‘What is psychiatry?’ – an exploration of the effect of a psychiatry summer school on school students’ attitudes towards psychiatry, through the medium of word clouds

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Aims. To explore if attending a psychiatry summer school would change the understanding of school students as to what the word ‘Psychiatry’ represents.

Background. The Institute of Psychiatry, Psychology and Neuroscience (IoPPN) and the local mental health trust, South London and Maudsley NHS Foundation Trust (SLaM) ran a free five-day summer school for 16-year-old school students, who had just completed their GCSE exams, from state and private secondary schools within South-East London.

Method. We asked all 26 student attendees to anonymously write down as many single words relating to ‘Psychiatry’ as they could think of. They were given approximately 5 minutes to complete this and they were asked to do this at the beginning of the first day and at the end of the final day of the summer school. These words were then transcribed with the number of times each word was submitted being documented. This information was then formatted into a word cloud, with the size of the word varying according to how many times it had been submitted.

Result. At the start of the summer school, the students submitted a total of 208 words which included a total of 94 distinct words. Of these, the 2 most common were brain (n = 15) and mental (n = 10). At the end of the summer school, the students submitted a total of 199 words which included a total of 100 distinct words. The 2 most common were psychosis (n = 12) and forensic (n = 8). Of the words submitted pre-summer school, there were 8 distinct words that described positive attributes of psychiatry – such as ‘helping’. This increased to 17 distinct positive words post-summer school.

Conclusion. We note from our outcomes that the number of words submitted, and the number of distinct words submitted, increased to 17 distinct positive words post-summer school. The increase in the number of distinct positive words submitted at the end of the summer school implies that the students had a more positive view of psychiatry following the summer school.

Collaborative development of course feedback with students for PsychED Up. Put more in, get more out

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Aims. To develop a responsive and sustainable template for long-term course evaluation for PsychED Up

To obtain rich, meaningful and specific feedback across multiple domains which can be translated into course improvements

To work collaboratively with students interested in medical education having previously participated in the course

To empower current students with the knowledge that their input is valuable

Method. PsychED Up is an innovative extra-curricular course for 3rd year medical students at King’s College London delivered by psychiatry trainees, senior students and actors. It is in its second year of running and focuses on the hidden curriculum in medicine, exploration of holistic care and communication skills at the mind-body interface. Input from people with lived experience is used to shape teaching.

Result. Revised questionnaire:

Included rationale at the start
Tailored questions so faculty have more useful responses
Greater quantity of prompted questions
Specific questions for large group presentation, small group teaching, actors’ performances and students’ reflections
Thoughtful combination of quantitative ratings and open-space questions
Reduced time between course sessions and obtaining of feedback
Quality and quantity of feedback
High response rates: 32/30 (2 duplicates) mid-term, 29/30 end-of-term
High-quality filling of open-space feedback allowed consolidation of themes to improve the course

Conclusion. Co-designing the feedback form with previous students from the course and faculty brought focus to the questions. They were more specific and were organised into sub-sections for different domains. This led to responses that were relevant, enriched with depth and breadth and provided faculty with richer, more personalised responses. More detailed reflections in feedback were thought to be due to better student understanding of the rationale for questions, and knowledge that their input would help improve the course. We have set up a robust system for collecting long-term feedback for PsychED Up. We will continue to make iterative amendments, and supplement questionnaire feedback with focus groups.

Psychopharmacology

Peripheral cortisol administration blunts reward arousal but heightens anxiety-like arousal in marmosets

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Aims. Excess hypothalamic-pituitary-adrenal (HPA) axis activation is common in people with major depression and generalised anxiety disorder. We sought to determine whether higher circulating levels
of the glucocorticoid cortisol are causally related to the expression of anhedonia-like and anxiety-like behaviours in marmosets.

**Method.** Four marmosets (two male, two female) took part in the study. Cortisol and saline control injections were administered intramuscularly and salivary cortisol samples were taken before and after injections to determine if circulating cortisol levels changed from pre- to post-injection. To measure anxiety-like behaviours, we trained marmosets on an appetitive Pavlovian conditioning paradigm, where animals learn to associate two anticipatory auditory cues (conditioned stimulus + or conditioned stimulus −, CS+ or CS−) with the presence or absence of food reward (unconditioned stimulus + or unconditioned stimulus −, US+ or US−). Using cardiovascular telemetry probes and video cameras, we recorded animals’ cardiovascular and behavioural arousal in freely moving conditions, comparing the injection of saline control versus 5 mg/kg, 10 mg/kg or 20 mg/kg intramuscular cortisol. To measure anxiety-like behaviours, we used a human intruder (HI) paradigm, where marmosets are confronted with an unfamiliar human in their home cage. We recorded their behaviour on video cameras after saline control or 20 mg/kg intramuscular cortisol. We used an exploratory-factor analysis (EFA) to determine how marmosets’ behaviours towards the intruder loaded onto an ‘anxiety-like’ score. We then compared these scores under saline control versus cortisol conditions. Significance was set at \( p < 0.05 \).

**Result.** Unlike saline control, we found that subcutaneous injections of 20 mg/kg cortisol successfully elevated peripheral cortisol concentrations to levels equivalent to peak circadian concentrations \( (p = 0.023) \). In the appetitive setting, 5 mg/kg, 10 mg/kg and 20 mg/kg cortisol injections blunted anticipatory (CS+ induced) increases in behavioural arousal \( (p = 0.004) \) but did not alter anticipatory cardiovascular arousal. Consummatory behavioural and cardiovascular arousal also remained intact. In the HI test, 20 mg/kg cortisol injections moderately increased anxiety towards the intruder as measured by an increase in marmosets’ EFA-derived anxiety-like scores \( (p = 0.035) \).

**Conclusion.** In marmosets, elevated peripheral cortisol levels are causally related to the behavioural features of blunted reward anticipation together with elevated anxiety-like behaviours characteristic of mood and anxiety disorders. Future work will characterise the neuroimaging changes induced by elevated peripheral cortisol levels and identify the regions of the prefrontal cortex contributing to HPA axis regulation and dysregulation.

**Multicentre evaluation of the pharmacological management of women with bipolar disorder in the perinatal period**

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**Aims.** The pharmacological management of women with bipolar disorder in the perinatal period is challenging. This population has a high recurrence rate, but some medications can be a concern in pregnancy and breastfeeding. Little is known about prescribing practices in perinatal services, and the impact of medication on recurrence rates.

The aims of this study are: 1) to describe the use of medication in women with bipolar disorder in the perinatal period and 2) to evaluate the impact of medication on the rate of postpartum recurrence.

**Method.** Clinical data were collected from pregnant women with a diagnosis of bipolar disorder in the nine participating centres in the UK and who were not experiencing an episode of illness entering the postpartum period. Using a proforma, data were collected for the period between conception and three months postpartum: sociodemographic, reproductive, the severity of illness, medication and recurrence.

Data were analysed for association using \( \chi^2 \) tests and logistic regression.

**Result.** In this sample of 167 women, 91 (55%) were taking medication at delivery: 62 (37%) antipsychotics, 41 (25%) antidepressants, and 25 (15%) mood stabilisers. In 12 cases medication was reduced before delivery. Of those who were taking medication at delivery six decreased of stopped after delivery and one increased the dose. 42% of women in this sample experienced a recurrence, with 30% of the sample experiencing a manic/psychotic episode. There was no significant association between taking medication and recurrence \( \chi^2 (1) = 0.07, p = 0.79 \). There continued to be no association in a multivariable analysis when adjusted for parity, severity (previous admissions, age at first treatment, bipolar