

How does self-report of anxiety symptoms compare with observer assessments after acquired brain injury?

Alex Seelochan^{1*}, Mark Paramall², Himanshu Tyagi³, Rohan Kandasamy⁴, Ida Bakar⁵, Cameron Holloway⁶, Samantha Harding⁷ and Anna Gadhvi²

¹Northern Ontario School of Medicine; ²North Bristol NHS Trust, Frenchay Brain Injury Rehabilitation Centre; ³The National Hospital for Neurology and Neurosurgery, University College London; ⁴The National Hospital for Neurology and Neurosurgery, Frenchay Brain Injury Rehabilitation Centre; ⁵Frenchay Brain Injury Rehabilitation Centre, North Bristol NHS Trust; ⁶Frenchay Brain Injury Rehabilitation Centre and ⁷North Bristol NHS Trust
*Corresponding author.

doi: 10.1192/bjo.2021.765

Aims. Comorbid anxiety and mood disorders occur in 30% and 60% of individuals post-ABI (acquired brain injury), respectively (Juengst et al, 2014). The presence of psychiatric symptoms correlate to poorer outcomes in post-stroke rehabilitation, worsened quality of life (QoL), and deficits in memory, attention, and processing speed that persists years following the index event. Despite this, it is unclear whether to what degree anxiety impacts cognition. Furthermore, the literature on this topic is inconsistent when comparing subjective and clinician measurements. This study seeks to ameliorate this gap in literature by analyzing how clinicians' measures of anxiety and cognitive performance correlate with subjective assessments of patient's own anxiety symptoms.

Method. Individuals with an ABI who were seen in a clinical neuropsychiatry outpatient clinic between 2019 and 2020 completed a GAD-7 (Generalized Anxiety Disorder-7) questionnaire (patient's self-report of the severity of anxiety symptoms) and an observer completed a Neuropsychiatric Inventory Questionnaire (NPIQ) including a subscale for anxiety (NPIQ-A). Participants also underwent a formal cognitive examination with the Montreal Cognitive Assessment (MoCA). A total of 24 ABI patients (depressed ABI and non-depressed ABI) were analyzed for variation, statistical agreement and correlation. Here, total anxiety scores (using GAD-7 scores), anxiety severity (correlating category based on total GAD-7 score) were compared against the objective measures for anxiety (NPI-QA) and cognition (MoCA). In order to standardize MoCA scores, z scores were used in the statistical analysis.

Result. The patient's subjective raw scores of anxiety were statistically significantly different from the corresponding scores from objective observers on Wilcoxon-Rank Sum tests ($p < 0.01$), however, there was a statistical correlation between GAD (categorized by severity level) and NPI-QA ($p = 0.75$). Spearman Rank Correlation did show positive, but, statistically insignificant correlation between dyads of these independent variables (including GAD7/NPIQ-A, GAD 7 categorised/NPIQ-A, GAD7/MoCA, GAD 7 categorised/MoCA).

Conclusion. These findings indicate (1) self-reported measures of anxiety (GAD7) in ABI were inconsistent with objective measures of anxiety in this cohort, (2) anxiety measures did not demonstrate significant correlation when compared to objective measures for cognitive function, and (3) ABI patients did not display good insight into the severity of their anxiety symptoms as measured by the GAD7. Further research should focus on utilizing other subjective measurement tools for anxiety and/or clinician evaluation tools with NPIQ-A.

Psychological morbidity and associated factors among perinatal patients referred for psychiatry assessments at a tertiary care centre in Sri Lanka

Saumya Madhri Senanayake*, Iresha Perera, Janith Galhenage and Raveen Hanwella

Professorial Psychiatry Unit, National Hospital of Sri Lanka

*Corresponding author.

doi: 10.1192/bjo.2021.766

Aims. Our objective was to study the psychological morbidity and associated risk factors among antenatal and postnatal patients referred for the psychiatric assessment at University Psychiatry Unit of National Hospital of Sri Lanka.

Method. All the Clinic records of perinatal referrals from 1st January 2019 to 31st December 2019 were assessed. Sociodemographic details, delivery details, health of the newborn, past and present psychiatry illness related details were obtained using a questionnaire. Data were analysed using SPSS.

Result. Total of 161 perinatal referrals were studied. Mean age of the mothers were 28.7 years (SD = 6.60). About 18 (11.8%) were not legally married, partner passed away or estranged. Above Ordinary level education was having 34.5% of participants. Majority were postnatal mothers (61.5%). Some mothers (32.3%) have reported the pregnancy was unexpected whilst 20 (32.3%) and 49(30.8%) have experienced delivery complications and neonatal illnesses respectively. Past mental illnesses were found among 31(20.7%) of mothers. Out of whole perinatal referrals maternity blues (28.9%) was the commonest current psychiatry diagnosis. Among antenatal mothers, adjustment disorder (28.8%) and depressive disorder (17.3%) were the commonest. Schizophrenia, Schizophreniform disorder and bipolar illness were found among 8(5%), 6(3.7%) and 3(1.9%) mothers respectively. Major psychoactive substance use disorder was found among 4 (2.5%) mothers. Presence of pregnancy related complications were significantly associated with postpartum mental illnesses($p = 0.008$).

Conclusion. Commonest perinatal mental illness was the maternity blues. Depressive disorder was the commonest major mental illness and neonatal complications were associated with psychological morbidity in postnatal mothers.

Attitudes surrounding the disclosure of mental illness

Brishti Sengupta^{1*} and Pritha Dasgupta²

¹Dollar Academy and ²Stratheden Hospital, NHS Fife

*Corresponding author.

doi: 10.1192/bjo.2021.767

Aims. To survey the effect of COVID-19 on mental health of both medical professionals and the general population, as well as attitudes surrounding the disclosure of mental illness.

Method. An online survey comprised of two questionnaires, one for medical professionals and one for the general population, were conducted via social media. Both questionnaires asked respondents of the effect of COVID-19 on their mental health, and the former asked respondents about the effect of COVID-19 on their patient group's mental health. The questionnaires went on to ask respondents about their attitudes to mental health disclosure in various scenarios, to varying groups of people. The general population group was also asked how they would react if someone else disclosed their mental illness to them.

Result. The questionnaire for the medical professionals gained 62 respondents and the one for the general population had 122 respondents, with responses from multiple nations. Overall, COVID-19 has affected everyone's mental health to a degree, and all groups had reservations about disclosing their mental health issues to others. The medical professionals were especially reluctant to disclose mental illness to their patients, but were more comfortable when it came to disclosing mental illness to colleagues. The general population, however, was much more reluctant to disclose mental health issues to their colleagues. The general population were, on the whole, willing to listen to and help anyone who came to them with mental health concerns. Both groups surveyed showed reluctance toward disclosure to the wider community.

Conclusion. COVID-19 appears to significantly affect not only physical health, but mental health as well. There is at least some degree of stigma surrounding the disclosure of mental health issues. While most would be happy to help anyone who came to them with their mental health problems, there seems to be an attitude shift when people must contend with mental health issues of their own.

Tolerability of a single IV administration of a methylene blue challenge in patients with bipolar disorder: preliminary data from a pharmaco-MRI study

Harriet Sharp*, Alfonso Russo, Alessandro Colasanti, Antonello Pinna, Prince Nwaubani and Riccardo De Marco

Department of Clinical Neuroscience and Neuroimaging, Brighton and Sussex Medical School, Sussex Partnership NHS Foundation Trust

*Corresponding author.

doi: 10.1192/bjo.2021.768

Aims. To summarise the tolerability profile following an infusion of methylene blue (MB), including subjective effects on mood and energy levels and haemodynamic changes, in patients with Bipolar Affective Disorder (BPAD).

Background. BPAD is associated with mitochondrial dysfunction and impaired cellular energy production. MB is proposed to enhance mitochondria function via rerouting electrons and intracellular reduction of oxidative stress, and is therefore a candidate compound for use as a probe to reveal alterations in brain oxygen metabolism in vivo in patients with BPAD. Although there are reports of MB used as treatment for BPAD, the tolerability and subjective effects of a single IV dose in this population has not yet been defined.

Method. Using a single-blind, randomised, within-subject design, 7 patients with BPAD on stable pharmacological treatment and 6 healthy controls (HCs) received an infusion of 0.5mg/kg MB and a placebo glucose solution one week apart. Visual Analogue Scales (VAS) assessing 'Mood' and 'Energy' levels were completed by 11 participants, and blood pressure (BP), heart rate (HR) and any subsequent side effects were recorded before and after infusions.

Result. A significant, albeit very small, effect of MB on 'Mood' levels relative to placebo was demonstrated, independent of groups (change relative to baseline: 5.5% $\pm$ 11 increase (placebo) vs -1.6 % $\pm$ 9.5 reduction (MB); $p = 0.027$). Although there was no effect of MB on energy levels in either group, there appeared to be a trend for a general group difference in 'Energy' levels across all trials, with lower ratings in BPAD patients ($p = 0.058$).

There was a trend for significantly lower post-infusion HR relative to pre-infusion (-6.4 $\pm$ 8.8 bpm, $p = 0.07$). Diastolic BP was higher (3.0 $\pm$ 7.8mmHg, $p = 0.039$). These effects were

independent of groups and drug. The most common side effect with MB was mild/moderate pain at infusion site ($n = 10/13$), resolving within median 32.5 minutes (IQR 6-102), and discoloured urine in 7/13 subjects lasting median 44.5 hours (IQR 36-59). No difference in frequency of side effects reported between groups.

Conclusion. Although limited by small sample size, this tolerability analysis demonstrates a acceptable profile of effects of MB on subjective ratings and blood pressure, in both BPAD and HCs. Common side effects of discoloured urine and pain at infusion site are in line with previous reports in the literature. We observed a small effect of MB on mood ratings which could be related to the discomfort experienced during infusion.

Virtual reality cognitive & functional assessment in psychosis

Sukhwinder Shergill*, Lilla Porffy, Gabriella Whomersley, Timea Szentgyorgyi, Elias Mouchlianitis and Joel Patchitt

Institute of Psychiatry, Psychology and Neuroscience, King's College London

*Corresponding author.

doi: 10.1192/bjo.2021.769

Aims. To compare the MATRICS Consensus Cognitive Battery (MCCB) and a novel Virtual Reality (VR) task, called VStore, in assessing cognition and functional capacity (FC) in schizophrenia. We hypothesise that VStore reliably discriminates between patients and controls, correlates with the MCCB, and is well-tolerated. Additionally, VStore is expected to strongly correlate with FC measures.

Background. Cognitive and functional deficits in schizophrenia have a major impact on everyday functioning of patients. The gold-standard cognitive assessment is the MCCB, while the USCD Performance-Based Skills Assessment (UPSA) is used to assess FC in this patient group. Neither of which are without limitations. For example, both take a long time to administer, and the MCCB alone cannot give clear indications of FC. We propose the use of a novel VR task to simultaneously measure cognition and FC in a single assessment. VStore is a shopping task, which involves a verbal learning task followed by buying items from a predetermined shopping list in a virtual minimarket.

Method. Ten patients with schizophrenia or schizoaffective disorder and ten age/gender-matched healthy controls recruited from South London, completed the following assessments: VStore, MCCB, UPSA & Global Assessment of Functioning (GAF), and VR-Symptom Questionnaire (VRSQ); while controls only completed the VR task. To test whether VStore can differentiate between patients and controls we employed unpaired t-test. To explore associations between VStore Total Time, MCCB composite score and FC measures Pearson's r was used. Finally, mean differences between pre/post-VR symptoms scores were tested using paired t-test.

Result. There was a significant difference between patients and controls on the verbal learning task ($t_{16.38} = -4.67, p < .001$), and total time spent completing the VR task ($t_{11.41} = 2.67, p = .023$). In addition, VStore had a strong association with MCCB composite score ($r = -.80, p = .010$). While both VStore ($r = -.82, p < .001$) and MCCB ($r = .77, p = .010$) had significant correlation with the UPSA, only VStore had a significant association with the GAF ($r = -.68, p = .030$). Finally, VStore appears to be well-tolerated, causing no measurable side effects in the VRSQ (Pre-VR Mean = 12.1 [SD = 13.5], Post-VR Mean = 9.6 [SD = 11.5], $t_9 = 0.49, p > .05$).