HOPE-Selwyn Scholarships 2016

What is the experience of older adults participating in their urban community?

Jo Conaglen – AUT University

This is a phenomenological study that explores the experience of older adults going about everyday life within their urban neighbourhood. Population ageing and urbanisation are converging international trends, evident in New Zealand. City living poses particular challenges for older peoples' ability to continue participating outside their home and its importance is strongly associated not only with health benefits to older people but to the community in which they live. Many older adults spend increasing amounts of time immersed in neighbourhoods and continued participation in everyday life within their neighbourhood makes it an important physical and social place for ageing. However, the influence of environment on participation remains under-explored.

Renewed interest in creating liveable cities, triggered in large by the recent World Health Organisation (WHO) strategic direction on Age-Friendly Cities, is influencing New Zealand's city interests in being age-friendly. New Zealand cities are increasingly looking to explore how they might respond to the environmental needs of older residents within their urban neighbourhoods.

This study intends capturing the voices of those in advanced years (85+) as they experience their neighbourhood so that we may gain insights to better inform development/modification of city structures and services eg transportation, housing and urban development, to support opportunities for health and participation of older people.

The physiological effects of keratin protein supplementation in endurance athletes

Yanita McLeay – Massey University

Oxidative stress occurs when the body's antioxidant system is unable to remove reactive oxygen species (ROS) at an appropriate rate. Elevated levels of ROS, and associated oxidative stress, is a primary cause of aging and age-related diseases including Alzheimer's disease, age-related macular degeneration, muscle wasting, heart disease and cancer. It may therefore be suggested that increasing antioxidant status throughout life and in the aging population may help prevent these ROS associated diseases. The primary aim of this doctorate is to determine the effect of a novel proprietary keratin supplement antioxidant status; using casein-based protein as a control.

This is being tested in male cyclists in a blinded, cross-over, and randomized study design protocol.

Using exercise as a model for oxidative stress, both with and without keratin supplementation, blood and tissue antioxidant status, oxidative stress levels and associated impact on physical work capacity are being tested prior to and following an acute and chronic intake of the each supplement.

Results from this study will have significant applications for enhancement of the health of the aging population and will contribute valuable information to the NZ health system for dealing with age-related diseases. Furthermore, this research will set the scene for future researchers to use these preliminary results in the design of projects focused on improving health in the aging population.

HOPE-Selwyn Summer Students 2016

Predictors of repeated self-harm in older New Zealanders

Gisele Foster – Auckland University

Late-life suicide is a growing public health concern in New Zealand and worldwide. Media attention and suicide prevention have primarily focused on young adults, and consequently, the older population have been overlooked.

The chief coroner suicide statistics revealed that older males aged 85 years and over had the highest suicide rates compared to all other age groups for 2013 and 2014. Due to an aging population, the absolute numbers of late-life suicide are expected to rise. Suicide attempt is considered as the strongest predictor for completed suicide. However, research into identifying older people at risk of suicide attempts is lacking, especially in NZ.

This study has provided an opportunity to understand the predictive factors that may assist in the development of clinical services and suicide prevention strategies directed at a high risk group.

Data was collected on older people who presented with self-harm to the emergency departments in seven secondary/tertiary hospitals in NZ.

Results revealed that older people under the mental health service at the time of self-harm had a higher risk of a repeat self-harm in 12 months.

Older people who presented with a positive blood alcohol at the time of self-harm were also found to be at an increased risk. Identification of individuals presenting with these factors may improve the clinical management of those at risk.

Retirement Villages – Survey Tools and Development

Brittany Williams – Auckland University

Residents of Retirement Villages (RVs) are a large, rapidly growing, under-researched sector of New Zealand. While it is acknowledged that the older population are a vulnerable facet of society, the lack of research into this setting means that it is currently unknown if the needs of these residents are being met.

Early work from the Freemasons' Department of Geriatric Medicine (FDGM) has indicated that retirement village residents have a level of disability and medical need that is higher than their counterparts living in private dwellings which has created the basis for this study.

The FDGM is about to embark on a four-year study to describe and compare medical and functional needs of older congregate housing residents to help rectify the gap in current research. The overall aim of the current project was to develop survey instruments and survey methods to explore the healthcare needs, healthcare use, functional abilities, social interactions and decision making paradigms of retirement village residents.

As a part of this the effectiveness and feasibility of the survey tools were also assessed in order to inform the future study, especially regarding forms, systems and databases needed to control the main study and to track data and participants. The information gained through this pilot study will inform the definitive study into this cohort and will provide information on the effectiveness of current research methods.

Another chance to visit RANNOCH

Twilight Soiree set for 1 May

Last year's Twilight Soiree at RANNOCH was a huge success with some people disappointed that they were unable to attend so we are giving everyone another opportunity on Sunday May 1.

RANNOCH is the home of art collector and philanthropist Sir James Wallace at 77 Almorah Rd Epsom. This is a rare opportunity to visit this home and admire some of the wonderful paintings in Sir James private collection.

This year a Trio will present Music from the French Romantic Era. The performers are Raewyn Winter on Flute, Sherry Grant Piano and James Donaldson Cello.

Last year a delightful supper was provided by the Friends of the HOPE Foundation and this year it will be delectable as usual.

Cost per person is $80. Use the information below to register and we will send you further information on the event.

Violinist Dr John Thomson and pianist Mikhail Tablis performing at RANNOCH last year

Book Your Seats Here for this Year's Twilight Soiree

This tear off slip to be returned to:

Rex Paddy, Executive Officer of The HOPE Foundation, PO Box 32082 Devonport Auckland 0744, Ph (09)445 2453

No of people attending: _____

I enclose my cheque for $ _____ made out to the HOPE Foundation

For Direct Deposit using your online banking facility our account no. is 060201 0030580 00
If making a Direct Deposit please advise Rex Paddy by Email: rpaddy@ihug.co.nz

First name: ..... Surname .....

Email:.....Phone: .....

Postal .....

No tickets will be issued but acknowledgement of payment will be made by email or telephone

March/April 2016

The HOPE Foundation for Research on Ageing

Preparing New Zealand for an Ageing Future

Dr Maree Todd,
Clinical Director,
Older People's Health,
Auckland District Health Board.
Chair of the Foundation

It is not often we get good news about dementia. Several positive items have been reported this year. Results from the Framingham a study[1] – a long running population based research project, show a 20% decrease in the incidence of dementia per decade over the last 40 years. In real terms this means there has been a reduction from 3.6 to 2.0 people per 100 over the age of 60 who develop dementia. Several other studies have shown similar trends but it has been hard to get good supportive evidence because of the difficulty of doing these projects over decades.

The age of diagnosis also went up from 80-85. Why this change has occurred is not so obvious. It seems to be related to better education, a better lifestyle and plausibly reduced risk factors for vascular disease such as heart attacks and stroke although this does not explain all the change. It is good news for individuals as the risk of dementia may be going down and occurs later. However because of the total number of older people is going up (this is good news – think of the alternative!) there will be more people overall living with dementia.This will require us all to think creatively about how we develop supportive age and dementia friendly communities.

Dementia is strongly related to a history of stroke and in the Auckland District Health Board[2] population the numbers of people having strokes has been going down quite significantly.

There is further good news in that many of the risk factors for both vascular dementia and Alzheimer's disease can be modified and so we need to have strong focus on prevention. In general what is good for your heart, is also good for your brain.

The United Kingdom has been a leader in dementia care and has just published the Prime Minister's Challenge on Dementia 2020[3]. This is good news for New Zealand as we can use this document to help bolster our own plans. The focus areas are on risk reduction ,starting with health checks from the age of 40, health and care of those with dementia, awareness and social action and research.

People living with dementia tell us that they need better support after the diagnosis, they want to live at home for longer and they need the opportunity to plan ahead at the right time by setting up Enduring Powers of Attorney and doing advanced care planning. Do your loved ones know your wishes if you were unable to decide for yourself?

So what can you do?

- Ensure you and your family stay physically active.
- Adopt a healthy diet and maintain a normal weight
- Stay mentally and socially active
- Education is critical: keep learning new things (use it or lose it!)
- Keep socially engaged – especially purposeful activities for and with others.
- Look after your heart and your brain, monitor blood pressure and cholesterol, do not smoke, do not drink excessive alcohol.
- Get checked for diabetes
- Mind your mood – seek help for depression.
- Get a good night's sleep.
- Set up an Enduring Power of Attorney
- Talk about advance care wishes with your family at your next family dinner.

It is never too late to start doing these things but it is critically important for those between the ages of 40 and 70.

You can help the HOPE Foundation by sharing this information, helping us raise funds to support researchers, volunteering for the Friends Committee – one step to help keep your brain healthy.

1 N Engl J Med 2016;374:523-32. DOI: 10.1056/NEJMoa1504327
2 Local data
3 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/505787/PM_Dementia_Acc.pdf

Karen Andersen Yates,
Chair, Friends of the Foundation

The committee has planned some wonderful fundraising events for the coming year.

Sunday the 1st of May, another concert will be held at Rannoch, the home of Sir James Wallace. We are grateful to Sir James for his generosity to the Foundation, in granting us the use of his interesting and wonderful home. We will be entertained by New Zealand musicians, James Donaldson, cellist, Sherry Grant on piano and Raewyn Winter on flute, playing music from the French Romantic era. Later in the year, the Dolphin theatre will be the venue for yet another fundraising play.

To those who have supported these events in the past, we thank you. They have been most successful and raised funds to support students in their studies. Please continue to attend or give a donation. Do inform your friends and encourage them to come. These events are for all who are interested.

I would also encourage you to maintain your membership as a Friend of the HOPE Foundation. Just fill in the form provided in this newsletter and post it or contact our Executive Officer Rex Paddy. All the details are provided.

To all who read this newsletter we look forward to seeing you at some of these events this year.

Chair: Dr Maree Todd,
PO Box 32082, Devonport, Auckland 0744
Charities Commission No. CC24328
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HOPE-Selwyn Scholarships 2016

The HOPE Foundation

SCHOLARS AND SUMMER STUDENTS CHOSEN FOR 2016

The cornerstone funding from the Selwyn Foundation plus additional grants from Family Trusts have enabled us to extend our grants to a record number of nine scholarships and two summer studentships.

Effects of fish oil supplementation on cognitive performance in older adults

Alexia Mengelberg – Massey University

Nutritional research has shown that older adults are not eating enough fish and seafood to reach the recommended daily allowance of docosahexaenoic acid (DHA), and yet epidemiological research has shown positive associations between fish consumption and both higher scores on cognitive tests and a slower rate in cognitive decline. DHA is an omega-3, poly-unsaturated fatty acid found in high amounts in oily fish such as salmon, sardines and mackerel. DHA is commonly referred to as 'essential fatty acid' which reflects the fact that the human body cannot synthesise the precursors and therefore it must be consumed through food or taken as a supplement. The extent to which environmental and genetic factors affect the progression from healthy age-related cognitive functioning to dementia remains unclear.

Of particular interest is the APOE gene which is involved in the transport of fats and cholesterol within the brain. Research has shown that APOE4 allele carriers have an increased likelihood of developing Alzheimer's disease and also of gaining a cognitive improvement from taking fish oil supplementation.

This study aims to conduct a randomised, double-blind, placebo-controlled trial to investigate the effects of a high DHA fish oil supplement on cognitive performance in older adults with Mild Cognitive Impairment (MCI), as well as to investigate the modulating effect of the APOE4 allele on changes in cognitive performance.

Hip Assessment and Revision Prediction Using Acoustic Emission Monitoring

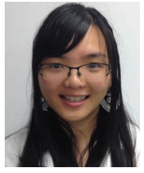
Anthony Fitzpatrick – Canterbury University

Osteoarthritis and other degenerative joint diseases can cause pain, a loss of mobility and significantly affect the quality of life of people suffering from these conditions. Joint replacement surgeries, such as Total hip replacements (THR), are one of the main treatments available to patients with advanced degenerative joint disease.

Total hip replacement is becoming increasingly more common in New Zealand, and around the world, as a result of an aging population. Research into inexpensive and non-invasive diagnostic techniques to determine the condition of joint replacement implants is currently of significant importance in the field of orthopaedics.

As a result, a growing interest in utilising Acoustic Emission (AE) monitoring for this purpose has developed due to promising results from studies to date. AE monitoring is essentially the passive (listening) side of a traditional ultrasound, recording vibrations on the skin surface which are produced by an implant during dynamic patient motion.

The aim of the current project is to develop a robust AE categorisation protocol which can be applied to the AE data to provide reliable correlations between the AE characteristics and clinical diagnoses of THR patients. Ultimately this would lead to a clinical diagnosis being made from AEs without the need for imaging techniques such as X-ray, CT, or MRI. As such, the new technique allows for testing of patients during the full dynamic range of motion, rather than a static image and does not subject the patient to any radiation.



Gene expression profiling in the human subthalamic nucleus in Parkinson's disease

Jane Wu - Auckland University

Parkinson's disease (PD) is a progressive, neurodegenerative disorder estimated to affect 1-2% in the population over the age of 65. It is one of the most common age-related neurodegenerative disorders in New Zealand. Over the past decade, deep brain stimulation therapy of the subthalamic nucleus (STN) has been successful in alleviating symptoms in advanced PD patients. However, the cellular mechanisms and neuro-scientific basis of the surgical procedure are not fully understood. The STN is considered as the "power-house" of the motor circuitry, playing an extremely important role in PD progression. Abnormal neuronal signalling within this nucleus has been previously demonstrated in many animal models to be related to PD symptoms such as bradykinesia (slowness of movement), rigidity and resting tremor.

The aim this year is to fully analyse the expression of critical genes we have identified that were encoded in the resulting bioinformatics files. These files were created using specialised software in a high performance computing platform. These critical genes were shown to have significant differential expression within the STN between control and PD patients and will be taken for further validation using Nanostring technologies. These gene changes reflect important pathological changes within the STN and could improve understanding of deep brain stimulation and other therapies in future treatments of Parkinson's disease.

An investigation into the legitimacy of residential aged care providers

Cobus Kilian - Waikato University

This research focuses on the perception(s) of strategic decision-makers in social purpose businesses about how legitimacy is created and maintained in their businesses. It is specifically looking at community-based residential aged-care providers in the Waikato region. It is focusing on three specific aspects of legitimacy. Firstly, the factors the strategic decision-makers identify as influencing their legitimacy; secondly, the sources that makes assessments of these organisations' legitimacy and thirdly, motivations behind these legitimacy actions (for instance, moral or pragmatic reasons). Organisational legitimacy relates to the extent the organisation being assessed reflects the values or norms of the community it is a part of. Simply put, if an aged care facility is providing its services in a way that aligns with the values and norms held by that community, then the organisation is likely to be seen by community as legitimate, and will have a mandate to operate

Once completed, this study will be an original contribution to management research in the aged care sector. The study will provide clarity to community-based residential aged care providers, researchers and policy-makers on how the legitimacy of these organisations is constructed. I will highlight systemic factors that detract from improving the quality of life of frail elderly New Zealanders, and suggest improvements to aged care that enhances the dignity and quality of care of the frail elderly.

The role of the cystine/glutamate antiporter in the eye: a target for delaying age related eye diseases?

Renita Martis – Auckland University

Age-related eye disease such as cataract, glaucoma and age-related macular degeneration are responsible for more than 70% of blindness in New Zealanders over the age of 50 years and are associated with increased levels of oxidative stress. The tissues of the eye are constantly exposed to high levels of oxidative stress due to ultraviolet radiation from sunlight and are therefore particularly susceptible to oxidative damage. The use of antioxidants to reduce oxidative stress has been promoted as therapies to prevent age related eye diseases however; studies have shown inconsistent results due to a lack of understanding on the molecular pathways involved in minimising oxidative stress in the tissues of the eye.

To date, no one has examined the roles of cystine/glutamate antiporter (CGAP) in the eye and hence for my PhD project I will investigate the roles of CGAP in the eye and determine whether it represents a pathway that could be targeted to minimise oxidative stress. Collectively, I believe that the findings from my PhD project will lead to new strategies for enhancing antioxidant levels and restoring redox balance in the eye thus delaying the onset of age related eye diseases for which currently no preventative treatments exist.

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☐ Yes I would like to become a Friend of the HOPE Foundation and donate $25 per year as an individual or $40 per family per year.

I want to help fund Research into Ageing and have enclosed my donation of: .....

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I enclose my cheque made out to the HOPE Foundation

Mail cheque to: The HOPE Foundation PO Box 32082 Devonport Auckland 0744.

If you wish to make a donation by Direct Deposit using your online banking facility our bank account number is:
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Please include your name and phone number in the detail which appears on our statement and email your address details to rpaddy@ihug.co.nz so that we can issue a receipt.

Charities Commission No. CC24328. All donations over $5 are tax deductible and receipts will be issued.
In accordance with the Privacy Act your personal information will only be used for the purposes of the HOPE Foundation for Research on Ageing.

Drama Therapy for Older People with Dementia: A Pilot Study

Sophie Buchanan – Massey University

Group drama therapy is a promising intervention for people with dementia in rest homes. Drama therapy enables participants to express themselves, explore the difficulties they encounter in their daily lives and discover new ways of coping, with the ultimate goal of improving their wellbeing.

It also brings rest home residents together in an enjoyable activity, which may help to strengthen their relationships. However, despite its promise and widespread use, very little research has been conducted on the benefits of drama therapy for dementia. Indeed, only two previous studies have investigated this topic, both of which were restricted by a number of methodological limitations.

The present study aims to use more rigorous methodology to explore whether group drama therapy: reduces symptoms of depression and anxiety, increases socialisation, improves psychological wellbeing, and is enjoyed by rest home residents with dementia. Residents will receive 10 weeks of drama therapy. Their results on a number of measures will be compared with a waiting-list control group and a conversation control group throughout the study, and at a 4-week follow-up period. If drama therapy is found to be beneficial and enjoyable for people with dementia, then it could be recommended as a routine part of rest home care.

A Game for Physiotherapeutic rehabilitation for Stroke Survivors

Scott Brebner – Victoria University

Stroke is one of the most common ailments affecting older adults in Western societies. It can result in a loss or weakness of mental and motor functions, severely impacting the individual's quality of life.

With proper rehabilitation it is possible to recover from stroke and regain some of the lost capabilities. However, rehabilitation is often very taxing on the individual, both physically and mentally, and many people struggle with maintaining motivation to continue.

Those who lose the motivation inadvertently sabotage their own recovery. To combat this, I suggest the incorporation of a digital game system into the rehabilitation process. Such a game system's purpose is to introduce a more engaging alternative to mundane physiotherapy exercises.

The system would convert prescribed exercises into gameplay using a special physical controller, specifically designed to target lower limb rehabilitation.

This game system would be tested by stroke survivors to ensure that it is both functional and enjoyable for an older audience. The system would be developed with support from health professionals to ensure the validity of the gameplay as a substitute for traditional rehabilitation methods.

Thanks to Our Sponsors . . .

The Selwyn Foundation

The Selwyn Foundation is our cornerstone sponsor and currently funds 80% of our activities.
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