

The change in Profile of Fatigue Related States (PFRS) score was similar in men with a significant decrease (-45%) as in women (-52%) ( $F_{4,8}$ ,  $p < 0.001$ ).

None of the individuals had any prior diagnosis of chronic fatigue syndrome.

All were new attendees to the clinic at the time of initial assessment.

**Conclusion.** Our findings indicate that this intervention based on massage and mobility exercises significantly reduced fatigue related to Long COVID.

It may be that early intervention and supportive treatments at the end of the acute phase of COVID-19 can help overcome acute phase symptoms and prevent them becoming chronic/enduring.

### Does food responsiveness change in people with first episode psychosis (FEP) over a period of 6 months after commencing antipsychotics? Preliminary results

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**Aims.** We here present preliminary results from our study to understand better the changes in people's experience of food in the months after diagnosis with first episode psychosis (FEP). Weight gain often occurs in the weeks/months after diagnosis and is related to an increase in appetite and food intake. Many drugs that are effective in treating psychosis are associated with changes in the way that people experience reward when they eat.

The aim of this project is to increase our understanding of exactly why this happens in terms of an individual's experience of food reward and reduced satiety – and therefore how we can help people with FEP to keep their weight down. At this stage we are looking at the feasibility of applying currently available evaluation tools to people in this situation.

**Method.** A convenience sample was used to recruit 10 service users from RDaSH NHS FT Early Intervention Services. This is a feasibility study which will provide data to underpin a fully powered, larger trial.

Rating scales applied were:

Power of food questionnaire: measures responsiveness to the food environment.

Intuitive Eating Scale: measures an individual's tendency to follow their physical hunger and satiety cues.

The loss of control over eating scale (LOCES): measures a global sense of whether individuals experience LOC over eating.

Dutch Eating Behaviour Questionnaire (DEBQ): measures restrained eating, emotional eating and external eating.

**Result.** The ages of the participants ranged from 17-26 years. All were started on Olanzapine at the dose of 5 or 10 mg daily.

Baseline total scores for the Power of Food (2.47-3.80)/5 (higher score = more responsiveness) and Intuitive Eating scales (2.10-2.62)/5 (higher score = greater tendency to follow hunger and satiety cues) were in the mid-range, while the LOCES scores varied widely from 1.50-2.38/5.

The DEBQ restrained subscale score range was 2.40-2.80/5 (higher indicates greater restraint with food) while the DEBQ external subscale ranged from 2.70–3.00/5 (higher = greater tendency to overeat) and the DEBQ emotional subtotal score was 1.92-1.94/5, in keeping with a relatively low emotional drive to eat.

**Conclusion.** Our preliminary results reveal at the beginning of antipsychotic treatment a moderate responsiveness to food and tendency to follow hunger/ satiety cues, with scores for Loss of Control of eating in the low to moderate range and a low emotional drive to eat. The difference between these and the follow-up eating behaviour scores will provide important clues as to the precise changes in eating behaviour with anti-psychotic treatment in FEP.

### Reduced motivation to work for financial reward associated with harmful alcohol use in a community sample of young adults

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**Aims.** Neuroimaging research suggests that alcohol dependency is associated with impairments in anticipating monetary rewards, but not aversive or alcohol-related cues.

We sought to investigate if reinforcement sensitivity is altered in young adults, who regularly consume harmful levels of alcohol, using a monetary incentive reinforcement (MIR) task. In light of previous research suggesting reduced motivation to obtain reward, we hypothesized that young alcohol users would show reduced motivation for monetary gain, but unimpaired loss avoidance behaviour.

**Method.** We recruited 46 volunteers from the local community in Cambridge (UK), half of whom reported consuming alcohol at harmful levels, as reflected by the Alcohol Use Disorder Test. Participants completed a number of personality questionnaires, including the Barratt Impulsivity Scale (BIS-11) and Sensation-Seeking-Scale (SSS-V) and performed the MIR task, which measures participants' efforts in avoiding punishment and gaining rewards. Data were analysed using Statistical Package for Social Sciences (SPSS) version 25 (IBM, Chicago IL). Analysis of co-variance (ANOVA) were used to explore group differences in demographics, personality traits and task performance; age and gender were included as co-variables.

**Result.** The groups were well-matched in terms of socioeconomic status and education levels. As the alcohol group was significantly younger than the control group and dominated by females, age and gender were statistically controlled for. Alcohol users reported significantly higher levels of impulsivity ( $F_{1,41} = 6.0$ ,  $p = 0.019$ ) and sensation-seeking traits ( $F_{1,42} = 36.7$ ,  $p < 0.001$ ) and demonstrated normal sensitivity to monetary value ( $F_{1,41} = 1.07$ ,  $p = 0.307$ ). However, when challenged to on the MIR task to gain reward or avoid punishment, alcohol users were as equally motivated as control volunteers to take action to avoid financial loss ( $F_{1,41} = 2.6$ ,  $p = 0.112$ ) but showed less motivation to work towards financial reward ( $F_{1,41} = 4.7$ ,  $p = 0.036$ ). Especially for small rewards, alcohol users exerted significantly less efforts, as reflected by a reduced accuracy rate ( $F_{1,41} = 6.6$ ,  $p = 0.014$ ) and a significant increase in late responses ( $F_{1,41} = 7.7$ ,  $p = 0.008$ ). The lack of motivation to work for reward was negatively associated with the severity of alcohol use, as reflected by the AUDIT score ( $r = -.48$ ,  $p < 0.05$ ).

**Conclusion.** We observed reduced motivation to obtain financial reward, but not avoid loss in a community sample of heavy drinkers. As the observed effect was directly related to alcohol use severity, it may suggest changes in reinforcement sensitivity occur at an early stage of chronic alcohol use. Future research may want to monitor reward motivation in alcohol users longitudinally to evaluate whether it would be a suitable target for early intervention.

## Inflammatory mechanisms of mental illness: brain inflammatory response to interferon stimulation

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**Aims.** We hypothesise that peripheral IFN stimulation results in a brain inflammatory response via pathways of neuroimmune communication which in turn results in sickness-behaviour and depressive phenotype. We aim to determine if peripheral IFN stimulation results in brain inflammatory response including upregulation of inflammatory cytokines and chemokines.

**Background.** There is increasing interest in the role of dysregulated immune function and inflammation in the pathogenesis of psychiatric disorders including mood disorders and dementias. Immune mechanisms offer a new approach to investigating mechanism in addition to offering hope for new avenues of treatment.

Interferon (IFN) therapy in humans is known to be associated with a significant risk of developing depression, both during therapy and increasing risk of relapse in the years following exposure, yet the mechanism remains unclear. IFN stimulation in animal models may offer insights into this phenomenon, in addition to furthering our understanding the role of immune mechanisms in the development of psychiatric phenotypes.

**Method.** Mice (n. 42) were exposed to either IFN- $\alpha$ , IFN- $\gamma$  or vehicle control using either osmotic pump or intraperitoneal injection over the course of 7 days. Mice were sacrificed, brains were dissected and RNA extracted. Inflammatory gene transcription within the brain was determined using real time quantitative polymerase chain reaction (RTqPCR). Absolute quantification was achieved using standard curves and reference gene. Statistical significance was determined using Mann-Whitney or ANOVA/Kruskal-Wallis depending on normality of data and number of groups.

**Result.** IFN $\gamma$  stimulation is associated with a significant brain upregulation of a number of inflammatory cytokines and chemokines including IL1 $\beta$ , TNF $\alpha$ , IL10, IFN $\gamma$ , CCL2, CCL5, CCL19, CXCL10 and CCR5. However, unexpectedly we did not find IFN $\alpha$  stimulation to associate with brain inflammatory transcriptional changes.

**Conclusion.** This work demonstrates a brain inflammatory response to peripheral IFN $\gamma$  stimulation. The inflammatory profile, including upregulated chemokines, suggests that recruitment of leukocytes across the blood brain barrier may be part of the immune response. Further experiments using existing tissues will explore if there are structural/cellular changes within the brain parenchyma. Further experiments within the group will seek to demonstrate if IFN treatment associates with sickness behaviour in order to determine if this is a clinically meaningful model. Surprisingly, we did not see similar changes in the IFN $\alpha$  treated group, which requires further investigation.

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## Does my patient have sex ? - Mental health professionals' understanding of sexual health issues among their patients

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**Aims.** To assess the level of understanding and difficulties encountered when obtaining sexual health details of their patients among mental health clinicians.

**Background.** People with mental health problems, especially those treated with psychiatric medication experience greater rates of sexual difficulties than those in the general population. Mental health practitioners need to examine personal beliefs and attitudes about sexuality among people with mental health problems. Providing information about sexuality and sexual practice benefits and enhances the quality of life of people with mental health problems. Therefore taking a sexual history should be an integral part of psychiatric assessment.

**Method.** An online survey consisted of 17 questions to cover 3 areas of objectives mentioned above was created using Survey Monkey. A link to the survey was emailed to all the clinicians who perform psychiatric assessments. Response collection and data analysis was performed by the trust IT team.

**Result.** Total of 54 clinicians participated in the survey representing nurses, junior, middle grade doctors and consultants. Almost all stated that mental health patients have capacity to make appropriate decisions about their sexual behaviour patterns. 43% thought people with mental health problems don't have similar patterns of sexual behaviour compared to people without mental health problems. 11% stated that people with mental health problems do not experience greater rates of sexual difficulties than those in the general population. Nearly a third did not believe that telling patients about potential sexual side effects may lead to poor compliance. Nearly 70% stated taking a sexual history should be an integral part of psychiatric assessment. 44% reported lack of knowledge and skills when talking about sexual health and 33% avoided asking about sexual health due to lack of knowledge. Half of the clinicians avoided asking about sexual health due to the fear of embarrassing or causing distress to patients while 16% avoided asking about sexual health due to self-embarrassment. 65% talk about sexual health issues only if patients brought them up.

During last 3 clinical encounters majority never asked about sexual difficulties, high risk behaviour and drug side-effects related to sexual difficulties. A significant proportion of clinicians never asked about contraception from their female clients.

**Conclusion.** Survey revealed majority of mental health clinicians lack understanding and skills about sexual health issues highlighting the importance of raising awareness among clinicians about sexual health issues.

## Stealth-vaping: a new era of illicit substance misuse? a systematic review and meta-analysis of the prevalence of electronic nicotine delivery systems for the consumption of illicit substances

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**Aims.** To estimate the prevalence of using Electronic Nicotine Delivery Systems (ENDS) for the consumption of illicit substances (illegal under UK Law). We hypothesised that this is an increasingly common mode of delivery.

**Background.** Using ENDS to consume nicotine is increasing in popularity worldwide with a prevalence in the UK of 6% and in