

Written evidence submitted by CUSP

Written evidence to the Education Committee reviewing the impact of Covid-19 on education and children's services from CUSP (Cambridge University Cross-Disciplinary Special Interest Group for Policy related to children and young people)

1.1 Who are CUSP?

We are senior academics from the University of Cambridge who represent many disciplines that contribute to applied research related to child development. Individuals are listed at the end of the document for reference and include experts in Economics, Education, Psychology, Psychiatry, Neuroscience, and Epidemiology.

Our collaboration aims to optimise the application of evidence to policy and practice for the benefit of children, young people, their families / carers and the practitioners working with them. For each issue, we first present relevant research evidence that identifies key challenges for education and children's services, as well as any very recent evidence gathered during the pandemic itself, and then suggest what the policy response might be.

1.2 Summary and key recommendations from CUSP

The Covid-19 pandemic has had unprecedented impact, affecting the entire nation and with severe disruption for children, their families, schools and children's services. It also occurred against a backdrop of increasing concern about the purpose of the education system and children's services (1-3), as well as increasing concern about the mental health of children and young people (4). Children, teachers and other practitioners had to adjust rapidly to the Lockdown, and will continue to flexibly adapt as society begins to open up. The move to remote schooling for most of the school population, combined with the change to remote working or emergency only responses from other services, raised significant immediate challenges that schools and children's services have had to manage. The policy and practice response to these challenges, however, offers an opportunity to improve systems that were functioning poorly to start with i.e. to consolidate and build on any beneficial changes in the longer term. While additional resource will be needed to mitigate the impact of the pandemic on children, evidence suggests that there are significant costs to the limitations of the current system and hence this crisis potentially offers opportunities for service improvement, and ultimately to reduce future costs. For example, the cost of mental health conditions falls mainly on the school system, with repeated meetings that are rarely therapeutic (5,6). We have effective interventions for significant behavioural problems, which cost very little compared to the costs incurred by education, social care, criminal justice and health if these difficulties persist (8). However we have insufficient provision to meet current levels of need (9,10).

Our evidence covers learning loss, school, community and family factors, as well as specific issues for some vulnerable groups. We provide evidence on all these issues, with specific suggestions for policy. However, we start by noting the following over-arching principles that guide our evidence for the committee:-

- The focus of the education system is broader than academic attainment alone, and policy levers should reflect this. The value of 'soft' skills (sometimes known as non-cognitive,

including self-regulation, confidence etc.) in the labour market is high (11-13). Enabling young people leave education with high levels of both cognitive and non-cognitive skill will therefore have substantial long-term benefits and should be prioritised.

- Children (and adults) will vary in their responses to the pandemic; the expectations placed on them need to be sensitive to their strengths as well as their difficulties, with responses that are proportionate to their situation.
- A single focus on mitigating learning losses is not likely to be effective if it ignores other aspects of children's development that have been affected by the crisis, including their social and emotional development and their physical and mental health.
- Positive relationships are key to development, including academic success and mental health; they are a key lever for positive change.
- We should try and "consolidate" the positive lessons of how children's services, schools and communities have responded to the Pandemic.

From these principles flow the following policy recommendations, which are expanded upon in the text that follows:-

- Going forward, as we manage the pandemic and its impacts over the next year, children and young people's needs and choices must be considered and prioritised
- A systemic approach and multi-agency collaborative model is essential to optimise children's development
- More children will face socio-economic disadvantage, which adversely influences both educational attainment and mental health; more children will therefore need additional support if attainment and health inequalities are not to widen.

At the end of the document we list useful evidence-based sources of information that can guide policy decisions and practice recommendations as a reference and that could be usefully disseminated across agencies working with children.

2. Over-arching issues

2.1 Learning loss

2.11 Loss of face-to-face schooling will negatively impact children's achievement

There is a significant relationship between instruction time and achievement (14), with each additional hour of schooling per week yielding around a 6% of a standard deviation improvement in test scores. As a result of the pandemic most children are not receiving face-to-face instruction and the quality of remote schooling has been highly variable. A loss of 3-4 hours of each main subject per week for a term equates to about an hour over an entire academic year, i.e. 6% of a standard deviation (see Burgess, 2020 for further evidence, 15). The actual loss of learning may be greater given other stresses on families and will vary by context, depending on what schools are able to provide as well as what families are able to access (see 3.3, 16). It is very clear however, that there will be very substantial loss to children's achievement and attainment.

The pandemic, and government response to it, will have a substantial impact on academic achievement, but this will likely be for subtly different reasons at different age ranges. The earlier years of a child's life are pivotal for their development and investment in children during this time is particularly valuable, in terms of improving their cognitive and non-cognitive skills, the latter including skills such as self-regulation of behaviour, feeling in control of one's own life (locus of control) and pro social behaviours (see Heckman et al. 2011 (17) and Britton and Vignoles, 2019 (18) for a summary). Hence the negative impact from a lack of face-to-face school provision is likely to be

large for children in the early years and primary school (19). Older children and adolescents will be significantly affected by the increased social isolation, which is likely to have a major negative impact on adolescents in particular (20). Furthermore, any inequalities in attainment that worsen in later adolescence, as students approach key high stakes examinations (GCSEs and A levels), will have a much longer-term impact on their educational and labour market trajectories. It is therefore clear that learning loss will be evident for all ages, with the driving factors being dependent on, and sensitive to, developmental stage (19,20).

2.12 Socio-economic disparities will widen during Lockdown

The evidence is also clear that the socio-economic gap in academic achievement will widen as a result of the pandemic for three related reasons:

- i) Even under normal circumstances, a socio-economic gap in achievement emerges in the earliest years of a child's life and widens during primary school and into secondary school (21). For those children whose parents cannot compensate for the lack of face-to-face schooling, reduced school provision during this phase will be particularly detrimental to their achievement.
- ii) Low income has a causal negative impact on children's outcomes, including their learning outcomes. A £860 increase in household income has been associated with gains in cognitive test scores of around 5-27% of a standard deviation (22). One likely mediating mechanism is parental stress. The pandemic has triggered both *reductions* in household income and *increases* in parental stress, so this evidence is highly relevant.
- iii) Family environment – the sole social domain for young children during Lockdown – is a major determinant of children's academic achievement (see also Britton and Vignoles, 2017 for a summary; 19). Well-educated parents invest more time and resource in their children during normal times. This explains much of the socio-economic gap in achievement. There is also some evidence that socio-economically advantaged parents tend to compensate for any deterioration in schooling to a greater extent (23). This implies that socio-economically advantaged parents who can provide more resources for their children (laptops, books, on-line resources etc.) will also be undertaking compensatory behaviours and this will exacerbate the learning gap. Multiple international and UK studies also highlight that economic stress affects children's emotional, social and academic attainment by initiating a cascade of family stress processes that amplify poor parental mental health (depression), leading to elevated interparental/carer conflict and more negative parenting practices, which in turn affect negative outcomes for children and adolescents (24), these processes are likely to be amplified for multiple households during and as a result of the pandemic.

Some evidence that these three factors will culminate in widening the attainment gap is the impact of summer vacation periods. During the summer break, in some countries more socio-economically disadvantaged students experience a decline in their cognitive test scores. Alexander et al, (2007) for example, examined the impact of the long summer vacation in Maryland schools in the US. This evidence is relevant because the US system entails a sizeable summer break of around 3 months (25). Given that remote schooling has been happening in the UK since March, and that very little face to face schooling is likely to happen before September, this evidence of the impact of a long break seems relevant, though we recognise that schools have still been teaching even whilst they have been physically closed. Alexander et al. (2007) classified children according to their socio-economic status, based on parental education, income and occupation (25). More socio-economically advantaged children improved on the CAT battery of test scores (both reading comprehension and mathematics) following the summer break (e.g. on average by 52 CAT-R points

per summer). By contrast disadvantaged children made losses or did not make gains, the so-called 'summer slide'. Whilst this evidence may not help us quantify the extent of learning loss, it does support the conclusion that the crisis is likely to have widened existing inequalities in academic achievement.

2.13 Children with cognitive disadvantages will make a slow re-start

There are large differences in cognitive skills directly related to classroom learning. For example, children with poor working memory – the capacity to hold in mind and manipulate small amounts of information for brief periods of time – are typically slower learners (26). Of the children falling into the bottom 10% on this cognitive skill relative to their peers, around 80% will have significant reading and maths problems, usually both. This is because these children learn more slowly in a typical classroom environment. But skilled teachers are able to mitigate this by altering the learning environment (27). In other words, children with poorer cognitive skills tend to be more sensitive to the learning environment (e.g. 28-30). This will likely mean they have been less able to adapt to home learning, and when schools restart with social distancing, alterations in class make-up and learning environment, children with poorer cognitive skills will find these unusual learning circumstances more challenging. Some children with cognitive difficulties will already be identified via a diagnosed learning difficulty, but most will not (31).

Furthermore, these differences are likely compounded by the socio-economic disparities identified above. Take for example learning to read. Socio-economic background directly negatively impacts reading development, as well as all the cognitive skills that contribute to it, including speeded sound decoding skills, the ability to differentiate word-like sounds, letter knowledge and non-verbal reasoning skills (32). In the absence of a formal school environment, these cognitive skills may well fall back, especially in children facing the added challenge of socio-economic disadvantage and family stress. Again, this will likely mean that these children will make a slow start when formal schooling resumes.

2.2 Current situation

Preliminary evidence of compensatory behaviours by parents comes from a recent Sutton Trust survey (2020) which suggests that during this period middle class parents are spending more time with their children than working class parents. Forty four percent of middle class parents are spending more than four hours a day on home schooling (33). One third of working class parents are doing so. Recent evidence from the Institute for Fiscal Studies (IFS; 34) has confirmed that children from wealthier families are spending more time on home learning. Children from the top fifth of the family income distribution are spending 75 minutes more per day on educational activities than children in the bottom fifth of households. Furthermore, school provision is highly variable. Again, IFS evidence suggests that two thirds of secondary school pupils from the richest fifth of households are receiving online classes and videoconferencing with teachers. This compares to just under half of children from the poorest fifth of families. Meanwhile, around 80% of secondary school pupils in private schools are receiving online classes, which confirms that existing inequalities in academic achievement will widen through this crisis.

Poorer students have already faced additional barriers to their learning, specifically many lack a computer or access to the internet. Sutton Trust evidence (2020) indicates that schools in deprived areas are reporting that about a third of their primary and secondary school pupils lack access to an appropriate device to do online / remote learning (33).

2.3 Recommendations

When restarting face-to-face school, prioritise support for disadvantaged students to reintegrate with the learning environment, and allow sufficient time for them to do so. Schools should not try to cram more learning into a shorter period since this may leave some students even further behind. For example, those who have had better home support will tend to be able to progress more rapidly

than those who have effectively had a gap in learning. Those who find learning more difficult and get less support from home will struggle to learn the same material more rapidly. Serious consideration needs to be given to interventions (see below) designed to mitigate learning loss of socio-economically disadvantaged pupils.

- Schools should return as soon as it is safe to do so since each additional month with suboptimal schooling is likely to widen the socio-economic gap in achievement, over and above any loss for the whole cohort.
- If not all pupils can return, socio-economically disadvantaged and younger children should be prioritised.
- Additional support on return to school will be required to address learning loss. This should be targeted at more disadvantaged students. Careful consideration must be given to how these are identified – far greater numbers of families will now be in economically challenging circumstances, and formal SEN categorisation misses most struggling learners. For example, FSM had limitations as an indicator of economic disadvantage before the pandemic (35) and will be even more problematic afterwards. Using assessment of current levels of achievement might be a better strategy to identify children who need additional support – teachers will likely know who these children are, but need the additional time and resources to provide dedicated support.
- We welcome recent investment in one-to-one catch-up funding by the Government. There is good evidence that one to one tuition can improve outcomes for disadvantaged pupils. Specifically, the Education Endowment Foundation has reviewed a number of programmes that suggest that one to one tuition can be beneficial for both numeracy and literacy; a summary of evidence is found here (36).
- There is good evidence that the Nuffield Early Language Intervention has a positive impact on children’s language development¹ and more crucially has been found to narrow the socio-economic gap in children’s literacy (37,38).
- The ‘digital divide’ needs to be addressed by supporting access to digital connection in families who do not have smart phones or Wi-Fi.

3.1 Challenges and opportunities for school, children’s services and the wider community

This section covers:

- The capacity of children’s services to support vulnerable children and young people
- Support for pupils and families during closures
- The effect on disadvantaged groups (particularly the most vulnerable groups; 28-29)

The overarching question is how, in the current situation, structures are supporting the development of:

- Children and young people (particularly vulnerable groups including those with special educational needs and disabilities)
- Parents in supporting children and young people’s development

¹ Vignoles (a contributor to this note) is a Nuffield Foundation Trustee. The Nuffield Early Language Intervention was independently evaluated by the Education Endowment Foundation (37) and was developed by an independent academic team (38). Vignoles has no personal interest in the intervention.

- Teachers in supporting children and young people’s development

And, what the particular and systemic issues are in achieving this.

3.2 Supporting the development of children and young people

There is accumulating evidence that school closure and the Lockdown arrangements are having a negative impact on the mental health and wellbeing of many children and young people, albeit differently. Early evidence suggests that young children prefer the home environment while older children prefer learning at school (39). Research shows that competence, autonomy and relatedness play an important role in wellbeing (40) and that many children feel a strong sense of attachment and belonging to school (41), deriving wellbeing from relationships with peers and adults in school (42). A survey of primary teachers in Ireland reported that pupils are missing school, particularly the social aspects of school, and teachers are particularly concerned for final year children who are missing key events that are markers of transition. For some children time out of school is positive, but most children do express happiness about the school they go to (43). There were differences and inequalities reported in these surveys including differences related to geography, socioeconomic status and family composition.

Vulnerable children are particularly at risk with school closures and Lockdown arrangements. A recent survey of vulnerable young people (44) reveals that young people feel their mental health has got worse. They are anxious about their families’ health, the impact of school and university closures, as well as loss of routine and social connections. A NSPCC survey (45) of those receiving counselling highlighted young people’s anxieties about difficult family relationships and suffering abuse, and difficulties in doing schoolwork. Young people with neurodevelopmental difficulties such as Autism are reporting an increase in anxiety during isolation. These children were already at an elevated risk of school related anxiety and refusal (46, 47) and providing them the support they need to return to school will require a coordinated approach involving schools, mental health services, and social services (see 3.5; 48).

3.21 Recommendations

- There is a need to allocate time and resources to providing information and practical resources, which could be online. Online contact with professionals would be welcomed too.
- There is a need to monitor and research the impact of these events on children’s emotional and cognitive development and progress
- We recommend a “return to school” multi-agency outreach structure to support vulnerable young people to leave the home setting and to attend school.

3.3 Supporting parents to support young people’s development

A survey of over 5000 parents / carers (50) showed that parents/carers are most stressed about work, but also very anxious about their child’s emotional wellbeing. Children were concerned with the health of family members, missing school, and wanted support around emotional wellbeing, education and coming out of social isolation. The behaviour of children with SEN/ND is a particular stressor for parents in the current context. Parents sought more online resources to assist them with these demands.

3.4 Supporting teachers to optimise Young People’s development

There is an increased set of different and varied demands on teachers. A survey of over 2800 Irish primary teachers (42) on the impact of school closure identified some benefits (e.g. personal safety), but staff felt under pressure to provide online learning with some teachers reporting they felt angry,

unprepared and out-of-depth as well as lacking equipment; well over half requested guidance, guidelines and clarity on the organisation of distance learning. If teachers do not feel efficacious, coupled with a lack of control this will be undermining two of three core needs identified as being essential for wellbeing according to self-determination theory (40). Furthermore, teachers were worried about catching up when the schools re-open and were worried about some children staying at home without the support they usually receive in school. Given that the context is a pandemic, other issues come to the fore. Research shows that teachers require confidence building in particular issues such as bereavement of parents or family members (50) and traumatic experiences with children.

3.41 Recommendation

- There should be an adjustment of demands for schools and teachers to meet the criteria normally applied. There is a need to examine how helpful or unhelpful some of the accountability processes will be during this time (e.g. the recent league table of how many vulnerable children were being educated). Whilst we welcome the continued suspension of routine Ofsted inspections in the autumn term, teachers will need to have support, assistance and coherent guidance in meeting the increased necessary focus on personal, social and emotional aspects of education.

3.5 A systemic approach to supporting children and young people's mental health and wellbeing

There is clear evidence that young people's mental health and wellbeing is most effectively cared for when professionals work across organisational divides (51).

Young people and their carers tell us that this is what they want and that the lack of this integrated approach has costs for them (52). The *Government Response to the Consultation on Transforming Children and Young People's Mental Health Provision: a Green Paper and Next Steps* recognises the need for a "more joined up approach to mental health support, not just across health and education but also other services – "a multi-agency approach focused on collectively understanding and meeting the needs of children and young people". This approach must inform our response to the Covid-19 pandemic. Mental Health Leads and Mental Health Support Teams will play an important role in implementing the following recommendations.

The way of working is equally important. Approaches should not increase the anxiety of young people and teachers but should be collaborative, supportive and confidence building. Young people address emotions, including difficult ones, best through the processes that schools can offer i.e. through expressing their feelings in drama, art, playing and story-telling and through having nurturing adults around them. Warm and supportive teacher pupil relationships are important for all children, but particularly for children who face adversities; poor teacher pupil relationships predict the onset of mental health conditions, as well as academic attainment (53,54). There is anecdotal evidence that teachers and NHS CAMH services have been able to work especially closely during social isolation to support individual children.

3.51 Recommendations

- We recommend a coordinated plan of graded return to academic work in combination with psychological support drawing on a systemic approach involving the family, young person, and school including the MHST where available. This approach should include the

identification of trauma related difficulties but should be embedded in a normalising and nurturing context and include information about social distancing and other pandemic related measures in the school environment.

- Sufficient time and a recommended framework should be provided for all professionals to continue to work together to ensure an integrated approach to supporting young people and recognise this as a point of best-practice that should become “business as usual”.
- The influence of staff-pupil relationships on children’s mental health (53) is strong, and staff will need time to re-establish these, particularly with the more vulnerable students.

3.6 Home environment and community

The home and community environments that children and adolescents experience affect their emotional, social, behavioural and academic development. Relationships between parents/carers, between parents and children and between siblings as well as relationships with extended family affect children’s development in multiple domains (55). Access to community resources, open spaces, clubs, peer networks, play areas and sporting facilities also affect children’s social and emotional development (56, 57). The home and community based environments that children experience affect their propensity to learn and also enhance learning across cognitive and non-cognitive domains (58).

Importantly, child protection services interface with family, community and educational systems that children experience through engagement with professional agencies that safeguard children and adolescents from risk and harm. The Covid-19 pandemic has fundamentally shifted child protection operational practices, processes and procedures constituting substantial challenges for the safety of young people outside of the structure and oversight of in-person education and other children protection services and agencies.

Mirroring international data, evidence of increasing rates of children’s exposure to domestic violence and parental conflict have been reported in England and Wales since March 2020 (59). Yet, standard practice provision in identifying, accessing and supporting young people at risk of physical, sexual, psychological or other forms of neglect and abuse have been severely compromised during the period of the pandemic, with the likelihood of continued disruption in the future. Significant concern has been raised regarding the increased propensity for young people to experience heightened risk as a result of staying at home, while also staying away from school and other formal and informal (e.g. clubs) social settings that allow activation of child protection services. Policy makers, educators, social workers, other practitioners, parents, families and children urgently need new knowledge and practice guidance to help meet the support and protection needs of vulnerable young people when very few are attending schools or other activities where the welfare can be monitored.

While there is some evidence highlighting the efficacy of ‘on-line’ practice in psychotherapy (60), relatively little is known about how education and child protection practice can best be delivered effectively through ‘virtual’ home visits or how in-person interactions with children and families can best be done while maintaining social distancing, and potential continued absence from school.

The increase need for school-based assessment and signposting of emotional, psychological and other forms of risk is likely to be exponentially greater following the lock down period and return to school, likely placing unsustainable strain on school-based child protection and service delivery agencies.

3.61 Recommendation

- There is an urgent need for the development of new practice models that will help protect children at risk of significant harm during home based containment and absence from formal educational settings, particularly as further local or national Lockdowns seem likely at the time of writing.
- Further, in light of the fiscal challenges that will likely follow in the medium and longer term aftermath of the Covid-19 pandemic, innovative and effective service delivery strategies will be an essential part of ensuring the future safety of children and young people.

4. Vulnerable groups need specific consideration

4.1 School readiness and the early years

Starting school is often exciting and enjoyable, but also brings new challenges that can be particularly difficult for some children. While traditional models of ‘school readiness’ emphasised children’s early literacy and numeracy skills, research evidence has led to a wider view that encompasses whole-child characteristics (e.g., wellbeing), as well as support from both families and schools (61). Likewise, current accounts of resilience go beyond child characteristics (e.g., verbal ability, temperament) to include multiple interdependent factors, that range from characteristics of the child to characteristics of the family, the school and the neighbourhood (62). A broad interpretation of school readiness makes sense from a policy perspective, in that families, schools (and indeed, communities) should share the responsibility of enabling all children to thrive during this important transition. For children either starting school or moving from Reception to Year 1 in 2020, this shared responsibility is vital, as social distancing will make it very difficult for young children to make friends and feel comfortable in the school environment. At the same time, this crisis offers opportunities to transform the educational system in ways that may help to address pressing challenges that result from the much deeper problems of climate change.

For example, outdoor learning is not only a solution to the problem of social distancing, but also provides an opportunity to transform pedagogy in order to foster children’s confidence, curiosity and connectedness to nature and their local communities; to equip children with important life-skills and to foster active life-styles. Adopting a ‘walking curriculum’ would enable schools to capitalise on community resources (local parks, nature reserves, places of cultural interest). Closing off local streets and using these spaces to teach young children to ride a bicycle would enable schools to provide opportunities for exercise and social interaction (e.g., by using bikes to play socially-distanced versions of ‘follow my leader’), as well as fostering children’s physical and social confidence. While social distancing will make it much more challenging for children to build social relationships, shared activities (e.g., an outdoor choir or percussion class) foster inclusivity and develop children’s attentional skills. Importantly, there is emerging evidence to suggest that outdoor learning is especially beneficial for children with special educational needs (63). As social distancing will also increase demands on teachers, this enriched curriculum may depend upon community support, but this dependence also provides a means of consolidating the many positive community initiatives that have emerged across this pandemic.

Staggered entry to school (in terms of both start dates and daily routines) may be deemed necessary for health reasons, but present a challenge to parents seeking to build up supportive relationships with each other. This social network is a key source of informational and emotional support and also serves to widen children’s social horizons. Involving parents in the KS1 curriculum changes proposed above might therefore also help strengthen ties between parents and contribute to lifelong learning.

Longitudinal and cross-cultural findings demonstrate that literacy and numeracy skills depend upon cognitive processes (aka 'executive functions') that are associated with the prefrontal cortex (PFC; among other brain areas), and that enable children to inhibit impulsive responses, hold ideas or instructions in mind and shift flexibly between activities or goals (64, 65). The PFC can be likened to the miner's canary, in that it is sensitive to exposure to adverse environments that affect children's wellbeing (66). Consistent with this view, executive functions mediate the impact of exposure to parental risk factors (e.g., depression, poor parenting strategies) and children's behavioural adjustment and academic performance (67, 68). Conversely, school-based interventions that adopt a holistic approach to promote child wellbeing have beneficial effects on children's executive functions (for a review, see Diamond & Lee 2011; 69) and hence on their academic progress. More fundamentally, however, children's experiences of starting school are profoundly coloured by their relationships with peers and teachers (e.g., 70, 71), such that individual differences in children's social competencies (e.g., emotional regulation, autonomy, pro-sociality) are pivotal to success across the transition to school and, potentially, long-term outcomes.

4.11 Recommendations

- As well as moving outside, the curriculum should really focus on children's social relationships, which will be much harder to establish under social distancing. For example, it would be helpful to keep friendship groups together as much as possible, despite staggered timing of school days. Likewise, teachers can use some of the new post-pandemic picture books to guide children as to how to express amity without touching each other. This might also be done through playful activities, such as chalk drawings on the playground and more pedagogical work – e.g., helping children to see 'smiles behind masks'.
- Initiatives that help parents form the supportive networks that are so often usually established at the school gates. Social media can be toxic, so it may be necessary to regulate local Facebook groups (etc) to ensure that they provide a positive climate that fosters support and connections between families. And resources may be needed to ensure that all families have the technological resources that they need to join virtual communities.

4.2 Adolescence (10-24 year olds)

The development of executive functions and other cognitive processes is not limited to childhood, but also occurs throughout adolescence. Executive functions such as the ability to inhibit inappropriate responses, make decisions and plan actions develop across adolescence (72), as do non-cognitive skills such as perspective taking and emotion regulation (73). The PFC as well as other brain regions involved in higher level cognitive processes, social and emotional behaviour, undergo substantial and protracted development across childhood and adolescence (defined as 10-24 years; 74). Adolescence is a period of continued brain plasticity and learning and can be considered a sensitive period of development. There is evidence that certain cognitive skills, including non-verbal reasoning, learning during late adolescence and early adulthood yields greater improvement than learning earlier in adolescence, which highlights the relevance of this late developmental stage for education (75).

Feeling insufficiently connected to other people and loneliness are associated with substantial and lasting negative consequences on physical and mental health (76). Due to social distancing measures, society is undergoing a period of intense and widespread reduction of face-to-face social contact. The potential negative effects of social distancing might be particularly profound during adolescence, a period of life characterized by heightened sensitivity to social stimuli and need for peer interaction (73). Adolescents are at a unique period in their lives when the social environment performs crucial functions in promoting social learning, development of self-identity and mental

health (19). The use of social media and other digital media are deeply embedded in the social structures of young people and might fill some of the social voids left by school closures and social distancing. We need to understand more about whether this is the case. Importantly, we believe that it is unlikely that social media and online learning can *replace* face-to-face peer interactions and teaching without consequences on development in adolescence.

4.21 Adolescent peer influence is a potentially useful lever

Adolescents show an increased propensity to be influenced by their peers, particularly when it comes to risky decisions. Adolescents tend to take more risks when with friends than when alone, and they are more influenced by other teenagers' perception of risk than by adults' risk perception (e.g., 73, 77). Peers can also promote positive, prosocial behaviour. For example, adolescents are more socially influenced than adults to engage in prosocial behaviours (78), and more likely to volunteer in the community if their peers also volunteer (79).

Adolescents might be more likely to engage in social distancing and online schooling if their friends are (80). Behaviour change interventions, and campaigns aimed at influencing adolescent behaviour, are most likely to work when they afford adolescents choice, autonomy and respect (81). One successful approach is to provide adolescents with the autonomy to alter peer norms through developing and delivering their own campaigns. This was demonstrated by a study that utilised a peer-led approach to reduce rates of school-based peer victimisation and bullying (82).

4.22 Recommendations

- There is a need for increased consideration of the needs, in particular the social needs, of adolescents during the Covid-19 response. Social interaction is crucial for adolescent development and mental health, and this needs to be taken into account when considering school re-openings and social distancing rules.
- Harness adolescents' sensitivity to peer influence, through peer-led approaches to information sharing, and encourage grass-roots community campaigns led by young people.
- Include young people in the policy response

4.3 Mental health and special educational needs

4.31 *The pandemic and Lockdown represents a significant threat to mental health*

The unprecedented changes experienced by all during the Lockdown present profound psychosocial to mental health, in particular due to the social distancing and greater exposure to risks that this may entail (83). The impact on individuals will be mediated by their social and home circumstances as well as their developmental stage, which may further compound social and educational disadvantage; population data from Glasgow demonstrated a significant mental health social gradient at school entry that widened over the next two years (84, 85). Infection with the virus itself may have biological impacts on the central nervous system while psychological responses to severe illness, particularly after treatment in Intensive Care Units, are common (83).

Mental health has a reciprocal relationship with academic attainment, so is an important consideration for the education sector (86, 87). The pandemic occurred against mounting evidence of deteriorating mental health in young people, particularly among young women in their late teens, as well as indications that the outcomes of poor childhood mental health have worsened in recent years (88-91). Our most recent estimates suggest that pre-pandemic 1 in 8 school-age children had clinically impairing mental health conditions, rising to nearly a quarter of 16-19 year old girls (Sadler et al., 2018). We need to balance the prompt detection of clinically impairing mental health

conditions against pathologizing adjustment reactions within the normal range. Many children are likely to adjust and cope without lasting difficulty. For example, the largest population-based survey of children who were looked after by the state in the UK showed that fewer than half had an impairing mental health condition, while one in 10 were thriving, defined as scoring in the optimal range for all subscales of the Strengths and Difficulties Questionnaire, compared to 50% of the children living in private households; 92). The universality of the experience may help children to process their experiences, while the small amount of evidence focusing on children suggests that universal psychological “debriefing” is not helpful and may be harmful (93). Trauma Focused Cognitive Behavioural Therapy is effective for the minority who develop Post Traumatic Stress Disorder (94). Similarly, previous research suggests that anxiety, particularly around infection, health and separation, are likely to increase (but importantly anxiety disorders respond well to psychological treatment, such as cognitive behavioural therapy; 96). In contrast, data from surveys recruited on-line and social media suggest that anxiety symptoms in adults have decreased after an initial rise during lock down (97), while the parents are reporting sharp increases in emotional and behavioural problems among children, but decreased emotional and increased restlessness among adolescents, who themselves are reporting no mental health changes (98). Such studies risk selection bias, given the lack of a sample frame (99). If, as is likely, those most interested and concerned about mental health click survey links, the impact of mental health may be inflated, while those on the wrong side of the digital divide, who are likely to be among the most vulnerable will be excluded. Significant attrition, which is likely with survey fatigue over time, mean that reported changes in psychological distress should be interpreted with extreme caution for the same reasons. Studies from established samples that include pre-pandemic mental health measures are more informative about prevalence and suggest increased anxiety levels and reduced wellbeing, particularly among young adults (99,100). Sadly we lack any such data on children under the age of 16, although we are aware of some in the field.

Bullying is probably the most tractable public mental health problem facing developed countries (101). A regrettably common experience, it predicts depression, anxiety, psychosomatic symptoms, eating difficulties, self-harm and suicide into adulthood as well as lower educational attainment (101-104). Classroom management and social structure are associated with substantial differences in the level of reported bullying (105) and whole-school interventions are more effective than curriculum-based interventions or behavioural and social skills training (106). At secondary school level, evidence suggests that peer led interventions are more effective than adult led (see section 4.21). Fear of bullying may deter some children from returning to school (49, 98, 82, 107).

4.32 Groups to monitor particularly closely

Children who have pre-existing mental health conditions, as well as those who have directly experienced Covid-19 infection, hospitalisation or bereavement will be at higher risk. Some of those with pre-existing mental health conditions may struggle due to the additional situational stress or reduced access to support during Lockdown, while those for whom school was a stressful environment may experience reduced anxiety or behavioural difficulties while at home, but find it difficult to return after a long and unexpected break. Children with separation, social or generalised anxiety may find it particularly hard to get back to school as their anxiety levels often increase at the end of an ordinary break. Pupils at key transition stages (see 19-21) may need additional support, as they are facing an unfamiliar environment at a time of heightened vigilance, with less preparation and support from friends. Similarly, children with neurodevelopmental disorders, particularly if they have prominent autistic traits, for whom even minor changes in routine can cause considerable distress, may struggle with the inevitable differences in the school environment.

4.4 Recommendations

- Non-mental health specialists working with children and young people should consider the severity and persistence of mental health difficulties, which may be emotional or behavioural in presentation, and the child's ability to function when considering whether a child needs additional support from external agencies.
- Routine data collected by schools, such as attendance may be useful as a sudden reduction in attendance may indicate children that are struggling; poor attendance is associated with anxiety, depression and self-harm (108-110).
- Moore and colleagues (2019) provide a useful framework for considering how school and home environment might exert both positive and negative influences on behaviour in school in their systematic review (111, P29-32). The resultant six core practitioner messages listed below provide evidence-based strategies to optimise behaviour management in schools in a briefer format for busy practitioners. These strategies may be of use in other settings. The key message is that strategies that encourage desirable behaviours in the context of clear expectations have an evidence-base while punitive approaches do not and more intensive and tailored use of the same strategies rather than novel approaches are required for those with higher levels of behavioural disturbance (111)
 1. know and understand your pupils and their influences,
 2. teach learning behaviours alongside managing misbehaviour,
 3. use classroom strategies to support good behaviour,
 4. use simple approaches as part of your regular routine,
 5. use targeted approaches for individual needs,
 6. consistency is key
- Joint agency planning with parents / carers and other agencies will be vital to optimise vulnerable children's attendance and ability to access education and other services.
- Careful and repeated explanations for the child as well as their carers, supplemented by picture timetables may help ease distress for those who struggle to manage change.

Evidence-based sources of information

<https://www.depressd.ca/covid-19-mental-health>

<https://reachwell.org/>

<https://www.rcpch.ac.uk/sites/default/files/generated-pdf/document/COVID-19---research-studies-on-children-and-young-people%2527s-views.pdf>

<https://www.minded.org.uk/>

<https://www.acamh.org/learning/>

<https://www.rcpsych.ac.uk/mental-health/parents-and-young-people>

<https://www.mentallyhealthyschools.org.uk/>

<https://educationendowmentfoundation.org.uk/evidence-summaries/teaching-learning-toolkit/>

<https://educationendowmentfoundation.org.uk/tools/>

<https://educationendowmentfoundation.org.uk/evidence-summaries/teaching-learning-toolkit/one-to-one-tuition/>

Full list of recommendations

- Going forward, as we manage the pandemic and its impacts over the next year, children and young people's needs and choices must be considered and prioritised
- A systemic approach and multi-agency collaborative model is essential to optimise children's development
- More children will face socio-economic disadvantage, which adversely influences both educational attainment and mental health; more children will therefore need additional support if attainment and health inequalities are not to widen.
- Schools should return as soon as it is safe to do so since each additional month with suboptimal schooling is likely to widen the socio-economic gap in achievement, over and above any loss for the whole cohort.
- If not all pupils can return, socio-economically disadvantaged and younger children should be prioritised.
- Additional support on return to school will be required to address learning loss. This should be targeted at more disadvantaged students. Careful consideration must be given to how these are identified – far greater numbers of families will now be in economically challenging circumstances, and formal SEN categorisation misses most struggling learners. For example, FSM had limitations as an indicator of economic disadvantage before the pandemic (35) and will be even more problematic afterwards. Using assessment of current levels of achievement might be a better strategy to identify children who need additional support – teachers will likely know who these children are, but need the additional time and resources to provide dedicated support.
- We welcome recent investment in one-to-one catch-up funding by the Government. There is good evidence that one to one tuition can improve outcomes for disadvantaged pupils. Specifically, the Education Endowment Foundation has reviewed a number of programmes that suggest that one to one tuition can be beneficial for both numeracy and literacy.(a summary of evidence is found here (36).
- There is good evidence that the Nuffield Early Language Intervention has a positive impact on children's language development and more crucially has been found to narrow the socio-economic gap in children's literacy (37,38).
- The 'digital divide' needs to be addressed by supporting access to digital connection in families who do not have smart phones or Wi-Fi.
- There is a need to allocate time and resources to providing information and practical resources, which could be online. Online contact with professionals would be welcomed too.
- There is a need to monitor and research the impact of these events on children's emotional and cognitive development and progress
- We recommend a "return to school" multi-agency outreach structure to support vulnerable young people to leave the home setting and to attend school.
- There should be an adjustment of demands for schools and teachers to meet the criteria normally applied. There is a need to examine how helpful or unhelpful some of the accountability processes will be during this time (e.g. the recent league table of how many vulnerable children were being educated). Whilst we welcome the continued suspension of routine Ofsted inspections in the autumn term, teachers will need to have support, assistance and coherent guidance in meeting the increased necessary focus on personal, social and emotional aspects of education.
- We recommend a coordinated plan of graded return to academic work in combination with psychological support drawing on a systemic approach involving the family, young person, and school including the MHST where available. This approach should include the identification of trauma related difficulties but should be embedded in a normalising and

nurturing context and include information about social distancing and other pandemic related measures in the school environment.

- Sufficient time and a recommended framework should be provided for all professionals to continue to work together to ensure an integrated approach to supporting young people and recognise this as a point of best-practice that should become “business as usual”.
- The influence of staff-pupil relationships on children’s mental health (53) is strong, and staff will need time to re-establish these, particularly with the more vulnerable students.
- There is an urgent need for the development of new practice models that will help protect children at risk of significant harm during home based containment and absence from formal educational settings, particularly as further local or national Lockdowns seem likely at the time of writing.
- Further, in light of the fiscal challenges that will likely follow in the medium and longer term aftermath of the Covid-19 pandemic, innovative and effective service delivery strategies will be an essential part of ensuring the future safety of children and young people.
- As well as moving outside, the curriculum should really focus on children’s social relationships, which will be much harder to establish under social distancing. For example, it would be helpful to keep friendship groups together as much as possible, despite staggered timing of school days. Likewise, teachers can use some of the new post-pandemic picture books to guide children as to how to express amity without touching each other. This might also be done through playful activities, such as chalk drawings on the playground and more pedagogical work – e.g., helping children to see ‘smiles behind masks’.
- Initiatives that help parents form the supportive networks that are so often usually established at the school gates. Social media can be toxic, so it may be necessary to regulate local Facebook groups (etc) to ensure that they provide a positive climate that fosters support and connections between families. And resources may be needed to ensure that all families have the technological resources that they need to join virtual communities.
- There is a need for increased consideration of the needs, in particular the social needs, of adolescents during the Covid-19 response. Social interaction is crucial for adolescent development and mental health, and this needs to be taken into account when considering school re-openings and social distancing rules.
- Harness adolescents’ sensitivity to peer influence, through peer-led approaches to information sharing, and encourage grass-roots community campaigns led by young people.
- Include young people in the policy response.
- Non-mental health specialists working with children and young people should consider the severity and persistence of mental health difficulties, which may be emotional or behavioural in presentation, and the child’s ability to function when considering whether a child needs additional support from external agencies.
- Routine data collected by schools, such as attendance may be useful as a sudden reduction in attendance may indicate children that are struggling; poor attendance is associated with anxiety, depression and self-harm (108-110).
- Evidence-based strategies to optimise behaviour management in schools are available via the Education Endowment Foundation practitioner brief. These strategies may be of use in other settings. The key message is that strategies that encourage desirable behaviours in the context of clear expectations have an evidence-base while punitive approaches do not and more intensive and tailored use of the same strategies rather than novel approaches are required for those with higher levels of behavioural disturbance (111)
- Joint agency planning with parents / carers and other agencies will be vital to optimise vulnerable children’s attendance and ability to access education and other services.

- Careful and repeated explanations for the child as well as their carers, supplemented by picture timetables may help ease distress for those who struggle to manage change.

Authors

Tamsin Ford CBE, Professor of Child and Adolescent Psychiatry

Duncan Astle, Professor of Cognitive Neuroscience

Sarah-Jayne Blakemore, Professor of Psychology and Cognitive Neuroscience

Gordon Harold, Professor of Education and Mental Health

Claire Hughes, Professor of Developmental Psychology

Ayla Humphrey, Consultant Clinical Psychologist and Affiliated Lecturer, Department of Psychiatry

Colleen McLaughlin, Professor of Education

Ros McLellan, Senior Lecturer in Education

Anna Vignoles CBE, Professor of Education

Acknowledgement

We are extremely grateful for the support of Lauren Cross, Research Assistant in the Department of Psychiatry at the University of Cambridge, for her support in formatting this document.

References

1. Biesta G. What Kind of Society Does the School Need? Redefining the Democratic Work of Education in Impatient Times. *Studies in Philosophy and Education*. 2019;38(6):657-668. Available from: doi:10.1007/s11217-019-09675-y
2. Wyse D, Hayward L, Higgins S, Livingston K. Traditional school subjects versus progressive pedagogy. *The Curriculum Journal*. 2018;29(3):295-297. Available from: doi:10.1080/09585176.2018.1487668
3. Ofsted's framework: what it means for pupil mental health [Internet]. Tes. 2020 [Accessed 20 July 2020]. Available from: <https://www.tes.com/news/ofsteds-framework-what-it-means-pupil-mental-health>
4. Ford T. Editorial Perspective: Why I am now convinced that emotional disorders are increasingly common among young people in many countries. *Journal of Child Psychology and Psychiatry*. 2020. Available from: doi:10.1111/jcpp.13211
5. Snell T, Knapp M, Healey A, Guglani S, Evans-Lacko S, Fernandez J 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*. 2013;54(9):977-985. Available from: doi:10.1111/jcpp.12055
6. Knapp M, Snell T, Healey A, Guglani S, Evans-Lacko S, Fernandez J et al. How do child and adolescent mental health problems influence public sector costs? Interindividual variations in a nationally representative British sample. *Journal of Child Psychology and Psychiatry*. 2014;56(6):667-676. Available from: doi:10.1111/jcpp.12327

7. Scott S. Conduct disorders in children. *BMJ*. 2007;334(7595):646-646. Available from doi: 10.1136/bmj.39161.370498.BE
8. Scott S, Spender Q, Doolan M, Jacobs B, Aspland H, Webster-Stratton C. Multicentre controlled trial of parenting groups for childhood antisocial behaviour in clinical practice Commentary: nipping conduct problems in the. *BMJ*. 2001;323(7306):194-194. Available from: doi:10.1136/bmj.323.7306.194
9. Heckman J, Stixrud J, Urzua S. The Effects of Cognitive and Noncognitive Abilities on Labor Market Outcomes and Social Behavior. *Journal of Labor Economics*. 2006;24(3):411-482. Available from: doi:10.1086/504455
10. Blanden J, Gregg P, Macmillan L. Accounting for Intergenerational Income Persistence: Noncognitive Skills, Ability and Education. *The Economic Journal*. 2007;117(519):C43-C60. Available from: doi:10.1111/j.1468-0297.2007.02034.x
11. de Coulon A, Meschi E, Vignoles A. Parents' skills and children's cognitive and non-cognitive outcomes. *Education Economics*. 2011;19(5):451-474. Available from: doi:10.1080/09645292.2010.511829
12. Lavy V. Do Differences in Schools' Instruction Time Explain International Achievement Gaps? Evidence from Developed and Developing Countries. *The Economic Journal*. 2015;125(588):F397-F424. Available from: doi:10.1111/eoj.12233
13. Burgess S, Sievertsen, H Schools, skills, and learning: The impact of COVID-19 on education. Available from: <https://voxeu.org/article/impact-covid-19-education>. Accessed: 20th July, 2020.
14. Heckman, JJ.; Humphries, JE.; Urzúa, S.; Veramendi, G. The effects of educational choices on labor market, health, and social outcomes. Working paper, University of Chicago, Department of Economics; 2011. Available from: https://www.researchgate.net/profile/James_Heckman3/publication/254420588_The_effects_of_educational_choices_on_labor_market_health_and_social_outcomes/links/546b9d670cf2397f7831c526/The-effects-of-educational-choices-on-labor-market-health-and-social-outcomes.pdf. Accessed: 20th July 2020.
15. Britton J, Vignoles, A. *Education production functions. In Handbook of contemporary education economics*. Edward Elgar Publishing; 2017.
16. Orben A, Tomova L, Blakemore S. The effects of social deprivation on adolescent development and mental health. *The Lancet Child & Adolescent Health*. 2020. Available from: doi:10.1016/s2352-4642(20)30186-3
17. Knoll L, Fuhrmann D, Sakhardande A, Stamp F, Speekenbrink M, Blakemore S. A Window of Opportunity for Cognitive Training in Adolescence. *Psychological Science*. 2016;27(12):1620-1631. Accessed from: doi:10.1177/0956797616671327
18. Crawford C, Macmillan L, Vignoles A. When and why do initially high-achieving poor children fall behind?. *Oxford Review of Education*. 2016;43(1):88-108. Available from: doi:10.1080/03054985.2016.1240672
19. Cooper K, Stewart K. *Does money affect children's outcomes: an update, Centre for Analysis of Social Exclusion*. Available from: <http://sticerd.lse.ac.uk/dps/case/cp/casepaper203.pdf>. Accessed: 20th July 2020.

20. Fredriksson P, Ockert B, Oosterbeek H. Parental Responses to Public Investments in Children: Evidence from a Maximum Class Size Rule. *Journal of Human Resources*. 2015;51(4):832-868. Available from: doi:10.3368/jhr.51.4.1114-6779r1
21. Harold GT, Acquah D, Chowdry H, Sellers, R. *What works to enhance inter-parental relationships and improve outcomes for children*. Department for Work and Pensions (DWP), Ref: ISBN 978-1-78425-719-4, Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/509368/what-works-to-enhance-inter-parental-relationships.pdf. Accessed July 20th 2020.
22. Alexander K, Entwisle D, Olson L. Lasting Consequences of the Summer Learning Gap. *American Sociological Review*. 2007;72(2):167-180. Available from: doi:10.1177/000312240707200202
23. Alloway T, Gathercole S, Kirkwood H, Elliott J. The Cognitive and Behavioral Characteristics of Children With Low Working Memory. *Child Development*. 2009;80(2):606-621. Available from: doi:10.1111/j.1467-8624.2009.01282.x
24. Elliott J, Gathercole S, Alloway T, Holmes J, Kirkwood H. An Evaluation of a Classroom-Based Intervention to Help Overcome Working Memory Difficulties and Improve Long-Term Academic Achievement. *Journal of Cognitive Education and Psychology*. 2010;9(3):227-250. Available from: doi:10.1891/1945-8959.9.3.227
25. Barth J, Dunlap S, Dane H, Lochman J, Wells K. Classroom environment influences on aggression, peer relations, and academic focus. *Journal of School Psychology*. 2004;42(2):115-133. Available from: doi:10.1016/j.jsp.2003.11.004
26. Evans GW, Lepore, SJ. Non-auditory effects of noise on children: A critical review. *Children's Environments*. 1993;10(1): 42-72.
27. Dockrell J, Shield B. Acoustical barriers in classrooms: the impact of noise on performance in the classroom. *British Educational Research Journal*. 2006;32(3):509-525. Available from: doi:10.1080/01411920600635494
28. Astle D, Bathelt J, Holmes J. Remapping the cognitive and neural profiles of children who struggle at school. *Developmental Science*. 2018;22(1):e12747. Available from: doi:10.1111/desc.12747
29. Dolean D, Melby-Lervag M, Tincas T, Damsa C, Lervag A. Achievement gap: socioeconomic status affects reading development and cognition among children facing poverty. *Learning and Instruction*. 2019;63; available from: doi.org/10.1016/j.learninstruc.2019.101218
30. Sutton Trust. *COVID-19 Impacts: School Shutdown*. Available from: <https://www.suttontrust.com/wp-content/uploads/2020/04/COVID-19-Impact-Brief-School-Shutdown.pdf>. Accessed: 20th July 2020.
31. Sevilla A, Phimister A, Krutikova S, Kraftman L, Farquharson C, Costa Dias M et al. Learning during the lockdown: real-time data on children's experiences during home learning. 2020. Available from: doi: 10.1920/bn.ifs.2020.bn0288
32. Ilie S, Sutherland A, Vignoles A. Revisiting free school meal eligibility as a proxy for pupil socio-economic deprivation. *British Educational Research Journal*. 2017;43(2):253-274. Available from: doi:10.1002/berj.3260

33. Education Endowment Foundation. *One to one tuition: evidence summary*. Available from: <https://educationendowmentfoundation.org.uk/evidence-summaries/teaching-learning-toolkit/one-to-one-tuition>. Accessed 20th July 2020.
34. Dimova S, Ilie S, Rosa Brown E, Broeks M, Culora A, Sutherland A. 2020. *The Nuffield Early Language Intervention Evaluation Report*. Available from: <https://www.nuffieldfoundation.org/wp-content/uploads/2016/02/EEF-Evaluation-report-Nuffield-Early-Language-Intervention.pdf>. Accessed 20th July 2020.
35. Bowyer-Crane C, Snowling M. Assessing children's inference generation: What do tests of reading comprehension measure?. *British Journal of Educational Psychology*. 2005;75(2):189-201. Available from: doi: 10.1348/000709904x22674
36. Walsh G, Purdy N, Dunn J, Jones S, HARRIS J. and Ballentine M. *Home Schooling in Northern Ireland and during the COVID-19 Crisis. The experience of parents and carers*. Available from: <https://www.stran.ac.uk/wp-content/uploads/2020/05/Research-Report-Homeschooling-in-Northern-Ireland-during-the-COVID-19-Crisis.pdf>. Accessed 20th July 2020.
37. Deci E, Ryan R. Facilitating optimal motivation and psychological well-being across life's domains. *Canadian Psychology/Psychologie canadienne*. 2008;49(1):14-23. Available from: doi: 10.1037/0708-5591.49.1.14
38. Goodenow C. Classroom Belonging among Early Adolescent Students. *The Journal of Early Adolescence*. 1993;13(1):21-43. Available from: doi:10.1177/0272431693013001002
39. Burke J, Dempsey M. (2020). *Covid-19 Practice in Primary Schools in Ireland Report*. Available from: <https://www.into.ie/app/uploads/2020/04/Covid-19-Practice-in-Primary-Schools-Report-1.pdf>. . Accessed 20th July 2020.
40. The Children's Society. *The Good Childhood Report 2019*. Available from: https://www.childrenssociety.org.uk/sites/default/files/the_good_childhood_report_2019.pdf. Accessed 20th July 2020.
41. YoungMinds. *Coronavirus: Impact on young people with mental health needs*. Available from: <https://youngminds.org.uk/media/3904/coronavirus-report-summer-2020-final.pdf>. Accessed 20th July 2020.
42. NSPCC Learning. *What children are saying to Childline about coronavirus*. Available from: <https://learning.nspcc.org.uk/media/2195/what-children-are-saying-to-childline-about-coronavirus.pdf>. Accessed 20th July 2020.
43. Munkhaugen E, Gjevik E, Pripp A, Sponheim E, Diseth T. School refusal behaviour: Are children and adolescents with autism spectrum disorder at a higher risk?. *Research in Autism Spectrum Disorders*. 2017;41-42:31-38. Available from: doi:10.1016/j.rasd.2017.07.001
44. Ochi M, Kawabe K, Ochi S, Miyama T, Horiuchi F, Ueno S. School refusal and bullying in children with autism spectrum disorder. *Child and Adolescent Psychiatry and Mental Health*. 2020;14(1). Available from: doi:10.1186/s13034-020-00325-7
45. Fazel M, Hoagwood K, Stephan S, Ford T. Mental health interventions in schools in high-income countries. *The Lancet Psychiatry*. 2014;1(5):377-387.
46. Waite P, Patalay P, Moltrecht B, McElroy E, Creswell, C. *Report 02: Covid-19 worries, parent/carer stress and support needs, by child special educational needs and parent/carer work status*. Available

- from: https://emergingminds.org.uk/wp-content/uploads/2020/05/Co-SPACE-report-02_03-05-20.pdf. Accessed 20th July 2020.
47. McLaughlin C, Lytle M, Holliday C. (2019). *Consequences of childhood bereavement in the context of the British school system*. Available from: https://www.educ.cam.ac.uk/networks/eri/publications/winstonswish/Consequences_of_childhood_bereavement_June_2019.pdf. Accessed 20th July 2020.
48. Salmon G, Rapport F. Multi-agency voices: A thematic analysis of multi-agency working practices within the setting of a Child and Adolescent Mental Health Service. *Journal of Interprofessional Care*. 2005;19(5):429-443. Available from: doi:10.1080/135618205002173075
49. Howarth E, Vainre M, Humphrey A, Lombardo C, Hanafiah A, Anderson J et al. Delphi study to identify key features of community-based child and adolescent mental health services in the East of England. *BMJ Open*. 2019;9(6):e022936. Available from: doi:10.1136/bmjopen-2018-022936
50. Lang I, Marlow R, Goodman R, Meltzer H, Ford T. Influence of problematic child-teacher relationships on future psychiatric disorder: population survey with 3-year follow-up. *British Journal of Psychiatry*. 2013;202(5):336-341. Available from: doi:10.1192/bjp.bp.112.120741
51. Cadima J, McWilliam R, Leal T. Environmental risk factors and children's literacy skills during the transition to elementary school. *International Journal of Behavioral Development*. 2009;34(1):24-33. Available from: doi:10.1177/0165025409345045
52. Harold GT, Acquah D, Chowdry H, Sellers R. *What works to enhance inter-parental relationships and improve outcomes for children*. Department for Work and Pensions, Ref: ISBN 978-1-78425-719-4 Available from: <https://www.eif.org.uk/report/what-works-to-enhance-interparental-relationships-and-improve-outcomes-for-children>. Accessed 20th July 2020.
53. Loades M, Chatburn E, Higson-Sweeney N, Reynolds S, Shafran R, Brigden A et al. Rapid Systematic Review: The Impact of Social Isolation and Loneliness on the Mental Health of Children and Adolescents in the Context of COVID-19. *Journal of the American Academy of Child & Adolescent Psychiatry*. 2020. Available from: doi: 10.1016/j.jaac.2020.05.009
54. Brown F, Webb S. Children without play. *Journal of Education*, 2005;35(1):139-158.
55. Sellers R, Harold G, Smith A, Neiderhiser J, Reiss D, Shaw D et al. Disentangling nature from nurture in examining the interplay between parent-child relationships, ADHD, and early academic attainment. *Psychological Medicine*. 2019;1-8. Available from: doi:10.1017/s0033291719003593
56. Home Affairs Committee. *Home Office preparedness for Covid-19 (Coronavirus): domestic abuse and risks of harm within the home*. Available from: <https://publications.parliament.uk/pa/cm5801/cmselect/cmhaff/321/32105.htm>. Accessed 20th July 2020.
57. Verma M. Screen relations: the limits of computer-mediated psychoanalysis and psychotherapy. *Psychoanalytic Psychotherapy*. 2018;32(3):315-320. Available from: doi:10.1080/02668734.2018.1440457

58. Hughes C, White N, Foley S, Devine R. Family support and gains in school readiness: A longitudinal study. *British Journal of Educational Psychology*. 2017;88(2):284-299. Available from: doi: 10.1111/bjep.12188
59. Shonkoff J. Capitalizing on Advances in Science to Reduce the Health Consequences of Early Childhood Adversity. *JAMA Pediatrics*. 2016;170(10):1003. Available from: doi: 10.1001/jamapediatrics.2016.1559
60. Marchant E, Todd C, Cooksey R, Dredge S, Jones H, Reynolds D et al. Curriculum-based outdoor learning for children aged 9-11: A qualitative analysis of pupils' and teachers' views. *PLOS ONE*. 2019;14(5):e0212242. Available from: doi:10.1371/journal.pone.0212242
61. Bull R, Espy K, Wiebe S. Short-Term Memory, Working Memory, and Executive Functioning in Preschoolers: Longitudinal Predictors of Mathematical Achievement at Age 7 Years. *Developmental Neuropsychology*. 2008;33(3):205-228. Available from: doi:10.1080/87565640801982312
62. Ellefson M, Zachariou A, Ng F, Wang Q, Hughes C. Do executive functions mediate the link between socioeconomic status and numeracy skills? A cross-site comparison of Hong Kong and the United Kingdom. *Journal of Experimental Child Psychology*. 2020;194:104734. Available from: doi:10.1016/j.jecp.2019.104734
63. Hughes C, Devine R. For Better or for Worse? Positive and Negative Parental Influences on Young Children's Executive Function. *Child Development*. 2017;90(2):593-609. Available from: doi: 10.1111/cdev.12915
64. Hughes C, Roman G, Hart M, Ensor R. Does maternal depression predict young children's executive function? - A 4-year longitudinal study. *Journal of Child Psychology and Psychiatry*. 2012;54(2):169-177. Available from: doi: 10.1111/jcpp.12014
65. Devine R, Bignardi G, Hughes C. Executive Function Mediates the Relations between Parental Behaviors and Children's Early Academic Ability. *Frontiers in Psychology*. 2016;7. Available from: doi:10.3389/fpsyg.2016.01902
66. Diamond A, Lee K. Interventions Shown to Aid Executive Function Development in Children 4 to 12 Years Old. *Science*. 2011;333(6045):959-964. Available from: doi:10.1126/science.1204529
67. Fink E, Hughes C. Children's friendships: Elian Fink and Claire Hughes review the evidence. *The Psychologist*. 2019;32(3): 28-31.
68. Mackintosh B, McCoy D. Exploring Social Competence as a Mediator of Head Start's Impact on Children's Early Math Skills: Evidence from the Head Start Impact Study. *Early Education and Development*. 2019;30(5):655-677. Available from: doi:10.1080/10409289.2019.1576156
69. Larsen B, Luna B. Adolescence as a neurobiological critical period for the development of higher-order cognition. *Neuroscience & Biobehavioral Reviews*. 2018;94:179-195. Available from: doi:10.1016/j.neubiorev.2018.09.005
70. Blakemore S, Mills K. Is Adolescence a Sensitive Period for Sociocultural Processing?. *Annual Review of Psychology*. 2014;65(1):187-207. Available from: doi:10.1146/annurev-psych-010213-115202
71. Sawyer S, Azzopardi P, Wickremarathne D, Patton G. The age of adolescence. *The Lancet Child & Adolescent Health*. 2018;2(3):223-228. Available from: doi:10.1016/s2352-4642(18)30022-1

72. Knoll L, Fuhrmann D, Sakhardande A, Stamp F, Speekenbrink M, Blakemore S. A Window of Opportunity for Cognitive Training in Adolescence. *Psychological Science*. 2016;27(12):1620-1631. Available from: doi:10.1177/0956797616671327
73. Hawkley L, Cacioppo J. Loneliness Matters: A Theoretical and Empirical Review of Consequences and Mechanisms. *Annals of Behavioral Medicine*. 2010;40(2):218-227. Available from: doi:10.1007/s12160-010-9210-8
74. Knoll L, Magis-Weinberg L, Speekenbrink M, Blakemore S. Social Influence on Risk Perception During Adolescence. *Psychological Science*. 2015;26(5):583-592. Available from: doi:10.1177/0956797615569578
75. Foulkes L, Leung J, Fuhrmann D, Knoll L, Blakemore S. Age differences in the prosocial influence effect. *Developmental Science*. 2018;21(6):e12666. Available from: doi:10.1111/desc.12666
76. Choukas-Bradley S, Giletta M, Cohen G, Prinstein M. Peer Influence, Peer Status, and Prosocial Behavior: An Experimental Investigation of Peer Socialization of Adolescents' Intentions to Volunteer. *Journal of Youth and Adolescence*. 2015;44(12):2197-2210. Available from: doi:10.1007/s10964-015-0373-2
77. Andrews J, Foulkes L, Blakemore S. Peer Influence in Adolescence: Public-Health Implications for COVID-19. *Trends in Cognitive Sciences*. 2020;24(8):585-587. Available from: doi:10.1016/j.tics.2020.05.001
78. Yeager D, Dahl R, Dweck C. Why Interventions to Influence Adolescent Behavior Often Fail but Could Succeed. *Perspectives on Psychological Science*. 2017;13(1):101-122. Available from: doi:10.1177/1745691617722620
79. Paluck E, Shepherd H, Aronow P. Changing climates of conflict: A social network experiment in 56 schools. *Proceedings of the National Academy of Sciences*. 2016;113(3):566-571. Available from: doi:10.1073/pnas.1514483113
80. Holmes E, O'Connor R, Perry V, Tracey I, Wessely S, Arseneault L et al. Multidisciplinary research priorities for the COVID-19 pandemic: a call for action for mental health science. *The Lancet Psychiatry*. 2020;7(6):547-560. Available from: doi:10.1016/S2215-0366(20)30168-1
81. Marryat L, Thompson L, Minnis H, Wilson P. Primary schools and the amplification of social differences in child mental health: a population-based cohort study. 2020.
82. Davis J, Vizard T, Forbes N, Pearce N, Nafilyan V, Merad S, Ford T, McManus, S, Goodman R, Goodman A. *Mental Health of Children and Young People in England: Predictors of mental disorder*. 2019. Health and Social Care Information Centre; London.
83. Deighton J, Humphrey N, Belsky J, Boehnke J, Vostanis P, Patalay P. Longitudinal pathways between mental health difficulties and academic performance during middle childhood and early adolescence. 2020. Available from: doi:10.1111/bjdp.12218
84. Panayiotou M, Humphrey N. Mental health difficulties and academic attainment: Evidence for gender-specific developmental cascades in middle childhood. 2020. Available from: doi:10.1017/S095457941700102X

85. Sadler K, Vizard T, Ford T, Goodman A, Goodman R, McManus S. *The Mental Health of Children and Young People in England 2017: Trends and characteristics*. 2018. Health and Social Care Information Centre; London.
86. McManus S, Gunnell D, Cooper C, Bebbington P, Howard L, Brugha T et al. Prevalence of non-suicidal self-harm and service contact in England, 2000–14: repeated cross-sectional surveys of the general population. *The Lancet Psychiatry*. 2019;6(7):573-581. Available from: doi:10.1016/s2215-0366(19)30188-9
87. Collishaw S. Annual Research Review: Secular trends in child and adolescent mental health. *Journal of Child Psychology and Psychiatry*. 2014;56(3):370-393. Available from: doi:10.1111/jcpp.12372
88. Sellers R, Warne N, Pickles A, Maughan B, Thapar A, Collishaw S. Cross-cohort change in adolescent outcomes for children with mental health problems. *Journal of Child Psychology and Psychiatry*. 2019;60(7):813-821. Available from: doi: 10.1111/jcpp.13029
89. Ford T, Vostanis P, Meltzer H, Goodman R. Psychiatric disorder among British children looked after by local authorities: Comparison with children living in private households. *British Journal of Psychiatry*. 2007;190(4):319-325. Available from: doi: 10.1192/bjp.bp.106.025023
90. Jacobs A, Pfefferbaum B. The Use of Debriefing With Children. *Current Psychiatry Reports*. 2015;17(6). Available from: doi: 10.1007/s11920-015-0578-9
91. Cohen J, Deblinger E, Mannarino A. Trauma-focused cognitive behavioral therapy for children and families. *Psychotherapy Research*. 2016;28(1):47-57. Available from: doi: 10.1080/10503307.2016.1208375
92. Viner R, Russell S, Croker H, Packer J, Ward J, Stansfield C et al. School closure and management practices during coronavirus outbreaks including COVID-19: a rapid systematic review. *The Lancet Child & Adolescent Health*. 2020;4(5):397-404.
93. Fancourt D. Twitter [Internet]. Twitter.com. 2020 [cited 20 July 2020]. Available from: https://twitter.com/Daisy_Fancourt/status/1261190573584723970
94. Co-Space Study: Supporting Parents A, survival T, effective S, Lockdown P. *Co-Space Study: Supporting Parents, Adolescents and Children during Epidemics — Department of Experimental Psychology*. Available from: <https://emergingminds.org.uk/wp-content/uploads/2020/06/CoSPACE-Report-4-June-2020.pdf>. Accessed: 20th July 2020.
95. Pierce M, McManus S, Jessop C, John A, Hotopf M, Ford T, Hatch S, Wessely S, Abel K. A critical look at mental health surveys during COVID-19. *The Lancet Psychiatry*. (in press, accepted 25 April 2020). Available from: doi:10.1016/ S2215-0366(20)30237-6
96. Kwong A, Pearson R, Adams M, Northstone K, Tilling K, Smith D et al. Mental health during the COVID-19 pandemic in two longitudinal UK population cohorts. 2020. Available from: doi:10.1101/2020.06.16.20133116
97. Arseneault L. Annual Research Review: The persistent and pervasive impact of being bullied in childhood and adolescence: implications for policy and practice. *Journal of Child Psychology and Psychiatry*. 2017;59(4):405-421. Available from: doi:10.1111/jcpp.12841

98. Copeland W, Wolke D, Angold A, Costello E. Adult Psychiatric Outcomes of Bullying and Being Bullied by Peers in Childhood and Adolescence. *JAMA Psychiatry*. 2013;70(4):419. Available from: doi:10.1001/jamapsychiatry.2013.504
99. Lereya S, Winsper C, Heron J, Lewis G, Gunnell D, Fisher H et al. Being Bullied During Childhood and the Prospective Pathways to Self-Harm in Late Adolescence. *Journal of the American Academy of Child & Adolescent Psychiatry*. 2013;52(6):608-618.e2. Available from: doi:10.1016/j.jaac.2013.03.012
100. Ttofi M, Farrington D, Lösel F, Loeber R. Do the victims of school bullies tend to become depressed later in life? A systematic review and meta-analysis of longitudinal studies. *Journal of Aggression, Conflict and Peace Research*. 2011;3(2):63-73. Available from: doi:10.1108/175965911111132873
101. Roland E, Galloway D. Classroom influences on bullying. *Educational Research*. 2002;44(3):299-312. Available from: doi:10.1080/0013188022000031597
102. Vreeman R, Carroll A. A Systematic Review of School-Based Interventions to Prevent Bullying. *Archives of Pediatrics & Adolescent Medicine*. 2007;161(1):78. Available from: doi:10.1001/archpedi.161.1.78
103. Bonell C, Allen E, Warren E, McGowan J, Bevilacqua L, Jamal F et al. Effects of the Learning Together intervention on bullying and aggression in English secondary schools (INCLUSIVE): a cluster randomised controlled trial. *The Lancet*. 2018;392(10163):2452-2464. Available from: doi:10.1016/s0140-6736(18)31782-3
104. Epstein S, Roberts E, Sedgwick R, Polling C, Finning K, Ford T et al. School absenteeism as a risk factor for self-harm and suicidal ideation in children and adolescents: a systematic review and meta-analysis. *European Child & Adolescent Psychiatry*. 2019. Available from: doi:10.1007/s00787-019-01327-3
105. Finning K, Ukoumunne O, Ford T, Danielson-Waters E, Shaw L, Romero De Jager I et al. Review: The association between anxiety and poor attendance at school - a systematic review. *Child and Adolescent Mental Health*. 2019;24(3):205-216. Available from: doi:10.1111/camh.12322
106. Finning K, Ukoumunne O, Ford T, Danielsson-Waters E, Shaw L, Romero De Jager I et al. The association between child and adolescent depression and poor attendance at school: A systematic review and meta-analysis. *Journal of Affective Disorders*. 2019;245:928-938. Available from: doi:10.1016/j.jad.2018.11.055
107. Moore, D., Benham-Clarke, S., Kenchington, R., Boyle, C., Ford, T., Hayes, R. and Rogers, M. Improving Behaviour in Schools: Evidence Review. Available from: https://educationendowmentfoundation.org.uk/public/files/Publications/Behaviour/EEF_Improving_behaviour_in_schools_Report.pdf Accessed: 20th July 2020.

July 2020