



Translational Health

SUITABLE FOR MASTER OF RESEARCH

Determinants of consumers' trust and use of food labels among Libyan migrants in Australia

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Research area: Health & Wellbeing/Reduced Inequalities/Zero Hunger

Nutrition labels are considered as an essential instrument for health promotion as it has a significant impact on food security as well as overall health and wellbeing. Nutrition information allows consumers to select healthier products, and food labels have been found to be associated with healthier food choices. However, distrust of food labels impacts consumer decision making and their food choice, which has implications on dietary intake patterns as well as nutrition outcomes. While a few studies have measured label comprehension among general and minority populations, no studies have explored food label use among Libyan migrants. This is concerning given that food security among migrants remains a concern globally, with the dearth of research about food labelling.

The aims of this study are to determine the factors associated with consumers' trust in food labels as well the factors influencing food label use among Libyan migrants in Australia.

A cross-sectional design utilising an online survey and convenience sampling was used to recruit 271 participants, each representing a family migrating from Libya to Australia. The existing dataset includes participants' socio-demographic characteristics and socio-economic factors, as well as information regarding their trust, use and understanding of food labels. Multivariable logistic regression modelling will be utilised to identify the predictors of consumers' trust in food labels as well as the factors associated with food label use. This study will identify the variables influencing consumers' trust and use of food labels among Libyan migrant families in Australia.

Impact of oral health conditions on the quality of life of preschool children and their families

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Research area: Health & Wellbeing/Reduced Inequalities

Tooth decay in young children under the age of 5 years is a major public health problem globally. Oral health conditions can have a negative impact on the functional, social and psychological wellbeing of young children and their families, causing pain and discomfort for the child. The Early Childhood Oral Health Impact Scale (ECOHIS) was developed to assess the impact of oral health conditions on the quality of life of preschool children (aged 2 to 5 years) and their families. In Australia, the effect of tooth decay on children aged 6-13 years old has been documented through population-based studies but to date no population-based study has been undertaken to assess the impact of ECC on the quality of life of preschool children and their families.

The aim of the present study is to evaluate the impact of tooth decay on the oral health related quality of life (OHRQoL) of preschool children aged three to five years and their families. Mothers who gave birth to infants were recruited to an ongoing longitudinal study (Healthy Smiles Healthy Kids) in public hospitals from former South Western Sydney Area health service. Longitudinal data has been collected for these children and parents and the potential student will be undertaking novel data analytic approaches to assess the impact of tooth decay on OHRQoL.

The project will provide robust evidence on the impact of poor oral health on OHRQoL of preschool children and their families in Greater Western Sydney. Moreover, the findings of the study are expected to guide the development of preventative interventions to promote good oral health in early childhood. Appropriate training in SPSS and quantitative data analysis will be provided.

SUITABLE FOR MASTER OF RESEARCH OR PHD

Avoidable Emergency Department Presentation and Hospitalisation for Individuals Living with Disability

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Research area: Health & Wellbeing/Reduced Inequalities

Persons with disability seek more health care than people without disability, and are consistently over-represented in hospital admissions and face undesirable



situations. This proposed program of research is an extension and combination of an existing (medical) staff specialist project examining the appropriate use of the Emergency Department, and an BOT(Honour) project on health and support service needs of individuals with disability. A number of existing and new opportunities are available in consultation with the multijurisdictional supervisory panel, subject to the research interest and career intention of the potential applicant. The candidate will explore a real-world problem, gain experience in working with diverse stakeholders and generate evidence to influence policy change.

Embedding dementia education and brain healthy lifestyles in primary school education

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Research area: Health & Wellbeing/Quality Education

Education is the largest modifiable dementia protective factor. However, as many as 40% of 15 year olds fail to meet international minimum literacy standards. This project aims to develop and evaluate a class-room based dementia awareness and risk reduction education program for primary school children to reinforce healthy lifestyle habits. This project will innovate approaches and development for future programs to enhance transparency and uptake of dementia awareness initiatives in primary school to support physical and cognitive health in the long run.

Evaluating a Training Program for Aged Care Staff

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Research area: Health & Wellbeing

Music can be a useful tool for supporting people who experience changes in mood and behaviour due to dementia. However, aged care staff often lack understanding of it's potential and how to use it effectively. This project will evaluate the effectiveness of an online training course and other resources in helping aged care staff develop alternative strategies to pharmacological approaches, while looking at ongoing cultural changes needed in an aged care setting.



Gene-environment interactions in schizophrenia

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Research area: Health & Wellbeing -

Schizophrenia is a chronic and disabling mental disorder that affects 1% of the world's population. Neither environment nor genetics alone are sufficient to cause schizophrenia. Rodent models for schizophrenia risk genes (e.g. neuregulin 1) are capable of partially modelling disease aetiology (i.e. endophenotypes) and clarifying the impact of these genes on behaviour and brain development. However, to model this mental disorder in its full complexity, it is important to develop multi-factorial animal models combining genetic and environmental risk factors (e.g. chronic cannabis abuse, unhealthy diet, early life stress) for schizophrenia. My team focuses on the neuro-behavioural characterisation of these models, applying a multitude of different behavioural phenotyping paradigms.

Greater Western Sydney Workforce Project

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Research area: Health & Wellbeing/Quality Education/Reduced Inequalities

The aim of this project is to plan for the primary health workforce in the Greater Western Sydney areas for the next decade. You will be working with a multidisciplinary team from the School of Medicine, School of Health Sciences, WentWest, South Western Sydney PHN, Nepean Blue Mountain PHN, and other stakeholders. The project can be scoped to suit the candidate's career aspirations and strengths.

Healthy Smiles Healthy Kids Birth Cohort Study (multiple new and existing project opportunities)

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Research area: Health & Wellbeing/Reduced Inequalities/Zero Hunger

The Healthy Smiles Healthy Kids Project is high quality, multi-centre, birth cohort study in Greater Western Sydney, with an aim to address socio-economic inequality in health among children. Over 1000 mother-infant pairs in the former



Sydney South West Area Health Service were recruited to this study in 2010 and have been followed up at regular intervals since then.

The project has a wealth of life-course data on socio-economic, behavioural, psychosocial, biomedical determinants on children and their siblings over the 10-year period. Data includes information on infant feeding, diet, health service use, residential movements, environmental exposure, physical activity, sedentary behaviour, quality of life, health literacy, and child health outcomes at several timepoints over the 10-year study period.

Expertise within our team spans chronic disease epidemiology, nutrition, integrated care service development, lifestyle behaviour change and monitoring, maternal and child health, cultural tailoring of interventions, community-engaged research, and health services research.

A number of existing and new opportunities are available that can be determined in consultation with the supervisory panel and is subject to research interest of the potential student given the wide scope of the data. The candidate will work with a multi-disciplinary team and maintain partnerships with research participants, University of Sydney, University of Technology Sydney, University of New South Wales, University of Queensland, Curtin University, and NSW Health.

Identifying and delivering effecting public health campaigns targeting dementia risk in middle-aged adults

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Research area: Health & Wellbeing/Education

Dementia is a global public health concern. Whilst there is no cure, research has focused on prevention, with up to 40% of your dementia risk being modifiable. However public health campaigns targeting dementia risk reduction is sorely lacking. This project will analyse the reach of existing public health campaigns for chronic health conditions and explore what elements are successful for supporting dementia awareness and risk reduction behaviours for older adults. The role of branding and alternative pathways will be explored.

Nature-based Solutions for Health and Wellbeing

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Research area: Health & Wellbeing



With an ever-growing demand for mental health services and a sector that struggles to have the available resources to meet this demand, there is a pushing agenda to ensure that we review all approaches that may be available to improve individuals' mental health and wellbeing. There is burgeoning interest in the benefits of being in nature within the literature; however, studies are limited and dependant on individual interventions. There is a need to undertake a larger scope and analysis of the wider benefits for health and wellbeing that nature immersive activity brings. This project is part of a larger collaborative project between THRI, the School of Education and the School of Health Sciences as a foundation for a repository and dissemination of research on the connections between nature and health to assist practitioners who work in this space. The methodology adopted will depend on the level of the project.

New therapeutic targets for dementia

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Research area: Health & Wellbeing -

Dementia is neurodegenerative cognitive disorder with an inflammatory component and Alzheimer's disease (AD) is its most common form. AD is described by extracellular amyloid deposition (building senile plaques) and tau hyper-phosphorylation (forming intracellular neurofibrillary tangles). These processes also impact on a variety of neurotransmitter systems and increased lipid peroxidation is found in affected brains supporting a role for oxidative damage in this disorder as well. Interestingly, the endocannabinoid system (eCB) plays a role in immunity, neuroprotection (i.e. anti-inflammatory and anti-oxidative effects) and can affect cognitive domains. Recent animal research suggests that manipulations to the eCB using cannabis plant constituents might have beneficial effects on the pathophysiology of Alzheimer's disease and disease-related cognitive impairments. Thus, my team evaluates the neuro-behavioural response of genetic mouse models for Alzheimer's disease to cannabinoid exposure with a particular focus on the effects of the non-psychoactive phytocannabinoid cannabidiol (CBD).

Patterns, determinants and barriers for physical activity participation among disadvantaged populations

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Research area: Health & Wellbeing/Gender Equality/Reduced Inequalities

The main aim of this research is to evaluate the individual, social and environmental factors that influence the patterns of leisure and physical activity participation among disadvantaged communities/populations. These communities/populations may be disadvantaged due to their low economic status, their gender identity (e.g. LGBTQI+ individuals), migration status (i.e. asylum seekers or refugees), substance abuse, disability, or any other condition/characteristic that places them in the margins of society. The student project may be focused on qualitative experiences or quantitative measures, but should include a holistic approach to leisure and physical activity participation. We are particularly interested in the structural factors that hinder or facilitate participation as well as the strategies adopted by these individuals and communities to create agency and deal with the challenges associated with participation in leisure.

The Epidemiology of Maternal and Child Health in Low and Middle Income Countries

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Research area: Health & Wellbeing/Reduced Inequalities/No Poverty/Zero Hunger/Clean Water & Sanitation

International recommendations including the World Health Organization (WHO) recommend infants should be exclusively breastfed for six months and continued further breastfeeding up to 12 months and beyond. Further, these guidelines recommend that parents should introduce solid foods from age 6 months. These guidelines and recommendations are based on overwhelming evidence highlighting the short-term and the long-term benefits of breastfeeding for both the infant and the mother. However, in a number of developing countries these guidelines are not met due to a number of socio-economic, biomedical and health service level reasons.

The potential candidate will have the opportunity to use existing datasets from low and middle income countries to develop novel questions. The major focus of this PhD will be on early childhood feeding and its impact on malnutrition, mortality, communicable diseases and chronic diseases. The scope of the project is open and will be determined in consultation with the supervisory panel.



Basic expertise and experience is required in one or more of the following areas: nursing, epidemiology, public health, biostatistics, paediatrics, medicine, health sciences.

The human right to leisure for people imprisoned

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Research area: Health & Wellbeing/Reduced Inequalities

According to The Universal Declaration of Human Rights, leisure is a right of all human beings. However, some still struggle to guarantee their right to leisure, particularly those who are marginalised in some way by their own societies. Men and women in prisons, youth in the juvenile justice system, and refugees and asylum seekers in detention, are among those who are most often denied of their right to leisure. Despite abundant evidence of the benefits of leisure for wellbeing and personal development, leisure is still considered by most as a privilege rather than a need and right. As such, those who are incarcerated/imprisoned are often deprived of this 'privilege' and, therefore, of opportunities to engage in leisure. This project intends to investigate how policy and perceptions of the rights to leisure of people imprisoned have changed over time and/or how they are enacted in current times.

Therapeutic properties of cannabidiol for drug use problems

Dr Rose Chesworth: r.chesworth@westernsydney.edu.au

Research area: Health & Wellbeing

Recent preclinical research suggests that cannabidiol (CBD), a non-psychoactive component of the cannabis plant, can limit release-like behaviour in rodent models of drug-taking for cocaine, methamphetamine, opioids and alcohol. This is of particular interest for schizophrenia research, as CBD is being investigated as a potential antipsychotic, as it has antipsychotic-like effects in rodent models of schizophrenia and some human studies. Our research examines whether CBD limits drug-taking and drug-seeking in genetic animal models of schizophrenia (e.g. Neuregulin 1 transmembrane domain heterozygous mouse), for a range of drugs of abuse (e.g. psychostimulants, cannabinoids, alcohol). Our experiments are designed to determine whether CBD treatment affects different components of the addiction cycle i.e. acquisition of drug-taking, extinction of drug-taking and



relapse. With this research, we hope to understand if CBD could be used to treat schizophrenia and comorbid drug addiction.

Validating psychometric tools to measure dementia risk in culturally and linguistically diverse populations

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Research area: Health & Wellbeing/Reduced Inequalities

Clinicians, policy makers, and researchers need reliable and valid tools to assess risk factors for dementia, to support brain health programs, and evaluate population-level dementia risk adequately. However, risk factors differ amongst various cultural groups (e.g., Lancet Commission recommendations). This project aims to develop a new dementia risk assessment tool for dementia and Alzheimer's disease exploring risk in older Chinese adults for use by clinicians, researchers, policy stakeholders and individuals. This project will incorporate a systematic review and Delphi consensus on factors amenable to change to establish psychometric validity with several prospective studies.

Value for whom?

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Research area: Health & Wellbeing/Reduced Inequalities

There is much interest in value-based healthcare as a better way of funding and structuring health services, and better health outcomes for the consumers. The concept of 'value' or health outcome that matters to the consumers is multi-dimensional as it encompasses not only clinical indicators but may also include other factors such as quality of life, productivity, consumer's experience, and meaningful engagement which can and do change throughout the course of a consumer's life and care journey. This program of research aims to evaluate this popular contemporaneous health system theory. The project will be scaled to the candidate's ability and career intention.

SUITABLE FOR PHD

Application of artificial intelligence in sports science and sports medicine



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Research area: Health & Wellbeing

Recent advancement in artificial intelligence (AI) has resulted in breakthroughs in many areas affecting all walks of life. This PhD study aims to include a series of projects aiming to develop an AI algorithm to (1) predict injury among distance runners based on their training data; (2) assist squash referees in making judgements for interference calls; and (3) promote physical training and performance in professional rowers. We have initial agreements with related industrial partners in these studies and the project deliverables can be patented and commercialised.

Breastfeeding Practices and Oral Health in Australian Preschool Children

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Research area: Health & Wellbeing/Reduced Inequalities/Zero Hunger

Tooth decay is the most prevalent health problem in Australia accounting for 19 million existing and 11 million newly decayed teeth each year. This has a huge impact on children as it can affect their adult teeth, speech problems, low self-esteem, and a poor quality of life.

Breastfeeding is an optimal way of providing ideal food for the healthy growth and development of newborns. The World health organisation has recommended exclusive breastfeeding from birth to six months and then complemented with food intake till 2 years of age.

It has long been assumed that breast milk is protective to the teeth but more recent data has suggested that prolonged and night-time breastfeeding may be associated with an increased risk of tooth decay. The evidence on breastfeeding practice as a potential risk factor for tooth decay has long been controversial and inconsistent.

This project will use advanced epidemiological methods to provide evidence on breastfeeding and oral health to inform policy makers.

Diabetes and Oral Health (DiabOH): Validation of the Periodontal Risk Assessment Tool (PRISK)

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Research area: Health & Wellbeing/Chronic Disease

Diabetes and periodontal disease are two prevalent chronic conditions that critically impact Australia's health expenditure and Australians' health outcomes. There is a bi-directional relationship between the two conditions. Whilst the Australian Diabetes Risk Assessment (AUSDRISK) Tool can be broadly used by non-medical healthcare professionals to assess risk and necessity to confirm diagnosis of diabetes, there is no equivalent tool for assessing the risk of periodontal disease by non-dental healthcare professionals.

The Diabetes and Oral Health (DiabOH) research team has developed the Periodontal Risk Assessment Tool (PRISK) for the screening of patients with diabetes by non-dental practitioners. This project will assess PRISK for reliability, sensitivity and validity against the community periodontal index (CPI) in detecting periodontal disease in patients with diabetes, and the inter-rater reliability of PRISK amongst different non-dental primary healthcare providers. PRISK will also be assessed for acceptability and feasibility for use in primary health care setting.

Infant Feeding and the Risk of Overweight in Young Children

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Research area: Health & Wellbeing/Reduced Inequalities/Zero Hunger

Australia is facing a major public health challenge in the form of obesity and overweight in Australian preschool children. According to Australian infant feeding guidelines, exclusive breastfeeding of infants to around six months of age when complementary foods are introduced, but not before four months and continued breastfeeding until the age of 12 months and beyond, if both mother and infant wish.

Several previous studies reported that early cessation of breastfeeding is associated with the higher risk of overweight and obesity in children. Similarly, it has been found that early introduction to solid food or formula is significantly associated with overweight and obesity.

This project will use novel epidemiological methods to ascertain the relationship between infant feeding and risk of overweight/obesity later in life. Longitudinal data from 10 years will be used to answer novel research questions to provide evidence.



Music, Colour and Mental Health in Young People

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Research area: Health & Wellbeing

While literature has speculated about connections between colour and emotions, there is little understanding about the impact of various colours on mental health particularly in people living with mental illness. This project will examine the topic experimentally and will explore the interaction between visual elements and music in improving mood and wellbeing in people living with mental illness.

Normalising oral health in alcohol and other drug recovery (NormAD)

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Research area: Health & Wellbeing/Reduced Inequalities

Despite the devastating effect of alcohol and illicit drugs on teeth and gums, oral health care is not generally a priority or even a part of alcohol and other drug (AOD) recovery. Raising awareness of the importance of oral health and normalising oral health as part of AOD recovery to improve outcomes in this vulnerable population are critical.

This project will explore the perceptions of clients and service providers of AOD recovery services in NSW on oral health needs based on their lived experience. Findings are intended to inform the development and pilot of strategies to embed oral health care in AOD recovery.

Quality Equity and Systems Transformation in Primary Health Care (QUEST PHC)
- Developing patient-reported measures for Australian general practice

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Research area: Health & Wellbeing/Reduced Inequalities

The Quality Equity and Systems Transformation in Primary Health Care (QUEST PHC) project aims to develop and implement evidence-based indicators and measures in Australian general practice to inform quality improvement and promote high-quality care. Patient-reported measures (PRMs) are increasingly



recognised to be critical tools for assessing patient perspectives, preferences and priorities to enable high-quality patient-centred care.

A key finding in QUEST PHC indicates that consumers expect PRMs to be clear, easy to comprehend, non-judgemental and efficient. It is important that PRMs reflect our society and are inclusive of people from diverse age, gender, cultural and linguistic backgrounds. There is a need for consumer input in the design of PRMs to realise their value in today's multicultural Australia.

This project will work with consumers to co-design PRM(s) applicable for Australian general practice that would capture data to enable high-quality care. The developed PRM(s) will then be piloted for acceptability and feasibility.

Success stories in reconciling homosexuality and religiosity

Associate Professor Brahm Marjadi: b.marjadi@westernsydney.edu.au

Research area: Health & Wellbeing/Reduced Inequalities

Research on gender and sexual diversity has identified the need for understanding the unique health, social and spiritual needs of people who identify as lesbian, gay, bisexual, transgender, queer, questioning, intersex, asexual or aromantic (LGBTQIA+). For religious LGBTQIA+ people, their sexual identity and religiosity are two integral parts of their identity. Yet, acceptance of sexuality and gender diversity varies across religions and even between different groups within the same religion. LGBTQIA+ people are often caught in an incompatibility between their sexuality and religiosity which could be deleterious to mental, social, spiritual and physical health particularly when one feels pressured to choose only one of these two parts of their identity. While the negative impacts of the incompatibility between sexuality and religiosity have been quite well studied, much less is known about how some religious LGBTQIA+ people have been able to reconcile these conflicting aspects of their lives. Anecdotal evidence from personal communications and a few non-research publications have indicated various ways to maintain one's sexuality and religiosity. A study on these 'success stories' may generate research evidence to shift the prevailing discourses about sexuality vis-à-vis religiosity, from focusing on the clash and seeing the resulting ill-health from a deficit perspective, to focusing on the intersectionality with a strength-based perspective. This project will use a qualitative approach with methods such as, but not limited to, life history and photo-voice to capture participants' journey to reconciling their sexuality and religiosity. The study is expected to identify both



the wide variety as well as the common threads of participants' lived experiences.
