2017 Honours Projects

List updated: Wednesday 7th February 2017

Note: This list of projects is updated weekly, and there may be additional research projects available which are not reflected in this list. This list is therefore not exhaustive, so if you wish to discuss any other potential projects, please feel free to contact the relevant Honours Co-ordinator. A list of Honours Co-ordinators is available here: http://sydney.edu.au/health-sciences/current-students/honours/index.shtml
Supervisor: Associate Professor Lee-Fay Low
Supervisor contact details: lee-fay.low@sydney.edu.au
Is there a specific project available: No (your name and research interest will be made available to students)
Do you have a broad research topic for students to consider: The lived experience of dementia - e.g. impact of the way the diagnosis is given
Why people with dementia don't get diagnosed
Stigma about dementia - in the general public, health professionals, and self-stigma
Restorative/rehabilitative approaches in residential aged care
Goal setting with older people
Project title:
Is this a project for students starting in 2017?
Research question:
Research topic: The lived experience of dementia - e.g. impact of the way the diagnosis is given
Why people with dementia don't get diagnosed
Stigma about dementia - in the general public, health professionals, and self-stigma
Restorative/rehabilitative approaches in residential aged care
Goal setting with older people
This project is appropriate for students in the following discipline(s):
- Bachelor of Health Sciences (Honours)
Research group type: Research Group based
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/lee-fay.low.php
Primary research interests: dementia
older people
aged care - residential and home based
qualitative and quantitative research
Name (s) of research team:
Aims and background
Proposed method of data collection:
Ethics approval needed? N/A
Ethics applied for?
Type of study:
Resources needed (all available):
Additional information:
Supervisor: Dr Margaret McGrath
Supervisor contact details: margaret.mcgrath@sydney.edu.au
Is there a specific project available: Yes

Do you have a broad research topic for students to consider: Sexuality Post - Stroke Validation of the Knowledge Comfort Attitudes and Approach to Sexuality Survey among Stroke Rehabilitation Professionals
Translation and Cross-Cultural Validation of Measures of Attitudes towards sexuality among health and rehabilitation professionals
Ageing and Obesity
Obesity among older people in residential care facilities - incidence; impact on care needs and quality of life

Project title:

Is this a project for students starting in 2017? Yes

Research question:

Research topic: Sexuality Post - Stroke Validation of the Knowledge Comfort Attitudes and Approach to Sexuality Survey among Stroke Rehabilitation Professionals
Translation and Cross-Cultural Validation of Measures of Attitudes towards sexuality among health and rehabilitation professionals
Ageing and Obesity
Obesity among older people in residential care facilities - incidence; impact on care needs and quality of life

This project is appropriate for students in the following discipline(s):

- Bachelor of Health Sciences (Honours), Bachelor of Applied Science (Exercise and Sport Science) Honours, Bachelor of Applied Science (Physiotherapy) Honours, Bachelor of Applied Science (MRS) Diagnostic Radiography Honours, Bachelor of Applied Science (Speech Pathology) Honours, Bachelor of Applied Science (Exercise Physiology) Honours

Any discipline

Research group type: Research Group based

University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/margaret.mcgrath.php

Primary research interests: Ageing - ageing in place; obesity among older people
Sexuality and disability

Name(s) of research team:

Aims and background

Proposed method of data collection:

Ethics approval needed? N/A
Ethics applied for?

Type of study:

Resources needed (all available):

Additional information:
Faculty of Health Sciences

**Supervisor:** Professor Anne Cusick  
**Supervisor contact details:** anne.cusick@sydney.edu.au  
**Is there a specific project available:** Yes  
**Do you have a broad research topic for students to consider**  
**Project title:** Emerging adulthood in Australia and other countries - validating two standardized surveys of perceptions of adulthood for 18-25 years  
**Is this a project for students starting in 2017?** Yes  
**Research question:** To date most research using the Inventory of the Dimensions of Emerging Adulthood (IDEA) and the Emerging Adulthood Survey has been done in North America and other English speaking countries with Anglo-Celtic traditions. Are these instruments cross-culturally appropriate?  
**Research topic:**  
This project is appropriate for students in the following discipline(s):  
- Bachelor of Health Sciences (Honours), Bachelor of Applied Science (Occupational Therapy)  
  Honours, Any discipline  
**Research group type:** Discipline based  
**Primary research interests:** Emerging adults (people aged between 18-25 years)  
Function, activity and participation of people living with chronic conditions  
Professional socialization of allied health and health sciences  
**Name(s) of research team:** Anne Cusick  
(Colleagues from another university will also be involved)  
**Aims and background**  
OPTION ONE This study will build on bi-lingual skills of honours student/s to pilot and if possible validate these two instruments in other languages - either in language-based populations living here in Australia or other countries (for example the country of origin of the student).  
OPTION TWO This study will build on the cultural context and networks of honours student/s to pilot and if possible validate these two instruments with young people who consider themselves to be observant Muslims - either in populations living here in Australia or other countries (for example the country of origin of the student).  
**Proposed method of data collection:** OPTION ONE The student will identify the second language that is proposed - he/she needs to be fluent in it. Permission will be sought from instrument authors to conduct a cross cultural validation study in that language. The instrument will be translated-back translated using
Emerging adulthood in Australia and other countries - validating two standardized surveys of perceptions of adulthood for 18-25 years

a professional translation company; the student and bi-lingual contacts will verify/ test out the translated instrument. Data will be collected from young adults 18-25 who can read that language. Data will be analyzed using descriptive and inferential statistics to validate the instruments; relationships in the data will be explored

OPTION TWO A couple of previous studies have applied these two instruments in Muslim populations. One was conducted by the supervisor and a colleague in Pakistan. We found that some items had to be changed because they were deemed culturally offensive or illegal in Pakistan, but that the amended survey was sensitive and cross culturally appropriate. We also found that indicators of perceived adulthood were different between Pakistan-dwelling young people and data from Western countries such as North America - but only on a couple of items. To date little research has been done using these instruments on Muslim populations living in diverse Western communities. This study will explore item content, will validate the survey in the Western context with Muslim young people, will the goal being to explore whether and how the survey can be sensitively used in a culturally diverse population that may include young Muslims. Data will be analysed using descriptive and inferential statistics to validate the instruments; relationships in the data will be explored

Ethics approval needed? Yes

Ethics applied for? No

Type of study: Quantitative

Resources needed (all available): OPTION ONE: The student/s must be fluent in reading and writing another language. Ideally this will be a language where previous cross cultural validation of these instruments has not been done before.

OPTION TWO: It is important for the credibility and sensitivity of this study that the honours student identifies as Muslim and has existing networks and contacts that can commence the snowball recruitment method for participation (which will be anonymous)

Additional information: BOTH OPTIONS: This project can be flexibly implemented. Data collection can occur remotely, but if students happen to be traveling they may be able to overlap data collection activities with the visit. Students can also use their bi-lingual or cultural networks here in Australia.

It would be ideal if a range of different young people could be targeted - not just university students - because it will be differences in the sample itself that will make study results more useful. This is because we already know that education, class, employment, parenthood etc directly influence the result on these surveys. So the greater the diversity of your networks to refer the survey to, the better.

Anne Cusick has done cross cultural projects involving samples from Pakistan, Libya, Greece and she regularly visits family in Malaysia. As soon as Anne knows which student is doing what project and thus what language or community connections you bring, she can develop up the Ethics applications to make sure these are approved long before you need to start collecting data. This project can be flexible to fit in
with your timelines. It will be busy and hard work but will be really interesting, will make very good use of
your language and/or cultural/ community experience and will be sure to have an impact in global
literature when finished.
Supervisor: Professor Mark Onslow
Supervisor contact details: mark.onslow@sydney.edu.au
Is there a specific project available: Yes
Do you have a broad research topic for students to consider
Project title: Variation of stuttering severity during a single day
Is this a project for students starting in 2017? Yes
Research question: Does a ten minute speech sample reflect the stuttering of pre-school children during a single day?
Research topic:
This project is appropriate for students in the following discipline(s):
· Bachelor of Applied Science (Speech Pathology) Honours
Research group type: Research Group based
University Profile: http://sydney.edu.au/health-sciences/asrc/about_us/director.shtml
Primary research interests: Stuttering
Name(s) of research team: Australian Stuttering Research Centre
Aims and background
Measurement is critical to treatment and research with stuttering pre-schoolers. This project determines how well a ten minute speech sample validly measures a child's stuttering severity during an entire day. Proposed method of data collection: Recordings of seven pre-school stuttering children are available at present, and a protocol for obtaining such recordings has been developed. The project collects three more recordings and analyses the entire data set of ten recordings.
Ethics approval needed? Yes
Ethics applied for? Yes Type of study: Quantitative
Resources needed (all available): Additional information:
Supervisor: Professor Anne Cusick
Supervisor contact details: anne.cusick@sydney.edu.au
Is there a specific project available: Yes
Do you have a broad research topic for students to consider
Project title: Have occupational therapy research student values changed in 20 years?
Is this a project for students starting in 2017? Yes
Research question: The values of occupational therapy students were surveyed in the 1990s, and the 2000s using a standardized assessment survey. They prioritized helping people and contributing to society as well as material success. Do occupational therapy students in 2017-2018 have similar values?
How might this affect their career goals and aspirations
Research topic:
This project is appropriate for students in the following discipline(s):
- Bachelor of Health Sciences (Honours), Bachelor of Applied Science (Occupational Therapy) Honours, Any discipline
Research group type: Discipline based
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/anne.cusick.php
Primary research interests: Emerging adults (18-25 years)
Allied Health
Professional and inter-professional Identity formation
Factors affecting preparation for professional roles
Function, activity and participation for people with complex and chronic conditions.
Name(s) of research team: Anne Cusick

There will be occupational therapy academic collaborators at other participating institutions
The occupational therapy researchers involved in the 1990s and 2000s data collection will be recognized as part of the team

Aims and background
To survey occupational therapy UG and PG students using the Rockeach Values Survey and compare findings with previous survey results from the 2000s and the 1990s to see if there has been cohort change over time.
To ask students in the 2017-2018 cohort what their career goals and aspirations are.

Proposed method of data collection: Two existing data sets of previously collected values and demographic survey data will be collated, ‘cleaned’ and used. Descriptive statistics from these previous studies will be used and updated.
A new data set will be generated using a demographic and Rockeach Values Survey - this will replicate
Have occupational therapy research student values changed in 20 years?

what was done in the previous two surveys.
The three cohorts will be compared.
A questionnaire will also ask student career goals and aspirations.

**Ethics approval needed?** Yes

**Ethics applied for?** No

**Type of study:** Quantitative

**Resources needed (all available):** This project will suit someone who is interested in surveys and in learning more about statistics. No interviews are involved. Literature review will be limited to background regarding values of young adults also known as emerging adults (people who are between 18 and 25 years of age) and what is known about the values held by occupational therapy students

**Additional information:** I have worked for many years with honours students. This project can be flexibly implemented so may suit someone who is juggling responsibilities and roles but who is confident with numbers and likes describing and comparing characteristics of samples. It does not matter if you are not an occupational therapist because the Values Survey is used with many different populations - in this study we are just focusing on OTs.
Supervisor: Dr. Kieron Rooney

Supervisor contact details: kieron.rooney@sydney.edu.au

Is there a specific project available: Yes

Do you have a broad research topic for students to consider

Project title: Development of an in-patient fitness assessment for patients seeking treatment for substance use disorder

Is this a project for students starting in 2017? Yes

Research question: This is a descriptive study that seeks to assess the baseline fitness of patients undergoing treatment for substance use disorder at Concord Hospital

Research topic: This project is appropriate for students in the following discipline(s):

- Bachelor of Applied Science (Exercise and Sport Science) Honours, Bachelor of Applied Science (Exercise Physiology) Honours

Research group type: Discipline based

University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/kieron.rooney.php

Primary research interests: Habitual Diet and Fuel Partitioning

- Regulators of Maximal Fat oxidation during exercise
- Metabolic and Behavioural effects of excess sugar consumption and capacity to recover during sugar withdrawal

Name(s) of research team: Dr. Kieron Rooney

Dr. Jonathan Freeston
Dr. Bridin Murnion
Dr. Jonathan Brett
Ms. Wendy Kerley
Ms. Kia Roberts
Ms. Johanna Castle

Aims and background

The in-patient addiction treatment wards at Concord Repatriation General Hospital propose to deliver an integrated life skills program comprised of exercise, nutrition, mental health promotion and vocational and recreational activity modules. However, there is currently no data available on the current levels of fitness of treatment seekers upon which to design an exercise program. As such, this project will be the first of its kind at CRGH in aid of testing the acceptability and feasibility of performing exercise testing and program design for this specialist population.
Development of an in-patient fitness assessment for patients seeking treatment for substance use disorder

Proposed method of data collection: This project will be almost entirely conducted at Concord Hospital. The student that takes on this project will be primarily based on the addiction treatment wards and will be responsible for the conduct of baseline fitness tests on patients undergoing treatment. This will predominantly take place early after admission. Secondary outcomes may include a re-assessment of fitness following treatment on the award. The data obtained from this study will inform future projects that seek to design exercise based programs that act as adjuncts to current usual care treatments.

Ethics approval needed? Yes
Ethics applied for? No
Type of study: Quantitative

Resources needed (all available):

Additional information:

Faculty of Health Sciences
Mondays and Wednesdays, (Typically Cumberland Campus)
Tuesdays, Thursdays and Fridays
(Typically Camperdown Campus)
The University of Sydney
NSW 2006 Australia

Dr. Kieron Rooney
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sydney.edu.au
ABN 15 211 513 464
CRICOS 00026A
Supervisor: Dr. Kieron Rooney

Supervisor contact details: kieron.rooney@sydney.edu.au

Is there a specific project available: Yes

Do you have a broad research topic for students to consider: The effect of sweet taste on metabolic and behavioural determinants of health.

Project title: The metabolic response of non-nutritive sweeteners

Is this a project for students starting in 2017? Yes

Research question: Does the consumption of non-nutritive sweeteners impact the fuel partitioning of co-ingested foods?

Research topic: The effect of sweet taste on metabolic and behavioural determinants of health.

This project is appropriate for students in the following discipline(s):

- Bachelor of Health Sciences (Honours), Bachelor of Applied Science (Exercise and Sport Science) Honours

Research group type: Discipline based

University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/kieron.rooney.php

Primary research interests: Habitual Diet and Fuel Partitioning
Regulators of Maximal Fat oxidation during exercise
Metabolic and Behavioural effects of excess sugar consumption and capacity to recover during sugar withdrawal

Name(s) of research team: Dr. Kieron Rooney
Prof Bob Boakes

Aims and background

A current cultural shift consists of decreased acceptance of added sugars in foods and drinks. Their replacement with either water or drinks sweetened with low calorie sweeteners such as saccharin, aspartame or stevia is commonly advised. The rationale for such advice is that removal of added sugars should result in a reduction in total energy intake. As a consequence, weight is lost and metabolic state improved.

The scientific basis for such advice – that metabolic health may be improved by the simple removal of sugar drinks or their replacement with low calorie sweeteners – is inconclusive. Worryingly, there is evidence from both human and small animal studies suggesting that consumption of such sweeteners may have the counter-intuitive effect of increasing energy intake and potentially inducing metabolic damage (such as impaired glucose tolerance) (Suez et al. 2014; Fagherazzi et al. 2013). In fact some studies have reported co-ingestion of artificial sweeteners to alter the glucose and insulin response to a standard glucose tolerance test (Pepino 2015).
The effect of sweet taste on metabolic and behavioural determinants of health.

**Proposed method of data collection:** The specific approach can be discussed and refined with the team, but in general the plan currently will be to recruit between 10-20 participants to undergo a number of acute meal challenges in a counter-balanced, randomised cross-over design. Prior to consumption of the meal participants will consume either a water control or non-nutritive sweetened primer. During the meal, fingerprick blood samples will be assessed for blood glucose and potentially insulin response, as well as whole body fuel oxidation. Various anthropometric measures will also be assessed as covariates in analysis. This project will most likely be completed on Cumberland Campus with the possibility of some testing taking place on Camperdown Campus.

**Ethics approval needed?** Yes

**Ethics applied for?** No

**Type of study:** Quantitative

**Resources needed (all available):** Students intending on completing this project will be trained in the skills required to collect all data including metabolic cart analysis of expired gases, finger prick blood collection and basic anthropometry.

**Additional information:**

Faculty of Health Sciences
Mondays and Wednesdays, Typically Cumberland Campus
Tuesdays, Thursdays and Fridays, Typically Camperdown Campus
The University of Sydney
NSW 2006 Australia

Dr. Kieron Rooney
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ABN 15 211 513 464
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**Supervisor:** Dr Zoe McKeough

**Supervisor contact details:** zoe.mckeough@sydney.edu.au

**Is there a specific project available:** No (your name and research interest will be made available to students)

**Do you have a broad research topic for students to consider**
Research on the effects of rehabilitation in chronic lung disease including examination of sedentary behaviour and physical activity in people with COPD. We have various projects including the examination of long-term Tai Chi exercise, behavioural interventions to improve sedentary behaviour and relationships of objective and subjective measures of activity.

**Project title:**

**Is this a project for students starting in 2017?**

**Research question:**
Research on the effects of rehabilitation in chronic lung disease including examination of sedentary behaviour and physical activity in people with COPD. We have various projects including the examination of long-term Tai Chi exercise, behavioural interventions to improve sedentary behaviour and relationships of objective and subjective measures of activity.

**This project is appropriate for students in the following discipline(s):**
- Bachelor of Applied Science (Physiotherapy) Honours

**Research group type:** Discipline based


**Primary research interests:** Cardiopulmonary physiotherapy
Rehabilitation for people with respiratory disease

**Name(s) of research team:**

**Aims and background**

**Proposed method of data collection:**

**Ethics approval needed?** No

**Ethics applied for?**

**Type of study:**

**Resources needed (all available):**

**Additional information:** If you undertake an honours project with me - you will be introduced to the cardiopulmonary physiotherapy research team and have an opportunity to work closely with other honours students who are working with other cardiopulmonary physiotherapy academics.
Supervisor: Dr Zakia Hossain
Supervisor contact details: zakia.hossain@sydney.edu.au
Is there a specific project available: Yes
Do you have a broad research topic for students to consider: Research in breast cancer, in particular women from Australian Aboriginal, Non-English speaking background women's health, Diabetes
Project title: Improving breast cancer screening among Australian Aboriginal women
Is this a project for students starting in 2017? Yes
Research question:
1. What factors affect Australian Aboriginal women's decision in breast cancer screening practices?
2. What are the barriers in utilization of clinical breast examination and breast self examination among the study population?
3. To what extent culture play significant role in the utilization of breast screening practices among these women?

Research topic: Research in breast cancer, in particular women from Australian Aboriginal, Non-English speaking background women's health, Diabetes
This project is appropriate for students in the following discipline(s):
· Bachelor of Health Sciences (Honours), Any discipline
Research group type: Research Group based
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/zakia.hossain.php
Primary research interests: Chronic disease- Breast cancer, Diabetes
Cross-cultural issues in health
migrant and socially disadvantaged groups
Asia Pacific region
Name(s) of research team: Dr Zakia Hossain
Professor Patrick Brennan
Dr Martin Mackey

Aims and background
"Whilst survival rates for women diagnosed with breast cancer have improved considerably since the 1980s, research shows that survival is lower in Aboriginal and Torres Strait Islander women diagnosed with breast cancer than in the general population. Aboriginal and Torres Strait Islander women are much less likely to participate in breast screening than women in the general population"(Australian Government, 2016: 1)
Improving breast cancer screening among Australian Aboriginal women

The purpose of this study is to document the breast cancer screening both BSE (Breast self examination) and CBE (clinical breast Examination) and Mammography practices of a community sample of Australian Aboriginal women (AAW) living in Sydney Metropolitan area.

Proposed method of data collection: Indigenous women aged 35 years or over living is Sydney Metropolitan Area for more than one year will be recruited as eligible participants of the study. A total sample of 100 Australian Aboriginal women (AAW) will be recruited using convenience sample for the purpose of the study. The study will examine AAW’s knowledge and ever practice of breast self-exam (BSE); clinical breast examination including mammography and ultrasound. It will also examine barriers in utilization of BSE and CBE among the participants. Mixed methods will be utilised. Data will collected on participants’ socio-demographic background, access to and utilisation of health care services and health insurance status. A total N=100 will be recruited for the quantitative study and four focus group discussion will be carried out each consisting of 6-8 participants for the qualitative study.

Ethics approval needed? No

Ethics applied for? No

Type of study: Mixed methods

Resources needed (all available): Data will be collected from the external location including Aboriginal health Centers;

Space needs: On-campus work including data analysis can be conducted in computer lab (B112).

Budget: Funds available for the standard Honours project (app. $500) should suffice.

Additional information: A very similar project is been running for last four years on breast cancer screening practices among Non-English speaking women living in Sydney Metropolitan area. I have extensive experience on study women's health related research. Previously supervised student on Australian Aboriginal health related topic.
Ethnic differences in breast cancer knowledge and screening practices among women living in Sydney

Research question: Research Question(s) and/or hypothesis:

1. What factors influence migrant women's decision to carry out breast screening?
2. Is there any difference in the use of clinical breast examination among CALD-women?
3. Is ethnicity an important factor in determining breast screening practices?
4. What are the barriers in utilization of clinical breast examination, breast self examination and mammogram among the CALD-women?
5. To what extent religious and cultural values play significant role in the utilization of breast screening services among these women?
6. What are the barriers of utilisation in use of health care services among these women?

Research topic: Research in breast cancer, teenage reproductive health

This project is appropriate for students in the following discipline(s):

- Bachelor of Health Sciences (Honours), Bachelor of Applied Science (Exercise and Sport Science) Honours, Bachelor of Applied Science (Occupational Therapy) Honours, Bachelor of Applied Science (Physiotherapy) Honours, Bachelor of Applied Science (MRS) Diagnostic Radiography Honours

Research group type: Discipline based


Primary research interests: Chronic disease and disability, women's health, ethnicity, cross-cultural issues,

Name(s) of research team: Dr Ann Poulos, Dr Sarah Lewis

Aims and background

Ethnic differences in survival of breast cancer were reported in the USA study (Hunter 2000). Limited evidence suggests that people from NESB have lower than average rates of population in cancer screening in Australia (Weber, Banks, Smith, O'connell and Sitas, 2009). In New South Wales, 31 one per cent populations aged 45 years or older in 2006 were born outside Australia (ABS, 2006). However, little is known about the breast cancer screening practices among women from diverse ethnic groups...
Ethnic differences in breast cancer knowledge and screening practices among women living in Sydney

The aims of this study is to: 1. document the breast cancer screening including BSE (Breast self examination) and CBE (clinical breast Examination) and mammogram among women from culturally and linguistically diverse groups (CALD-women) living in Sydney Metropolitan area; 2. examine the impact of beliefs and cultural values on health care behavior of CALD women living in Sydney metropolitan area, particularly with regard to breast cancer screening;

Proposed method of data collection: A quantitative method will be used for the purpose of the study. CALD women aged 35 years or over living in SMA for more than one year will be recruited as eligible participants of the study. The study will examine CALD women’s knowledge and ever practice of breast self-exam (BSE); clinical breast examination and mammogram. It will also examine barriers in utilization of BSE, CBE and Mammogram among the participants. Survey will cover participants’ socio-demographic background, migration status, access to and utilisation of health care services and health insurance status, breast cancer knowledge, breast screening practices and utilisation of health care services.

Study Design: Cross-sectional study.
Outcome measures: Breast cancer screening practices.
Criteria for inclusion: CALD women aged 35 years or over living in Sydney Metropolitan area.
Source of subjects, method of recruitment, method of model validation: Migrant Resource centers; snowball sampling, and recruitment via flyers etc.

Ethics approval needed? No
Ethics applied for? Yes
Type of study: Quantitative
Resources needed (all available): none
Additional information: Project has got ethics clearance from the University of Sydney Human Research Ethics committee.
Supervisor: Dr Yu-Wei Chen
Supervisor contact details: yu-wei.chen@sydney.edu.au
Is there a specific project available: Yes
Do you have a broad research topic for students to consider: Research in children with autism regarding their quality of social life
Project title: Quality of life and social participation of children with autism spectrum disorder: An experience sampling study
Is this a project for students starting in 2017?: Yes
Research question: What is the relationship between everyday social participation and health-related quality of life in children with autism spectrum disorder (ASD)?
Research topic: Research in children with autism regarding their quality of social life
This project is appropriate for students in the following discipline(s):
- Bachelor of Applied Science (Occupational Therapy) Honours
Research group type: Discipline based
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/yu-wei.chen.php
Primary research interests: Quality of social life in disability
Ecological momentary assessment
Paediatric occupational therapy
Name(s) of research team: Dr Yu-Wei Chen
Prof Anita Bundy
Dr Sarah Wilkes-Gillan
Aims and background
Meaningful social experiences promote mental health. We learned from previous work with adults with ASD that, they enjoy interacting with others; social interactions provoke anxiety and take their toll. Little is known about how similar the experiences of children with ASD are to those of adults. In addition, whether the everyday social participation influences health-related quality of life requires investigation. This project will advance knowledge regarding factors influencing quality of life and develop intervention addressing their needs and challenges in social participation.
Proposed method of data collection: The study is a part of a larger project which investigates everyday social participation and mental health of children with autism spectrum disorder compared with typically developing peers. The student who involves in this study will recruit 10 children with a formal diagnosis of ASD and 10 without disabilities. All the children will be aged between 10 and 12 years. Experience sampling method, an ecological momentary assessment, will be used to collect the data regarding time use in everyday life. The data will be incorporated in to the larger project and then analysed to answer the research questions.
Ethics approval needed? Yes
Quality of life and social participation of children with autism spectrum disorder: An experience sampling study

Ethics applied for? Yes Type of study: Quantitative Resources needed (all available):

Additional information: The larger project which investigates everyday social participation and mental health of children with autism spectrum disorder compared with typically developing peers has started in 2016. The project team includes researcher at the University of Sydney (Dr Chen, Prof Bundy) and Australian Catholic University (Dr Wilkes-Gillan). Dr Chen will be the primary supervisor. All the team members have profound experiences working with children with autism spectrum disorders.
Supervisor: Dr Tatjana Seizova-Cajic

Supervisor contact details: tatjana.seizova-cajic@sydney.edu.au

Is there a specific project available: Yes

Do you have a broad research topic for students to consider: Although specific projects are available, students are welcome to propose their own ideas concerning human senses (perception).

Project title: Plasticity in somatosensory maps

Is this a project for students starting in 2017: Yes

Research question: Can short-term stimulation change perception of position on the skin of the hand?

Research topic: Although specific projects are available, students are welcome to propose their own ideas concerning human senses (perception).

This project is appropriate for students in the following discipline(s):
- Bachelor of Health Sciences (Honours), Bachelor of Applied Science (Exercise and Sport Science) Honours, Bachelor of Applied Science (Occupational Therapy) Honours, Bachelor of Applied Science (Physiotherapy) Honours, Bachelor of Applied Science (Exercise Physiology) Honours

Research group type: Discipline based

University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/tatjana.seizova-cajic.php

Primary research interests: human senses; touch; proprioception; multisensory integration

Name (s) of research team:

Aims and background

BACKGROUND:
Plasticity in the nervous system can refer to functional or structural changes triggered by changes in external environment, learning experience or peripheral damage to the nerves. Contrary to assumptions that changes in the cortical network circuits are possible only during crucial periods of development, we now know that a fundamental feature of the brain is its capacity for plasticity, even in adults. One of the brain areas that is highly plastic is the primary somatosensory cortex. Our study investigates plasticity in conscious perception based on the processing in this part of the brain. We use short-term exposure ('learning') to motion patterns across the skin to influence WHERE on the skin we perceive the touch.

AIM: We want to determine whether patterns of motion across the hand in which two patches of skin are always presented 'in reverse' will influence subsequent perception of their position.

SIGNIFICANCE: This is basic research that contributes to the thorough understanding of the sense of touch. Knowledge of sensory systems allows us to treat or substitute sensory impairments, create virtual reality systems and mimic human senses in machines.
Plasticity in somatosensory maps

Proposed method of data collection: This is behavioural research conducted on healthy volunteers in a laboratory setting (sample size: 10-15). The method is experimental and participants' verbal reports indicating what they perceive are used as the outcome measure. This is quantitative research and statistics is used for data analysis. Summaries of qualitative data are also included in research reports.

Ethics approval needed? Yes
Ethics applied for? Yes
Type of study: Quantitative
Resources needed (all available): This research is conducted in the Touch, Proprioception and Vision laboratory at the Faculty of Health Sciences.

A stimulating glove to be used in this study is being developed by an Honours student in engineering (2016-17); pilot study can be done with the equipment that is already available.

Additional information: This project would likely best suit students with basic understanding of, and interest in neuroscience.
Supervisor: Dr Tatjana Seizova-Cajic
Supervisor contact details: tatjana.seizova-cajic@sydney.edu.au
Is there a specific project available: Yes
Do you have a broad research topic for students to consider: Students interested in human senses (conscious perception) and factors that determine why we perceive things the way we do.
Project title: Perception of self-touch
Is this a project for students starting in 2017? Yes
Research question: Perceived self-touch and its relationship with perceived posture
Research topic: Students interested in human senses (conscious perception) and factors that determine why we perceive things the way we do.
This project is appropriate for students in the following discipline(s):
- Bachelor of Health Sciences (Honours), Bachelor of Applied Science (Exercise and Sport Science) Honours, Bachelor of Applied Science (Occupational Therapy) Honours, Bachelor of Applied Science (Physiotherapy) Honours
Research group type: Discipline based
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/tatjana.seizova-cajic.php
Primary research interests: human senses; touch; proprioception; multisensory integration
Name (s) of research team:

Aims and background
BACKGROUND: One of the most common forms of tactile stimulation we receive every day is self-touch, for example when the fingers on our two hands touch each other. There is no effort in this, but the process resulting in the feeling that we are touching our own body is more complicated than it seems. It depends on the precise timing of different sensory inputs and on our prior experience. Experience of self-touch is related to other seemingly simple experiences, including limb ownership (the feeling that our limbs are really ours, denied by some people with brain injury) and agency (the feeling that our actions are initiated by us and not by some external agent, which may be distorted in some people who therefore feel that ‘external force’ or ‘aliens’ move their limbs or apply other kinds of stimulation to their body).

Common experience of self-touch may create a bias to perceive as self-touch even those stimuli that do NOT represent self-touch -- in other words, to have an illusion of self-touch. Our previous research shows that such a bias exists: a prolonged touch of someone else’s hand may result in an ILLUSORY percept that our own hands are touching each other.

AIM: The objective of the present study is to explore the conditions under which this illusion develops and when it breaks down. Specifically, we want to determine whether symmetry in hand configurations affects the illusion and how far apart hands need to be for the illusion to break down.
Perception of self-touch

SIGNIFICANCE: This is basic research that contributes to the thorough understanding of sensory mechanisms. Knowledge of sensory systems allows us to treat or substitute sensory impairments, create virtual reality systems and mimic human senses in machines.

**Proposed method of data collection:** This is behavioural research conducted on healthy volunteers in a laboratory setting (sample size: 10-15). The method is experimental and participants verbal reports indicating what they perceive are used as the outcome measure. This is quantitative research and statistics is used for data analysis. Summaries of qualitative data are also included in research reports.

An interested student would contribute to development of study design, collect data and help with simple aspects of data analysis.

**Ethics approval needed?** Yes

**Ethics applied for?** Yes

**Type of study:** Quantitative

**Resources needed (all available):** This research is conducted in the Touch, Proprioception and Vision laboratory at the Faculty of Health Sciences.

**Additional information:** Students with basic understanding of neuroscience would have an advantage.
Supervisor: Dr Natalie Allen  
Supervisor contact details: natalie.allen@sydney.edu.au  
Is there a specific project available: No (your name and research interest will be made available to students)  
Do you have a broad research topic for students to consider: Research in exercise interventions for people with PD, particularly in the areas of pain management and falls prevention. Open to student suggestions  
Project title:  
Is this a project for students starting in 2017?  
Research question:  
Research topic: Research in exercise interventions for people with PD, particularly in the areas of pain management and falls prevention. Open to student suggestions  
This project is appropriate for students in the following discipline(s):  
- Bachelor of Applied Science (Physiotherapy) Honours  
Research group type: Discipline based  
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/natalie.allen.php  
Primary research interests: Exercise interventions for people with Parkinson's disease - descriptive studies, randomised controlled trials, systematic reviews  
Name(s) of research team:  
Aims and background  
Proposed method of data collection:  
Ethics approval needed? N/A  
Ethics applied for?  
Type of study:  
Resources needed (all available):  
Additional information:
Supervisor: Dr Meryl Lovarini
Supervisor contact details: meryl.lovarini@sydney.edu.au
Is there a specific project available: Yes
Do you have a broad research topic for students to consider This project will focus on the use of virtual technologies in residential aged care.
Project title: The use of virtual technologies in residential aged care settings for improving health, participation and quality of life.
Is this a project for students starting in 2017? Yes
Research question: To be discussed with the student.
Research topic: This project will focus on the use of virtual technologies in residential aged care.
This project is appropriate for students in the following discipline(s):
   · Bachelor of Applied Science (Occupational Therapy) Honours
Research group type: Discipline based
Primary research interests: Technology use by occupational therapists and their clients to enhance health outcomes.
Name (s) of research team: Dr Meryl Lovarini
Dr Sanet du Toit
Aims and background
To be discussed with the student.
Proposed method of data collection: Scoping review methodology.
Ethics approval needed? No
Ethics applied for? N/A
Type of study: Mixed methods
Resources needed (all available): Nil specific at this stage.
Additional information: I am happy to meet with interested students to discuss this project opportunity.
Supervisor: Dr Merrolee Penman
Supervisor contact details: merrolee.penman@sydney.edu.au
Is there a specific project available: Yes
Do you have a broad research topic for students to consider: Evaluating simulated learning from supervisor/student perspectives
Project title: Using conversational and content analysis to shed light on what happens during group supervision in simulated placements/fieldwork.
Is this a project for students starting in 2017? Yes
Research question: Our broad research question is:
What are the characteristics of the interactions between SIM facilitators/educators and students in group supervision?

Research topic: Evaluating simulated learning from supervisor/student perspectives
This project is appropriate for students in the following discipline(s):
- Bachelor of Applied Science (Occupational Therapy) Honours, Bachelor of Applied Science (Speech Pathology) Honours
Research group type: Research Group based
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/merrolee.penman.php
Primary research interests: clinical education
clinical reasoning
simulation
Name (s) of research team: Dr Jennie Brentnall
Dr Merrolee Penman
Robyn Johnson
Dr Belinda Kenny

Aims and background
Adoption of simulation as preparation for clinical education/fieldwork placements is increasingly becoming part of allied health student curricula. At the University of Sydney, simulation has been a core component of undergraduate and masters curricula since 2014 for occupational therapy and for speech pathology since 2016. Alongside the implementation, academics across both disciplines have introduced a stream of research aimed at investigating both processes used to enabling quality student learning, and the outcomes achieved.
This study will be part of the stream investigating the processes used to enable quality student learning,
Using conversational and content analysis to shed light on what happens during group supervision in simulated placements/fieldwork.

in particular the debriefing that follows client encounters in simulation. Debriefing is known to be a essential part of simulation with current research focusing primarily on the content and impact on student learning. However, there is very little that focuses on the interactions occurring between facilitator/educator and students and how this dynamic might influence student outcomes.

In 2017/18, both occupational therapy and speech pathology disciplines will schedule simulation as part of the curriculum. The team sees an opportunity for both a speech pathology student and occupational therapy student to work in a collaborative team with the researchers to complete a conversational and content analysis of student groups of both disciplines. Equally one or other component (i.e. conversational or content analysis) could be completed by one student according to their discipline.

**Proposed method of data collection:** This study will follow a mixed methodology using videos/voice recordings of debriefs following a simulated learning experience. Each discipline has multiple students groups engaged in multiple simulated client encounters from which the sampling will be determined based on the research design. For example, you might take recordings of 20 minute debriefing sessions at 2 to 3 points across the simulated placement, for 2 - 4 groups of students. Analysis will follow conventions for conversational analysis of the interactions, and thematic analysis of the content.

**Ethics approval needed?** Yes

**Ethics applied for?** No

**Type of study:** Mixed methods

**Resources needed (all available):** no specific requirements

**Additional information:** The team sees an opportunity for both a speech pathology student and occupational therapy student to work in a collaborative team with supervisors from both disciplines. The research team is drawn from WIL Academics who work together across a range of projects on day to day basis. Interprofessional learning is one of our key values. Team members are experienced in the use of mixed methods, content analysis, conversational analysis and in collaborative supervision.
Supervisor: Dr Kate Thomson
Supervisor contact details: kate.thomson@sydney.edu.au
Is there a specific project available: Yes
Do you have a broad research topic for students to consider: Investigate the use of discussion boards for learning, for example, do they facilitate reflection?
I have broad interests and I'm very open to negotiating a topic with students
Project title:
Is this a project for students starting in 2017? Yes
Research question:
Research topic: Investigate the use of discussion boards for learning, for example, do they facilitate reflection?
I have broad interests and I'm very open to negotiating a topic with students
This project is appropriate for students in the following discipline(s):
- Any discipline
Research group type: Research Group based
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/kate.thomson.php
Primary research interests: Informal learning
Scholarship of teaching and learning
Student feedback and quality improvement
Work integrated learning
Higher education
Name (s) of research team:
Aims and background

Proposed method of data collection:
Ethics approval needed? Yes
Ethics applied for? No
Type of study: Mixed methods
Resources needed (all available):
Additional information:
**Supervisor:** Dr Kate Edwards  
**Supervisor contact details:** kate.edwards@sydney.edu.au  
**Is there a specific project available:** Yes  
**Do you have a broad research topic for students to consider**  
**Project title:** Yoga as a prophylactic for stress: examination of effects for protection from cardiovascular disease  
**Is this a project for students starting in 2017?** Yes  
**Research question:** Does a single session of Yoga change the responses to stress in a population at-risk for CVD?  
**Research topic:**  
**This project is appropriate for students in the following discipline(s):**  
- Bachelor of Health Sciences (Honours), Bachelor of Applied Science (Exercise and Sport Science) Honours, Bachelor of Applied Science (Exercise Physiology) Honours  
**Research group type:** Discipline based  
**Primary research interests:** Exercise immunology, stress physiology  
**Name(s) of research team:** Dr Kate Edwards, Dr Melody Ding,  
**Aims and background**  
Yoga is a mind-body practice which is often used to reduce stress in modern life. The way that yoga reduces stress isn’t well understood, and it’s important to unravel the effect so that the best recommendations for use are possible. We recently found that young healthy adults showed a reduced stress response to a maths task if they completed a yoga session immediately beforehand. This project plans to explore if this immediate anti-stress effect of yoga can work in populations who are at risk of cardiovascular disease (e.g. have high blood pressure) or during times of very high stress (e.g. during exams for students).  
**Proposed method of data collection:** Randomised crossover trial in participants (N=24) with elevated blood pressure (SBP130-150mmHg, DBP 80-100mmHg, High-normal and Grade 1 hypertension), without any other CVD risk factor (according to ACSM guidelines). On the first day of testing, participants will be randomly assigned to complete either the control condition (watching TV) or the Yoga session (delivered by CIB). All subjects will be their own control, hence those who have watched TV during the first day of experiment will participate in Yoga on the second day of experiment, and vice-versa. Study trials will be separated by a minimum of 48 hours and all trials will be completed during the afternoon to control for the known diurnal variation in cortisol. During each day of testing, participants will first rest for 15 minutes before undergoing the assigned condition (control or Yoga). After the 30-minute task, participants will undergo a math task to induce stress reactivity and, afterwards, will recover from the task during 30 minutes. Measurements of cardiovascular reactivity will be measured throughout the period (heart rate,
Yoga as a prophylactic for stress: examination of effects for protection from cardiovascular disease

heart rate variability, blood pressure); in addition salivary samples will be taken at intervals to assess the hypothalamic-pituitary adrenal (HPA) response (cortisol) and salivary pH as a marker of sympathetic and parasympathetic balance. In addition to demographic and trait psychological measures, participants will give self-reported mood and state cognitive, somatic anxiety and self-confidence assessments pre and post stress tasks.

Ethics approval needed? Yes
Ethics applied for? No
Type of study: Quantitative
Resources needed (all available): Additional
information:

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Dr Kate Edwards
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ABN 15 211 513 464
CRICOS 00026A
**Supervisor:** Dr Belinda Kenny  
**Supervisor contact details:** belinda.kenny@sydney.edu.au  
**Is there a specific project available:** Yes  
**Do you have a broad research topic for students to consider** Our research team is interested in exploring interdisciplinary practice during clinical placements. The Work Integrated Learning team, will subsequently offer student placements to University of Sydney. This topic is well suited to interdisciplinary, peer learning opportunities and the scope of the project may be adapted for students from one or more disciplines. Interested students are encouraged to contact the research team for further information.  
**Project title:** Interprofessional Learning Resources: Do they add value to students’ informal learning opportunities?  
**Is this a project for students starting in 2017?** Yes  
**Research question:** What is the nature of students’ IPL learning experiences when they engage in structured IPL activities during clinical placements?  
What positive IPL outcomes are associated with the use of structured IPL resources during clinical placements?  
**Research topic:** Our research team is interested in exploring interdisciplinary practice during clinical placements. The Work Integrated Learning team, will subsequently offer student placements to University of Sydney. This topic is well suited to interdisciplinary, peer learning opportunities and the scope of the project may be adapted for students from one or more disciplines. Interested students are encouraged to contact the research team for further information.  
**This project is appropriate for students in the following discipline(s):**  
- Any discipline  
**Research group type:** Research Group based  
**Primary research interests:** Ethical and clinical reasoning  
Clinical education  
Interdisciplinary practice  
Communication and swallowing disorders in adults  
**Name (s) of research team:** Belinda Kenny  
Gillian Nisbet  
Robyn Johnson  
**Aims and background**  
Interprofessional learning (IPL) on placement gives students an experiential basis for developing skills for collaborative, client centred care in the professional workplace. Typically, IPL learning occurs informally when students observe or interact with professionals who are managing clients the students are treating.  
A recent study by Zhao, Nagarayan & Nisbett, 2015 indicated that students perceive such IPL activities lead to improved insights into the roles and responsibilities of team members and more effective
Interprofessional Learning Resources: Do they add value to students’ informal learning opportunities?

Communication skills.
This project aims to evaluate an innovative IPL resource package developed to provide students and clinical educators with tools to enhance informal interprofessional learning opportunities that naturally occur in health care workplaces. The Interprofessional Learning Resources for Students and their Supervisors for use in Placement Settings resource provides five structured IPL activities graded from less difficult (observation) to more difficult (communication). The resources were informed by IPL competencies and developed in collaboration with educators and students. During this study, the resources will be applied in clinical education settings to investigate students’ perceived benefits of the resources and suggestions for further development.

**Proposed method of data collection:** A qualitative descriptive research approach will be used to evaluate the application of IPL resources during clinical placements. Purposive sampling will recruit students who are allocated clinical placements from external sites that are collaborating in Capacity Development Facilitation with Work Integrated Learning, the University of Sydney. IPL resources will be introduced during student tutorials. Following completion of the IPL activities, students who agreed to participate in the study will attend a focus group to explore their learning experiences. Focus group data will be transcribed and thematically analysed to reflect students’ perceptions of the effectiveness of the tools in facilitating learning opportunities, confidence and skills in IPL. Findings will support the continuing development of IPL resources for students.

**Ethics approval needed?** Yes

**Ethics applied for?** No

**Type of study:** Qualitative

**Resources needed (all available):**

**Additional information:** We are an interdisciplinary project team with experience supervising Higher Degree Research and honours students and research interests in IPL.
Supervisor: Dr Belinda Kenny
Supervisor contact details: belinda.kenny@sydney.edu.au
Is there a specific project available: Yes

Do you have a broad research topic for students to consider: Our research team is interested in exploring the outcomes of interdisciplinary clinical education workshops. In particular, we wish to understand to what extent clinical educators who attend our workshops apply key workshop concepts consistent with quality learning experiences for students. A single project has been proposed but this topic is well suited to peer learning opportunities. Our interdisciplinary team of supervisors could support more than one student working together on related projects exploring different aspects of quality outcomes in clinical education. Interested students are encouraged to contact the research team for further information.

Project title: Educating our Educators: Quality outcomes from interdisciplinary clinical education workshops.

Is this a project for students starting in 2017? Yes

Research question: What are the outcomes of participation in interdisciplinary clinical education outcomes?

Individual research projects may address one or more of the following questions:
1) What do clinical educators learn when they attend interdisciplinary workshops? For example, what do participants identify as key take-home strategies recorded after completing the workshop, and do they implement these strategies in the following months.
2) What are the enablers and barriers to workshop participants applying what they learned in the workshop to their clinical settings? For example, the implementation of peer learning and/or interdisciplinary learning opportunities for students in different clinical settings.
3) How has workshop participation changed clinical educators’ management of student placements? For example, how does the clinical educator plan, manage and evaluate the quality of student placements at his/her site?

Research topic: Our research team is interested in exploring the outcomes of interdisciplinary clinical education workshops. In particular, we wish to understand to what extent clinical educators who attend our workshops apply key workshop concepts consistent with quality learning experiences for students. A single project has been proposed but this topic is well suited to peer learning opportunities. Our interdisciplinary team of supervisors could support more than one student working together on related projects exploring different aspects of quality outcomes in clinical education. Interested students are encouraged to contact the research team for further information.

This project is appropriate for students in the following discipline(s):
- Any discipline
Educating our Educators: Quality outcomes from interdisciplinary clinical education workshops.

**Research group type:** Research Group based  
**Primary research interests:** Ethical and clinical reasoning  
Clinical education  
Communication and swallowing disorders in adults  
Interdisciplinary practice  
**Name(s) of research team:** Belinda Kenny  
Madelyn Nicole  
Jennie Brentnall  
Kate Thomson

**Aims and background**

Through clinical and fieldwork placements students develop the competent skills and attributes necessary for working in diverse health care settings. Students’ learning occurs under the guidance of clinical educators at external sites. Hence, students’ learning is impacted by the nature of experiences provided by clinical educators. To facilitate quality of clinical education experiences, the Work Integrated Learning (WIL) team provide regular interdisciplinary clinical education workshops. These workshops provide participants with knowledge of evidence based approaches to clinical education and opportunities to discuss, practice and reflect upon skills they may apply in future placements. The workshops are well-subscribed and have received high participant post-workshop satisfaction ratings. However, the translation of workshop learning to quality student placement experiences has received limited empirical attention. This project aims to explore the learning clinical educators who attend interdisciplinary clinical education workshops apply in their own workplaces in the following months.

**Proposed method of data collection:** The project aim and research questions will be addressed using a mixed methods or qualitative descriptive research approach (the team have experience in both and the selection will be guided by the questions of the interested student/s). Interdisciplinary health care professionals will be invited to participate in the study when they register to attend a WIL clinical education workshop. Workshops are conducted at least twice per semester with approx. 40-80 participants enrolled in each workshop. Participants vary in their personal demographics, clinical and clinical education experience, and clinical setting features.  
At the completion of the workshop, each participant completes a workshop evaluation including the identification of up to five concepts or strategies that they plan to apply during future clinical education placements. These data can be thematically analysed to provide short term quality outcomes. Follow-up
Educating our Educators: Quality outcomes from interdisciplinary clinical education workshops

over a period of 3-6 months can then be designed according to the selected research questions (e.g., qualitative descriptive study with interviews and/or focus groups, action research study, evaluation study). Findings may be related to participant characteristics as relevant to the methodology (e.g., correlations in a mixed-methods study).

Ethics approval needed? Yes
Ethics applied for? No
Type of study: Mixed methods

Resources needed (all available):

Additional information: We are an interdisciplinary project team with experience supervising Higher Degree Research and honours students and research interests in quality clinical education. We have experience in a range of evaluation and research methodologies.
Supervisor: Dr Andy Smidt
Supervisor contact details: andy.smidt@sydney.edu.au
Is there a specific project available: Yes
Do you have a broad research topic for students to consider
Project title: Supporting young adults with sensory stimulatory behaviours to connect with others
Is this a project for students starting in 2017? Yes
Research question: Can provision of an individual sensory profile increase engagement and decrease challenging behaviour for students with severe intellectual disabilities?
Research topic:
This project is appropriate for students in the following discipline(s):
· Bachelor of Applied Science (Speech Pathology) Honours
Research group type: Discipline based
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/andy.smidt.php
Primary research interests: Adults and children with developmental disabilities
· AAC
· Challenging behaviour
· Staff training
Name(s) of research team: Andy Smidt
Mark Carter (Macquarie University)
Jennifer Stephenson (Macquarie University)
Aims and background
See work by Karen Bunning for a description of ISE. Our intention is to create a personalised sensory profile for students, and train teachers and classroom assistants to use this with students to increase engagement and decrease challenging behaviour
Proposed method of data collection: Single Subject Experimental design
Ethics approval needed? Yes
Ethics applied for? No
Type of study: Mixed methods
Resources needed (all available):
Additional information: This is an exciting new collaboration between Dr Andy Smidt who is a speech pathologist at Sydney university with Dr Mark Carter and Dr Jennifer Stephenson who are part of MUSEC at Macquarie University. Between us we have good relationships with a number of SSP (schools) and our aim is to trial this approach to collect data on what is already a valued intervention approach for young adults with complex needs.
Supporting young adults with sensory stimulatory behaviours to connect with others

Between us, we have a good deal of expertise and experience and we are excited to be bringing special needs teachers and speech pathologists together for this research. We have some idea about what we want to achieve but we are open to input and discussion with the student who takes on this project. We are able to take one or two students on this project for 2017-18.
Supervisor: Dr Andy Smidt
Supervisor contact details: andy.smidt@sydney.edu.au
Is there a specific project available: Yes
Do you have a broad research topic for students to consider This project will look at using iPads in classrooms for students with severe intellectual disabilities. It will build on the work of Jennifer Stephenson (2016 paper) and will involve replicating this project with other students using a Single Subject Experimental design. This project will develop from discussions between the student and the supervisory team.
Project title:
Is this a project for students starting in 2017? Yes
Research question:
Research topic: This project will look at using iPads in classrooms for students with severe intellectual disabilities. It will build on the work of Jennifer Stephenson (2016 paper) and will involve replicating this project with other students using a Single Subject Experimental design. This project will develop from discussions between the student and the supervisory team.
This project is appropriate for students in the following discipline(s):
- Bachelor of Applied Science (Exercise Physiology) Honours
Research group type: Discipline based
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/andy.smidt.php
Primary research interests: Adults and children with developmental disabilities
- AAC
- Challenging behaviour
- Staff training
Name(s) of research team: Dr Andy Smidt
Dr Mark Carter (Macquarie Uni)
Dr Jennifer Stephenson (Macquarie Uni)
Aims and background
See 2016 paper by Jennifer Stephenson "Using the Choiceboard CreatorTM app on an iPad© to teach choice making to a student with severe disabilities". The plan is to replicate this study with other students to provide more evidence than this single case study does.
Proposed method of data collection: Multiple baseline design.
Ethics approval needed? Yes
Ethics applied for? No
Type of study: Quantitative
Resources needed (all available):

Additional information:

This is an exciting new collaboration between Dr Andy Smidt who is a speech pathologist at Sydney University with Dr Mark Carter and Dr Jennifer Stephenson who are part of MUSEC at Macquarie University. Between us we have good relationships with a number of SSP (schools) and our aim is to replicate the work of Stephenson.
Supervisor: Doctor Zakia Hossain
Supervisor contact details: zakia.hossain@sydney.edu.au

Is there a specific project available: Yes

Do you have a broad research topic for students to consider: Breast cancer, Chronic disease and disability, ethnicity and cross-cultural issues

Project title: Muslim migrant women’s breast cancer screening project in Sydney

Is this a project for students starting in 2017? Yes

Research question: What factors influence a Muslim women’s decision to carry out breast screening? Do the levels of clinical breast examination use and breast screening participation rates differ based on the level of Islamic practice among Muslim women? What are the barriers in utilization of clinical breast examination, mammography and breast self examination among the study population? To what extent does religion play the significant role in the use of breast screening practices among these women? What ways are screening practices of Muslim women influenced by difficulties in understanding health material?

Research topic: Breast cancer, Chronic disease and disability, ethnicity and cross-cultural issues

This project is appropriate for students in the following discipline(s):
- Bachelor of Health Sciences (Honours), Bachelor of Applied Science (Exercise and Sport Science) Honours, Bachelor of Applied Science (Occupational Therapy) Honours, Bachelor of Applied Science (MRS) Diagnostic Radiography Honours, Bachelor of Applied Science (Speech Pathology) Honours

Research group type: Research Group based

University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/zakia.hossain.php

Primary research interests: Health sociology, women’s health, breast cancer, Chronic disease and disability (i.e, diabetes) disadvantaged groups and health (indigenous health) ethnicity and cross-cultural issue in health health service provision and utilisation

Name (s) of research team: Professor Patrick Brennan, Dr Martin Mackey, Dr Sarah Lewis
Muslim migrant women’s breast cancer screening project in Sydney

Aims and background
Aim is to examine breast screening knowledge and participation rates among the Muslim ethnic group living in Sydney Metropolitan Area. Breast screening practices include breast self-exam, clinical breast examination such as mammogram, ultrasound and fine needle biopsy.

Proposed method of data collection: This is a cross-sectional study based on quantitative method. Participants eligible for the study include Muslim – born women of ethnic background in the Sydney Metropolitan area, of age 35 -50. Converted Muslims are not included in this study. Women, who ever diagnosed with breast cancer and are undergoing treatment, are not included in this study.

Convenient sampling technique will be used in order to collect data from specific ethnic Muslim groups including Arabic, Middle East, African, Arabic, Bengali and Malaysian communities.

Ethics approval needed? No
Ethics applied for? Yes
Type of study: Quantitative
Resources needed (all available): None

Additional information: The current project is to collect more data and make a comparative analysis between Muslim women from different part of Asia, Middle East regions. This will provide understanding of religious and cultural variations in breast screening practices among the selected women.
Supervisor: Doctor Nicola Hancock
Supervisor contact details: nicola.hancock@sydney.edu.au
Is there a specific project available: Yes
Do you have a broad research topic for students to consider: Qualitative exploration of the critical elements of recovery for people living with and recovering from mental illness. Specific project focus will be negotiated with successful student.
Will involve semi-structured interviews with people living with mental illness in the community.
Thematic analysis of interview data.
Project title:
Is this a project for students starting in 2017? Yes
Research question:
Research topic: Qualitative exploration of the critical elements of recovery for people living with and recovering from mental illness. Specific project focus will be negotiated with successful student.
Will involve semi-structured interviews with people living with mental illness in the community. Thematic analysis of interview data.
This project is appropriate for students in the following discipline(s):
- Bachelor of Applied Science (Occupational Therapy) Honours
Research group type: Discipline based
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/nicola.hancock.php
Primary research interests: Mental health recovery and recovery-oriented practice; mental health service evaluation; engaging mental health consumers in co-production research, qualitative methods
Name(s) of research team:
Aims and background
Proposed method of data collection: Ethics approval needed? Yes
Ethics applied for? No Type of study: Qualitative Resources needed (all available):
Additional information: The mental health research team in the Discipline of Occupational Therapy are running a number of related projects. We would rather meet with students and discuss a match between their and our interest.
Supervisor: Doctor Merrolee Penman
Supervisor contact details: merrolee.penman@sydney.edu.au
Is there a specific project available: Yes
Do you have a broad research topic for students to consider: A comparison of how supervising occupational therapists use the electronic SPEF-R (fieldwork evaluation) versus the paper version. Research in this area will contribute to demonstrating the validity of the evaluation tool.
Project title:
Is this a project for students starting in 2017? No
Research question:
Research topic: A comparison of how supervising occupational therapists use the electronic SPEF-R (fieldwork evaluation) versus the paper version. Research in this area will contribute to demonstrating the validity of the evaluation tool.
This project is appropriate for students in the following discipline(s):
- Bachelor of Health Sciences (Honours), Bachelor of Applied Science (Occupational Therapy) Honours
Research group type: Discipline based
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/merrolee.penman.php
Primary research interests: I am interested in research in work integrated learning, reflective practice, metacognition in allied health, learning styles, self-directed learning
Name (s) of research team:
Aims and background
Proposed method of data collection:
Ethics approval needed? Yes
Ethics applied for? No
Type of study: Mixed methods
Resources needed (all available): No specific requirements required. Students will be able to access all files electronically
Additional information: The University of Sydney has used the paper version of the SPEF-R since its development. We plan to move to the eSPEF-R version in 2015 when licensing agreements have been made. Currently the ways in which therapists complete the SPEF-R can vary enormously. The SPEF-R provides an electronic comment bank that can be adjusted by the supervisor. We are interested in evaluating whether with the use of the eSPEF-R whether supervisors continue to provide similar
comments, or whether the quality of comments changes in some way. We are also interested in understanding how having electronic comment banks may aid supervisors in completing the SPEF-R.
Supervisor: Doctor Maree Milross and Doctor Tiffany Dwyer

Supervisor contact details: maree.milross@sydney.edu.au and tiffany.dwyer@sydney.edu.au

Is there a specific project available: Yes

Do you have a broad research topic for students to consider investigations into a new quality of life questionnaire in adults with non-cystic fibrosis bronchiectasis - validation, comparison to other questionnaires and clinical correlates, sensitivity to change

Project title: Investigations of the QOL-B (quality of life in bronchiectasis) in adults with non-cystic fibrosis bronchiectasis

Is this a project for students starting in 2017? Yes

Research question:

Research topic: investigations into a new quality of life questionnaire in adults with non-cystic fibrosis bronchiectasis - validation, comparison to other questionnaires and clinical correlates, sensitivity to change

This project is appropriate for students in the following discipline(s):

- Bachelor of Applied Science (Physiotherapy) Honours

Research group type: Research Group based


Primary research interests: respiratory medicine; exercise; airway clearance; cystic fibrosis and bronchiectasis; respiratory failure; non-invasive ventilation; hypertonic saline

Name(s) of research team: Clinical and Rehab Sciences

Aims and background

Proposed method of data collection:

Ethics approval needed? Yes

Ethics applied for? No

Type of study: Mixed methods

Resources needed (all available):

Additional information:
Supervisor: Doctor Kate Edwards

Supervisor contact details: kate.edwards@sydney.edu.au

Is there a specific project available: Yes

Do you have a broad research topic for students to consider
Project title: Exercise is medicine in multiple myeloma (MM)

Is this a project for students starting in 2017? No

Research question: Can an exercise intervention can improve prognosis in MM patients?

Research topic:
This project is appropriate for students in the following discipline(s):
- Bachelor of Applied Science (Exercise and Sport Science) Honours, Bachelor of Applied Science (Physiotherapy) Honours, Bachelor of Applied Science (Exercise Physiology) Honours

Research group type: Research Group based

University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/kate.edwards.php

Primary research interests: Exercise immunology, stress physiology

Name(s) of research team: Michael Marthick, Dr John Campbell, Prof Doug Joshua

Aims and background
A common co-morbidity caused by MM and exacerbated by anti-MM therapy is profound immuno-suppression which gives rise to recurrent serious infections. Administration of influenza, pneumococcal and other vaccines is recommended, however, vaccine efficacy in MM is extremely poor, thus compounding infection risk in this patient group. A number of studies have demonstrated that exercise can be used as an adjuvant to the immune system. Using a human vaccination model, it was found that exercise may augment immune-competence and enhance vaccine responses. Such improvement may lead to a direct reduction in rates of rates of infection-associated hospital visits, infection-related deaths and infection-induced inflammation leading to MM tumour relapse.

Proposed method of data collection: MM (N=20) patients diagnosed at the Sydney Cancer Centre, Royal Prince Alfred Hospital (RPAH) will be recruited via referral to Exercise Physiology (Michael Marthick at the Chris O’Brien Lifehouse). Ex group participants will attend the Lifehourse EP unit for initial exercise induction and exercise capacity test, enabling personalised prescription. To ensure suitability and promote adherence, each participant will be given a program based on their cardiopulmonary fitness and exercise capacity for a period of 12 weeks. Patients will receive vaccinations (pneumococcus) after undertaking a supervised aerobic and resistance exercise session. Serum biomarkers of myeloma (IgG, IgA, IgM and serum FLC) will be assessed before during and after exercise intervention, and peak antibody responses will be measured in serum.

Ethics approval needed? Yes

Ethics applied for? No
Exercise is medicine in multiple myeloma (MM)

**Type of study:** Quantitative

**Resources needed** (all available):

**Additional information:**
Supervisor: Doctor Kate Edwards

Supervisor contact details: kate.edwards@sydney.edu.au

Is there a specific project available: Yes

Do you have a broad research topic for students to consider: Research in effects of exercise on immune function.

   Relationships between stress, behaviour and health.

Project title: Aerobic exercise during chemotherapy infusion

Is this a project for students starting in 2017: No

Research question: Can aerobic exercise be used by patients during chemotherapy infusion prior to surgical removal of tumour?

Research topic: Research in effects of exercise on immune function.

   Relationships between stress, behaviour and health.

This project is appropriate for students in the following discipline(s):

   · Bachelor of Applied Science (Exercise and Sport Science) Honours
   · Bachelor of Applied Science (Physiotherapy) Honours
   · Bachelor of Applied Science (Exercise Physiology) Honours

Research group type: Research Group based

University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/kate.edwards.php

Primary research interests: Exercise immunology, stress physiology

Name(s) of research team: Michael Marthick, Dr John Campbell, Prof Doug Joshua

Aims and background

Aerobic exercise has historically been used by dialysis patients during infusion and has been found to improve aerobic endurance, muscular strength, quality of life and dialysis efficiency. Recent animal and human data suggest that aerobic exercise during infusion may increase blood flow to a tumour, and therefore increase drug delivery to a tumour. In addition, exercise may attenuate the hypoxic tumour microenvironments that are associated with conventional anticancer treatment failures.

Proposed method of data collection: In this initial feasibility study it is proposed that ten neo-adjuvant chemotherapy patients complete stationary cycling at 40-70% VO2peak for 20-40 minutes (in a graded program) during infusion. Data collection will focus on exercise tolerability for patients during infusion, chemotherapy completion rate, and changes in aerobic fitness and fatigue during therapy. Patients will be referred to Michael Marthick, Exercise Physiologist at the Chris O'Brien Lifehouse.

Ethics approval needed? Yes

Ethics applied for? No

Type of study: Quantitative

Resources needed (all available):
Supervisor: Doctor Grace Spencer

Supervisor contact details: grace.spencer@sydney.edu.au

Is there a specific project available: No

Do you have a broad research topic for students to consider Research on young people's health, health practices and health promotion

Project title:

Is this a project for students starting in 2017?

Research question:

Research topic: Research on young people's health, health practices and health promotion

This project is appropriate for students in the following discipline(s):

- Any discipline

Research group type: Discipline based

University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/grace.spencer.php

Primary research interests: Health promotion

- Children and young people’s health
- Health practices and behaviours
- Empowerment
- Social determinants of health - gender, social position, socio-environment
- Qualitative research

Name (s) of research team:

Aims and background

Proposed method of data collection:

Ethics approval needed? N/A

Ethics applied for?

Type of study:

Resources needed (all available):

Additional information:
Supervisor: Doctor Alycia Fong Yan

Supervisor contact details: alycia.fongyan@sydney.edu.au

Is there a specific project available: Yes

Do you have a broad research topic for students to consider: Research integrating novel exercise delivery in chronic disease population but open to student suggestions

Project title: Validation of musculoskeletal assessment tools

Is this a project for students starting in 2017? No

Research question: How many musculoskeletal assessment tools are available to assess lower limb function and core stability?

How valid are these assessment tools?

What are the normative values for different population groups?

Research topic: Research integrating novel exercise delivery in chronic disease population but open to student suggestions

This project is appropriate for students in the following discipline(s):

- Any discipline

Research group type: Research Group based

University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/alycia.fongyan.php

Primary research interests: Dance

Biomechanics

Musculoskeletal mechanics and injury prevention

Name(s) of research team: Evangelos Pappas, Claire Hiller

Aims and background

Aim: To assess the validity of various musculoskeletal assessment tools for the lower limb and core stability.

Specificity and validity of musculoskeletal assessment tools are important aspects to consider when selecting the right tool for a client. New or modified assessments have not been thoroughly investigated for use in different population groups, and clinicians need to reliably implement the assessment tools appropriately. The purpose of this project is to establish normative values across different population groups, investigate the construct validity, specificity, and accuracy of the tests.

Proposed method of data collection:

Ethics approval needed? Yes

Ethics applied for? No

Type of study: Quantitative

Resources needed (all available):

Additional information:
Supervisor: Doctor Alycia Fong Yan
Supervisor contact details: alycia.fongyan@sydney.edu.au

Is there a specific project available: Yes
Do you have a broad research topic for students to consider

Project title: Investigating mechanics of dance movement

Is this a project for students starting in 2017? No

Research question: What are the unique characteristics of dance movement?
What are the kinematic and kinetic demands on the body during dance movement?
How do the mechanics of dance movement change with varying levels of skill?
What are the mechanical risk factors for injury during dance movement?

Research topic:
This project is appropriate for students in the following discipline(s):
- Any discipline

Research group type: Research Group based

University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/alycia.fongyan.php

Primary research interests: Dance
Biomechanics

Name (s) of research team: Richard Smith, Claire Hiller

Aims and background
This project aims to better understand the movement patterns and forces that dancers undergo during dance performance to inform injury prevention and teaching practices.

Dancers push their bodies to the physical limits of motion whilst maintaining the aesthetic requirements of the dance genre. The extreme technical requirements can take a toll on the body with many dancers, both professional and recreational, either injured or at risk of injury. Dancers only have a short professional career and the competition for performance roles and jobs is high. The purpose of this study is to investigate the mechanism for injuries, risk factors for injury, and movement variability.

Proposed method of data collection:

Ethics approval needed? No

Ethics applied for? No Type of study: Quantitative

Resources needed (all available):

Additional information:
Supervisor: Associate Professor Evangelos Pappas
Supervisor contact details: evangelos.pappas@sydney.edu.au
Is there a specific project available: Yes
Do you have a broad research topic for students to consider ACL injuries
Project title: Recovery after ACL reconstruction; predictors of good outcomes
Is this a project for students starting in 2017? No
Research question: What predicts outcomes after ACL reconstruction?
Research topic: ACL injuries
This project is appropriate for students in the following discipline(s):
  - Bachelor of Applied Science (Exercise and Sport Science) Honours, Bachelor of Applied Science
    (Physiotherapy) Honours, Bachelor of Applied Science (MRS) Diagnostic Radiography Honours
Research group type: Research Group based
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/evangelos.pappas.php
Primary research interests: athletic knee injuries; sports injury prevention; biomechanics; recovery after
knee injury
Name (s) of research team: Corey Scholes
Aims and background
There is wide variability on the extent of recovery after ACL reconstruction. However, there is limited
research on predictors of outcomes. The current project aims to identify predictors of recovery after ACL
reconstruction.
Proposed method of data collection: Secondary data analysis of predictors (age, sex, activity level, pre
and post-operative measures etc) on recovery after ACL reconstruction
Ethics approval needed? Yes
Ethics applied for? Yes Type of study: Quantitative
Resources needed (all available):
Additional information:
Supervisor: Associate Professor Martin Mackey
Supervisor contact details: martin.mackey@sydney.edu.au
Is there a specific project available: Yes
Do you have a broad research topic for students to consider: Impacts of activity based working environments on health enhancing physical activity
Project title: Activity Based Working – how is it working for FHS staff and students?
Is this a project for students starting in 2017? Yes
Research question: What are the health effects and perceptions of staff and students moving from Cumberland Campus to the ABW environment of the Faculty's new Health Precinct building at the Camperdown Campus.
Research topic: Impacts of activity based working environments on health enhancing physical activity
This project is appropriate for students in the following discipline(s):
  - Bachelor of Applied Science (Physiotherapy) Honours
Research group type: Discipline based
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/martin.mackey.php
Primary research interests: Physical activity and population health - measurement, interventions
  - Ergonomics
  - Work Health and Safety
Name (s) of research team: A/Prof Martin Mackey
Dr Lina Engelen
Dr Josephine Chau
Dr Jo Gale
A/Prof Corinne Caillaud

Aims and background
Activity Based Working (ABW) is potentially a promising avenue for improving physical and mental health in the workplace and can have a positive impact on staff perception of the workplace and the employer. Although ABW is implemented in numerous organisations and is the flavour ‘du jour’ of office design, there is a scarcity of evidence on the outcomes, benefits and downsides of ABW, specifically in a holistic sense. The aim of the project is to holistically evaluate the health effects and perceptions of staff and students moving to an ABW environment at the University.

Proposed method of data collection: Observational study design, measuring outcomes 2 months prior to moving, 2 months after moving and 6 months after moving to assess baseline and the short and longer terms effects respectively. We will use a range of validated measures (self-report, objective, digital) at each time-point to holistically study the impact moving into an ABW environment has on physical and mental health and healthy behaviours, perceptions of the workplace and productivity, and how the ABW environment is used.
Participants: A representative sample of staff and students moving to the ABW environment in the new location will be invited to participate.

**Ethics approval needed?** Yes

**Ethics applied for?** Yes

**Type of study:** Mixed methods

**Resources needed (all available):**

**Additional information:** The study will likely run over several enrollment cohorts 2017-18 and 2018-19. The study team is highly experienced including in this field with numerous related grants and publications.
Supervisor: Associate Professor Tricia McCabe
Supervisor contact details: tricia.mccabe@sydney.edu.au
Is there a specific project available: Yes
Do you have a broad research topic for students to consider Severe speech disorders in children - treatment and diagnosis
Project title: Treating more children with CAS more often.
Is this a project for students starting in 2017? Yes
Research question: Does an online training package for speech pathologists improve treatment for children with childhood apraxia of speech?
Research topic: Severe speech disorders in children - treatment and diagnosis
This project is appropriate for students in the following discipline(s):
  · Bachelor of Health Sciences (Honours), Bachelor of Applied Science (Speech Pathology) Honours
Research group type: Discipline based
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/tricia.mccabe.php
Primary research interests: Childhood apraxia of speech
  Neurogenic speech disorders in adults and children
  Dyspraxia
  Dysarthria
  Phonology
  Speech development
  Ultrasound in speech pathology
  Voice disorders in adults and children
  Treatment of speech and voice disorders
  Speech pathology evidence based practice
  Speech pathology service delivery
  Acoustics
  Acoustic perception
  Prosody
  Motor speech disorders in adults and children
  Motor learning in speech pathology
Name (s) of research team:
Aims and background:
Childhood apraxia of speech is a severe and persistent speech disorder which starts in early childhood. Our team at the Faculty of Health Sciences has developed an effective treatment for this disorder and
Treating more children with CAS more often.

recently received funding to make an online training package so that speech pathology clinicians can learn how to deliver the training, regardless of where they live. The aim of the online training is to improve client access to the training and reduce clinician anxiety about implementing the new treatment. This project will evaluate the effectiveness of the website.

**Proposed method of data collection:** Online survey, analysis of interviews with speech pathologists. Quantitative and qualitative methods will be used.

**Ethics approval needed?** Yes

**Ethics applied for?** Yes

**Type of study:** Mixed methods

**Resources needed (all available):**

**Additional information:**
**Supervisor:** Associate Professor Tricia McCabe  
**Supervisor contact details:** tricia.mccabe@sydney.edu.au  
**Is there a specific project available:** Yes  
**Do you have a broad research topic for students to consider**  
**Project title:** The development of speech skills in children who have autism  
**Is this a project for students starting in 2017?** Yes  
**Research question:** How does connected speech develop in children who have autism over a 12 month period?  
**Research topic:**  
**This project is appropriate for students in the following discipline(s):**  
- Bachelor of Health Sciences (Honours), Bachelor of Applied Science (Speech Pathology) Honours  
**Research group type:** Discipline based  
**Primary research interests:** Speech Pathology, Communication Disorders, Speech and Language disorders, Phonology and phonetics, Evidence based practice  
**Name (s) of research team:** In addition to Tricia McCabe, the team includes Kate Broome (PhD student) and Dr Kimberley Docking and Dr Maree Doble (both speech pathologists).  
**Aims and background**  
**Proposed method of data collection:** As part of a larger study of speech development in children with autism, this project will examine the connected speech of 23 children who have a diagnosis of autism. The children's speech has been recorded over a 12 month period and in this project it will be transcribed and changes over time will be explored. The study will help speech pathologists and others who work with these kids to understand their speech development.  
**Ethics approval needed?** No  
**Ethics applied for?** N/A  
**Type of study:** Quantitative  
**Resources needed (all available):**
**Additional information:** Students will need to transcribe speech samples and therefore knowledge of phonetic transcription is required. We do not expect you to be very good at it to start with and will provide training but you must have completed CSCD1034 Linguistics and Phonetics (or equivalent). You will also learn to use transcription and analysis software.
Supervisor: Associate Professor Chin-Moi Chow

Supervisor contact details: chin-moi.chow@sydney.edu.au

Is there a specific project available: No (your name and research interest will be made available to students)

Do you have a broad research topic for students to consider? Napping (e.g., use of a sleeping pod to be located in the Health Sciences library) and cognitive functions

Project title:

Is this a project for students starting in 2017? Yes

Research question:

Research topic: Napping (e.g., use of a sleeping pod to be located in the Health Sciences library) and cognitive functions

This project is appropriate for students in the following discipline(s):
- Bachelor of Health Sciences (Honours), Bachelor of Applied Science (Exercise and Sport Science) Honours, Bachelor of Applied Science (Occupational Therapy) Honours, Bachelor of Applied Science (Physiotherapy) Honours

Research group type: Discipline based

University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/chin-moi.chow.php

Primary research interests: Sleep and lifestyle factors, exercise

Name(s) of research team:

Aims and background

Proposed method of data collection:

Ethics approval needed? Yes

Ethics applied for? No Type of study: Quantitative Resources

needed (all available):

Additional information:
Supervisor: Doctor Anne Honey
Supervisor contact details: anne.honey@sydney.edu.au
Is there a specific project available: No (your name and research interest will be made available to students)
Do you have a broad research topic for students to consider: Research on family and carer involvement in mental health services
Project title:
Is this a project for students starting in 2017? Yes
Research question:
Research topic: Research on family and carer involvement in mental health services
This project is appropriate for students in the following discipline(s):
  · Bachelor of Applied Science (Occupational Therapy) Honours
Research group type: Discipline based
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/anne.honey.php
Primary research interests: mental health families
Name (s) of research team:
Aims and background

Proposed method of data collection:
Ethics approval needed? Yes
Ethics applied for? No Type of study: Qualitative
Resources needed (all available):
Additional information:
**Supervisor:** Professor Philip Bohle  
**Supervisor contact details:** philip.bohle@sydney.edu.au  
**Is there a specific project available:** Yes  

**Do you have a broad research topic for students to consider**  
Data are available from three recent ARC and NHMRC projects concerning the employment, health and wellbeing of Australian workers. One is based on a representative sample of Australian aged between 45 and 64, stratified by whether they are in paid employment or not. A subsequent project collected similar data from Australians aged 18 to 64 who were in paid employment. The final project is examining the health, safety and wellbeing of homecare workers in three sectors: disability services, youth services & aged care services. I am happy for students to be jointly supervised by a staff member in their own discipline and to negotiate the specific topic in conjunction with them.  

**Project title:** ‘You can choose from various work and health projects (See additional information)’  
**Is this a project for students starting in 2017?** Yes  

**Research question:**  
**Research topic:** Data are available from three recent ARC and NHMRC projects concerning the employment, health and wellbeing of Australian workers. One is based on a representative sample of Australian aged between 45 and 64, stratified by whether they are in paid employment or not. A subsequent project collected similar data from Australians aged 18 to 64 who were in paid employment. The final project is examining the health, safety and wellbeing of homecare workers in three sectors: disability services, youth services & aged care services. I am happy for students to be jointly supervised by a staff member in their own discipline and to negotiate the specific topic in conjunction with them.  

**This project is appropriate for students in the following discipline(s):**  
- Bachelor of Health Sciences (Honours), Bachelor of Applied Science (Occupational Therapy) Honours, Bachelor of Applied Science (Physiotherapy) Honours  

**Research group type:** Research Group based  
**Primary research interests:** Working hours, work-life conflict and health; Employment and health of older workers; Job quality and health; Effects of precarious (casual, agency, subcontract, etc) work on health and wellbeing.  

**Name(s) of research team:** Prof. Philip Bohle  

**Aims and background**
Proposed method of data collection: Ethics approval needed? No
Ethics applied for?
Type of study: Quantitative

Resources needed (all available): Completion of a unit of study on statistics, preferable including with some multivariate analysis.

Additional information: Each of the projects is nearing completion. All data have been collected for all but one project and are available for analysis. Collection of survey data from the homecare project will be completed in February 2017. I have supervised 31 students, from Honours to PhD, to completion of their theses, with three more PhD students submitting in the next six months.

From above - Project Title
You will have an opportunity to select a specific project from a range of options. Various datasets are available for analysis (see 9 above). Each contains extensive selections of demographic (e.g. age, gender, socioeconomic status), employment (e.g. precarious or secure work, working hours, work intensity/demands), and self-reported health and wellbeing (e.g. work-life balance, job or life satisfaction) variables. For example, you could do a project on the links between working hours; preference for, or satisfaction with, casual work; work-life conflict and health. Many other topics are possible too.
Faculty of Health Sciences

Supervisor: Doctor Anne Honey

Is there a specific project available? Yes

Is there a broad research topic/s for students to consider:

Project title: Going home: Experience of international students transitioning to practice in non-Western countries

Is this an existing project? Yes

Research question: How do international occupational therapy students transfer the skills they have learned in Australia to the different cultural contexts of their home countries?

This project is appropriate for students in the following degree(s):
- Bachelor of Applied Science (Occupational Therapy) Honours

Research group type: Discipline based


Primary research interests: International student experiences of OT

Chief investigator: Anne Honey

Research team:

Aims and background

Studying occupational therapy requires students to think and behave in ways that may come more or less “naturally” to students depending on culture. A previous study found that international OT students from Asian backgrounds were concerned about how what they learned in Australia would translate into practice in their home countries. Little is known about how international students from CALD backgrounds experience the transition to practice in their home countries.

Proposed method of data collection: Method can be negotiated. Participants will be OT Alumni from the University of Sydney who were international students from non-western backgrounds and are now working in non-western countries. Methods could involve a survey of all alumni or skype interviews with a smaller sample.

Ethics approval needed? Yes

Ethics applied for? No

Type of study: Could be qualitative or quantitative.

Supervisor contact details: 93519370 / Anne.honey@sydney.edu.au
Supervisor: Lisa Keay

Is there a specific project available? Yes

Is there a broad research topic/s for students to consider: Safe mobility and older drivers

Project title: Long term changes in driving habits of older people living in the community: 3 year follow-up to a trial in north and north-western Sydney

Is this an existing project? Yes

Research question: Giving up driving is one of the most difficult decisions an older person can make. While there are concerns about safety of older drivers, driving cessation can dramatically reduce independence and social inclusion. This project will involve field work collecting data from study participants and analysis of this data. The aim of this project is to describe the long term changes to driving practices after a transport planning program.

This project is appropriate for students in the following degree(s):
- Any discipline

Research group type: Research Group based

University Profile: http://sydney.edu.au/research/opportunities/supervisors/1192

Primary research interests:
- Safe mobility, ageing, driver safety, community participation, vision loss, falls

Chief investigator: Lisa Keay

Research team: Kristy Coxon

Aims and background
There is evidence that older people with functional limitations are more likely to restrict their driving or give up driving altogether. However, there are other factors which influence the timeliness of this decision. We have recently completed a large trial involving a group of 380 drivers aged 75 years and older who were resident in the suburban outskirts of North and North-Western Sydney. This study evaluated the effectiveness of an education-based safe transport program.

Proposed method of data collection: In this honours project we plan to build on the findings of this 12 month trial by collecting data from this group again 3 years after they joined the study. The student would be involved in assessment of older people participating in the study. This includes a standardised battery of vision and cognitive tests and a structured interview about their health status, socialization, community participation and transport needs. This project will generate evidence about the longer term effectiveness of education and planning for retirement from driving as an approach to promote road safety but preserve mobility in this age group.

Ethics approval needed? Yes

Ethics applied for? Yes

Type of study: Quantitative

Resources needed (all available): Drivers license
Long term changes in driving habits of older people living in the community: 3 year follow-up to a trial in north and north-western Sydney

Additional information: The scope of the project can be changed to meet timelines. There is the opportunity to work with a large project team. The project has been highly productive and it is anticipated the honours student would be able to publish their project results. The project team have extensive experience in student supervision and the student would be well supported. Hot desk office space will be made available as required but the student will be involved in some field work also.

Supervisor contact details: lkeay@georgeinstitute.org.au
Supervisor: Associate Professor Tricia McCabe

Supervisor contact details: tricia.mccabe@sydney.edu.au

Is there a specific project available: Yes

Do you have a broad research topic for students to consider

Project title: The methodological rigour of speech pathology single case design treatment studies.

Is this a project for students starting in 2017? Yes

Research question: What is the methodological rigour of speech pathology single case design treatment studies.

Research topic:

This project is appropriate for students in the following discipline(s):

· Bachelor of Health Sciences (Honours), Bachelor of Applied Science (Speech Pathology)
  Honours

Research group type: Discipline based

University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/tricia.mccabe.php

Primary research interests: Speech language pathology
Speech disorders across the lifespan
Evidence based practice

Name (s) of research team: SpeechBITE

Aims and background

The speechBITE database has 5000 speech pathology related treatment studies listed. Group studies are evaluated using the PEDRO -P scale. Until recently there has been no way to evaluate the research rigour of the single case studies (SCED) although there are 2000 SCEDs on the database.

This study will examine the research rigour of a subset of studies on the database and report on the quality of the work. We will make recommendations on how researchers should improve their research methods.

Proposed method of data collection: We will select and evaluate papers from the database using the RoBIN-T scale. 20% of papers will be independently re-rated. Descriptive statistics will be used to describe the data. Results will be examined for relationships between variables including date of publication, country of origin, diagnostic category of patients etc.

Ethics approval needed? No

Ethics applied for? N/A

Type of study: Quantitative

Resources needed (all available): None

Additional information: Associate supervisors will be Prof Leanne Togher and Ms Melissa Brunner. SpeechBITE is run members of the Discipline of Speech Pathology as a service to the entire profession.
The methodological rigour of speech pathology single case design treatment studies

worldwide. You can find out more about us at speechbite.com.
You will learn to use statistical software, rate papers on the RoBIN-T scale, write a journal article and work with a highly productive team.
Supervisor: Doctor Justin Sullivan
Supervisor contact details: justin.sullivan@sydney.edu.au
Is there a specific project available: No (your name and research interest will be made available to students)
Do you have a broad research topic for students to consider?
Project title:
Is this a project for students starting in 2017?
Research question:
Research topic:
This project is appropriate for students in the following discipline(s):
· Bachelor of Applied Science (Physiotherapy) Honours
Research group type: Discipline based
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/justin.sullivan
Primary research interests: Musculoskeletal Physiotherapy
Manual Therapy
Lower limb biomechanics
Foot/Lower limb conditions
Plantar heel pain
Name(s) of research team:
Aims and background

Proposed method of data collection:
Ethics approval needed? N/A
Ethics applied for?
Type of study:
Resources needed (all available):
Additional information:
**Supervisor:** Doctor Maree Doble  
**Supervisor contact details:** maree.doble@sydney.edu.au  
**Is there a specific project available:** Yes  
**Do you have a broad research topic for students to consider**  
**Project title:** Perceptions of family/client centred practice in speech pathology students and clinical educators  
**Is this a project for students starting in 2017?** Yes  
**Research question:** What do students and clinical educators in speech pathology understand or perceive family/client centred practice to be?  
What do students and clinical educators in speech pathology feel are barriers or facilitators to teaching students implementing family/client centred practice in clinic?  
**Research topic:**  
This project is appropriate for students in the following discipline(s):  
- Bachelor of Applied Science (Speech Pathology) Honours  
**Research group type:** Discipline based  
**Primary research interests:** Hearing Impairment (aural education)  
Family/Client centred practice  
Student Learning  
**Name (s) of research team:** Dr Maree Doble  
Associate Professor Steven Cumming  
**Aims and background**  
Many professionals across the health care sectors purport client and family centred practice is central to the services they provide. In reality, service provision in many areas is typically driven by the professional. The reason for this may centre around the professionals perceptions of client and family centred practice, in theory and practice.  
The curriculum in the undergraduate and masters courses of speech pathology at the University of Sydney has the premise of family and client centred practice woven throughout, however the key to establishing good practice is the practical application of this on clinic placement. As a result there is wide range of practical skills and understanding of client and family centred practice amongst students.  
Aims: To investigate speech pathology clinical educator and student perceptions of client and family centred practice, both theoretically and practically.  
To identify facilitators and barrier to implementing family/client centred practice in clinic.
**Perceptions of family/client centred practice in speech pathology students and clinical educators**

**Proposed method of data collection:** The first part of this project will be survey based (this will be followed up with focused interviews in a subsequent honours project). If we obtain surveys from 30% of students and educators the sample size will be around 65.

The details of the method including analysis will be formalised before the honours student starts.

**Ethics approval needed?** Yes

**Ethics applied for?** No

**Type of study:** Mixed methods

**Resources needed (all available):**

**Additional information:** This project will be the beginning of a larger research program where we aim to scaffold student learning around family and client centred practice. This research will suit someone who is interested in how we as professionals can work better with clients and their families.
**Supervisor:** Doctor Ollie Jay  
**Supervisor contact details:** ollie.jay@sydney.edu.au  
**Is there a specific project available:** Yes  
**Do you have a broad research topic for students to consider**  
**Project title:** Practicing hot yoga during pregnancy  
**Is this a project for students starting in 2017?** Yes  
**Research question:** Is the core body temperature response to hot yoga similar between pregnant and non-pregnant women?  
**Research topic:**  
**This project is appropriate for students in the following discipline(s):**  
- Bachelor of Health Sciences (Honours), Bachelor of Applied Science (Exercise and Sport Science) Honours  
**Research group type:** Research Group based  
**Primary research interests:**  
- Assessing and understanding thermoregulatory impairments in specific populations (e.g. children, MS patients, obese)  
- Cooling/survival interventions for at-risk groups during heat waves  
- Biothermal modeling  
- Heat stroke prevention  
- Pediatric temperature management  
- The development of international standards  
**Name(s) of research team:** Nicholas Ravanelli, Kate Edwards  
**Aims and background**  
**Background:** Doctors are currently unsure whether pregnant women are at greater risk of overheating during physical activity in the heat. Consequently, they are typically advised to avoid participating in activities in hot environments such as hot yoga. However, no evidence exists to support this contraindication. The findings of this preliminary project will enable the development of safe exercise guidelines for pregnant women wishing to remain active and obtain the benefits of regular exercise.  
**Aim:** To determine whether practicing Hot or Bikram yoga during pregnancy may result in a critical rise of core body temperature.  
**Proposed method of data collection:** 2 groups of pregnant and age matched non-pregnant women will be recruited who regularly practice yoga. On separate occasions, pregnant and non-pregnant controls will engage in an identical yoga class taught by a standardized instructor in either a hot (~36°C) or thermoneutral (~21°C) environment. Measurements include: core body temperature using telemetry pills,
Supervisor: Dr Kieron Rooney  
Supervisor contact details: kieron.rooney@sydney.edu.au  
Is there a specific project available: Yes  
Do you have a broad research topic for students to consider: The effect of sweet taste on metabolic and behavioural determinants of health.  
Project title: The metabolic response of non-nutritive sweeteners  
Is this a project for students starting in 2017? Yes  
Research question: Does the consumption of non-nutritive sweeteners impact the fuel partitioning of co-ingested foods?  
Research topic: The effect of sweet taste on metabolic and behavioural determinants of health.  
This project is appropriate for students in the following discipline(s):  
- Bachelor of Health Sciences (Honours), Bachelor of Applied Science (Exercise and Sport Science) Honours  
Research group type: Discipline based  
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/kieron.rooney.php  
Primary research interests: Habitual Diet and Fuel Partitioning  
Regulators of Maximal Fat oxidation during exercise  
Metabolic and Behavioural effects of excess sugar consumption and capacity to recover during sugar withdrawal  
Name(s) of research team: Dr. Kieron Rooney  
Prof Bob Boakes  

Aims and background  
A current cultural shift consists of decreased acceptance of added sugars in foods and drinks. Their replacement with either water or drinks sweetened with low calorie sweeteners such as saccharin, aspartame or stevia is commonly advised. The rationale for such advice is that removal of added sugars should result in a reduction in total energy intake. As a consequence, weight is lost and metabolic state improved.  
The scientific basis for such advice – that metabolic health may be improved by the simple removal of sugar drinks or their replacement with low calorie sweeteners – is inconclusive. Worryingly, there is evidence from both human and small animal studies suggesting that consumption of such sweeteners may have the counter-intuitive effect of increasing energy intake and potentially inducing metabolic damage (such as impaired glucose tolerance) (Suez et al 2014; Fagherazzi et al 2013). In fact some studies have reported co-ingestion of artificial sweeteners to alter the glucose and insulin response to a standard glucose tolerance test (Pepino 2015).
**Proposed method of data collection:** The specific approach can be discussed and refined with the team, but in general the plan currently will be to recruit between 10-20 participants to undergo a number of acute meal challenges in a counter-balanced, randomised cross-over design. Prior to consumption of the meal participants will consume either a water control or non-nutritive sweetened primer. During the meal, fingerprick blood samples will be assessed for blood glucose and potentially insulin response, as well as whole body fuel oxidation. Various anthropometric measures will also be assessed as covariates in analysis. This project will most likely be completed on Cumberland Campus with the possibility of some testing taking place on Camperdown Campus

**Ethics approval needed?** Yes

**Ethics applied for?** No

**Type of study:** Quantitative

**Resources needed (all available):** Students intending on completing this project will be trained in the skills required to collect all data including metabolic cart analysis of expired gases, finger prick blood collection and basic anthropometry.

**Additional information:**
The effect of sweet taste on metabolic and behavioural determinants of health

Proposed method of data collection: The specific approach can be discussed and refined with the team, but in general the plan currently will be to recruit between 10-20 participants to undergo a number of acute meal challenges in a counter-balanced, randomised cross-over design. Prior to consumption of the meal participants will consume either a water control or non-nutritive sweetened primer. During the meal, fingerprick blood samples will be assessed for blood glucose and potentially insulin response, as well as whole body fuel oxidation. Various anthropometric measures will also be assessed as covariates in analysis. This project will most likely be completed on Cumberland Campus with the possibility of some testing taking place on Camperdown Campus

Ethics approval needed? Yes
Ethics applied for? No
Type of study: Quantitative

Resources needed (all available): Students intending on completing this project will be trained in the skills required to collect all data including metabolic cart analysis of expired gases, finger prick blood collection and basic anthropometry.

Additional information:
Supervisor: Dr Alison Purcell
Supervisor contact details: alison.purcell@sydney.edu.au
Is there a specific project available: Yes
Do you have a broad research topic for students to consider
Project title: Speech and language development of children with non-syndromic cleft palate (CP): A comparative study at 2, 3 and 5 years
Is this a project for students starting in 2017? Yes
Research question:
- a) How does the speech development of children with CP aged 2, 3 and 5 years compare to that of their typically-developing peers?
- b) Is there a difference in the types of speech errors (phonetic vs. phonological) that children with CP demonstrate at 2, 3 and 5 years of age?
- c) What changes occur in the speech of children with CP from the age of 2 to 5 years?
- d) Are children with CP more vulnerable to producing speech errors in polysyllabic words as compared to monosyllabic words?

Research topic:
This project is appropriate for students in the following discipline(s):
- Bachelor of Applied Science (Speech Pathology) Honours
Research group type: Discipline based
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/alison.purcell.php
Primary research interests: Dr Purcell is a certified practicing speech pathologist. She has extensive experience and expertise with research that profiles the speech and language skills of children with disorders including cleft palate, hearing loss, and syndromes with craniofacial involvement.
Name(s) of research team: Alison Purcell, Melissa Parkin and Kate Short.

Aims and background
Cleft palate with or without cleft lip (CP) is a common congenital defect and the most common congenital defect of the face (Kummer, 2014). In developed countries such as Australia, New Zealand, UK, US and European countries, children born with CP will be connected to a multi-disciplinary cleft palate service from birth (or from initial identification of the cleft palate) and will have their palate surgically repaired within the first few years of their life. The child will then remain under the care of the cleft palate clinic and have regular reviews by the multi-disciplinary team throughout their childhood, adolescence and into early adulthood.

Despite the early surgery many children with CP show delay and disorder in their speech and language development. Indeed, in 2014 a UK audit of the speech skills of children with CP reported that at age 5 years only 48% of children had speech that would be considered as typically developing. Little is known about the speech and language outcomes for Australian children with CP. This study will help to fill that gap by documenting the speech and language skills of Australian children with CP at age 2, 3 and 5 years.

Proposed method of data collection: This is a cross-sectional research project. The data is being
Speech and language development of children with non-syndromic cleft palate (CP): A comparative study at 2, 3 and 5 year

collected by the speech pathologists at the Sydney Children's Hospital Randwick Cleft Palate Clinic. The student will analyse the speech and language assessment data to answer the 4 research questions.

Ethics approval needed? No
Ethics applied for? Yes Type of study: Quantitative

Resources needed (all available):

Additional information: This project is part of a larger research project being conducted at the Sydney Children's Hospital Randwick Cleft Palate Clinic. Students will have the opportunity to work with the Cleft Palate Clinic team during throughout the project.
Faculty of Health Sciences

Supervisor: Dr Anne Honey
Supervisor contact details: anne.honey@sydney.edu.au

Is there a specific project available: No (your name and research interest will be made available to students)

Do you have a broad research topic for students to consider? We have 2 possible projects that would be supervised in conjunction with Mental Health Services of Sydney Local Health District. The first would be a qualitative study of the experiences of consumers with strengths based care coordination. The second would be looking at the impact of supported accommodation programs on consumers.

Specific methods and foci for these projects are negotiable and would be developed through discussion between Anne, the student and the clinically based supervisor.

Project title:

Is this a project for students starting in 2017?

Research question:

Research topic: We have 2 possible projects that would be supervised in conjunction with Mental Health Services of Sydney Local Health District. The first would be a qualitative study of the experiences of consumers with strengths based care coordination. The second would be looking at the impact of supported accommodation programs on consumers.

Specific methods and foci for these projects are negotiable and would be developed through discussion between Anne, the student and the clinically based supervisor.

This project is appropriate for students in the following discipline(s):

- Bachelor of Applied Science (Occupational Therapy) Honours

Research group type: Discipline based

University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/anne.honey.php

Primary research interests: Mental health

Name (s) of research team:

Aims and background
Proposed method of data collection:

Ethics approval needed? Yes

Ethics applied for?

Type of study:

Resources needed (all available):

Additional information:
Supervisor: Dr Joanna Diong
Supervisor contact details: joanna.diong@sydney.edu.au
Is there a specific project available: Yes

Do you have a broad research topic for students to consider? Impaired movement is common in people with neurological conditions such as stroke or spinal cord injury. Research in our laboratory is directed at investigating the physiological mechanisms of impaired human movement by studying movement kinematics, kinetics, and muscle activity (ie. joint angle, torque, EMG) both in able-bodied people and people with clinical conditions. We investigate components of normal and impaired movement such as neural and mechanical contributions to motor control, quantify joint kinematics after stroke, and investigate clinical assessments of joint range in people with stroke and able-bodied people. We also investigate the epidemiology (ie. incidence, prevalence) of impaired movement in cohort studies, and apply epidemiological techniques to examine bias in research. We are passionate about good science and endeavour to apply strategies to enhance reproducibility and transparency in research: these include programming for data processing and analysis, documenting workflow, and version control.

Students who undertake projects in our laboratory will be exposed to a variety of experimental and clinical research techniques. Projects could include experimental research on mechanisms of human movement, epidemiological/clinical research on characteristics of impaired movement or bias in research, or a combination of both.

Project title: Motor control during normal and impaired movement

Is this a project for students starting in 2017? Yes

Research question: How are joint force and muscle activity regulated during functional tasks?

Research topic: Impaired movement is common in people with neurological conditions such as stroke or spinal cord injury. Research in our laboratory is directed at investigating the physiological mechanisms of impaired human movement by studying movement kinematics, kinetics, and muscle activity (ie. joint angle, torque, EMG) both in able-bodied people and people with clinical conditions. We investigate components of normal and impaired movement such as neural and mechanical contributions to motor control, quantify joint kinematics after stroke, and investigate clinical assessments of joint range in people with stroke and able-bodied people. We also investigate the epidemiology (ie. incidence, prevalence) of impaired movement in cohort studies, and apply epidemiological techniques to examine bias in research. We are passionate about good science and endeavour to apply strategies to enhance reproducibility and transparency in research: these include programming for data processing and analysis, documenting workflow, and version control.

Students who undertake projects in our laboratory will be exposed to a variety of experimental and clinical research techniques. Projects could include experimental research on mechanisms of human movement,
**Motor control during normal and impaired movement**

epidemiological/clinical research on characteristics of impaired movement or bias in research, or a combination of both.

**This project is appropriate for students in the following discipline(s):**

- Bachelor of Applied Science (Exercise and Sport Science) Honours, Bachelor of Applied Science (Occupational Therapy) Honours, Bachelor of Applied Science (Physiotherapy) Honours, Bachelor of Applied Science (Exercise Physiology) Honours

**Research group type:** Discipline based


**Primary research interests:** Human movement

Motor control
Stroke rehabilitation
Bias in research

**Name(s) of research team:** Dr Joanna Diong
Dr Martin Heroux Ms
Stephanie Potts

**Aims and background**

It is thought that the ability to produce stable joint forces and muscle activity improves performance of functional tasks such as grasping and walking. Scientists have studied variability of force production with and without visual feedback of force, but performance of functional tasks in daily living are visually matched to other variables, never force. This project will investigate how well people can control force during a functional task (eg. preventing an object from slipping) when they receive feedback of force compared to feedback of task parameters itself.

**Proposed method of data collection:** We will record joint force and muscle activity during functional activities, and analyse variability in force production under different test conditions.

**Ethics approval needed?** Yes

**Ethics applied for?** No

**Type of study:** Quantitative

**Resources needed (all available):**

**Additional information:** An interest in technical aspects of data collection and clinical research could be beneficial but is not necessary. You will learn valuable and useful skills as part of this project eg. Conducting biomedical research in laboratory and clinical settings, quantitative data acquisition and analysis, reproducible research techniques.
Supervisor: Professor Joshua Burns
Supervisor contact details: joshua.burns@sydney.edu.au
Is there a specific project available: Yes
Do you have a broad research topic for students to consider 1000 Norms Project
Project title: 1000 Norms Project
Is this a project for students starting in 2017? Yes
Research question: What is normal?
Research topic: 1000 Norms Project
This project is appropriate for students in the following discipline(s):
  · Bachelor of Applied Science (Physiotherapy) Honours
Research group type: Research Group based
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/joshua.burns.php
Primary research interests: Musculoskeletal disorders; Neuromuscular diseases; Gait disorders;
  Genetic diseases; Orthopaedics; Allied health
Name(s) of research team: Prof Joshua Burns, Marnee McKay, Jennifer Baldwin and the 1000 Norms Project Consortium
Aims and background
The 1000 Norms Project is an observational study investigating physical function and self-reported health of 1000 children and adults aged 3-101 years. Many high impact publications, conference presentations and media stories have been generated from the 1 million data points collected.

Proposed method of data collection: There is an opportunity to research many of the unexplored measures: foot alignment and footwear habits, gait and centre of pressure variability, isokinetic strength dynamometry, ethno-geographic variation of physical function, workability and 2D video biomechanical analysis. There is also a research translation opportunity to build the 1000 Norms Project online portal.

Ethics approval needed? Yes
Ethics applied for? Yes
Type of study: Quantitative
Resources needed (all available):
Supervisor: Dr Meryl Lovarini
Supervisor contact details: meryl.lovarini@sydney.edu.au

Is there a specific project available: No (your name and research interest will be made available to students)

Do you have a broad research topic for students to consider: Prescribing assistive technologies by occupational therapists.

Project title: TBC

Is this a project for students starting in 2017? Yes

Research question: TBC

Research topic: Prescribing assistive technologies by occupational therapists.

This project is appropriate for students in the following discipline(s):

- Bachelor of Applied Science (Occupational Therapy) Honours

Research group type: Discipline based

University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/meryl.lovarini.php

Primary research interests: Technology and occupational therapy.

Name(s) of research team: Dr Meryl Lovarini

Aims and background

TBC

Proposed method of data collection: TBC

Ethics approval needed? No

Ethics applied for? No

Type of study: Mixed methods

Resources needed (all available): Nil specific

Additional information: The topic is broad at this stage and will be confirmed in discussion with the student.
**Supervisor:** Associate Professor Tricia McCabe

**Is there a specific project available?** Yes

**Is there a broad research topic/s for students to consider:** Severe speech disorders in children - treatment and diagnosis

**Project title:** Treating more children with CAS more often.

**Is this an existing project?** Yes

**Research question:** Does an online training package for speech pathologists improve treatment for children with childhood apraxia of speech?

**This project is appropriate for students in the following degree(s):**
- Bachelor of Health Sciences (Honours)
- Bachelor of Applied Science (Speech Pathology) Honours

**Research group type:** Discipline based


**Primary research interests:**
- Childhood apraxia of speech
- Neurogenic speech disorders in adults and children
- Dyspraxia
- Dysarthria
- Phonology
- Speech development
- Ultrasound in speech pathology
- Voice disorders in adults and children
- Treatment of speech and voice disorders
- Speech pathology evidence based practice
- Speech pathology service delivery
- Acoustics
- Acoustic perception
- Prosody
- Motor speech disorders in adults and children
- Motor learning in speech pathology

**Chief investigator:** Tricia McCabe

**Research team:**

**Aims and background**

Childhood apraxia of speech is a severe and persistent speech disorder which starts in early childhood. Our team at the Faculty of Health Sciences has developed an effective treatment for this disorder and recently received funding to make an online training package so that speech pathology clinicians can learn how to deliver the training, regardless of where they live. The aim of the online training is to improve client access to the training and reduce clinician anxiety about implementing the new treatment. This
project will evaluate the effectiveness of the website.

**Proposed method of data collection:** Online survey, analysis of interviews with speech pathologists. Quantitative and qualitative methods will be used.

**Ethics approval needed?** Yes

**Ethics applied for?** Yes

**Is this already an existing project?** Yes

**Type of study:** Mixed methods

**Resources needed (all available):**

**Additional information:**

**Supervisor contact details:** tricia.mccabe@sydney.edu.au
Supervisor: Doctor Hans Bogaardt
Supervisor contact details: hans.bogaardt@sydney.edu.au
Is there a specific project available: Yes
Do you have a broad research topic for students to consider
Project title: The role of muscle fatigue in swallowing exercises
Is this a project for students starting in 2017? Yes
Research question: Is muscle fatigue in muscles involved in swallowing measurable and what would be an optimal loading for training sub-mental muscles?
Research topic:
This project is appropriate for students in the following discipline(s):
  · Bachelor of Applied Science (Speech Pathology) Honours
Research group type: Discipline based
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/hans.bogaardt.php
Primary research interests: -Swallowing disorders
Name (s) of research team: Hans Bogaardt
Aims and background
When doing the Shaker Exercise, patients are normally instructed to do a number of repetitions. So far, there seems no evidence for how many repetitions must be done to have optimise the outcomes of this exercise.
Proposed method of data collection:
Ethics approval needed? Yes
Ethics applied for? No
Type of study: Quantitative
Resources needed (all available):
Additional information:
Supervisor: Doctor Helen O'Connor

Is there a specific project available? Yes

Is there a broad research topic/s for students to consider: No we have a specific project see below

Project title: Development of tool to assess quality in exercise performance studies

Is this an existing project? No

Research question: What are the critical design and methodological factors that determine study quality in exercise performance studies

This project is appropriate for students in the following degree(s):
- Bachelor of Applied Science (Exercise and Sport Science) Honours
- Bachelor of Applied Science (Physiotherapy) Honours
- Bachelor of Applied Science (Exercise Physiology) Honours

Research group type: Discipline based

University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/helen.oconnor.php

Primary research interests: Sports Nutrition, exercise training studies

Chief investigator: Dr Helen O'Connor

Research team: Dr Jacqui Raymond & Dr Ollie Jay

Aims and background
The primary aim is to develop a robust tool to assess methodological quality and reporting of exercise performance studies. Currently there is no tool or scale available to assess the unique methodological features of these types of studies. Such a tool or scale would be useful to assess study quality as part of a systematic review or meta-analysis.

Proposed method of data collection: We will use a modified Delphi approach to achieve consensus among a panel of international experts on the critical design and methodological factors that determine study quality. The research process will include recruiting research experts in the fields of exercise science and sports nutrition and maintaining close contact these participants throughout the Delphi study. We anticipate the successful completion of this study will deliver a manuscript for publication.

Ethics approval needed? Yes

Ethics applied for? No

Is this already an existing project? No

Type of study: Quantitative

Resources needed (all available): The student will need a place to work within EXSS. Honours budget will be used to purchase gift vouchers for study participants on completion of the study.

Additional information: This is a new project. The student will be able to work independently with the support of the supervisors. Communication with participants will be electronic. The supervisors have a strong network of international experts for the student to engage with and they also have extensive
Experience with systematic review checklists and with honours supervision. The project team have worked together before and have a strong, supportive approach to honours supervision.

**Supervisor contact details:** [helen.oconnor@sydney.edu.au](mailto:helen.oconnor@sydney.edu.au)
Supervisor: Dr Che Fornusek
Supervisor contact details: Che.Fornusek@sydney.edu.au
Is there a specific project available: Yes
Do you have a broad research topic for students to consider
Project title: Feasibility of Functional Electrical Stimulation Cycling Exercise in Persons with Moderate Cerebral Palsy: A Pilot Study
Is this a project for students starting in 2017? Yes
Research question: Is electrical stimulation exercise feasible and beneficial in persons with moderate cerebral palsy?
Research topic:
This project is appropriate for students in the following discipline(s):
- Bachelor of Health Sciences (Honours), Bachelor of Applied Science (Exercise and Sport Science) Honours, Bachelor of Applied Science (Physiotherapy) Honours
Research group type: Research Group based
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/che.fornusek.php
Primary research interests: Electrical stimulation exercise
- Spinal cord injury
- Multiple sclerosis
- Cerebral palsy
Name(s) of research team:
Aims and background
The primary aim of this project is to evaluate the feasibility of Functional Electrical Stimulation (FES)-cycling for persons with cerebral palsy (CP). The limited literature available on electrical stimulation exercise suggests it may be as effective as activity training in persons with CP with milder mobility limitation (GMFCS I & II) (systematic review; Chiu 2014). Electrical stimulation (especially FES cycling) has many disadvantages, including the cost of equipment, the time invested in setting up the equipment each session and the low intensity of exercise it provides. However, persons with CP with more severe mobility limitation (e.g. GMFCS-III & IV) often have less options for exercise and may therefore gain benefits from electrical stimulation cycling exercise. Prior to this application, we have demonstrated the feasibility of our method of FES cycling for persons with advanced multiple sclerosis (MS) (Fornusek 2014). Clinical findings in CP can be similar to advanced MS with paresis and hypertonia and variable but often preserved sensation.

The feasibility of an ES cycling training program will be measured in persons with CP (GMFCS-III). Specifically, we will measure adherence to the training program and improvements in muscle mass, leg
Feasibility of Functional Electrical Stimulation Cycling Exercise in Persons with Moderate Cerebral Palsy: A Pilot Study

strength, mobility, spasticity and quality of life. This pilot project serves as the first step in our research group focusing on the benefits of electrical stimulation for persons with CP.

Proposed method of data collection: In this project twelve persons with moderate CP (GMFCS III) will perform 8 weeks of ES cycling training at the Faculty of Health Sciences, University of Sydney. The outcome variables will be measured before and after the 8 week intervention. During the whole experiment, four sessions of testing will be required to record the outcome measures; two for pre-intervention testing and two for post-intervention testing. Each test session will take up to 3 hours. Eight weeks after the completion of the training, a QOL questionnaire (CPQoL-Teen) will be sent to the participants to complete. This will measure any carryover benefits from the intervention.

Ethics approval needed? No
Ethics applied for? Yes
Type of study: Mixed methods
Resources needed (all available):
Additional information:
Supervisor: Dr Kate Edwards
Supervisor contact details: kate.edwards@sydney.edu.au
Is there a specific project available: Yes
Do you have a broad research topic for students to consider Exercise immunology / behavioural medicine
Project title: Is mindfulness associated with yoga, or running, or rugby?
Is this a project for students starting in 2017? Yes
Research question:
Research topic: Exercise immunology / behavioural medicine
This project is appropriate for students in the following discipline(s):
· Bachelor of Health Sciences (Honours), Bachelor of Applied Science (Exercise and Sport Science) Honours, Bachelor of Applied Science (Physiotherapy) Honours, Bachelor of Applied Science (Exercise Physiology) Honours
Research group type: Discipline based
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/kate.edwards.php
Primary research interests: Behavioural medicine
Name (s) of research team: Kate Edwards, Melody Ding, Lianne Tomfohr
Aims and background
A mounting body of literature points to the positive benefits of mindfulness training in the promotion of physical health (Brown et al., 2007). Mindfulness based interventions have been linked to increased antibody response to influenza vaccination (Davidson et al., 2003), reduced circulating inflammation levels in response to stress (Pace et al., 2010) and blood pressure reductions in individuals with hypertension (Schneider, et al., 2005). Despite the evidence linking mindfulness based interventions to reductions in markers of illness, the underlying mechanisms driving the relationships remain unclear. It has been hypothesized that increasing dispositional, or trait mindfulness is associated with better health, and that the relationship may occur through the promotion of positive cognitive states or “affective balance” and reduction of stress cognitions or “negative affect”. In line with this hypothesis, it is expected that individuals high on trait mindfulness would have lower levels of physiological markers linked to illness. We recently found an association between mindfulness (in particular the ‘observe’ facet) and blood pressure and the cytokine IL-6 (both of which have been found to be predictive of future disease including diabetes and cardiovascular disease) in a young healthy adult population (Tomfohr, 2015). With the exception of our recent study, investigation of relationships between trait mindfulness and objective measures of physiological functioning has been scarce.

The beneficial effects of physical activity for health are well accepted and documented. Given that studies
Is mindfulness associated with yoga, or running, or rugby?

have found that mindfulness interventions result in increased exercise involvement (Carlson 2004), and the association between mindfulness and physiological variables, it is plausible to suspect that physical activity is a potential mechanism. Indeed, successful exercise maintenance has been associated with higher levels of mindfulness in community exercisers (Ulmer et al., 2010). Interestingly, mindfulness is associated with particular forms of physical activity (i.e., yoga), thus it is of interest to examine if the variation in trait mindfulness is associated with certain physical activity forms and if this variation is reflected in other health indices. Identifying associations between facets of mindfulness that are amenable to change, exercise participation/adherence and physiological variables is the next step in a line of research aimed at disentangling the mindfulness and health connection.

The current study will extend our previous investigation and examine the relevance of physical activity participation as a potential mechanism linking facets of mindfulness and clinically relevant physiological variables. The first aim of the study is to establish if there are associations between facets of mindfulness and (1) type of exercise participation and (2) exercise adherence. The second aim of the study is to replicate previous findings showing associations between facets of mindfulness and clinically relevant physiological markers. The third and final aim of the study is to examine if exercise variables mediate associations between mindfulness and health variables.

Proposed method of data collection: This honours project will attend to the first aspect of this study, examining the association between levels of trait mindfulness and participation in different types of exercise and physical adherence.

Participants will be required to complete a questionnaire pack containing demographic, physical activity, mindfulness and mindfulness associated psychological construct questionnaires. All healthy adults who are free of known chronic disease and acute infection between 18-30 years old will be eligible for participation. Recruitment for this study is open to both genders and we will endeavor to include equal numbers of male and female participants.

Ethics approval needed? No
Ethics applied for? Yes
Type of study: Quantitative
Resources needed (all available): none
Additional information:
Supervisor: Dr Stephen Cobley
Supervisor contact details: stephen.cobley@hotmail.com
Is there a specific project available: Yes
Do you have a broad research topic for students to consider Research in athlete development
Research in paediatric and adolescent health
Research in mental health

Is this a project for students starting in 2017? Yes
Research question: How does growth and maturation impact short and long-term outcomes in athlete development?
Research topic: Research in athlete development
Research in paediatric and adolescent health
Research in mental health

This project is appropriate for students in the following discipline(s):

- Bachelor of Applied Science (Exercise and Sport Science) Honours, Bachelor of Applied Science (Exercise Physiology) Honours

Research group type: Discipline based
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/stephen.cobley.php
Primary research interests: Athlete development
Motor Control & Skill Acquisition
Sport & Exercise Psychology
Adolescent Health and Mental Health
Name (s) of research team: Stephen Cobley (USyd)

Aims and background

Ethics approval needed? Yes
Ethics applied for? No
Type of study: Quantitative
Resources needed (all available): N/A
The impact of growth and maturation in athlete development: An analysis in Australian Swimming.

Additional information: N/A
Supervisor: Dr Rhonda Orr
Supervisor contact details: rhonda.orr@sydney.edu.au
Is there a specific project available: Yes
Do you have a broad research topic for students to consider Concentration in elite junior rugby league
Sport-related injury
Application of GPS technology in sports
Project title: Match Performance, Workload and Injury Profiles in Competitive Women's Football.
Is this a project for students starting in 2017? Yes
Research question: What are the characteristics and prevalence of injuries in Australian female football players?
Are there differences in injury characteristics between adolescent and senior Australian female football players?
What are the predictors of prevalent injuries in Australian female football players?
What are the movement demands during female football match-play
Research topic: Concussion in elite junior rugby league
Sport-related injury
Application of GPS technology in sports
This project is appropriate for students in the following discipline(s):
- Bachelor of Health Sciences (Honours), Bachelor of Applied Science (Exercise and Sport Science) Honours, Bachelor of Applied Science (Exercise Physiology) Honours
Research group type: Discipline based
Primary research interests: Injury and concussion in sport
Measurement of match performance and training workloads using GPS
Drugs in sport
Name (s) of research team: Rhonda Orr
Aims and background
Australian female football participation is at a crest, ranking 5th in the world for youth and total registered players. More females registered to play football than netball in 2015. Increasing player numbers have been accompanied by escalating injuries. Anecdotal reports of physiotherapy practices indicate the most serious football injuries (ACL rupture, concussion, ankle fractures) result in prolonged rehabilitation and lost work/school time. Scientific studies report that, compared to males, female football players sustain more knee injuries, have greater risk of concussion, and suffer more severe and prolonged post-concussion symptoms and cognitive deficits. Yet no research on Australian female football injuries exists.
**Match Performance, Workload and Injury Profiles in Competitive Women’s Football.**

This project aims to comprehensively investigate the nature of injuries sustained during training and matches by junior and senior women football players in the 2017 Women’s Premier League pre-season and competition phases. Specifically, the aims are to:

- implement an injury surveillance paradigm to establish an injury profile of players describing their injury characteristics;
- assess injury (and concussion) prevalence;
- compare injury characteristics/profile, incidence and severity across age groups and playing positions; and
- investigate potential relationships between player body size (anthropometry), player factors and injuries to examine associated risk factors.

A second student could examine these aims:

- measure match performance and training workload
- measure match performance (activity profile) using GPS
- identify associations between load (training & match) and injury characteristics.
- identify associations between match activity profile and injury characteristics.

**Proposed method of data collection:** Study design: cross sectional study over 12 months

Participants: aged 12 years and over, will be recruited from five women’s teams comprising U13s, U15s, U17s, Reserve Grade and First Grade. The total sample size of the cohort is anticipated to be 85 players.

**Measurements**

1. Player Baseline Information will include questions about a) demographics; b) player factors (position, football history, injury history, medical history)
2. Anthropometry (height, weight) will be measured during the pre-season
3. Injury during training and match-play will be recorded electronically via app or spreadsheet or hard copy form.
4. Training and match exposure (minutes duration) will be recorded per player per session and summated for each team for the season.
5. Match and training performance using global positioning systems (GPS) to provide a comprehensive analysis of on-field and training movement patterns, physiologic demands and body loads. Outcome measures will include distance covered, running velocity (average & peak), accelerations and decelerations, impacts due to accelerations and decelerations and body loads.
   Players will wear a GPS device during training sessions and for the entirety of competitive games, including during all break periods such as pre-game, quarter-time, half-time, post full-time and any associated periods on the interchange bench.
6. RPE measurement will to assess match and training workload using session RPE (sRPE)
7. Measurements of functional movement eg: hamstring length, single leg hop for distance
Match Performance, Workload and Injury Profiles in Competitive Women’s Football.

Ethics approval needed? Yes
Ethics applied for? No
Type of study: Quantitative
Resources needed (all available):
Additional information: Desirables
1. student lives in or near the Sutherland Shire.
2. student is a player/former football player or has an understanding of football
Supervisor: Professor Ross Sanders

Supervisor contact details: ross.sanders@sydney.edu.au

Is there a specific project available: Yes

Do you have a broad research topic for students to consider: Skill acquisition or motor control and learning; swimming; talent development; body composition

Project title: Talent Development Project

Is this a project for students starting in 2017? Yes

Research question:

Research topic: Skill acquisition or motor control and learning; swimming; talent development; body composition

This project is appropriate for students in the following discipline(s):
  · Bachelor of Health Sciences (Honours), Bachelor of Applied Science (Exercise and Sport Science) Honours, Bachelor of Applied Science (Exercise Physiology) Honours

Research group type: Discipline based


Primary research interests: motor control and learning, biomechanics, anthropometry and body composition

Name (s) of research team: Talent Development Team

Aims and background

Proposed method of data collection:

Ethics approval needed? No

Ethics applied for? No

Type of study: Quantitative

Resources needed (all available):

Additional information:
Supervisor: Dr Hans Bogaardt
Supervisor contact details: hans.bogaardt@sydney.edu.au
Is there a specific project available: Yes
Do you have a broad research topic for students to consider
Project title: The effects of a novel muscle strengthening exercise on laryngeal excursion during swallowing
Is this a project for students starting in 2017? Yes
Research question: Does a novel exercise targeting improvement in laryngeal elevation improve laryngeal excursion during swallowing?
Research topic:
This project is appropriate for students in the following discipline(s):
- Bachelor of Applied Science (Speech Pathology) Honours
Research group type: Discipline based
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/hans.bogaardt.php
Primary research interests: Swallowing disorders
Name(s) of research team: Hans Bogaardt
Aims and background

Proposed method of data collection:
Ethics approval needed? Yes
Ethics applied for? No
Type of study: Quantitative
Resources needed (all available):
Additional information:
Supervisor: Associate Professor Tricia McCabe
Supervisor contact details: tricia.mccabe@sydney.edu.au
Is there a specific project available: Yes
Do you have a broad research topic for students to consider
Project title: Survey of Australian head and neck speech pathologists of current services for patients pre/post oral cancer surgery
Is this a project for students starting in 2017? Yes
Research question: What are the current Australian speech pathology assessment and therapy services provided to patients with oral cancer?
Research topic:
This project is appropriate for students in the following discipline(s):
• Bachelor of Health Sciences (Honours), Bachelor of Applied Science (Speech Pathology) Honours
Research group type: Discipline based
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/tricia.mccabe.php
Primary research interests: Speech and voice assessment and treatment
Name(s) of research team: Tricia McCabe, Dr Katrina Blyth (RPAH)
Aims and background
The team has demonstrated that direct therapy on speech and swallow of patients
Proposed method of data collection: Online survey using redcap or survey monkey with targeted selection of clinicians in each of the head and neck teams around the country.
Ethics approval needed? Yes
Ethics applied for? No
Type of study: Mixed methods
Resources needed (all available):
Additional information: Associate supervisor will be Dr Katrina Blyth, an experienced head and neck cancer clinician at Royal Prince Alfred Hospital.
Supervisor: Ms Kate Short
Supervisor contact details: Katherine.Short@sydney.edu.au
Is there a specific project available: Yes
Do you have a broad research topic for students to consider
Project title: Receptive vocabulary, childcare attendance and home literacy in Urban Aboriginal children.
Is this a project for students starting in 2017? Yes
Research question: What is the receptive vocabulary at 4 years old of a group of urban Aboriginal children who have received home visiting? Are differences in receptive vocabulary at 4 years explained by childcare attendance or home literacy experiences?
Research topic:
This project is appropriate for students in the following discipline(s):
· Bachelor of Applied Science (Speech Pathology) Honours
Research group type: Discipline based
Name (s) of research team: Kate Short Katherine.Short@sydney.edu.au
Professor Lynn Kemp: lynn.kemp@westernsydney.edu.au
Dr Natalie Munro: Natalie.Munro@sydney.edu.au
Aims and background
There is limited research pertaining to the communication development of Australian Aboriginal children. However it is frequently reported that there is a known educational achievement “gap” evident prior to school (Leigh & Gong, 2008) which widens over time (Zubrick et al., 2006) and may be related to communication development. The receptive vocabulary of most (69%) indigenous children at 4 years fell 1SD within or above the mean for Australian children (Christensen, Zubrick, Lawrence, Mitrou, & Taylor, 2014).Taylor et al (2013) found that Aboriginal children, as a subgroup of all Australian children, had vocabularies that were on average around 8 months behind peers at 4 years and overtime this gap did not change. Attendance at childcare and home literacy have both been shown to be one of many factors related to receptive vocabulary and language development in a number of Australian studies (Harrison et al, 2009; McKean et al, 2015). These variables as well as interventions such as home visiting, are important, as they may be “levers” (McKean et al 2015) to change the course of language development and later literacy in children who live in disadvantaged communities.

This study aims to investigate the receptive vocabulary of a group of urban Aboriginal children who’s families
Receptive vocabulary, childcare attendance and home literacy in Urban Aboriginal children.

received a home visiting treatment for the first two years of the child’s life. Two of many possible influencing factors in receptive vocabulary development will be investigated- childcare attendance and the home literacy environment.

Proposed method of data collection: This project will use cross sectional data from the larger Bulundidi Gudaga (BG) study, a clinical trial investigating impacts of a home visiting treatment developed to meet the needs of South Western Sydney local Aboriginal families. 100 mothers and their children received the treatment from birth to two years and are being followed longitudinally. Receptive vocabulary skills of 100 urban Aboriginal children in the BG trial were tested using the Peabody Picture Vocabulary Test (Dunn & Dunn, 2007) at 4 years. Childcare attendance for the year prior to school was reported by parents both in number of hours/ week and type of care. It is also known how long the children had been in care. Home literacy experiences have been measured using the HOME (Home Observation for Measurement of the Environment) Inventory – Infant/Toddler (IT) (Caldwell & Bradley, 2001) at 1 year of age and parent report of number of times books have been read to the child. The student will investigate the relationship between no child care vs child care and amount (hours) of care and receptive vocabulary outcomes as well as home literacy measures and receptive vocabulary.

Ethics approval needed? No

Ethics applied for? Yes

Type of study: Quantitative

Resources needed (all available):

Additional information: This project is in conjunction with the Tharawal Aboriginal Corporation, Western Sydney University and UNSW.
Supervisor: Doctor Elaine Ryan
Supervisor contact details: elaine.ryan@sydney.edu.au
Is there a specific project available: Yes
Do you have a broad research topic for students to consider Research into CT dose measurements
Research into DRL measurements and dose optimisation
Project title: Is a lateral view of the hip necessary for extra capsular fractures?
Is this a project for students starting in 2017? Yes
Research question: Can radiographers recognise extra capsular fractures on an AP pelvis? Could they use this information to make a correct on whether to proceed with further imaging?
Research topic: Research into CT dose measurements
Research into DRL measurements and dose optimisation
This project is appropriate for students in the following discipline(s):
- Bachelor of Applied Science (MRS) Diagnostic Radiography Honours
Research group type: Research Group based
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/elaine.ryan.php
Primary research interests: Medical Physics
Diagnostic radiology
Breast density measurement
Diagnostic reference levels
Name(s) of research team: Steve Littlefair
Elaine Ryan

Aims and background
The gold standard treatment for an extracapsular fracture is internal fixation. For this to be diagnosed there is no requirement for lateral image information. However, current clinical protocols dictate that two views are always necessary. This project sets out to determine whether radiographers would be able to correctly diagnose extracapsular fractures after the AP is taken, and consequently reducing the need for multiple projections to subsequently be taken.

Proposed method of data collection: Take an image set of 50 AP pelvis, with some fractures present in some images. Radiographers will be asked to view the images and diagnose any extracapsular fractures. If radiographers can correctly diagnose extracapsular fractures using AP images, they will be able to decide there is no clinical need for a lateral projection to be taken.

Ethics approval needed? Yes
Ethics applied for? No
Type of study: Quantitative
Is a lateral view of the hip necessary for extra capsular fractures?

Resources needed (all available): 50 AP pelvis images with various fractures.
Radiographers to read images
Desk and computer to perform analysis.

Additional information:
**Supervisor:** Doctor Elaine Ryan

**Supervisor contact details:** elaine.ryan@sydney.edu.au

**Is there a specific project available:** Yes

**Do you have a broad research topic for students to consider** The use of simulated learning in health science education

**Project title:** Do MRS students value and benefit from the use of the NetRad CT system within their learning experience?

**Is this a project for students starting in 2017?** Yes

**Research question:** Does the use of the NetRAD CT system improve student performance in basic CT learning objectives?

Do students value the opportunity to use the NetRAD CT within their degree, or is it just seen as another assessment?

**Research topic:** The use of simulated learning in health science education

**This project is appropriate for students in the following discipline(s):**
- Bachelor of Applied Science (MRS) Diagnostic Radiography Honours

**Research group type:** Research Group based

**University Profile:** sydney.edu.au/health-sciences/about/people/profiles/elaine.ryan.php

**Primary research interests:** Simulated learning

Computed Tomography

**Name (s) of research team:** Elaine Ryan

**Aims and background**

The NetRAD CT system is a clinical CT unit that has been modified so that it is available online for MRS students, as well as students from other health disciplines. It has been rolled out across the UG and GEM programs, as well as for distance education Masters, in the form of practical exercises to be completed. This study will look at whether students score more highly on a set of basic and advanced knowledge questions before and after completing a prac using the NetRAD CT system. It will also look at student evaluations before and after completing the prac exercises.

**Proposed method of data collection:** The online prac exercises that have been designed for the NetRAD CT system will be put into an online program. This will also incorporate a set of questions to be answered before and then after key stages within the prac. There will also be questions for the users to answer about how they graded the exercises. A pilot of the online program will be tested on a group of UG students. The pre and post data will be analysed to evaluate improvement in performance due to NetRAD use. Student attitudes will be assessed by analysing survey answers.

**Ethics approval needed?** Yes
Do MRS students value and benefit from the use of the NetRad CT system within their learning experience?

Ethics applied for? No

Type of study: Mixed methods

Resources needed (all available): Desk and computer
Access to NetRAD and Blackboard

Additional information:
 Supervisor: Doctor Elaine Ryan  
Supervisor contact details: elaine.ryan@sydney.edu.au  
Is there a specific project available: Yes  
Do you have a broad research topic for students to consider: Dose measurements in CT  
Project title: Accuracy of measured and reported dose data during computed tomography  
Is this a project for students starting in 2017? Yes  
Research question: Are  
Research topic: Dose measurements in CT  
This project is appropriate for students in the following discipline(s):  
- Bachelor of Applied Science (MRS) Diagnostic Radiography Honours  
Research group type: Research Group based  
University Profile: sydney.edu.au/health-sciences/about/people/profiles/elaine.ryan.php  
Primary research interests: Breast imaging  
Dose measurement  
Name (s) of research team: Elaine Ryan  
Aims and background  
This project aims to measure the dose to tissues and organs within an anthropomorphic phantom during a CT scan and compare those doses to those reported on the CT scanner itself.  

The use of computed tomography in medicine is increasing. It is estimated that approximately 5% of all those received by the human population now has an origin from computed tomography. Recently, fears have been raised by publications in the British medical Journal that indicate an increase of 20% in the odds ratio for developing cancer as a result of one CT scan as a child.  

In light of this it is increasingly important that we have accurate measurements of the dose received by the patient. Previous work has demonstrated that the reported computer tomography dose index on the CT scanner itself may vary by as much as 5% from the actual calculator dose the Phantom. The patient size is another factor in this problem, which should be accounted for.  

Proposed method of data collection: This project would measure the actual dose using state-of-the-art dose meters, anthropomorphic phantoms that accurately simulates the organs and tissues of a human patient, and the 16 slice CT scan housed within the basement of medical radiation science.
Accuracy of measured and reported dose data during computed tomography

The student would undertake exposures on the CT scanner and would be in charge of measurement of dosimetry. The measured doses would be compared to the displayed doses on the scanner.

Student would also investigate any causes of discrepancies between the measured and actual doses. During this project students would gain experience on the use of a modern CT scanner and would gain skills in dosimetry.

Ethics approval needed? No
Ethics applied for? No
Type of study: Quantitative
Resources needed (all available):
Additional information:
Supervisor: Doctor Elaine Ryan
Supervisor contact details: elaine.ryan@sydney.edu.au
Is there a specific project available: Yes
Do you have a broad research topic for students to consider: Outcomes from Global Health Experiences
Project title: Staff attitudes and expectations of global health experiences for health science students
Is this a project for students starting in 2017? Yes
Research question: Do staff support the participation of Health Science students in International student exchange or short term global health experience programs?
Research topic: Outcomes from Global Health Experiences
This project is appropriate for students in the following discipline(s):
- Any discipline
Research group type: Research Group based
University Profile: sydney.edu.au/health-sciences/about/people/profiles/elaine.ryan.php
Primary research interests: Global Health Experiences
Student globalisation
Name(s) of research team: Elaine Ryan
Elizabeth Dylke
Aims and background
The Faculty of Health Sciences is committed to producing graduates who are global citizens. FHS supports this by offering opportunities for health science students to travel abroad as part of their degree programs, either for a short experience, with FHS Abroad, or a longer term within the student exchange. However, the success of these programs is reliant on the support of staff across the faculty, both to promote these programs, but also to champion them and support students who wish to take part. This study aims to assess how staff see these programs, and how actively they encourage student participation.
Proposed method of data collection: This project would be undertaken by way of an anonymous online survey sent to all staff across the faculty. It will assess whether staff are aware of current opportunities, whether they are aware of students who have taken part and whether they actively encourage students to take part.

Ethics approval needed? Yes
Ethics applied for? No
Type of study: Mixed methods
Resources needed (all available):
Supervisor: Stephen LITTLEFAIR
Supervisor contact details: s.littlefair@usyd.edu.au
Is there a specific project available: Yes
Do you have a broad research topic for students to consider Research into advanced radiographic practice
Project title: Can radiographers "hot report"
Is this a project for students starting in 2017? Yes
Research question: Are radiographers able to accurately report the appendicular images they have taken?
Research topic: Research into advanced radiographic practice
This project is appropriate for students in the following discipline(s):
- Bachelor of Applied Science (MRS) Diagnostic Radiography Honours
Research group type: Discipline based
University Profile: MSc Associate Lecturer, Medical Radiation Sciences C43M - M Block Cumberland Campus, The University of Sydney Telephone 61 2 9036 7355
Primary research interests: Radiographer reporting
Perception
Eye-Tracking
Name (s) of research team: Stephen LITTLEFAIR
Dr. Warren Reed
Aims and background
There is a later radiological reporting workload in clinical practice, some of this reporting workload could be undertaken by radiographers
Proposed method of data collection: Radiographers or varying experience will be asked to practice report the appendicular images they take in clinical practice. These reports will be compared to the "gold standard" radiologists report sent to the referring clinician. Analysis of accuracy sensitivity and specificity will be made
Ethics approval needed? Yes
Ethics applied for? No
Type of study: Quantitative Resources needed (all available): Computer
Statistical analysis software Additional information:
Supervisor: Stephen LITTLEFAIR

Supervisor contact details: s.littlefair@usyd.edu.au

Is there a specific project available: Yes

Do you have a broad research topic for students to consider: Research into advanced radiographic practice

Project title: Can health science professionals triage patients with minor injuries?

Is this a project for students starting in 2017: Yes

Research question: Can referrals to imaging departments be reduced by radiographers assessing minor injuries and deciding that imaging will not affect patient management or outcomes

Research topic: Research into advanced radiographic practice

This project is appropriate for students in the following discipline(s):
· Bachelor of Applied Science (MRS) Diagnostic Radiography Honours

Research group type: Discipline based

University Profile: MSc Associate Lecturer, Medical Radiation Sciences C43M - M Block Cumberland Campus, The University of Sydney Telephone 61 2 9036 7355

Primary research interests: Radiographer reporting
Perception
Eye-Tracking
Malpractice evidence

Name (s) of research team: Stephen LITTLEFAIR
Dr. Warren Reed

Aims and background
There is much research highlighting the practice of defensive medicine. In such cases patients are referred for unnecessary tests due to medical staff fear of litigation

Proposed method of data collection: Radiographers on clinical placement will evaluate medical referrals of minor injuries and make a decision as to whether the referral is justified based on the clinical presentation of the patient.

Ethics approval needed: Yes

Ethics applied for: No

Type of study: Resources needed (all available): Computer
Statistical analysis software

Additional information:
Supervisor: Tuguy Esgin
Supervisor contact details: tuguy.esgin@sydney.edu.au

Is there a specific project available:

Do you have a broad research topic for students to consider Using exercise and medicine to reduce the incidence and prevalence of avoidable chronic disease in the community.

Project title:

Is this a project for students starting in 2017? Yes

Research question:

Research topic: Using exercise and medicine to reduce the incidence and prevalence of avoidable chronic disease in the community.

This project is appropriate for students in the following discipline(s):

- Bachelor of Health Sciences (Honours), Bachelor of Applied Science (Exercise and Sport Science) Honours, Bachelor of Applied Science (Exercise Physiology) Honours

Research group type: Discipline based

University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/tuguy.esgin.php

Primary research interests: Exercise physiology
Metabolic syndrome
Indigenous health
Cultural competence

Name(s) of research team:

Aims and background

Proposed method of data collection:

Ethics approval needed? Yes

Ethics applied for? No

Type of study: Mixed methods

Resources needed (all available):

Additional information:
**Supervisor:** A/Prof Sarah Dennis  
**Supervisor contact details:** sarah.dennis@sydney.edu.au  
**Is there a specific project available:** No (your name and research interest will be made available to students)  
**Do you have a broad research topic for students to consider** A project, probably conducted in SW Sydney with COPD, physical activity or allied health interventions - TBC  
**Project title:**  
**Is this a project for students starting in 2017?** Yes  
**Research question:**  
**Research topic:** A project, probably conducted in SW Sydney with COPD, physical activity or allied health interventions - TBC  
**This project is appropriate for students in the following discipline(s):**  
- Bachelor of Applied Science (Physiotherapy) Honours  
**Research group type:** Discipline based  
**Primary research interests:** COPD, chronic disease and prevention  
**Name (s) of research team:**  
**Aims and background**  
**Proposed method of data collection:**  
**Ethics approval needed?** Yes  
**Ethics applied for?** No  
**Type of study:** Quantitative  
**Resources needed (all available):**  
**Additional information:**
Supervisor: Dr Milena Simic
Supervisor contact details: milena.simic@sydney.edu.au
Is there a specific project available: No (your name and research interest will be made available to students)
Do you have a broad research topic for students to consider Research into exercise and conservative therapies for people with knee osteoarthritis and low back pain.
Project title:
Is this a project for students starting in 2017?
Research question:
Research topic: Research into exercise and conservative therapies for people with knee osteoarthritis and low back pain.
This project is appropriate for students in the following discipline(s):
· Bachelor of Applied Science (Physiotherapy) Honours
Research group type: Research Group based
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/milena.simic.php
Primary research interests: Knee osteoarthritis
Musculoskeletal health
E-health
Biomechanics
Name (s) of research team:
Aims and background
Proposed method of data collection:
Ethics approval needed? Yes
Ethics applied for?
Type of study:
Resources needed (all available):
Additional information:
**Supervisor:** Dr Susan Coulson and Dr Melanie Nguyen

**Supervisor contact details:** susan.coulson@sydney.edu.au

**Is there a specific project available:** Yes

**Do you have a broad research topic for students to consider** The effectiveness of e-health in the management of facial nerve disorders

**Project title:** What is the quality of online health information about facial nerve paralysis for people with facial nerve paralysis?

**Is this a project for students starting in 2017?** Yes

**Research question:** What is the quality of online health information about facial nerve paralysis for people with facial nerve paralysis?

**Research topic:** The effectiveness of e-health in the management of facial nerve disorders

**This project is appropriate for students in the following discipline(s):**
- Bachelor of Applied Science (Physiotherapy) Honours

**Research group type:** Discipline based

**University Profile:** [http://sydney.edu.au/health-sciences/about/people/profiles/susan.coulson.php](http://sydney.edu.au/health-sciences/about/people/profiles/susan.coulson.php)

**Primary research interests:** Rehabilitation following facial nerve paralysis

- e-health

**Name(s) of research team:** Dr Susan Coulson and Dr Melanie Keep

**Aims and background**

When people become affected by facial nerve paralysis, they lose the capacity to produce an effective smile. The smile is our 'social currency', the expression that is used most commonly on the face to express happiness and when meeting someone for the first time. There are a broad range of online resources available about facial nerve paralysis, however due to the of variable quality of these resources, patients react in a number of ways after viewing them.

To date, little research has been conducted evaluating the availability, accessibility and quality of online information about facial nerve paralysis for people with facial nerve paralysis. This project will address several aims:

1. Ascertain/understand the information and resource needs of people with facial nerve paralysis.
2. Evaluate the quality of existing online resources for people with facial nerve paralysis.
3. Develop recommendations for the development of an online resource for people with facial nerve paralysis.
What is the quality of online health information about facial nerve paralysis for people with facial nerve paralysis?

Proposed method of data collection: This research will involve interviewing people with facial nerve paralysis and/or evaluating the quality of current online resources using established criteria for assessing online health information quality.

Ethics approval needed? Yes

Ethics applied for? No

Type of study: Mixed methods

Resources needed (all available):

Additional information: Dr Susan Coulson has successfully supervised 14 Class 1 Honours Students, three of whom have received the University Medal. She has conducted research into facial nerve disorders for over 20 years.
**Supervisor:** Professor Sharon Kilbreath, Dr Elizabeth Dylke  
**Supervisor contact details:** sharon.kilbreath@sydney.edu.au; elizabeth.dylke@sydney.edu.au  
**Is there a specific project available:** Yes  
**Do you have a broad research topic for students to consider** Detection of lymphoedema in the genital/pelvic region - is there a role for bioimpedance spectroscopy?  
**Project title:** Detection of lymphoedema in the genital/pelvic region  
**Is this a project for students starting in 2017?** Yes  
**Research question:** Is there a role for bioimpedance spectroscopy in detection of genital/pelvic lymphoedema.  
**Research topic:** Detection of lymphoedema in the genital/pelvic region - is there a role for bioimpedance spectroscopy?  
**This project is appropriate for students in the following discipline(s):**  
- Bachelor of Health Sciences (Honours), Bachelor of Applied Science (Exercise and Sport Science) Honours, Bachelor of Applied Science (Occupational Therapy) Honours, Bachelor of Applied Science (Physiotherapy) Honours, Bachelor of Applied Science (Exercise Physiology) Honours  
**Research group type:** Research Group based  
**Primary research interests:** Lymphoedema, particularly as it relates to breast cancer.

Rehabilitation following breast cancer.  
**Name(s) of research team:** Breast cancer rehabilitation group  
**Aims and background**  
In India, filariasis is present in many regions. This is a mosquito-born disease that leads to serious consequences including lymphoedema and hydroceles. For patients with hydroceles without lymphoedema in the pelvic region, surgical intervention is highly successful; however, if lymphoedema is present, secondary complications arise with surgery. The challenge is to identify a method in which lymphoedema can be detected prior to surgery.  
**Proposed method of data collection:** This will be a cross-sectional study in which bioimpedance spectroscopy is used to assess lower limbs and trunk regions in healthy persons. Normative thresholds will be determined and then tested with persons presenting with lymphoedema specific to this region.  
**Ethics approval needed?** Yes  
**Ethics applied for?** No  
**Type of study:** Quantitative  
**Resources needed (all available):** A small bioimpedance unit will be used for data collection.
Detection of lymphoedema in the genital/pelvic region

Additional information: This project has arisen from collaborations we have with medical practitioners in Delhi, India.
Supervisor: Professor Colleen Canning
Supervisor contact details: colleen.canning@sydney.edu.au
Is there a specific project available: No (your name and research interest will be made available to students)
Do you have a broad research topic for students to consider Developing and testing innovative methods of reducing disability and falls in people with Parkinson’s disease
Improving understanding of fall risk factors and fall prediction in people with moderate to severe Parkinson's disease
Understanding exercise preferences of people with Parkinson's disease
Project title:
Is this a project for students starting in 2017?
Research question:
Research topic: Developing and testing innovative methods of reducing disability and falls in people with Parkinson's disease
Improving understanding of fall risk factors and fall prediction in people with moderate to severe Parkinson's disease
Understanding exercise preferences of people with Parkinson's disease
This project is appropriate for students in the following discipline(s):
- Bachelor of Applied Science (Physiotherapy) Honours
Research group type: Discipline based
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/colleen.canning.php
Primary research interests: Reducing disability and falls in people with Parkinson's disease - observational studies, randomised controlled trials, systematic reviews
Name(s) of research team:
Aims and background

Proposed method of data collection:
Ethics approval needed? Yes
Ethics applied for?
Type of study:
Resources needed (all available):
Additional information:
Supervisor: Associate Professor Sarah Lewis

Supervisor contact details: sarah.lewis@sydney.edu.au

Is there a specific project available: Yes

Do you have a broad research topic for students to consider: What is the knowledge base and practices of radiographers when imaging obese patients. What radiation dose strategies are employed?

What common mistakes are made in breast cancer screening with mammography? How can we minimise error and maximise participation?

Does radiography curricula prepare students for emotionally challenging situations such as acute emergency imaging and intensive care imaging?

Project title: What types of breast cancers are missed when recall rates are reduced in screening mammography?

Is this a project for students starting in 2017? Yes

Research question: When recall rates are reduced, radiologists are forced to let go cases they believe are not malignant but may be tricky to determine. Is there one type(s) of cancers that are more likely to be recalled than others and what are these mammographic features?

Research topic: What is the knowledge base and practices of radiographers when imaging obese patients. What radiation dose strategies are employed?

What common mistakes are made in breast cancer screening with mammography? How can we minimise error and maximise participation?

Does radiography curricula prepare students for emotionally challenging situations such as acute emergency imaging and intensive care imaging?

This project is appropriate for students in the following discipline(s):

- Bachelor of Applied Science (MRS) Diagnostic Radiography Honours

Research group type: Research Group based

University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/sarah.lewis.php

Primary research interests: Breast Cancer Imaging

Obesity Imaging

Emotional Intelligence in Curricula

Professional workforce issues for medical imaging
What types of breast cancers are missed when recall rates are reduced in screening mammography?

Name(s) of research team: Sarah Lewis
Warren Reed

Aims and background

Proposed method of data collection:

Ethics approval needed? No
Ethics applied for? Yes

Type of study: Quantitative

Resources needed (all available): This project would analyse data that has already been collected but not included in a PhD study.

Additional information: This Hons project builds upon an existing project looking at the effects of forcing radiologists to make decisions in order to reduce their recall rate. It examines what types of cancers radiologists can rationalise to let go and has very important implications for cancer screening in Australia.
Supervisor: Doctor Justin Sullivan
Supervisor contact details: justin.sullivan@sydney.edu.au
Is there a specific project available: No (your name and research interest will be made available to students)
Do you have a broad research topic for students to consider Foot and ankle function and painful conditions
Project title:
Is this a project for students starting in 2017?
Research question:
Research topic: Foot and ankle function and painful conditions

This project is appropriate for students in the following discipline(s):
· Bachelor of Applied Science (Physiotherapy) Honours
Research group type: Discipline based
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/justin.sullivan.php
Primary research interests: Musculoskeletal Physiotherapy
Manual therapy
Lower limb biomechanics
Foot and ankle conditions
Plantar heel pain
Name (s) of research team:
Aims and background

Proposed method of data collection:
Ethics approval needed? Yes
Ethics applied for?
Type of study:
Resources needed (all available):
Additional information:
Supervisor: Dr Leanne Hassett
Supervisor contact details: leanne.hassett@sydney.edu.au

Is there a specific project available:

Do you have a broad research topic for students to consider
Interventions to increase physical activity in people with physical disabilities, primarily people with neurological conditions.

Depending on the student's preference and the progress of various research projects, there would be opportunities to work on projects investigating:
implementing fitness training in traumatic brain injury;
health coaching within physiotherapy practice;
increasing sporting opportunities for people with physical disability; OR
sub-study analysing data from the recently completed NHMRC funded Activity and MObility UsiNg Technology (AMOUNT) rehabilitation trial.

Project title:

Is this a project for students starting in 2017? Yes

Research question:

Research topic: Interventions to increase physical activity in people with physical disabilities, primarily people with neurological conditions.

Depending on the students preference and the progress of various research projects, there would be opportunities to work on projects investigating:
implementing fitness training in traumatic brain injury;
health coaching within physiotherapy practice;
increasing sporting opportunities for people with physical disability; OR
sub-study analysing data from the recently completed NHMRC funded Activity and MObility UsiNg Technology (AMOUNT) rehabilitation trial.

This project is appropriate for students in the following discipline(s):

- Bachelor of Applied Science (Physiotherapy) Honours

Research group type: Discipline based

University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/leanne.hassett.php

Primary research interests:

Name (s) of research team:

Aims and background
Proposed method of data collection:

Ethics approval needed? N/A

Ethics applied for?

Type of study: Quantitative

Resources needed (all available): All of the proposed projects should have the required resources. Depending on the project chosen, ethics applications may be required.

Additional information: Some research may also be conducted within the musculoskeletal team at The George Institute for Global Health, where I work as a Research Fellow 2 days per week.
Supervisor: Dr Fereshteh Pourkazemi

Supervisor contact details: fereshteh.pourkazemi@sydney.edu.au

Is there a specific project available: No (your name and research interest will be made available to students)

Do you have a broad research topic for students to consider Yes,
- Research in Chronik Ankle Instability
- Research in Learning and Education
- Research in Pain and Mindfulness

Project title:

Is this a project for students starting in 2017? Yes

Research question:

Research topic: Yes,
- Research in Chronik Ankle Instability
- Research in Learning and Education
- Research in Pain and Mindfulness

This project is appropriate for students in the following discipline(s):

- Bachelor of Health Sciences (Honours), Bachelor of Applied Science (Exercise and Sport Science) Honours, Bachelor of Applied Science (Physiotherapy) Honours

Research group type: Discipline based

University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/fereshteh.pourkazemi.php

Primary research interests: Chronic Ankle Instability

Pain and Mindfulness

Education

Name (s) of research team: Fereshteh Pourkazemi

Aims and background

Proposed method of data collection:

Ethics approval needed? Yes

Ethics applied for? No

Type of study: Mixed methods

Resources needed (all available):

Additional information:
Supervisor: Doctor Daniel Hackett

Supervisor contact details: daniel.hackett@sydney.edu.au

Is there a specific project available: Yes

Do you have a broad research topic for students to consider: Exercise and dietary interventions to maximise muscular strength, hypertrophy and power adaptations.

Project title: Pre-exercise Fasting and Maximizing Muscular Hypertrophy.

Is this a project for students starting in 2017? Yes

Research question: Is there potential for greater muscular hypertrophy with ingestion of supplement following fasted resistance training.

Research topic: Exercise and dietary interventions to maximise muscular strength, hypertrophy and power adaptations.

This project is appropriate for students in the following discipline(s):
- Any discipline

Research group type: Discipline based


Primary research interests: Exercise physiology
- Resistance training
- Muscular strength, hypertrophy and power
- Obesity and diabetes
- Charcot Marie Tooth

Name(s) of research team: Exercise Physiology and Nutrition - Dr Daniel Hackett

Aims and background
Previous research has indicated that fasting for several hours allows faster transport of amino acids across muscle cell membrane may create a favourable environment for activation of genes involved in the process of muscular hypertrophy. This aim of this study is examine whether fasted resistance training enhances muscular hypertrophic effects.

Proposed method of data collection: Subjects recruited will be healthy 18-25 year old males with 6 months resistance training experience.

A total of 58 subjects will be randomised into either a fasted or fed resistance training group.

Subjects will be required to complete a 12-week resistance training intervention (supervised, full-body resistance training three times/week)

Sessions will be performed at 8am and include the following exercises: Leg Press, Bench Press, Seated
Pre-exercise Fasting and Maximizing Muscular Hypertrophy.

Machine Row, Triceps pushdown, Bicep curl, Plank. 3-5 x 8-10RM, 60-120s rest. The sessions will be completed by 9.30am on the allocated days.

Subjects randomised into fasted group will perform resistance training sessions following a 9 hour overnight fast, while subjects in the fed group will be given a standardised meal to consume 60 minutes prior to the resistance training sessions.

Both groups will consume a protein shake within 15 minutes following the resistance training sessions. In addition, the fasted group will consume a low-protein meal to ensure caloric intake is standardised between groups. Daily diets will be given to subjects and compliance will be tracked via myfitnesspal.

Data collected will be lean and fat mass via a DXA scan and ultrasound measures, muscular strength and power of the upper and lower body.

**Ethics approval needed?** Yes

**Ethics applied for?** No

**Type of study:** Quantitative

**Resources needed (all available):**

**Additional information:** This will be the first ever study to be conducted investigating the efficacy of fasted resistance training for maximizing muscular hypertrophy. The project will be shared among a group of students due to the time required for this study to be completed.
Supervisor: Doctor Daniel Hackett
Supervisor contact details: daniel.hackett@sydney.edu.au
Is there a specific project available: Yes
Do you have a broad research topic for students to consider
Project title: Effects of Olympic Weightlifting on Athletic Performance
Is this a project for students starting in 2017? Yes
Research question:
Research topic:
This project is appropriate for students in the following discipline(s):
  · Any discipline
Research group type: Discipline based
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/daniel.hackett.php
Primary research interests: Exercise physiology
Resistance training
Muscular strength, hypertrophy, and power
Obesity and diabetes
Charcot Marie Tooth
Name (s) of research team: Exercise Physiology and Nutrition - Dr Daniel Hackett
Aims and background
Proposed method of data collection:
Ethics approval needed? Yes
Ethics applied for? No
Type of study: Quantitative
Resources needed (all available):
Additional information:
Supervisor: Dr Warren Reed
Supervisor contact details: warren.reed@sydney.edu.au
Is there a specific project available: No (your name and research interest will be made available to students)
Do you have a broad research topic for students to consider: Visual Search in Image Interpretation
Project title:
Is this a project for students starting in 2017?: Yes
Research question:
Research topic: Visual Search in Image Interpretation
This project is appropriate for students in the following discipline(s):
· Bachelor of Applied Science (MRS) Diagnostic Radiography Honours
Research group type: Research Group based
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/warren.reed.php
Primary research interests:
Name (s) of research team:
Aims and background

Proposed method of data collection:
Ethics approval needed? Yes
Ethics applied for? No
Type of study: Mixed methods
Resources needed (all available):
Additional information:
Supervisor: Dr. David Kennedy

Supervisor contact details: david.kennedy@sydney.edu.au

Is there a specific project available: No (your name and research interest will be made available to students)

Do you have a broad research topic for students to consider: How does muscle fatigue and painful exercise alter the way in which the nervous system drives the muscles in both healthy and clinical populations?

Understanding changes in proprioception and muscular performance of patients with multiple sclerosis.

Examining the effects of muscle fatigue on proprioception in healthy and clinical populations.

This project is appropriate for students in the following discipline(s):

- Bachelor of Applied Science (Physiotherapy) Honours, Bachelor of Applied Science (Exercise Physiology) Honours

Research group type: Discipline based

University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/david.kennedy.php

Primary research interests: Research interests are in how pain and fatigue alter central nervous system motor control. Specifically, how the central nervous system contributes to fatigue and what effects fatigue and pain have on proprioception and voluntary activation of muscles.

Ethics approval needed? No
Supervisor: Dr Melanie Keep
Supervisor contact details: melanie.keep@sydney.edu.au
Is there a specific project available: Yes
Do you have a broad research topic for students to consider
Project title: Social media and well-being
Is this a project for students starting in 2017? Yes
Research question: Does “quitting” social media increase wellbeing?
Research topic:
This project is appropriate for students in the following discipline(s):
- Any discipline
Research group type: Research Group based
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/melanie.keep.php
Primary research interests: eHealth
Social media and well-being
Online communication
Online health information

Name (s) of research team:

Aims and background
Online social networking sites (such as Facebook, Instagram, Twitter) allow users to create a profile and connect with other profiles. Users can then share their thoughts, images, videos, links to other websites to the profiles connected with theirs. Within such a network, users may experience a sense of belonging (Quinn & Oldmeadow, 2012) and increased self-esteem (Valkenberg, Peter & Schouten, 2006) through positive interactions with others. On the other hand, research has also shown that increased symptoms of depression (Lup, Trub & Rosenthal, 2015) and feelings of social isolation (Gross, 2004) are related to greater social networking site use.

Recently, Tromholt (2016) showed participants who stopped using Facebook for a week reported greater improvements in life satisfaction than participants in the control group who continued to use Facebook as normal. However, many people are active users on more than one social networking site and it is unclear whether the consequences of Facebook use are generalisable to all similar sites. It is also hypothesised that perhaps it is not the absence of online social networking that enhances wellbeing but, rather, the presence of other activities such as increased one-on-one communication with family and friends. These variables have yet to be measured.
This project aims to examine the effect of ceasing social media use on wellbeing.

**Proposed method of data collection:** Participants will be invited to complete a survey measuring their well-being before and after one week of no social media use. Participants will also be asked about how they spent their time without social media. Combined, this data will be analysed to explore the effect of social networking sites on wellbeing.

**Ethics approval needed?** Yes

**Ethics applied for?** No

**Type of study:** Mixed methods

**Resources needed (all available):**

**Additional information:**

Faculty of Health Sciences  
Cumberland Campus - O Block, room 220  
Camperdown Campus - Old Teachers College, room 204

I'm at both campuses each week.

Dr Melanie Keep  
T 9351 9390  
E melanie.keep@sydney.edu.au  
sydney.edu.au

The University of Sydney  
NSW 2006 Australia
Supervisor: Dr Claire Hiller

Supervisor contact details: claire.hiller@sydney.edu.au

Is there a specific project available: No (your name and research interest will be made available to students)

Do you have a broad research topic for students to consider 1. Research in ankle injury
2. Validation of a new clinical balance test.
3. Secondary analysis of professional dancer health survey in Australia

Project title:

Is this a project for students starting in 2017? Yes

Research question:

Research topic: 1. Research in ankle injury
2. Validation of a new clinical balance test.
3. Secondary analysis of professional dancer health survey in Australia

This project is appropriate for students in the following discipline(s):

· Bachelor of Health Sciences (Honours), Bachelor of Applied Science (Exercise and Sport Science) Honours, Bachelor of Applied Science (Physiotherapy) Honours

Research group type: Research Group based

University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/claire.hiller.php

Primary research interests: Ankle sprain and instability
Dancer injury

Name (s) of research team:

Aims and background

Proposed method of data collection:

Ethics approval needed? Yes

Ethics applied for? No

Type of study: Quantitative

Resources needed (all available):

Additional information:
Supervisor: Doctor Jean Nightingale

Is there a specific project available? No (your name and research interest will be made available to students)

Is there a broad research topic/s for students to consider:

Project title:

Is this an existing project?

Research question:

This project is appropriate for students in the following degree(s):

- Bachelor of Applied Science (Physiotherapy) Honours

Research group type: Research Group based

University Profile: Elizabeth Nightingale

Primary research interests:

- Knee and Ankle Injuries
- Netball injuries
- Clinical biomechanics

Chief investigator:

Research team:

Aims and background:

Proposed method of data collection:

Ethics approval needed? N/A

Ethics applied for?

Is this already an existing project?

Type of study:

Resources needed (all available):

Additional information:

Supervisor contact details: jean.nightingale@sydney.edu.au
Supervisor: Doctor Amy Freeman-Sanderson

Supervisor contact details: amy.freeman-sanderson@sswhs.nsw.gov.au

Is there a specific project available: Yes

Do you have a broad research topic for students to consider: Research in critical care

Project title: Speech Pathology workforce in ICU: Demographics and Roles

Is this a project for students starting in 2017? Yes

Research question: What is current Speech Pathology workforce within ICU across Australia?
What is the role of the Speech Pathologist in ICU?

Research topic: Research in critical care

This project is appropriate for students in the following discipline(s):
- Bachelor of Applied Science (Speech Pathology) Honours

Research group type: Discipline based

University Profile: Nil uni profile created

Primary research interests: Critical Care
Adults
Tracheostomy
Instrumental assessment
Dysphagia
Communication

Name(s) of research team: Amy Freeman-Sanderson
Professor Leanne Togher (Co-supervisor)

Aims and background

Speech Pathology associations in Australia, UK and USA endorse the role of Speech Pathologists in ICU and state provision of care is within our scope of practice. Speech Pathology services to patients within the ICU has been recognised as an important aspect of patient care in regards to communication and swallow function. However, the presence of Speech Pathology within the ICU is not standard practice across Australia and the national workforce demographic is unknown. It is vital to report the current level of service and role of Speech Pathology within ICU in order to identify practice and training gaps for workforce planning.

Proposed method of data collection: A multiple methods approach including a prospective survey to private and public ICUs/hospitals. The survey will contain questions regarding Speech Pathology FTE, demographics about role and explore barriers to provision of service. The survey will be delivered via email, with data uploaded and stored in a secure RedCap Database.

ICUs will be chosen from all states and territories from a comprehensive list provided by the Australian
and New Zealand Intensive Care Society.

**Ethics approval needed?** Yes

**Ethics applied for?** No

**Type of study:** Mixed methods

**Resources needed (all available):** Students will require access to own computer and internet

**Additional information:** This is a new project exploring the Speech Pathology workforce in ICU. I am a clinically based Speech Pathologist at RPA. I have a PhD in the management of ventilated tracheostomy patients in ICU - this involved various study designs, presenting at national/international conferences and writing for peer-reviewed journals.
Supervisor: Dr Tatjana Seizova-Cajic and Dr Leanne Hassett

Supervisor contact details: tatjana.seizova-cajic@sydney.edu.au; leanne.hassett@sydney.edu.au

Is there a specific project available: Yes

Do you have a broad research topic for students to consider Tactile perception in health and disease (but please see specific project)

Project title: Tactile perception of position and motion of stimuli applied to the hand of people with acquired brain injury

Is this a project for students starting in 2017? Yes

Research question: Do patients with gross localization errors have impaired perception of motion, and if so, are motion impairments predictable from patterns of mislocalization?

Research topic: Tactile perception in health and disease (but please see specific project)

This project is appropriate for students in the following discipline(s):
- Bachelor of Health Sciences (Honours), Bachelor of Applied Science (Occupational Therapy) Honours
- Bachelor of Applied Science (Physiotherapy) Honours

Research group type: Discipline based

University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/tatjana.seizova-cajic.php;

Primary research interests: Human senses in health and disease (TSC); the role of exercise in rehabilitation following traumatic brain injury (LS)

Name(s) of research team:

Aims and background

Localization of stimuli on the skin and awareness of how they move or slip are fundamental tactile functions, an impairment of which makes it difficult to handle and manipulate objects.

Sensory impairments are common in people with brain injury. Several case studies of stroke patients showed that their ability to localize stimuli on the hand suffers from systematic distortions. For example, one patient had a persistent bias, such that all stimuli applied to his hand felt closer to the centre of the palm than they actually were. Another had a ‘scrambled’ map of the hand, i.e., persistent disorderly mislocalizations. Perception of motion on the hand has not been studied much in patients and our first aim is to determine to what extent, if at all, motion perception is impaired in patients with other of sensory impairment (primarily, but not restricted to, localization errors).

We are also interested in the neurophysiological mechanisms underpinning perception of position and motion. Studying people with damage to the sensory system may allow us to establish to what extent the two mechanisms depend on each other, i.e., whether perception of position and perception of motion are dissociated. This is our second aim. (Dissociation means that one impairment cannot be predicted from
another, suggesting that separate neural structures are involved. For example, impairments in speech 
production and speech comprehension do not necessarily co-occur -- they are dissociated; this leads to a 
conclusion that either one is super ordinate to the other, or that different brain areas/neural mechanisms 
are responsible for the two.)

Significance: Understanding these impairments helps because it increases our basic knowledge about 
how senses work both in health and disease, and this in turn helps us design rehabilitation strategies. 

**Proposed method of data collection:** Small-n or single case experimental study (pilot) to investigate 

**Ethics approval needed?** Yes 

**Ethics applied for?** No 

**Type of study:** Quantitative 

**Resources needed (all available):** An advantage might be given to students with interest in 
neuroscience. 

**Additional information:** TSC has extensive experience and a number of publications regarding tactile 
perception in healthy participants, and LH has extensive experience and a number of publications 
resulting from her work with clinical populations, esp. patients with brain injury. Please see our staff pages 
for more details.
Supervisor: Dr. Elise Baker, Dr. Natalie Munro, and Dr. Rosemary Hodges

Supervisor contact details: elise.baker@sydney.edu.au

Is there a specific project available: Yes

Do you have a broad research topic for students to consider

Project title: An investigation into late talkers’ talkativeness during a structured speech assessment vs. a spontaneous sample

Is this a project for students starting in 2017? Yes

Research question: Are late talkers more talkative during a structured speech assessment compared to during a spontaneous sample collected via unstructured play activity?

Research topic:

This project is appropriate for students in the following discipline(s):

- Bachelor of Applied Science (Speech Pathology) Honours

Research group type: Discipline based

University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/elise.baker.php

Primary research interests: Intervention for speech sound disorders, innovative service delivery solutions for children with speech sound disorder, speech pathologists’ methods of practice with children who have speech sound disorders, and, the conduct of evidence-based practice. Elise is also interested in the interaction between the phonological and lexical systems in word learning.

Name(s) of research team: The research team includes members of the Kids Talk Lab-- Dr. Elise Baker, Dr. Natalie Munro, and Dr. Rosemary Hodges.

Aims and background

The aim of this study is to determine whether late talkers are more talkative during a structured speech assessment compared to during a spontaneous sample collected via unstructured play activity.

Proposed method of data collection: Examine data collected from a sample of toddlers, including a group of typically developing toddlers, and toddlers late to talk considering volubility, responsiveness, language, and speech production skills.

Ethics approval needed? Yes

Ethics applied for? Yes

Type of study: Quantitative

Resources needed (all available): Students will need to have good phonetic transcription skills.

Additional information:
Supervisor: Dr Rhonda Orr
Supervisor contact details: rhonda.orr@sydney.edu.au

Is there a specific project available: Yes
Do you have a broad research topic for students to consider
Concussion in junior and senior sports
Sport-related injury
Application of GPS technology in sports

Project title: Match Performance, Workload and Injury Profiles in Competitive Women's Football. (This project is available for one or more students).

Is this a project for students starting in 2017? Yes

Research question: What are the characteristics and prevalence of injuries in Australian female football players?
Are there differences in injury characteristics between adolescent and senior Australian female football players?
What are the predictors of prevalent injuries in Australian female football players?
What are the movement demands during female football match-play

Research topic: Concussion in junior and senior sports
Sport-related injury
Application of GPS technology in sports

This project is appropriate for students in the following discipline(s):
- Bachelor of Health Sciences (Honours), Bachelor of Applied Science (Exercise and Sport Science) Honours, Bachelor of Applied Science (Exercise Physiology) Honours

Research group type: Discipline based


Primary research interests: Injury and concussion in sport
Measurement of match performance and training workloads using GPS
Drugs in sport

Name (s) of research team: Rhonda Orr

Aims and background
Australian female football participation is at a crest, ranking 5th in the world for youth and total registered players. More females registered to play football than netball in 2015. Increasing player numbers have been accompanied by escalating injuries. Anecdotal reports of physiotherapy practices indicate the most serious football injuries (ACL rupture, concussion, ankle fractures) result in prolonged rehabilitation and lost work/school time. Scientific studies report that, compared to males, female football players sustain...
more knee injuries, have greater risk of concussion, and suffer more severe and prolonged post-concussion symptoms and cognitive deficits. Yet no research on Australian female football injuries exists.

This project aims to comprehensively investigate the nature of injuries sustained during training and matches by junior and senior women football players in the 2017 Women’s Premier League pre-season and competition phases. Specifically, the aims are to:

- implement an injury surveillance paradigm to establish an injury profile of players describing their injury characteristics;
- assess injury (and concussion) prevalence;
- compare injury characteristics/profile, incidence and severity across age groups and playing positions; and
- investigate potential relationships between player body size (anthropometry), player factors and injuries to examine associated risk factors

A second student could examine these aims:

- measure match performance and training workload
- measure match performance (activity profile) using GPS
- identify associations between load (training & match) and injury characteristics.
- identify associations between match activity profile and injury characteristics

**Proposed method of data collection:** Study design: cross sectional study over 12 months

Participants: aged 12 years and over, will be recruited from five women’s teams comprising U13s, U15s, U17s, Reserve Grade and First Grade. The total sample size of the cohort is anticipated to be 85 players.

**Measurements**

1. **Player Baseline Information** will include questions about a) demographics; b) player factors (position, football history, injury history, medical history)
2. **Anthropometry** (height, weight) will be measured during the pre-season
3. Injury during training and match-play will be recorded electronically via app or spreadsheet or hard copy form.
4. Training and match exposure (minutes duration) will be recorded per player per session and summated for each team for the season.
5. Match and training performance using global positioning systems (GPS) to provide a comprehensive analysis of on-field and training movement patterns, physiologic demands and body
loads. Outcome measures will include distance covered, running velocity (average & peak), accelerations and decelerations, impacts due to accelerations and decelerations and body loads.
Players will wear a GPS device during training sessions and for the entirety of competitive games, including during all break periods such as pre-game, quarter-time, half-time, post full-time and any associated periods on the interchange bench.
6. RPE measurement will to assess match and training workload using session RPE (sRPE)
7. Measurements of functional movement eg hamstring length, single leg hop for distance

Ethics approval needed? Yes
Ethics applied for? No
Type of study: Quantitative
Resources needed (all available):
Additional information: Desirables
1. student lives in or near the Sutherland Shire.
2. student is a player/former football player or has an understanding of football
Supervisor: Doctor Elizabeth Murray
Supervisor contact details: elizabeth.murray@sydney.edu.au
Is there a specific project available: Yes
Do you have a broad research topic for students to consider
Is this a project for students starting in 2017? Yes
Research question: 1. Can the stimuli in the GFTA-2 be used reliably to detect segmental and suprasegmental aspects in order diagnosis CAS?
2. Can the operational definitions of the 11-point CAS criteria (Iuzzini-Seigel, 2015) be used for replication without further training?
3. What is the reliability of detecting each aspect of the 11 point criteria?
Research topic:
This project is appropriate for students in the following discipline(s):
- Bachelor of Applied Science (Speech Pathology) Honours
Research group type: Discipline based
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/elizabeth.murray.php
Primary research interests: Diagnosis of Childhood Apraxia of Speech and other speech sound disorders
Treatment of Childhood Apraxia of Speech.
Genetic and neurological correlates of motor speech disorders.
Speech motor control and development in children.
Name (s) of research team: Elizabeth Murray, Jacqueline McKechnie and others
Aims and background
Childhood apraxia of speech (CAS) is considered an impairment of speech motor planning and programming. That is, a child know what they want to say but they have difficulties planning the sequence of motor movements in space and time needed to talk (American Speech-Language-Hearing Association [ASHA], 2007b; Nijland, Maassen, & Van der Meulen, 2003; Shriberg, Lohmeier, Strand, & Jakielski, 2012). The impairment then manifests as disordered articulation, difficulty sequencing sounds and syllables, inconsistent production of repeated sounds and syllables, and disruption at the suprasegmental level (i.e., dysprosody) (ASHA, 2007b).

Despite the recent advances in our theoretical understanding of CAS, it remains difficult to differentially diagnose CAS from other disorders. There is still no one validated and replicated procedure to diagnose CAS (Murray et al, 2015). At the moment, the gold standard is expert opinion of perceptual features. The Strand 11-point criteria (Shriberg, Potter and Strand (2013) is considered an important and replicated set

of features, used clinically and in research (Murray et al, 2015; Shriberg et al, 2013; Maas et al, 2012). Recently, Iuzzini-Seigel and colleagues (refs) have provided operationalized definitions of the criteria. The researchers then used the criteria to diagnose CAS in 11 school-aged participants using the GFTA-2. This study will replicate the method for a larger sample, including younger children to answer the research aims.

**Proposed method of data collection:** Participants: 44 participants with CAS will be used.

Data collection: The GFTA-2 from larger studies (2 RCTs – Murray et al, 2015 and McKechnie et al, 2016) will be used.

Data analysis: The GFTA-2 and data will be transcribed using narrow/phonetic transcription. The 11 point CAS criteria from Strand et al as operationalized by Iuzzini-Seigel et al (2015) will be used. Each child will be given a present or absent score for each criterion by 3 speech pathologists. A total score out of 11 will be determined. This will be compared to the benchmarks in Iuzzini-Seigel (2015) to determine if a child meets the criteria for CAS.

Further, the number of occurrences and opportunities for each criteria will be calculated for each child. This data will be converted to percentages. This will be used to investigate the diagnostic accuracy of (a) each criterion and (b) a subset of significant or clinically important criteria using discriminant function analysis. Reliability for each criteria and the overall score will also be determined using statistical analysis.

**Ethics approval needed?** Yes

**Ethics applied for?** Yes

**Type of study:** Quantitative

**Resources needed (all available):**

**Additional information:**
Supervisor: A/Prof Paulo Ferreira
Supervisor contact details: Paulo.ferreira@sydney.edu.au
Is there a specific project available: Yes
Do you have a broad research topic for students to consider video-game exercises for low back pain
physical activity in low back pain
e-health and use of apps for patients with back pain
genetics and lifestyle factors in twins with low back pain
efficacy of e-health interventions for patients with back pain in rural areas

Project title: A/Prof Paulo Ferreira currently has these projects available for Honours students:

VIDEOGAME trial: video-game exercises for low back pain
AUTBACK study: physical activity in Australian twins with low back pain
IMPACT study: The impact of e-health and physical activity for people with low back pain
EMPOWER study: Empowering people in rural areas to manage back pain through e-health

Is this a project for students starting in 2017? Yes
Research question: What is the impact of physical activity based interventions, e-health (specifically designed apps), and videogame technology to manage people with low back pain.

What is the role of genetics and lifestyle factors in twins with low back pain.
Research topic: video-game exercises for low back pain
physical activity in low back pain
e-health and use of apps for patients with back pain
genetics and lifestyle factors in twins with low back pain
efficacy of e-health interventions for patients with back pain in rural areas

This project is appropriate for students in the following discipline(s):
· Bachelor of Applied Science (Physiotherapy) Honours
Research group type: Research Group based
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/paulo.ferreira.php
Primary research interests: Low back pain
Physical activity
E-health
Genetics
Name(s) of research team: Arthritis and Musculoskeletal Research Group
Aims and background
A/Prof Paulo Ferreira currently has these projects available for Honours students:

**VIDEOGAME trial**: video-game exercises for low back pain
**AUTBACK study**: physical activity in Australian twins with low back pain
**IMPACT study**: The impact of e-health and physical activity for people with low back pain
**EMPOWER study**: Empowering people in rural areas to manage back pain through e-health

The aims of these projects are to investigate the efficacy of contemporary and innovative approaches to treat people with low back pain.

This research uses innovative and state of the art methods to identify effective treatments for low back pain.

**Proposed method of data collection**: Randomized controlled trials.
Twin Research Design.
**Ethics approval needed?** No
**Ethics applied for?** Yes
**Type of study**: Quantitative
**Resources needed (all available):**

**Additional information:**
Supervisor: Professor Glen Davis
Supervisor contact details: Glen.davis@sydney.edu.au
Is there a specific project available: Yes
Do you have a broad research topic for students to consider: Projects relating to: Physiological responses and energy costs of electrically-stimulated exercise (cycling, walking or rowing) in people with spinal cord injury; Comparison of electrically stimulated walking versus cycling in individuals with spinal cord injury; Energy expenditure analysis in adults with intellectual disability (with Professor Roger Stancliffe) Heart rate variability analysis for understanding neurological drive during exercise and recovery Exercise responses in paediatric populations with spinal cord injury Exercise gaming (‘exergaming’) in wheelchair users Selection of exercise mode, volume and intensity using discrete choice methodology Research in neurological populations, but open to student suggestions

Project title: Numerous possible titles implied in Question 9
Is this a project for students starting in 2017? Yes
Research question: Numerous possible research questions implied in Question 9
Research topic: Projects relating to: Physiological responses and energy costs of electrically-stimulated exercise (cycling, walking or rowing) in people with spinal cord injury; Comparison of electrically stimulated walking versus cycling in individuals with spinal cord injury; Energy expenditure analysis in adults with intellectual disability (with Professor Roger Stancliffe) Heart rate variability analysis for understanding neurological drive during exercise and recovery Exercise responses in paediatric populations with spinal cord injury Exercise gaming (‘exergaming’) in wheelchair users Selection of exercise mode, volume and intensity using discrete choice methodology Research in neurological populations, but open to student suggestions

This project is appropriate for students in the following discipline(s):
- Bachelor of Health Sciences (Honours), Bachelor of Applied Science (Exercise and Sport Science) Honours, Bachelor of Applied Science (Physiotherapy) Honours, Bachelor of Applied Science (Exercise Physiology) Honours

Research group type: Discipline based
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/glen.davis.php
Primary research interests: Exercise Physiology
Cardiovascular Physiology
Clinical Exercise Physiology
Exercise Responses for Populations with Chronic Disease and Disability
Exercise Prescription and "dose-potency" for Populations with Chronic Disease and Disability

Name(s) of research team: Professor Glen Davis
Ms Camila Oliviera
Mr Scott Michael

Aims and background

Proposed method of data collection:
Ethics approval needed? Yes
Ethics applied for? No
Type of study: Mixed methods
Resources needed (all available):
Additional information:
Supervisor: Professor Glen M Davis
Supervisor contact details: glen.davis@sydney.edu.au
Is there a specific project available: Yes
Do you have a broad research topic for students to consider: Use of Assistive and Surveillance Technologies to promote sufficient Volume and "Dose-Potency" to meet Exercise Guidelines after Chronic Disability
Project title: Use of Assistive and Surveillance Technologies to promote sufficient Volume and "Dose-Potency" to meet Exercise Guidelines after Chronic Disability
Is this a project for students starting in 2017? Yes
Research question:
Research topic: Use of Assistive and Surveillance Technologies to promote sufficient Volume and "Dose-Potency" to meet Exercise Guidelines after Chronic Disability
This project is appropriate for students in the following discipline(s):
· Bachelor of Health Sciences (Honours), Bachelor of Applied Science (Exercise and Sport Science) Honours, Bachelor of Applied Science (Physiotherapy) Honours, Bachelor of Applied Science (Exercise Physiology) Honours
Research group type: Discipline based
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/glen.davis.php
Primary research interests: Promoting Exercise through Assistive and Surveillance Technologies after Chronic Disability
Name(s) of research team: Professor Glen Davis
Aims and background

Proposed method of data collection:
Ethics approval needed? Yes
Ethics applied for? No
Type of study: Mixed methods
Resources needed (all available):
Additional information:
Supervisor: Dr Alison Harmer
Supervisor contact details: alison.harmer@sydney.edu.au
Is there a specific project available: Yes
Do you have a broad research topic for students to consider Chronic knee pain and barometric pressure
OR
Diabetes and knee pain
Project title:
Is this a project for students starting in 2017?
Research question:
Research topic: Chronic knee pain and barometric pressure
OR
Diabetes and knee pain
This project is appropriate for students in the following discipline(s):
· Bachelor of Applied Science (Physiotherapy) Honours
Research group type: Research Group based
Primary research interests: Diabetes - effects of exercise and exercise training on patient-centred measures (e.g. neuropathic pain) and objective measures (e.g. metabolic, respiratory measures) Osteoarthritis - effects of exercise/rehabilitation on patient-centred measures (e.g. knee pain) and objective measures (e.g. strength, fitness); metabolic influences in osteoarthritis and effects on patient-centred measures
Name(s) of research team:
Aims and background
Proposed method of data collection:
Ethics approval needed? Yes
Ethics applied for?
Type of study:
Resources needed (all available):
Additional information:
Supervisor: Dr Michelle Villeneuve

Supervisor contact details: michelle.villeneuve@sydney.edu.au

Is there a specific project available: Yes

Do you have a broad research topic for students to consider

Project title: Enabling Community Resilience: Disability Inclusion Disability Inclusive Disaster Preparedness (DIDP) in NSW: Enabling Local Community Resilience Through Collaboration

Is this a project for students starting in 2017? Yes

Research question: The research questions are:
(a) What are the challenges/opportunities of implementing a disability inclusive DRR approach in NSW local communities?
(b) What are the main factors controlling affecting or influencing the resilience to natural disasters of people with disabilities in NSW local communities?
(b) How can NSW organisations, working with people with disabilities, be enabled to support them before, during and after disasters?
(c) How can people with disabilities – particularly those who are socially isolated - be effectively included in DRR policy and practice?

Research topic:

This project is appropriate for students in the following discipline(s):
· Bachelor of Applied Science (Occupational Therapy) Honours

Research group type: Research Group based

University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/michelle.villeneuve.php

Primary research interests: disability inclusion
development
community development
integrated working across sectors (e.g., health, education, community services)
natural hazard emergency preparedness

Name (s) of research team: Michelle Villeneuve
Gwynnyth Llewellyn
Dale Dominey-Howes
Hayley Brooks

Aims and background

Aim: The aim of this project is to build resilience to natural disasters in NSW local communities using a disability inclusive approach.

Background:
The research addresses the exclusion of people with disability from NSW disaster risk reduction (DRR)
Enabling Community Resilience: Disability Inclusion Disability Inclusive Disaster Preparedness (DIDP) in NSW: Enabling Local Community Resilience Through Collaboration

policy and practice. Recent mortality data from Hurricane Katrina and the 2011 Japan Tsunami showed that people with disabilities are disproportionately affected by disasters (Tanaka, 2013). Current emergency management approaches to people with disabilities regard them only as “particularly vulnerable individuals” and significantly under estimate their capacity to be actively involved in community disaster preparedness. Awareness is increasing - but practical tools and strategies for supporting and enabling that change within the community are required.

The Sendai Framework for Disaster Risk Reduction, issued by the United Nations in March 2015, provide disaster risk reduction guidelines for Member Countries for the next 15 years (2015-2030) and makes explicit reference to the need of including people with disabilities in preparedness strategies.

There is therefore an urgent need to develop robust methods to assess and increase the resilience of people with disabilities in specific situations of high risk for natural hazard disasters. This is required to develop appropriate national and local policies and to undertake appropriate planning and prevention activities to reduce the increased risk of morbidity and mortality for people with disabilities in the wake of a natural disaster.

Proposed method of data collection: The specific methodology will be determined in collaboration with the student and research team, given the specific focus that the student will have on the project/questions. This is because we have two options for the student to focus on: 1) working with existing recent (qualitative) data to analyse findings and support tool development; or 2) supporting data gathering and analysis using participatory methods - which could involve survey or tool design and pilot testing. This allows flexibility for the student to develop their interest and skills in the research process. Note, if new directions develop, ethics modifications may be required.

Ethics approval needed? No
Ethics applied for? Yes
Type of study: Qualitative
Resources needed (all available): n/a
Additional information: I would be happy to meet with the prospective students to discuss.
Supervisor: Associate Professor Sarah Lewis
Supervisor contact details: sarah.lewis@sydney.edu.au
Is there a specific project available: Yes
Do you have a broad research topic for students to consider What is the value of multidisciplinary care teams for enhanced patient care for breast cancer?
Project title: Radiographers as active participants in multi-disciplinary breast cancer meetings
Is this a project for students starting in 2017? Yes
Research question: What is the value of radiographers attending MDT meetings for breast cancer?
Research topic: What is the value of multidisciplinary care teams for enhanced patient care for breast cancer?
This project is appropriate for students in the following discipline(s):
· Bachelor of Applied Science (MRS) Diagnostic Radiography Honours
Research group type: Research Group based
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/sarah.lewis.php
Primary research interests: Breast Cancer Imaging
Lung Cancer Imaging
Education and Multi-disciplinary research
Name (s) of research team: Associate Professor Sarah Lewis
Amanda Punch
Aims and background
Diagnostic radiographers are not regular inclusions for MDT meetings although often radiologists cannot attend due to scheduling problems. This leave the MDT meetings without an expert in imaging to describe the results. This study explores the value of having a DR attend the meetings and present radiology results.
Proposed method of data collection: Observation
Focus Groups or Interviews
Ethics approval needed? Yes
Ethics applied for? No
Type of study: Qualitative
Resources needed (all available): Students need to be interested in breast imaging and be able to attend a MDT meeting at their clinical centre while on placement.
Additional information: A similar study was contacted with breast radiologists by Honours student Samantha Alcantara and published in the European Journal of Cancer Care in 2013.
Radiographers as active participants in multi-disciplinary breast cancer meetings
Supervisor: Associate Professor Sarah Lewis
Supervisor contact details: sarah.lewis@sydney.edu.au
Is there a specific project available: Yes
Do you have a broad research topic for students to consider: How can we maximise efficiency in breast cancer screening through better education for radiologists?
Project title: The education preferences of radiologists reporting on screening mammograms
Is this a project for students starting in 2017? Yes
Research question: What are the preferences and attitudes towards education strategies for Australian radiologists reading screening mammograms
Research topic: How can we maximise efficiency in breast cancer screening through better education for radiologists?
This project is appropriate for students in the following discipline(s):
· Bachelor of Applied Science (MRS) Diagnostic Radiography Honours
Research group type: Research Group based
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/sarah.lewis.php
Primary research interests: Breast Imaging
Obesity Imaging
Emotional Intelligence
Lung Cancer Imaging
Education Research
Name(s) of research team: Associate Professor Sarah Lewis
Professor Patrick Brennan
Aims and background
A variety of educational strategies exist however it is unknown which interventions are preferred and feasible for Australian radiologists who report on breast screening mammograms.
Proposed method of data collection: Survey research, on-line survey
Ethics approval needed? Yes
Ethics applied for? No
Type of study: Mixed methods
Resources needed (all available): Students would work within the BREAST research team.
Additional information:
Supervisor: Doctor Jamee Newland

Supervisor contact details: jamee.newland@sydney.edu.au

Is there a specific project available: Yes

Do you have a broad research topic for students to consider Developing a safe bystander intervention for disability-related harassment

Project title: Developing a safe bystander intervention for disability-related harassment

Is this a project for students starting in 2017? Yes

Research question: - What knowledge do students and staff at USYD hold towards disability?
- How do staff and students understand disability-related harassment?
- How do staff and students respond to disability-related harassment?
- How did the implementation of the bystander intervention change and impact staff and students knowledge of disability, and the way they would respond to disability-related harassment

Research topic: Developing a safe bystander intervention for disability-related harassment

This project is appropriate for students in the following discipline(s):
- Any discipline

Research group type: Research Group based

University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/jamee.newland.php

Primary research interests: - Mixed method research [qualitative focus]
- Sociology of health
- Disability
- Marginalization
- Human Rights

Name(s) of research team: Jamee Newland

Aims and background
The primary aim of this proposed work is to promote the University of Sydney as a place that is safe, respectful and inclusive of all people regardless of their abilities or disabilities. The project will achieve the study aim through an assessment of current awareness, attitudes and behaviours of staff and students regarding disability, as well as the types of disability-related harassment that people have experienced or witnessed [both on and off campus] the responses and health seeking behaviours to these instances of harassment and the organisational systems and processes required for the effective implementation of the intervention across the university. The project will be guided by evidence from the literature and an expert working group who will collaborate so that messages for a disability-related safe bystander intervention will be developed, disseminated and measured for impact.

Proposed method of data collection: The project will utilise a mixed method process and impact evaluation design (pre-and post-intervention) and include a component that translates research to practice (the intervention design). Knowledge, attitudes, and behaviours related to disability and disability-
related harassment will be of staff and students [n=500?] will be surveyed pre-intervention [including quantitative survey questions, with qualitative components, sampled through a whole of campus approach]; from this and the literature, safe disability-related bystander intervention messages will be developed, disseminated, tested and measured for impact (post-intervention).

**Ethics approval needed?** Yes

**Ethics applied for?** No

**Type of study:** Mixed methods

**Resources needed (all available):** There are a number of opportunities for a student within this larger project including:

- writing a scoping review to be published in the academic literature
- undertaking research [data collection, analysis and reporting]
- developing media products for the intervention

Or any suitable and complimentary activity to the project

**Additional information:** The project will be guided by an expert working group, comprising participation from a number of university faculties at the University of Sydney, the Australian Human Rights Commission, People with Disability Australia, NSW Council for Intellectual Disability and a number of other disability peaks and individuals with a lived experience of disability.
Supervisor: Dr Mohd Hanafi Ali
Supervisor contact details: hanafi.ali@sydney.edu.au
Is there a specific project available: Yes
Do you have a broad research topic for students to consider Comparison of Exposure Index between Medical Imaging departments for x-ray examination.
Project title: Comparison of Exposure Index between Medical Imaging departments for abdomen x-ray examination.
Is this a project for students starting in 2017? Yes
Research question:
1. What is the trend of the exposure factors used for abdominal x-ray in each centre?
2. Is there any correlation between exposure factor determine in lab study and exposure factor used in each centres?
3. Does CR can tolerate to low or high exposure factors. High exposure factors can lead to overexposing the patients and can increase patient dose. What is the optimum exposure factor for abdominal x-ray to produce good quality images?

Research topic: Comparison of Exposure Index between Medical Imaging departments for x-ray examination.
This project is appropriate for students in the following discipline(s):
· Bachelor of Applied Science (MRS) Diagnostic Radiography Honours
Research group type: Discipline based
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/hanafi.ali.php
Primary research interests: Brain activities measurement using MRI
CT dosimetry
Dementia
Exposure control and image quality
Radiation dose optimisation

Name(s) of research team: Optimisation in Radiographic exposure
Aims and background
1. To determine the difference of radiation exposure dose used in several health centres for abdominal x-ray.
2. To determine the difference of radiation exposure dose used in several centres with the lab study result.
Comparison of Exposure Index between Medical Imaging departments for abdomen x-ray examination.

3. To establish optimum radiation exposure dose for different abdominal thickness.

Proposed method of data collection: There are two stages of data collections:
In medical imaging laboratory, abdominal phantom images were produced using several X-ray exposure parameters setting. All images were studied for noise level, contrast, resolution and the Entrance Skin Dose (ESD). The best image with high quality and lowest ESD was identified and the mean exposure parameters involved become the references value. In clinical practice, several patients who undergo the abdominal X-ray using CR were observed. The mean for kVp, mAs, exposure indicator and ESD were compared between hospitals and laboratory results.

Ethics approval needed? Yes
Ethics applied for? Yes
Type of study: Quantitative

Resources needed (all available): Equipment for laboratory examination is required to make student easily understand the idea of the project.

Additional information: Data has been collected for the project.
Supervisor: Dr Roger Bourne
Supervisor contact details: roger.bourne@sydney.edu.au

Is there a specific project available: No (your name and research interest will be made available to students)

Do you have a broad research topic for students to consider Cancer imaging for diagnosis and treatment assessment.

Project title:

Is this a project for students starting in 2017? Yes

Research question:

Research topic: Cancer imaging for diagnosis and treatment assessment.

This project is appropriate for students in the following discipline(s):

· Bachelor of Health Sciences (Honours), Bachelor of Applied Science (MRS) Diagnostic Radiography Honours

Research group type: Discipline based

University Profile: http://sydney.edu.au/health_sciences/staff/roger_bourne

Primary research interests: MRI, diffusion MRI, cancer imaging, image processing

Name (s) of research team:

Aims and background

Proposed method of data collection:

Ethics approval needed? Yes

Ethics applied for? Yes

Type of study: Quantitative

Resources needed (all available):

Additional information:
**Supervisor:** Professor Roger Fulton  
**Supervisor contact details:** roger.fulton@sydney.edu.au  
**Is there a specific project available:** Yes  
**Do you have a broad research topic for students to consider:** Methods of estimating and correcting for patient head motion during PET, SPECT, CT, MRI imaging procedures. Open to suggestions for related projects from students.  
**Project title:** Assessing the Clinical Value of Motion Correction in Helical CT  
**Is this a project for students starting in 2017:** Yes  
**Research question:** Is the ability to correct helical CT scans of the human head for motion that occurs during the scan clinically useful?  
**Research topic:** Methods of estimating and correcting for patient head motion during PET, SPECT, CT, MRI imaging procedures. Open to suggestions for related projects from students.  
**This project is appropriate for students in the following discipline(s):**  
- Bachelor of Applied Science (MRS) Diagnostic Radiography Honours  
**Research group type:** Research Group based  
**Primary research interests:** Medical imaging  
Medical physics  
Preclinical imaging  
Motion correction for tomographic imaging  
Motion tracking methods  
**Name(s) of research team:** Physics and Biomodelling Team, Medical Radiation Sciences and Brain and Mind Centre  
**Aims and background**  
Our research group, together with our collaborators in Leuven Belgium, has developed an effective method of correcting for patient head motion during helical CT scans. The method requires access to the raw CT data. We have shown that the method can accurately estimate the rigid motion at each projection angle, using the only the acquired data, and then utilize the motion information to produce a reconstructed image free of motion artifact.  
We have collected over 60 sample datasets from the Childrens Hospital at Westmead and Westmead Hospital with ethical approval. Our aim is now to process these data sets, and assess, in conjunction with the radiology staff, the clinical value of applying motion correction to these data sets.  
**Proposed method of data collection:** The student will apply the existing motion correction software to the collected clinical datasets, and compare the resulting motion-corrected images with the normally-reconstructed images. This comparison will involve visual comparisons and the calculation of image
similarity metrics using computer algorithms. The student will also coordinate meetings of the project teams to review the results, collate data for publication, and contribute to the preparation of publications.

Ethics approval needed? No
Ethics applied for? Yes

Type of study: Mixed methods

Resources needed (all available): Student will need a desk and a computer.

Additional information: Students interested in knowing more about the project can view publications on motion correction methods developed by our team, which are now just beginning to be tested on clinical data. This does not include work recently submitted for publication where we show that hard motion can be very accurately estimated from clinical CT data sets using a data-driven method, without the need for a motion tracking system:


Supervisor: Dr Josephine Gwynn

Supervisor contact details: josephine.gwynn@sydney.edu.au

Is there a specific project available: Yes

Do you have a broad research topic for students to consider

Project title: Aboriginal children's views on the barriers to their participation in physical activity in their communities - a photovoice project.

Is this a project for students starting in 2017? Yes

Research question: What barriers do Aboriginal children see to their participation in physical activities in their communities.

Research topic:
This project is appropriate for students in the following discipline(s):

- Bachelor of Applied Science (Occupational Therapy) Honours

Research group type: Discipline based

University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/josephine.gwynn.php

Primary research interests: Aboriginal and Torres Strait Islander Health

Name(s) of research team: Dr Josephine Gwynn

Ms Nicole Turner - Indigenous Community Nutritionist

Ms Janice Smith - Indigenous Health Worker

Professor Ron Plotnikoff- University of Newcastle

Aims and background

Low levels of physical activity and increased sedentary time during childhood is associated with the development of chronic diseases and overweight and obesity in later years. In Australia, more than half of Aboriginal and Torres Strait Islander peoples aged 15 years and above are overweight or obese. Improving levels of physical activity, particularly in this vulnerable group has the potential to reduce the overall burden of disease and increase overall health outcomes for this group. While the levels of physical activity in non Indigenous children has been extensively studied, data on the physical activity of young Aboriginal and Torres Strait Islander people is scarce; with only two Australian studies conducted.

The aims of the study are:

a) to gauge community response to previous findings; 
b) seek their opinion on follow up studies targeting physical activity; and 
c) to identify the barriers and facilitators of physical activity in rural Aboriginal and Torres Strait Islander young people.
Proposed method of data collection: Although this project has finalised the data collection there are many components of the research still to be completed. The student will:

1. Liaise with ethics committees - including the Aboriginal Health and Medical Research Council ethics committee.
2. Liaise with key Aboriginal community members and the participants (n= 25) and families.
3. Become familiar with NVIVO (used in qualitative data analysis) and undertake thematic analysis to build on that already completed.
4. Participate in community focus groups with the research team.
5. Draft a publication.
6. Draft community posters.
7. Feedback to the community.

Ethics approval needed? No
Ethics applied for? Yes

Type of study: Qualitative

Resources needed (all available): Train in the use of NVIVO

Additional information: Student may have to travel with the research team to the participating communities once.
Supervisor: Dr Josephine Gwynn
Supervisor contact details: josephine.gwynn@sydney.edu.au

Is there a specific project available: Yes
Do you have a broad research topic for students to consider

Project title: The determinants of readiness to change nutrition and physical activity behaviors among rural disadvantaged parents.

Is this a project for students starting in 2017? Yes

Research question: What are the determinants of readiness to change nutrition and physical activity behaviors among rural disadvantaged parents

Research topic:
This project is appropriate for students in the following discipline(s):
  · Bachelor of Health Sciences (Honours), Bachelor of Applied Science (Exercise and Sport Science) Honours, Bachelor of Applied Science (Occupational Therapy) Honours

Research group type: Discipline based

University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/josephine.gwynn.php

Primary research interests: Rural Health
Aboriginal and Torres Strait Islander health

Name(s) of research team: Dr Josephine Gwynn
  Professor John Wiggers - University of Newcastle
  Mr Stephen Blunden - CEO Casino Aboriginal Medical Service
  Ms Nicole Turner - Indigenous Community Nutritionist

Aims and background

Parents exert a strong influence on their children’s behavior. Little is known of the determinants driving rural disadvantaged parents (and their families) nutrition and physical activity behaviors. We wish to identify these determinants with a view to informing the development of more targeted ‘healthy lifestyle’ messages for parents of rural children.

Data on determinants and ‘readiness to change’ has been collected over 2 time points using self report surveys, with a total of 884 parents in the first survey (2007/8) and 513 parents in the 2nd survey (2011/12).

Aims are:
1. Identify Determinants.
2. Describe the Impact of a community healthy lifestyle program (conducted 2009-2011) on parent determinants.
3. Compare parental reported behaviour’s with that of their children (also surveyed and data published).
The determinants of readiness to change nutrition and physical activity behaviors among rural disadvantaged parents.

Proposed method of data collection: Two cross-sectional self-report surveys are available for analysis and reporting - sample size and information as above in section 13.

This parent survey was conducted as part of an NHMRC research project which also surveyed their children (Aboriginal and non-Indigenous).

Qualitative analysis - statistical methods yet to be finalised in consultation with FHS statistician, and will include:
1. identifying proportions responding to survey questions.
2. administering appropriate tests for difference (p value) between the 2 parent surveys.
3. administering appropriate tests for difference (p value) between the surveys of parent and their child over time.

Publication will result and results distributed to participating communities.

Ethics approval needed? No
Ethics applied for? Yes
Type of study: Qualitative
Resources needed (all available):
Additional information: This data was collected as part of a long running project (the Many Rivers Diabetes Prevention Project) conducted in partnership with 2 Aboriginal communities and included non-Aboriginal children. Very small numbers of Aboriginal parents agreed to participate and this project only includes the non-Indigenous cohort.
Supervisor: Professor Lindy Clemson
Supervisor contact details: lindy.clemson@sydney.edu.au

Is there a specific project available: Yes

Do you have a broad research topic for students to consider: Understanding how habits are formed or changed is critical to working with people to change everyday behaviours that will improve health. This project will utilise either a survey that measures self-reported perceptions of habit strength for an identified behavior (Self-Report Habit Index; Verplanken & Orbell, 2003) or qualitative interviews to examine perceptions of habit strength and change. The context will be older people implementing the LiFE program which is a functional exercise program whereby the person embeds strength and balance training throughout their daily life activities. This approach using habit theory has applicability to occupational therapists or physiotherapists who work with clients to change everyday habits and routines.

Project title:

Is this a project for students starting in 2017? Yes

Research question:

Research topic: Understanding how habits are formed or changed is critical to working with people to change everyday behaviours that will improve health. This project will utilise either a survey that measures self-reported perceptions of habit strength for an identified behavior (Self-Report Habit Index; Verplanken & Orbell, 2003) or qualitative interviews to examine perceptions of habit strength and change. The context will be older people implementing the LiFE program which is a functional exercise program whereby the person embeds strength and balance training throughout their daily life activities. This approach using habit theory has applicability to occupational therapists or physiotherapists who work with clients to change everyday habits and routines.

This project is appropriate for students in the following discipline(s):

- Bachelor of Applied Science (Occupational Therapy) Honours, Bachelor of Applied Science (Physiotherapy) Honours

Research group type: Research Group based

University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/lindy.clemson.php

Primary research interests: Falls prevention
Dementia
community-based restorative/preventive programs

Name (s) of research team:

Aims and background

Proposed method of data collection:

Ethics approval needed? Yes

Ethics applied for? No
Type of study: Mixed methods

Resources needed (all available): not applicable

Additional information: This project arises from previous and current work in developing the LiFE program
Supervisor: Dr Amir Taba and A/Professor Sarah Lewis
Supervisor contact details: amir.tavakoli@sydney.edu.au

Is there a specific project available: Yes

Do you have a broad research topic for students to consider Social learning and social media use in radiology

Project title: Undertaking a systematic review of social learning in breast radiology

Is this a project for students starting in 2017? Yes

Research question: How is social media used to promote shared learning in radiology. What is the value, direction and influence of key players, key information and evidence.

Research topic: Social learning and social media use in radiology

This project is appropriate for students in the following discipline(s):

· Bachelor of Applied Science (MRS) Diagnostic Radiography Honours

Research group type: Research Group based

University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/sarah.lewis.php

Primary research interests: Social networks and the impact on learning

Social media and the impact on learning

Blending ICT use and building workforce knowledge

Name(s) of research team: Dr Amir Taba

A/Professor Sarah Lewis

Professor Patrick Brennan

Aims and background

To undertake a systematic review of social learning in radiology

Proposed method of data collection: Systematic review

Ethics approval needed? No

Ethics applied for? N/A

Type of study: Mixed methods

Resources needed (all available): None

Additional information:
Supervisor: Doctor Mohd Hanafi Ali
Supervisor contact details: hanafi.ali@sydney.edu.au
Is there a specific project available: Yes
Do you have a broad research topic for students to consider: Image quality optimisation by comparing exposure index
Project title: Evaluation of the Current Abdominal Computed Radiography Exposure Parameters Used in Selected Hospitals
Is this a project for students starting in 2017? Yes
Research question: 1. What is the trend of the exposure factors used for abdominal x-ray in each centre? Is there any correlation between exposure factor determine in lab study and exposure factor used in each centres?
2. Computered Radiography can tolerate to low or high exposure factors. High exposure factors can lead to overexposing the patients and can increase patient dose. What is the optimum exposure factor for abdominal x-ray to produce good quality images?

Research topic: Image quality optimisation by comparing exposure index
This project is appropriate for students in the following discipline(s):
    · Bachelor of Applied Science (MRS) Diagnostic Radiography Honours
Research group type: Discipline based
University Profile: http://sydney.edu.au/health-sciences/about/people/profiles/hanafi.ali.php
Primary research interests: Medical Imaging
Image recognition
Image quality and Radiation Optimisation
Computed Tomography
Magnetic Resonance Imaging
Memory and cognitive
Dementia
Name (s) of research team: none, may involve

1. Mr John Robinson and his team
2. Mr Mohd Zamri Mohd Zin, Malaysia
2. Associate Professor Mark McEntee
Aims and background
Computed Radiography (CR) system has ability to reduce patient radiation dose compared to the conventional screen film system. However, if it is not properly handled, it may result in higher radiation
dose to the patient. The objective of this study is to compare the exposure parameters, image quality and radiation dose for abdominal CR in selected hospitals with the optimum quality image produced using standard abdominal phantom.

To determine the difference of radiation exposure dose used in selected centres for abdominal x-ray.

To determine the difference of radiation exposure dose used in several centres with the lab study result.

To establish optimum radiation exposure dose for different abdominal thickness.

**Proposed method of data collection:** In medical imaging laboratory, abdominal phantom images were produced using several X-ray exposure parameters setting. All images were studied for noise level, contrast, resolution and the Entrance Skin Dose (ESD). The best image with high quality and lowest ESD was identified and the mean exposure parameters involved become the references value. In clinical practice, several patients who undergo the abdominal X-ray using CR were observed. The mean for kVp, mAs, exposure indicator and ESD were compared between hospitals and laboratory results.

**Ethics approval needed?** No

**Ethics applied for?** Yes

**Type of study:** Quantitative

**Resources needed (all available):** Abdominal phantom for laboratory radiation dose measurements.

**Additional information:** Most of the data were collected in Malaysian hospitals.
Supervisor: Dr Kim Bulkeley
Supervisor contact details: kim.bulkeley@sydney.edu.au

Is there a specific project available: Yes

Do you have a broad research topic for students to consider: Working with a community partner to explore the participation of children with additional needs in a soccer program from a parent perspective and from the service provider perspective. I would be open to having two students working with me on this project, taking different perspectives on the inclusion and participation of children in this program.

Project title:

Is this a project for students starting in 2017?

Research question:

Research topic: Working with a community partner to explore the participation of children with additional needs in a soccer program from a parent perspective and from the service provider perspective. I would be open to having two students working with me on this project, taking different perspectives on the inclusion and participation of children in this program.

This project is appropriate for students in the following discipline(s):

- Bachelor of Applied Science (Occupational Therapy) Honours

Research group type: Research Group based


Primary research interests: Participation of children with additional needs; rural and remote service delivery; Indigenous allied health services

Name (s) of research team:

Aims and background

Proposed method of data collection:

Ethics approval needed? Yes

Ethics applied for? No

Type of study:

Resources needed (all available): Transport to visit sites across the Sydney metropolitan area - car or public transport.

Additional information: I am open to working up the design of the project with the students with a broad view of participation and inclusion.
**Supervisor:** Doctor Peter Kench

**Is there a specific project available?** Yes

**Is there a broad research topic/s for students to consider:**

**Project title:** Diagnostic reference levels for plain radiography

**Is this an existing project?** No

**Research question:** What are the national diagnostic reference level (DRL) for different plain x-ray procedures. What are the contributing factors for high or low facility reference levels (FRL)

**This project is appropriate for students in the following degree(s):**
- Bachelor of Applied Science (MRS) Diagnostic Radiography Honours

**Research group type:** Research Group based


**Primary research interests:**
- Dose reference levels for Radiography and Nuclear Medicine

**Chief investigator:** Dr Peter Kench

**Research team:** Assoc. Prof. Mark McEntee, Dr Warren Reed, Dr Elaine Ryan and Prof. Patrick Brennan

**Aims and background**

DRLs provide a national standard to which facility reference levels FRLs can be compared. Facilities can then determine if the radiation dose routinely administered is within an acceptable range. Those facilities with a high FRL are encouraged to review their equipment and techniques to determine if these can be optimised so that the administered radiation dose to the patient is reduced.

**Proposed method of data collection:** Routine plain x-ray protocols and equipment will be recorded for each facility. The radiation dose for a minimum or 10 procedures will be recorded for each facility. A sample of facilities will be selected to be representative of the population, Australian radiography practices, so that a national DRL may be established.

**Ethics approval needed?** Yes

**Ethics applied for?** No

**Type of study:** Quantitative

**Resources needed (all available):**

**Additional information:** The development of DRL for medical imaging is a sub speciality of the Medical Imaging, Optimisation & Perception Group (MIOPeG) with the discipline of Medical Radiation Sciences. Associate Professor Mark McEntee and Professor Patrick Brennan have published extensively within this field over many years. We have three PhD students completing DRL investigations. Staff and students are collaborating with scientists from the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) on DRL projects.

**Supervisor contact details:** [peter.kench@sydney.edu.au](mailto:peter.kench@sydney.edu.au)