QRW Abstracts: Mental Health

MH1: Making Work Better: How leading organisations are winning with people

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As uncertainty and change become the new normal, leaders know they need to step up - engaging and motivating their people to build the adaptive, innovative organisations required in this environment. Dr Denise Quinlan explains how Waypower is an essential new skillset for leaders, allowing both people and organisations to thrive. You'll find out why a leader's ability to build trust, empower, and collaborate is more important to ensure collective wellbeing than being the expert with all the answers. Drawing on her research with NZ-based companies that are 'winning with people', Dr Quinlan shares the strategies and practices they are using to grow productivity, innovation, staff engagement, job satisfaction, and improve mental health outcomes. Learn how purpose, flexibility, challenging and changing the way work is done, a culture of feedback, and leadership as self-navigation for all, is transforming organisations ranging from family to global businesses. These systemic and societal-level changes are imperative to combat the rising tide of mental health issues in Aotearoa and beyond, alongside individualised treatment programmes for those in need.

MH2: Breathing and anxiety: A gateway into understanding and improving our mental health

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Anxiety is one of the most common mental health disorders, and its symptoms can be incredibly debilitating and destructive. Many of the physical symptoms present in our body (e.g. a racing heart or becoming short of breath), and recent theories have proposed that a mis-communication may exist between the brain and body with anxiety when perceiving and interpreting these sensations (termed 'interoception'). In our research we predominantly focus on breathing signals, as these are both incredibly salient and also consciously controllable, and have been used in the management of anxiety for centuries. We have observed that while those with greater anxiety have greater self-reported attention towards body and breathing sensations, they actually have reduced sensitivity to minor changes in breathing resistance, lower confidence in perceptual decisions, and lower insight (which describes your ability to self-reflect on how well you perceive body signals, similar to reflecting on your performance in an exam prior to getting your marks back). Notably, this latter relationship between anxiety and interoceptive insight is only observed in women, and not men. Here I will translate our findings to describe their current clinical significance, and what we hope to achieve in our ongoing work investigating the impact of pharmacotherapies and exercise to manage anxiety symptoms.

MH3: Health Reform in New Zealand: What are the opportunities to grow mental health research?

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New Zealand is currently in the midst of the most significant reform of our Health Service in two decades. This talk will provide an overview of the history of the reforms with a specific emphasis on the shape of mental health services. It will challenge researchers to think about the opportunities and risks for mental health research in this new system and invite them to think about how they can help shape mental health care in New Zealand in the future.

MH4: Some future challenges for mental health service provision in New Zealand

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The prevalence of mental health disorders in New Zealand is such that it is unlikely there will ever be enough trained mental health personnel to handle demand. While improvement in socio-economic conditions might lead to a measurable decrease in levels of psychological distress, individualised interventions will remain difficult to access.

One-line and e-therapies have been promoted as a means to overcome this problem, especially for people with mild to moderate levels of mental disorder, with moderate success. The development of more sophisticated digital initiatives including AI supported psychotherapies and digital phenotyping might allow more effective engagement, assessment, treatment, and outcome measurement. AI enabled documentation may increase service efficiency and increased access to pharmacogenomic testing encourage greater precision in the prescribing of medications.

Measurement of the wider effect of changes in service focus is also an issue. Linking health records with the Integrated Data Infrastructure (IDI) might allow better analysis of the effect of new initiatives, including those outside the health sector, on service utilisation and outcomes. The formation of national mental health registries and service evaluation and research units would enable the effectiveness of interventions to be analysed[1].

Mental health services will also need plans to deal with changes in weather conditions induced by climate change as well as unexpected and potentially catastrophic events that have non-trivial chances of occurring, with four new “horsemen of an apocalypse” suggested to be pandemics, space weather and solar flares, super-volcanic eruptions and misaligned artificial intelligence[2].

1. Mulder R., Bastiampillai T, Jorm A., Allison S. *New Zealand’s mental health crisis, He Ara Oranga and the future.* NZMJ 21 January 2022, Vol 135 No 1548: 89-95.
2. Noy I., Uher T. *Four new horsemen of an apocalypse? Solar flares, super-volcanoes, pandemics and artificial intelligence.* Economics of Disasters and Climate Change (2022) 6:393–416.

MH5: What helps and what gets in the way? What children and young people tell me about their mental health

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The mental health of our mokopuna in Aotearoa NZ, and inequity in the mental health system, is something that needs our urgent attention. There's a rise in the incidence and prevalence of depression and self-harm, anxiety and eating disorders. At the same time, young New Zealanders from lower socioeconomic areas have self-reported depression at almost double the rate of those from low deprivation areas. And youth mental health services are under increasing pressure, with only 65% of mokopuna under 19 being seen by a mental health practitioner within the first 3 weeks of their referral.

We know that sitting behind the increase in youth distress is a complex picture reflecting our ever-changing world and a multitude of stressors that children and young people face. And the pressures on the health system are well-documented. But what do young people say about their mental health and what it is they need to grow up safe and well?

As Chief Children's Commissioner, I meet with mokopuna of all ages and stages, and all across the motu. My team and I are asking them: 'I tōu ao, he aha te mea nui? In your world, what matters most?' Their answers reflect a universal childhood experience, highlighting the importance of whānau and social connection, a safe home and community, being truly seen and having what they need to live a full and happy life. But they also tell me about what gets in the way – the barriers to living their best life, which include bullying, racism, trauma and distress.

In my talk, I will share the voices of these young people and my aspiration that all children and young people receive the mental health support they need to have a good childhood and a strong and positive start in life, including all sides of their Te Whare Tapa Whā being as strong as possible, to help set them on a positive lifetime trajectory.

MH6: Anxiety NZ Trust: an NGO charity for positive mental health and the prevention and treatment of anxiety and related conditions

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Anxiety is the most prevalent cause of mental distress in Aotearoa, New Zealand. Te Rau Hingaro, the New Zealand Mental Health survey, suggests an annual prevalence of diagnosable anxiety disorders of around 15%[1] while the New Zealand Health survey shows anxiety of mild or greater intensity is present in close to 27% of the population, with 9.8% experiencing moderate or greater symptoms[2]. The Anxiety NZ Trust, an NGO established in 1980, addresses anxiety-related conditions through in-person and online therapy, a free 24-hour national 0800 Helpline, online resources, social media content, workshops, community education, peer support groups, volunteer training, and an internship program to support mental health workforce development.

In 2023, the Anxiety NZ Trust responded to 40,000 calls to the 0800 Anxiety Helpline and clinic service, provided over 3500 therapy sessions, facilitated 120 peer support group meetings, organised 40 training sessions and workshops and distributed 20,000 printed resources. Over 300,000 connections were made through various services, online and communication channels. The organisation established and led a national Helpline Collaboration Group and developed a free online Empowered Programme.

While a small portion of government funding supports the 0800 Helpline and peer groups, and reduced fees for clinical services, most services rely on fundraising. Despite these efforts, funding and resource limitations remain significant barriers. Anxiety NZ Trust provide efficient, high-quality and person-centred prevention and treatment options for mental health, contributing to the development of resilient, inclusive and mentally healthy communities.

1. MA Oakley Browne, JE Wells, KM Scott (eds), 2006. *Te Rau Hingaro: The New Zealand Mental Health Survey*. Wellington: Ministry of Health.
2. *Mental Health and Problematic Substance Use. New Zealand Health Survey*: 2016/17 and 2021-23. Manatu Hauora Ministry of Health: 10 June 2024.

MH7: The Evolution and Impact of Whau Mental Health Research Foundation

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Whau Mental Health Research Foundation (previously known as Oakley Mental Health Research Foundation) is Aotearoa's only Foundation solely dedicated to mental health research. Since 1967, the Foundation has invested approximately $2.5 million in over 180 research projects, driving innovations and improved mental health policy and practice. This talk will explore the Foundation's history, its rebranding journey, and its significant contributions to addressing mental health challenges in Aotearoa.

Key points will include:

- The historical context and achievements of the Foundation
- The motivations and strategic goals behind the rebranding to Whau Foundation
- Examples of research projects funded by the Foundation and their contributions to the field
- The types of projects the Foundation looks to fund
- Information and guidance for potential grant applicants interested in partnering with the Whau Mental Health Research Foundation

This talk aims to provide mental health professionals, researchers and potential grant applicants with insights into the Foundation's impact, the current landscape in Aotearoa, and information on how to engage and support the Foundation's mission.

MH8: Role of EAP in Psychosocial Risk Management and Workplace Wellbeing

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What is the future of EAP (employee assistance programs)? There is a real mismatch between what is required, which is the ability for organisation to effectively manage their psychosocial risks by harnessing technology and data analytics, to ensuring their people receive the right support in a timely manner. There is often a huge gap between best practice to achieve the best outcomes, and what is implemented in real life by an organisation's EAP.

As a society, we recognise there needs to be a significant shift away from being reactive to being proactive. To focus more on systemic level interventions rather than individual level interventions in order to prevent the harm from happening in the first place e.g., burnout. However, due to the lack of visibility on the true mental state of an organisation in the context of the dynamic and subjective nature of these risks, the complexity in managing these risks is high.

In addition, accurate data collection of these psychosocial risks directly from employees, are also problematic due to stigma and fear of repercussions especially in organisations that are not psychologically safe. There is also the infrequent collection of the data that often results in the organisation being out of touch with what employees require.

Even when leadership/managers are aware of what are the psychosocial hazards that exists in the workplace, they often lack internal capability or have the expertise to conduct an evidence-based approach to addressing the root cause, or the ability to provide the support/intervention at scale. Neither are they effectively tracking the outcomes of the interventions or controls that are introduced to tackle the hazards, to ensure the risks are mitigated or eliminated.

This will require a multifunctional effort between leadership, health and safety, HR, legal and operations teams.

MH9: Modern-day Disordered Breathing Syndrome and its effect on subclinical anxiety disorders

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Sub-clinical anxiety disorders in the workplace are on an upward trajectory, the health system is over-burdened, and people have inadequate access to efficacious interventions. We set out to test our theory about mitigating sub-clinical anxiety in employees from two large, fast-paced corporations, by circuit-breaking poor breathing patterns. All other conditions of the employees' life and work remained the same. The only change made was to their breathing.

For the study, we undertook to explain the physiology, then demonstrate how to breathe functionally, and lastly, provided a digital tool to methodically reset breathing patterns over a period of seven days. The results were swift and compelling with 76% of participants reporting improved sleep and 96% of participants reporting reduced anxiety, within seven days.

The understanding of breathing patterns as a robust intervention to address sub-clinical anxiety is limited, with most people perceiving breathing as lightweight and lacking in scientific rigour. For this reason, it was imperative that the first education of participants was regarding the physiology – the direct relationship between the stress response and the breath response. And then next, to link these with myriad of anxiety indicators such as poor sleep, feelings of panic, headache, poor recall, overwhelm, nervousness, mood swings, forgetfulness, trouble making decisions. These indicators would typically and understandably be explained as the result of an over-burdened life and rarely, if ever linked to breathing patterns.

We have continued to monitor anonymised data of participants in the Take a Breath 7-Day Challenge and observed similar results. We conclude that the pace and pressure of modern-life has shifted people's breathing patterns, and that resetting breathing patterns provides an efficacious, easily accessibly tool to regulate the nervous system and reduce sub-clinical anxiety disorders.

MH10: Through a different lens: Contributing to a culturally-responsive clinical psychology workforce

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Growing the Māori clinical psychology workforce is critical to supporting the mental health needs of Māori communities. Currently we are seeing a growing number of tauira Māori in clinical psychology training, however, much of this clinical training in Aotearoa still draws heavily on Western models of practice. Unfortunately, the deficit focus that some of these Western approaches take, where disorder sits with the individual, can diminish the lived experiences of whaiora Māori and contribute to poorer outcomes. Recently, we have seen a wider uptake of mātauranga and tīkanga Māori-based approaches in clinical practice. These holistic, strengths-based approaches aim to enhance health outcomes by understanding and addressing the historic and contemporary environments that lead people to seek support.

This talk focuses on my experiences as an early career academic reconnecting with my culture, and my work developing culturally-responsive teaching and research programmes within the area of clinical psychology.

MH11: Ko Ngati Porou, Ko Tararaa, ko Ngati Maru oku nei iwi

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We are parents, grandparents, rental tenants, one-income empty-nesters, and are not unlike too many other Māori whānau who struggle with the statistic of 1 in 4 suffering from mental health issues. While we are proud to be Māori, mental illness is taking a toll on too many generations of our whānau.

As a psychology undergraduate, my master's degree in counselling was a natural lean, much like Narrative Therapy is to Māori culture, because it values an oral tradition of purakau, or stories. My PhD reconciled tensions between the theory of social constructionism, Tikanga Māori and my faith. Working in the field as an educator, social worker and cultural supervisor, the journey has been everything fascinating!

This presentation is an interactive workshop. We utilise the tools of Titiro, Whakarongo and Kōrero to engage on the topic of mental health today by asking us simple questions about what solutions we can see but are not able to express and what solutions we can express but cannot easily implement. We utilise social constructionism and Wairua to 'speak' these solutions into existence through the values of Tika, Pono and Aroha.

MH12: EEG biomarkers and dysconnectivity in bipolar disorder

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Bipolar disorder (BD) presents with mood lability, alternating between episodes of mania and depression. For a third of those with BD, a diagnosis is not made till 10 years after symptom onset. A barrier to improving diagnostics and treatment is the lack of objective biomarkers and screening tools. However, with no consensus on the underlying pathology or established therapeutic targets in BD, subjective questionnaires remain the primary diagnostic tool.

BD has been suggested to be a dysconnectivity syndrome. There is a strong relationship between functional connectivity and myeloarchitecture, both of which are altered in BD. Despite this, the axonal effects of treatments like antiepileptics and lithium have not been quantified. To address this, we produced electrophysiological data from a novel brain slice preparation of the mouse lateral olfactory tract. We found that axonal ion channel targets of antiepileptics and lithium acted to modulate conduction of the action potential waveform. We then translated this into humans, investigating the potential of a novel infraslow EEG biomarker within the salience, central executive, and default mode networks by analysing EEG profiles in healthy volunteers who received either lithium (350mg BID) or fampridine (2mg BID), a potential novel therapeutic. After 7 days of treatment, EEG profiles showed changes in functional connectivity and power, coming to resemble signatures present in BD. These results also confirmed our ex vivo findings that lithium 'amplified' lower frequencies (delta and theta) to a greater effect than higher frequencies.

Our results suggest that therapeutics used in BD may act through axonal ion channel modulation to alter functional connectivity within resting networks, thereby restoring flexibility in regions associated with emotional and cognitive processing.

MH13: Investigating Neurobiological Correlates of Schizotypy Using Multimodal MRI in a Subclinical Cohort

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Schizotypy is used to describe the subclinical symptoms of disorders such as schizophrenia or bipolar disorder, which people experience before receiving a diagnosis. Schizotypy can be assessed using self-report questionnaires that measure the incidence of psychosis-like experiences (PEs), which can then be used to estimate an individual's risk of developing psychosis. Currently, no biomarker for schizotypy can be used to aid research into psychosis or identify schizotypy without relying on self-reports. This research aimed to use magnetic resonance imaging (MRI) to investigate associations between PEs and different measures of the physical and chemical attributes of the brain. A cohort of forty undergraduate students was assessed for PEs using the Schizotypal Personality Questionnaire and the Psychosis-Like Symptoms Semi-Structured Interview. Twenty-one participants had a moderate-to-high incidence of PEs and nineteen had a low-to-no incidence of PEs. The participants then participated in an MRI scan that was used to estimate brain tissue volumes, grey matter density and white matter integrity. Magnetic resonance spectroscopy (MRS) was also used to measure regional concentrations of glutamate and gamma-aminobutyric acid (GABA) in the region of the ventromedial prefrontal cortex and striatum. Independent t-tests were used to assess any group differences between participants who reported moderate-to-high PEs compared to those who reported low-to-no PEs and linear regressions were conducted to consider any direct relationships between brain measures and questionnaire scores. No significant differences were identified at the group level across any of the measures ($p<0.05$). However, positive and negative trends (r ranging from -0.26 to 0.14, p ranging from 0.1 – 0.9) were identified in the regression analyses, indicating that a greater incidence of PEs may correlate with differences in brain tissue volumes and relative concentrations of glutamate. These findings, while preliminary, suggest that subtle neurobiological differences may be present even in subclinical populations experiencing psychosis-like symptoms.

MH14: Taming ketamine – can formulation changes reduce dissociation and sedation symptoms in depressed patients?

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Low dose ketamine has remarkable promise as a fast-acting antidepressant, however when it is injected or inhaled, it produces marked dissociation and sedation, and needs to be administered in a medical clinic. This presentation reports on a program to develop an extended-release tablet formulation of ketamine, to try and minimize these side effects. Results from a Phase 2 clinical trial confirm this profile1, and have identified an effective dose for future studies.

1. Glue P et al. *Extended-release ketamine tablets for treatment-resistant depression: a randomized placebo-controlled phase 2 trial.* Nature Medicine 2024. https://doi.org/10.1038/s41591-024-03063-x.

MH15: Genetic association analysis for depression symptoms in a diverse cohort of New Zealand young people

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The goal of this research project is to identify the most significant biological and environmental pathways underpinning childhood depression symptoms. This will help us better understand what causes depression and anxiety. We are investigating the association between genetic variants and mental health outcomes based on GWAS and candidate gene studies reported in the literature. Additionally, we are utilising polygenic risk scoring to test the predictive power of multiple genetic variants simultaneously. Currently, we are constructing polygenic risk scores for each participant based on GWAS discovery results from the Psychiatric Genomics Consortium. We will then assess the association between genetics and our depression scores obtained from the 8,10- and 12-year data collection waves of the Growing Up in New Zealand study. Depression symptoms were assessed using the Centre for Epidemiologic studies depression scale (10 item version). Genotype information was obtained using DNA collected from saliva samples taken at 4.5 and 8 years of age using the DNA Genotek Oragene-DNA saliva kit. The illumina Global screening array (GSAv3) was used to genotype the samples at either Macrogen South Korea or InfogeneNZ. We will present our preliminary results investigating the association between known genetic variants for depression and depression in young people.

MH16: Long term outcomes associated with ADHD: evidence from the Christchurch Health and Development Study

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Recent decades have seen advances in the understanding of attention deficit/hyperactive disorders (ADHD) in childhood and adolescence, particularly concerning the consequences associated with ADHD diagnoses across a range of domains (e.g. education, social functioning, employment). However, relatively little research has focussed on the long-term, life course outcomes associated with ADHD - in order to determine the causal role of ADHD on life course outcomes, longitudinal research using data from large population cohorts is required, in which data on ADHD symptoms, and the predictors and outcomes associated with ADHD, have been measured prospectively.

The Christchurch Health and Development Study (original n = 1265) is a longitudinal birth cohort born in Christchurch in 1977 and followed to age 40 in 2017. The Study has collected data on ADHD and other behavioural disorders (including conduct disorder (CD) and oppositional/defiant disorder (ODD)) through childhood and adolescence, and the Study database contains a vast array of measures that may confound the associations between ADHD and later life outcomes, including childhood family sociodemographic factors, childhood family functioning, abuse exposure, individual factors including personality, and early indicators of poor mental health.

This investigation modelled mental health, substance use, and personal and family functioning indicators as a function of ADHD in adolescence (ages 14-16), controlling for confounding and co-occurring CD and ODD. Bivariate associations showed that ADHD in adolescence was associated with adverse mental health, substance use, and personal and family functioning outcomes across adulthood to age 40. While controlling for confounding factors did not materially affect these associations, control for co-occurring CD and ODD reduced most of these associations to statistical non-significance. The results of these analyses suggested that ADHD is a risk marker for a range of adverse outcomes across adulthood, but that it is unlikely that ADHD plays a strong causal role in these outcomes.

MH17: Preliminary findings that Ketamine increases GABA levels in the amygdala two hours post infusion in people with treatment resistant anxiety

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Low-dose subcutaneous infusions of the glutamate N-methyl-D-aspartate (NMDA) receptor antagonist Ketamine have been shown to act as a rapid and persistent anxiolytic in over 80% of those with treatment-resistant Generalised and Social Anxiety Disorders. However, neural correlates of such disorders and their treatment response have yet to be defined. Additionally, GABA levels in the amygdala-medial prefrontal cortex circuitry have been correlated with trait anxiety. Therefore, the present study sought to investigate GABA and Glutamate levels in participants with treatment-resistant Generalised or Social Anxiety Disorders pre- and 72 hours post-ketamine intervention, using Proton Magnetic Resonance Spectroscopy (H-MRS). The PRESS sequence was used, with a 2cm3 voxel over the amygdala. Neurochemical measures were corrected for water suppression, cerebrospinal fluid volume and percentage of white matter, and analysed using the Linear combination of model spectra of metabolite solutions in vitro (LCModel). Mann Whitney U and unpaired t-tests were used to investigate GABA and Glutamate levels between the healthy (n=14) and pre-ketamine anxiety (n=18) groups. Repeated Measures ANOVA were used to investigate GABA and Glutamate levels from 1 day pre-ketamine infusion to 2 hours and 3 days post-ketamine infusion (n=8). Following this analysis, we found a significant increase in the relative ratio of GABA to Creatine levels of 0.1086 (95% CI: -0.2039, -0.01317; P-Value=0.0304) between the pre-intervention and the 2-hour post-ketamine timepoints in the amygdala. These preliminary findings suggest that ketamine may alter GABAergic functions in patients with treatment-resistant anxiety. Furthermore, these alterations do not persist at the three-day timepoint despite the anxiolytic effects of ketamine lasting up to one week. While giving a first indication of neurochemical changes induced by ketamine, this information may also be of particular importance to clinicians, as an increase in GABA may indicate ketamine could have unforeseen interactions with other common psychiatric medications such as benzodiazepines and anticonvulsants.

MH18: Cognitive Predictors of Response to Interpersonal and Social Rhythm Therapy in Mood Disorders

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There has been increasing interest in examining the potential moderating effects that cognitive functioning has on treatment outcome in bipolar disorder (BD) and major depressive disorder (MDD). Therefore, the aim of this exploratory study was to examine the relationship between baseline cognitive function and treatment outcome in individuals with mood disorders who completed 12 months of Interpersonal and Social Rhythm Therapy (IPSRT) and were randomised to receive adjunctive Cognitive Remediation (CR) or no additional intervention. Fifty-eight patients with mood disorders (BD, n = 36, MDD, n = 22), who were randomised to IPSRT-CR or IPSRT underwent cognitive testing at baseline and completed follow up mood measures after 12 months of treatment. General linear modelling was used to examine the relationship between baseline cognitive function (both objective and subjective) and change in mood symptom burden and functioning, from baseline to treatment-end.

Poorer baseline attention/executive function was associated with less change in mood symptom burden, particularly depressive symptoms, at treatment-end. Additionally, slower psychomotor speed at baseline was associated with less improvement in mania symptom burden. Baseline subjective cognitive function was not related to change in mood symptom burden at treatment-end, and neither objective nor subjective cognitive function were associated with functional outcome. Due to the exploratory nature of the study, no correction was made for multiple comparisons.

Overall, aspects of objective cognitive function were found to be associated with treatment outcome following psychotherapy. Further large-scale research is required to examine the role that cognitive function may have in determining various aspects of mood disorder recovery.

MH19: Exploring the Effect of SSRIs on Interoceptive and Exteroceptive Perceptions in Individuals with Anxiety

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Impairments in interoception (interpreting internal stimuli from within the body) and exteroception (interpreting external stimuli) are characteristic of many mental health disorders, including anxiety. Despite the prevalence of anxiety, and common use of selective serotonin reuptake inhibitors (SSRIs) as a pharmacological treatment in Aotearoa New Zealand, little is known about the impact of SSRIs on perceptual processes. While this treatment can be a key step in therapeutic intervention plans, it is important to understand what changes these therapeutic interventions can evoke, who they work best for and in what contexts. Therefore, this project aimed to explore the effects of SSRIs on interoceptive and exteroceptive perception in individuals who have a clinical diagnosis of anxiety.

Preliminary data from an ongoing longitudinal study was used to assess how six or more weeks of prescribed SSRI treatment influenced three dimensions of breathing-related interoception and visual-related exteroception. Twenty-seven participants completed questionnaires, a respiratory resistance sensitivity task (RRST[1]), and a visual perceptual task (VPT[2]) to assess changes in anxiety and depression symptoms, as well as changes in perceptual sensitivity, confidence, and insight in each domain. Prior to treatment, participants had vastly greater sensitivity to visual stimuli compared to breathing stimuli, while greater confidence and insight were apparent for breathing compared to visual perceptions. Following treatment, alongside the expected (and profound) decreases in the severity of clinical depression and anxiety symptoms, participants also demonstrated improved perceptual sensitivity in both the interoceptive and exteroceptive domains. While confidence improvements approached significance, insight did not improve following treatment. These results are preliminary in nature; a final analysis using the protocols established here will be conducted on a larger sample size, and will include an additional control group who are stable on SSRIs to help manage their anxiety symptoms.

1. Nikolova, N., Harrison, O., Toohey, S., Brændholt, M., Legrand, N., Correa, C., Vejlø, M., Jensen, M. S., Fardo, F., & Allen, M. (2022). *The respiratory resistance sensitivity task: An automated method for quantifying respiratory interoception and metacognition*. Biological Psychology, 170, 108325.
2. Rouault, M., Seow, T., Gillan, C. M., & Fleming, S. M. (2018). *Psychiatric symptom dimensions are associated with dissociable shifts in metacognition but not task performance*. Biological Psychiatry, 84(6), 443–451. https://doi.org/10.1016/j.biopsych.2017.12.017.

MH20: The effect of an acute bout of self-selected intensity exercise on anxiety and anxiety sensitivity in moderately anxious individuals

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Current research suggests a one-off bout of exercise at various intensities and modalities is effective to reduce state anxiety. The effect may be mediated by reductions in anxiety sensitivity (fear of anxiety-related symptoms) due to the role of anxiety sensitivity in the development and perpetuation of anxiety. This study aims to investigate the effect of a single bout of self-selected intensity exercise on anxiety and anxiety sensitivity. Sedentary adults (n=39, mean age(±SD)=27.5±8.2 years) with a trait anxiety score (Spielberger Trait Anxiety Index; STAI-T) greater ≥40 were randomised to complete one 20-min exercise bout of either self-selected aerobic exercise or static stretching. State anxiety (STAI-S), and anxiety sensitivity (Anxiety Sensitivity Index; ASI-3), were measured before and after exercise. Associative/dissociative thought, perceived exertion and perceived control of body symptoms were collected throughout the exercise. Affect (Feeling Scale; FS) was measured before, after and throughout exercise. Intensity was quantified as %HRpeak (obtained in a following $\dot{V}O_2$peak test). ANOVA results showed anxiety significantly decreased by 16% after exercise (p=0.002, η^2=0.12), with no difference observed between conditions. There was no change in anxiety sensitivity over time, nor between conditions. Affect was significantly more positive following exercise (p=0.02, η^2=0.07), with no difference between conditions. The aerobic group selected to exercise at 74-84%HRpeak, indicating a vigorous intensity, which was significantly higher than the stretching group (45-48%HRpeak) (p<0.001). During exercise, perceived control of body symptoms decreased in the aerobic group (p=0.03) and overall was significantly lower than in the stretching group (p=0.01). There was no change to the proportion of associative/dissociative thought during exercise. These results suggest that a one-off bout of either static stretching or self-selected exercise may improve anxiety and affect. As aerobic exercise induces decreased perceptions of control of body symptoms during exercise, repeated bouts may be required to improve anxiety sensitivity.

MH21: Investigating the effect of exercise on physiological and perceptual hypercapnic responses in anxiety

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Anxious thoughts are adaptive mechanisms that serve in self-preservation and preparation. However, when their frequency and intensity exceed environmental demands, they can quickly become harmful. Bodily symptoms of anxiety such as sweating, increased heartbeat, and an urge to breathe are often the first to be detected. The perception of these signals emanating from within the body is termed “interoception”, and misinterpretation of bodily signals have been considered a key factor of multiple mental health conditions, including anxiety. Physical activity is widely known to alleviate anxiety symptoms, however the mechanisms involved are not completely understood. We hypothesise that safe exposure to intense interoceptive signals may modify future interoceptive processing. To investigate this, we measured physiological and perceptual responses of moderately anxious participants to hypercapnia (5% CO_2), before and after 30-minutes of either aerobic or stretching exercise. Hypercapnia is an interoceptive signal that is induced by exercise, reliably increasing ventilation and the urge to breathe in humans, and at high levels causes feelings of breathlessness and anxiety. Here, we observed no pre-post effect ($F_{(1,24)} = 0.35$, p = .57), and no effect of treatment condition ($F_{(1,24)} = 3.47$, $p = .07$) on the ventilatory response to hypercapnia. However, we did observe a pre-post effect on both self-perceived breathlessness ($F_{(1,24)} = 14.52$, $p < .05$) and breathing-related anxiety ($F_{(1,24)} = 12.20$, $p < .05$) in response to hypercapnia, where both perceptual responses decreased following the treatments. There was no treatment condition effect on breathlessness ($F_{(1,24)} = 0.00$, $p > .99$) or anxiety towards breathing ($F_{(1,24)} = 0.02$, $p = .88$). These results indicate a decoupling of perceptual and physiological breathing systems within interoceptive pathways as a result of acute exercise and stretching bouts, which we are now investigating further through a longer-term exercise intervention study.

MH22: Tagata o Te Moana Nui a Kiwa – mental health and well-being of Pacific youth in Aotearoa

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Aotearoa New Zealand's past and future journey is integrally linked to the Pacific region through its historical context, location in the Pacific region, and an increasing proportion of its population with ancestral ties to the Pacific Islands. Tagata o Te Moana Nui a Kiwa is a reference to people of and from the Pacific Ocean, people in Aotearoa who whakapapa to one of the many islands in the Pacific region. They left the beautiful shores of their island nations for better education and employment opportunities in Aotearoa. They are however disproportionately represented in poor health and education outcomes.

This presentation provides the context for Pacific young people in the tertiary environment in New Zealand. The Pacific population is young, a fast growing group making up 8% of New Zealand's population, and predicted to increase to 10% by 2038. This growth in the context of New Zealand's poor youth mental health statistics and global tertiary student mental health concerns, highlight the need to better understand and respond to the mental health and well-being needs of this group.

This presentation presents a perspective from quantitative and qualitative work undertaken, and provides suggestions to consider for the way forward. It seeks to provide a balance between the reality for Pacific young people in the tertiary environment, while positioning the way forward for constructive and enabling approaches to enable Pacific youth in Aotearoa to thrive.

MH23: Hauora Hinengaro o te Whaea – Assessment tool development

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Perinatal mental health and wellbeing is a critical component of hauora, influencing not only the well-being of māmā but also the developmental outcomes of their pēpi and whānau. Yet this has remained an under-researched and under-supported area of health, particularly for wāhine Māori. According to the Perinatal Mortality Review Committee report published Jan 2024, wāhine Māori were 2.91 times more likely to die by suicide as a direct result of maternal mortality than women of Pākehā ethnicity in the 2006–2020 period. Funded by Te Aka Whai Ora and hosted by the National Hauora Coalition (PHO), a group of Māori mental and maternal health experts have been developing via a Delphi study approach a mātauranga-Māori informed, perinatal mental health and wellbeing assessment tool. Incorporating kaupapa Māori methodologies, Whānau (mainly Māmā) focus groups were undertaken to understand the potential utility of the tool. The team proposes to seek funding to now test and iterate the tool in real world contexts. The assessment tool aims to assist perinatal healthcare providers in the early detection and timely support of Māori mothers experiencing psychological distress. There is a notable lack of culturally relevant and tailored tools and resources to support holistic assessment and support hapū Māmā in relation to mental health and psychological wellbeing. The presentation will incorporate lived-experience viewpoints and provoke considerations for the importance of this field of research.

MH24: Starting well: Improving Māori mental health by focusing on the first 2000 days of life

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Adverse child experiences (ACEs) have been shown to accelerate the risk of developing a range of debilitating physical and mental health conditions in later life. Yet, they remain one of the most unaddressed risk factors in our society. In comparison with non-Māori, Māori living in Aotearoa New Zealand report significantly higher rates of child maltreatment including acts of omission (neglect) and commission (abuse). Consistent with the cumulative risks associated with adverse child experiences, Māori are also more likely than non-Māori to be hospitalised for a mental disorder, they are more likely to die by suicide, they are over-represented in our prison population, and they are more likely to die early of preventable, avoidable chronic diseases. This talk will broadly address factors that perpetuate poor mental (and physical) health outcomes for Māori, including engagement, service delivery and treatment modalities. It will also make the case for intervening earlier in development to reduce the likelihood of experiencing poor mental health outcomes later in life.

Summary of Abstracts for the Poster Session

No.	Title	Presenter	Institutions
MH25	Amygdala Connectivity During Perception of Emotional Faces in Individuals with Treatment-Refractory Anxiety Disorders	Kemp, A.M.[1], Glue, P.[1], Russell, B.R.[1], Harrison, O.K.[1,2,3]	[1]University of Otago, Dunedin, New Zealand [2]University of Oxford, Oxford, United Kingdom [3]University of Zurich and ETHZ Zurich, Zurich, Switzerland
MH26	Emotion Detection in Short Speech Through Wavelet Decomposition: A Mental Health Monitoring Perspective	Adebanji, A., Samaneh, M., Olayinka, A.	Auckland University of Technology, Auckland, New Zealand
MH27	SSRI Effects on Emotion Recognition in Anxiety	Gans, J.[1], McLeod-Edwards, E.[1], Gorman, F.[1,2,3], Russell, B.R.[1], Harrison, O.K.[1,4,5]	[1]University of Otago, Dunedin, New Zealand [2]Ngāpuhi, New Zealand [3]Ngāi Tahu, New Zealand [4]University of Oxford, Oxford, United Kingdom [5]University of Zurich and ETHZ Zurich, Zurich, Switzerland
MH28	Emergency Assistance for Paralyzed Using Eye Blink Detection	Simi M.S.[1], Sumesh C.R.[2]	[1]University of Auckland, Auckland, New Zealand [2]Adi Shankara Institute of Engineering Technolo, Ernakulam, Kerala, India
MH29	Assessing test-retest reliability of an approach-avoidance conflict task across three weekly sessions	Mamun Mia[1], Shabah M Shadli[2], Jess Hogan[1], Neil McNaughton[1]	[1]University of Otago, Dunedin, New Zealand [2]Charles Sturt University, Bathurst, NSW, Australia
MH30	EEG biomarkers and dysconnectivity in bipolar disorder	Crellin, S., Glue, P., Sheard, P., Heyward, P.M., De Ridder, D.	University of Otago, Dunedin, New Zealand

MH31	Investigating Neurobiological Correlates of Schizotypy Using Multimodal MRI in a Subclinical Cohort	Cawood, T.J.[1], Harrison, O.K.[1,2,3], Linscott, R.J.[1], Russell, B.R.[1]	[1]University of Otago, Dunedin, New Zealand [2]University of Oxford, Oxford, United Kingdom [3]University of Zurich and ETHZ Zurich, Zurich, Switzerland
MH32	Genetic association analysis for depression symptoms in a diverse cohort of New Zealand young people	Walker, C.G., Marks, E.J., Waldie, K., Musgrove, S., Smith, A., Snell, R.	University of Auckland, Auckland, New Zealand
MH33	Preliminary findings that Ketamine increases GABA levels in the amygdala two hours post infusion in people with treatment resistant anxiety	Cawood, S.M.F.[1], Williams, J.M.[1], Ryan, M.M.[1], Harrison, O.K.[1,2,3], Russell, B.R.[1]	[1]University of Otago, Dunedin, New Zealand [2]University of Oxford, Oxford, United Kingdom [3]University of Zurich and ETHZ Zurich, Zurich, Switzerland
MH34	Exploring the Effect of SSRIs on Interoceptive and Exteroceptive Perceptions in Individuals with Anxiety	McLeod-Edwards, E.[1], Gorman, F.[1,2,3], Russell, B.R.[1], Harrison, O.K.[1,4,5]	[1]University of Otago, Dunedin, New Zealand [2]Ngāpuhi, New Zealand [3]Ngāi Tahu, New Zealand [4]University of Oxford, Oxford, United Kingdom [5]University of Zurich and ETHZ Zurich, Zurich, Switzerland
MH35	The effect of an acute bout of self-selected intensity exercise on anxiety and anxiety sensitivity in moderately anxious individuals	Connor, M.[1], Harrison, O.K.[1,2,3], Hargreaves, E.A.[1]	[1]University of Otago, Dunedin, New Zealand [2]University of Oxford, Oxford, United Kingdom [3]University of Zurich and ETHZ Zurich, Zurich, Switzerland
MH36	Investigating the effect of exercise on physiological and perceptual hypercapnic responses in anxiety	Paul, J.[1], Russell, B.R.[1], Turner, R.[1], Harrison, O.K.[1,2,3]	[1]University of Otago, Dunedin, New Zealand [2]University of Oxford, Oxford, United Kingdom

			[3]University of Zurich and ETHZ Zurich, Zurich, Switzerland
MH37	Anxiety NZ Trust: an NGO charity for positive mental health and the prevention and treatment of anxiety and related conditions	Wollard, S.[1], Kydd, R.[2]	[1]Anxiety New Zealand Trust, Auckland, New Zealand [2]University of Auckland, Auckland, New Zealand
MH38	The Evolution and Impact of Whau Mental Health Research Foundation	Morris, S.K.[1], Kydd, R.[1,2]	[1]Whau Mental Health Research Foundation, Auckland, New Zealand [2]University of Auckland, Auckland, New Zealand
MH39	Modern-day Disordered Breathing Syndrome and its effect on subclinical anxiety disorders	Laurie, S.L.	Take a Breath Ltd., Auckland, New Zealand
MH40	Role of EAP in Psychosocial Risk Management and Workplace Wellbeing	Lim, A.	Clearhead, Auckland, New Zealand