


Short Report

General practitioner referrals to a child and adolescent mental health service (CAMHS): pre and post COVID-19 pandemic

P. FitzPatrick¹, A. George², F. Lynch³ and F. McNicholas⁴ 

¹Ballyfermot Mental Health Service, Ballyfermot Primary Care Centre, Dublin, Ireland, ²SMMS, UCD, Belfield, Dublin, Ireland, ³Consultant Psychiatrist Lucena Clinic Tallaght, Exchange Hall, Belgard Square North, Tallaght, Co., Dublin, Ireland and ⁴Consultant Psychiatrist, Lucena Clinic, Dublin, Ireland

Abstract

Objectives: To compare the characteristics of GP referrals to CAMHS prior to and over the entire pandemic.

Methods: All accepted referrals to a Dublin-based CAMHS between January 1, 2019, and June 30, 2023, were examined. Referral letters were anonymised in batches, and information was extracted directly onto a designated proforma.

Results: Before the pandemic (January 2019–February 2020), an average of 17.8 referrals were accepted per month, while during and after the pandemic (March 2020–June 2023), this rose to 18.7 accepted referrals per month. Increases were observed in the clinic's prioritisation of cases during the pandemic period (54.8% v. 41%, $p < .001$).

Referrals post COVID-19 were older (13.1–13.64 years, $p = .010$) with a higher proportion of females (50.2% v. 62.1%, $p < .001$). Internalising disorders increased during the pandemic (68.7% v. 78.7%, $p = .001$), with self-harm referrals also being notably more frequent (18.5% v. 36.3%, $p < .001$). Referrals for anxiety (43.0% v. 78.2%, $p = .004$) and eating disorders (0% v. 6.2%, $p < .001$) increased significantly. Referrals for psychosis (8.4% v. 4.8%, $p = .032$) and autism spectrum disorder (ASD) (26.5% v. 18.7%, $p = .008$) decreased after the onset of the pandemic.

Conclusions: Notable increases in referrals for anxiety, depression, self-harm, and eating disorders underscore the impact of the pandemic on youth mental health. Understanding these shifts is crucial for CAMHS to adapt resources and interventions effectively. Clinicians must remain vigilant in assessing and addressing the evolving mental health needs of youths in the post-COVID era, ensuring timely and appropriate interventions, and resources to mitigate long-term consequences.

Keywords: Anxiety; CAMHS; COVID-19; eating disorders; pandemic

(Received 19 April 2024; revised 15 July 2024; accepted 9 August 2024)

Introduction

The COVID-19 pandemic declared by the World Health Organisation in February 2020 and stepped down in May 2023 led to three and a half years of significant societal disruption with unprecedented changes in social behaviour, economic structures, and healthcare working. The immediate concern was of managing medical risk and reducing mortality. As of July 2023, over 6.9 million deaths have occurred globally due to COVID-19 (World Health Organisation 2023).

Previous pandemics have alerted us to pandemic-related mental health (MH) repercussions, often longer lasting and with greater impact than medical sequelae (Gunnell et al., 2020). Current international evidence confirms adverse MH outcomes internationally, with higher risk among females and younger age (Holmes et al., 2020; Santomauro et al., 2021).

Ireland too saw an increase in MH presentations. Paediatric emergency departments nationally saw a disproportionate rise in

acute MH referrals for suicidal thoughts and self-harm. (McDonnell et al., 2022) aligning with international experience (Wong et al., 2023).

In the first year of the pandemic, referrals to five child and adolescent mental health services (CAMHS) increased by 50% compared to previous years (McNicholas et al., 2021). Research by this group failed to show any increase in general practitioner (GP) referrals but reported a change in clinical profile: a higher proportion of referrals for females (57% compared to 43% pre-pandemic) presenting with internalising disorders (86% v. 70%) and/or self-harm or suicidal ideation (56% v. 42%) (FitzPatrick et al., 2023). Fewer referrals were received for ADHD (11% post COVID-19 compared to pre-pandemic rates of 21%) and ASD (16% v. 26%). As this study was limited to the first ten months of the pandemic, it is not clear whether this change in profile has persisted.

Aims

To compare characteristics of GP referrals to CAMHS prior to and over the entire pandemic.

Methods

Using CAMHS electronic health records (Mental Health Information System; MHIS), all referrals received and accepted

Corresponding author: P. FitzPatrick; Email: pat.fitzpatrick23@gmail.com

Cite this article: FitzPatrick P, George A, Lynch F, and McNicholas F. General practitioner referrals to a child and adolescent mental health service (CAMHS): pre and post COVID-19 pandemic. *Irish Journal of Psychological Medicine* <https://doi.org/10.1017/ipm.2024.39>

by one specialist geographically defined CAMHS in Dublin were examined. This CAMHS covered a catchment area of about 20,000 youths under eighteen years. The study time period spanned 54 months, from January 1st 2019 to 30th June 2023. Referrals received after March 2020, or time 2, were categorised as post COVID-19. Referrals received that did not meet criteria for CAMHS were excluded.

A proforma was designed to assist with data extraction from the GP letter. The presence or absence of various clinical symptoms referenced by the GP were recorded using a tick-box system. This included mention of possible mood, anxiety, psychotic or eating disorder, ADHD, ASD, behavioural or conduct disorder, substance abuse disorder, suicidal ideation, and self-harm. Reasons for referral and clinical features mentioned were extracted and aligned with possible clinical diagnoses. Data was collected by the team psychiatry registrars. A medical student attached to the team during a summer research project also assisted with data extraction. Training and ongoing supervision were provided by the senior clinical members. Data extracted from MHIS was de-identified at source and analysis conducted using Statistical Package for Social Sciences (SPSS).

Descriptive statistics were used to categorise the sample. Mean and standard deviations (SD) were used to describe age, with frequencies and percentages used to describe sex, education, symptoms and diagnosis, actions, and thoughts of self-harm. Referrals marked urgent by GP or clinician post review were categorised as priority.

Cases were subsequently categorised as either internalising (reserved for any mention to symptoms of anxiety or depression) or externalising (where reference was made to ADHD, behavioural, or conduct problems) for ease of analysis. Other presentations, such as psychosis, eating disorders, substance use disorder, and self-harm, were listed separately.

Results

An average of 17.8 referrals were accepted per month during time 1 compared to 18.7 time 2 post COVID-19, representing a 5% increase (see Table 1).

The age of referral showed a significant increase from 13.1 to 13.64 ($p = .010$). During T1, 125 cases (50.2%) were females (average of 8.9 per month), compared to 443 (62.1%) in T2 (average 11.1/month) ($p < .001$). There was also a difference in clinic prioritisation, with 152 (41%) being prioritised by CAMHS as urgent at T1 compared to 391 (54.8%) at T2 ($p < .001$).

There was a significant increase in the proportion of referrals with internalising disorders post COVID-19 (68.7% v. 78.7%, $p = .001$), reflected by an increase in referrals for anxiety (43.0% v. 78.2% $p = .004$), where monthly referrals increased significantly from 7.6 to 9.6/m. The proportion of referrals for eating disorders (0% v. 6.2%, $p < .001$) and self-harm (18.5% v. 36.3%, $p < .001$) also increased (Table 1). Monthly referrals for self-harm increased from 3.3 to 7.5/m. In contrast, the proportion of referrals for psychosis (8.4% v. 4.8%, $p = .032$) and ASD (26.5% v. 18.7%, $p = .008$) decreased significantly. Monthly referrals for ADHD also decreased, from 7.7 per month to 5.6, but this did not reach clinical significance. ($p = .061$).

Discussion

Findings of this study, conducted over 40 months post-pandemic onset, concur with and extend findings from a study examining GP referrals to CAMHS in the first ten months of COVID-19

(FitzPatrick *et al.*, 2023). Average monthly referrals for females increased from 8.9 to 11.1 per month, and the average age increased from 13.1 to 13.6 as the pandemic progressed. This observation resonates with a systematic review reporting adolescents and girls experienced a more pronounced deterioration in MH post-pandemic (Samji *et al.*, 2022). Existing literature suggests that during crises, girls rely more on social networks for support than boys. Hence, pandemic disruptions to these networks may have disproportionately affected females, increased distress, and prompting referrals to CAMHS.

This study found that GP referrals for internalising disorders and/or self-harm or suicidal ideation were also higher than pre-pandemic rates. This was predominantly driven by a sustained increase in anxiety-related referrals, where the average monthly referral rose from 7.6/month pre-pandemic to 9.6. This increased rate of referrals with self-harm to CAMHS aligns with international data (Ougrin *et al.*, 2022).

A pandemic-related increase in demand for eating disorder (ED) services has been reported in specialist services both in Ireland (Campbell *et al.*, 2022; Rafferty *et al.*, 2024) and internationally (Branley-Bell and Talbot 2020). The earlier study (FitzPatrick *et al.*, 2023) noted little change in GP referrals of EDs in the initial stages of COVID-19. However, this service has historically low rates of ED referrals. However, as the pandemic progressed, ED referrals increased. A potential delayed effect on ED psychopathology has also been reported by others (Lin *et al.*, 2021).

COVID-19 related social isolation, time home alone, and stressful home environments were viewed as risk factors for depression in this age group (Chen *et al.*, 2020). Higher rates of depression have been reported internationally (Ludwig-Walz *et al.*, 2022) and in qualitative interviews with a cohort of 48 Irish families (O'Sullivan *et al.*, 2021). Given Ireland had one of the longest periods of school closure compared to other countries, it might be expected that rates of depression would be higher (OECD 2021). Contrary to expectations, our study did not show any increase in referrals for depression. Monthly referral rates remained stable at between 9.4 and 9.8/month. Other researchers have highlighted a rebound effect of anxiety symptoms with the easing of lockdown restrictions and re-integration back to school and society (Huang and Ougrin 2021). It is possible that our lack of any increase in depression may be due to diagnostic overshadowing with anxiety.

Consistent with the previous study (FitzPatrick *et al.*, 2023) as the pandemic continued, fewer referrals were received relating to ASD and psychosis. This is at odds with the experience of families with children with ASD, where they reported increased MH difficulties during the pandemic, mostly due to educational closures and changes to routine. Concerns have been raised previously that presentations of psychosis have been overshadowed or masked by anxiety during the pandemic, contributing to delays in treatment (O'Donoghue *et al.*, 2021) and of relevance given the increase in anxiety-related referrals received. Research conducted in Australia showed a twofold increase in presentations during the later phase of restrictions compared to the initial phase (O'Donoghue *et al.*, 2022). This finding does not align with our study and highlights the importance of ongoing surveillance.

In our initial study, we found a significant decrease in ADHD referrals (FitzPatrick *et al.*, 2023). An ADHD specialist CAMHS also reported an 80% reduction in referrals, attributing this to school closure and reduced teacher referrals (McGrath 2020). It stands to reason with the re-opening of schools and other facilities in the latter stages of the pandemic that referrals for ADHD would

Table 1. Clinical characteristics of GP referrals pre and post COVID-19*

Symptom profile	January 2019–February 2020 pre-COVID-19 (<i>N</i> = 249) 14 months time 1	March 2020–June 2023 COVID-19 pandemic and aftermath (<i>N</i> = 746) 40 months time 2	Statistics
Average number of referrals/months	17.8/m	18.65/m	
Age	13.1 (<i>n</i> = 249)	13.64 (<i>n</i> = 713)	<i>T</i> (960) = −2.576, <i>p</i> = 0.010
Female gender	50.2% (<i>n</i> = 125)	62.1% (<i>n</i> = 443)	Chi (2) = 14.855, <i>p</i> < 0.001
Clinic prioritisation	41% (<i>n</i> = 152)	54.8% (<i>n</i> = 391)	Chi (1) = 14.22, <i>p</i> < 0.001
GP prioritisation	0% (<i>n</i> = 0%)	41.1% (<i>n</i> = 293)	Chi (1) = 147.139, <i>p</i> < 0.001
Internalising disorders	68.7% (<i>n</i> = 171) 17.8/m	78.7% (<i>n</i> = 561) 14/m	Chi (1) = 10.158, <i>p</i> = 0.001
Anxiety	43.0% (<i>n</i> = 107) 7.6/m	78.2% (<i>n</i> = 382) 9.6/m	Chi (1) = 8.304, <i>p</i> = 0.004
Mood disorder	52.6% (<i>n</i> = 131) 9.4/m	55% (<i>n</i> = 392) 9.8/m	Chi (1) = 717, <i>p</i> = 0.518
Eating disorders	0% (<i>n</i> = 0) 0/m	6.2% (<i>n</i> = 44) 1.1/m	Chi (1) = 16.103, <i>p</i> < 0.001
Externalising disorders	37.8% (<i>n</i> = 94) 6.7/m	31.3% (<i>n</i> = 223) 5.8/m	Chi (1) = 3.502, <i>p</i> = 0.061
Psychosis	8.4% (<i>n</i> = 21) 1.5/m	4.8% (<i>n</i> = 34) 0.9/m	Chi (1) = 4.599, <i>p</i> = 0.032
ADHD	43.4% (<i>n</i> = 108) 7.7/m	29.9% (<i>n</i> = 223) 5.6/m	Chi (1) = 3.502, <i>p</i> = 0.061
ASD	26.5% (<i>n</i> = 66) 4.7/m	18.7% (<i>n</i> = 133) 3.3/m	Chi (1) = 6.936, <i>p</i> = 0.008
SH	18.5% (<i>n</i> = 46) 3.3/m	36.3% (<i>n</i> = 259) 7.5/m	Chi (1) = 27.176, <i>p</i> < 0.001
SI	38.2% (<i>n</i> = 95) 6.8/m	44.5% (<i>n</i> = 317) 7.9/m	Chi (1) = 2.99, <i>p</i> = 0.083

*Full data on *N* = 249 pre and *N* = 713 post COVID-19.

return to pre-COVID-19 levels. However, our study, covering 40 months after COVID-19 onset does not suggest this. Although there has been an increase in the proportion of referrals over the 40 months (29.9%), compared to the first 10 months post-COVID-19 (11.1%) (FitzPatrick et al., 2023) these have not yet reached levels seen before COVID-19 (43.4%), where the average monthly referral rates were 7.7/month compared to 5.6/month post COVID-19.

Disorder-specific differences and the variance in findings between countries prompt an exploration into potential mitigating factors. Country-specific responses and financial supports to COVID-19, adaptation and roll out of telehealth, use of online communication, extent of family connections may account for some of these differences. (Sean Murray 2023, Tibbetts et al., 2021).

The COVID-19 pandemic has critically impacted young peoples' MH (Hossain et al., 2022). Perhaps the most pertinent finding of this study is the increase in clinic perceived prioritisation of cases, which has persisted as the pandemic continued. What previously might have been viewed as an acute stress response to the pandemic is evident as persistent for many. Ongoing demand for CAMHS will require requires more resources and manpower – something that needs to be continually advocated and championed for.

Limitations

This study lacked a standardised method for data collection, and data extracted relied on details provided in GP referrals letters alone. Diagnostic proxies drawn from this information were not substantiated by post-assessment diagnosis. Triangulating GP referral letters with post assessment reports would have added credibility to the findings. The retrospective nature of the study and data retrieval from only one CAMHS limits the generalisability of the findings.

Conclusions

Initial increases in GP CAMHS referrals for anxiety, self-harm, and EDs have persisted over the 40 months of the pandemic. The initial decrease in referrals of ASD and psychosis have also persisted over time. Females and older adolescents showed increased referral rates, potentially highlighting a demographic more vulnerable to the pandemic's MH effects. The persistence of heightened clinical prioritisation underscores the pandemic's lasting impact on MH service demand. These shifts necessitate adaptable service delivery models and increased resources to address the evolving needs of young patients. The study also emphasises the importance of continuous monitoring and proactive planning to manage the ongoing impact on CAMHS effectively. While the study faced

limitations, including reliance on GP referral details and data from a single CAMHS, it underscores the critical need for sustained vigilance and flexibility in MH services. Addressing these ongoing challenges requires enhanced resources and strategic planning to support the MH of young people in the post-pandemic era.

Financial support. This research received no specific grant from any funding agency, commercial or not-for-profit sectors.

Competing interests. None.

Ethical standards. The authors assert that all procedures contributing to this work comply with the ethical standards of the relevant national and institutional committee on human experimentation and with the Helsinki Declaration of 1975, as revised in 2008.

Ethical approval was granted by St John of God Ethics Board ID 784.

References

- Branley-Bell D, Talbot CV (2020). Exploring the impact of the COVID-19 pandemic and UK lockdown on individuals with experience of eating disorders. *Journal of Eating Disorders* 8, 44. <https://doi.org/10.1186/s40337-020-00319-y>
- Campbell S, Maunder K, Lehmann O, McKeown M, McNicholas F (2022). The long-term impact of COVID-19 on presentations to a specialist child and adolescent eating disorder program. *Irish Medical Journal* 115, 653.
- Chen F, Zheng D, Liu J, Gong Y, Guan Z, Lou D (2020). Depression and anxiety among adolescents during COVID-19: a cross-sectional study. *Brain, Behavior, and Immunity* 88, 36–38. <https://doi.org/10.1016/j.bbi.2020.05.061>
- FitzPatrick P, Antczak K, Lynch F, Lynch S, McNicholas F (2023). General practitioner referrals to child and adolescent mental health services: did they differ during covid-19? *Irish Journal of Psychological Medicine* 40, 457–459. <https://doi.org/10.1017/ipm.2023.13>
- Gunnell D, Appleby L, Arensman E, Hawton K, John A, Kapur N, Khan M, O'Connor RC, Pirkis J, Appleby L, Arensman E, Caine ED, Chan LF, Chang S-S, Chen Y-Y, Christensen H, Dandona R, Eddleston M, Erlangsen A, Gunnell D, Harkavy-Friedman J, Hawton K, John A, Kapur N, Khan M, Kirtley OJ, Knipe D, Konradsen F, Liu S, McManus S, Mehlum L, Miller M, Moran P, Morrissey J, Moutier C, Niederkrotenthaler T, Nordentoft M, O'Connor RC, O'Neill S, Page A, Phillips MR, Pirkis J, Platt S, Pompili M, Qin P, Rezaeian M, Silverman M, Sinyor M, Stack S, Townsend E, Turecki G, Vijayakumar L, Yip PSF (2020). Suicide risk and prevention during the COVID-19 pandemic. *The Lancet Psychiatry* 7, 468–471. [https://doi.org/10.1016/S2215-0366\(20\)30171-1](https://doi.org/10.1016/S2215-0366(20)30171-1)
- Holmes EA, O'Connor RC, Perry V H, Tracey I, Wessely S, Arseneault L, Ballard C, Christensen H, Cohen Silver R, Everall I, Ford T, John A, Kabir T, King K, Madañ I, Michie S, Przybylski AK, Shafran R, Sweeney A, Worthman CM, Yardley L, Cowan K, Cope C, Hotopf M, Bullmore E (2020). Multidisciplinary research priorities for the COVID-19 pandemic: a call for action for mental health science. *The Lancet Psychiatry* 7, 547–560. [https://doi.org/10.1016/S2215-0366\(20\)30168-1](https://doi.org/10.1016/S2215-0366(20)30168-1)
- Hossain MM, Nesa F, Das J, Aggad R, Tasnim S, Bairwa M, Ma P, Ramirez G (2022). Global burden of mental health problems among children and adolescents during COVID-19 pandemic: an umbrella review. *Psychiatry Research* 317, 114814. <https://doi.org/10.1016/j.psychres.2022.114814>
- Huang HC-H, Ougrin D (2021). Impact of the COVID-19 pandemic on child and adolescent mental health services. *BJPsych Open* 7, e145. <https://doi.org/10.1192/bjo.2021.976>
- Lin JA, Hartman-Munick SM, Kells MR, Milliren CE, Slater WA, Woods ER, Forman SF, Richmond TK (2021). The impact of the COVID-19 pandemic on the number of adolescents/Young adults seeking eating disorder-related care. *Journal of Adolescent Health* 69, 660–663. <https://doi.org/10.1016/j.jadohealth.2021.05.019>
- Ludwig-Walz H, Dannheim I, Pfaenhauer LM, Fegert JM, Bujard M (2022). Increase of depression among children and adolescents after the onset of the COVID-19 pandemic in Europe: a systematic review and meta-analysis. *Child and Adolescent Psychiatry and Mental Health* 16, 109. <https://doi.org/10.1186/s13034-022-00546-y>
- McDonnell T, Conlon C, McNicholas F, Barrett E, Barrett M, Cummins F, Hensey C, McAuliffe E, Nicholson E (2022). Paediatric hospital admissions for psychiatric and psychosocial reasons during the first year of the COVID-19 pandemic. *International Review of Psychiatry* 34, 128–139. <https://doi.org/10.1080/09540261.2022.2061840>
- McGrath J (2020). ADHD and covid-19: current roadblocks and future opportunities. *Irish Journal of Psychological Medicine* 37, 204–211. <https://doi.org/10.1017/ipm.2020.53>
- McNicholas F, Kelleher I, Hedderman E, Lynch F, Healy E, Thornton T, Barry E, Kelly L, McDonald J, Holmes K, Kavanagh G, Migone M (2021). Referral patterns for specialist child and adolescent mental health services in the republic of Ireland during the COVID-19 pandemic compared with 2019 and 2018. *BJPsych Open* 7, e91. <https://doi.org/10.1192/bjo.2021.48>
- Murray Sean (2023, August 8). *Ireland Made the Biggest Jump to Remote Working*. Irish Examiner (<https://www.irishexaminer.com/business/economy/arid-41200393.html>) Accessed 19 September 2024.
- O'Donoghue B, Collett H, Boyd S, Zhou Y, Castagnini E, Brown E, Street R, Nelson B, Thompson A, McGorry P (2022). The incidence and admission rate for first-episode psychosis in young people before and during the COVID-19 pandemic in Melbourne, Australia. *Australian & New Zealand Journal of Psychiatry* 56, 811–817. <https://doi.org/10.1177/00048674211053578>
- O'Donoghue B, O'Connor K, Thompson A, McGorry P (2021). The need for early intervention for psychosis to persist throughout the COVID-19 pandemic and beyond. *Irish Journal of Psychological Medicine* 38, 214–219. <https://doi.org/10.1017/ipm.2020.56>
- OECD. (2021, September 16). *Ireland's primary schools were shut for longer than international average during Covid-19 – report*. Irish Independent (<https://www.independent.ie/irish-news/irelands-primary-schools-were-shut-for-longer-than-international-average-during-covid-19-report/40856838.html>) Accessed 19 September 2024.
- O'Sullivan K, Clark S, McGrane A, Rock N, Burke L, Boyle N, Joksimovic N, Marshall K (2021). A qualitative study of child and adolescent mental health during the COVID-19 pandemic in Ireland. *International Journal of Environmental Research and Public Health* 18, 1062. <https://doi.org/10.3390/ijerph18031062>
- Ougrin D, Wong BH, Vaezinejad M, Plener PL, Mehdi T, Romaniuk L, et al. (2022). Pandemic-related emergency psychiatric presentations for self-harm of children and adolescents in 10 countries (PREP-kids): a retrospective international cohort study. *European Child & Adolescent Psychiatry* 31, 1–13. <https://doi.org/10.1007/s00787-021-01741-6>
- Rafferty C, O'Donnell A, Campbell S, Sun B, King J, Ali Z, Lynch D, Barrett E, Richardson S, Clifford M, McNicholas F (2024). Eating disorders and COVID-19 - different or just more? *Irish Journal of Medical Science* 193, 1939–1944. <https://doi.org/10.1007/s11845-024-03649-x>
- Samji H, Wu J, Ladak A, Vossen C, Stewart E, Dove N, Long D, Snell G (2022). Review: mental health impacts of the COVID-19 pandemic on children and youth – a systematic review. *Child and Adolescent Mental Health* 27, 173–189. <https://doi.org/10.1111/camh.12501>
- Santomauro DF, Mantilla Herrera AM, Shadid J, Zheng P, Ashbaugh C, Pigott DM, Abbafati C, Adolph C, Amlag JO, Aravkin AY, Bang-Jensen BL, Bertolacci GJ, Bloom SS, Castellano R, Castro E, Chakrabarti S, Chattopadhyay J, Cogen RM, Collins JK, Dai X, Dangel WJ, Dapper C, Deen A, Erickson M, Ewald SB, Flaxman AD, Frostad JJ, Fullman N, Giles JR, Giref AZ, Guo G, He J, Helak M, Hulland EN, Idrisov B, Lindstrom A, Linebarger E, Lotufo PA, Lozano R, Magistro B, Malta DC, Månsson JC, Marinho F, Mokdad AH, Monasta L, Naik P, Nomura S, O'Halloran JK, Ostroff SM, Pasovic M, Penberthy L, Reiner Jr RC, Reinke G, Ribeiro ALP, Sholokhov A, Sorensen RJ D, Varavikova E, Vo AT, Walcott R, Watson S, Wiysonge CS, Zigler B, Hay SI, Vos T, Murray CJ L, Whiteford HA, Ferrari AJ (2021). Global prevalence and burden of depressive and anxiety disorders in 204 countries and territories in 2020 due to the COVID-19 pandemic. *The Lancet* 398, 1700–1712. [https://doi.org/10.1016/S0140-6736\(21\)02143-7](https://doi.org/10.1016/S0140-6736(21)02143-7)

- Tibbetts M, Epstein-Shuman A, Leitao M, Kushlev K (2021). A week during COVID-19: online social interactions are associated with greater connection and more stress. *Computers in Human Behavior Reports* 4, 100133. <https://doi.org/10.1016/j.chbr.2021.100133>
- Wong BH-C, Cross S, Zavaleta-Ramírez P, Bauda I, Hoffman P, Ibeziako P, Nussbaum L, Berger GE, Hassanian-Moghaddam H, Kapornai K, Mehdi T, Tolmac J, Barrett E, Romaniuk L, Davico C, Moghraby OS, Ostrauskaite G, Chakrabarti S, Carucci S, Sofi G, Hussain H, Lloyd ASK, McNicholas F, Meadowcroft B, Rao M, Csábi Görgyi, Gatica-Bahamonde G, Öğütlü H, Skouta E, Elvins R, Boege I, Dahanayake DMA, Anderluh M, Chandradasa M, Girela-Serrano BM, Uccella S, Stevanovic D, Lamberti M, Piercey A, Nagy P, Mehta VS, Rohanachandra Y, Li J, Tufan AE, Mirza H, Rozali F, Baig BJ, Noor IM, Fujita S, Gholami N, Hangül Z, Vasileva A, Salucci K, Bilaç Öznur, Yektaş Çiğdem, Cansız MA, Aksu Gülen Güler, Babatunde S, Youssef F, Al-Huseini S, Kılıçaslan F, Kutuk MO, Pilecka I, Bakolis I, Ougrin D (2023). Self-harm in children and adolescents who presented at emergency units during the COVID-19 pandemic: an international retrospective cohort study. *Journal of the American Academy of Child & Adolescent Psychiatry* 62, 998–1009. <https://doi.org/10.1016/j.jaac.2022.11.016>
- World Health Organisation (2023). *Weekly Epidemiological Update On COVID-19- 20 July 2023*. (<https://www.who.int/publications/m/item/weekly-epidemiological-update-on-covid-19—20-july-2023#:~:text=Overview,but%20an%20increase%20in%20deaths>) Accessed 19 September 2024.