Results. In total, 435 papers were identified. After screening, 99 papers reporting on 87 unique studies with 51,904 participants from 32 LMICs met the inclusion criteria. Study designs included cross-sectional (n = 89), cohort (n = 6) and experimental (n = 4). Overall, 5 scored as high quality, 79 studies scored as moderate and 15 scored as weak quality. Twenty-nine papers reporting on 22 unique studies used validated alcohol use tools including AUDIT, CAGE and WHO CIDI. The pooled prevalence of any hazardous/harmful/dependent alcohol use was 41% (95% CI: 31–51%), and of daily alcohol use was 26% (95% CI: 17–36%). There was variation in harmful alcohol use by global region (Sub-Saharan Africa: 38%; South Asia/Central Asia/ East Asia and Pacific: 47% and Latin America and the Caribbean:44%). Harmful alcohol use was significantly associated with inconsistent condom use (pooled unadjusted RR: 1.65; 95% CI: 1.01–2.67), STIs (pooled unadjusted OR: 1.29; 95% CI 1.15–1.46); and other drug use (pooled unadjusted OR of 2.44; 95% CI 1.24–4.80), but not with HIV, violence or mental health problems.

Conclusion. We found a high burden of problem alcohol use and daily alcohol use among FSWs in LMICs. Harmful drinking was associated with HIV risk factors such as inconsistent condom use, STIs and other drug use. There is an urgent need for tailored interventions for FSWs in LMICs that address alcohol use as well as the associated sex work risk environment

Mental Health Apps (Applications): A Review of Studies Conducted in the UK

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Aims. With advancing technology, there are many online resources available for people with mental health problems. Smartphone software applications are an emerging resource for mental health conditions, for which further research is crucial in understanding its role in the wider community.This study aims to appraise the literature available, surrounding mental health apps (applications) in the UK. Individual applications are studied, for disorders such as Depression, Anxiety, ADHD, Autism and Dementia for patients, carers and clinicians for either assessment or treatment.

Methods. A comprehensive literature search was completed in September 2021, involving the following databases: Cinhal, MEDLINE, Psychinfo, EMBASE, PubMed, Google Scholar, Cochrane and Nice guidelines. Studies involving multiple apps and non apps technology, duplicate studies studying the same app, apps not targeting assessment or treatment and ones that were not in the English language were omitted. Studies performed on those below 18 years of age and ones based outside of the UK were also excluded.

Results. A total of 515 articles were identified, out of which 8 apps were deemed eligible as per our inclusion criteria. 4 apps were based on dementia, 3 for depression, out of which 1 was for antenatal depression and 1 for anxiety. It was then analysed whether some apps investigated assessment, treatment or both. 5 apps were used for the treatment of mental health disorders including 1 for both assessment and treatment and 2 focused on the research, still including assessment of mental health disorders.

Conclusion. This review only looked into apps that are currently available to download in the UK and some apps studied are currently in use in NHS mental health trusts.

In general, digital apps could offer the ability to respond quickly and efficiently and can reach people over great distances with minimal mobility requirements, thus, guided by a rigorous evidence-based approach, apps could be the solution to combat large waiting lists in the NHS.

Developing a Neuromodulation Approach for Treating Working Memory Deficits in Severe Mental Illness

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Aims. We report electroencephalography (EEG) results from a non-patient pilot study conducted whilst developing a neuromodulation approach for improving visual spatial working memory (vSWM) in people with schizophrenia. Working memory impairments are common in people with schizophrenia yet respond poorly to current drug treatments. Transcranial magnetic stimulation (TMS), a minimally-invasive, well-tolerated, brain stimulation technique that is performed whilst a person is awake and alert, may improve working memory performance. However, results have been inconsistent, possibly because TMS was delivered during the heterogenous "resting-state". We delivered TMS to left dorsolateral prefrontal cortex time-locked to specific events in a vSWM task, aiming to modulate functional networks involved in encoding spatial data into working memory.

Methods. Each trial in the vSWM task started with a 2-second-long sample display containing either three or four coloured circles positioned at random locations. This was followed by a 2-second delay period. At the end of the delay period, a visual cue appeared, indicating the target colour. Participants moved a crosshair to the screen location where the target had appeared. We recorded 64-channel EEG throughout. In Experiment 1, twelve participants completed three- and four-item task versions. In Experiment 2, eighteen participants completed the four-item task in three separate blocks within a single session. Between blocks, they completed a short task version alongside TMS. TMS (intermittent theta burst stimulation, 600 pulses, 3.3 minutes) was delivered over the F3 electrode position. Each stimulation on-phase was synchronised to coincide with the onset of sample display. In a random order, one TMS block was active, and one was sham (90° coil rotation).

Results. In Experiment 1, EEG showed decreases ("desynchronisation") in beta (13–30 Hz) power during sample display and increases ("synchronisation") during the delay period. Both effects were greater in the four-item condition, and in posterior electrodes. In Experiment 2, posterior beta desynchronisation during

sample display was greater following either active or sham stimulation. However, synchronisation during the delay period reduced following sham and increased only following active stimulation. Likewise, performance declined following sham but remained stable or improved following active stimulation.

Conclusion. We examined the effects of TMS on electrophysiological signals evoked during a spatial working memory task. We found that beta-band oscillatory activity, thought to safeguard stored information during memory delays, was increased by memory load and maintained or restored in blocks following active TMS. These effects were greatest over parietal/occipital areas. It is suggested that this beta activity serves to protect memory traces from distractors (in the current case, internal distractors). Notably, if TMS enhances delay activity within areas of the brain involved in stimulus representation that are distal from the stimulation site, then its effects are best understood as network level modulations of brain activity.

Evaluating the Interventions Implemented and Subsequent Outcomes Following a Moderate and High Score on the Dynamic Appraisal of Situational Aggression Risk Assessment Tool

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Aims. The Dynamic Appraisal of Situational Aggression (DASA) is one of a few instruments designed for the prediction of violence specifically for inpatient populations. It is important that risk assessment tools demonstrate clinical utility, and that barriers to successful implementation are addressed. If successful, the tool should not only predict risk, but lead to the utilisation of interventions intended to manage and reduce risk. The aim of this study is to learn more about the acceptability of the tool (adherence), it's outputs (nursing interventions), and the outcomes (inpatient aggression and violence). Understanding more about the relationship and processes between an intervention and its outcomes is a key step in intervention evaluation.

Methods. Data were collected over a three-month period within a medium secure forensic hospital. A total of 43 patients were included for analysis.

Categories of nursing intervention were coded and content analysis of electronic health records analysed. Incidents of aggression/violence to others was recorded as aggression to patient and aggression to staff. Data were gathered on the completion of the DASA score for all patients for each 24-hour period. A DASA score of 2–3 for moderate risk and ≥4 for high risk was used. The change in DASA score (before and after intervention) and frequency of incidents was calculated for each intervention implemented.

Results. The average adherence of the DASA tool was 58.82% (Range 1.09% - 90.02%). The most frequent intervention following a moderate and high DASA score was that no interventions were provided. The second most frequent outcome following a high score was a focussed discussion with the patient, the use of increased monitoring and the use of seclusion. For those patients that recorded a high score on the DASA tool, eight of those scores were followed by an incident of aggression (n = 8 / 50%). There was no statistically significant difference between the change in DASA scores between interventions implemented, for both high and moderate scores.

Conclusion. The ultimate goal of risk assessment is the management and prevention of risk. Thus, if a high score does not result in strategies for intervention, it renders the assessment process worthless. A recommendation for future clinical practice would be the systematic recording of interventions and risk management strategies when in receipt of a high score on the DASA. Greater operationalisation of risk management strategies and their ability to reduce aggression is needed to enhance risk assessment research and clinical practice.

Using Evidence-Based Measures to Assess the Effectiveness of Residential Mental Health Rehabilitation for Adults With Dual Disabilities

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Aims. The Transitional Support Unit (TSU) is a unique 10-bed state-wide service and currently operates as one of two community-based long-term mental health services in Victoria. TSU is geared towards adults with complex mental health disorders in addition to a co-occuring intellectual disability or acquired brain injury--also referred to as a dual disability (DD). The aim of this project is to identify the benefits of this service to participants in order to improve the current structure and also to encourage development and expansion of similar services in Australia or globally.

Methods. The project was performed at the TSU. Participants included all previous and current residents of the TSU program (N = 24). Data were collected from three different evidence-based measures; the Health of the Nation Outcome Scales (HoNoS), Lifestar, and the Life Skills Profile (LSP). Each participant had these scales performed on admission, at time of discharge, and at 91 day intervals throughout their stay at TSU. The change in the measures were used to determine what clinical benefit, if any, resulted from undergoing engagement with the TSU program. Inclusion criteria was broad and encompassed any adult who had a DD and was admitted into TSU. Exclusion criteria was defined as any TSU resident with no completed discharge scales for comparison.

Results. On review, it was found that on average, there was an overall decrease in HoNoS scores from admission to discharge of 4 points. For the LSP, there was an average decrease of 10 points in TSU participants and the Lifestar was found to have an average increase of 20 points. Within Lifestar specifically, participants were found to have an average improvement between 1.64 and 2.94 in each individual category assessed. No TSU participants were observed to suffer from any decline or step back in categories related to how they spent their time, feeling good about themselves, or the people they knew.

Conclusion. TSU does appear to have notable benefit for adults with DD, particularly in improving overall mood, social interaction, and development of a routine as well as activities throughout the day. The least improvement was found in categories such