



Melbourne School of Psychological Sciences

Master Projects for 2021

Why do patients with PTSD get high rates of sleep apnea?

Details

Primary Supervisor: Amy Jordan

Contact Email: ajordan@unimelb.edu.au

Maximum number of student Places: 1

Patients with Post-Traumatic Stress disorder have higher rates of the sleep condition obstructive sleep apnea than the general population. The reason for this is unknown, but may be related to how their brain controls breathing or how easily they awaken from sleep. This study will assess the brains control of breathing in a very simple manner – how long a participant can hold their breath for in people with a range of PTSD symptomatology.

Screening for cognitive impairment in epilepsy patients

Details

Primary Supervisor: Charles Malpas

Contact Email: charles.malpas@unimelb.edu.au

Maximum number of student Places: 1

Cognitive impairment is common in epilepsy and related disorders. Formal neuropsychological evaluation, performed by a specialist, is the ‘gold-standard’ investigation for cognitive impairment. Neuropsychological evaluation, however, is resource intensive and is not universally available. The use of brief cognitive screening instruments has been adopted as an alternative approach in some epilepsy services. This project will evaluate one such instrument, the Neuropsychiatric Unit Cognitive Assessment Tool (NUCOG) in patients undergoing routine pre-surgical neuropsychological evaluation. Data will be obtained via clinical audit of two epilepsy surgical programs.

Developing an ultra-brief neurocognitive screening measure

Details

Primary Supervisor: Charles Malpas

Contact Email: charles.malpas@unimelb.edu.au

Maximum number of student Places: 1

The Neuropsychiatric Unit Cognitive Assessment Tool (NUCOG) is commonly used to screen for cognitive impairment across several neuropsychiatric populations. This instrument has been shown to be effective for cognitive screening in these populations but

takes up to 25 minutes to administer. As such, there is a need for a briefer version of the NUCOG for rapid screening applications. This project will focus on developing a 'NUCOG-lite' for use in a specialist neuropsychiatric service. This project will suit a student who is interested in understanding cognitive impairment across a range of populations, including epilepsy and younger onset dementia.

Maladaptive personality traits in epilepsy and related disorders

Details

Primary Supervisor: Charles Malpas

Contact Email: charles.malpas@unimelb.edu.au

Maximum number of student Places: 1

Maladaptive personality traits are commonly observed in patients with epilepsy and related disorders, particular psychogenic seizures disorders. The most recent version of the DSM advocated for an alternative model for the personality disorders, which is based around a five-factor model of maladaptive personality traits. While this model has promise, it has not been fully investigated in patients with epilepsy and related disorders. This project will analyse data from ~400 patients who underwent investigation for epilepsy and related disorders across two epilepsy programs. The aim will be to understand how maladaptive personality traits are expressed in this population.

Psychopathological characteristics of patients with combined epileptic and psychogenic seizures

Details

Primary Supervisor: Charles Malpas

Contact Email: charles.malpas@unimelb.edu.au

Maximum number of student Places: 1

Patients undergoing prolonged video-encephalographic monitoring (VEM) are commonly diagnosed with either organic seizures or psychogenic non-epileptic seizures. A small subset, however, are diagnosed with both organic and psychogenic seizures. Little is known about the psychiatric, cognitive, and psychosocial characteristics of this group of patients. This project will comprehensively investigate patients with both organic and psychogenic seizures who were evaluated at two comprehensive epilepsy programs in Melbourne. This project will suit any students with an interest in the intersection between neuropsychology and neuropsychiatry.

Understanding the psychopathological phenotype of multiple sclerosis

Details

Primary Supervisor: Charles Malpas

Contact Email: charles.malpas@unimelb.edu.au

Maximum number of student Places: 1

Patients with multiple sclerosis (MS) often experience symptoms of the major 'high prevalence' psychological disorders, such as depression or anxiety. While this is well documented, relatively little is known about other psychopathological domains (such as post-traumatic stress, maladaptive personality traits, obsessive-compulsive symptoms, etc...). The overall aim of this project will be to comprehensively map the psychopathological topology of MS using validated psychometric instruments. This project will suit any student with an interest in the intersection between neuroimmunology and psychopathology.

Psychopathological correlates of cognitive enhancing medication in MS

Details

Primary Supervisor: Charles Malpas

Contact Email: charles.malpas@unimelb.edu.au

Maximum number of student Places: 1

Stimulant medication is commonly used in multiple sclerosis (MS) to ameliorate fatigue and cognitive impairment. There is some evidence, however, that stimulant medication can induce or exacerbate symptoms of anxiety in some patients. This possibility has not been systematically investigated. The current project will compare patients who are taking stimulant medication to those who are not using validated psychometric instruments sensitive to anxiety and related symptom domains. This project will suit any student with an interest in the intersection between neuroimmunology and psychopathology.

The relationship between grief and loss and health care use: a systematic review

Details

Primary Supervisor: Christina Bryant

Contact Email: cbryant@unimelb.edu.au

Maximum number of student Places: 1

Grief and bereavement can pose a considerable risk for older people's mental and physical health, so it seems reasonable to assume that experiencing a significant loss would result in

increased health service use. However, there are conflicting findings with some studies suggesting that grieving individuals may not always seek help through the healthcare system, even when needed. In order to examine the relationship between grief and loss and health care use, the student will undertake a systematic review of this literature. This project will be co-supervised with Dr Katrin Gerber at the National Ageing Research Institute.

The bereavement care needs of older people who have lost someone during the COVID-19 pandemic.

Details

Primary Supervisor: Christina Bryant

Contact Email: cbryant@unimelb.edu.au

Maximum number of student Places: 2

This study aims to examine the bereavement needs of older people who have lost someone during the COVID-19 pandemic. Using a mixed-methods design, one student will have the opportunity to collect and analyse data by extending an existing grief survey to quantify the effects of COVID-related bereavements on older people's health, wellbeing and healthcare use. A second student will be able to conduct and analyse in-depth interviews with older people to provide qualitative insights into personal stories of bereavement during the COVID-19 pandemic

Systematic review of the prevalence of anxiety disorders in older adults

Details

Primary Supervisor: Christina Bryant

Contact Email: cbryant@unimelb.edu.au

Maximum number of student Places: 1

In 2008 I published a now highly cited review of the prevalence of anxiety disorders in older adults. It is time for an update to this literature using the more rigorous methodologies that are now called for. This review will follow PRISMA guidelines and use well-defined search terms to produce a paper that is likely to have a high impact. See this reference for the original paper:

Bryant, C., Jackson, H., & Ames, D. (2008). The prevalence of anxiety in older adults: Methodological issues and a review of the literature. *Journal of Affective Disorders*, 109, 233-250.

Systematic review of health apps

Details

Primary Supervisor: Christina Bryant

Contact Email: cbryant@unimelb.edu.au

Maximum number of student Places: 1

Health apps have become ubiquitous, yet few undergo rigorous testing before they are released. Tinnitus is a highly prevalent condition with significant implications for communication and well-being, yet often remains hidden and stigmatised. This systematic review will examine the evidence for the efficacy of apps that have been developed for the management of tinnitus. This work is in its early stages, thus giving the student the valuable opportunity to contribute to the refinement of the research question and the design of the study. We will collaborate with colleagues at Soundfair <https://soundfair.org.au/>, the leading organisation that advocates for people with hearing disorders.

Barriers and enablers of psychological help-seeking in people with tinnitus

Details

Primary Supervisor: Christina Bryant

Contact Email: cbryant@unimelb.edu.au

Maximum number of student Places: 1

Hearing disorders, such as tinnitus, are highly prevalent conditions with significant implications for communication and well-being, yet often remain hidden and stigmatised. Current models of care frequently pay little attention to psychological needs and little is known about help-seeking in people with tinnitus. This systematic review will examine the literature on barriers and enablers of psychological help-seeking in people with tinnitus. This study offers the valuable opportunity to contribute to the refinement of the research question and the design of the study. We will collaborate with colleagues at Soundfair <https://soundfair.org.au/>, the leading organisation that advocates for the needs of people with hearing disorders.

General interests

Details

Primary Supervisor: Christina Bryant

Contact Email: cbryant@unimelb.edu.au

Maximum number of student Places: 1

I have a broad interest in topics relating to mental health and ageing, the promotion of well-being and women's health. You are very welcome to approach me with ideas of your own within these areas, and I'd be happy to discuss these with you.

Abnormal remembering: a new cognitive cost of epilepsy?

Details

Primary Supervisor: Genevieve Rayner

Contact Email: raynerg@unimelb.edu.au

Maximum number of student Places: 1

Memory impairment is common in people with epilepsy, and can have a major psychological and functional impact. Most memory research in epilepsy has focused on abnormal forgetting. In contrast, there is a lack of research on the problem of abnormal remembering or false memory; that is, incorrectly remembering things that did not occur. This project will examine whether people with epilepsy are also vulnerable to abnormal remembering, and what the clinical, psychological, and cognitive correlates of this might be. The project has ethics approval at RMH, where the candidate will be based collecting data, and will suit a student with a keen interest in the neuropsychological aspects of seizure disorders and the memory system.

The Enfacement illusion in Eating Disorders

Details

Primary Supervisor: Isabel Krug

Contact Email: isabel.krug@unimelb.edu.au

Maximum number of student Places: 2

Distorted self-perception in eating disorders (EDs) may be due to disturbances in multisensory integration (that is, combining & integrating visual, tactile, and/or proprioceptive sensory information). The current project will investigate self-perception in EDs (specifically Anorexia Nervosa) using enfacement, which is a phenomenon how people with EDs/body dysmorphia perceive their own face in relation to its perceived weight (i.e. facial adiposity). It is anticipated that through the enfacement effect body dissatisfaction might improve in ED individuals

The impact of STRIVE support groups for caregivers of people with an eating disorder

Details

Primary Supervisor: Isabel Krug

Contact Email: isabel.krug@unimelb.edu.au

Maximum number of student Places: 2

A variety of interventions have been developed for caregivers of people with an eating disorder (ED) either to help them cope with the burden and distress that commonly accompanies this role or to make them more effective at providing support. This study will examine the impact of Strive support groups offered through Eating Disorders Family Australia (EDFA) for caregivers of people with an ED, which are run by facilitators with lived experience of caring for a loved one with an ED. This project aims to use both qualitative and quantitative measures to assess the impact of Strive support groups on carers' coping strategies, burden and distress. This project will be co-supervised by Sarah Giles, a PhD student working in the area of EDs.

Consumer and health care professional experiences of the New Medicare Eating Disorder Plan

Details

Primary Supervisor: Isabel Krug

Contact Email: isabel.krug@unimelb.edu.au

Maximum number of student Places: 2

Since 1 November 2019, Australians experiencing eating disorders are now able to access more support through Medicare. Known as the Eating Disorder Plan (EDP), it is an evidence-based, best practice model of treatment. This new plan can now include up to 20 Medicare-subsidised sessions with a dietitian and 40 sessions with a mental health clinician over a 12-month period. The current project will aim to investigate consumer and health care professional experiences of this new plan, 1-2 years after its implementation and its usage during the COVID pandemic. This project aims to use both qualitative and quantitative measures. The project will be co-supervised by Vanja Rozenblat, an Associate Lecturer at MSP.

Attentional engagement vs. attentional disengagement: Alternative accounts of body dissatisfaction

Details

Primary Supervisor: Isabel Krug

Contact Email: isabel.krug@unimelb.edu.au

Maximum number of student Places: 2

People with eating disorders (EDs) commonly experience episodes of body dissatisfaction (BD). This project will assess a novel questionnaire aimed at assessing frequency and duration of BD episodes, followed by an attentional task capable of independently assessing biased attentional engagement with, and biased attentional disengagement from, idealised bodies (which will be assessed differently for males and females). Finally, participants will be followed up with ecological momentary assessment (EMA) to assess frequency and duration of BD episodes across the subsequent seven days. This project will be co-supervised with Laura Dondzilo at the University of Perth, where data for this project will also be collected.

A systematic review and meta-analysis on transdiagnostic factors in Anxiety, Depression and Eating Disorders

Details

Primary Supervisor: Isabel Krug

Contact Email: isabel.krug@unimelb.edu.au

Maximum number of student Places: 1

A 'transdiagnostic process' is the label given to a mechanism which is present across disorders, and which is either a risk factor or a maintaining factor for the disorder. Transdiagnostic processes are found in the domains of attention, memory/imagery, thinking, and behaviour. There are a range of transdiagnostic factors that are shared amongst depression, anxiety and eating disorders (e.g. perfectionism, intolerance of uncertainty, alexithymia, distress tolerance, maladaptive schemas, cognitive inflexibility etc.). The current review will focus on one of these transdiagnostic processes and will review all studies to date in depression, anxiety and eating disorders. This project will be co-supervised by Litza Kiropoulos.

A systematic review and meta-analysis on Other Specified Feeding or Eating Disorders

Details

Primary Supervisor: Isabel Krug

Contact Email: isabel.krug@unimelb.edu.au

Maximum number of student Places: 1

Based on DSM-5 more than 50% of all eating disorder (ED) patients are diagnosed with Other Specified Feeding or Eating Disorder (OSFED) which is one broad heterogeneous provisional diagnoses entailing a mixture of various ED symptoms. Within OSFED, a few more specific categories such as Purging Disorder (PD), Atypical Anorexia Nervosa, Night Eating Syndrome and Subthreshold Bulimia/Binge Eating Disorder have been proposed, but systematic research on these different entities is lacking. The current project will for the first time undertake a systematic review and meta-analysis of all the studies to date that have assessed the different OSFED categories proposed to date.

Investigating factors contributing to poor outcome in individuals with mild traumatic brain injury

Details

Primary Supervisor: Jacqueline Anderson

Contact Email: jfande@unimelb.edu.au

Maximum number of student Places: 2

Although most individuals who have suffered a mild traumatic brain injury (mTBI) recover well within 6-12 weeks of the injury, a significant number have cognitive and emotional difficulties that can persist for 12 months and longer. This project will investigate factors that contribute to variations in outcome in a sample of mTBI patients, recruited from the statewide trauma centre at The Alfred and Royal Melbourne hospitals. Cognition, neuropathology, mood, personality and extent of trauma reaction are some of the factors that will be investigated as possible contributors to mTBI outcome. This is also suitable for a PhD.

Determining cognitive outcome after endovascular clot retrieval

Details

Primary Supervisor: Jacqueline Anderson

Contact Email: jfande@unimelb.edu.au

Maximum number of student Places: 1

Individuals who suffer a clot within the major cerebral arteries may be eligible for medical intervention, which removes the clot and restores normal blood flow. Currently, it is unknown whether 50% flow restoration has an equivalent outcome on cognition as 100% flow restoration. This study will investigate the cognitive function of individuals who have undergone endovascular clot retrieval and compare performances of those who have full flow restoration with those who have partial flow restoration. This project is being conducted at the statewide endovascular clot retrieval centre at the Royal Melbourne Hospital.

Socioeconomic status and attention control in young primary school children

Details

Primary Supervisor: Katherine Johnson

Contact Email: kajo@unimelb.edu.au

Maximum number of student Places: 1

This project is part of an ARC-funded research program investigating the relations between behaviour in the classroom, cognitive attention control, and the development of literacy and numeracy in children starting school. Three waves of longitudinal data have been collected. This project focuses on the associations between SES, cognitive attention control, and academic outcomes.

Johnson, K A., Lewis, F C., Cornish, K M. A child-focused version of the Attention Network Task designed to investigate interactions between the attention networks, including the endogenous orienting network. *Child Neuropsychology*, 2020, 26(5), 666-690. DOI: 10.1080/09297049.2019.1702635

Interactions between the four attention networks in young primary school children

Details

Primary Supervisor: Katherine Johnson

Contact Email: kajo@unimelb.edu.au

Maximum number of student Places: 1

This project is part of an ARC-funded research program investigating the relations between behaviour in the classroom, cognitive attention control, and the development of literacy and numeracy in children starting school. Three waves of longitudinal data have been collected. This project focuses on the alerting, endogenous and exogenous spatial orienting, and executive control networks, measured using the Attention Network Task. We are interested to measure how the networks interact together and how these relations change over three years.

Johnson, K A., Lewis, F C., Cornish, K M. A child-focused version of the Attention Network Task designed to investigate interactions between the attention networks, including the endogenous orienting net.

Towards Parenthood: evaluation of partner's experience

Details

Primary Supervisor: kim felmingham

Contact Email: kfelmingham@unimelb.edu.au

Maximum number of student Places: 1

Towards Parenthood, an evidence-based antenatal psychoeducational workbook, has been shown to be efficacious in reducing maternal post-natal depression symptoms; a randomised controlled trial has indicated that the intervention may mitigate parenting stress (Milgrom, Schembri, Ericksen, Ross, & Gemmill, 2011). Very few interventions have been designed to prepare new parents emotionally for the changes accompanying the birth of a child.

An existing student project beginning in 2021, will conduct a feasibility trial in which clinical outcomes between pregnant women receiving the new online version of the Towards Parenthood program and an expanded version of Towards Parenthood, including an additional module on attuned caregiving and appropriate.

Beating the Blues before birth: a more in-depth look at anxiety in pregnancy

Details

Primary Supervisor: kim felmingham

Contact Email: kfelmingham@unimelb.edu.au

Maximum number of student Places: 1

Depression in pregnancy is both prevalent and highly co-morbid with anxiety. There is good evidence that if a mother is depressed and anxious while pregnant, her child is substantially more likely to have behavioural and emotional problems. Beating the Blues before Birth is an ongoing randomised controlled trial of depression treatment during pregnancy focused on child behavioural outcomes at 24 months. Participants (n=230) are assessed for Maternal Depression using Structured Clinical Interview for DSM-V (SCID-5-CV) and included in the study if they have a diagnosis of a depressive disorder. The Beck Depression Inventory (BDI) is used to measure severity of symptoms and the Beck Anxiety Inventory (BAI) is used to assess anxiety symptoms.

Integrated e-screening for Postnatal Depression and Anxiety: long term follow up

Details

Primary Supervisor: kim felmingham

Contact Email: kfelmingham@unimelb.edu.au

Maximum number of student Places: 1

Postnatal depression is highly prevalent yet uptake of treatment is poor. This currently funded study is a cluster randomised controlled trial (c-RCT) evaluating an integrated e-screening and Clinical Decision Support System (CDSS) for postnatal depression in Maternal and Child Health Centres. To date 200 postnatal mothers have participated in the study, half of these mothers have been screened for symptoms of postnatal depression using best practice routine care during their 4-week postnatal visit, and half have been screened using the integrated e-screening and CDSS tool, looking at treatment uptake at 3-months postnatal.

The proposed study would involve a longitudinal follow up of the mothers already enrolled in this study, to evaluate t

Impact of exercise following fear extinction on extinction recall

Details

Primary Supervisor: kim felmingham

Contact Email: kfelmingham@unimelb.edu.au

Maximum number of student Places: 1

Fear extinction learning and recall are critical mechanisms involved in exposure therapy for anxiety disorders and PTSD. In particular, the capacity to retain fear extinction can determine success of exposure therapy and prevent relapse. Recent interest is examining exercise on fear extinction recall. This project will examine the impact of aerobic exercise following fear extinction in an experimental lab study in anxious and non-anxious participants.

Impact of training program for hospital clinicians in assessing family violence

Details

Primary Supervisor: Kim Felmingham

Contact Email: kfelmingham@unimelb.edu.au

Maximum number of student Places: 1

Three-year follow-up study investigating the impact of a whole-of-hospital transformational change project on the knowledge, confidence and clinical skills of hospital staff in the area of family violence response.

About the Project

The RMH FST have conducted a transformation change project at the hospital over the last three years, to embed family violence clinical response skills in the workforce to improve the care provided to patients experiencing family violence. This has included the deployment and implementation of a Family Violence Procedure and Guideline, the provision of hospital-wide training, with over 4900 attendances at training sessions thus far, the development of a Family Safety Network comprised of over 200 staff, and th

Development of a cognitive strengths inventory to enhance motivation and functioning in young people with mental illness

Details

Primary Supervisor: Lisa Phillips

Contact Email: lisajp@unimelb.edu.au

Maximum number of student Places: 1

We have recently proposed that focusing on cognitive strengths may serve to enhance motivation and functioning in young people with severe mental illness. We have completed 3 qualitative studies and a theoretical review on the potential value of assessing and using cognitive strengths in treatments for mental illness. The next step is to develop and pilot a self-report measure of cognitive strengths. We also aim to investigate the cross-sectional relationships between cognitive strengths, motivation, and functioning in young people. This study will inform the validation of a cognitive strengths-based inventory that can be used for assessment and intervention in youth mental health.

Developing a co-designed trauma-informed care model for Australian youth mental health services: Exploring the experience of consumer and professional developers

Details

Primary Supervisor: Lisa Phillips

Contact Email: lisajp@unimelb.edu.au

Maximum number of student Places: 2

There are 2 projects available to develop a consumer centered trauma informed care (TIC) training package for headspace youth mental health services. Aims: to explore the experiences of consumers and service providers who participate in the development of a TIC model. In-depth interviews and/or focus groups will be conducted with young people, friends and family members, service providers, and training developers to explore and understand their experiences of jointly developing the TIC model. The 2 projects will contribute to the understanding of, and best practice for, involving consumers in the development of TIC models.

Quality of life, clinical and service use characteristics of rural and remote young Australians seeking help from headspace services

Details

Primary Supervisor: Lisa Phillips

Contact Email: lisajp@unimelb.edu.au

Maximum number of student Places: 1

The interrelationships between quality of life (QoL) and clinical symptoms can be complex and bi-directional. Information related to QoL in young people can provide important information about how to best support and treat this population. We have cross-sectional data from over 4000 young people receiving support from headspace services on a range of measures and routinely collected outcome measures (demographic data, clinical characteristics and service use characteristics). This project will explore differences in the quality of life, clinical and service use characteristics of young people from rural and remote locations with those living in urban areas. Based on these findings, policy and clinical recommendations will be identified.

The development and evaluation of an online suicide prevention campaign content targeting high-school aged young people

Details

Primary Supervisor: Lisa Phillips

Contact Email: lisajp@unimelb.edu.au

Maximum number of student Places: 1

The #chatsafe guidelines are the world's first evidence-informed tools and tips designed to help young people have safe conversations online about suicide. In 2019, the guidelines were used to inform a nation-wide social media campaign that was found to improve young people's willingness, confidence, and safety when communicating online about suicide-related content. Although the #chatsafe social media content has been co-designed and evaluated by young people, previous participants have predominantly been over 18 years. Working within school settings, the aims of this project are to develop and evaluate online suicide prevention campaign content that is developmentally appropriate for high-school aged young people. orygen.org.au/chatsafe/

Student well-being - longitudinal follow-up

Details

Primary Supervisor: Lisa Phillips

Contact Email: lisajp@unimelb.edu.au

Maximum number of student Places: 1

Last year 1st year psychology students were surveyed regarding their well-being in the context of commencing university and COVID-19. This year we hope to conduct a follow-up to see how students are faring a year later and determine what factors may have influenced outcomes a year later. There is a lot of opportunity for an interested student to have input into the design of this study, including what outcomes are measured.

Young people's satisfaction and outcomes associated following engagement with an online mental health service

Details

Primary Supervisor: Lisa Phillips

Contact Email: lisajp@unimelb.edu.au

Maximum number of student Places: 1

The scope of this project is fairly wide open at this stage. We have access to a range of indicators of client satisfaction and clinical outcomes following young people's interaction with an online service. We may also be able to access info about that interaction. The possibilities are broad with scope for a keen student to be very involved in shaping the project.

Mindfulness group therapy for depression and anxiety in chronically ill populations: a systematic review and meta-analysis

Details

Primary Supervisor: Litza Kiropoulos

Contact Email: litzak@unimelb.edu.au

Maximum number of student Places: 1

No project details

Investigation of depressive and anxiety endophenotypes in multiple sclerosis: an investigation in twins

Details

Primary Supervisor: Litza Kiropoulos

Contact Email: litzak@unimelb.edu.au

Maximum number of student Places: 1

This project will involve the investigation of differences in depression and anxiety in concordant/discordant MZ and DZ twins. Data has already been collected. Statistical analyses will involve twin modelling analyses.

Transdiagnostic mediators the relationship between personality and depression and anxiety in chronic populations.

Details

Primary Supervisor: Litza Kiropoulos

Contact Email: litzak@unimelb.edu.au

Maximum number of student Places: 2

Examination of transdiagnostic mediators (intolerance of uncertainty, rumination, distress tolerance) in the relationship between neuroticism and optimism and depression and anxiety measures in individuals with chronic conditions (multiple sclerosis, cancer) compared to healthy controls. Students will be involved in online data collection and contributing to the database (N = 920 to date) in this established research program.

Associations between musical activities and mental health? A genetically informed approach.

Details

Primary Supervisor: Miriam Mosing

Contact Email: Miriam.Mosing@unimelb.edu.au

Maximum number of student Places: 1

Past research has suggested possible beneficial effects of musical activities on mental health. However, findings are mixed and it remains unclear to what extent such associations reflect causal influences of musical engagement, as opposed to reverse

causality or effects of genetic constitution (i.e., self-selection). Using a genetically informative sample of twins, this project will explore the relationship between musical engagement and mental health related factors (depressive symptoms, anxiety and stress). The study design will allow us to account for familial confounding (genetic and rearing environment) and strengthen causal inferences.

Associations between personality traits and cognitive health in the middle aged? A genetically informed approach.

Details

Primary Supervisor: Miriam Mosing

Contact Email: Miriam.Mosing@unimelb.edu.au

Maximum number of student Places: 1

Past research has suggested a relationship between personality traits and susceptibility to stress with cognition and cognitive ability. However, research is limited and the associations are not well understood. Using a genetically informative and longitudinal sample of twins – the PISA study - this project will explore the relationship between personality, stress and cognitive health. The study design will allow us to account for familial confounding (genetic and rearing environment) and strengthen causal inferences. As this project is based on a large pool of already collected longitudinal twin data, the student has much leverage to adapt the research question to his/her own research interests.

Associations between lifestyle and cognitive reserve factors and cognitive health? A genetically informed approach.

Details

Primary Supervisor: Miriam Mosing

Contact Email: Miriam.Mosing@unimelb.edu.au

Maximum number of student Places: 1

A better understanding of the relationship between modifiable lifestyle factors and cognition is important for the development of evidence-based interventions to delay age-related cognitive decline. The present project will explore lifestyle and cognitive reserve factors earlier in life and the effect on cognition and memory problems in middle age using a genetically informative and longitudinal twin sample – the PISA study. The study design will allow us to account for familial confounding (genetic and rearing environment) and strengthen causal inferences. As this project is based on a large pool of already collected longitudinal twin data, the student has much leverage to adapt the research question to his/her own research interests.

Neurobiology of hip osteoarthritis.

Details

Primary Supervisor: Natalia Egorova

Contact Email: natalia.egorova@unimelb.edu.au

Maximum number of student Places: 1

A Master's (with a possibility of conversion to a PhD) project is available to understand how hip osteoarthritis and exercise affect the brain. It is offered in collaboration with Dr Michelle Hall, a leader in the field of hip and knee osteoarthritis with particular interest in exercise, from the Centre for Health, Exercise and Sports Medicine at The University of Melbourne. The project will broadly aim to elucidate the neurobiological profile of people with hip osteoarthritis to facilitate our understanding of osteoarthritis beyond the musculoskeletal system.

Special Needs: basic programming skills (shell scripting/MATLAB) are desirable but not required.

Exploring perceptions of mental health treatment among young people

Details

Primary Supervisor: Nicholas Van Dam

Contact Email: nicholas.vandam@unimelb.edu.au

Maximum number of student Places: 1

Common media depictions of treatment for mental health and substance abuse issues are extremely biased, with an overemphasis on medications, psychoanalytic therapy, and alcoholics/narcotics anonymous treatments. It is plausible that common perceptions of what occurs within the treatment context is a deterrent to young people seeking treatment. In this study, we propose to explore young people's perceptions of treatment for mental health issues with a focus on primary forms of treatment for high-prevalence disorders (anxiety, depression, substance abuse) and considering what people think particular treatment modalities (e.g., cognitive behavioural psychotherapy, mindfulness training, detoxification) entail.

Exploring the individual characteristics of people who engage in meditation

Details

Primary Supervisor: Nicholas Van Dam

Contact Email: nicholas.vandam@unimelb.edu.au

Maximum number of student Places: 1

While meditation has become increasingly popular in Western countries, ideas about what it is, who it helps, and how it works vary considerably. In moving research and clinical use of meditation forward, we need to better understand why certain individuals pursue these practices and what it is that they do. The proposed work will rely on and work to expand an ongoing project (including over 1200 participants worth of existing data) looking at individual characteristics of meditators to examine goals, individual characteristics, and practice types.

Enablers and barriers to home end-of-life care in haematological cancers: perspectives of family caregivers

Details

Primary Supervisor: Nienke Zomerdijk

Contact Email: nienke.zomerdijk@unimelb.edu.au

Maximum number of student Places: 1

Dying at home is considered a key indicator of quality end-of-life (EOL) care. Research shows haematological cancer patients are more likely to die in hospital than at home or in a hospice setting. No systematic reviews have specifically explored the barriers and enablers of home EOL care from the perspectives of family caregivers. This is concerning given family caregivers provide significant physical and emotional care to cancer patients, including those who wish to die at home. The aim of this study is to review published qualitative research on the barriers and enablers to home EOL care in haematological cancers from the perspectives of family caregivers, synthesize key findings, and identify gaps where additional research is needed.

Altered perception and cognitive function in schizophrenia

Details

Primary Supervisor: Olivia Carter

Contact Email: ocarter@unimelb.edu.au

Maximum number of student Places: 2

Many people with schizophrenia experience hallucinations or unusual sensory experiences. These perceptual changes may cause distress, confusion, and anxiety. However, the selectivity of such changes and their relationship to symptomatology remain unclear—preliminary evidence suggests a complex picture. This project will use a range of visual tasks in an inpatient psychiatric sample. The aim will be to determine the relationship between sensory deficits, diagnoses, and symptom profiles. Testing at the Monash Medical Centre (Clayton) will involve patients with schizophrenia and others exhibiting non-schizophrenic forms of psychosis. Students will be trained to administer the perceptual tasks, as well as the PANSS interview to assess symptoms.

Contingency Management to Foster Cigarette Smoking Cessation in Young People with Borderline Personality Features: Predictors of Outcome

Details

Primary Supervisor: Robert Hester

Contact Email: hesterr@unimelb.edu.au

Maximum number of student Places: 1

Youth with Borderline Personality Disorder (BPD) features smoke cigarettes at high rates, with 63% of clients at Orygen's BPD program smoking daily. Contingency Management (CM) is an intensive treatment that pits financial incentives against smoking. The MYSS study is an open-label pilot study of the feasibility, safety, and initial efficacy of CM for smoking cessation in smokers (15-25 years old; N=40) with 3+ BPD features. Students will assess predictors of response to CM (i.e. impulsivity etc.) in this population. Student authorship is guaranteed on any publications resulting from their project (but not the project overall), with ranking being based on relative contribution.

Understanding why some relevant knowledge does not affect decision making.

Details

Primary Supervisor: Ron Borland

Contact Email: rborland@unimelb.edu.au

Maximum number of student Places: 2

Decisions people make are sometimes based on a selective and biased subset of their relevant knowledge which can lead to systematic biases in choices and poor decisions in both their professional and private lives. This can occur even when the ignored knowledge has been recently cued. Possible explanations relate to the depth of processing of that knowledge and the extent to which the knowledge it links affectively to what the person feels they should do. The aim of this study will be to find ways to demonstrate such flaws reliably as a precursor to exploring interventions to reduce such tendencies. It will involve an element of qualitative work to identify promising quantitative measures to develop and trial.

Assessment and management of fatigue following paediatric acquired brain injury

Details

Primary Supervisor: Rowena Conroy

Contact Email: rconroy@unimelb.edu.au

Maximum number of student Places: 1

Acquired brain injury (ABI) is defined as any brain insult that occurs after birth. Fatigue is one of the most frequently reported sequelae of ABI, and can negatively impact on a child's participation in everyday life. However, there is minimal research that focuses on understanding the best approach to supporting children and families to manage fatigue. This study will use a mixed methods design to examine current approaches to the assessment and management of fatigue in children with ABI. This project will be based at the Murdoch Children's Research Institute and the Royal Children's Hospital where the successful candidate will be by a highly experienced clinical research team.

Family-centred care in rehabilitation following paediatric ABI

Details

Primary Supervisor: Rowena Conroy

Contact Email: rconroy@unimelb.edu.au

Maximum number of student Places: 1

Many children with acquired brain injury (ABI) experience long-term physical, cognitive, academic, emotional, behavioural, and occupational difficulties. Secondary psychosocial effects are often profound, including mental health problems, parent/sibling distress, social disadvantage, and family dysfunction. Treating children who have sustained an ABI requires a family-centred, interdisciplinary approach. This project is part of a larger program focused on the lived experiences of rehabilitation for children and their families following ABI; it will focus on the evaluation of technological advances designed to enhance family-centred care. It will be based at the MCRI and the Victorian Paediatric Rehabilitation Service.

Children and young people bereaved by domestic homicide

Details

Primary Supervisor: Rowena Conroy

Contact Email: rconroy@unimelb.edu.au

Maximum number of student Places: 1

This project aims to contribute to improving support for children and young people who have lost a parent due to domestic homicide. Our larger project (see here: <https://bit.ly/3nkSYpt>) investigates children's and young people's experiences of their new home, family and peer relationships, and identity development after domestic homicide. An important focus is on hearing the perspectives of young people and adults with lived experience. In addition, we interview caregivers and professionals. Your student project will take a specific sub-topic or interviewee-group to work with, within the larger project.

Abbreviated vs. Comprehensive Neuropsychological Assessment

Details

Primary Supervisor: Stephen Bowden

Contact Email: sbowden@unimelb.edu.au

Maximum number of student Places: 1

Background: There exists substantial variation among neurologists and neuropsychologists in assessment practices, including the number and type of tests administered (Rabin et al., 2005). Given that some degree of measurement error is inherent in all neuropsychological tests, using a single test to assess each cognitive domain may result in an inaccurate characterisation of cognitive ability. Adopting a more comprehensive approach to neuropsychological assessment by using a standardized battery that includes multiple tests to assess each cognitive construct, may achieve improved reliability and diagnostic sensitivity (Strauss & Fritsch, 2004).

Aim: To compare the diagnostic accuracy between abbreviated and comprehensive assessment

Cognitive Screening vs. Neuropsychological Assessment

Details

Primary Supervisor: Stephen Bowden

Contact Email: sbowden@unimelb.edu.au

Maximum number of student Places: 1

Background: In dementia care settings, cognitive screening tests, such as the Mini-Mental State Examination (MMSE) and Montreal Cognitive Assessment (MoCA), are valuable tools to detect cognitive impairment and to indicate whether more comprehensive neuropsychological assessment is required. However, despite utility, evidence shows that these abbreviated cognitive screening tests lack robust validation and adequate psychometric properties (Cullen et al., 2007), and there may be undue reliance on these tests to determine diagnosis, sometimes even replacing neuropsychological assessment.

Aim: To compare the diagnostic accuracy between cognitive screening and comprehensive neuropsychological assessment in a memory clinic sample.

Visual vs. Volumetric Neuroimaging Assessment

Details

Primary Supervisor: Stephen Bowden

Contact Email: sbowden@unimelb.edu.au

Maximum number of student Places:

Background: The earliest atrophic changes in Alzheimer's disease (AD) are typically observed in the mesial temporal lobe, particularly in the entorhinal cortex (Pennanen et al., 2004). Consequently, entorhinal cortex atrophy is likely to represent an early, important anatomical marker to detect incipient AD. Two methods to assess entorhinal cortex atrophy on MR images are visual assessment (primarily utilised in clinical settings) and volumetric assessment (primarily utilised in research settings). However, the comparative clinical utility of these two methods remains uncertain for entorhinal cortex assessment.

Aim: To compare the diagnostic accuracy of visual and volumetric entorhinal cortex assessment in a memory clinic sample.

Project 1: Tracking development of social cognition skills in children using a novel iPad tool

and

Project 2: Social competence and its relationship to social cognitive skills in children with neurodevelopmental disorders

Details

Primary Supervisor: Vicki Anderson

Contact Email: Vicki.Anderson@rch.org.au

Maximum number of student Places:

Poor social and emotional skills are a primary characteristic of several neurodevelopmental disorder such as autism spectrum disorders (ASD), ADHD and conduct disorder. Despite the well-known importance of social skills to quality of life, there is a lack of theoretically driven, developmentally appropriate tools to evaluate social and emotional skills in children, limiting our ability to identify those at-risk for poor social outcomes and direct them towards evidence-based early intervention.

The Paediatric Evaluation of Emotions, Relationships and Socialisation (PEERS™) is an innovative digital, comprehensive assessment of social cognitive skills underpinned by a social neuroscience theoretical framework¹ developed to fill this breach in paediatric social assessment².

Using a novel, i-Pad based assessment of social competence (PEERS), this study aims to evaluate social cognitive skills and their relationship to everyday social skills in i) typically developing adolescents (Project 1) and ii) children with neurodevelopmental disorders and brain insults (Project 2)

1. Beauchamp, M. H., & Anderson, V. (2010). SOCIAL: an integrative framework for the development of social skills. *Psychological bulletin*, 136(1), 39.
2. Thompson, E. J., Beauchamp, M. H., Darling, S. J., Hearps, S. J., Brown, A., Charalambous, G., ... & Anderson, V. (2018). Protocol for a prospective, school-based standardisation study of a digital social skills assessment tool for children: The Paediatric Evaluation of Emotions, Relationships, and Socialisation (PEERS) study. *BMJ open*, 8(2), e016633.

Preventing and treating delayed symptoms of concussion in children and adolescents: a randomized controlled trial.

Details

Primary Supervisor: Vicki Anderson

Contact Email: Vicki.Anderson@rch.org.au

Maximum number of student Places:

In recent years, the potential harms associated with concussions, particularly in paediatric populations, have been at the forefront of popular news coverage and scientific inquiry. Most children who sustain a concussion will recover on their own, but a substantial minority will continue to experience symptoms beyond the typical recovery period (i.e., 4 weeks). There are almost certainly multiple interacting factors that underly the risk for developing persistent post-concussion symptoms. Therefore, a multidimensional treatment approach is most likely to be effective. In this project, we will investigate outcomes following a multimodal therapeutic intervention for children aged 9-18 years who experienced delayed recovery post-concussion. This will include measures of mental health, quality of life, physical activity, school attendance, and cognition. The Master's project will investigate one of the outcome measures while embedded within the larger trial.

