A cross-cultural perspective of children's mental health in schools

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Word count: 4,978/5,200

Abstract

Good mental health is important for children's learning. Schools are well-placed to promote healthy classrooms and learners. However, available mental health assessments and services for specific populations and cultures often do not translate to younger years, hence support for school children scoring under clinical cut-offs for mental health referral and treatment are limited. How might we fill this gap in services when the demand for mental health support is clearly needed? This chapter reviews the evidence for school-based mental health support cross-culturally and discusses the importance of healthy classrooms for children's development. A shift towards a dimensional preventative approach to mental health is needed to maximise children's achievement and life outcome.

Keywords

Mental Health; School; Developmental; Culture; Transition.

Children's mental wellbeing and education

Mental health is the behavioural, emotional, and attentional symptoms that we all experience. It includes both mental *ill*-health and *well*-being which can both impact children's learning. There is good evidence that mental health begins in infancy and can have long term impacts on later life. Where educational research has focused on improving learning through teacher's instruction, curriculum design, and student engagement, psychological research has focused on promoting healthy learning environments and healthy learners. Researchers in these disciplines work hand and glove when it comes to thinking about our children's future.

This chapter examines the promotion of mentally healthy children in classrooms by drawing on evidence and policies from different countries. The premise of this chapter is that schools are well-placed to provide children and young people with a safe space to learn, develop, and grow into healthy individuals. We ask several questions: Why are mentally healthy classrooms important for children's learning? How is mental health assessed and defined in schools? What has been done and what is next?

To understand our current views of children's health, we must rewind our clocks back to 27th December 1839. On this day, the earliest record of children's development was first documented by none other than the naturalist, Charles Darwin. Darwin systematically journaled

William Erasmus's stages of development (Darwin's first-born child of 10) and whether or not his emotional expressions (e.g., onset of frowning, smiling) were 'instinctual' or 'learned' and how they related to emotions seen in animals (Darwin, 1839; 1872). From then, other scientists continued to study children's development and learning including Lev Vygotsky (1934; 1978), Jean Piaget (1936) and by the 50s/60s, John Bowlby (1969). In particular, Bowlby's Attachment Theory caught public attention. The theory posits that infants have an innate need to bond with the primary caregiver and that the relationship quality between infant and caregiver (predominantly the mother) predicts the infant's later development. Importantly, a persistently *poor* relationship, or insecure infant-mother attachment, would have dire effects on the "child's character and the *whole* of their future life" (p.46; Bowlby, 1952). This ominous statement at the time had ramped up societal pressures on mothers, sparked a feminist movement against the claims, and propelled further scrutiny over the causal conclusions drawn from Bowlby's observations.

Within the decade more objective epidemiological studies of children's development came to light. Bowlby's claims were contested and debunked as incomplete. A new wave of evidence led by Sir Michael Rutter, founding father of modern child psychiatry and developmental psychopathology, helped shift the field's understanding of the influences of 'nature vs. nurture' on children's development by advocating for a life course perspective. Rutter pointed out that poor attachment was only one 'risk factor' at best, and not a 'causal factor' for later mental disorders and autism. His naturalistic studies paved way for our understanding of the importance of early childhood environments on later development. Unlike Bowlby's observations in the lab, Rutter conducted prospective longitudinal studies and observed the outcomes of different groups of children in one 'natural' environment compared to another over time. Only this way can one begin to tease apart the nature-nurture contributions to children's outcomes and experiences. Today, many researchers take this lifespan approach and recognise the contributions of social, biological, and developmental factors that may influence children's mental health outcomes (Wong, Venables, & Raine, 2018).

Three of Rutter's landmark studies are particularly noteworthy. In a study of 9- to 11-year-olds from Camberwell (inner south London) and the Isle of Wight, Rutter *et al.*, (1976) found that inner city children were twice more likely to report behavioural deviance, psychiatric disorders, and reading retardation compared to those living in the Isle of Wight. Rutter's further analyses found that the relationship was no longer true once family adversity was considered. This suggested that children only differed in attainment because of differences in family disadvantage – a socioeconomic factor.

In a second study, Rutter *et al.* (1979) investigated why children's mental wellbeing and attainment varied across schools and found that school quality played a huge role in children's development (see Fifteen Thousand Hours). This then gave hope that improvements in school environment may have a positive impact on children's attainment and mental wellbeing.

The third and still on-going landmark longitudinal study of over 30 years is the English and Romanian Adoptees Study (Rutter, 1998). Rutter et al., (1998) followed the life trajectories of 165 Romanian orphans who were adopted at age 2 weeks to 43 months by various supportive UK families since the fall of the Socialist Republic of Romania in the 80s. Although initial study results showed that 80% of children with social deprivation reported emotional difficulties, peer problems, cognitive impairment and conduct problems, one-fifth of children with the same deprivation showed normal functioning (Rutter, Kreppner, & O'Connor, 2001). The most recent study findings have shown that childhood social deprivation of more than 6 months, assessed by

time spent in a Romanian institution, is the predicter for higher levels of social, emotional, and cognitive problems throughout adoptee's lives in their mid-20s compared to those of less than 6 months, had similar levels of mental health symptoms as UK adoptees (Sonuga-Barke et al., 2017). This evidence indicate that extreme early environmental deprivation and neglect can have long-lasting impact on an individual's adulthood. What this study crucially highlights were that placement into positive 'loving family' after childhood adversity was much needed, and so for children in similar situations today, action is urgently needed. Taken together, it is clear that a safe, stimulating, and positive learning environment is vital for children's mental wellbeing and development.

Why a healthy classroom is important for children's learning?

As Plato said, "The direction in which education starts a man will determine his future in life." As children and young people spend a significant portion of their early years in schools, a healthy classroom environment is vital for children's learning and development. According to a survey of 38 OECD countries (2014), the average hours spent in classrooms for a primary student is 794 hours a year, which comes to roughly 113 days a year. Hours spent in classrooms are largely unchanged between 2000 and 2009 but do vary across countries (hours): China (408), Poland (423), England (574), Australia (606), Belgium (637), USA (644), and Chile (787). Conversely, spending more time in classrooms don't equate to better attainment. There's more to designing effective school environments for learning as key 'actors' in the school, the teachers, and the peers, also play a role in promoting children's attainment and development including a wide range of socioemotional skills and mental wellbeing. Thus, maximising the potential for each of these factors can promote children's mental wellbeing in schools and increase their potential for learning.

But how is mental health assessed and defined in schools?

To best help students improve their attainment, teachers must also be aware of any learning difficulties and/or health issues. Specifically, understanding children and young people's mental health development can inform educational curriculum and design, school mental health support, and at a broader societal level, prevent students from embarking on a career in violence and crime (Wong, 2020; Wong & Raine, 2019; Wong & Raine, 2018). According to the World Health Organization (2021), 50% of all adult mental health disorders start by the age of 14 years. The majority of these disorders are undetected and untreated yet can impact young people's development and attainment. While it has been well-established that mental health issues have roots in childhood, it turns out that there are three gaps in our knowledge.

A first gap is our ability to measure mental health concepts are limited (e.g., measurement issue). Until recently, it was thought that young children do not worry or experience anxiety and depression, so there was little interest to assess these concepts. Moreover, the majority of existing instruments to date are for 8-year-olds and up, with almost nothing reliable and valid apart from a few parent-report questionnaires for younger children, so the research on the developmental aspects of mental health in younger children has been largely ignored. So, while the majority of young children are faring well on mental health, a small sub-group of young children are expressing symptoms of mental ill-health when surveyed (Wong et al., 2014; Wong et al., 2021). As accumulating evidence identifying pre-natal risk-factors (e.g., inflammation), genetic risk-factors (Barkhuizen, Pain, Dudbridge, & Ronald, 2020; Flouri et al.,

2019; Havers, Taylors, & Ronalds, 2019), and environmental risk-factors are being identified to predict mental illnesses in adulthood, the question then is: should we be assessing these symptoms earlier on in development? Which developmental period matters the most (Wong, Francesconi, & Flouri, 2021)? In the last two decades, the field has begun to bridge this gap in developing more child-appropriate mental health tools for younger ages.

A second gap is the lack of cross-cultural studies of mental health in low-income and developing countries, again often driven by the scarce culturally appropriate assessment tools for mental health or the inappropriate adoption of Western-developed scales without stringent psychometric testing. The majority of research on children's mental health come from Western, educated, industrialized, rich and democratic (WEIRD) countries and so more cross-cultural comparative studies in non-WEIRD countries are needed to help us better understanding how to maximise children's life outcomes globally. To this point, The World Bank has conducted some studies to address this. In one national representative survey of five countries (Indonesia, Bosnia and Herzegovina, Mexico, India, and Tongo), researchers found that poor mental health was associated with participants who were older, female, widowed, reported poor physical health, and lived with others (Das, Do, Friedman, & McKenzie, 2008). Interestingly, there was no relationship between mental health and poverty of education, but that financial and sudden shocks of illness and crisis can have greater impact on mental health than did levels of poverty – a point we will revisit in the pandemic section.

A third gap is the heterogeneity in the provision of mental health support in schools. Teachers are under pressure to provide adequate academic support for many students at a time, and additional time for further training is limited. Whilst teachers have been shown to be effective at recognising mental ill-health symptoms in students, about 20% of teachers across schools report specific gaps in their knowledge about mental health, particularly towards children with special education needs (SEN) (Wall et al., 2019). Thus, the burden of children's mental health should not fall on teachers. At the global level, many schools have adopted a variety of arrangements including working with third-party mental health service providers (e.g., Place2Be), integrating mental health knowledge into school curriculum (e.g., Personal, Social, Health, and Economics classes), having in-school counsellors/social workers (e.g., Child and Adolescent Mental Health Support (CAMHS) Teams), nurses/special needs educators assuming the role, and in some countries, teacher's referral mechanisms to external psychiatrists and psychologists. But which methods are most effective?

Currently, a 'three-tiered' approach is the most widely accepted and effective approach in identifying school's mental health needs in both low-/high-income countries (see reviews Fazel, Hoagwood, Stephen, & Ford, 2015; Fazel, Patel, Thomas, & Tol, 2014). This includes administering assessments to a specific group (step 1), followed by school mental health professionals processing/interpreting the data to identify students who meet a cut-off score (step 2), and interviewing/assessing students who meet the cut-off (see Fazel, Patel, Thomas, & Tol, 2014). Although these three steps are clear and seemingly practical, the reality is much more challenging.

Typically, a teacher would complete a student referral which would take on average 56 days for a child to access help – this is upward from the UK government goal of 30 days (Crenna-Jennings & Hutchinson, 2020). At the point of waiting, approximately 26% of referrals are rejected (2018-19 statistics) – 133,000 children and young people – because children's conditions are not suitable for treatment or didn't meet treatment criteria. Additionally, although the current tools used to screen/assess children's mental health (e.g., the Strengths and

Difficulties Questionnaire) are valid standardized measures, there is an unstandardized process for an acceptable cut-off score for students to be seen across school districts (e.g., as reflected also by different referral rates around England, and based on district resources). This process alone, though a seemingly good one, can amount to huge burdens and stress for both schoolteachers, parents, and social workers who simply do not have the skills to mediate the situation nor the capacity to monitor the child to ensure they do not self-harm. Currently, 1 in 6 mental health patients are attempting suicide as they face incredibly long wait times (2014) and according to a Royal College of Psychiatrist press release, two-fifths of patients waiting for mental health treatment are forced to use A&E instead (Savanta ComRes, 2020). As such, it is simply too little too late to only help those who reach a cut-off score, and more school-based preventative measures need to be in place.

Impact of COVID-19 pandemic on children's mental health

Evidently, the mental health issues and challenges presented thus far have come into even sharper focus when the coronavirus infectious disease 2019 (COVID-19) global pandemic hit (World Health Organization, 2020). In the UK alone, over 77 studies and counting have started to look at the impact of COVID-19 on children and young people from differing sub-groups (see updated list by Royal College of Paediatrics and Child Health, 2021). In one large UK study of parent reported child mental health (N = 9,161), researchers documented real fluctuations in behavioural, emotional, and attentional difficulties over the course of the lockdown year (Skripkauskaite et a., 2021). Symptoms peaked at the height of UK lockdowns restrictions and school closures, which is not unlike adult studies of mental health (Carollo et al., 2020; 2021; Wong et al., 2021). Young children (4 to 10 years) were particularly hard-hit compared to adolescents (11 to 16 years). As expected, although most children's mental health improved as lockdown restrictions lifted, on average, children and young people with special education needs/neurodevelopmental disorders and families on low incomes during the pandemic showed sustained high levels of symptoms. Comparable findings were reported in a German cross-sectional study conducted during the most restrictive lockdown period (April 2020). 3-to-6-year-olds reported even higher levels of conduct problems and hyperactivity compared with 7-to-10-year-olds, but older children reported more emotional symptoms (Christner et al., 2021).

While a key limitation to these studies is the lack of baseline measures of children's mental health, longitudinal studies around the world have addressed this gap. For example, in a national representative England's Mental Health of Children and Young People's survey, researchers found that increased levels of mental health issues, particularly symptoms of depression rose from 10.7% in 2017 to 16% in July 2020 in 5-to-16year-olds, with young women (27.2%) continuing to be the leading group of individuals reporting the highest levels of mental health issues (Newlove-Delgado et al., 2021). More than 25% of children (aged 5-16 years) and young people (aged 7-22 years) reported poor sleep, 1 in 10 children and young people reported 'often' or 'always' feeling lonely, 5.4% and 13.8%, respectively. Many more young people wanted to access healthcare services but could not, due to inaccessibility and long wait times. That said, the picture is not always doom and gloom. In the same sample where 54.2% of 11-to-16-year-olds with probable mental health problems reported that lockdown made their lives worse, 27.2% said it made their lives better. Similarly, in a separate study by Widnall et al., (2020), again with available pre- and post-pandemic measures, the mental health of those already struggling in October 2019 reported improvements in levels of anxiety, increase in wellbeing, and no change in depression. Improvements were also seen during the pandemic for children

who have had low school, peer, and family connectedness pre-pandemic in October 2019. When understanding the effects of the pandemic on mental health, it is important to recognise the nuance of the context and the heterogeneity of individual experiences.

On balance, when examining sub-groups of individuals in the population, the pandemic seems to have disproportionately affected some sub-groups of children more than others globally. Specifically, children with pre-existing e.g., attention deficit hyperactivity disorder, autism spectrum disorder (UK), 12-to-24-year-olds living with Type-1 diabetes reported moderate stress in 50% of cases (India; Agarwal et al., 2020), 4-to-18-year olds with chronic lung disease and their parents with high coronavirus anxiety (Canada; Hawke et al., 2020), and young people with pre-existing psychiatric diagnosis who were 6 times more likely to report clinical-levels of depressive symptoms and 4-5 times more likely to report clinical levels of anxiety and post-traumatic stress during the pandemic (USA; Liu et al., 2020) compared to the control group. It is clear that we are all in the same storm, but not in the same boat. These findings further highlight the discrepancies in mental health changes and inequalities in recovery for those with pre-existing socioeconomic and health inequalities.

In the UCL-Penn Global COVID Study (Wong & Raine, 2020), a three time-point study of the impact of COVID on adults (aged 18+ years) mental health, researchers examined specifically the mental health of families with at least one underaged child (<18 years) across time 1 (17 April – 14 July 2020) and time 2 (17 October 2020 – 31 January 2021) of the pandemic. Researchers found that parents with young children (4-8 years) had the highest levels of depression across both waves compared to parents with older children (9-12 years and 13-17 years), these parents were also significant younger than other parents (M_{age} = 39.37 years) (Portnoy, Bedoya, & Wong, 2021). Child externalizing problems at time 1 predicted parental stress levels and parental depressive symptoms at time 2, controlling for covariates (e.g., child age, parent age, gender). These findings suggest that both children's and parent's mental health also reciprocally interacting with each other and are no in isolation. Thus, children's problem behaviours likely influenced parents stress and depression during the pandemic, indicating that mental health interventions for parents with young children may help during times of disaster.

What has been done, and what is next?

In light of the pre- and post-pandemic literature on children's mental health, it is clear that widespread heterogeneity in individual mental health experiences, school-level practices, and country-level policies makes promoting good mental wellbeing for children challenging. However, taking a systems-approach, and the three-tiered approach in schools, it is important that at every of children's development that there is clear mental health support available to them. These mental health provisions have to start very early on in development as they can influence children's attainment, social and coping skills, later physical and mental health, and have costly impacts on society at large. As such, I highlight three areas of priority below.

1. **Preventive mental health provision in schools to support all.** School is a hub for learning but is also frequently children's first point of contact to accessing professional mental health support (e.g., teacher referrals, teachers are successful at identifying mental health symptoms). While teachers should not be expected and further burdened to provide professional mental health support, teacher's ability to screen for and monitor changes in children and young people's moods/behaviours are valuable. In contrast to most WEIRD countries, regular assessments of all children's mental health have been met with criticism and ethical concerns, yet in China's recent

policy mandate (2021), the country has asked for compulsory mental health education in all public/private schools, inclusion of a counsellor in every school, and assessment of depressive symptoms in university-goers (Ni, 2021). Though gathering mental health data en masses may be a strong preventive intervention strategy if done with transparency. But as cultural barriers/stigma towards mental disorders are still prevalent, a better approach might be a national-wide conversations and promotion of positive mental wellbeing strategies that encourage lifestyle and cultural change.

2. **Promotion of school-wide mental wellbeing and awareness**. Specifically in schools, education about mental health (e.g., UK PSHE classes, US Health Education Class) and regular 'health' assessments that encompass both physical and mental health conditions are recommended. Schools remain to be safe educational spaces where difficult conversations around mental health issues can be had, myths debunked, and stigma normalised.
3. **Facilitation of more Research-Educator partnership.** There is still so much to learn on the topic of children and young people's mental health in schools. The final recommendation pertains to the closing of the research-to-practice gap through co-produced knowledge exchange projects/initiatives and co-created solutions. Coming back to the point at the beginning, both educators and psychologists have the same goal of maximising children's life outcomes. Thus, better and more researcher-practitioner partnerships will only benefit the same cause.

Against this backdrop of evidence presented in this chapter, it is clear that we are at the cusp of a sea change. Whether it is closing of the research-to-practice gap, the field has come a long way in the last century, and perhaps with a pandemic in between, we will finally come together to maximise our children's futures.

References (1,250 words)

1. Agarwal, N., Harikar, M., Shukla, R. & Bajpai, A. (2020). COVID-19 pandemic: a double trouble for Indian adolescents and young adults living with type 1 diabetes. *International Journal of Diabetes in Developing Countries, 40*, 346–352.
2. Barkhuizen, W., Pain, O., Dudbridge, F., & Ronald, A. (2020). Genetic overlap between psychotic experiences in the community across age and with psychiatric disorders. *Translational Psychiatry*, *10*(1), 1-12.
3. Bowlby, J., & World Health Organization. (1952). Maternal care and mental health: A report prepared on behalf of the World Health Organization as a contribution to the United Nations programme for the welfare of homeless children. World Health Organization.
4. Carollo, A., Bizzego, A., Gabrieli, G., Wong, K. K. Y., Raine, A., & Esposito, G. (2020). I'm alone but not lonely. U-shaped pattern of perceived loneliness during the COVID-19 pandemic in the UK and Greece. *medRxiv*.
5. Carollo, A., Bizzego, A., Gabrieli, G., Wong, K. K. Y., Raine, A., & Esposito, G. (2021). Self-Perceived Loneliness and Depression During the COVID-19 Pandemic: A Two-Wave Replication Study. *UCL Open: Environment Preprint*.

6. Christner, N., Essler, S., Hazzam, A., & Paulus, M. (2021). Children's psychological well-being and problem behavior during the COVID-19 pandemic: An online study during the lockdown period in Germany. *PLOS ONE*, *16*(6), e0253473.
7. Crenna-Jennings, W. & Hutchinson, J. (2020). Access to child and adolescent mental health services in 2019. Retrieved on 10 November 2021. https://epi.org.uk/publications-and-research/access-to-child-and-adolescent-mental-health-services-in-2019/.
8. Das, J., Do, Q-T., Friedman, J., & McKenzie, D. (2008). Mental Health Patterns and Consequences : Results from Survey Data in Five Developing Countries. Policy Research Working Paper; No. WPS 4495. World Bank, Washington, DC. © World Bank. https://openknowledge.worldbank.org/handle/10986/6376 License: CC BY 3.0 IGO.
9. Goodman, R., Gledhill, J., & Ford, T. (2003). Child psychiatric disorder and relative age within school year: cross sectional survey of large population sample. *BMJ, 327*(7413), 472.
10. Hawke, L. D., Monga, S., Korczak, D., Hayes, E., Relihan, J., Darnay, K., ... & Henderson, J. (2021). Impacts of the COVID-19 pandemic on youth mental health among youth with physical health challenges. *Early Intervention in Psychiatry*, *15*(5), 1146-1153.
11. Liu, C. H., Stevens, C., Conrad, R. C., & Hahm, H. C. (2020). Evidence for elevated psychiatric distress, poor sleep, and quality of life concerns during the COVID-19 pandemic among US young adults with suspected and reported psychiatric diagnoses. *Psychiatry research*, *292*, 113345.
12. Ni, D. (2021). Beijing schools to include compulsory mental health education. Retrieved on 10 Nov 2021: https://www.sixthtone.com/news/1008663/beijing-schools-to-include-compulsory-mental-health-education-
13. Darwin, C. (1872). The Expression of the Emotions in Man and Animals. London: J. Murray. Also cited in *The correspondence of Charles Darwin*, vol. 4, Appendix III. Darwin's notebook is in the Darwin Archive of Cambridge University Library (DAR 210.11: 37). Retrieved on 10 Nov 2021 from https://www.darwinproject.ac.uk/people/about-darwin/family-life/darwin-s-observations-his-children.
14. Downs, J., Gilbert, R., Hayes, R. D., Hotopf, M., & Ford, T. (2017). Linking health and education data to plan and evaluate services for children. *Archives of Disease in Childhood, 102*(7), 599-602.
15. Fazel, M., Hoagwood, K., Stephan, S., & Ford, T. (2014). Mental health interventions in schools in high-income countries. *The Lancet Psychiatry, 1*(5), 377-387.
16. Fazel, M., Patel, V., Thomas, S., & Tol, W. (2014). Mental health interventions in schools in low-income and middle-income countries. *The Lancet Psychiatry*, *1*(5), 388-398.
17. Flouri, E., Francesconi, M., Papachristou, E., Midouhas, E., & Lewis, G. (2019). Stressful life events, inflammation, and emotional and behavioural problems in children: A population-based study. *Brain, Behavior, and Immunity*, *80*, 66-72.
18. Ford, T., Hayes, R., Byford, S. Edwards, V., Fletcher, M., Logan, S., Norwich, B., Pritchard, W., Allen, K., Allwood, M., Ganguli, P., Grimes, K., Hansford, L., Longdon, B., Norman, S., Price A. & Ukoumunne O. C. (2019). The effectiveness and cost-effectiveness of the Incredible Years® Teacher Classroom Management programme in

primary school children: results of the STARS cluster randomised controlled trial. Psychological Medicine, 49(5), 828-842. doi:10.1017/S0033291718001484.
19. Havers, L., Taylor, M. J., & Ronald, A. (2019). Genetic and environmental influences on the stability of psychotic experiences and negative symptoms in adolescence. *Journal of Child Psychology and Psychiatry*, *60*(7), 784-792.
20. Newlove-Delgado, T., McManus, S., Sadler, K., Thandi, S., Vizard, T., Cartwright, C., & Ford, T. (2021). Child mental health in England before and during the COVID-19 lockdown. *The Lancet Psychiatry*, *8*(5), 353-354.
21. OECD (2014), "Indicator D1: How much time do students spend in the classroom?", in Education at a Glance 2014: OECD Indicators, OECD Publishing. http://dx.doi.org/10.1787/888933119530
22. Portnoy, J., Bedoya, A., & Wong, K. K. Y. (2021). Child Externalizing and Internalizing Behavior and Parental Well-Being During the COVID-19 Pandemic. *UCL Open: Environment Preprint*.
23. Royal College of Paediatrics and Child Health (2021). COVID-19 - research studies on children and young people's views. Retrieved on 10 November 2021 https://www.rcpch.ac.uk/resources/covid-19-research-studies-children-young-peoples-views.
24. Rutter, M. (1979). *Fifteen thousand hours: Secondary schools and their effects on children*. Cambridge, Mass: Harvard University Press.
25. Rutter, M. (1998). Developmental catch-up, and deficit, following adoption after severe global early privation. *The Journal of Child Psychology and Psychiatry and Allied Disciplines*, *39*(4), 465-476.
26. Rutter, M. L., Kreppner, J. M., & O'Connor, T. G. (2001). Specificity and heterogeneity in children's responses to profound institutional privation. *The British Journal of Psychiatry*, *179*(2), 97-103.
27. Rutter, M., Tizard, J., Yule, W., Graham, P., & Whitmore, K. (1976). Isle of Wight Studies, 1964–1974. *Psychological Medicine*, *6*(2), 313-332. doi:10.1017/S003329170001388X
28. Savanta ComRes (2020). Two-fifths of patients waiting for mental health treatment forced to resort to emergency or crisis services
29. Retrieved 11 November 2021. https://www.rcpsych.ac.uk/news-and-features/latest-news/detail/2020/10/06/two-fifths-of-patients-waiting-for-mental-health-treatment-forced-to-resort-to-emergency-or-crisis-services
30. Skripkauskaite, S., Shum, A., Pearcey, S., McCall, A., Waite, P., & Creswell, C. (2021). Changes in children's mental health symptoms from March 2020 to June 2021 (Report 11). Co-SPACE study. http://cospaceoxford.org/findings/changes-in-childrens-mental-health-symptoms-from-march-2020-to-june2021/
31. Sonuga-Barke, E. J., Kennedy, M., Kumsta, R., Knights, N., Golm, D., Rutter, M., ... & Kreppner, J. (2017). Child-to-adult neurodevelopmental and mental health trajectories after early life deprivation: the young adult follow-up of the longitudinal English and Romanian Adoptees study. *The Lancet*, *389*(10078), 1539-1548.
32. Wall, K., Van Herwegen, J., Shaw, A., Russell, A., & Roberts, A. (2019). A Study of the Drivers, Demand and Supply for Special Educational Needs and/or Disabilities (SEND)-Related Continuing Professional Development (CPD) for School Staff. UCL.

33. Widnall, E., Winstone, L., Mars, B., Haworth, C., & Kidger, J. (2020). Young people's mental health during the COVID-19 pandemic: Initial findings from a secondary school survey study in Southwest England. *University of Bristol*. https://sphr.nihr.ac.uk/wp-content/uploads/2020/08/Young-Peoples-Mental-Health-during-the-COVID-19-Pandemic-Report.pdf
34. Wong, K. K. Y. (2020). Schizophrenia and Crime. *Encyclopedia of Personality and Individual Differences*, 4575-4580.
35. Wong, K. K-Y., & Raine, A. (2020). COVID-19: Global social trust and mental health study. https://doi.org/10.17605/OSF.IO/FE8Q7.
36. Wong, K. K., & Raine, A. (2018). Developmental aspects of schizotypy and suspiciousness: a review. *Current behavioral Neuroscience Reports*, *5*(1), 94-101.
37. Wong, K. K.-Y., & Raine, A. (2019). Peer problems and low self-esteem mediate the suspicious and non-suspicious schizotypy–reactive aggression relationship in children and adolescents. *Journal of Youth and Adolescence*, *48*(11), 2241-2254.
38. Wong, K. K-Y., Wang, Y., Esposito, G., & Raine, A. (2021). A three-wave network analysis of COVID-19's impact on schizotypal traits, paranoia and mental health through loneliness. *UCL Open: Environment Preprint*
39. Wong, K. K. Y., Raine, A., & Venables, P. (2018). The effect of being left home alone at age 3 years on schizotypy and antisocial behavior at ages 17 and 23 years. *Journal of Psychiatric Research*, *105*, 103-112.
40. World Health Organization. (2020). Coronavirus disease 2019 (COVID-19): situation report, 51. World Health Organization. https://apps.who.int/iris/handle/10665/331475.
41. World Health Organization (2021). Adolescent and Young Adult Health. https://www.who.int/news-room/fact-sheets/detail/adolescents-health-risks-and-solutions. Retrieved on 10 November 2021.

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