Clinical Psychology Research Projects 2019

You can discuss potential Masters or PhD projects with any staff in Psychology. Staff research interests can be found at this link.

There are a variety of specific project areas that have been outlined below, some by external supervisors, others by staff in Psychology.

Check our website periodically for updated entries for new projects.

Please note: applicants for the Doctor of Philosophy (Clinical Psychology) **must** discuss potential projects and have in-principle support from a supervisor before submitting an application. Masters students do not need a supervisor before applying, and are encouraged to talk to potential supervisors **after** acceptance to the program.

Psychology staff – interests and projects supervised

Michelle Arnold (Lecturer in Psychology)
My interests include the reconstructive nature of memory (e.g., subjective experience of remembering, false memory), strategic regulation of accuracy (e.g., knowing when to act on a piece of information or when to keep quiet), and judgment and decision making across a variety of situations. One current interest in our lab is understanding how the context of a situation affects strategic regulation; for example, whether punishing people for reporting wrong information works better than rewarding people for reporting correct information.

Another current interest is understanding anomalistic belief (i.e., belief in the paranormal, extra-terrestrials, etc.). Previous work in this area is limited, but typically indicates there are performance differences between people who hold such beliefs and those who do not. Our work focuses on understanding these differences, as well as how other variables may be related to anomalistic belief (e.g., religiosity, schizotypy, belief in complementary and alternative medicine, etc).

Mariëtte Berndsen (Lecturer in Psychology)
My primary research interests involve the social psychology of emotions, stigma, and prejudice. I would like to supervise projects in the area of:
- Guilt and shame. How do people cope with these emotions (e.g., avoiding specific situations) and how can we mitigate these emotions?
- Stigma. Individuals who deviate (in negative ways) from normative standards in their behaviour and/or appearance are often stigmatized. This is especially so when they are perceived to have some control over their behaviour/appearance (e.g., obese people, people who suffer from depression). How do stigmas affect one's life and can we reduce stigmas?

Glen Bodner (Associate Professor in Psychology)
I am a cognitive psychologist interested in both basic and applied memory research. Potential thesis topics that might interest a clinical student include improving memory accuracy, understanding the role of different types of subjective recognition experience, and clarifying how the eye movements used in EMDR affect qualitative aspects of unpleasant memories.

Junwen Chen (Senior Lecturer in Psychology)
My research primarily focuses on anxiety disorders, specifically social anxiety (disorder) and excessive worry, as well as the cross-cultural study of these problems in different populations. For 2019, I am keen on supervising projects related to these areas. Examples of projects are:

- Examining the interactions between cognitive processes in social anxiety disorder: targeting negative self-imagery and negative interpretation bias
- Investigating preventative strategies for school refusal behaviours in youth with anxiety and depression, targeting excessive worry as a transdiagnostic process
- Developing and examining the effects of a brief intervention for youth with stuttering and social anxiety disorder
- Developing and examining the effects of brief internet-based interventions for academic worry

Sarah Cohen-Woods (Matthew Flinders Fellow in Psychology)
My research focuses on establishing the role of genetics and epigenetics in psychological outcomes, and how environmental risk/protective factors mediate their influence through our biology (i.e. via epigenetic change. Understanding *how* it is the environment interacts with our genetics to either increase or decrease risk of poor mental health). Epigenetics provides a possible mechanism by which the environment can interact with our genome.

Current projects that could be of interest to Masters and PhD students include:

- Investigating epigenetic change in context of cross-generational inheritance of childhood maltreatment (poor outcomes in children born to fathers exposed to childhood maltreatment)
- Understanding the genetic and epigenetic basis of psychosis in context of childhood maltreatment, and neuroimaging-related and cognitive phenotypes in psychosis
- Understanding the mechanisms of comorbidity between depressive symptoms, and obesity through child and adolescent development, and the impact of stressors in that time
- Investigating if there is evidence for psychological disorders mediating the effect of obesity genetic risk variants from childhood through to adulthood
- Investigating epigenetic and biological effects of interventions, and if biological changes are related to psychological change

Some of the terms and ideas may sound intimidating, particularly if you have not yet had exposure to behavioural genetic research, however I will provide information and resources for gaps in knowledge, and the appropriate support to develop required skills. Please could interested students contact me at sarah.cohenwoods@flinders.edu.au to discuss potential projects.

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Oren Griffiths (Lecturer in Psychology)
My interests are divided between two clusters: fundamental attention and learning mechanisms, and the cognitive underpinnings of psychotic symptoms. I study both using a mixture of methods: behavioural methods (reaction time tasks), surveys, psychophysiology (eye-tracking, heart-rate, electroencephalography), and clinical interviews.

Current projects include:
- What are the electrophysiological correlates of feelings and familiarity and insight (the "aha" moment)? And to what extent are these processes disrupted in delusion-prone individuals?

- How does the attentional system learn to selectively orient to important and meaningful events in the world, and ignore noisy, irrelevant events? Do we need conscious processes to do this? Can conscious beliefs impact upon this selectivity?

- Learning two mentally associative events is a basic building block of complex cognition: learning which parts of the world signal safety or danger is a fundamental cognitive capacity. I am interested in the rules and processes that govern how people use (or misuse) the statistics of their environments to learn these associations, and in particular, the role of a person's expectancies in shaping the beliefs that they form. For example, why do people learn superstitious beliefs about e.g. how to win at the pokies, when there is no empirical evidence to support this belief?

Eva Kemps (Professor in Psychology)
My research activities focus on applications of cognitive experimental psychology in the area of eating behaviour.

Two broad areas of ongoing research with opportunities for several post-graduate research projects include:

- Managing the psychological impulse to consume soft drinks
  Eating behaviour includes the consumption of not only food, but also beverages. In fact, the rising consumption of sugar-sweetened beverages, in particular soft drinks, makes up a significant proportion of daily sugar intake. In 2015 the World Health Organisation released new guidelines halving the recommended sugar intake, particularly from soft drinks, in an effort to help combat rising obesity rates. The overarching aim of this research is to develop an effective intervention protocol for reducing excessive sugar intake from soft drinks.
- Subtly changing the food environment to promote healthier eating
  There is an abundance of unhealthy food in the contemporary Western environment, contributing to poor eating habits and rising obesity rates. Emerging evidence, based on the principles of nudging, suggests that making subtle changes to the food environment could combat unhealthy eating and weight gain. Some studies have shown that presenting a healthy food option alongside unhealthy ones can lead to healthier food choices and intake; however, others have shown the exact opposite. The overarching aim of this research is to find the optimal way of presenting food to promote healthier eating.

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Julie Mattiske (Senior Lecturer in Psychology)
For Masters projects, I am broadly interested in anxiety, anxiety disorders, and health-related issues. I have supervised Masters projects in a range of other areas including perfectionism, schizophrenia, and alcohol dependence. I would be very happy to serve as the internal co-supervisor for most of the nominated health projects, e.g., diabetes, oncology.

Reg Nixon (Professor in Psychology)
My primary interest is child and adult response to traumatic stressors. I am specifically interested in how psychological difficulties such as acute stress disorder (ASD) and posttraumatic stress disorder (PTSD) develop following trauma, and in the treatment of these disorders. I have several possible projects in following areas:

- Stepped-care treatment approaches for adult PTSD
- PTSD prevalence in community mental health settings and treatment access
- Adjustment following burn injuries in children
- Computer-based attribution bias training in children

Emma Thomas (Associate Professor in Psychology):
I have three areas of ongoing research that may be of interest to clinical postgraduate students (Masters and PhD):

- The distinction between well-being stemming from feelings of self-actualisation (eudaimonic well-being) versus feelings of well-being stemming from pleasure/an absence of pain (hedonic well-being). I have some pre-existing longitudinal data relating to both.

- The interplay between national well-being (that is, subjective feelings of the well-being of one's nation relating to social, economic and political functioning) and personal well-being (that is, subjective feelings of well-being in one's personal life, inter-personal relationships). I have some pre-existing longitudinal data relating to both.

- Feelings of gratitude relating to aspects of one's personal circumstances (personal gratitude) versus feelings of gratitude by virtue of privileges derived from group memberships (collective gratitude) and the relationships with well-being, entitlement and support for minority groups. I have developed an experimental approach to test this distinction.

Michael Tlauka (Lecturer in Psychology)
My research focuses on human spatial memory. I am interested in supervising projects examining people's ability to learn spatial information in a variety of contexts. Recent investigations include forgetting, virtual learning and sex differences in spatial ability.

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Tracey Wade (Matthew Flinders Distinguished Professor in Psychology)
There are three areas on ongoing research that may be of interest to postgraduate students:
- Evaluation of online perfectionism interventions in various settings, including schools, online with university populations, online with the general population. The impact on perfectionism and associated psychopathology is of interest, as is impact on learning outcomes, procrastination, and social media use.
- Examining the relations between social media use, perfectionism and disordered eating.
- Development and evaluation of combined metacognitive therapy and cognitive remediation therapy as an adjunct treatment for eating disorders.

Michael Wenzel (Professor in Psychology)
My research currently focuses on responses to victimizations and wrongdoing in interpersonal or intergroup contexts. I am interested in victims' and wrongdoers' responses to wrongdoing in the form of confession, apology, forgiveness and self-forgiveness, punishment and self-punishment, etc., and the role of these responses in the restoration of justice perceptions, moral identities, and social relationships. I am also specifically interested in the dynamics between these victim and offender responses, the co-engagement of relationship partners about the wrongdoing, and their effects on self and relationship repair.

Robyn Young (Assoc Professor in Psychology)
My research is in the area of Autism Spectrum Disorder (ASD). I am interested in outcomes of persons with ASD (children and adults) as well as comorbidity issues. I am also interested in early detection of autism, and female profiles. I am also interested in people's fitness to stand trial and other matters related to ASD and criminality; either perpetrators or victims.

I am engaged in a collaborative research project with Neil Brewer (Professor Psychology) which provides many possible avenues for clinical projects. Broadly speaking the project is concerned with the interactions that adults with Autism Spectrum Disorder (ASD) have with the criminal justice system. We have recently completed a book manuscript titled 'The Crimes of People with Autism Spectrum Disorder: Myths and Mechanisms'. In this we identify numerous interesting but largely un-researched issues. These primarily relate to those social-cognitive characteristics of individuals with ASD that might contribute to their becoming involved in crime (as a culprit or a victim) or to prejudicial (i.e., negative) interactions with the police and the courts. We can accommodate a couple of students working on projects in this area, particularly projects that might tackle closely related investigations of the same basic issue.

Many of these projects are amenable to laboratory experimentation – so, just to illustrate (note: these are but a couple of examples from numerous possibilities), one might examine how some particular characteristics of the verbal or nonverbal presentation of individuals with ASD affect the way in which others perceive or respond to them, or how an inability to detect the intentions of others through reading their nonverbal behaviour may contribute to a problematic interaction with that person.

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Projects Offered by Adjunct Staff or External Supervisors/Organisations
Please note: any research offered by external organizations will require an internal university supervisor, where relative supervisory input will need to be negotiated on a case-by-case basis

Dr Lisa Beatty (Cancer Council SA Postdoctoral Fellow (Cancer Support), Flinders Centre for Innovation in Cancer)
My research area is psycho-oncology (the scientific exploration of the psychosocial aspects of cancer – including psychosocial contributors, outcomes, and treatment approaches/interventions). In particular, I have expertise in the development and evaluation of digital (online) mental health interventions for cancer. Within these broad areas, I would welcome student ideas, or I have a number of specific research projects that would be appropriate, including:

- Pilot trial of the acceptability and feasibility of an online psychosocial intervention for women with metastatic breast cancer (this will be a mixed methods trial – quantitative pilot RCT, plus qualitative evaluation of acceptability/satisfaction among intervention participants).
- Developing and feasibility testing a web-based lifestyle intervention (nutrition, physical activity) for cancer survivors. This project is a collaboration between Flinders University, Cancer Council SA, University of QLD, and Adelaide University.
- Exploring what barriers and facilitators occur in implementing empirically-supported online psychosocial programs into routine clinical practice for cancer patients and survivors.

I have scope to take on one student only. This project will be co-supervised by Prof Bogda Koczwara, Director, Flinders Centre for Innovation in Cancer.

Niranjan Bidargaddi (Associate Professor, Digital Psychiatry & Personal Health Informatics Lab, College of Medicine & Public Health, Flinders University, Location: SAHMRI & Flinders at Tonsley)
Available to supervise Masters/PhD projects with a digital focus. If you are interested in these project please email to discuss the further niranjan.bidargaddi@flinders.edu.au.

Current research focus:

Digital Biomarkers – discovering brain activity biomarkers from unobtrusively assessed mobile device data
The diagnosis and management of mental illnesses primarily relies on self-report or observable changes in functioning. Modern technologies, such as smartphones and connected wearable devices, which now permeate everyday life, make it possible to characterise psychiatric problems in a naturalistic setting.[2] Using this high-resolution and ecologically valid data collected in real-time from digital devices, and applying machine learning algorithms can provide a moment-by-moment quantification of the individual-level human phenotype in situ.[3] This process is known as **digital phenotyping,** and the research in the area has been shown that indicators which are highly correlated with parameters of brain activity and neuropsychological functioning can be derived from digital signals.[4] Thus, digital phenotyping provides an unprecedented method of unobtrusively capturing biomarkers of disease.

This project will collect high-resolution sensor data from mobile phones and wearable sensors (e.g., geolocation and accelerometer data, number of text messages and calls received, typing speed, app usage), ecological momentary assessment and electronic health record data from individuals with mental illness, and apply machine learning techniques to derive "digital phenotypes" – unobtrusively collected markers of mood, cognition and behaviour. By linking smartphone sensor data with data from fMRI scans, neuropsychological assessments, self-report measures and electronic health records; models can be developed that are able to derive objective and valid early warning biomarkers of mental health or illness. A framework for machine learning algorithms designed to derive associated digital biomarkers will be presented. The

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outcome of this project will result in real-time indicators of functional decline, suitable for early diagnosis and screening of mental health problems in clinical practice.

References
1. Chaudhury PK, Deka K, Chetia D. (2006) Disability associated with mental disorders. Indian J Psychiatry. 48(2):95-101. doi: 10.4103/0019-5545.31597.
2. Bidargaddi N, Musiat P, Makinen VP, Ermes M, Schrader G, Licinio J. (2016) Digital footprints: facilitating large-scale environmental psychiatric research in naturalistic settings through data from everyday technologies. Mol Psychiatry. 22(2):164-169. doi: 10.1038/mp.2016.224
3. Onnela, J.-P., & Rauch, S. L. (2016). Harnessing Smartphone-Based Digital Phenotyping to Enhance Behavioral and Mental Health. Neuropsychopharmacology, 41(7), 1691–1696. http://doi.org/10.1038/npp.2016.7
4. Kerchner, Geoffrey A. et al. (2015) Unobtrusive neuropsychological monitoring from smart phone use behaviour. Alzheimer's & Dementia: The Journal of the Alzheimer's Association , Volume 11 , Issue 7 , P272 - P273
5. J Affect Disord. 2018 Aug 15;236:31-36. doi: 10.1016/j.jad.2018.04.099. Epub 2018 Apr 22.

Just in time adaptive mobile health interventions.

Recent advances in mobile devices and wearable sensors make it possible to deliver treatments to users at anytime and any place. Smartphone-based behaviour change interventions overcome a major limitation of traditional approaches in relation to the delivery of treatments. The delivery of treatments can be triggered by detections/predictions of vulnerability and receptivity through mobile signals. Such in-moment interventions, which can be designed to adapt dynamically to an individual's changing internal and contextual state, are known as Just-In-Time Adaptive Interventions (JITAIs). These interventions capitalise the data that is collected via mobile sensing technology (e.g., smartphones, wearable blood alcohol monitors, physiological monitoring sensors, etc.) to detect contexts and trigger the right type or amount of support, at the right time, in real-life. We are interested in the development of Just-In-Time Adaptive Interventions for a range of problem types, and conducting micro-randomised trials to personalise and evaluate these interventions. Our lab has the technology and expertise to facilitate the development of such interventions.

References
1. Bidargaddi, et al, Predicting which type of push notification content motivates users to engage in a self-monitoring app, Preventive Medicine Reports, 2018
2. Ann Behav Med. 2018 May 18;52(6):446-462. doi: 10.1007/s12160-016-9830-8.

Cancer Council SA Projects

There may be projects that students can jump in on or they will be able pitch their own project ideas within the topic areas of the supervisors or along the guiding principles of Cancer Council SA. We will endeavour to ensure project designs meet Masters requirements and have sufficient potential participant numbers to satisfy sample size requirements for a Masters project.

Please note that Dr Julie Mattiske (Psychology, Flinders University) is happy to be approached as the internal supervisor for any projects done in collaboration with the Cancer Council.

Benefits of working with a Cancer Council SA supervisor:
- Opportunity to network with a range of professionals including nurses, counsellors and researchers within the realm of Cancer Prevention and Treatment, Psycho-oncology, and Health promotion
- Potential for volunteer experience as a Research Assistant in the Behavioural Research and Evaluation unit

Cancer Council Philosophy:

Statement of Purpose:	To unite the community in the fight against cancer and be an independent voice for cancer control in South Australia.
Guiding Principles:	1. Reduce cancer risk, increase cancer prevention and early detection 2. Improving the rates of survival when cancer does occur 3. Optimise cancer care 4. Improve the quality of life for people with cancer, cancer survivors and carers 5. Address inequalities in cancer risk and cancer outcomes between more and less advantaged sectors of the community, by addressing the causes 6. Build for the future through investment in infrastructure and strong cancer research 7. Provide and improve information for cancer control

Guiding Principles 1 – 5 above can all include psychological elements and therefore psychological theoretical underpinnings that may suit students. Principles 6 and 7 may not be relevant.

Potential External Supervisors

Josh Trigg - Researcher – PhD
Past experience and interests:

- Attachment theory, in relation to animals and people (e.g., pet attachment)
- Psychological and attitudinal dimensions of human-animal bonds beyond attachment (e.g. self-object functioning)
- Identify formation and identity characteristics of people
- Psychological response to threat, both perceived and physical
- Some experience in human factors/occupational health topics (employee health)
- Risk-taking and risk-taking propensity

For any interested students, and if they have any ideas that also relate to topics around cancer I'm open to discussion (https://www.researchgate.net/profile/Joshua_Trigg/publications). I'm able to work across both quantitative and qualitative methodologies, so am pretty open when it comes to

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research design. I'm also a member of the some human-animal studies research groups and societies, so if there is any interest in animal assisted interventions or the role of companion animals, or even engagement with wildlife and the natural world, I have other connections that might be willing to assist.

Julia Morris – Researcher - (soon to be PhD)
I have a particular interest in Psycho-oncology, within the context of adolescents and young adults whose family member has cancer. I am also interested in the impact and evaluation of promotional activities (i.e. non-clinical directed campaigns) for cancer screening.

Jason Blunt – (PhD)
My Background: PhD studying Post-traumatic Stress disorder in military and disaster settings, as well as research looking at psychological impact of traumatic injury and natural disasters on individuals and their communities. I'm Interested in projects around PTSD symptoms following Cancer diagnosis and survivorship, low-level interventions to aid mental health before the need for psychological or pharmacological treatment (e.g. mindfulness, meditation, diet and exercise).

Current Project: An evaluation of Cancer Council SA Psycho-Oncological service, aims to evaluate the efficacy of the Community Counselling Service, a free program offered by CCSA to assist people affected by cancer. Our current Hypotheses:
- General distress will significantly decrease following receipt of psycho-oncological sessions (Quantitative measures)
- Symptoms of depression and anxiety will be significantly reduced following the receipt of psycho-oncological sessions (quantitative measures)
- Expectations of the psycho-oncological service at Cancer Council SA will be satisfied, and receipt of counselling session will significantly benefit clients in everyday life.

Cancer Council SA Contacts

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