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Supporting Children in the Time of COVID-19:

*A School-Based
Approach to Health
and Wellbeing*

27th August 2020



A virtual conference brought
to you by Born in Bradford,
the Centre for Applied
Education Research,
& Stanford Center for
Population Health Sciences

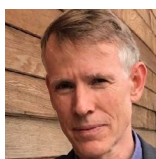


Vision for the Collaboration

Stanford Center for Population Health Sciences (PHS) <https://stanford.io/2Sd6Y6j>, the Bradford Institute for Health Research (BIHR) <https://bit.ly/3n8xgEX>, and the Wolfson Centre for Applied Research <https://wolfsoncahr.uk/>, share a common goal: improving the health and equality of populations and increasing the opportunities of a generation. We are also united in the scientific basis for achieving this goal based on the knowledge that approximately 90% of our health is determined by social and environmental factors. Finally, we share the belief that data, if collected and used in the right way, can help achieve this goal. Data can support our prior beliefs about what actions to take, or let us know that we can do better and be more effective in the solutions that we test.

Our shared vision and approach offers the opportunity to do more - and be more effective - by bringing greater numbers of people together to share ideas and solutions. The virtual conference on *Supporting Children in the Time of COVID-19: A School Based Approach to Health and Wellbeing* is an example of this. This conference report provides a summary of the presentations given during the event which touch on four international challenges facing teachers, children and their families throughout the COVID-19 pandemic: mental health, digital divide, equity in the classroom, and food insecurity. Both the United States and the United Kingdom are facing similar obstacles to keeping our children safe and healthy, and we believe that we can benefit from sharing ideas and learning from one another.

Our vision for the collaboration is that through interactive discussions we can identify specific shared interests for projects involving people from both the San Francisco Bay Area and Yorkshire, from Stanford and the Bradford Institute for Health Research and Wolfson Centre. In each of these collaborative projects, we aim to develop evidence based solutions, adapted to each community, to further our goal of improving the health and health equity of populations.



John Wright, MBBS, FRCP, FFPH |
Bradford Institute for Health Research



David Rehkopf, ScD, MPH | Center for
Population Health Sciences, Stanford
University

Session 1: Mental Health



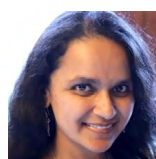
Roisin Corcoran, PhD, FBPSS, FAcSS |
University of Nottingham
***Social and Emotional Learning: Turning
Misconceptions into Research-Based
Conceptions***

Students, teachers, and parents are grappling with new anxieties and fears as a result of the COVID-19 pandemic. This has led to an increased demand for academic, social and emotional learning (SEL) programmes that promote evidence-based social and emotional research, policies, and practices. Universal school-based SEL programmes are known to have positive effects on reading, mathematics, and science achievement. However, not all SEL programmes are successful and randomised controlled trials and quasi-experimental evaluations are needed to determine which SEL programmes work, for whom, and under what conditions. Evidence-based

SEL approaches should be incorporated into teacher education programmes in order to help teachers develop and assess their own social and emotional competencies. When properly supported, student teachers reported better outcomes in managing their emotions and integrating SEL approaches into their classrooms.

More information can be found here:

<https://bit.ly/2HCdZeO>



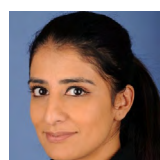
Manpreet Singh, MD MS | Stanford
University
***Understanding and Preventing
Depression in Youths During the
COVID-19 Pandemic***

Mood disorders are the leading cause of disability worldwide among young people. Disability stemming

from these disorders frequently appears at school, thus inhibiting a child's socialisation with peers, participation in academic and extracurricular activities, and school attendance. With the onset of COVID-19, these issues are now being compounded and observed at home. Children are also being exposed to the psychiatric conditions of family members and their maladaptive coping styles, including alcohol and/or drug use. The most poignant concern is social isolation and the impact this can have on adolescent development. Diagnosing childhood depression is difficult because it varies based on age and can mirror other conditions. To better address childhood depression, researchers must identify and develop: 1) biomarkers for early detection, 2) pre-emptive interventions for those at risk or in pre-symptomatic stages, and 3) better treatment options for people living with depression that can predict and track outcomes. Children who grow up in chaotic family environments, or who have parents with mood disorders, are at higher risk of developing more disconnected brain networks that are important for governing emotional regulation. However, those same networks can also be used to leverage more resilient outcomes by practising "prosocial behavior training," as exemplified in Family Focused Therapy (FFT). Evidence shows that FFT can delay the occurrence of mood symptom recurrence when compared to standard psycho education. Benefits of FFT also include improved emotion regulation, family relationships, and adaptive brain network connectivities to support healthy emotion regulation.

More information can be found here:
<https://stan.md/3jj2xTv>

Session 2: Digital Divide

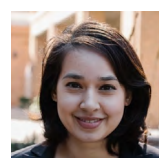


Fozia Hayat, MD | Bradford Institute for Health Research
Digital Makers: Thriving in a Virtual World

Digital literacy is a critical ingredient for social mobility in today's connected world. The digitally literate young person has access to myriad job opportunities that are not available to the illiterate. Researchers must provide opportunities for young, underserved communities to access digital resources and develop the confidence needed to navigate the world around them. The Bradford Institute for Health Research (BIHR) in partnership with the Centre for Immersive Technologies

has developed several projects focused on "curiosity-led research." One such programme, Digital Makers, allows young people to become directly involved in the research that shapes their environment, education, and leads to better health outcomes. The Digital Makers programme educates young people on digital security by showing them how to make informed decisions around data rights, privacy, and security. Participants become informed digital consumers who benefit from the physical, mental, and financial aspects of electronic services. For example, our children and young people can create electronic materials to signpost their peers to mental health support services. The programme uses data science, data analytics, artificial intelligence, and immersive technology packages to enhance the learning environment that is available to teachers and children in the City of Bradford.

More information can be found here:
<https://bit.ly/2HLRpk7>



Amina Fazlullah, JD | Common Sense Media
Closing the K-12 Digital Divide in the Age of Distance Learning

In the United States, 30% of K-12 students (equivalent to UK primary and secondary schools) are digitally divided from their peers (15-16 million people). Likewise, approximately 300,000 teachers lack adequate internet connection and approximately 80,000 lack appropriate devices for distance teaching within the US. The research from Bradford shows that there are similar issues within the UK. Without adequate distance teaching and learning tools, students - especially in low income and rural households - are at risk of significant learning loss during the COVID-19 pandemic. Although proper distance learning requires adequate internet connectivity and computing devices, one in four students in the United States do not have access to these resources. The digital divide disproportionately impacts rural communities as well as Native American, Black, and LatinX households. Government policies around the deployment of internet services has led to inconsistent and suboptimal coverage across neighborhoods. This poor infrastructure exacerbates the challenges of distance learning and often results in families paying higher internet costs due to fewer service providers. Costing studies have projected that \$6-11 billion (US) are needed in order to close the K-12 digital divide among students for one year. An additional \$1 billion (US) is needed to close the divide

among teachers. There is an urgent need for Congress and the states to provide emergency funding to ensure all students have equal access to distance learning. In the UK, the government needs to better support Local Authorities to close the digital divide. The private sector, districts, and education support organisations also have important roles to play in this challenge - to identify the right technology that meets the unique needs of their students and teachers today while fitting their long-term digital aspirations, and that are delivered systematically and equitably to districts across the United States

More information about the report:

<https://bit.ly/2SexhZO>,

and an interactive story map: <https://bit.ly/3n8B6xR>

Session 3: Equity in the Classroom



Amanda Waterman, PhD | University of Leeds

Supporting Disadvantaged Children During COVID-19

Children who live in poverty or who have special educational needs are more likely to have poorer short- and long-term educational outcomes compared to their peers. With COVID-19, these disparities have become exacerbated as virtual learning has resulted in reduced teaching time and poorer student engagement. Lack of routine and face-to-face interactions are especially harmful for children with special needs. The majority of disadvantaged children, those living in poverty and those with special educational needs, have poor executive function (which includes working memory, cognitive flexibility, and inhibition, linked to mental and physical health outcomes). With remote learning and lack of structure, there is a larger burden on executive function and obstacles in developing these skills. In a study of executive function in children in Bradford, the difference in average executive function scores between children from the most and the least deprived areas (linked to socioeconomic position) was the equivalent to a one to two year age gap. Thoughtful restructuring of the classroom environment, breaking down materials into smaller digestible portions, and utilising other physical and visual aids will help to ameliorate this problem.

More information can be found here:

<https://bit.ly/3jkdALZ>



Thomas Dee, PhD | Stanford University
Sustaining Student Engagement: Insights from Equity-Focused Partnership Research

COVID-19 is creating serious, long-lived disruption to student learning trajectories. Three ambitious initiatives in the San Francisco Bay Area provide leading evidence on equity-focused programme innovations: a summer enrichment programme for middle-school students in San Francisco: <https://bit.ly/2ELZh3S>, an Ethnic Studies course for high school students in San Francisco: <https://stanford.io/3OonTaF>, and the African American Male Achievement (AAMA) programme for Black youth in Oakland: <https://stanford.io/3jib6gX>. All three programmes focus on promoting student engagement and motivation through curricula and teaching that emphasises social/emotional skills and/or culturally relevant pedagogy. Quasi-experimental studies of these programmes indicate they are effective in improving critical student outcomes (e.g. chronic absenteeism, suspensions, grade point average, and dropping out of school). These programmes can be unusually cost-effective as they involve a reinvention of existing school programmes and practices. However, careful attention to implementation fidelity and support for teachers undertaking new approaches is needed.

Session 4: Food Insecurity



Jason Halford, PhD | University of Leeds
Child Obesity & COVID-19

Obesity is a known risk factor for cardiovascular disease, diabetes, and cancer, and a common comorbidity in more than 70% of individuals with COVID-19 in the United Kingdom. Those living with obesity are at greater risk of COVID-19 related hospitalisation, intensive care admission, and death. Children of obese parents are also at higher risk of being overweight, of having low socioeconomic status, suffering from mental health issues, and facing food insecurity. The COVID-19 pandemic has affected relationships with food with more serious downstream consequences beyond concerns directly related to COVID-19 outcomes for children and their parents who are living with obesity. In the early lockdowns, strained food systems and supply chains, increased reliance on processed foods, and decreased consumption of fresh fruits and vegetables resulted in shifts in diet, decreased

levels of physical activity, and worsening mental health. Additionally, longer screen time increased children's exposure to unhealthy food marketing, shifting child preferences away from healthy foods - an effect that more greatly affects children who are overweight or have obesity. Unfortunately, obesity is not a policy priority in most governments. In the United Kingdom, there is a new obesity strategy, limiting junk food marketing; however, there is a need to improve the cost of healthy foods, provide better access for obesity treatment, and prioritised prevention and management of COVID-19 for people who have obesity.

More information can be found here:
<https://bit.ly/2Gt0pty>



Anisha Patel, MD | Stanford University
School-based Efforts to Mitigate the Impact of the COVID-19 Pandemic on Food Insecurity

Food insecurity refers to uncertain access to food needed for a healthy and active lifestyle. It leads to malnutrition in the form of stunting/wasting or development of obesity and micronutrient deficiencies. These conditions increase the risk of chronic conditions such as dental caries, poor mental health, diabetes, and asthma. Food insecurity in the United States increased from 15% of households with children in 2018, to 35% in 2020, due to the COVID-19 pandemic. Thanks to efforts of school nutrition directors and the US Department of Agriculture, new programmes were quickly implemented to address food insecurity for school-aged children. The Families First Coronavirus Act and US Department of Agriculture administrative waivers enabled the creation of programmes like Pandemic-EBT. EBT is the Electronic Benefits Transfer US federal government welfare system (processed by an electronic transfer of funds) that supports low income families in the purchasing of food and other essential items. This programme ensured children were able to obtain meals from drive-throughs and bus stop deliveries; and food distribution evolved to allow for batching of meals, bulk distribution, and Pandemic-EBT funds that permitted families to purchase food and prepare meals with more appeal for individual family preferences. In a study of school districts in California, the majority were providing breakfast and lunch, especially in districts with underrepresented minority and free and reduced priced meal students; however, rural areas may need more assistance. Increased funding is needed for school

meal programmes, especially with the additional safety precautions surrounding COVID-19, and local school districts are encouraged to partner with community-based organisations to improve healthy bulk food options for children.

More information can be found here:
<https://bit.ly/36r76aR>

Conclusion

COVID-19 is a global pandemic with devastating consequences for children; however, research being conducted today offers evidence-based solutions we can advocate for and ways to help implement them in our schools and communities. This event served as the launch for longer term collaboration across these themes to support and improve outcomes for children.

A recording of the conference along with speaker biographies can be found here: <https://bit.ly/3ng1syx>

Acknowledgements

This conference and the research behind it would not have been possible without the contributions of our speakers and moderator. Their knowledge and commitment to supporting children, teachers, and their families has been extremely valuable during these uncertain times. We would also like to thank the members of the conference steering committee and community partners for providing feedback on the design and content of this event. We would also like to thank the conference coordination team from the Centre for Applied Education Research and the Stanford Center for Population Health Sciences for their logistical and operational support.

Q&A Discussion

Q. How do we identify individual families experiencing food insecurity in areas thought to be more affluent?

A. In the US, families from low-income backgrounds can apply to receive free and reduced-price meals in schools. Programme eligibility can be used as a proxy for identifying food-insecure families. School districts

could also administer a valid two-item food insecurity screener to identify food insecure families: <https://bit.ly/3cKpIn0>. Advocates working to address food insecurity have also proposed ensuring that all students in schools have access to free meals during the COVID-19 pandemic via Universal Free Meals. More information can be found here: <https://bit.ly/3n84Tab>.

Q. In the San Francisco Bay Area, kids are being bombarded with school work and sitting in front of a computer screen for several hours (especially middle school and high school students). School districts appear to lack concern for students' mental health. How do we bring school districts up to speed with what the research is showing with respect to mental health?

A. There are a number of educational activities and outreach programmes that are already provided, but efforts to disseminate research may be improved upon through strategic collaborations between education and healthcare systems.

Q. In Bradford, how are birth risk factors (e.g., preterm birth, etc.) shared with early-childhood and K-12 educators, in order to target interventions?

A. In Bradford we recognise the strong interconnection between health and education. Our early work has ensured that we link health and education data to provide a unified approach to understanding and predicting risk of adverse health and education outcomes and explanatory factors for positive outcomes. One example is our work linking prematurity and birth risk factors with Early Stage Foundation Profiles at age 5 years: <https://bit.ly/34ct5zp>. This illustrated the double disadvantage of prematurity and summer births and led to a change in school admission policy in Bradford.

Q. Before age three, early infant weight gain is predictive of later obesity risk. In Bradford, what maternal and child health interventions are targeting early infant weight gain?

A. Our epidemiological research in Born in Bradford has highlighted the risk of overweight and obesity that starts in pregnancy and early life: <https://bit.ly/2ELFeCD>. We initially focused on two locally developed obesity prevention programmes – Health and Active Parenting Programme for early Years (HAPPY): <https://bit.ly/3n6fhiI>, and the HENRY programme: <https://bit.ly/3ng29Ym>. However we are increasingly sceptical about their

emphasis on individual behaviour change and are moving to a whole, complex systems approach with ActEarly: <https://bit.ly/3cKuHnI>.

Q. Which kind of funding is available for smaller charities in the US/UK to meet the rising needs of children and their families?

A. In the US context, the most relevant source of funding to meet our current learning challenges is the federal government. However, its ongoing political dysfunction suggests few meaningful resources are likely to be made available, at least in the near term. A more modest, secondary source of funding involves the many philanthropies who have strategically pivoted to meet the challenges created by COVID-19. But it's important to note that some of the programmes discussed during the conference (e.g. innovative curricula and pedagogy) have much more modest costs because they involve reconstituting existing activities rather than generating entirely new programmes.

Q. What difference could data-driven models make for decision support compared with, say, knowledge-based strategies for regulators and local governments? Are there any examples to date?

A. Data-driven and knowledge based strategies are highly complementary and both are important. While knowledge-based strategies that put subjective human knowledge at the forefront are at the foundation of decision making, data driven models can provide new insights or confirm or reject prior human knowledge. At its essence, a data-driven model is just a more mathematical version of human observation, with similar strengths and weaknesses. It can get things wrong based on biases, but it can provide useful new knowledge, and can also be used to avoid human biases. In California an example of this are the Opportunity Zones and Promise Zones established in 2017 under President Obama. Rather than having humans pick less resourced areas for development, which in the past had been subject to political influence and corruption, data on poverty and resources were used to prioritise areas for economic investment.

Community Research Collaboration Meeting: The Four Projects

Mental Health: Supporting the social and emotional needs of educators in school settings

Deliverable: Support the school system in creating an evidence based 'listening service' (a peer-to-peer service providing a safe space for school staff to talk freely to colleagues, and signpost emotional wellbeing resources)

- Synthesise the research evidence literature on successful 'listening service' models developed previously
- Adapt existing health system models on basis of evidence and co-production
- Explore technical solutions (messaging, online courses, media platforms etc.) to underpin the service
- Support the school system to implement – and evaluate – the listening service

Digital Divide: Developing a granular understanding of digital inequalities impacting children

Deliverable: A detailed survey of digital inequalities across 'place' to support policies relating to the development/refinement of distant learning programs

- Undertake Qualitative and quantitative Investigation into technical, practical and emotional 'readiness' of children to engage with distance learning programs
 - Technology assessments (e.g. identifying connectivity needs and capacity)
 - Home resource assessments (e.g. caregiver support, device capacity, etc.)
 - Skills and knowledge mapping (teachers, families, community organizations)
- Develop training curriculum for teachers to facilitate remote teaching

Equity in the Classroom: Use predictive analytics to identify risk and protective factors for long term outcomes in children with neurodevelopmental problems

Deliverable: Publication of findings from analysis of existing datasets (providing insights into the early predictors of special educational support need in later childhood)

- Systematic synthesis of existing knowledge and evidence that can be shared
- Use existing data (e.g. Born in Bradford) to address new research questions
- Help schools, teachers, and non-profit organizations to use the generated evidence to create interventions that can mitigate child educational disparities / disadvantages

Food Insecurity: Understanding how the school system can improve food security for students and families

Deliverable: Guidelines on the use of schools as settings for tackling food insecurity

- Conduct qualitative community assessments that can inform interventions (focusing on key stakeholders, such as food banks, but particularly schools)
- Understand how schools can identify need and act as a hub that connects families with resources (particularly where race and disadvantage currently hinder access)
- Identify existing strategies used within schools that ensure interventions reach those most in need

We will disseminate the output of all projects via the academic literature, professional publications, policy maker networks, and reports within the Stanford and CAER networks.

We will ensure appropriate attribution of authorship according to the principles laid out by The International Committee of Medical Journal Editors Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work.



We aim to develop evidence based solutions, adapted to each community, to further our goal of improving the health and health equity of populations.

