

HC (15 studies, 538 patients, 416 HC, MD:  $-2.24$  (95% CI  $-4.12$ ,  $-0.36$ ),  $p = 0.02$ ,  $I^2 = 64\%$ ). There were no statistically significant differences between patients and controls in the other three outcomes. CBFv (cm/s): 6 studies, 305 patients, 198 HC, MD:  $-1.23$  (95% CI  $-6.10$ ,  $3.64$ ,  $p = 0.62$ ,  $I^2 = 65\%$ ). Combined CBF and CBFv: 20 studies, 804 patients, 573 HC, SMD:  $-0.16$  (95% CI  $-0.32$ ,  $0.01$ ),  $p = 0.06$ ,  $I^2 = 51\%$ . Ratio of uptake of radiotracer: 3 studies, 60 patients, 53 HC, MD:  $-0.11$  (95% CI  $-0.11$ ,  $0.11$ ),  $p = 1.00$ ,  $I^2 = 0\%$ ). The narrative synthesis revealed varying results, with many studies identifying a decrease in CBF in depressed patients compared to controls, but other studies identifying an increase, or mixed results. Multiple regions of impairment were identified, including the anterior cingulate cortex and prefrontal cortex.

**Conclusion.** There was a statistically significant reduction in CBF in depressed patients compared to controls. The narrative synthesis revealed varying results, however specific regions of interest have been identified. Further research is needed to explore the effect of antidepressant medication, utilising different imaging modalities, and at different levels of disease severity.

### Coping with a modern pandemic-an online survey of Anesthesiologists in India during COVID-19

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**Aims.** In 2020, India was one of the worst affected countries by COVID-19. As the pandemic spread, creating undue pressure on health care workers (HCWs), there was an urgent need for the development of appropriate interventions to protect their mental health. This study aims to study the effect of COVID-19 on the mental health of anaesthesiologists in India and factors that influence their coping behaviour.

**Method.** The study was designed as a semi-structured, descriptive, cross-sectional, online open survey and conducted on Google forms between 21st May and 20th June 2020, among practicing anaesthesiologists across India. The participants were recruited by sending messages to their emails and through social media platforms. It created a small number of international respondents, who were also included (India = 301, rest = 23). The self-designed questionnaire had 30 questions in the form of multiple choices, checkboxes, linear scales and short comments. Informed consent was recorded at the outset. Details such as demographic characteristics, place and nature of work, pandemic related changes in duration or pattern of work, psychological symptoms during and after working hours, fears about quarantine, were collected in the survey. Statistical Analysis was performed using Statistical Package for Social Sciences (SPSS Statistics for Mac Version 21.0 IBM Corp., USA)

**Result.** Among the 324 participating anaesthesiologists, a prevalence rate of 64.8% for stress, 51.2% for anxiety and 65.7% for depression was noted, which was double the rate from pre-pandemic studies. Those between the ages of 30 and 50 ( $p = 0.010$  OR:2.191) and working in government run ( $p = 0.045$  OR:2.564) COVID-19 hospitals in India ( $p = 0.002$  OR:2.018), were particularly stressed (33.3%) and anxious (38%) than the rest. Increased workload, contracting the virus and becoming an infectious source to their family (88.6%) were their prime concern. Formulating standard operating procedures (SOP) (66.7%)

and procuring personal protective equipment (PPE) (56.2%) were some of the challenges faced at work. Most of them recommended a congenial workplace (68.8%) and family support (60.8%) to help them work through their anxiety and fear, while a few reported considering leaving their career (34.8%) from fear of monetary loss and burn out (53.8%).

**Conclusion.** COVID-19 has changed the professional and personal life of anaesthesiologists in India. Irrespective of their workplace, their fears and challenges remain universal. Early identification of anxiety and depression and providing appropriate psychological support will prevent deep and enduring damages to the lives of these professionals.

### Taking leadership over psychopathogenic environments

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**Aims.** Do psychiatrists believe children are growing up in psychopathogenic environments that significantly contribute to mental ill-health? If so, do they feel empowered to change those environments? If not, how can psychiatrists be given a role where they can create meaningful change? Finally, how much responsibility can psychiatry usefully take for changing psychopathogenic environments?

**Background.** We define psychopathogenic environments as environments that predispose to mental ill-health. It is the psychological environment we live in - including income, the way we interact with others (e.g. social media, bullying), what we do with our free time, pressures at school and expectations of our peers. It is not discrete events (e.g. trauma) and stretches beyond life at home (where many ACE's occur).

Self-harm presentations to medical professionals amongst teenagers are on the rise, Universities report a fivefold increase in disclosure of mental health conditions in the last decade. Here we consider if psychopathogenic environments are part of the cause of these changes.

**Method.** A 10-item questionnaire distributed to Child and Adolescent Psychiatrists in NHS Lothian, NHS Grampian and Manchester University NHS Trust via a consultant in each Trust.

**Result.** All 14 respondents said psychopathogenic environments are "very important" contributors to mental ill-health. 13/14 say the environments have got worse in the last 10 years. 13/14 responded negatively about whether psychiatrists could change them. When given white space to tackle the problem they suggested changes were needed from Government including against poverty / inequality, education, public health nudges, more resources, MDT working and better access to leisure facilities. Given specific choices, 11/14 identified influencing Government as a major way forward.

**Conclusion.** This group of psychiatrists believe psychopathogenic environments are; 1) a very important contributor to mental ill-health 2) getting worse but 3) feel largely powerless to tackle it. It is a problem they think is important and want to engage in, but lack time, resources and struggle with the complexity of the problem. How therefore, can psychiatrist show leadership in this area? The two perspectives to consider how to empower psychiatrists to help create change are 1) how they can influence the environment for individual patients, 2) how they can influence public policy and government to make wider changes.

Is this the job of psychiatrists? Not alone, but as agents they have a unique insight and authority as both a lens for and director of these environments.

## Comparing intentions to reduce substance use and willingness to seek help among transgender and cisgender participants from the global drug survey

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**Aims.** To describe and compare psychoactive substance misuse help-seeking among transgender (trans) and cisgender (cis) participants from a large multi-national cross-sectional survey.

**Background.** Trans people experience stressors related to their minority status which have been associated with increased rates of psychoactive substance use and related harm. Despite this, there is a paucity of evidence relating to the treatment needs of trans people who use psychoactive substances, beyond a small body of literature describing a culture of transphobic hostility in general substance misuse services. This paper aims to describe and compare psychoactive substance misuse help-seeking among trans and cis participants from a large multi-national cross-sectional survey.

**Method.** Over 180,000 participants, recruited from the world's largest annual survey of drug use - the Global Drug Survey (GDS) - during 2018 and 2019, reported use of a range of psychoactive substances in the preceding 12 months. Five gender groups (118,157 cis men, 64,319 cis women, 369 trans men, 353 trans women and 1,857 non-binary people) were compared, using Chi-square and z-tests with Bonferroni correction, on items relating to the desire to use less psychoactive substances and the need to seek help to achieve this. Respondents from GDS 2018 were also assessed for substance dependence. Binary logistic regression was used to compare gender groups on self-reported substance dependence to frame the help-seeking analyses.

**Result.** Trans respondents ( $n = 1,710$ ) to GDS 2018 were significantly more likely than cis respondents to report use of illicit substances (OR = 1.66-2.93) and dependence on cannabis (OR = 2.39), alcohol (OR = 3.28) and novel psychoactive substances (OR = 4.60). In the combined GDS 2018 and 2019 dataset, there were no significant differences between trans ( $n = 2,579$ ) and cis ( $n = 182,476$ ) participants on the desire to reduce substance use. However, among those who did report wanting to use less, non-binary people and trans women were most likely to want help to achieve this.

**Conclusion.** Trans respondents reported a greater need for help with reducing substance use than cis respondents. Given the deficit of specialist services for psychoactive substance users who are trans, there is a need for a more thorough understanding of the barriers and facilitators to their engagement in general substance misuse services. In the interim, substance misuse service providers require education about gender minority status to help meet the needs of trans clients.

## Prevalence and correlates of substance use among transgender adults: a systematic narrative review

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**Aims.** To understand the prevalence, patterns and correlates of substance use among transgender adults.

**Background.** Minority stress theories suggest that the increasing rates of discrimination experienced by transgender people are precipitants of substance use. This is likely exacerbated by an inadequate provision of trans-inclusive substance misuse services. However, the exclusion of transgender people from the general substance misuse literature makes it difficult to determine the extent to which gender minority status influences substance use. A systematic review was undertaken to better understand the prevalence, patterns and correlates of substance use among this group.

**Method.** In accordance with the PRISMA guidance, a literature search was conducted to 29th May 2019 on PubMed, PsycINFO, EMBASE and Global Health databases. Primary quantitative studies, published in the English language, that reported the prevalence, patterns or correlates/risk factors of substance use by trans people were included, with no restriction on methodological design.

**Result.** 651 unique records were identified by the search and 40 studies were included in the synthesis. While there was some suggestion of excess risk of substance use among trans people, there was insufficient evidence to estimate prevalence or quantify the risk of substance use among transgender people, relative to a cisgender population. However, this review identified several gender minority related correlates of substance use which are of relevance to clinicians working with transgender patients, including transphobic discrimination or violence, unemployment and sex work, gender dysphoria, high visual gender non-conformity and intersectional sexual minority status.

**Conclusion.** There are currently significant gaps in the trans substance use literature, relating to the disproportionate investigation of transgender women with multiple intersectional disadvantages, who are not representative of the wider trans community. However, there is sufficient evidence to recommend screening for substance use when individuals report high levels of gender minority stress and to consider the use of integrated trauma-informed psychosocial interventions when managing problematic substance use in the transgender adult.

## A clinical inventory of moderators of tic severity in Tourette's Syndrome

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**Aims.** Changes in the severity of tics in Tourette's syndrome (TS), as seen with variations in the intensity or frequency of tics, can be moderated by a variety of independent factors such as external or internal stimuli. Identifying such moderators has important clinical implications as it can aid clinicians in adjusting interventions. Hence, based on our previous review of tic-severity moderators, we developed a clinical inventory of moderating variables for motor and vocal tics for inclusion in the new version of the Queen Square Proforma for Tourette's Syndrome to aid initial assessments in the National Tourette Syndrome Service's Outpatient Clinic for Adults.

**Method.** A review of tic-severity moderators was previously carried out by the authors to investigate the kinds of moderators and their worsening, improving or neutral effects on tic severity. Based on this a semantic thematic analysis of the identified