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information about age, gender, education, therapy provision and drug prescription included generic name and dosing.

**Results.** A total of 129 patients were included in the study. 81.7% (n = 105) were females and 18.3% (n = 24) were males. 72 (76.4% female, 23.6% male) patients were started on medications. All patients were initiated on a monotherapy regime of antidepressants.

The most commonly prescribed antidepressant was Fluoxetine (58.3%), followed by Sertraline (18.1%), Fluoxamine (12.5%), Escitalopram (6.9%), Mirtazapine (2.8%) and Amitriptyline (1.4%).

**Conclusion.** Our findings revealed that current psychopharmacology practice for depressive disorder in Singapore generally follows the published Singaporean treatment guidelines, which is generally kept up to date with wider international recommendations.

The factor of pricing may affect the lower prescription of certain medications, such as Escitalopram, as it is more expensive than the other prescribed medications in the list.

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## Risk Factors, Symptomatology, and Predictors of Mortality Among COVID-19 Inpatients Presenting With Delirium Symptoms in a Tertiary Hospital in the Philippines

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Aims. The prevalence of delirium among confirmed COVID-19 patients is around 12–33%. Delirium in COVID-19 patients is associated with worse functional outcomes; and associated with length of hospital stay, admission to ICU, and ventilator utilization. COVID-19 patients with delirium have a significantly higher risk for mortality than those who did not develop delirium. This study aimed to describe the risk factors, symptomatology, and predictors of mortality of COVID-19 patients presenting with delirium symptoms admitted between January and October 2021 to the Philippine General Hospital, a public tertiary hospital in the Philippines.

**Methods.** Medical records of adult COVID-19 patients admitted to the Philippine General Hospital were analyzed. Descriptive statistics were used to summarize the demographic and clinical history. Univariate and multivariate logistic regression were done to determine the variables that predict mortality.

**Results.** One in five (20.01%) COVID-19 patients presented with delirium; of the 1,992 medical records reviewed, 400 patients had either presented with symptoms of delirium or were diagnosed with delirium.

Of the 400 patients, 36.5% were not diagnosed with delirium, only 7% were referred to Psychiatry, and 74% expired during admission. Patients referred to Psychiatry had lower mortality odds than those not referred (aOR = 0.069, p = 0.014). Before the COVID-19 pandemic, patients with psychiatric symptoms from organic causes are already less likely to be referred to psychiatrists. Furthermore, studies have shown that delirium is under-recognized among patients with COVID-19. Early referral

to a psychiatrist for assessment and management may possibly be protective against mortality.

Those who received midazolam had higher odds of mortality (aOR = 3.112, p = 0.001). Currently, no literature supports the association between midazolam use and mortality among COVID-19 patients with delirium; however, it is known that midazolam use puts patients at increased risk for delirium and mortality.

Patients with decreased sensorium (aOR = 7.438) and decreased psychomotor activity (aOR = 3.857) had higher odds of mortality (p < 0.001). Decreased sensorium and decreased psychomotor activity are typical in patients with hypoactive delirium; hypoactive delirium is a known prognosticator for patient mortality. The only available studies on specific delirium symptomatology show that decreased sensorium and decreased psychomotor activity are common among COVID-19 patients with delirium. Conclusion. Timely assessment and appropriate management are critical for COVID-19 patients with delirium symptoms, especially those at an increased risk for mortality. Clinicians dealing with COVID-19 patients presenting with delirium must be reoriented to delirium symptomatology, initial interventions, and indications for referral to psychiatrists.

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## Systematic Literature Review and Meta-Analysis of Anti-Psychotic Use in Parkinson's Disease Psychosis

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Aims. Psychosis is a common neuropsychiatric symptom associated with Parkinson's disease (PD), with prevalence rates of up to 75%. Parkinson's disease psychosis (PDP) is associated with increased morbidity, caregiver burden, depression, poorer quality of life and progression of dementia. It has also been shown to be a strong predictive factor for long term care placement, and results in up to 71% increase in risk of mortality compared with PD patients free from psychotic symptoms. Use of antipsychotics for PDP is common, with up to 35% of PD patients prescribed at least one antipsychotic within 7 years of PD diagnosis. This systematic literature review aims to search, appraise and synthesise the best available and most up-to-date evidence for the use of antipsychotics in the treatment of PDP, and their effects on PD motor symptoms.

**Methods.** We carried out a comprehensive literature review and meta-analysis following the PRISMA statement for systematic reviews

Results. Four studies investigated quetiapine, three investigated olanzapine, two investigated clozapine and a further two investigated pimavanserin. Both quetiapine and olanzapine showed no significant improvement for PDP over placebo, however meta-analysis of olanzapine groups showed significant motor worsening, UPDRS +2.89 (95% CI 1.22 to 4.56) compared with placebo. Clozapine showed a significant improvement in psychosis vs placebo in both studies, with a large effect size in their primary outcome measure; -0.82 (95% CI -1.37 to -0.26), -0.89 (95% CI -1.42 to - 0.36). Pimavanserin showed significant improvement in psychosis vs placebo -0.48 (95% CI -0.77 to -0.18). Quetiapine,

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clozapine and pimavanserin showed no significant worsening in motor scores vs placebo group.

**Conclusion.** Although Olanzapine and Quetiapine are commonly used to treat psychotic symptoms in Parkinson's Disease, the only medication with robust evidence is Clozapine. This finding may have implications for service delivery.

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## Differentiation Between Suicide Attempt and Suicidal Ideation in Patients With Major Depressive Disorder Using Cortical Functional Network

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Differentiation between suicide attempt and suicidal ideation in patients with major depressive disorder using cortical functional network Sehoon Shim, Differentiation between suicide attempt and suicidal ideation in patients with major depressive disorder using cortical functional network Youngjoon Kwon.

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**Aims.** Studies exploring the neurophysiology of suicide are scarce, and the neuropathology of related suicide is poorly understood. This study investigated source-level cortical functional networks using resting-state electroencephalography (EEG) in drug-naive patients with suicide attempt and suicide ideation.

Methods. EEG was recorded in 55 patients with suicide attempt and 54 patients with suicide ideation. Graph theory-based source-level weighted functional networks were assessed via strength, clustering coefficient (CC), and path length (PL) in seven frequency bands. This study applied machine learning to differentiate the two groups using source-level network features.

**Results.** At the global level, patients with suicide attempt showed lower strength and CC, and higher PL in the high alpha band, compared to those with suicide ideation. At the nodal level, compared to suicide ideation, patients with suicide attempt showed lower high alpha band nodal CCs in most of brain regions. The best classification performance for suicide attempt and suicide ideation showed an accuracy of 73.39%, a sensitivity of 76.36%, and a specificity of 70.37% based on high alpha band network features.

**Conclusion.** Our findings suggest that abnormal high alpha band functional network reflects the pathophysiological characteristics of suicide and might serve clinically as a neuromarker of suicide.

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## Modulating N-Methyl D-Aspartate Receptors to Enhance Learning of Safety Memories in a Rodent Model of Exposure Therapy

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Aims. Overactive negative memories are thought to contribute to the core symptoms of psychiatric conditions such as anxiety disorders or post-traumatic stress disorder (PTSD). For talking therapies, such as exposure therapy, there are high rates of relapse demonstrating the necessity for innovative new treatments. It is thought that enhancing the ability to extinguish fear responses to the reactivation of these memories in patients with pharmacological adjunct treatments will enhance the efficacy of interventions.

N-methyl D-aspartate receptors (NMDARs) regulate the process of memory formation and consolidation. It is hypothesised that increasing the function of NMDARs would augment the consolidation of safety learning, during treatment sessions. NMDARs require the co-agonists glycine or d-serine to function. Bitopertin, a GlyT-1 inhibitor, increases the availability of glycine. Bitopertin has been studied in the context of schizophrenia, and therefore has been demonstrated to be safe for use in humans. In this preclinical study, we aim to determine if bitopertin can enhance safety learning, so-called extinction, in rodent models.

**Methods.** 24 Lister Hooded rats (male, n = 12) will undergo aversive Pavlovian conditioning to form an associative memory. Rats will then be administered with saline or bitopertin systemically, prior to a session to extinguish fear responses. The strength of the extinction of responses will be measured the following day with a rapid re-acquisition test.

Results. This study is being carried out as part of an intercalated master's degree, so the final results will be available in spring 2024. Given pilot data, it is expected that we will observe that the rats administered with bitopertin exhibit lower levels of fear responses on the rapid reacquisition test than the rats administered with saline. We do not predict any sex difference in responses. This would demonstrate bitopertin has the potential to enhance and safety memory consolidation in rats.

**Conclusion.** This is an exciting area of research for which results could provide a break-through in improving talking therapies and adjunct treatments offered to patients with anxiety disorders. Negative results would be informative as this allows neurobiologists to refine the search for a pharmacological agent which could be used as a cognitive enhancer in this manner.

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