The Economic Case for Prevention in Young People's Mental Health: Bullying

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1. Introduction

1.1 Importance of supporting the mental health of young people

Mental health problems among young people can have significant and wide-ranging consequences not only during childhood and adolescence but also throughout the lifespan. In Great Britain, the most recent national survey found that 12% of young people of secondary school age met diagnostic criteria for a mental disorder (1), mainly reflecting neurodevelopmental disorders at very early ages, while depression, anxiety, attention deficit and hyperactivity disorder and conduct disorder become more prominent later on (2-4). Indeed, adolescence represents a critical period, during which the greatest risk for the onset of major mental health problems occurs and mental illness is the leading cause of disability among young people (5). Thus, early intervention and prevention efforts which recognise the potential consequences are crucial during this period of development. Early intervention can allow for more effective approaches to addressing mental health problems and also facilitate outcomes such as better school achievement, peer and family relationships, as well as averting substance abuse and strengthening resilience.

Despite it being known that mental health problems arise during childhood and adolescence, there are often long delays before contact with health professionals or help being provided, and many children and young people receive no treatment (6, 7). These delays and lack of access to treatment mean that problems that could be addressed through intervention worsen in severity to the extent that some become crises, with long-term impacts on people's lives (8). A combination of factors, including poor mental health literacy, stigma and the organisation and accessibility of health services and appropriate treatment, leads to this "decade of delay" (7), and it is clear that new approaches are needed to ensure that services are provided in a timely and accessible way, and in particular to focus on prevention and early intervention in the teenage years.

1.2 Importance of prevention and early intervention

Previous projections of the cost of mental health problems have indicated that even with current patterns of treatment and support, there would still be a significant need for increased spending in the future due to increases in population (9). Improvements in knowledge and awareness of mental health problems and reduction of stigma may actually *increase* the number of people seeking mental health care (10).

At the same time, health systems have finite resources to improve the health and wellbeing of their populations, and focusing spending on prevention and early intervention can be a means of reducing the prevalence or severity of illness. This is particularly true in mental health where services have historically not attracted the same level of funding as physical conditions and, whilst increased funding for treatment services is a priority to achieve parity, a focus on prevention and early intervention also presents an opportunity to address such parity issues through the more efficient use of new resources.

Across the United Kingdom, public health bodies have highlighted the need to focus on prevention (11, 12) and work commissioned by these groups previously has demonstrated that prevention interventions in a wide range of areas can have substantial returns on investment. Government policy in England has also emphasised the importance of prevention in mental health and *The Five Year Forward View for Mental Health* commits the English National Health Service to this approach (13).

1.3 Rationale for the current project

We were commissioned by MQ to explore the economic case for several interventions to improve the mental health of young people. We focused on three particular areas: firstly, bullying and cyber-bullying; secondly, school-based resilience interventions; and thirdly, mental health literacy and awareness training to recognise young people at risk of psychosis. For each of these areas, we estimated the economic impact of an intervention aimed at prevention of mental illness and/or promotion of young people's mental health. Each intervention targets a different issue in children and young people's mental health and is embedded within school-based structures.

Schools play an important role in students' mental health. Teachers and other members of school staff see children more than any other professionals and are well-placed to identify emerging mental health problems, refer young people for treatment, and potentially provide support and / or intervention. Similarly, children spend more time in school than any other formal setting, and time and space can be made available for preventive interventions to be delivered within existing structures (14). The school system is also universal: almost every child and young person will be educated in such a setting. For these reasons, schools and teachers make vital partners in addressing mental health problems in children and young people, and their input should be leveraged to ensure the best possible outcomes.

As well as the school environment providing a setting for prevention, intervening during this period is essential because – as noted earlier – mental health problems are emerging at a time when the life-course of children and young people is starting to be set by the results of examinations and choices made about future education and training. Adverse experiences, like bullying, in this period have long-term impacts (15) and mental health symptoms may hinder gaining qualifications and limit future earnings and opportunities (16). For instance, one study reported that 40% of young people with common mental health problems could not complete secondary school and more than half of people with early psychosis had difficulties staying in education. This could have negative implications for employment when entering adulthood (17). If the risk of adverse experiences of this kind can be mitigated and the prevalence of mental health problems reduced, or at least managed, then this could play a role in ensuring access to training, further education and employment, and maximising the life chances of children and young people.

Here we report our findings on the economic case for an anti-bullying intervention. Our findings for the two other interventions will be reported separately in the coming months.

2. Bullying

2.1 Context

Bullying can be defined as behaviour that is intended to hurt someone either physically or emotionally (18). It can include both direct aggressive behaviour (e.g., physical assault and intimidation, teasing and verbal threats) and indirect aggressive behaviour (e.g. exclusion, rejection) (19). Bullying was reported by between 34% and 46% of school children in England in recent surveys (20).

Bullying can take many forms and developments in technology mean that in today's world online-based cyberbullying has become a growing concern. Whilst definitive generalisation about the differential impacts of 'traditional' bullying and cyberbullying is not appropriate because robust longitudinal research has not yet been possible, the issue is important to consider as the internet and social media have become such key parts of the lives of young people. The definition of cyberbullying heavily influences estimates of the number of children and young people who experience this form of bullying, but reviews suggest that traditional bullying remains more prevalent than cyberbullying (21).

A recent survey of 10,020 young people aged 12-20 in the UK reported that 54% had experienced some form of bullying at some point in the previous year; 17% experienced cyberbullying (22) Similar figures were reported in a 2014 survey of 120,015 15 year olds in England: 55% had experienced any type of bullying and 15% cyberbullying in the previous two months (23). There appears to be a high correlation between the various forms of bullying, meaning that individuals who experience bullying victimisation often experience it both in person and online, and it has been suggested that the behaviour (i.e. victimising someone) is more important than the means through which the behaviour is manifested (24). If this is the case, it means that traditional bullying interventions may remain well-placed to address the harms that are caused and the long-term outcomes from bullying of today's children and young people will be similar in nature.

Children and young people who are bullied have a higher risk of mental health problems, both as young people and continuing well into adulthood. However, 'the developmental processes that translate childhood bullying victimisation into health problems later in the life course are poorly understood' (25). Possible mechanisms include the 'biological embedding of stress' – young people who are bullied have greater vulnerability to stress and psychopathology as they grow up – and the concurrent development of anxiety or depression in childhood (26). Another suggestion is that young people who are bullied might have a higher risk of bullying victimisation as adults, with direct consequences for their mental health (27).

Young people who are frequently bullied are more likely to use mental health services, not only in childhood and adolescence (odds ratio (OR) 2.53) but also in midlife up to age 50 (OR 1.30) (28). There are also more immediate impacts on mental health and emotional wellbeing during childhood that potentially bring children into contact with school health services, and also with primary care and in some cases specialist child and adolescent

mental health services. In a very small number of cases, deliberate self-harm arising due to the impacts of bullying may require emergency hospital care. There can also be impacts on educational attainment which in turn may ultimately lead to poorer employment prospects in adulthood and lower earnings when in employment (25, 29).

Persistent bullying can affect school performance and can increase truancy; this also has cost implications for families (30). In England, by law, all state schools must now have a behaviour policy in place that includes measures to prevent all forms of bullying, including cyberbullying, among pupils. Schools are free to take their own approaches to addressing bullying. This could include actions to influence school culture as well as working with young people as an element of PSHE (Personal, Social, Health and Economic) education that most state schools provide in some form.

2.2 Intervention

Our economic model looks at the potential costs that may be averted for children aged 7 until the age of 50 through the implementation of an evidence-based school-set programme to tackle bullying, KiVa. Developed in Finland, KiVa focuses on enhancing the empathy, self-efficacy, and anti-bullying attitudes of classroom peers. Positive changes in the behaviour of pupils who are neither bullies nor victims can reduce the rewards that bullies perceive that they receive and thus reduce the incentives for bullying. It addresses real world ('traditional') bullying and cyberbullying, and is delivered by teaching staff. It has been implemented in more than 90% of all Finnish schools and in a non-randomised trial involving more than 150,000 students, participants in the control group were 22% more likely to be victims and 18% more likely to be perpetrators of bullying during the first 9 months of the study (31). KiVa has already been implemented in some schools in England and Wales and is being evaluated in a randomised controlled trial (32, 33). In our model the KiVa curriculum is assumed to fit within the existing PSHE curriculum and it is compared with the usual PSHE curriculum (33).

2.3 Model design and assumptions

A Markov decision-tree model was designed for a hypothetical primary school cohort of 200 pupils (equally split between boys and girls), initially in year 3 of school (aged 7). The model then runs for 4 years until the end of primary school. It is assumed that the programme is delivered as part of curriculum for Key Stage 2 class teachers (years 3-6 ages 7 to 11). The model calculates immediate impacts on the use of specialist child and adolescent mental health services (CAMHS), contact with GPs, periods of absence from school and the costs to the NHS for hospital presenting deliberate self-harm.

Information on the resource use and costs of implementing KiVa are taken from a micro-costing study in Wales (34). This analysis included details of the initial sunk and recurrent costs of KiVa. These costs include initial training costs for two members of the teaching / management team from school to attend the two-day training course delivered by KivA-accredited trainers. The average costs of a CAMHS multidisciplinary team contact and GP consultations are taken from the PSSRU *Unit Costs of Health and Social Care* volume

(35).The model assumes that parents bear the cost of absence from school; it is assumed that parents have to give up working days, valued at the 2016 minimum wage rate, when their children are absent from school due to bullying.

Evidence on effectiveness is taken from the previous KiVa evaluations in Finland, and the incidence of bullying in schools is based on observed data in the Welsh pilot evaluation. The model looks at the impact that KiVa has on a child being bullied intermittently or frequently during the school year. The baseline rate for use of CAMHS services and referral rates from GPs to CAMHS are based on a recent survey from the Children's Commissioner for England (Children's Commissioner, 2016). The model assumes that there is no difference in the use of CAMHS services by children who are infrequently bullied and those that are not bullied at all.

In addition to these immediate impacts, the model draws on a new analysis of the long-term economic impacts associated with childhood bullying victimisation in England (36) to estimate costs that may be averted up to the age of 50 through the avoidance of frequent bullying in primary school. Specifically these long-term costs are related to increased use of health services to deal with mental health issues and a reduction in earnings linked to bullying. Education-related benefits are assumed to be reflected in impacts on earnings. This recent analysis also allows us to model the impact on wealth accumulation, estimating the impact on levels of savings achieved as well as the lost opportunities for home ownership by the age of 50. Significant impacts on both costs and wealth were examined by gender compared to those who were not bullied. Only significant and marginally significant differences in costs were included in the analysis reported here. All costs are reported in 2016 prices. GDP deflators from the ONS are used to adjust original values from an earlier year where necessary. A discount rate of 3.5% is applied to all future costs and costs averted, with the exception of the value of house ownership which is not discounted. The average value of a house in 2016 is £283,000.

2.4 Impact

Table 1 shows that for our cohort of 200 children the total costs of investing in KiVa (£656) are more than offset by the immediate costs averted over the four years of the programme to the NHS and to the children's families. This gives an initial short-term return on investment from a societal perspective of £1.58 for every £1 invested. The model suggests that there will in total be 14 *fewer years* of frequent and sustained bullying within the cohort over this four-year period and it also indicates that on average approximately 6 children will avoid any bullying each year over this period. The economic case for action is strengthened when long-term economic impacts until age 50 are also considered. The model estimates that the lost adult earnings can be reduced by £2,932. Mental health-related health service costs are reduced by £971. (Health care costs covering an 8-year period to age 50 are assumed to be extrapolated to cover the period from age 18 onwards.) This increases the return on investment to £7.52. In terms of direct government spending, in the long run the savings from reduced health service use outweigh the cost of providing the bullying intervention, meaning that it is cost-saving from a public purse perspective.

In addition, if impacts on wealth are taken into consideration, then the case for investment is stronger still; a reduction in bullying in our hypothetical cohort of children will reduce the savings gap compared to a cohort that have not been bullied by £15,332 or more than £76 each. There is also a reduction in lower levels of home ownership compared to people who were not bullied equating to £76,047 for the whole cohort or £380 per member of the cohort. If these impacts on wealth are also taken into account the return on investment by age 50 per individual shoots up to £146.78. Tables 2 and 3 indicate that the long-term benefits are a little higher for girls compared to boys. This difference is due to higher long term adverse impacts on girls compared to boys in the model. We have not differentiated in the likelihood of being bullied by gender; a 2014 survey in England of an older age group (15 year olds) reported that 63% of girls were bullied compared with 48% of boys (23). If this also applies to younger age groups it may mean that we might be underestimating the potential benefits to girls.

2.5 Discussion

Our modelling work illustrates the potential for investing in anti-bullying interventions in schools, and KiVa is a well-evidenced model which could form the basis for wider use. Our analysis suggests that costs averted far outweigh the costs of the programme, and whilst the bulk of the returns are to the individual over the longer term, delivering the intervention is also cost-saving to the public sector. Moreover, we have not considered the costs and impacts of teenage pregnancy or criminal convictions. Danish analysis looking at the association between being bullied by age 10-12 and selected outcomes at age 18 found significantly lower teenage pregnancy rates for children who had not been bullied. The study also identified a higher probability of criminal convictions in children who had been bullied and then become perpetrators of bullying themselves (37). Nor have we looked at the additional costs to schools of providing special needs support. Some children who develop mental health problems may require up to £1,500 in extra costs for special educational needs services (38). In addition, despite the apparent similarities of traditional bullying and cyberbullying, there may be important differences that have an impact on the long-term effects (39).

It is also important to recognise that there may be differences in the implementation of KiVa in schools in England compared to schools in Wales. In Wales the programme fits well into required PSHE curriculum requirements (40); in England schools have more discretion on how they deliver PSHE which may mean that teaching staff in English schools are more reluctant to implement the programme. This could increase the costs of delivery. However, we conducted sensitivity analysis which assumed a doubling in the costs of implementation, and there would still be a positive return on investment.

Most schools in the UK today will be doing more to prevent and respond to bullying (including supporting victims) than was generally the case in schools in the 1960s and 1970s, when members of the 1958 Birth Cohort were being educated. This does not alter the relevance of the findings on the short-term effectiveness of KiVa, given that the intervention was evaluated recently (in Finland, and currently in Wales). There might, however, be differences in societal responses to the needs of young people and adults today compared

to the situation 30 or 40 years ago, with the consequence that the adulthood impacts of being bullied as a child might not be as profound for young people who are victimised today. This issue always arises when using data collected from a historical birth cohort.

Another reason for caution might be the findings from a recent study of twins that suggested that the adverse consequences of bullying victimisation might dissipate over time faster than previously suggested (26). The wider relevance of these interesting findings is unclear to us, given that 97% of people are *not* twins and that family context and relationships can in part mitigate the risks of adverse consequences from bullying victimisation through, for example, their effects on resilience. Further research is needed on this issue to more clearly define the long term impacts of bullying on mental health in different groups, but nonetheless the results of this model would be robust to a dissipation of effect and intervention would remain a cost-saving option.

2.6 Future research directions

The KiVa intervention that this model is based on has a well-established evidence base in Finland and there is currently a large randomised controlled trial involving 20 Welsh schools being run by researchers at Bangor University (33). Due to the existence of ongoing trials, research funding does not need to be directed to establishing the effect of KiVa, but there are significant issues that arise when considering how uptake of KiVa could be encouraged in schools across the country. Higher-level policy initiatives that leverage Ofsted's influence may help promote greater adoption of anti-bullying interventions, but it is important to take a number of actions. These may include messages targeted at head-teachers that could increase uptake, as well as actions to increase awareness of the issue among teaching staff (including their trade unions), young people and their families, and the public. There may also be opportunities for young people and teachers to discuss and co-produce strategies against bullying: research is needed to examine how best to go about this. In addition, if KiVa or similar anti-bullying interventions *do* have widespread adoption then research may also be needed to examine whether the effect of KiVa can be maintained when delivered outside the setting of a university-led research study and how successful implementation by schools can best be facilitated to ensure that the full benefits are attained.

Another consideration for future research is that our model uses estimates of adulthood economic impacts calculated for a cohort of individuals born in the late 1950s and at school in the 1960s and early 1970s when bullying would have been in-person and generally based around a child's immediate social network. There was no cyberbullying. Some evidence suggests that children perceive and experience bullying and cyberbullying in similar ways (41) and, as mentioned previously, there is a high correlation between different modes of bullying (24). However, it is possible that the combined forms of bullying have a more pervasive impact, and strategies for coping that were available to earlier generations may be more limited for today's young people, as cyberbullying, in particular, will continue outside of the school setting. For example, it has been noted that individuals bullied as children were more likely to be self-employed as adults, suggesting that workplace environments may be less desirable than conducting work and communicating online (unpublished data, please contact authors for details). If this is a strategy for coping with the long-term impacts of bullying, it is not clear how this would be impacted by experiencing

bullying both in person and online. Research has begun to explore the impacts of cyberbullying, but the area is not yet well-understood and – with rapidly moving technology – only studies that have collected data from 2014 will have captured the rise of Snapchat and other image-based social media. Research is therefore clearly needed to provide information on cyberbullying and to examine whether the long-term effects differ from the experience of earlier cohorts.

Another focus for future research could be on *wellbeing*, given the considerable public policy and wider interest in this area (https://www.whatworkswellbeing.org/). The What Works Wellbeing Centre defines personal wellbeing as 'how satisfied we are with our lives, our sense that what we do in life is worthwhile, our day to day emotional experiences (happiness and anxiety) and our wider mental wellbeing' and to date wellbeing outcomes have not been widely used in bullying research. How does bullying victimisation impact on the immediate and longer-term wellbeing of those who are bullied and those who perpetrate the bullying? Do anti-bullying interventions improve wellbeing as well as, or in different ways to their impacts on mental health and longer-term economic consequences?

Finally, taking action to prevent bullying will only be one part of the picture. Even if all cases of frequent and severe bullying could be eliminated this would not deal with all mental health issues in and beyond school. Poor mental health may itself also be a risk factor for bullying. Therefore it is important to consider the place of actions to address bullying within the context of a wider actions to promote and protect the mental health and wellbeing of children and young people.

Table 1: Short and long-term costs averted and wealth gained through a school anti-bullying programme (200 pupils).

	Age 7-8	Age 8-9	Age 9-10	Age 10-11	Age 50	Total Cost / Saving
Incremental cost of KIVA intervention	£320.00	£115.94	£112.02	£108.23		£656.20
CAMH cost	£0.00	-£83.02	-£111.54	-£126.31		-£320.87
GP cost	-£0.60	-£0.83	-£0.96	-£1.01		-£3.41
Pupil Absenteeism	-£128.82	-£142.59	-£158.27	-£162.08		-£591.76
Self-Harm	£0.00	-£30.50	-£40.97	-£46.40		-£117.87
Lost Adult Earnings to Age 50					-£2,931.71	-£2,931.71
Health Service Costs to Age 50					-£970.76	-£970.76
Lost Wealth Accumulation to Age 50 (Savings)					-£15,332.40	-£15,332.40
Lost Home Ownership					-£76,047.43	-£76,047.43
Total cost consequences (savings if negative value)*	-£129.42	-£256.94	-£311.74	-£335.80	-£95,282.30	-£96,316.20
Total costs (savings if negative value)**	£190.58	-£141.00	-£199.72	-£227.57	-£95,282.30	-£95,660.01
Overall Return per Pound Invested	**£0.40**	**£0.89**	**£1.27**	**£1.58**	**£146.78**	**£146.78**
Intense Bullying Victimisation Free Years Gained	**2.89**	**3.26**	**3.69**	**3.85**		**13.68**
Average Annual School Age Bullying Cases Avoided						**6*****

*Sum of additional costs incurred or costs averted as a result of intervention. The cost of the intervention is not included in these figures
** Sum of all additional costs incurred or costs averted as a result of intervention, including the cost of intervention.
***25.71 additional cases of any bullying avoided over four years

Table 2: Short and long-term costs averted and wealth gained through a school anti-bullying programme (100 boys only)

	Age 7-8	Age 8-9	Age 9-10	Age 10-11	Age 50	Total Cost / Saving
Incremental cost of KIVA intervention	£160.00	£57.97	£56.01	£54.12		£328.10
CAMH cost	£0.00	-£41.51	-£55.77	-£63.15		-£160.43
GP cost	-£0.30	-£0.42	-£0.48	-£0.51		-£1.70
Pupil Absenteeism	-£64.41	-£71.29	-£79.14	-£81.04		-£295.88
Self-Harm	£0.00	-£15.25	-£20.49	-£23.20		-£58.93
Lost Adult Earnings to Age 50					-£2,931.71	-£2,931.71
Health Service Costs to Age 50					£0.00	£0.00
Lost Wealth Accumulation to Age 50 (Savings)					-£7,198.30	-£7,198.30
Lost Home Ownership					-£35,868.73	-£35,868.73
Total cost consequences (saving if negative value)*	-£64.71	-£128.47	-£155.87	-£167.90	-£45,998.75	-£46,515.70
Total costs (savings if negative value)**	£95.29	-£70.50	-£99.86	-£113.78	-£45,998.75	-£46,187.60
Overall Return per Pound Invested	**£0.40**	**£0.89**	**£1.27**	**£1.58**	**£141.77**	**£141.77**
Intense Bullying Victimisation Free Years Gained	**1.44**	**1.63**	**1.84**	**1.92**		**6.84**
Average Annual School Age Bullying Cases Avoided						**3*****

*Sum of additional costs incurred or costs averted as a result of intervention. The cost of the intervention is not included in these figures
** Sum of all additional costs incurred or costs averted as a result of intervention, including the cost of intervention.
***12.86 additional cases of any bullying avoided over four years

Table 3: Short and long-term costs averted and wealth gained through a school anti-bullying programme (100 girls only)

	Age 7-8	Age 8-9	Age 9-10	Age 10-11	Age 50	Total Cost / Saving
Incremental cost of KIVA intervention	£160.00	£57.97	£56.01	£54.12		£328.10
CAMH cost	£0.00	-£41.51	-£55.77	-£63.15		-£160.43
GP cost	-£0.30	-£0.42	-£0.48	-£0.51		-£1.70
Pupil Absenteeism	-£64.41	-£71.29	-£79.14	-£81.04		-£295.88
Self-Harm	£0.00	-£15.25	-£20.49	-£23.20		-£58.93
Lost Adult Earnings to Age 50					£0.00	£0.00
Health Service Costs to Age 50					-£970.76	-£970.76
Wealth Accumulation to Age 50					-£8,134.09	-£8,134.09
Lost Home Ownership					-£40,178.70	-£40,178.70
Total cost consequences (saving if negative value)*	-£64.71	-£128.47	-£155.87	-£167.90	-£49,283.55	-£49,800.50
Total costs (savings if negative value)**	£95.29	-£70.50	-£99.86	-£113.78	-£49,283.55	-£49,472.41
Overall Return per Pound Invested	**£0.40**	**£0.89**	**£1.27**	**£1.58**	**£151.79**	**£151.79**
Intense Bullying Victimisation Free Years Gained	**1.44**	**1.63**	**1.84**	**1.92**		**6.84**
Average Annual School Age Bullying Cases Avoided						**3*****

*Sum of additional costs incurred or costs averted as a result of intervention. The cost of the intervention is not included in these figures
** Sum of all additional costs incurred or costs averted as a result of intervention, including the cost of intervention.
***12.86 additional cases of any bullying avoided over four years

3. References

1. Green H, McGinnity A, Meltzer H, Ford T, Goodman R. Mental Health of Children and Young People in Great Britain: 2004. London: Office for National Statistics; 2005.
2. Costello EJ, Mustillo S, Erkanli A, Keeler G, Angold A. Prevalence and development of psychiatric disorders in childhood and adolescence. Archives of general psychiatry. 2003;60(8):837-44.
3. Kessler RC, Chiu WT, Demler O, Merikangas KR, Walters EE. Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication. Archives of general psychiatry. 2005;62(June):617-27.
4. Patel V, Flisher AJ, Hetrick S, McGorry P. Mental health of young people: a global public-health challenge. The Lancet. 2007;369(9569):1302-13.
5. Gore FM, Bloem PJ, Patton GC, Ferguson J, Joseph V, Coffey C, et al. Global burden of disease in young people aged 10-24 years: a systematic analysis. Lancet. 2011;377(9783):2093-102.
6. Wang PS, Berglund PA, Olfson M, Kessler RC. Delays in Initial Treatment Contact after First Onset of a Mental Disorder. Health Services Research. 2004;39(2):393-416.
7. Centre for Mental Health. Missed opportunities: A review of recent evidence into children and young people's mental health. London: 2016.
8. McGorry PD, Purcell R, Goldstone S, Amminger GP. Age of onset and timing of treatment for mental and substance use disorders: implications for preventive intervention strategies and models of care. Current opinion in psychiatry. 2011;24(4):301-6.
9. McCrone P, Dhanasiri S, Patel A, Knapp M, Lawton-Smith S. Paying the price: the cost of mental health care in England to 2026. The British journal of psychiatry : the journal of mental science. 2008;184:386-92.
10. Clement S, Schauman O, Graham T, Maggioni F, Evans-Lacko S, Bezborodovs N, et al. What is the impact of mental health-related stigma on help-seeking? A systematic review of quantitative and qualitative studies. Psychological medicine. 2015;45(01):11-27.
11. Public Health England. Prevention Concordat for Better Mental Health. London: 2017.
12. Welsh Government. Together for Mental Health. A Strategy for Mental Health and Wellbeing in Wales. Cardiff: Welsh Government, 2012 978 0 7504 8033 8.
13. Independent Mental Health Taskforce to the NHS in England. The five year forward view for mental health. London: NHS England, 2016.
14. Weare K, Nind M. Mental health promotion and problem prevention in schools: what does the evidence say? Health promotion international. 2011;26 Suppl 1:i29-69.
15. Wolke D, Lereya S. Long-term effects of bullying. Arch Dis Child. 2015;100:879-55.
16. Goodman A, Joyce R, Smith JP. The long shadow cast by childhood physical and mental problems on adult life. Proceedings of the National Academy of Sciences. 2011;108(15):6032-7.
17. Bowman S, McKinstry C, McGorry P. Youth mental ill health and secondary school completion in Australia: time to act. Early intervention in psychiatry. 2017;11(4):277-89.
18. UK Government. Bullying at school. https://www.gov.uk/bullying-at-school/bullying-a-definition 2016.
19. Evans CB, Fraser M, Cotter KL. The effectiveness of school-based bullying prevention programs: A systematic review. Aggression and Violent Behavior. 2014;19:532-44.
20. Department of Health. Future in Mind. London: Department of Health, 2015.
21. Modecki KL, Minchin J, Harbaugh AG, Guerra NG, Runions KC. Bullying prevalence across contexts: A meta-analysis measuring cyber and traditional bullying. Journal of Adolescent Health. 2014;55(5):602-11.
22. Ditch the Label. The annual bullying survey 20172017.

23. Ipsos MORI. Health and Wellbeing of 15 year olds in England: Findings from the What About YOUth? Survey 2014: Health and Social Care Information Centre; 2015.
24. Hase CN, Goldberg SB, Smith D, Stuck A, Campain J. Impacts of traditional bullying and cyberbullying on the mental health of middle school and high school students. Psychology in the Schools. 2015;52(6):607-17.
25. Takizawa R, Maughan B, Arseneault L. Adult Health Outcomes of Childhood Bullying Victimization: Evidence From a Five-Decade Longitudinal British Birth Cohort. Am J Psychiat. 2014;171(7):777-84.
26. Singham T, Viding E, Schoeler T, Arseneault L, Ronald A, Cecil CM, et al. Concurrent and Longitudinal Contribution of Exposure to Bullying in Childhood to Mental Health: The Role of Vulnerability and Resilience. JAMA psychiatry. 2017.
27. Arseneault L. The long-term impact of bullying victimization on mental health. World psychiatry : official journal of the World Psychiatric Association (WPA). 2017;16(1):27-8.
28. Evans-Lacko S, Takizawa R, Brimblecombe N, King D, Knapp M, Maughan B, et al. Childhood bullying victimization is associated with use of mental health services over five decades: a longitudinal nationally representative cohort study. Psychological medicine. 2017;47(1):127-35.
29. Brown S, Taylor K. Bullying, education and earnings : Evidence from the National Child Development Study. Economics of Education Review. 2008;27(4):387-401.
30. Brown V, Clery E, Ferguson C. 'Estimating the prevalence of young people absent from school due to bullying. London: National Centre for Social Research; 2011.
31. Karna A, Voeten M, Little TD, Poskiparta E, Alanen E, Salmivalli C. Going to scale: a nonrandomized nationwide trial of the KiVa antibullying program for grades 1-9. Journal of consulting and clinical psychology. 2011;79(6):796-805.
32. Hutchings J, Clarkson S. Introducing and piloting the KiVa bullying prevention programme in the UK. Educational & Child Psychology. 2015;32(1):49-61.
33. Clarkson S, Axford N, Berry V, Edwards RT, Bjornstad G, Wrigley Z, et al. Effectiveness and micro-costing of the KiVa school-based bullying prevention programme in Wales: study protocol for a pragmatic definitive parallel group cluster randomised controlled trial. BMC public health. 2016;16:104.
34. Charles J. Calculating the costs of establishing and delivering KiVa in Wales. Presentation. Centre for Health Economics and Medicines Evaluation: Bangor University; 2016.
35. Curtis L, Burns A. PSSRU Unit Costs of Health and Social Care 2015. Canterbury: University of Kent; 2015.
36. Brimblecombe N, Arseneault L, Evans-Lacko S, King D, Knapp M, Maughan B, et al. Long term economic impact associated with childhood bullying victimisation. in submission.
37. Eriksen TLM, Nielsen HS, Simonsen M. Bullying in Elementary School. Journal of Human Resources. 2014;49, Numb 4:839-71.
38. Snell T, Knapp M, Healey A, Guglani S, Evans-Lacko S, Fernandez JL, et al. Economic impact of childhood psychiatric disorder on public sector services in Britain: estimates from national survey data. Journal of child psychology and psychiatry, and allied disciplines. 2013;54(9):977-85.
39. Wolke D, Lee K, Guy A. Cyberbullying: a storm in a teacup? European Child & Adolescent Psychiatry. 2017;26(8):899-908.
40. Department for Children Education Lifelong Learning and Skills. Personal and social education framework for 7 to 19-year-olds in Wales. Cardiff: Welsh Assembly Government; 2008.
41. Zych I, Ortega-Ruiz R, Del Rey R. Systematic review of theoretical studies on bullying and cyberbullying: Facts, knowledge, prevention, and intervention. Aggress Violent Beh. 2015;23:1-21.