specialist services for Black, Asian and Minority Ethnic women and girls, counselling service in a GP practice for women refugees/asylum seekers, and a counselling service in HMP New Hall women's prison.

[Bradford Youth Service](#)

Bradford Youth Service is a local authority service providing a variety of youth clubs, peer and targeted support groups across Bradford localities and within schools, for 11-19yr olds (up to 25yrs with disabilities).

[Child and Adolescent Mental Health Service \(CAMHS\)](#)

CAMHS supports children and young people from pre-school years up to 16 years of age, (or up to 18 years of age if still in school) where there are severe and long standing concerns about emotional well-being and behaviours. CAMHS offers several specialist services including Family Therapy and a Looked After Children service.

[Child Sexual Exploitation Hub](#)

Bradford's Child sexual Exploitation Hub is a point of access for referrals and advice relating to child sexual exploitation.

[Compass](#)

Compass is a charity working across North Yorkshire inclusive of Airedale, Wharfedale & Craven to provide health and wellbeing services. Services include:

Compass Buzz: aims to improve the mental health and wellbeing of children and young people aged 5-18 (25 with SEND) in schools. The project works with schools and other key partners to increase the skills, confidence and competence of staff dealing with emotional and mental health concerns.

Compass Reach: A free, confidential health and wellbeing service for children and young people in North Yorkshire who need support with issues related to drugs, alcohol, mental health and / or sexual health.

[Educational psychologists](#)

Bradford Council provides Educational Psychology support for Statutory Work and Early Help activities across the district.

[Family Action Bradford](#)

Family Action offers the following community based trauma-informed therapeutic services to children and their families across Bradford District.

Children and Loss Service: therapeutic support for children and young people aged 5 to 17 who have experienced a bereavement 6 months prior to referral.

Alma Street: therapeutic support for children and young people aged 5 to 17 who have been sexually abused.

Hope: Support for children aged 5 to 13 who have experienced domestic abuse.

Building Bridges Service: Counselling for parents/carers affected by mental health issues impacting upon relationships.

[Families First](#)

The Families First programme is funded by Bradford Council under the Government's Troubled Families Programme and is devised and delivered by youth workers. The programme provides families with a dedicated key worker who puts the family's needs first and offers consistent and ongoing support. Families benefitting from the programme may face any number of social and domestic issues including violence and other forms of abuse, poor attendance at school, mental health issues, unemployment, child sexual exploitation and anti-social behaviour.

[First Response Service](#)

The First Response Service offers support 24 hours a day, seven days a week to people of all ages living in Bradford, Airedale, Wharfedale or Craven experiencing a mental health crisis. Accessed through a single phone number, First Response is the patient gateway to all urgent mental health and social services in the area.

[Hand in Hand](#)

Hand in Hand provides one to one support for young people in Keighley involved in Child Sexual Exploitation or who are vulnerable to grooming. Training and Information Sessions are offered to organisations on request.

[Health Action Local Engagement \(HALE\)](#)

HALE offers a number of services aimed at young people:

Baildon Youth Council: aims to empower, improve skills and enable young people to engage with their community.

Loud Whispers: offers a programme which covers recognising positive and negative relationships, acceptable and unacceptable behaviours, gaining knowledge in grooming, trafficking and how to stay safe from vulnerable situations.

Youth Work: funded through the Police and Crime Commissioner, the project aims to educate young people in the Shipley area around the effects and risks of alcohol consumption, the danger of alcohol misuse and the association with anti-social behaviours using a Mobile Venue (converted bus).

Local Sexual Health Outreach: run various drop ins each week, at various locations across Bradford and some on Mobile Venues where young people aged 15 – 26 can access free condoms and Chlamydia Screening, information about sexual health & relationships and signposting to local clinics and services.

[Learning mentors](#)

School-based learning mentors help students develop coping strategies, enhance their motivation, raise their aspirations and encourage them to re-engage in learning. Learning mentors take into account the range of complex issues that usually lay behind problems with learning and achievement (eg bereavement, lack of confidence/low self-esteem, low

aspirations, mental health issues, relationship difficulties, bullying, peer pressure, family issues/concerns).

[Mental Health Champions \(MHCs\)](#)

The MHC's are trained school staff who are equipped to work with pupils on a 1:1 and group basis and also deliver classes and assemblies to raise the profile of mental health and wellbeing in their school.

[PACE](#)

PACE works alongside parent, carers of children who are - or at risk of being - sexually exploited by perpetrators external to the family. They offer guidance and training to professionals on how Child Sexual Exploitation affects the whole family. PACE seek to enable parents and carers to safeguard and stop their children being sexually exploited. Provide evidence and specialist advice in order to demonstrate to partners that parents and carers have an essential safeguarding role. PACE work with parents and partners to disrupt and bring perpetrators to justice. Influence national and local policy and practice to reflect the active safeguarding role of parents and the impact on families of child sexual exploitation. Sustain long term change by training partners in the active role of parents and carers safeguarding their children.

[Parenting courses in Bradford](#)

Bradford hosts a number of parenting courses across the Bradford District and the council also signpost parents to an online [parenting course](#) hosted by Netmums in partnership with Family Links.

[Prevention and Early Help](#)

Prevention and Early Help is about making sure families receive prompt and assertive help as early as possible when needs are identified, either by families themselves asking for help or professionals having worries or seeing needs before they become problematic.

[Project6](#)

Project 6 is a voluntary sector drug and alcohol charity based in Keighley and West Yorkshire. Our core purpose is to provide opportunities and choices for individuals, families and communities to create meaningful and sustainable change in their well-being. Services include:

Family Support: Personalised support on a 1-1 and group basis for parents and young people affected by substance use.

Concerned Other: One-to-one, group and peer support and guidance for those affected by someone else's substance misuse.

Maternity & Families Service: Support for alcohol users pre, during and post pregnancy. Includes advice, information and support for other healthcare professionals.

Domestic Violence Advocacy Service: Support & advocacy, provides psychological & practical support for those affected by domestic abuse and substance use.

Young People's Resilience: Support for young people affected by or at risk of substance use. Includes 1:1 Brief Interventions and education sessions.

[Relate Bradford Services](#)

Relate offers Children and Young People's Counselling.

[Roshni Ghar](#)

Roshni Ghar helps women in the Keighley area that have experienced mental health problems in their lives and supports them to become confident and independent. Services include:

A preventative and early intervention project in schools for young women promoting wellbeing, befriending and vocational opportunities. Young women aged 13 to 18 years old (25+ for those with learning difficulties) are offered 6 weeks initial 1:1 emotional support and a weekly well-being group.

In-reach project with the mental health ward for South Asian women and support for their families

[Safer Spaces](#)

Safer space offers a homely place to stay for one night, where friendly, trained staff will help children make sense of what is going on, so they can handle things more easily in the future. It is available seven days a week, 365 days a year, from 10 pm to 10 am. This service offers support for young people, under 18 years of age, in crisis and struggling with emotional distress living in Bradford, Airedale, Wharfedale or Craven.

[Sharing Voices](#)

Sharing Voices community development mental health organisation actively supporting and working with diverse minority communities of Bradford. It supports 13-24 year olds around a range of issues that may impact upon mental health and wellbeing including bullying, family issues and abuse through 1:1 support, group sessions, peer support, befriending and buddying and other wellbeing activities. Sharing Voices also works in partnerships with schools in Bradford and Keighley offering 1:1 support for students, supporting them and schools to engage with external agencies to raise awareness.

[Step2](#)

Step 2 offers a range of services to young people in schools, community sessions and through outreach, offering services to young people individually, in groups or whole class settings. Current programmes include RSE, Protective Behaviour, Bumps (Babies, Understanding Maternity, Parenthood and Sexual Health), Insight (emotional health and well being) and Respect (for boys and young men). It also offers a counselling service for children aged 11 to 18 years with the option of family counselling.

[The BLAST Project](#)

The BLAST Project is the UK's leading male only sexual exploitation service dedicated to tackling the grooming and sexual exploitation of boys and young men. The Project supports boys and young men who have been, are being or are at risk of being sexually exploited.

[The Bridge Project](#)

The Bridge Project is a drug treatment charity working with individuals, partners, families and communities.

[The Time 2 project](#)

The Time project provides support for boys at risk of and experiencing child sexual exploitation (CSE) in Bradford to reduce their risk of CSE, improve their safety, health and life chances.

[Turnaround](#)

Turnaround works towards prevention of and supporting recovery from episodes of exploitation and trafficking. It offers support and advocacy for trafficking victims including help with keeping safe, dealing with relationships and issues affecting individual lives.

[Youth In Mind](#)

Youth In Mind is an integrated community-based mental health service. It is a partnership between health, local authority and voluntary and community sector services:

Bradford District Care Foundations Trust: Specialist CAMHS service.

Bradford Council Youth Service: Buddies providing 1:1 support for 12 weeks.

Barnardo's Well-being Recovery Action Planning: 10 week Programme based on a peer support model.

Yorkshire Mentoring : Volunteer Mentors providing 1:1 support for 6 months.

MYMUP: Digital Platform self help tool with 12 months access.

8. Evidence based approaches to adverse childhood experiences

8.1 Primary prevention

A true upstream approach to managing adverse childhood experiences would involve interventions aimed at preventing ACEs in the first instance. This would require a multi-sector approach as health, social, education and criminal justice services all have a role.

The effectiveness of primary prevention approaches have been discussed in the literature (2,41,70–72). Potential actions include the following:

- Identification of families at risk of adverse childhood experiences with early referral for support;
- Prenatal programmes with parents-to-be;
- Training in parenting skills;
- Interventions to strengthen relationships between caregivers and children;
- Social development and bullying prevention programmes;
- Interventions promoting community awareness of adverse childhood experiences and their consequences;
- Tackle adverse community environments by addressing social isolation, increasing community connectedness, and reducing poverty;
- Legislation to change social norms and behaviours surrounding actions that result in adverse childhood experiences (e.g. criminalising corporal punishment);
- Enforcement of legislation safeguarding children;
- Policies to tackle the drivers of adverse childhood experiences (e.g. alcohol misuse).

8.2 Secondary prevention

Secondary prevention aims to reduce the impact of adverse childhood experiences that have already occurred. A child's brain demonstrates plasticity (capacity to learn from experience) thus providing an opportunity to develop a buffer against toxic stress and its associated poor life-course health outcomes in children exposed to adverse childhood experiences.(7) Though empirical evidence of benefit is limited, a large body of literature promotes resilience as the key to protection from the harmful effects of adversity.(2,7,19,73) Resilience is defined as the ability to cope, positively adapt to and recover from adversity.(74) Positive relationships, particularly in childhood are essential for development of individual resilience. Evidence shows that nurturing, stable and supportive relationships with at least one adult may reduce the harmful effects of early toxic stress by providing support and structure to their lives, protecting them from developmental disturbances and empowering capacity-building.(75) Resilience programmes to develop problem solving and coping skills can be delivered universally in school and tailored to meet the needs of vulnerable children in youth justice,

social services and community settings (76) The literature suggests that developing schools and communities rich in resilience assets could make a positive difference to the health of children who have had adverse childhood experiences. Attachment-awareness, availability of good role models, provision of networking opportunities and settings for friendship building, and promoting a sense of fairness and equity are all reported to enhance resilience.(73,77)

8.3 Tertiary prevention

Tertiary prevention aims to improve the quality of life, ability to function, and life expectancy of individuals experiencing lasting ill health effects of their adverse childhood experiences. It involves targeted treatments, interventions to reduce progression of illness, and enabling people to successfully manage their conditions. Access to appropriate and timely emergency, medical, mental health, and specialised trauma services is paramount. Tailored school and community based interventions have also been shown to be successful in improving well-being and reducing symptoms of mental ill health.(77–79)

In support of successful tertiary prevention there is a swell of literature promoting a trauma-informed approach to working with individuals living with the ill effects of adverse childhood experiences. Being trauma-informed is a multi-layered whole system approach.(80) It involves integrating trauma-related aspects, knowledge and concepts into every domain of an organisation e.g. the mission statement, recruitment and training, policies and procedures, language and terminology used, and working environment and culture.(80) A trauma-informed approach seeks to: develop environments of emotional and physical safety for service users and providers; foster relationships of trust; promote choice and personal control with service user consultation on service design; and empower people by supporting service users to identify their own strengths and develop skills.(81,82) Screening of patients for adverse childhood experiences is controversial but argued to alert to provision of trauma-informed care.(83) Both screening questionnaires and informal approaches have been used.(84) A 2019 review of routine enquiry into ACEs concluded that current evidence examining its impact is limited and focus should remain on evaluating developing models of ACE enquiry.(85) Self-care of staff to prevent burnout is also recognised as an important aspect of trauma informed service provision.(84)

8.4 A whole system family-orientated approach to commissioning and delivering services

Adverse childhood experiences are complex and do not exist in isolation. When seeking to address ACEs it is imperative that the child's whole environment is considered. Family health and relationships are major influencers on a child's health from a wellbeing and resilience

perspective. A Bradford District approach to ACEs must recognise that programmes targeting the child or parent alone is unlikely to be enough.

The [Family-Friendly Framework](#) published by the British Association for Community Child Health and the British Association for Child and Adolescent Public Health in 2014 built on the 'Think Family' approach which recognises the impact on childhood of adult health problems and does not separate the planning and commissioning of children's services from those services for their parents.(86,87) This framework is intended to “create alignment and synergy between all of the [system] parts, to enable resources to be used wisely, outcomes to be achieved and the best possible care for children and families”. (86) While beyond the scope of this Health Needs Assessment, adoption and adaptation of this framework in local prevention and management of adverse childhood experiences could prove valuable to success.

9. Recommendations for action

Make prevention and mitigation of adverse childhood experiences a Bradford District priority.

Develop a Bradford ACEs Hub with appropriate representatives from the local authority, NHS Trusts, West Yorkshire Police, CCGs and the local community and voluntary sector. This hub could lead on and co-ordinate achievement of the following recommendations:

- **Review and evaluate current services working to prevent and mitigate adverse childhood experiences. Act on outcomes to improve service quality and share lessons learnt across the system.**
- **Identify gaps and opportunities in primary, secondary and tertiary prevention approaches to ACEs in Bradford and ensure actions taken to prevent and mitigate ACEs are evidence-informed.**
- **Endeavour to reduce silo working between organisations by improving links and referral pathways in order to make efficient use of expertise and resources in the District.**
- **Improve local routine data collection on ACEs.**
- **Raise awareness of ACEs and their associated health outcomes in local communities and amongst professionals.**
- **Develop a district-wide whole systems trauma-informed approach to ACEs in consultation with all relevant stakeholders including children and their caregivers.**

Consider adaptation of the BACCH/BACAPH ‘Family-Friendly Framework’ for commissioning and delivering services.

10. Conclusion

Local data on the prevalence of adverse childhood experiences proved to be lacking or challenging to unpick. Improved routine data collection could provide greater evidence for and emphasis on the need for action on ACEs. However, despite limitations of the data presented we know that thousands of children within Bradford are exposed to one or more adverse childhood experience. The available figures for some ACEs in Bradford are higher than national and regional averages. This may in part be explained by the high levels of deprivation experienced by some areas of the District as there is compelling evidence to suggest relative deprivation is associated with increased risk of exposure to ACEs. There is strong evidence of an association between ACEs and deleterious physical and mental health outcomes across the life course and the findings of this health needs assessment presents a strong argument to prioritise adverse childhood experiences on the public health agenda.

There are many examples of positive action already occurring across the District e.g. Better Start Bradford programs (though these are postcode specific); awareness raising of ACEs through multiple screenings of the film 'Resilience'; resilience building by WRAP and Project 6; and Family Action's provision of trauma-informed services. However, many services are fragmented, and organisations are working in silo. There needs to be a whole systems family orientated approach with use of common language around ACEs and greater sharing of experience and lessons learnt in this emerging field. Consultation with stakeholders identified that greater resource investment is needed to evaluate the effectiveness of current programmes, raise awareness and community engagement with existing services and to increase service capacity and reduce waiting lists.

The opportunity for trauma-informed preventative action must be exploited to abate the personal devastation, health inequalities, and the societal and economic cost of adverse childhood experiences.

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Appendix A: The Life Course Health Impact of Adverse Childhood Experiences: A Narrative Review

Dr Amy J Stevens

1. Introduction

“Adverse childhood experiences are the single greatest unaddressed public health threat facing our nation today.”

Dr Robert Block, former President of the American Academy of Pediatrics.

1.1 Adverse childhood experiences

Adverse childhood experiences are defined as traumatic or stressful events occurring within a child’s family or social environment during their first 18 years of life.(1) Adverse childhood experiences vary in severity, are frequently persistent, and have the potential to disturb a child’s physical and mental health.(1) They include experiences that cause harm directly (e.g. abuse, neglect) and indirectly as a result of household challenges (e.g. exposure to parental separation, substance misuse, mental illness, domestic violence, and incarceration).(2)

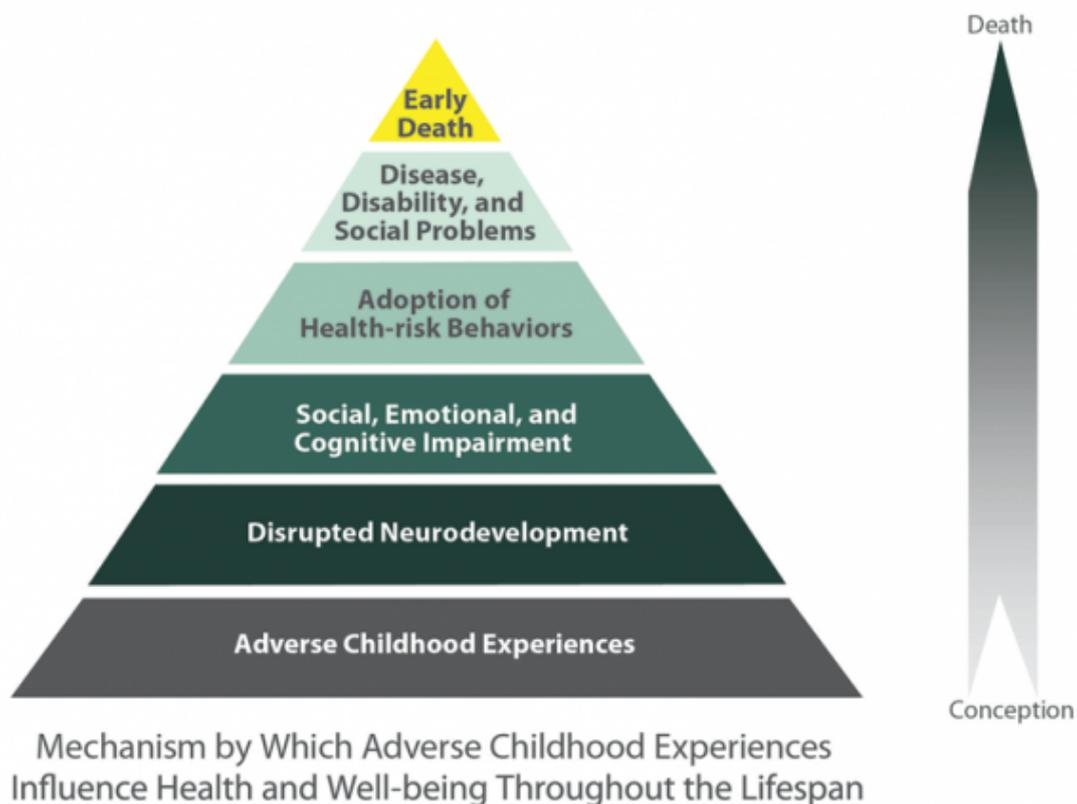
1.2 The relationship between adverse childhood experiences and health and wellbeing

Evidence demonstrating a relationship between adverse childhood experiences and life course health was first published in 1998 following a collaboration between the Centres for Disease Control and Prevention (CDC) and Kaiser Permanente.(8) This original American Adverse Childhood Experiences study investigated indicators of child maltreatment and other adverse experiences and discovered a strong, graded relationship between the breadth of exposure to adverse childhood experiences and multiple risk factors for numerous leading causes of death in adults (e.g. heart disease, cancer).(8) Since then there has been an explosion of research highlighting the relationship between adverse childhood experiences and lifelong health, with estimates that they can lower life expectancy by up to twenty years.(2,6,7)

The proposed mechanisms as to how adverse childhood experiences impact physical and mental health are complex and multifactorial (Figure 1). Increased susceptibility to adverse health outcomes are thought to be contributed to by both physiological damage in early life and adoption and persistence of health-damaging behaviours. (2) Toxic stress is considered to play an important role. Toxic stress refers to powerful, frequent or prolonged activation of the body’s stress response system in childhood, as triggered by adverse childhood experiences, in the absence of safety from buffering supportive relationships.(33,88) Emerging physiological and biomolecular studies demonstrate that toxic stress during sensitive periods of development can lead to chronic physiological damage.(32) Stress-response alterations to the nervous, endocrine and immune systems has physiological,

epigenetic, cognitive, social and emotional consequences.(23,89) Adaptive capacities and coping skills are threatened with lasting effects on behavioural, educational, economic, and health outcomes not only decades, but generations later.(90)

Figure 1: Mechanism by which adverse childhood experiences influence health and well-being throughout the lifespan(11)



1.3 Prevalence of adverse childhood experiences

The prevalence of adverse childhood experiences is high, irrespective of sex and cultural context.(3) A nationally representative survey of English residents aged 18 to 69 (n = 3,885) found 47% of individuals experienced at least one of the nine adverse childhood experiences included in the questionnaire.(4) A breakdown of adverse childhood experiences reported by the participating adults is given in Table 1.(4)

Table 1: Prevalence of self-reported adverse childhood experienced by adults aged 18-69 years in England(4)

Adverse childhood experience		Prevalence
Child maltreatment	Verbal abuse	17.3%
	Physical abuse	14.3%
	Sexual abuse	6.2%
Childhood household included	Parental separation	22.6%
	Domestic violence	12.1%
	Mental illness	12.1%
	Alcohol abuse	9.1%
	Drug use	3.9%
	Incarceration	4.1%

An NSPCC household survey of 11-17 year olds (n=2275) reported the percentages of children self-reporting a history of emotional abuse (64%), physical abuse (66%), contact sexual abuse (5%) and witnessed domestic violence (18%).(5) Table 2 presents prevalence figures and trends of data collected by statutory services on adverse childhood experiences.(5)

Table 2: Officially recorded data on prevalence of adverse childhood experiences(5)

Indicator of adverse childhood experience	Number (n)	Rate per 10,000 children under 18	Trend
Recorded sexual offences towards children under 18 (2016/17) England	54,846	46.5	Increasing*
Recorded cruelty and neglect offences towards children under 16	13,591	12.9	Increasing*
Children in need due to abuse or neglect at 31 March 2017	203,750	172.9	Increasing
Children subject to a child protection plan (thought to be at risk of harm) (2016/17)	64,410		Increasing

*This increase is believed to be attributable to increased reporting of offences and changes in recording practices.

It is generally supposed that reported figures are significant underestimates of true prevalence figures, representing the tip of the iceberg of adverse childhood experiences in

the population.(45) Of no doubt however, is that adverse childhood experiences are concerningly very common.

1.4 Public health relevance

The combination of adverse childhood experiences' high prevalence and life-long health impacts indicates a significant but often concealed contribution to the global burden of disease.(2) The health inequalities between individuals exposed to adverse childhood experiences and those who are not are profound.(18) The associated cost and burden on society strengthens the importance of adverse childhood experiences as a public health issue demanding attention.(19) There are opportunities to mitigate the impact of adverse childhood experiences throughout the life course.(7) Investment in policies, programs and collaborative trauma-informed sector-wide working to both prevent and manage the outcomes of adverse childhood experiences is required.

This review seeks to synthesis evidence on the health and wellbeing consequences of adverse childhood experiences throughout the life course by type of adverse childhood experience. The information will be used to inform a health needs assessment of children exposed to adverse childhood experiences in Bradford.

2. Search strategy

A search of the databases EMBASE, MEDLINE and PubMed were conducted using the search term "adverse childhood experiences" limiting results to systematic reviews/meta-analyses in English language published in the past 10 years with available full text. Limitation of the review to systematic reviews/meta-analyses was due to the overwhelmingly large number of individual studies and the availability of numerous published systematic reviews and meta-analyses, recognised sources of 'best evidence'.

3. Results

Twenty-three relevant articles were identified for inclusion. The majority were made up of studies originating from high-income countries. Study participants included: males and females; groups from vulnerable populations (e.g. homeless, incarcerated); and were drawn from clinical and non-clinical population pools. Most included studies focused on health outcomes in adulthood rather than childhood.

There is no universal consensus on the concept of adverse childhood experiences and a variety of sub-types were included across studies. The author has outlined the life course health outcomes associated with each examined sub-type but acknowledges that categorisation may conceal the continuity of the spectrum of abuse and the variability within sub-types.(45) For each adverse childhood experience the results are presented distinctly as child and adult health outcomes and then further divided under subheadings related to the

aspect of health that is affected. Some of the included systematic reviews do not differentiate between adverse childhood experiences subtypes but still present the case that they increase the risk of adverse health outcomes. To avoid publication bias this undifferentiated information is included in chapter 3.11.

3.1 Physical abuse

Physical abuse is exposure to the act of intentional harm by another person, causing injury or trauma including bruising, broken bones, cuts and burns.(104)

3.1.1 Childhood health outcomes

Physical health

Physical abuse has been associated with an increased risk of asthma, non-asthma cardiorespiratory disease and febrile illness.(23)

Development

One systematic review reported an association between interpersonal trauma and significant delays in cognitive development.(23)

Mental health

The systematic reviews did not detail the mental health outcomes in childhood of exposure to physical abuse, but it is known from the literature that 50% of mental illness first manifests by age 14.(24) Therefore, the evidence of increased risk of mental ill health in adults who experienced physical abuse in childhood (chapter 3.1.2) is highly suggestive of there being increased adverse mental health outcomes in childhood.

Behaviour

Physical abuse is associated with a doubling of the odds of childhood behavioural and conduct disorders.(19) Children experiencing behavioural problems are at risk of adverse outcomes which affect the individual and society throughout their life course. Compared with children without behavioural disorders, children with behavioural disorders are twice as likely to leave school without qualifications, three times more likely to become a teenage parents, four times more likely to become drug dependent, six times more likely to die before age thirty, eight times more likely to be on the child protection register and twenty times more likely to end up in prison.(25) A child with serious behavioural disorders are heavy service users, with a lifetime cost to the public purse of £260,000 per affected child.(25)

3.1.2 Adult health outcomes

Physical health

Physical abuse was found to confer a significant increased risk of obesity with a dose-responsive relationship. (19,26,27) Obesity is one of the greatest contributors to ill health both causing and exacerbating multiple health problems. Associated health risks include: metabolic syndrome; type 2 diabetes; hypertension; coronary heart disease; stroke, sleep apnoea; cancer; infertility; osteoarthritis; non-alcoholic fatty liver disease and non-alcoholic steatohepatitis; and gall bladder disease. (28) All of which cause chronic morbidity and carry a significant risk of premature death. Childhood physical abuse further contributes to the UK's non-communicable diseases burden through its association with increased risk of adulthood cancer.(29)

One meta-analysis found that physical abuse was associated with a 1.3 times increased risk of type 2 diabetes.(3) Another reported suggestive evidence of a significant association between child physical abuse and arthritis, ulcers, and headache/migraine in adulthood.(19)

Patients with functional gastrointestinal disorders are more likely to have reported physical abuse in childhood.(30) Functional gastrointestinal disorders encompass a range of chronic conditions that may be disabling, and carry significant social and economic cost.(31)

Mental health

Physical abuse in childhood is associated with mental ill health. One study suggested that experiencing physical abuse doubles the likelihood of a person experiencing a mental health problem. (19,21) Specifically, experiencing physical abuse increases the likelihood of a person developing a mood disorder, depression, anxiety, panic disorders as well as mental illnesses such as PTSD, psychosis and schizotypy in later life.(19,32–35) Physical abuse is associated with a threefold increased risk of developing an eating disorder and a five-fold increased risk of developing bulimia nervosa with a dose-response relationship.(19)

Self-harm and suicide

Childhood physical abuse significantly increases an individual's risk of suicide ideation and suicide attempt compared to adults without a history of abuse.(19,21,32) No significant difference between genders for physical abuse and suicidal behaviour was reported.(19)

Smoking, alcohol and drug use

Physical abuse was associated with a significantly increased risk of current smoking.(19) A dose response was reported in one study with individuals who had experienced physical abuse 3-5 times being more likely to smoke than those who had been physically abused 1-2 times in childhood.(19) This dose-responsive relationship ceased when frequency of abuse exceeded six occasions.(19) Smoking is associated with significant morbidity and has both immediate and long-term adverse health outcomes. It causes increased risk of cardiovascular disease, stroke, cancers, respiratory symptoms and disease, and premature death.(36)

Physical abuse significantly increased the risk of alcohol problem drinking (risky drinking, alcohol abuse/dependence, binge drinking) and non-problem alcohol consumption (current or ever alcohol use).(19,32) The effect of physical abuse on problem drinking was stronger among males than females.(19) No dose-response relationships was seen between frequency of abuse and risk of problem drinking.(19) However the evidence was not strongly consistent between studies included in the meta-analysis.(19) Alcohol misuse carries health and social costs. It increases the risk of liver disease, cancer, cardiovascular disease, neurological conditions, accidents and violence.(37)

Sexually transmitted infections and risky sexual behaviour

Physically abused individuals are reported to have a significantly higher risk of sexually transmitted infections (STIs) and/or risky sexual behaviour compared to non-abused individuals.(19) Individuals who have experienced physical abuse were twice as likely to have HIV infection than those who had not, with the difference being statistically significant.(19) The size of risk was dose-responsive.(19)

Sleep

Childhood physical abuse is associated with violent behaviour during sleep (disorder involving self-mutilation, sexual assault, or murder attempt during sleep) and self-reported sleep disturbances (including difficulty falling/staying asleep, feeling tired after sleep and frequent insufficient sleep). Consistently poor sleep increases the risk of obesity, heart disease, hypertension, diabetes, poor mental health, and premature death.(38)

3.2 Emotional abuse

Emotional abuse is exposure to deliberate psychological harm which may involve intentionally frightening, humiliating, isolating or ignoring a child.(104)

3.2.1 Child health outcomes

Physical health

Childhood maltreatment including emotional abuse has been associated with an increased risk of asthma, non-asthma cardiorespiratory disease and febrile illness.(23)

Development

One systematic review reported an association between interpersonal trauma and significant delays in cognitive development.(23)

Mental health

Children exposed to emotional abuse have been reported to exhibit lower self-esteem than controls, with a dose-response effect.(39) Emotional abuse is also reported to significantly influence depressive symptoms and result in greater emotional dysregulation than controls and children experiencing other forms of abuse.(39)

Behaviour

Externalising features (aggressive/assaultive/destructive/anti-social/delinquent behaviour) have been commonly described amongst children experiencing emotional abuse.(39) Children exposed to emotional abuse are reported to have greater difficulty making friends.(39) Having few or no friends is considered a major diagnostic criterion for numerous psychiatric disorders and may be predictive of adulthood social incompetence and maladjustment.(40)

3.2.2 Adult health outcomes

Physical health

As with physical abuse, childhood emotional abuse is associated with increased risk of obesity, functional gastrointestinal disorders and adulthood cancer.(19,27,29,30) The significance of these adverse health outcomes are discussed in more detail in chapter 3.1.2.

Mental health

Childhood emotional abuse is associated with multiple psychiatric outcomes.(21) It has been associated with twice the risk of developing adverse mental health outcomes than no exposure to abuse or neglect.(19) Emotional abuse may contribute to the development of some personality disorders (e.g. borderline, narcissistic, paranoid, schizoid, and schizotypal) and dissociative disorders, independent of other risk factors.(32,35) It is also linked to an increased risk of psychosis with findings suggesting a significant role of emotional abuse in the aetiology of schizophrenia.(32,34)

Self-harm and suicide

Emotionally abused individuals in one systematic review had a significantly increased risk of suicide attempt and suicidal ideation than non-abused individuals.(19)

Smoking

Emotional abuse is associated with a significantly increased risk of current smoking.(19) Adverse health effects of smoking are outlined in chapter 3.1.2.

Sleep

Self-reported sleep disturbances including difficulty falling/staying asleep, feeling tired after sleep and frequent insufficient sleep are associated with a history of childhood emotional abuse.(6) The health consequences of this are outlined in chapter 3.1.2.

Sexually transmitted infections and risky sexual behaviour

Emotionally abused individuals were found to have a significantly higher risk of STIs and/or risky sexual behaviour compared to non-abused individuals.(19) Individuals who had experienced emotional abuse were twice as likely to have HIV infection than those who had not, with the difference being statistically significant.(19) The size of risk was dose-responsive.(19)

Inter-generational transfer: parenting

In one systematic review there were inconsistent findings of maternal history of emotional abuse and reduced parenting competency.(41) Cautious associations are reported between maternal history of emotional abuse and subsequent dysfunctional parent-child interactions; lower empathy; lower acceptance; greater psychological control; increased child maltreatment potential; use of infant spanking; and attitudes toward punishment and punitiveness.(41) However, the authors stress that the evidence suggests most mothers with a history of adverse childhood experiences do not go on to maltreat their own children.(41)

3.3 Sexual abuse

Sexual abuse is being forced or persuaded to participate in sexual activities. It may or may not involve physical contact.(104)

3.3.1 Child health outcomes

Physical health

Childhood maltreatment including sexual abuse has been associated with an increased risk of asthma, non-asthma cardiorespiratory disease and febrile illness.(23)

Development

One systematic review reported an association between interpersonal trauma and significant delays in cognitive development.(23)

Self-harm and suicide

Females who have experienced childhood sexual abuse are at increased risk of self-harm and suicidal behaviour, with the highest probability of first suicide attempt occurring in adolescence.(42)

Behaviour

Female adolescents who have experienced sexual abuse are reported to be more likely to be violent perpetrators than those who have not experienced abuse.(42) One prospective study estimated that 1 in 8 sexually abused boys go on to become sexual offenders.(43)

3.3.2 Adult health outcomes

Physical health

A systematic review found sexual abuse predicts higher obesity and central adiposity in longitudinal studies and higher-quality cross-sectional studies.(26) It is predictive of a higher BMI in young adult women with sexually abused women 1.5 times more likely to be obese than matched controls.(26) This association between sexual abuse and obesity on later life is corroborated in another systematic review.(27) The negative health outcomes associated with obesity are detailed in chapter 3.1.2.

A meta-analysis reported an increased risk of developing type 2 diabetes in individuals exposed to childhood sexual abuse.(3)

Patients with functional gastrointestinal disorders are more likely to have reported sexual abuse in childhood.(30) Chapter 3.1.2 describes the consequences of this.

Smoking, alcohol and drug use

Sexual abuse has been associated with alcohol use disorder including higher rates of alcohol dependence in adulthood.(32,44) The adverse outcomes of alcohol misuse are outlined in chapter 3.1.2.

Mental health

There is a reported higher lifetime prevalence of psychopathology and pathologic behaviours in children exposed to sexual abuse.(42) It is associated with earlier onset and increased severity of psychiatric disorders and symptoms.(42) Mental health problems associated with child sexual abuse include: post traumatic stress disorder; depression; eating disorders; borderline, and paranoid personality disorders; anxiety disorders; dissociative disorders; heightened experience of loneliness; and perception of being overweight and poor body image.(32,42,44) One meta-analysis reported that adults with a history of sexual abuse were twice as likely to suffer depression or anxiety than adults who had no history.(33)

Sexual abuse has also been linked with an increased risk of psychosis and schizotypal disorders.(34,35,45) The reported associated risk is higher with a history of penetrative sexual abuse, abuse after aged 12 years, and more than one perpetrator.(45)

Self-harm and suicide

Sexual abuse is correlated with self-harm.(42,44) It has the greatest association with suicidality compared to other combinations of adverse childhood experiences.(21) Exposure to sexual abuse increases the likelihood of committing suicide by eight-fold.(32) It is a major risk factor for suicidal behaviour and is associated with increased prevalence and severity of repeated suicide attempts.(42) 11-14.5% of suicidal behaviour in females could be prevented by removing the factor of childhood sexual abuse.(42)

Behaviour

In one systematic review 13% of 9,216 participants with histories of child sexual abuse were reported to have a conduct disorder.(46) Additionally, the average prevalence of child sexual abuse among study participants with conduct disorder was significantly higher than among participants without a conduct disorder.(46) It's findings also corroborated other reports to lead to the suggestion that girls with conduct disorder may be more likely than boys to have experienced sexual abuse.(46) It reported that conduct disorders were significantly higher in participants with sexual and physical abuse combined or physical abuse alone than sexual abuse alone.(46) However another study has reported delinquency to have a stronger association with history of childhood sexual abuse than with other Adverse childhood experiences.(21) Another systematic review identified an increased risk of conduct behaviour and antisocial personality disorder in adults who had experienced childhood sexual abuse.(42) The life course costs of behaviour disorders are discussed in chapter 3.1.1.

Females who have experienced sexual abuse are at increased risk of becoming victims of intimate partner violence as adults and perpetuating violence themselves thus demonstrating the revictimization and cycle of violence associated with childhood abuse.(42,47)

Sleep disorders

Childhood sexual abuse is associated with violent sleep behaviour and sleep paralysis (occurring when the motor paralysis characteristic of REM sleep persists post awakening, commonly presenting with associated tactile and visual hallucination).(6) Episodes of sleep paralysis are reported to be more frequent and distressing in individuals exposed to abuse compared to individuals who have not.(6)

Risky sexual behaviour

In comparison with other adverse childhood experiences sexual abuse had the strongest association with sexual risk behaviour.(21) Reported examples include increased likelihood of unprotected sex, multiple partners, sex with a stranger, anal intercourse, and having a sexually transmitted disease.(42)

Utilisation of healthcare

Sexual abuse has been associated with increased utilisation of healthcare and psychotropic medications with associated costs to the public purse.(42)

3.4 Neglect

Neglect is the ongoing failure of a child to have their basic needs met.(104)

3.4.1 Child health outcomes

Development

Neglect has been reported as having a dose dependant significant association with late menarche. (23)The same systematic review reported an association between interpersonal trauma and significant delays in cognitive development.(23)

Physical health

Neglect has been shown to effect weight during adolescence with reports of increased risk of obesity.(23) The health impact of obesity is outlined in chapter 3.1.2. It is also associated with an increased risk of asthma, non-asthma cardiorespiratory disease and febrile illness.(23)

Mental health

One systematic review explored the association between neglect and issues pertaining to mental health.(48) Children exposed to neglect or emotional abuse reportedly exhibited lower self-esteem than controls, with a dose-response effect.(39) It review found less emotional understanding among children who had experienced neglect when compared to controls, especially in relation to negative emotions and less effective coping strategies.(39) Additionally, it reported depression as being associated with physical neglect with insecure maternal attachments and negative maternal schema showing the greatest associations.(39)

Behaviour

Externalising features were frequently reported amongst children experiencing neglect.(39) Other behavioural features found to be associated with neglect included: internalising features (withdrawn/anxiety/depression/somatic complaints); anxious ambivalent attachment; and impulsivity, inattention and hyperactivity.(39)

One systematic review reported that neglected children exhibit difficulties in being accepted by their peers and struggle to develop reciprocated friendships, a risk factor for psychiatric disorder development and social incompetency in adulthood.(39,40) Compared to controls they are reported to show a delay in personal care skills and ability to complete domestic tasks.(39)

School performance and IQ

Three of 6 studies assessing IQ in one systematic review reported a lower IQ overall in children exposed to neglect with increasing severity of neglect being associated with a lower IQ.(39) Neglect was reported to be associated with poor executive decision making and reduced manual dexterity, auditory attention and visual-motor integration than controls.(39) However they were found to achieve higher at problem solving, abstraction and planning.(39)

Review findings investigating the association between neglect and school performance/increased likelihood of special educational needs compared to controls were contradictory.(39)

Self harm and suicide

Only one study in a systematic review looked at neglect specifically and suicide potential in young children (6-12 year olds).(39) No difference between this group and controls was identified.(39)

3.4.2 Adult health outcomes

Physical well-being

One systematic review reported that childhood emotional and physical abuse has been associated with a lifetime increased risk of obesity.(27) This is in contrast with another systematic review which did not identify a significant association between childhood neglect and adult obesity.(19) A meta-analysis however reported an almost two-fold increased risk of developing type 2 diabetes in adults exposed to childhood neglect when compared to those who had not.(3) Obesity is itself a risk factor for type 2 diabetes.(49)

Smoking, alcohol and drug use

Neglect was not found to increase the risk of problem drinking or current smoking but is reported to possibly be associated with increased risk of drug use.(19)

Mental health

One meta-analysis found childhood neglect was associated with twice the risk of developing adverse mental health outcomes than no exposure to abuse or neglect.(19) Neglect is reported to be related to an increased risk of psychosis and depression.(32,34) Additionally, adults with a dissociative disorder have been found to report physical neglect more frequently.(32)

Self-harm and suicide

Neglected individuals reportedly have a significantly increased risk of suicide attempt and suicidal ideation than non-abused individuals.(19,32)

Sexually transmitted infections and risky sexual behaviour

Adults who have experienced childhood neglect are reported to be at a significantly increased risk of sexually transmitted infections and/or risky sexual behaviour compared to those who have not experienced neglect or abuse.(19)

Inter-generational transfer: parenting

In one systematic review there were inconsistent findings of maternal history of emotional neglect and reduced parenting competency.(41)

3.5 Parents separated/divorced or parental death

3.5.1 Child health outcomes

Physical well-being

A systematic review reported that children whose parents have separated are more likely to be overweight or obese between 3 and 5 years, but this weight difference diminishes by age 17.(23) The life course health consequences of this are outlined in chapter 3.1.2.

Development

A weak association between parental divorce/separation and shorter height in both boys and girls is reported but the included study findings were not always statistically significant.(23) The same systematic review reported that parental death/divorce was associated with lower cognitive ability scores at ages 8 and 15 years.(23)

3.5.2 Adult health outcomes

Mental health

Parental divorce has been reported to have a negative impact on mental health but to a lesser extent than other adverse childhood experiences including parental mental illness, emotional and physical abuse and witnessing violence at home.(21) In one systematic review the experience of parental death in childhood was found to be significantly associated with increased psychosis once the potential outlier was excluded.(34)

Sleep

Parental loss or separation is associated with violent behaviour during sleep and self-reported sleep disturbances – the health consequences of which are listed in chapter 3.1.2.(6)

3.6 Witnessing parental inter-partner violence

3.6.1 Child health outcomes

Physical health

Children whose mothers reported inter-partner violence (IPV) were found to be more likely to be obese at aged 5 years than children whose mothers reported no IPV. (23) Children exposed to early (<12 months) or late (3 and/or 5 years) maternal IPV did not have a significant increase in risk. (23) Analyses stratified by sex identified an increase in obesity risk among females exposed to maternal chronic IPV as opposed to males.(23)

3.6.2 Adult health outcomes

Physical health

Witnessing domestic violence is reported to have a positive association with adult BMI and obesity.(26,27) The life course health consequences of obesity are outlined in chapter 3.1.2.

Mental health

Witnessing violence is reported to be significantly associated with multiple adverse psychiatric outcomes.(21) The Organisation for Economic Co-operation and Development's report estimates that mental ill health costs the UK over £94bn every year, including treatment, social support expenses, lower employment and productivity.(57)

Self-harm and suicidal behaviour

Witnessing inter-partner violence significantly impacts upon suicide attempts.(21)

Sleep

Witnessing domestic violence in childhood is associated with self-reported sleep disturbances in adulthood.(6) Insufficient sleep over a prolonged period of time is associated with adverse physical and mental health outcomes as described in chapter 3.1.2.

3.7 Household member with mental illness

3.7.1 Child health outcomes

Physical well-being

Maternal depression predicts long-term failure in weight reduction for overweight and obese 7-15 year olds. (23) In addition parental mental health has been associated with an increased risk of asthma, non-asthma cardiorespiratory disease and febrile illness.(23)

Sleep

Maternal depression is reported to be associated with reduced infant nocturnal sleep and increased awakenings in the night and maternal PTSD is significantly associated with increased infant waking after sleep onset.(23) Infant sleep plays a critical and positive role in cognition and physical growth.(58)

3.7.2 Adult health outcomes

Mental health

Parental mental illness is significantly associated with multiple psychiatric outcomes, which carry individual and societal costs.(21,57)

Sleep

A history of household mental illness is associated with self-reported sleep disturbances in later life with associated physical and mental health consequences (see chapter 3.1.2).(6)

3.8 Household member spent time incarcerated

3.8.1 Child health outcomes

Behaviour

One meta-analysis identified parental incarceration as a predictor of increased risk for children's antisocial behaviour, but not mental health problems, drug use, or poor educational performance.(62) The meta-analysis examined studies comparing children of incarcerated parents with children separated from parents for other reasons and results showed a significantly higher risk for antisocial behaviour among the parental incarceration group.(62) It can therefore be concluded that parent-child separation per se is not the main influence explaining children's outcomes after parental incarceration. The health and social consequences of behavioural disorders are discussed in chapter 3.1.1.

3.8.2 Adult health outcomes

Mental health

A systematic review reported parental imprisonment to be associated with adverse psychiatric outcomes but to a lesser extent than parental mental illness, physical, and emotional abuse.(21)

Sleep

A history of household member incarceration is associated with self-reported sleep disturbances in later life which has physical health consequences as listed in chapter 3.1.2).(6)

3.9 Bullying

Bullying is exposure to repeated negative actions of peers over time, whose intention is to harm or disturb.(105) It may be overt (verbally or physically aggressive) or relational (social harm inflicted by friendship status).

3.9.1 Child health outcomes

Physical health

All 14 studies examining peer bullying and obesity in one systematic review identified a relationship between the two.(26) This was found to be true in the case of overt and relational bullying and for both genders.(26) There was some evidence of a dose–response relationship between increasing severity or frequency of bullying and BMI.(26) The likelihood of bidirectional relationships existing between bullying and obesity with potential cyclical interplay is acknowledged.(26)

Mental health

In one systematic review 8/10 studies found a significant association between being bullied at school and non-clinical psychotic symptoms (e.g. hallucinations, delusions) with a reported two-fold risk of experiencing psychotic symptoms in adolescence or adulthood compared to non-bullied children.(64) The association was shown to be dose-responsive with increased frequency and severity of bullying increasing the risk of developing psychotic symptoms and persistence of them.(64) While no difference was reported between overt or relational bullying, experience of both types increased the risk of developing psychotic symptoms when compared to only one.(64) Being both a victim of bullying and a perpetrator showed an increased risk of developing psychotic symptoms compared to being a victim of bullying alone.(64) However the effect of bullying on development of psychotic disorders in clinical samples is reported as inconclusive with apparent associations disappearing after controlling for other variables.(64) The authors postulate that sparse research and lack of power in conducted studies as an explanation for this inconclusiveness.(64)

Sleep

Bullying victimization is reported as significantly associated with nightmares, night terrors, sleepwalking at ages 8 and 10 years, and any type of parasomnia at age 12 years.(23)

3.9.2 Adult health outcomes

Mental health

Bullying has been found to be associated with an increased risk of psychosis and psychotic symptoms.(34,64) Another systematic review found that being a perpetrator or a victim of bullying is associated with greater risk of schizotypy.(35)

3.10. Household member with a problem with alcohol or substance misuse

Evidence from the included systematic reviews specifically investigating the health outcomes of living with a household member with a problem with alcohol or substance misuse is limited to an identified association with self-reported sleep disturbances in later life.(6) However, alcohol and substance misuse has been shown to be associated with other adverse childhood experiences including abuse, neglect, inter-partner violence, mental illness and incarceration.(66–69) Following this logic childhood exposure to a household member with a problem with alcohol or substance misuse may potentially be linked to the adverse health outcomes described in chapters 3.1, 3.2, 3.3, 3.4, 3.6, 3.7 and 3.8.

3.11. Undifferentiated adverse childhood experiences

3.11.1 Child health outcomes

Physical health

Individuals who have been exposed to adverse childhood experiences are more likely to engage in risky health behaviours at susceptible times in their development, such as adolescence, than those who have not. (21) Multiple risk behaviours, including, anti-social behaviour, alcohol misuse and unprotected sexual intercourse, cluster in adolescence.(91) Consequences include increased risk of poor educational attainment, life-course morbidity and premature mortality.(91) Risky health behaviours in adolescence shape adult behaviours with an associated cost on the individual and society.(91)

Adverse childhood experiences are associated with caregiver reported child somatic complaints.(23) Children with somatic complaints are at increased risk of emotional disorders during both childhood and adulthood.(92)

Behaviour

Adverse childhood experiences have been reported to be associated with addictive behaviours, which may include substance misuse and gambling in childhood.(93)

3.11.2 Adult health outcomes

Physical health

Adverse childhood experiences have been linked to multiple poor physical health outcomes in adulthood including; cardiovascular disease, chronic lung disease, autoimmune disease, headaches, obesity and premature death.(21)

In a systematic review of 36 studies, 29 (81%) reported positive associations between obesity and childhood inter-personal violence (behaviour that threatens, attempts or causes physical harm inclusive of sexual abuse) from care-givers, peers and community.(26) This relationship is stronger in females and younger adults.(26)

Women who have experienced adverse childhood experiences are more likely to have repeated abortions.(21) Abortions carry the risk of possible complications including mental health problems, infection, excessive bleeding, and cervical and uterine damage.(94) Repeated terminations have been linked to adverse health perinatal outcomes including premature delivery and small for gestational age.(95)

Women who have experienced adverse childhood experiences are more likely to suffer intimate-partner violence.(21) This has adverse physical and mental health consequences and the risk of inter-generational transfer.

Smoking

Adverse childhood experiences is associated with an increased risk of smoking. Abuse occurring in adolescence was reported to be a more important risk factor for early initiation of smoking amongst girls than abuse experienced in early childhood. (21)

Mental health

Adverse childhood experiences are strongly correlated with negative mental health consequences. In one systematic review, all 12 studies investigating the association between adverse childhood experiences and psychiatric health conditions found strong associations with mental health conditions.(21) These included depression, post-traumatic stress disorder (PTSD), anxiety, emotional reactivity, schizophrenia and schizotypal personality disorders.(21) The finding of increased risk of developing schizotypal traits, especially positive schizotypy, in adults exposed to childhood trauma is reported elsewhere with the additional finding of a dose–response relationship.(35) Another systematic review of 41 studies reported that adverse childhood experiences were significantly associated with an almost three times increased risk for psychosis.(34)

One review reports that almost half of patients with bipolar disorder have a history of adverse childhood experiences.(96) Adverse childhood experiences result in an earlier age of onset of bipolar disease and increases the chance of a rapid cycling course, the occurrence of psychotic features, the frequency of lifetime mood episodes, the risk of suicide ideation and attempts, and substance misuse in this population.(96)

Self-harm and suicidal behaviour

Adverse childhood experiences are associated with increased suicidal ideation and suicidal attempts.(21) One study estimated that preventing adverse childhood experiences in their study population would have decreased suicide attempts by 50% in women and 33% in men.(97)

Smoking, alcohol and drug use

Individuals who have had adverse childhood experiences are more likely to smoke, binge drink and abuse substances. (21) These health behaviours contribute to many non-communicable diseases with associated chronic morbidity and premature mortality.

A metasynthesis reports on the relationship between adverse childhood experiences and addictive behaviours including alcohol and drug abuse in adulthood.(93) Addiction behaviours are reportedly used by adults who have experienced adverse childhood experiences as a way of alleviating their emotional distress associated with traumatic memories.(93) The consequences of addictive substance misuse are complex and include a close relationship with domestic violence and crime. This can result in inter-generational transfer of Adverse childhood experiences and a perpetuating cycle of violence-addiction-violence.(93)

Sleep disorders

Adverse childhood experiences are associated with multiple sleep disorders and disturbances in adulthood.(6,21) Statistically significant differences were found for nightmare frequency, sleep apnoea, narcolepsy, nightmare distress, nightmare impact , psychiatric sleep disorders, insomnia, and poorer sleep quality in adults exposed to adverse childhood experiences compared to those who had had a childhood free from abuse.(6) Statistically significant differences in objective sleep measurements (proportion of awakenings during sleep, sleep efficiency, movements during sleep) have also been between adults with a history of adverse childhood experiences and those without, the former experiencing more unfavourable sleep outcomes.(6)

Healthcare utilisation and costs

Adverse childhood experiences are associated with high healthcare utilisation, increased prescription medication and increased prescription of multiple classes of pharmaceuticals.(21) They are linked with reduced health and functioning, family stress and dysfunction, disability associated societal economic losses and financial burden on the healthcare system.(21)

3.12 Multiple adverse childhood experiences

Adverse childhood experiences are frequently clustered and rarely occur in isolation.(45) The more adverse childhood experiences the greater the effect on behaviour and physical and mental health.(21) Some of the reviews explored the impact of multiple adverse childhood experiences on adult health and the results are summarised below.

3.12.1 Adult health outcomes

Physical well-being

One meta-analysis reported weak associations between multiple adverse childhood experiences and obesity, physical inactivity and diabetes when compared to individuals without a history of adverse childhood experiences.(2)

Another systematic review found significant associations between number of adverse childhood experiences and adult cancer risk.(29) It reported a strong and graded relationship between adverse childhood experience summary score and lung-cancer risk even after controlling for smoking status and parental smoking history.(29)

Smoking and alcohol

Individuals with four or more adverse childhood experiences had more than double the risk of being a current smoker or heavy drinker and almost six times the risk of drinking problematically than those who had no adverse childhood experiences. (2) Smoking and alcohol use are leading risk factors for the global burden of disease (44)

Mental health

The greater the number of adverse childhood experiences experienced the worse the psychiatric outcomes.(21,45) One meta-analysis reported an approximate four-times higher risk of low life satisfaction, anxiety and depression in individuals with at least four adverse childhood experiences compared to those with none.(2) A review of longitudinal studies for childhood determinants of adult mental illness reported that multiple adverse childhood experiences was associated with increased adult mental illness including depression, anxiety, adult neuroticism, negative affect, behavioural inhibition and dissocial behaviour.(45) Authors of another systematic review suggested that age of exposure and multi-victimisation

may have a stronger association with psychosis than type of adverse childhood experience.(34)

Self-harm and suicide

Two reviews found suicidal ideation and suicide to be strongly associated with multiple adverse childhood experiences.(2,45)

Violence

One meta-analysis reported that individuals who have experienced four or more adverse childhood experiences are at seven times the risk of violence victimisation and eight times the risk for violence perpetration than those with no history of adverse childhood experiences.(2)

Sleep disorders

A graded relationship between the number of adverse childhood experiences and self-reported poor sleep quality, difficulty falling/staying asleep and feeling tired after sleep, and insufficient sleep was observed.(6,21) associated health consequences are discussed in chapter 3.1.2.

Sexually transmitted infections and risky sexual behaviour

One meta-analysis found that Individuals with a history of four or more adverse childhood experiences were at three times higher risk of multiple sexual partners, five times increased risk of sexually transmitted infections, three times higher risk of early sexual initiation, and greater than four times higher risk of teenage pregnancy than an individual without a history of adverse childhood experiences.(2)

4. Discussion

“The human costs on individuals, families and communities, and the financial and economic costs to society, both in the moment and from transgenerational effects cannot be ignored.”
The Annual Report of the Director of Public Health NHS Highland, 2018

An association between adverse childhood experiences and negative health outcomes throughout the life course was consistently shown in the systematic reviews included in this review. While causal inference is limited by the considerable reliance on results from retrospective studies and inability to completely control for confounding factors there is increasing biomedical evidence to support plausible causal relations between adverse childhood experiences and health outcomes.(2,29)

The findings of this review support the argument to making tackling adverse childhood experiences a public health priority. A ‘preventative spend’ approach is advocated as it has the potential to reduce the health, education, social care, police and justice services costs associated with adverse childhood experiences.(7) While strategies to improve parenting and family functioning may be more effective and economical than managing the multiple negative health outcomes associated with adverse childhood experiences, a combination of primary, secondary and tertiary prevention interventions are necessary for success.(19) The American Academy of Pediatrics attests that addressing adverse childhood experiences requires “unprecedented levels of collaboration” with community partners, including educators, social service providers, and policy makers.(29) A critical review of the evidence for managing adverse childhood experiences and their health consequences is beyond the scope of this narrative but the following paragraphs give an overview of potential approaches informed by the literature.

4.1 Management of adverse childhood experiences: A public health approach

Primary prevention

A true upstream approach would involve interventions aimed at preventing adverse childhood experiences in the first instance. This would require a multi-sector approach as health, social, education and criminal justice services all have a role.

Possible primary prevention approaches include: identification of families at risk of adverse childhood experiences with early referral for support; prenatal programmes with parents-to-be; training in parenting skills; interventions to strengthen relationships between caregivers and children; social development and bullying prevention programmes; interventions promoting community awareness of adverse childhood experiences and their consequences; legislation to change social norms and behaviours surrounding actions that result in adverse childhood experiences (e.g. criminalising corporal punishment); and policies to tackle the drivers of adverse childhood experiences (e.g. alcohol misuse). (2,41,70–72)

Secondary prevention

Secondary prevention aims to reduce the impact of adverse childhood experiences that have already occurred. A child’s brain demonstrates plasticity (capacity to learn from experience) thus providing an opportunity to develop a buffer against toxic stress and its associated poor life-course health outcomes in children exposed to adverse childhood experiences.(7) Though empirical evidence of benefit is limited, a large body of literature promotes resilience as the key to protection from the harmful effects of adversity.(2,7,19,73) Resilience is defined as the ability to cope, positively adapt to and recover from adversity.(74) Positive relationships, particularly in childhood are essential for development of individual resilience. Evidence shows that nurturing, stable and supportive relationships with at least one adult may reduce the harmful effects of early toxic stress by providing support and structure to their lives, protecting them from developmental disturbances and empowering capacity-building.(75) Resilience programmes to develop problem solving and coping skills can be delivered universally in school and tailored to meet the needs of vulnerable children in youth justice, social services and community settings (76) The literature suggests that developing schools

and communities rich in resilience assets could make a positive difference to the health of children who have had adverse childhood experiences. Attachment-awareness, availability of good role models, provision of networking opportunities and settings for friendship building, and promoting a sense of fairness and equity are all reported to enhance resilience.(73,77)

Tertiary prevention

Tertiary prevention aims to improve the quality of life, ability to function, and life expectancy of individuals experiencing lasting ill health effects of their adverse childhood experiences. It involves targeted treatments, interventions to reduce progression of illness, and enabling people to successfully manage their conditions. Access to appropriate and timely emergency, medical, mental health, and specialised trauma services is paramount. Tailored school and community based interventions have also been shown to be successful in improving well-being and reducing symptoms of mental ill health.(77–79)

In support of successful tertiary prevention there is a swell of literature promoting a trauma-informed approach to working with individuals living with the ill effects of adverse childhood experiences. Being trauma-informed is a multi-layered whole system approach.(80) It involves integrating trauma-related aspects, knowledge and concepts into every domain of an organisation e.g. the mission statement, recruitment and training, policies and procedures, language and terminology used, and working environment and culture.(80) A trauma-informed approach seeks to: develop environments of emotional and physical safety for service users and providers; foster relationships of trust; promote choice and personal control with service user consultation on service design; and empower people by supporting service users to identify their own strengths and develop skills.(81,82) Screening of patients for adverse childhood experiences is controversial but argued to alert to provision of trauma-informed care.(83) Both screening questionnaires and informal approaches have been used.(84) Self-care of staff to prevent burnout is also recognised as an important aspect of trauma informed service provision.(84)

4.2 Review strengths and limitations

Study heterogeneity

Study heterogeneity existed within and between the systematic reviews which may have influenced the reliability of the presented results. Included studies varied in the study design, the populations involved, the adverse childhood experiences and outcomes examined, the definitions used, the methods of measurement, and the duration of study.

Study types

The majority of included studies were adult retrospective cross-sectional studies measuring adverse childhood experiences with self-reported methods. The associated risk of recall bias may have negatively impacted study reliability.(21) Individuals with health problems may be more likely to recall or disclose adverse childhood experiences. Objective measures of adverse childhood experiences (e.g. court-substantiated child abuse cases) removes the bias associated with recall and increases external validity.(26) However, cases reaching child

protections agencies represents a small percentage of people who have experienced abuse and this population may be qualitatively different to those whose childhood abuse went undetected and did not receive intervention.(26,51) It has been found that retrospective responses pertaining to adverse childhood experiences tend to be consistent over time and may actually be more reliable than legal documents, police reports and clinical notes that could underestimate the extent of abuse.(52–54) There are claims that retrospective reporting of adverse childhood experiences may be at greater risk of bias toward underreporting than overreporting.(55) However, there is risk that retrospective designs with psychiatric patients can result in recall bias with consequential exaggeration of the estimated risk attributed to the studied exposure and incorrect conclusions of association.(46) Retrospective studies are also unable to determine temporal relationships between life events and ill health making the causation inference impossible.

Prospective studies made up the minority of studies included in the systematic reviews. These are at risk of being unrepresentative samples as they frequently only capture abuse as identified by child protection agencies and are potentially skewed towards inclusion of individuals of a lower socioeconomic demographic. This could result in inaccurate reporting of strengths of associations due to unidentified cases of abuse and publication of results not generalisable to children from middle and upper-socioeconomic backgrounds. In addition, prospective study designs could have resulted in children identified to have been exposed to abuse receiving some form of intervention, which in turn may have influenced their susceptibility to developing an adverse health outcome. However, a strength of the prospective studies is that they present convincing evidence of a temporal relationship between adverse childhood experiences and development of risky health behaviours and poor physical and mental health outcomes.

Confounding

Understanding associations between adverse childhood experiences and adult health outcomes is complicated and influence of confounding cannot be fully evaluated. It is important to remember that the health outcomes discussed are not independent of genetic predisposition and the wider socioeconomic circumstance. Possible confounding factors include lifestyle factors, healthcare access, community characteristics, social deprivation, family dysfunction and environment stressors.(19) Likewise, assessment of the independent potential of an adverse childhood experience to effect health outcomes has challenges of confounding. Outcomes may be influenced by age of exposure to adverse childhood experience, its frequency, duration, and relationship with concurrent or successive adverse childhood experiences.

Some reviews included studies whose participants were predominantly drawn from clinical rather than community samples. Data derived from clinical samples is claimed to be at increased risk of biases which threaten its validity as child abuse and family problems are greatly confounded in this group. (98,99)

While some investigators did apply multivariable analytical techniques to adjust for confounding this was not consistent across studies limiting causal inferences.

Generalisability

The study populations included in this narrative review were not homogenous and generalisability of results is limited. However, most studies recruited participants from high-income developed countries in the USA, Europe and Australasia and were inclusive of predominantly white individuals, so application of the results to a population of a similar demographic may not be inappropriate. Results cannot be generalised to persons excluded from the studies: often individuals who are severely unwell, suffering disabling conditions or learning disabilities.(46) As children with physical and learning disabilities are at an increased risk of abuse, the exclusion of this group in the bulk of the research is a failure to recognise their specific health risks and needs.(100–103)

5. Conclusion

“It is easier to build strong children than to repair broken men.”
Frederick Douglass (1817–1895)

Adverse childhood experiences are common and there is strong evidence of an association with deleterious physical and mental health outcomes across the life course. While more research is needed to understand the mechanisms driving this relationship, there is a growing body of evidence-based plausible scientific explanations. This review synthesises available evidence to present a strong argument to prioritise adverse childhood experiences on the public health agenda. The opportunity for trauma-informed preventative action must be exploited to abate the personal devastation, health inequalities, and the societal and economic cost of adverse childhood experiences. The review will inform a health needs assessment investigating the health needs of children experiencing adverse childhood experiences in Bradford as part of a city-wide drive to address this public health issue.

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