Making an Impact

11th National Conference of Emerging Researchers in Ageing

Abstracts and Proceedings

19-20 November 2012
The Greek Club, Brisbane, Australia
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Abstracts and Proceedings

The 11th National Conference of Emerging Researchers in Ageing

19 & 20 November 2012
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Presented by

Sponsored by

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Edited by Vicki Percival and Andrea Petriwskyj

Foreword

It is with great pleasure that I welcome you to the 11th National Conference of Emerging Researchers in Ageing. This conference builds on a long history of successful ERA conferences hosted around Australia. This year The University of Queensland/Blue Care Research and Practice Development Centre is hosting ERA 2012 in Brisbane. This seems fitting as 10 years ago the inaugural ERA conference was held in Brisbane at The University of Queensland. This year we have chosen the Greek Club as our central location at South Bank and hope you have the opportunity to visit local venues and enjoy the fabulous Queensland weather. We have chosen the dates to coincide with the Australian Association of Gerontology conference which will also be hosted at South Bank and hope you might take the opportunity to immerse yourself in an entire week celebrating ageing research in Australia.

Like previous years this conference has an extensive program bringing together students from a broad range of research areas to discuss and share the latest research on ageing. We have chosen the theme of *Making an Impact*, which focuses on the policy and practice implications of research. It emphasises the impact that the work of emerging researchers has on the field of ageing and the potential their research holds for influencing change. We have 46 oral presentations, 6 posters and 16 full papers. On the second day we are pleased to present 2 workshops - *Building a career in ageing: beyond the PhD* and *Issues in mixed methods research*. The workshop Building a career in ageing is coordinated by Dr Tim Henwood, who is a Research Fellow at the UQ/Blue Care Research & Practice Development Centre. The mixed method workshop also has a local UQ host with Dr Deirdre McLaughlin, Senior Research Fellow, Centre for Longitudinal and Lifecourse Research. I know those attending will really enjoy the opportunity to work in a small group environment and continue the networking that will be a feature of the first day of the conference.

I would like to thank our generous sponsors Wesley Mission Brisbane, The Australian Association of Gerontology, National and Queensland Division and our industry partner Blue Care.

So once again, welcome to ERA 2012. Enjoy yourself and I look forward to meeting you and hearing about the latest fantastic developments in ageing research.

Deborah Parker
Director
UQ/Blue Care Research and Practice Development Centre
School of Nursing and Midwifery
University of Queensland

Acknowledgements

We would like to thank our generous sponsors for ERA 2012:

- Wesley Mission Brisbane, Gold Sponsor;
- The Australian Association of Gerontology, Silver Sponsor;
- Blue Care; and
- The Australian Association of Gerontology, Queensland Division.

The conference committee for ERA 2012 included: Associate Professor Deborah Parker (Convenor), Dr Andrea Petriwskyj, Vicki Percival, Dr Matthew Carroll, Dr Tim Henwood, Dr Anthony Tuckett and Sue Hunt. We would also like to thank former ERA staff member Barbara Dungey.

A number of academics and students volunteered their time to review abstracts and papers and help out on the day of the conference—many thanks to all of them.

Contents

Keynote Speakers

Professor Wendy Moyle

Director, Research Centre for Clinical and Community Practice Innovation

"Mapping and advancing your career from ECR to experienced researcher"

Professor Moyle is an internationally renowned expert on care for older people and people with dementia. The focus of her work has been on quality of life and finding evidence for managing agitated behaviours in people living with dementia using controlled trials and psychosocial and complementary and alternative medicine interventions. As the Director of a large and successful research centre she has successfully mentored a number of successful researchers.

In her presentation, Prof Moyle will discuss opportunities available to build your career post PhD. She will use examples from her own career and of those she has mentored to demonstrate structures and supports necessary to help advance your career.

Dr Tony Coles

Executive Officer, Australian Association of Gerontology

"Opening doors to new opportunities"

Prior to taking up the position of Executive Officer with the AAG, Dr Coles worked for three years with the Australian Government Department of Health and Ageing, initially within the graduate program before being promoted to acting Assistant Director with the Office for an Ageing Australia (OFAA). Dr Coles has also worked as a lecturer and tutor at the University of Tasmania and the University of Helsinki, Finland.

In his presentation, Dr Coles will discuss the importance of postgraduate education in relation to career development, the opportunities available to those looking at a career beyond academics after graduation, and the advantages of focusing on ageing in terms of both research and career. Drawing on his own experiences in academics, government, and the not-for-profit sector, Dr Coles will highlight the varied opportunities available to emerging researchers in ageing, and how postgraduates with expertise in ageing are able to make an impact across the broader work spectrum.

Conference Program

Monday 19 November 2012	
8:00 – 9:00	**Registration**
9:00 – 10:10	**Opening Plenary** Aegean Room **Opening and Welcome** **Associate Professor Deborah Parker** Conference Convener **Dr Matthew Carroll** ERA Coordinator **Message from our Gold Sponsor** **Judy Wollin** Wesley Mission Brisbane **Keynote Address** *"Mapping and advancing your career from ECR to experienced researcher"* **Professor Wendy Moyle** Director, Research Centre for Clinical and Community Practice Innovation and Unit Leader - Ageing and Older People Unit, Research Centre for Clinical and Community Practice Innovation
10:10 – 10:40	**Morning Tea and poster viewing** Aegean Room

	Session A	Session B	Session C
10:40 – 12:00	**Pain and Chronic Disease** Aegean Room Chair: Adam Burston	**Social and Experiential Dimensions** Ionian Room 1 Chair: Fengsong Gao	**Dementia and Depression** Ionian Room 2 Chair: Katrina Radford
	Barriers and facilitators to pain identification and assessment in older people with moderate to severe dementia living in residential aged care ***Helen Holloway*** Healthcare costs of arthritis: A systematic review of published studies ***Thomas Lo*** A cross sectional survey of pain in older women ***Katie DeLuca*** The assessment and management of pain in older people in acute care: What are the barriers and/or facilitators to the practice of nurses? ***Joanne Harmon*** A qualitative exploration of current smokers' views on smoking cessation among Greek -Australian elderly people aged 50 and over ***Masoud Mohammednezhad***	Representations of age and ageing in comedy film ***Margaret Gatling*** Speaking of farming: Narrative ethnography of the ageing self ***Zoe O'Callaghan*** Successful ageing in Asia and the Pacific ***Nicamil Sanchez*** The exploration of perceptions of quality of life among older Chinese immigrants in the Australian Capital Territory (ACT) ***Christine Wu*** Preserving the priceless: An exploratory study of volunteerism in heritage transport museums ***Sandra Bateman*** Advocacy in rural residential aged care facilities ***Robyn Collins***	Choir therapy as a psychotherapeutic intervention for reducing depression in mid to later age ***Kirstin Robertson-Gillam*** The experience and meaning of a first-time diagnosis of depression for rural older people ***Sandra Davidson*** Barriers to diagnosing dementia in rural general practice ***Angela Greenway-Crombie*** Early intervention with people with dementia: Is it what they want? ***Gillian Stockwell-Smith*** Falls prevention knowledge translation for community-dwelling people with dementia ***Claudia Meyer*** Appraisal of the quality of care in older people with cognitive impairment presenting to emergency departments ***Linda Schnitker***
12:00 – 1:00	**Lunch and poster viewing** Aegean Room		

Conference Program

	Session D	Session E	Session F
1:00 – 2:20	**Aged Care Workforce** Aegean Room Chair: Jennifer Hewitt	**Evidence-Based Practice** Ionian Room 1 Chair: Helen Holloway	**Housing and Resources** Ionian Room 2 Chair: Hamish Robertson
	Attraction and retention of residential aged care workers in Australia ***Fengsong Gao*** The effects of personal and organisational resources on eldercare strain: A longitudinal study ***Claire Greaves*** Evaluating the knowledge of nursing assistants in a palliative approach ***Sara Karacsony*** The Australian aged care nurse: Improving workplace satisfaction and staff retention ***Adam Burston*** Battle of the decades: Factors affecting different generations of employees' intentions to stay in and leave the aged care sector ***Katrina Radford***	A grounded theory study of evidence-based practice in residential aged care ***Malcolm Masso*** Shining a light on night-time continence care in residential aged care facilities ***Joan Ostaszkiewicz*** The impact of innovative research methods in complex settings ***Janice Taylor*** Identification of early predictors of non-healing venous leg ulcers after 24 weeks ***Christina Parker*** Validation of decision support software for identification of drug-related problems in home medicines reviews ***Colin Curtain***	Home equity release products allowing for individual house price risk ***Adam Wenqiang Shao*** Retirement and asset allocation in Australian households ***Megan Gu*** Transportation - implications for accessibility for older people ***Elisabeth Zeitler*** The effect of tax incentives on participation in salary sacrificing into superannuation ***Jun Feng*** Exploring the experience of food insecurity for older Australians through phenomenology and ethnography ***Alexandra King*** Housing security in later life ***Deborah Oxlade***
2:20 – 2:50	**Afternoon Tea and poster viewing** Aegean Room		

	Session G	Session H	Session I
2:50 – 4:00	**Health Service Use and Planning** Aegean Room Chair : Deborah Oxlade	**Family and Carers** Ionian Room 1 Chair: Sandra Davidson	**Biological and Physiological Ageing** Ionian Room 2 Chair: Claudia Meyer
	Understanding the social determinants of older men's health ***Luckman Hlambelo*** Modeling demand driven provision of formal aged care for baby boomers in Australia ***Sarah Yu*** Use of home and community care services by older Chinese immigrants in Australia ***Dolly Huang*** Making an impact on ageing from space: A multidimensional approach ***Hamish Robertson*** Medications use and mental health outcome ***Maha Alsalami***	Lived experiences after a spouse's admission for permanent care ***Lisa Hee*** Many ways of knowing: Using multiple methods to explore care giving ***Belinda Cash*** Care giving burden for Taiwanese caregivers looking after people with dementia ***Wu (Chloe) Shunting*** The development of an appropriate model of pastoral care to address the challenges for family carers of people with dementia ***Di Crowther***	Macronutrient regulation, metabolic health and ageing in mice ***Samantha Solon*** Falls prevention in residential aged care - making an impact - by averting impact! ***Jennifer Hewitt*** Immunomodulatory and genoprotective function of polyphenols from cassia auriculata flowers on aged rat model ***Cini John*** A randomised controlled trial investigating the effect of additional exercise for bed based transition care program clients ***Carol Parker***
4:00 – 5:00	**<u>Closing Plenary</u>** Aegean Room **Keynote Address** *"Opening doors to new opportunities"* **Dr Tony Coles** Executive Officer, Australian Association of Gerontology **Announcement of Prizes** **Introduction to the ERA 2013 Conference** **Dr Matthew Carroll** ERA Coordinator **Closing**		
5:00–6:30	**Conference Reception** Greek Club Terrace		

Conference Program

Tuesday 20 November 2012		
Conference Workshops		
9:00 - 10:30	**Issues in mixed-methods research** Acropolis Room 1	**Building a career in ageing: Beyond the PhD** Acropolis Room 2
10:30 - 11:00	**Morning Tea** Acropolis Room 1	
11:00 - 12:30	**Issues in mixed-methods research** Acropolis Room 1	**Building a career in ageing: Beyond the PhD** Acropolis Room 2
12:30	**End of post-conference workshops**	

Conference Workshops

Mixed Methods Research: A natural complement to qualitative and quantitative research

Dr Deirdre McLaughlin
Senior Research Fellow
Centre for Longitudinal and Lifecourse Research, School of Population Health,
The University of Queensland

Mixed methods' research has become increasingly accepted in recent years because of the capacity to use both qualitative and quantitative research methods in order to develop a deeper understanding of a topic. Combining analysis strategies, however, raises a number of issues. This workshop will provide emerging researchers with a general understanding of how to conduct mixed methods research and of the challenges and opportunities associated with it.

Building a career in ageing: Beyond the PhD

Dr Tim Henwood
Research Fellow
UQ/Blue Care Research & Practice Development Centre, School of Nursing and Midwifery,
The University of Queensland

This workshop will provide emerging researchers with insights regarding how to successfully transition into a career in ageing. The workshop will involve a panel of recent PhD graduates and emerged researchers now working in a variety of fields, including academic, clinical, government, private industry and the not-for-profit sector. Students will have the opportunity to ask panel members about their PhD experiences, managing workloads, identifying mentors, and developing career paths.

Posters

Posters will be displayed throughout Monday, 19 November 2012 in the Aegean Room. Delegates are encouraged to take time during the tea and lunch breaks to view the posters and meet the authors.

No	Title	Authors
1	Impact of chronic disease on workforce participation	*Tazeen Majeed, Julie Byles, Peta Forder*
2	How is the experience of pain measured in older, community dwelling people with arthritis?	*Katie DeLuca, Lynne Parkinson, Julie Byles, Fiona Blyth, Henry Pollard*
3	Serum induced SIRT1 expression in older men	*David Le Couteur, Shajjia Razi, Vicky Benson, Vasi Naganathan, Victoria Cogger*
4	Behavioural smoking cessation programs targeted to elderly people: A systematic review	*Masoud Mohammednezhad, Paul Ward, George Tsetuor, Carlene Wilson, Julie Ratcliff*
5	Development and pilot of a survey instrument for measuring pain in older women with arthritis	*Katie DeLuca, Lynne Parkinson, Julie Byles, Fiona Blyth, Henry Pollard*
6	The relationship between diet and age-related changes in liver sinusoidal endothelial cells	*Mashani Mohamad, Victoria Cogger, Samantha Solon, Aisling McMahon, Steve Simpson, David Le Couteur*

Abstracts

Session A

Pain and Chronic Disease

Barriers and facilitators to pain identification and assessment in older people with moderate to severe dementia living in residential aged care
Helen Holloway

Healthcare costs of arthritis: A systematic review of published studies
Thomas Lo

A cross sectional survey of pain in older women
Katie DeLuca

The assessment and management of pain in older people in acute care: What are the barriers and/or facilitators to the practice of nurses?
Joanne Harmon

A qualitative exploration of current smokers' views on smoking cessation among Greek-Australian elderly people aged 50 and over
Masoud Mohammednezhad

BARRIERS AND FACILITATORS TO PAIN IDENTIFICATION AND ASSESSMENT IN OLDER PEOPLE WITH MODERATE TO SEVERE DEMENTIA LIVING IN RESIDENTIAL AGED CARE

HOLLOWAY Helen, PARKER Deborah, NEVILLE Christine

University of Queensland

Higher rates of pain in older people in residential aged care relate to those with dementia. The dementia syndrome results in deterioration of multiple areas of cognitive function. These changes in cognitive and neurological function include a lack of spontaneous verbalisation of pain and a change in pain processing in the central nervous system. Limited or no spontaneous verbalisation is a significant barrier to the identification and assessment of pain. In addition, other resident, staff, facility and aged care system barriers prevent pain being adequately identified and assessed. A key facilitator to the identification, assessment and subsequent management of pain, is Improving the knowledge of all staff caring for this group of individuals. However, despite improved access to education and training resources, results from recent research have shown that identification and assessment of pain remains poor. Developing strategies to address barriers and enhance facilitators is a key aim of research in this area. This paper will discuss results from chart audits of 17 residents with dementia to highlight the barriers and facilitators to pain assessment in people with moderate to severe dementia, living in residential aged care.

HEALTHCARE COSTS OF ARTHRITIS: A SYSTEMATIC REVIEW OF PUBLISHED STUDIES

LO Thomas[1], PARKINSON Lynne[1], CUNICH Michelle[2], BYLES Julie[1]

[1] Research Centre for Gender Health and Ageing, The University of Newcastle
[2] University of Sydney

Australian Health Ministers have declared arthritis and musculoskeletal conditions a National Health Priority Area. Healthcare expenses attributable to arthritis and musculoskeletal conditions were estimated at $4.0 billion in 2004-5. However, current national measures of health expenditure employ methods that do not allow consideration of the effect of comorbidities. The 'top-down' costing method uses the total cost per healthcare sector as the starting point and then allocates the fractions of cost attributed to mutually exclusive diseases. Yet, research has found that arthritis is often associated with other chronic conditions including hypertension, back pain, and osteoporosis; and comorbid conditions have been linked to higher healthcare costs. Hence, the top-down method might have underestimated the cost of arthritis. This systematic review aims at answering two questions: 1) what are the most common methodologies used for the estimation of the healthcare costs of arthritis? 2) what are the strengths and weaknesses of these study methods? Electronic databases were searched for current literature on the healthcare costs of arthritis, with special attention paid to the costing methods. Search of Medline identified 254 published studies, of which 17 were included; three additional studies were included from the reference lists. Of the included studies, three studied all forms of arthritis, six studied osteoarthritis specifically, eight studied rheumatoid arthritis, and three studied other specific forms of arthritis. Several studies employed the 'bottom-up' costing method, where individual patient costs data are aggregated to arrive at the final estimate of the cost of arthritis. Bottom-up methods potentially allow the association between healthcare costs and individual characteristics to be studied, such as individual disease severity and comorbidities. Consideration of individual characteristics is essential when estimating healthcare expenses. The bottom-up method may allow more accurate measurement of the cost of arthritis in future studies..

A CROSS SECTIONAL SURVEY OF PAIN IN OLDER WOMEN

DE LUCA, Katie[1], PARKINSON Lynne[1], BYLES Julie[1], BLYTH Fiona[2], POLLARD Henry[3]

[1] University of Newcastle
[2] University of Sydney
[3] Australian Catholic University

Background: In Australia, arthritis has a significant impact on quality of life with increased pain, disability and mental health. Arthritis is a significant burden on the community with large socioeconomic costs. Arthritis is very common, affecting around 3 million Australians. Pain is the primary symptom in arthritis; a result of activating of the nociceptive pathway from mechanical stress and inflammation. However, our understanding of pain is becoming increasingly complex, with central mechanisms of pain postulated. Recent research has found that central sensitisation, a mechanism of neuropahic pain, is evident in arthritis populations. Very few population based studies have investigated the characteristics of pain (duration, severity, location, time and type), associated with arthritis. This study will describe profiles of pain experienced by women, compare profiles of pain for women with and without arthritis and explore the emerging area of neuropathic pain in arthritis. ***Methods***: A cross-sectional postal survey of two sub samples of the 1946-1951 cohort of the Australian Longitudinal Study on Women's Health (ALSWH). One sample will include women who self-report arthritis and one sample will include women who have never self -reported arthritis. The survey will include outcome measures of health, pain, arthritis and neuropathic pain. Recruitment will be carried out by ALSWH staff consistent with ALSWH protocol. ***Results***: Descriptive profiles of pain will be generated for each sub sample. Prevalence estimates of each profile of pain and neuropathic pain will be calculated. Relationships on the profile of pain, arthritis and health within and between the two sub samples will be explored. Given this, findings may have widespread implications in the management of arthritis, as current pharmacological options are often ineffective and carry adverse risk. Furthermore, findings will help in understanding the impact that arthritis has on the health of older Australians.

THE ASSESSMENT AND MANAGEMENT OF PAIN IN OLDER PEOPLE IN ACUTE CARE: WHAT ARE THE BARRIERS AND/OR FACILITATORS TO THE PRACTICE OF NURSES?

HARMON Joanne[1], HIGGINS Isabel[1], SUMMONS Peter[2], MASLIN-PROTHERO Sian [3]

[1] School of Nursing and Midwifery, The University of Newcastle
[2] School of Design, Communication and IT, The University of Newcastle
[3] School of Nursing & Midwifery, Edith Cowan University

The prevalence of older people experiencing pain within acute care settings is an area of concern. Older people have high hospital admission rates; increased length of hospital stay and high levels of pain (Herr, 2010; Kerr, et al., 2010; Seeher, Withall, & Brodaty, 2011). Of particular significance is that many of these older people are also likely to have either a temporary or permanent cognitive impairment (Draper, Karmel, Gibson, Peut, & Anderson, 2011; Seeher, et al., 2011). Current research regarding nurses' practices in relation to pain assessment and management for adult inpatients in acute care reports a consistent pattern of under assessment and inappropriate management of pain (Dunwoody, Krenzischek, Pasero, Rathmell, & Polomano, 2008; Ene, Nordberg, Bergh, Johansson, & Sjostrom, 2008; Herr, 2011; Tait & Chibnall, 2002). This paper will discuss the barriers and facilitators relating to the assessment and management of pain in older people. This discussion will focus on the findings of a systematic search and a critical review of the literature. The findings will be presented thematically based on an organisational framework by Schien (1992).

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A QUALITATIVE EXPLORATION OF CURRENT SMOKERSS' VIEWS ON SMOKING CESSATION AMONG GREEK-AUSTRALIAN ELDERLY PEOPLE AGED 50 AND OVER

MOHAMMADNEZHAD Masoud, WARD Paul, TSETUOR George, WILSON Carlene, RATCLIFF Julie

Flinders University

Cigarette smoking is implicated in 6 of the top 14 causes of death for older adults. Despite the fact that older smokers have been identified as a priority group, few smoking cessation efforts have been directed at older smokers. Greek-Australian elderly people have the highest prevalence of cigarette use in Australia but there is a shortage of knowledge about Greek-Australian's own perspectives on smoking cessation. The purpose of this exploratory qualitative study was to obtain information on Greek-Australian elder current smoker's views on smoking cessation. Snowball sampling technique was used to identify ten current smokers (7 males and 3 females), aged ≥50 years. They were recruited through Greek Orthodox Community Center of South Australia (GOCSA) for older adults in the Adelaide. Qualitative data were collected using a semi-structured face-to-face interview schedule in 2011. The audio-taped interviews were translated and then analyzed using content analysis across narratives. A narrative perspective was applied. Mean years of smoking were 50.2 year (SD=10.4 year). Six participants had smoking-related diseases. Three of the participants acknowledged that quitting smoking would be advantageous for their health, although they did not identify in what way. Participants perceived quitting as a difficult process and reported multiple quit attempts of short duration. Most of the identified barriers to smoking cessation were related to attitudinal. The majority of the respondents had very low confidence in their capacity to quit smoking. Nearly all interviewees mentioned that financial burden is the main factor which they encounter following their smoking. All smokers were in the first two stages based on Stage of Change Model. Greek-Australian elderly smokers have been identified as a priority group in terms of smoking cessation intervention. There is a need to adapt and test effective smoking cessation intervention to make them culturally acceptable to ethnic minority communities.

Session B

Social and Experiential Dimensions

Representations of age and ageing in comedy film
Margaret Gatling

Speaking of farming: Narrative ethnography of the ageing self
Zoe O'Callaghan

Successful ageing in Asia and the Pacific
Nicamil Sanchez

The exploration of perspectives of quality of life among older Chinese immigrants in the Australian Capital Territory (ACT)
Christine Wu

Preserving the priceless: An exploratory study of volunteerism in heritage transport museums
Sandra Bateman

Advocacy in rural residential aged care facilities
Robyn Collins

REPRESENTATIONS OF AGE AND AGEING IN COMEDY FILM

GATLING Margaret

James Cook University

With the twin considerations of an age expectancy of around 85 years and the arrival of baby boomers at the threshold of 'old age,' ageist attitudes and their consequences negatively impact the lives of a growing number of people. In the developed world, the Global Financial Crisis continues to affect the financial health of a generation which in more prosperous times could have retired from paid employment at the traditional age of 65. However, employers are often reluctant, to retain or hire older workers despite their skills and experience. Perceptions that older workers take more sick leave and are slower to learn new skills reflect commonly held beliefs about ageing. Negative attitudes about ageing and older people can result in behaviours which are hurtful, discriminatory and deleterious to the health and wellbeing of the elderly. Exposure to negative representations of age and ageing in the media, particularly on screen, have been shown to have a corrosive effect on viewers' attitudes to older people. This paper reflects a larger research study examining how popular comedy films represent ageing in the context of a genre which attracts a diverse audience because of its ability to comfort, relax and cocoon viewers, at least temporarily, from the everyday anxieties of their lives. By examining through Critical Discourse Analysis the semiotic functions of the images and language used by and about older characters, evidence of cultural hegemony is revealed whereby the interests of the young and beautiful are privileged over those of the old. It is suggested that this kind of analysis can be used to educate students in the health professions to be more discerning in their viewing habits and to question their own attitudes toward age, ageing and their older clients, thus making a positive impact on the prevailing culture of ageism.

SPEAKING OF FARMING: NARRATIVE ETHNOGRAPHY OF THE AGEING SELF

O'CALLAGHAN Zoe Ellen

JRI, La Trobe University

Environments of storytelling mediate the organisation and meaning of accounts we tell. In order to study narratives we must go 'into the field" in order to understand how we story the self. The context in which stories are told are as much a part of their reality as the texts themselves, and so are integral to narrativity, no more so than for my study of ageing male farmers along the borderlands of the Murray River in Victoria and New South Wales. The stories told to me by these men are occasioned and conditioned by prevailing cultural scripts on farming and rurality, however they neglect to reflect what I have observed - problems arising from the challenges of ageing selves. Narrative ethnography calls us to look closer beneath what appears obvious. For Australian male farmers who pride themselves on being resilient and stoic, and who 'spin' a good story, observation is all the more important. It allows the researcher to identity whether certain elements of the narrative ring true. This presentation considers the value of using narrative ethnography to draw linkages between what is said and what is done.

SUCCESSFUL AGEING IN ASIA AND THE PACIFIC

SANCHEZ Nicamil

Australian Catholic University

This paper discusses the existing literature on Successful Ageing in the Asia Pacific and identifies the limiting and facilitating factors toward its attainment. Successful Ageing is widely studied concept but until now, there is no universal accepted definition. Successful ageing encompasses the World Health Organization's definition of health as well as the concept of active ageing and society of all ages. Thus, scholars on ageing around the world have conducted studies on successful ageing in their own countries, mostly utilising Rowe and Kahn's criteria of absence of disease, disability, and maintaining physical and

mental functioning, and active engagement. This study provides a comprehensive account on the literature on successful ageing taking into consideration the culture, dynamics, and unique situation of older person in Asia Pacific countries. Most of the studies conducted in Asia Pacific countries finds that demographic variables like health, chronological age, gender, marital status, level of education, and social status are the factors that determine attainment of successful ageing. However, some Asia Pacific countries place more importance on the success of their children, social support, relationship, and psychosocial factors. This paper provides a comprehensive review of literature on successful ageing from 2000 until 2011 in countries located in Asia & the Pacific that are published in scholarly journal. Lastly, this study provides a multi-dimensional perspective of human ageing as well as individual perspective on the limiting and facilitating factors associated with successful ageing that could serve as reference for governments and ageing-related organisation in developing and enhancing models of care, program intervention, and policy which is responsive to the needs of their ageing population.

THE EXPLORATION OF PERCEPTIONS OF QUALITY OF LIFE AMONG OLDER CHINESE IMMIGRANTS IN THE AUSTRALIAN CAPITAL TERRITORY (ACT)

WU Christine, MIKHAILOVICH Katja

University of Canberra

Australia is recognised as a nation built upon migration with an increasing number of older people coming from a wide range of cultural and linguistically diverse (CALD) backgrounds. Population ageing and migrant health have major effects on economic growth and government expenditure, and consequently justify the need to explore the quality of life of these older immigrants. This study documents both qualitative and quantitative investigations into factors associated with the quality of life of older Chinese immigrants aged 55 years and over in the ACT. A survey was conducted with 60 participants to explore the relationships between quality of life and its six domains. The survey results revealed that the strongest contributors to overall quality of life were domains in past, present and future activities, social participation, autonomy, intimacy and sensory abilities. A lower relationship was found between quality of life and the domain of death and dying. In-depth interviews revealed that a good quality of life was found to be associated with good health, autonomy and independence, a positive attitude towards life, good relationships with family and friends, the ability to communicate with other people, a well-established social welfare system, and participation in social and community activities. Moreover, traditional Chinese cultural beliefs were essential elements affecting the quality of life of individuals. Holding on to certain beliefs, for example living simply and in harmony with nature, appears to have not only enabled older Chinese immigrants to adapt to their new country but importantly also to enjoy better quality of life. This study has contributed to the body of knowledge on factors associated with the quality of life of older Chinese immigrants. The outcomes of the research will help health and social service providers to improve their cultural competence and develop more targeted programs.

PRESERVING THE PRICELESS: AN EXPLORATORY STUDY OF VOLUNTEERISM IN HERITAGE TRANSPORT MUSEUMS

BATEMAN Sandra

La Trobe University, Wodonga, Victoria

The aim of this research is to gain a rich understanding of the experiences of volunteers who perform physically demanding labour in Australian heritage transport museums. Through the preservation of our transportation history, heritage transport museums contribute to the cultural wholeness of the community through public education, communication and active display. A review of the literature provides scant reference to physically demanding volunteer activity and while there is considerable research into many aspects of heritage, there is little focused on heritage transport museums. Volunteers are critical to the continuation of museums which need to ensure a continual supply of new volunteers and hope that these volunteers will remain with the organisation for many years. This research seeks to uncover the issues that

are important to each age group and how they change over the life course and how volunteer organisations can ensure that the needs of each demographic are met. Constructionism will guide the research process. Phenomenography will be used to examine the volunteer activity of men and women of different age groups and extend the study across three heritage transport museums. I will research the motivators for undertaking physically demanding volunteer labour across the life span. Volunteers are crucial to the very survival of museums and via in-depth personal interviews with volunteers this research seeks to examine how museums can attract and retain volunteers across all age groups. Research has shown that museums depend on older volunteers. This research learns from the older age cohorts in order to better meet the needs of emerging cohorts of volunteers and ensure a strong volunteer base into the future. In addition to heritage transport museums, this information will be of value to volunteer organisations worldwide as people become even more time poor as they cope with the demands of paid employment and family

ADVOCACY IN RURAL RESIDENTIAL AGED CARE FACILITIES

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Currently, approximately half of all Australians over 65 years of age require some form of assistance to manage their activities of daily living. It is estimated that around 5.3% of the Australian population receive care in one of 3000 formal residential aged care facilities (RACF). Most of these residents (70%) are receiving high level care. While approximately 150,000 Australians currently reside in RACFs, this figure is expected to rise dramatically as the percentage of the population over 65 years is predicted to almost double by 2047. Provision of future residential aged care services/programs will need to accommodate increasing community expectations to meet flexible, responsive and culturally diverse older persons' needs. The proportion of Australia's aged people from culturally and linguistically diverse (CALD) backgrounds is growing at a faster rate than the general Australian aged population. As these trends emerge, the importance of advocacy on behalf of those people in RACFs becomes increasingly more evident. Formal advocacy services are largely absent in rural areas. In rural RACFs advocacy becomes the responsibility of families and significant others of residents. Advocacy provides residents, through their families and friends, with a voice that they otherwise might not have, ensuring that the services they receive are consumer-oriented and tailored to their individual needs. It is this advocacy that ensures appropriate attitudes to elders and their roles / status within their culture and community. This paper discusses rural RACF advocacy and collaboration as perceived by family members and significant others of residents within rural settings (RACFs) of Gippsland, Victoria. The importance of this study is in its impact on the promotion of improved collaborative practice within RACFs generally.

Session C

Dementia and Depression

Choir therapy as a psychotherapeutic intervention for reducing depression in mid to later age
Kirstin Robertson-Gillam

The experience and meaning of a first-time diagnosis of depression for rural older people
Sandra Davdison

Barriers to diagnosing dementia in rural general practice
Angela Greenway-Crombie

Early intervention with people with dementia: Is it what they want
Gillian Stockwell-Smith

Falls prevention knowledge translation for community-dwelling people with dementia
Claudia Meyer

Appraisal of the quality of care in older people with cognitive impairment presenting to emergency departments
Linda Schnitker

CHOIR THERAPY AS A PSYCHOTHERAPEUTIC INTERVENTION FOR REDUCING DEPRESSION IN MID TO LATER AGE

ROBERTSON-GILLAM Kirstin

University of Western Sydney

This research examined whether choir therapy could reduce mid to later life depression. Chronic physical and mental disorders can lead to the loss of resilience for coping with mid to later life change in vulnerable individuals, leading to social isolation. Thirty-two community dwelling volunteers, from the Blue Mountains, west of Sydney, aged 48-73 years, participated in the study. Some were allocated to the choir group (N=21) and the remainder to a wait list control group (N=11). This latter group lived their lives as normal with the opportunity to join the choir after the study. Both groups were interviewed and assessed for depression, post traumatic stress, well-being and quality of life before and after the intervention. In addition to the main study, a pilot trial involving nine subjects was randomly selected from the choir, to monitor any changes in brain wave patterns before and after the singing intervention. A mixed methods approach compared results between the choir and control groups. The eight week choir therapy program included meditation, singing exercises and learning new songs. The wait list control group lived their lives as normal between the pre and post interviews and assessments. In the pilot study (N=9), quantitative encephalography (QEEG) readings were carried out before and after the choir intervention to measure any changes in brain wave patterns. Results showed a significant decrease in depression and increase in wellness scores following the eight week choir therapy program. The nine QEEG subjects showed a heightened P3 novelty response before the choir intervention which was significantly lower at post testing ($p<0.05$ level). This suggests that choir therapy was effective in reducing pre-hyper-responsiveness to novel stimuli. All results indicated that the practice of choir therapy can reduce symptoms of depression, making an impact for healthier ageing.

THE EXPERIENCE AND MEANING OF A FIRST-TIME DIAGNOSIS OF DEPRESSION FOR RURAL OLDER PEOPLE

DAVIDSON Sandra

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The ageing of the population and the reported significant prevalence of depression in older people suggests that increasing numbers are likely to receive a diagnosis of depression. Despite the large body of literature regarding depression, very little attention appears to have been given to the significance and meaning of such a diagnosis to the individual, particularly when diagnosis occurs at a later stage of life. Authors who have undertaken qualitative studies have emphasised the highly variable and subjective meanings attributed to a diagnosis of depression, emphasising the significance of receiving such a diagnosis, which may include a search for meaning and redefinition of identity. The impact of a diagnosis of depression on the older individual's sense of self appears to be neglected in the literature. My PhD research attempts to address this gap by endeavouring to understand how people aged 70 years and over, living in a rural environment, make sense of a diagnosis of depression in the context of their life story. In order to elucidate my research approach, this paper will explore the depression narrative of an older woman participant living in a small rural town. My approach follows narrative studies in that it focuses on the ways that individuals diagnosed with depression continue to do biographical work to incorporate this into their life story and their day-to-day realisation of the enactment of self. I suggest that such research can enrich current knowledge around the giving of the diagnosis and subsequent treatment approaches. Practice informed by client's personal meanings and biographical significance is needed to counter the narrowing effect of prevailing biomedical approaches.

BARRIERS TO DIAGNOSING DEMENTIA IN RURAL GENERAL PRACTICE

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This paper discusses some of the difficulties encountered by General Practitioners (GPs) in the diagnosis and disclosure of dementia, and examines these barriers from a rural General Practice perspective. The increasing ageing of the rural population and subsequent increase in dementia diagnoses and burden will produce many challenges for the rural health workforce. Rural GPs are central to the diagnosis and management of people with dementia and must also provide and coordinate support to the carers, hence their roles are particularly complex. There are many characteristics of rural general practice and rural communities that create barriers to the diagnosis and disclosure of dementia, and evidence suggests that dementia is often not specifically diagnosed by GPs. Such barriers include time constraints, diagnostic uncertainty, denial of symptoms by patients and families, and stigma. In examining these barriers additional challenges were identified for rural general practice, particularly around the restricted access to dementia education and training and the lack of specialist services to which to refer patients for more comprehensive dementia assessment. These barriers have been confirmed and expanded on through individual in-depth interviews with rural GPs, and potential strategies to address some of them have been identified. The GP interviews were recorded with permission and transcribed. The transcripts were initially coded and a thematic analysis was conducted. Examination of these barriers and their impact in rural general practice is essential to inform relevant policy decisions, to develop and deliver appropriate education and training options, and to ultimately improve dementia management in rural general practice.

EARLY INTERVENTION WITH PEOPLE WITH DEMENTIA: IS IT WHAT THEY WANT?

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The incidence of chronic progressive conditions is increasing with population ageing and early intervention has become a key policy directive within government funded support services. This combined with the rising prevalence of dementia has also made early intervention a particular focus for dementia research and practice. This presentation reports on the recruitment and implementation stages of a community based early-intervention support model for people with Mild Cognitive Impairment (MCI)/early-stage dementia and their caregivers (the Dyad). Participants were recruited from a wide range of community groups for older people and retirement villages across SE Qld. The in-home intervention was delivered by a trained facilitator over seven sessions. Detailed records on reasons for non-participation were maintained and the acceptability of the intervention to dyads and facilitators was evaluated using a mixed method analysis. The study findings document how the study intervention was received by participants and challenges some assumptions on the acceptability of early intervention/forward planning approaches to people with a progressive incurable condition. The stigma older people associate not only with dementia but with any deterioration in memory in themselves or their associates was strongly evident during the recruitment and intervention phases of the project. This resulted in challenges in identifying, recruiting and retaining participant dyads. 175 dyads expressed interest in participating of which 96 provided consent and completed the baseline data collection interview. The factors, which encourage older people to accept support early in the illness trajectory, are known to vary considerably. Some Dyads perceived early-intervention approaches to be confronting whilst those that completing the intervention (n=29, 75%) stated they felt better informed and identified tangible actions taken to plan for the future. The results indicate that acceptance of early intervention, forward planning approaches is influenced by gender, age and dyadic relationship.

FALLS PREVENTION KNOWLEDGE TRANSLATION FOR COMMUNITY-DWELLING PEOPLE WITH DEMENTIA

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***Introduction*:** A systematic review was undertaken to assess the effectiveness of knowledge translation (KT) interventions, and perceptions attributed to these interventions, in preventing falls in community-dwelling older adults living with dementia. ***Method*:** Several health and gerontology related databases were searched (1990-2012). Search terms of "falls" and "community", with manual identification of KT interventions were used, rather than the wide variability of KT terminology. Reference lists of relevant articles were hand-searched to identify further studies. Studies were included if the target population was people living with dementia or their caregivers (or sub-analysis for either group); community-dwelling; intervention included translation of knowledge related to falls prevention; and outcomes related to falls and/ or communicating with and involving consumers in their healthcare. ***Results*:** Two hundred and ten of approximately 6000 articles were retrieved as full-text. Two independent reviewers identified eight articles for detailed data extraction. Three were randomized controlled trials (two with cognitive impairment sub-analysis) and two were pre-post design (recruiting persons with dementia). Three were qualitative papers, with two specifically targeting caregivers of persons with dementia, while the third recruited frail older persons with/without cognitive impairment and their caregivers. KT interventions included to "inform and educate" (5); "support behavior change" (3); "teach skills" (4); and "facilitate communication and/or decision making" (1). For the quantitative papers, outcomes related to falls, injury, hospitalization and residential care admission rates; physical performance; health status and caregiver burden. Qualitative papers identified "perceptions of older people regarding communication of falls prevention strategies". ***Conclusion*:** While papers were of variable methodological quality, and most KT strategies were embedded within multi-factorial programs, preliminary findings suggest the importance of caregiver involvement in interventions; and understanding caregiver need and coping strategies.

APPRAISAL OF THE QUALITY OF CARE OF OLDER PEOPLE WITH COGNITIVE IMPAIRMENT PRESENTING TO EMERGENCY DEPARTMENTS

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The aim of this study was to examine the quality of care received by cognitively impaired older persons in emergency departments (EDs). The medical records of 273 older patients aged 75 years and over were reviewed from November 2010 – February 2011 to evaluate quality of emergency care through the use of geriatric emergency quality indicators. Records contained evidence of an attempt to carry out a cognitive assessment was identified in 150 records. A formal screening tool was used in 22 cases. The lack of routine appraisal of cognitive function precluded the further assessment of quality of care in 127 medical records. In 54 cases there was documented evidence of cognitive impairment. Our review of quality indicators for older ED patients with cognitive impairment indicated that: 1) Of the 54 patients with cognitive impairment, 24 patients had documented evidence of the presence or absence of an acute change in cognitive function from baseline; 2) Of 26 patients discharged home with a pre-existing cognitive impairment (i.e. no acute change from baseline), 11 had documented evidence of the presence or absence of previous consideration of this issue by a health care provider. 3) 9 of the 21 discharged patients, who screened positive for cognitive issues for the first time, were referred for outpatient evaluation. These findings suggests that the majority of older persons presenting to emergency departments are not receiving a formal cognitive assessment and over half of older ED patients with cognitive impairment do not receive quality of care according to the quality indicators.

Session D

Aged Care Workforce

Attraction and retention of residential aged care workers in Australia
Fengsong Gao

The effects of personal and organisational resources on eldercare strain: A longitudinal study
Claire Greaves

Evaluating the knowledge of nursing assistants in a palliative approach
Sara Karacsony

The Australian aged care nurse: Improving workplace satisfaction and staff retention
Adam Burston

Battle of the decades: Factors affecting different generations of employees' intentions to stay in and leave the aged care sector
Katrina Radford

ATTRACTION AND RETENTION OF RESIDENTIAL AGED CARE WORKERS IN AUSTRALIA

GAO Fengsong[1], TILSE Cheryl[1], WILSON Jill[1], TUCKETT Anthony[2], NEWCOMBE Peter[1]

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The demand for aged care workforce is projected to triple by 2050 in Australia. Residential aged care facilities (RACFs), however, are experiencing increasing difficulties in attracting and retaining direct care workers (DCWs). It is widely documented that poor attraction and retention of DCWs may cause insufficient staff-to-resident ratios and consequently result in low quality of care and huge costs in staff recruitment and training. Given that quality of care and cost are the major concerns of service providers, funders, residents and residents' families, this study aims to describe and explore factors associated with attraction and retention of DCWs in RACFs. Based on empirical evidence and two influential theories, the Job Demand-Control-Support model and the Effort-Reward-Imbalance model, this study develops a conceptual framework in which the impact of job demands, coping resources, workforce characteristics and individual characteristics on employment outcomes is moderated by organizational context and social context. This study will follow a sequential mixed method approach. Firstly, quantitative analysis on secondary datasets (i.e. the Nurses and Midwives e-cohort Study and the National Aged Care Workforce Census and Surveys) will be conducted using structural equation modelling and multiple regression; The quantitative findings will inform qualitative sampling strategies. In-depth semi-structured individual interviews will collect qualitative data. Findings from this study will have significant implications for residential aged care service providers to develop strategies to attract and retain DCWs and for policy makers to improve funding models and care standards. This presentation will report the significance, aims, research questions and hypotheses of this study, gaps in knowledge, the development of the conceptual framework and the methodology to be utilized.

THE EFFECTS OF PERSONAL AND ORGANISATIONAL RESOURCES ON ELDERCARE STRAIN: A LONGITUDINAL STUDY

GREAVES Claire

The University of Queensland

Due to population ageing in Australia, the number of older adults requiring care will noticeably increase over the ensuing decades. To date, no research has explored the importance of different forms of support networks that may decrease employed caregivers' strain and buffer the associated negative health and work outcomes. The goal of this study is to extend previous research which has examined the role of perceived organisational eldercare support (Zacher & Winter, 2011). The current study examines whether support resources buffer the negative health and workplace impacts of eldercare to lead to a dual process of positive outcomes. In addition, the compensatory nature of various sources of support for care giving employees is explored. Approximately 500 employed caregivers (aged 40-65 years) across Australia will be recruited to show how eldercare demands are related to strain and various support resources. Through quantitative modeling of the multi-wave longitudinal data (i.e., structural equation modeling), it is expected that resources moderate the relationship between eldercare demands and strain, specifically, this relationship will be positive for employees with low levels of support and weak and negative for employees with high levels of support. This research is important given the current demographic trends where balancing eldercare with one's paid work will become a crucial human resource agenda, paramount to the success of both organisational and employee/carer functioning. Practical implications include caregiver training and development in accruing personal resources to buffer negative health and workplace outcomes. Organisational implications include the utility of various human resource services and policies for older employees as workforce shifts pertain to this group balancing both employment and informal care roles.

EVALUATING THE KNOWLEDGE OF NURSING ASSISTANTS IN A PALLIATIVE APPROACH

KARACSONY Sara

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This paper discusses the rationale and development of a questionnaire designed to test nursing assistants' knowledge of a palliative approach during phase one of a mixed methods study focused on nursing assistants. The need for a specific tool for nursing assistants' scope of practice has been identified in the literature. Nursing assistants (however termed) are the largest and growing number of primary caregivers in residential aged care facilities (RACFs). They provide most of the direct care to residents and are required to care for residents approaching the end of life. Nursing assistants are currently unlicensed and supervised by declining numbers of registered nurses. For this reason, their knowledge base is becoming increasingly important for the complex care needs of the growing number of frail, elderly individuals in RACFs. One aspect of essential knowledge is a palliative approach which is recommended as a framework to enhance older people's quality of life at the end of life. For this approach to be offered by nursing assistants requires that they have the necessary knowledge and skills. A questionnaire that is sensitive to nursing assistants' learning needs can be used to inform education interventions to develop nursing assistants' skills in a palliative approach. The process of questionnaire development involved feedback from an advisory panel regarding item inclusion and piloting of the questionnaire to a group of nursing assistants in the Western suburbs of metropolitan Sydney.

THE AUSTRALIAN AGED CARE NURSE: IMPROVING WORKPLACE SATISFACTION AND STAFF RETENTION

BURSTON Adam

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Increasing demand for services, an ageing workforce, and inadequate numbers of freshly trained workers are of critical concern to the nursing workforce and the wider aged care sector. An ageing Australian population will increase demand on services; with issues of workload, stress, and emotional demands specifically identified. This project focuses on the implications moral distress has on the nurse, the nursing workforce, and by extension aged care consumers. Physical effects of moral distress include demoralisation, anger and frustration, with some even noted as becoming callous and bitter. Further consequences include delivery of sub-optimal care, ending care delivery entirely, suffering burnout, and/or leaving the profession. In some contexts it is noted to occur frequently but with low intensity, in others infrequently but with a high intensity. Whilst moral distress has been investigated across a range of clinical contexts and countries, lamentably little research exploring moral distress in the Australian or the aged care contexts is evident. Addressing this issue can significantly improve the aged care workforce and care delivered to consumers. The aim of the study is to adapt and pilot test an instrument measuring the intensity and frequency of moral distress for Aged Care nurses in Queensland, Australia. This presentation will report on the findings of an initial literature review, as well as the identification and adaptation of the measurement instrument. Primary outcomes include: an overview of the historical evolution of moral distress highlighting current definitions, trends, and areas for future research; and identification, adaptation, testing and validation of an appropriate instrument for measuring moral distress in the Australian aged care sector. This research will articulate to more extensive investigations of the moral distress experience, as well as qualitative investigations facilitating the development of a suite of interventions to address and ameliorate the experience of moral distress..

BATTLE OF THE DECADES: FACTORS AFFECTING DIFFERENT GENERATIONS OF EMPLOYEES' INTENTIONS TO STAY IN AND LEAVE THE AGED CARE SECTOR

RADFORD Katrina, SHACKLOCK Kate, BRADLEY, Graham

Griffith University

The ageing workforce, global shortage of nurses, increased complexity of health conditions in older people living in Australia as well as the increased reliance on quality health care services for the aged have all created a need to ensure a quality workforce exists within the aged care sector. Therefore research examining factors influencing employees' intentions to stay in and leave the sector is essential, which was the purpose of this research project. This project examined the factors that influence three different generations' intentions to stay in and leave the Australian aged care sector. Data was collected through a national survey of direct care workers who were employed in both private and not for profit organisations around Australia. This paper and presentation will highlight the findings of this study and outline the main reasons why employees of different generations stay in and leave the aged care industry. This research provides the aged care sector with significant information on the retention of aged care workers, which can then be used to enhance organisation's policies, processes, and guidelines around the recruitment and retention of its core workforce.

Session E

Evidence-Based Practice

A grounded theory study of evidence-based practice in residential aged care
Malcolm Masso

Shining a light on night-time continence care in residential aged care facilities
Joan Ostaszkiewicz

The impact of innovative research methods in complex settings
Janice Taylor

Identification of early predictors of non-healing venous leg ulcers after 24 weeks
Christina Parker

Validation of decision support software for identification of drug-related problems in home medicines reviews
Colin Curtain

A GROUNDED THEORY STUDY OF EVIDENCE-BASED PRACTICE IN RESIDENTIAL AGED CARE

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This paper reports the findings of a study to answer the question: what mechanisms influence the implementation of evidence-based practice in residential aged care and how do those mechanisms interact? The context for the study was a national program to implement evidence-based practice in residential aged care. The methodology used grounded theory from a critical realist perspective and a conceptual framework that differentiates between the context, process and content of change. People were purposively sampled and invited to participate in semi-structured interviews. Data analysis resulted in the identification of four mechanisms that accounted for what took place and participants' experiences. The core category that provided the greatest understanding of the data was the mechanism *On Common Ground*, comprising several constructs that formed a 'common ground' for change to occur. The mechanism *Learning by Connecting* recognised the ability to connect new knowledge with existing practice and knowledge, and make connections between actions and outcomes. *Reconciling Competing Priorities* was an ongoing mechanism whereby new practices had to compete with an existing set of constantly shifting priorities. Strategies for reconciling priorities ranged from structured approaches such as care planning to more informal arrangements such as conversations during daily work. The mechanism *Exercising Agency* bridged the gap between agency and action. It was the human dimension of change, both individually and collectively, that made things happen. The findings are consistent with the findings of others, but fit together in a novel way and have important implications for policy and practice: 'evidence' can inform practice change, but only as part of a broader mix of factors, including whether a change 'makes sense'; a common language and approach to framing care are important; conversing about practice makes a key contribution to learning; and there is a constant need to reconcile the priorities inherent in daily work.

SHINING A LIGHT ON NIGHT-TIME CONTINENCE CARE IN RESIDENTIAL AGED CARE FACILITIES

OSTASZKIEWICZ Joan, O'CONNELL Bev, DUNNING Trisha

Deakin University

Background: People living in residential aged care facilities (RACF) often experience fragmented and interrupted sleep during the night. Providing continence care at night is one factor that disrupts residents' sleep. There is a lack of research data about night-time continence care in Australian RACF. ***Purpose***: As part of a larger Grounded theory study on continence care in RACF; this project explored how staff managed night-time continence for highly dependent residents and the basis for staff decisions about care. ***Methods***: Field observations were conducted from public areas of two RACF over two eight hour periods at night. One RACF was a private 50 bed facility and the other was a not-for-profit 75 bed facility. Both provided care for highly dependent residents. The field observation process involved observing staff and short informal conversations with them about what care they provided and why. Quantitative observational data were analysed and reported descriptively and conversational data were thematically analysed. ***Findings***: Observations revealed staff conducted two to three continence care rounds each night and most residents received care each time. Staff indicated they assisted seven residents to use the toilet, and nine to use a urinal or bedpan. Staff checked 134 pads, and changed 44 (35%). Staff decisions about care were influenced by staff shortages, occupational health and safety policies, residents' dependence, concerns about residents' skin, residents' preferences for care and responses to being woken up at night, managers' expectations about care, peer norms, the absorptive capacity of pads, and a perceived lack of care options. ***Conclusion*****:** As two thirds of residents did not need their pad changed at night, further research is required to develop an evidence-base for night-time continence care. This information could help staff better identify residents who need such care, and improve the quality of sleep disruption for those who do not.

THE IMPACT OF INNOVATIVE RESEARCH METHODS IN COMPLEX SETTINGS

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The aim of this paper is to generate discussion regarding innovative means of exploring the phenonmenon of nursing home resident mobility with a view to improving mobility care practice. Many factors need consideration before practice developments in complex settings such as nursing homes are adopted, assimilated, diffused and disseminated. Qualitative research methods are ideally suited to explore such factors and inform practice development. However, complexity may also require blurring of boundaries between research and implementation, researcher and participant as well as science and art. Methods that enhance the sharing of knowledge and common understandings may be required. Phronetic social science and crystallization are examples of innovative qualitative methodologies. Phronetic social science *(phronesis = wisdom)* proposes that values be centrally placed during research projects in social settings via the use of phenomenology/ethomethodolgy and Foucauldian discourse analysis. Phenomenology and ethnomethodology enable deeper access to participants' understandings of phenomena. Methods used are interviews (in-depth, semi-structured), observations (etic and emic) and focus groups. Foucauldian methods of analysis of discourse aim to better understand the genesis and archaeology of power dynamics within complex settings via methods pioneered by Michel Foucault. Discourse is a dynamic process where dialogue and interaction result in constant transformation of meaning. However, power dynamics may result in certain currents of thought becoming dominant. If such discursive frameworks are uncritically accepted they may act as barriers to practice improvement. Crystallization describes qualitative research that embraces artistic forms of representation in an endeavour to reflect knowledge as multi-faceted rather than single-pointed or triangulated. The influence of these research methods in a research project are demonstrated to promote discussion regarding their possible value. The incorporation of such methods into nursing home research may increase possibilities for adoption and subsequent dissemination throughout the industry of advances in safe resident mobility care.

IDENTIFICATION OF EARLY PREDICTORS OF NON-HEALING VENOUS LEG ULCERS AFTER 24 WEEKS

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Chronic leg ulcers affect approximately 1-3% of adults aged over 60 years. Many of these leg ulcers remain unhealed for years. Prevalence increases with age and with the over 65 year age group predicted to double in size over the coming 40 years, this becomes a significant healthcare issue. There is a significant socioeconomic impact for chronic leg ulcer patients in relation to medical care, days off work, and/or job loss, expenses for dressings, medication, transportation costs and reduced quality of life. Currently, there are no screening tools available to detect leg ulcers at risk of delayed healing in order to guide appropriate early interventions and wound management. Identification of risk factors for delayed healing would offer an opportunity for clinicians to determine realistic outcomes for their patients. The aim of this study was to identify early predictors of delayed healing of venous leg ulcers. A secondary analysis was conducted on a database with a sample of 366 ulcers, from patients who participated in previous prospective wound healing studies with Queensland University of Technology between 2004 and 2012. These participants had clinical, healing, health and psychosocial data documented and were recruited from hospital and community settings. Bivariate analysis identified a number of social, comorbidity, physical, treatment and ulcer characteristics as potential predictors ($p<0.05$). After adjustment for all variables multivariable logistic regression modelling determined that four factors retained an independent significant contribution: living alone, PUSH score, compression level and ulcer area percent reduction at two weeks. This study has identified early predictors of non-healing venous leg ulcers after 24 weeks which will contribute to an innovative risk assessment tool for early detection of ulcers at risk of delayed healing. This work is supported by the Wound Management Innovation CRC *(established and supported under the Australian Government's Cooperative Research Centres Program).*

VALIDATION OF DECISION SUPPORT SOFTWARE FOR IDENTIFICATION OF DRUG-RELATED PROBLEMS IN HOME MEDICINES REVIEWS

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Background: Accredited pharmacists in Australia are funded to conduct home medicines reviews (HMRs) to address drug-related problems (DRPs) and optimise patient medication use. HMRs are suited to older patients who are more likely to be associated with greater medication use and DRPs. The HMR process involves collation and analysis of patient-specific information to determine actual and potential DRPs and recommend solutions. Clinical decision support systems have been commercially implemented to assist with this task. This research performs validation of two such systems by comparison with the reviewing pharmacists' findings. ***Method***: HMR data collected during 2008 were entered into software which utilised artificial intelligence, Medscope™ Medication Review Mentor (MRM), and software which did not, Monitor-Rx (MRX). DRPs identified by each software program were recorded. A random sample of 20 HMRs with the DRP findings of MRM (N=125), MRX (N=259) and original pharmacist findings (N=73) were presented to 12 clinical pharmacy experts. Experts evaluated each source on a per case basis for clinical relevance, excessive DRP findings and missed clinically relevant DRPs. ***Results***: Experts agreed that MRM (193 of 240 opinions - 80%) and pharmacists (76%) identified clinically relevant DRPs, yet significantly less agreed MRX was clinically relevant (13%). No significant difference was found between pharmacists and MRM concerning relevant DRPs, yet MRM actually identified a greater number of DRPs. Experts agreed each source missed clinically relevant DRPs (pharmacists 69%, MRM 48%, MRX 76%), with significant difference between sources. Opinion concerning excessive DRP findings was also significantly different between sources. Experts agreed pharmacists (88%) and MRM (65%) did not identify excessive DRPs, in contrast to MRX (3%). ***Conclusion***: Software which utilises artificial intelligence, such as MRM, may assist pharmacists in performing HMR activities via identification of an acceptable number of relevant DRPs.

Session F

Housing and Resources

Home equity release products allowing for individual house price risk
Adam Wenqiang Shao

Retirement and asset allocation in Australian households
Megan Gu

Transportation - implications for accessibility for older people
Elisabeth Zeitler

The effect of tax incentives on participation in salary sacrificing into superannuation
Jun Feng

Exploring the experience of food insecurity for older Australians through phenomenology and ethnography
Alexandra King

Housing security in later life
Deborah Oxlade

HOME EQUITY RELEASE PRODUCTS ALLOWING FOR INDIVIDUAL HOUSE PRICE RISK

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Australians hold a large proportion of their savings in home equity and this can be used to provide post-retirement income and health care costs. This “nest egg” is recognised as an important component of financing retirement needs of an ageing population. The recent report by the Productivity Commission on “Caring for Older Australians” recommends that home equity should be considered as a means to pay for care costs and that home equity release products would allow individuals to unlock this wealth. This issue motivates our study on trends and risks in individual house prices and on how they impact the pricing of home equity release products. The study is based on a detailed panel data set on individual house price transactions in the Sydney Statistical Division over the period of 1979-2011. A new method to model house price risk allowing for individual property characteristics, such as number of bedrooms etc, is used. The study has two aims: (1) to forecast individual house prices by projecting the house price index and then linking individual house prices to this index; (2) to price equity release products allowing for the No-Negative Equity Guarantees (NNEG) typically included in these products. In the current literature, house price risk is typically assessed using an overall housing market price index, which does not account for the significant differences between the overall house price index and individual house prices. This study allows for idiosyncratic house price risk by projecting price trends and volatilities for individual houses with heterogeneous characteristics. This provides new and improved insights in designing reliable and affordable home equity release products that effectively help retirees to finance their consumption and care costs.

RETIREMENT AND ASSET ALLOCATION IN AUSTRALIAN HOUSEHOLDS

GU Megan

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This paper examines the effect of the retirement decision on the asset allocation of Australian households using data from the Household Income Labour Dynamics of Australia (HILDA) Survey. It investigates the popular financial advice that as one approaches retirement one should reduce the proportion of risky assets held. This advice stems from economic foundations informed by the life cycle theory of consumption and saving. Given the design of Australia’s Superannuation Guarantee, there is an increased responsibility on individuals to make key decisions, including voluntary contribution rates, asset allocation and timing of retirement. This paper utilises the panel data nature of HILDA by estimating fixed effect and random effect models to address the possible endogeneity of the retirement decision. Preliminary results suggest that there is a negative relationship between retirement and the proportion of net risky assets held by Australian households. This is consistent with economic theory. The impact of personal characteristics, including human capital is also considered. Preliminary results indicate that ‘safe’ human capital is associated with more conservative investment behaviour closer to retirement. These results provide guidance to policymakers and trustees of superannuation funds, who are required to design and implement default investment strategies to facilitate adequate and secure retirement incomes.

TRANSPORTATION – IMPLICATIONS OF ACCESSIBILITY FOR OLDER PEOPLE

ZEITLER Elisabeth, BUYS Laurie, AIRD Rosemary

Queensland University of Technology

Objective: This research investigates older people’s use of transportation to develop strategies for age-friendly transportation within the community. ***Methods***: Data for this study was derived from Global Positioning System (GPS) tracking of thirteen people aged 55 years and older, together with self-report

information recorded in travel diaries about daily activities undertaken outside the home over a period of seven days. Semi-structured interviews were aided by individual maps to investigate engagement in out-of-home activities and verify the recorded GPS data. ***Results***: Overall, participants were highly reliant on the car for daily commuting. Walking, biking and public transport options were unattractive due to environmental conditions, accessibility and usability. ***Conclusion***: Participation within the community and access to services is facilitated by private and public transportation. It is therefore critical to address accessibility and usability issues faced by older people to enable them to maintain their mobility, and ensure access to services, especially when driving ceases.

THE EFFECT OF TAX INCENTIVES ON PARTICIPATION IN SALARY SACRIFICING INTO SUPERANNUATION

FENG Jun

University of New South Wales

Adequacy of retirement incomes is a key concern for policymakers when considering the welfare of the retirees in an ageing society. Despite an increase in mandatory employer contributions under Australia's superannuation guarantee (SG) from 9% to 12% by 2020, academics and industry experts still argue about the level of savings required to fund a comfortable retirement. To supplement these SG contributions, the government also provides tax incentives to encourage voluntary superannuation contributions. These include the ability to salary sacrifice superannuation contributions, government co-contributions for low income earners, and tax offsets for spouse contributions and transition to retirement (TTR) pensions. Despite these incentives, only around 30% of the working population are actively making voluntary contributions. The aim of this paper is to examine the effectiveness of the tax incentives. Using a regression discontinuity (RD) framework, the paper measures the response of employees to tax incentives to salary sacrifice superannuation. Results indicate that tax incentives provided have no effect on the decision to salary sacrifice, contrary to similar studies using US data. It is likely that this is due to the complexity of the incentive schemes and competing demands for long term savings. The results provide some support for the increase of mandatory retirement saving rate from 9% to 12%.

EXPLORING THE EXPERIENCE OF FOOD INSECURITY FOR OLDER AUSTRALIANS THROUGH PHENOMENOLOGY AND ETHNOGRAPHY

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University Department of Rural Health, University of Tasmania

Recent research has identified a significant prevalence of malnutrition amongst community-dwelling older Australians. Food insecurity and inadequate nutrition can significantly diminish older adults' quality of life and lead to a range of adverse health outcomes. Food insecurity is of increasing interest to governments, non-government organisations and community groups in Australia and elsewhere. An in-depth understanding of the etiology and experience of food insecurity for older adults in particular is important for the development of effective policies, interventions and advocacy for this age group. A literature reviews reveals that research undertaken in Australia and other western countries into food insecurity in older adults is predominantly quantitative in nature and tends to under-examine less quantifiable dimensions of the phenomenon. Qualitative research which examines the social and place-based dimensions of food insecurity for older adults is warranted in order to fully understand the multi-dimensional nature of the phenomenon. This paper outlines the methodological framework of current PhD research into food insecurity in older adults living in rural and regional Tasmania. It is informed by two complimentary methodologies: phenomenology and ethnography. Phenomenology is a philosophical tradition grounded in everyday life and practice. It resonates with the intention of the study to examine food insecurity – a grounded, day-to-day phenomenon – from the perspective of those who experience it. As well, ethnography – which is concerned with how human life is enacted in particular social and cultural settings – directs our attention to the situated nature of food insecurity. This study uses three qualitative research methods: in-

depth interviews, informal observation and ‘walking interviews’ which is an innovative participatory methodology. The theoretical underpinnings, aims and key features of each method are described. The paper concludes with reflections on the preliminary fieldwork conducted this year, examining the practical realities and ethical implications of applying these research methods with older adults.

HOUSING SECURITY IN LATER LIFE

OXLADE Deborah

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In this paper I argue for the need to reframe housing insecurity in ways that centre on security and reflect its multiple dimensions rather than insecurity. To do so, I first define the concept of ‘housing security’ in terms of independence, security and control afforded by 1) housing access; 2) housing stability 3) housing affordability; 4) housing adequacy; 5) tenure position; and 6) housing quality. These six dimensions of housing security provide a necessary conceptual foundation for exploring how social structures and institutions impact on individual and household experiences producing varying degrees of housing security. Second, I contextualise the significance of housing security to the retired ex-service community. There is surprising little known about the social and economic outcomes of this group comprised of veterans, their spouses, war widows and widows. A review of the current literature reveals that housing security is representative of struggle of the individual and households within a market economy that is primarily orientated towards labour force participation; productivity and consumption. This struggle is exacerbated in later life by the demands placed on personal, social and economic resources by increased life expectancy, changes in health, ability, income and relationships. So while traditionally ‘housing security’ or more commonly, ‘housing insecurity’ in Australia has been viewed in terms of tenure type, I argue that achieving a specific tenure type alone does not ensure independence, security and control in later life. The implication of this reframing to housing security necessitates housing and aged care policy makers broaden their understanding of housing security to include its multiple dimensions.

Session G

Health Service Use and Planning

Understanding the social determinants of older men's health
Luckman Hlambelo

Modeling demand driven provision of formal aged care for baby boomers in Australia
Sarah Yu

Use of home and community care services by older Chinese immigrants in Australia
Dolly Huang

Making an impact on ageing from space: A multidimensional approach
Hamish Robertson

Medications use and mental health outcome
Maha Alsalami

UNDERSTANDING THE SOCIAL DETERMINANTS OF OLDER MEN'S HEALTH

HLAMBELO Luckman

University of Western Sydney

The presentation is grounded in the author's theoretical framework for a study of men's health as part of ongoing PhD research. Much of what passes as approaches to older men's health, including their use of services, is based on social constructions of gender, often focusing on their reluctance to seek help. As such, negative stereotypes about older men are perpetuated, which may, despite best intentions, reinforce negative health behaviours among older men. In this presentation, I will argue that the health promotion community is well positioned to strategically free older men from the constraints of hegemonic masculinity through adopting a "social determinants of health approach" to frame professional responses to their health needs. I will support the ideas with evidence from three issues – social isolation, social exclusion and lack of social support which are addressed here as significant for older men. These issues will be discussed in light of long-term psychological stress which can make some men more vulnerable to many serious illnesses such as cardiovascular and immune system diseases, and adult-onset diabetes. This research is being carried out as part of a PhD project entitled *Impact of Men's Shed on Health: An Investigation with Emphasis on Social Inclusion, Cortisol Level and Resting Heart Rate Variability* at the University of Western Sydney. The specific design of the research is driven by an inductive qualitative method supplemented by a quantitative method in order to explore the impact of Men's Sheds on the health of the men involved.

MODELLING DEMAND DRIVEN PROVISION OF FORMAL AGED CARE TO BABY BOOMERS IN AUSTRALIA

YU (Sarah) Yanyue, NEPAL Binod

NATSEM, University of Canberra

Population ageing has become a critical public policy issue in Australia. The existing literature suggests that demand for aged care services and support is highly variable with diverse provision of care to aged persons. The baby boomer generation approaches retirement and their likely needs for aged care services are generating major concerns. There is an urgent need to conduct the research. However, very limited research on potential need for formal aged care to the baby boomers in a global context has been conducted. Therefore, this research attempts to facilitate better future projection of the provision of aged care. Based on the research gap identified, this study addresses the central question: How will demand and preferences of the unique baby boomers impact on the future aged care service? This study aims to explore and analyse the needs and preferences of the baby boomers for aged care at the level of the individual and family, and to understand and model the demand of baby boomers to better inform projections of the future supply of formal aged care that will be needed to meet the expected demand. This will involve developing and incorporating a demand modelling tool into the aged care module of Australian Population and Policy Simulation Model (APPSIM). The research is part of a broader research program at NATSEM which aims to investigate and evaluate the need for aged care and financing options that will help mitigate the widening fiscal gap predicted for the Australian economy. This aim is being achieved by building a computer modelling tool that will provide the infrastructure to assist policy makers in assessing the economic consequences of various aged-care financing options. The modelling tool will identify options that support the delivery of long-term care which is acceptable to ageing Australians, baby boomers, while ensuring fiscal sustainability.

USE OF HOME AND COMMUNITY CARE SERVICES BY OLDER CHINESE IMMIGRANTS IN AUSTRALIA

HUANG Dolly, OZANNE Elizabeth, HARMS Louise

The University of Melbourne

Background: As one of Australia's largest and most well-established ethnic groups, very limited empirical research has been conducted to investigate aged care utilisation by older Chinese in Australia. ***Objectives:*** This paper aims to examine the predictors and type of Home and Community Care (HACC) services utilised by elderly Chinese immigrants, using Andersen and Newman's service utilisation model. ***Methodology:*** One hundred and twenty survey interviews were conducted with Australians aged 65 years and older who identified themselves as Chinese and spoke mainly Chinese at home. Participants were recruited proportionally from the four metropolitan areas in Melbourne using a quota sampling method to ensure that the sample was representative of the older Chinese-speaking population according to the 2006 Census.To examine the predictive factors of HACC service use, hierarchical multiple regression analysis was performed using predisposing, enabling, and need factors entered into the regression sequentially. ***Results:*** The study found that over half of the participants had used at least one HACC service before. Of these, community health centres were the most frequently used service type by older Chinese immigrants, followed by home maintenance, transport, planned activity group, home care, and nursing. Some predictors of HACC service use such as living arrangements, social support, and knowledge about existing services were associated with their migration circumstances and cultural factors. The findings should assist service providers in better understanding patterns of service use by older Chinese as well as in planning and delivering more culturally and socially appropriate aged care services.

MAKING AN IMPACT ON AGEING FROM SPACE: A MULTIDIMENSIONAL APPROACH

ROBERTSON Hamish[1], NICHOLAS Nick[2], GEORGIOU Andrew[1], JOHNSON Julie[1], BROE Tony (GA)[3]

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[3] Neuroscience Research Australia

The importance of space is largely underplayed in contemporary aged care policy and analysis. A general discourse around 'ageing in place' draws a loose connection to the importance of spatial knowledge in aged care planning and development, however 'place' is often invoked as a surrogate for location. Yet all individuals, groups and populations age within specific contexts, including geographical contexts. The dimensions of space, time and scale are enormously important for developing effective systemic responses to the complex human problems associated with population ageing. In the wider social sciences, space and place are often left to geography, and in government we occasionally see old-style atlases (or their updated web equivalents) produced to illustrate social variables at the national, state or more local level. This is a very limited approach to the tangible contribution that the spatial sciences can make to health and social support in the context of ageing societies. In this presentation I illustrate how emerging spatial science can support and extend our knowledge of population ageing and its wider social and systemic impacts now and into the future. I use my postgraduate research work on Alzheimer's disease to illustrate the case for making a more informed impact on ageing from and through spatial approaches. I argue that the lack of sophisticated spatial methods in the health sciences generally and in aged care planning and service development are a limiting factor in current planning approaches. The rapid advance of spatial technologies and techniques will continue into the foreseeable future as this has been identified as one of the 'big three' technologies of the 21st century by the United States Department of Labor. I argue that if we want to make a meaningful impact on population ageing we need to make a more effective use of spatial knowledge and practices.

MEDICATIONS USE AND MENTAL HEALTH OUTCOME

ALSALAMI Maha, BYLES Julie, HASNAT Milton, McEVOY Mark

University of Newcastle

Two questions are central to this research: Is there a cross-sectional association between number and type of medications used and Mental Health Index (MHI) score? And is that association consistent at different ages? The issues addressed in this research attempt to clarify concerns regarding the effects of pharmaceutical use by older people, particularly in relation to women's mental health. There has been ongoing medical debate regarding poly-pharmacy in ageing women and its relationship to depression. Various adverse outcomes are demonstrably related to poly-pharmacy in the elderly. They include an increased risk of various geriatric syndromes, adverse drug reactions and receiving inappropriate medication, as well as more morbidity (including Depression) and mortality (Hajjar, 2007). Unützer *et al* (2007) and Wolitzky-Taylor *et al* (2010) found that decline in mental health from depression and anxiety is a common issue in the elderly, especially for women. Further research in this area is needed to clarify the relationship between medication and mental health, and to identify high risk medications. In this presentation I will describe the classes and types of medications most commonly used by a large cohort of aging women participating in the Australian Longitudinal Study on Women's Health. I will then describe how my PhD is framed to assess medication use among aging women, particularly identifying dose and patterns of use of different medications. These are the first steps towards developing measures of medication burden, which will be used to analyse the association between medication use and depression. Information gained from this research may pre-empt and alleviate the suffering from depression that is experienced by many ageing women who require multiple medications. It could lead to the design of more flexible and diverse treatment strategies for this population. The intended impact is to make medication of ageing women more effective, and have less unintended, detrimental side-effects.

Session H

Health Service Use and Planning

Lived experiences after a spouse's admission for permanent care
Lisa Hee

Many ways of knowing: Using multiple methods to explore caregiving
Belinda Cash

Care giving burden for Taiwanese caregivers looking after people with dementia
Wu (Chloe) Shunting

The development of an appropriate model of pastoral care to address the challenges for family carers of people with dementia
Di Crowther

LIVED EXPERIENCES AFTER A SPOUSE'S ADMISSION FOR PERMANENT CARE

HEE Lisa, BARNARD Alan, THEOBALD Karen

Queensland University of Technology

Carers play a substantial role in terms of physical, social and economic needs for the current and future ageing population of Australia. In 2003 there were nearly half a million carers aged 65 years and over, and 83% of older carers are caring for a spouse (Australian Bureau of Statistics, 2008). Estimates show that informal carers save the Australian economy more than $40 billion per year (Australian Bureau of Statistics, 2010). Their role in the community is vital. Despite their major contribution to society, little is known about the challenges and changes to carers' lives once their spouse is placed into an aged care facility. This study using a longitudinal hermeneutic phenomenological approach underpinned by the work of phenomenologist Martin Heidegger (1889-1976) aims to identify the experiences of the carer in their life in general after their spouse's admission for permanent care. Outcomes will help to inform future carers, care staff and other key stakeholders about caring experiences, and better inform health care services for carers. Emerging data indicates admission of their spouse into the aged care facility not easy, and that care staff and friends can make it worse. There have been exceptions to this identified which will be explained at the presentation. This knowledge will help all key stakeholders, particularly in providing awareness of issues associated with aged care placement for others facing a similar situation.

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MANY WAYS OF KNOWING: USING MULTIPLE METHODS TO EXPLORE CAREGIVING

CASH Belinda

La Trobe University, Wodonga, Victoria

There is growing support for multiple method approaches, particularly as researchers seek extended and deeper answers to their research questions. This paper, drawing on a study of ageing and care giving, will provide an example of a research approach using multiple qualitative methods. The author will demonstrate how such an approach can provide a stronger and more comprehensive understanding of the issues pertaining to choice for informal caregivers within its social and political context. A significant number of carers identify obligation or a lack of choice as the reason they undertake care giving. This highlights the important need to understand underlying assumptions in policy and practice which could impact on the availability of choice to informal caregivers. Ageing and care giving occur within a complex network of family, community, cultural, organisational and policy factors. There is limited research regarding choice for carers, even less which considers the impact of these broader systems, primarily focusing on either policy analysis or individual interviews. A methodological approach which considers the complexity of these social systems is essential when researching choice for informal caregivers. The paper will argue that some research questions may best be answered using a combination of data collection methods. Seldom can one method be applied across the individual, practice and policy domains. In order to understand the impact of social policy and healthcare practices on choice for older spousal caregivers, this research engages the multiple qualitative methods of focus groups, interviews, thematic analysis and discourse analysis. It will be argued that this unique design will enable research that provides a deeper understanding of the role of choice across multiple social layers.

CARE GIVING BURDEN FOR TAIWANESE CAREGIVERS LOOKING AFTER PEOPLE WITH DEMENTIA

SHUNTING Wu (Chloe), HEE Lisa

Queensland University of Technology

Figures predict that the number of older persons with dementia will rise to 81.1 million by 2040 worldwide. As dementia progresses, patients' physical and psychological wellbeing decrease dramatically, this consequently increases the care burden levels of those dementia caregivers. Most dementia caregivers are family members, neighbours and close friends. Care giving burden is now a widely discussed topic among dementia patients. Caregivers of people with dementia can be influenced while caring for the patient by their own personal background as cultural beliefs and values. This presentation will present findings of a literature review focused on examining the disparity between Taiwanese and Western family caregivers with dementia patients regarding to the cultural background. The review examined international research to analyse the care burden variation experienced by Taiwanese caregivers and available interventions that can effectively reduce the care burden for Taiwanese caregivers. There is ample evidence demonstrating that taking care of dementia patients results in a high cost of family caregivers' care burden. To be more specific, dementia care giving can negatively and greatly affect their physical, psychological and social well-being. For Taiwanese caregivers with dementia patients, cultural beliefs and values have also been identified as a further care burden when caring for people with dementia. Barriers of the cultural background and values seem to be an overwhelming obstacle for Taiwanese family caregivers applying interventions. With a lack of support in caring for a dementia patient, it is predictable that Taiwanese caregivers will experience accumulated care burden levels. This presentation will provide recommendations to assist the Taiwanese caregiver to provide effective care for the person with dementia.

THE DEVELOPMENT OF AN APPROPRIATE MODEL OF PASTORAL CARE TO ADDRESS THE CHALLENGES FOR FAMILY CARERS OF PEOPLE WITH DEMENTIA

CROWTHER Di

University of Queensland

This paper addresses the issue of providing appropriate emotional and spiritual support for family carers of people with dementia. Gerontological and sociological research has identified carer stress and burden, loss and isolation as significant challenges, and the need is acknowledged for further research and evidence-based interventions to address these. There is increasing recognition of the ambiguous and disenfranchised grief of the dementia journey, and recent grief theories focus on the significance of meaning-making in the grief process. The search for meaning and for connection beyond oneself is increasingly recognised as a spiritual task, and pastoral practice, involving both emotional and spiritual care, must address these challenges. This paper presents the results of an interpretative phenomenological study which explored the caring journey, including the emotional and spiritual needs, of six family carers of people with dementia. Three conversational interviews with each participant over a twelve month period sought to capture their lived experience of caring, and an interpretative phenomenological analysis method (IPA) guided the processing of the data. Profiles of participants and thematic and interpretative analyses were developed. The findings of the study identified the issues of stress and depression, loss and ambiguous grief, and an overarching theme was that of isolation, including social, emotional and spiritual isolation. There was a strongly expressed need, from the time of diagnosis to the year following the death of a partner with dementia, for someone who could listen with empathy. These findings indicate that the provision of ongoing empathic pastoral care has a significant positive contribution to the quality of life of family carers throughout the journey. Where holistic care is the goal of community services, these findings have important implications for the planning and delivery of care.

Session I

Biological and Physiological Ageing

Macronutrient regulation, metabolic health and ageing in mice
Samantha Solon

Falls prevention in residential aged care—making an impact—by averting impace!
Jennifer Hewitt

Immunomodulatory and genoprotective function of polyphenols from *cassia auriculata* flowers on aged rat model
Cini John

A randomized controlled trial investigating the effect of additional exercise for bed based transition care program clients
Carol Parker

MACRONUTRIENT REGULATION, METABOLIC HEALTH AND AGEING IN MICE

SOLON Samantha[1,2], McMAHON Aisling[1,2], RAUBENHEIMER David[3], Le COUTEUR David[2], SIMPSON Stephen[1]

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Caloric restriction (CR) is a central focus in aging research. Its role in improving insulin sensitivity, overall metabolic health and increasing lifespan is widely accepted. However, the individual contributions of dietary protein, carbohydrate and fat intake on metabolism, obesity and aging remain unclear. Recent advances in nutrition research have shown across a wide range of taxa that the balance of individual macronutrients, rather than total energy, drive feeding behaviour in animals. Here, we use a geometrically based 3D experimental design (the "Geometric Framework") to evaluate the effects of dietary protein, carbohydrate and fat on aging, metabolism and liver function in a large-scale 30 diet mouse study. Results thus far indicate that protein has the strongest influence on total food intake, resulting in excess energy consumption on low protein diets. This excess intake results in an increase in % body fat when protein intake is reduced and these results are positively correlated with elevated basal blood glucose levels and plasma leptin levels. Surprisingly, glucose tolerance is markedly improved on low protein/high carbohydrate diets and median survival is also greatest in these animals. Survival data are not complete but current analysis indicates that dietary protein content and consumption may have greater implications for metabolic health and survival than previously attributed. Our results support the influence of macronutrients on insulin sensitivity, fat metabolism, and aging. If dietary protein manipulation can produce health benefits similar to those observed in caloric restriction, such a nutritional intervention may have important implications for diet management, the development of metabolic syndrome and the extension of a healthy lifespan in humans.

FALLS PREVENTION IN RESIDENTIAL AGED CARE - MAKING AN IMPACT – BY AVERTING IMPACT!

HEWITT Jennifer[1], REFSHAUGE Kathryn[1], HENWOOD Timothy[2], CLEMSON Lindy[1], GOODALL Stephen[3]

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[2] University of Queensland
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Falls are common in older populations, with the rate of injury from falls substantially increasing after the age of 75 years. No other single injury, including road trauma, costs the health system more than injuries resulting from falls. Present evidence suggest that the rate of falls and the associated impact of falls can be reduced using resistance and balance exercise. While the majority of research has focused on community dwelling populations, falls rates are three times higher in residential aged care. This presentation will discuss the proposed project design of a PhD study into falls prevention in residential aged care using resistance and balance exercise. Specifically, the presentation will describe the randomised controlled trial design, the exercise program, the project timeline and the hypothesised outcomes for falls prevention, quality of life, mood, cognition and mobility among residential aged care participants. In addition, the planned health economic analysis will be discussed. The identification and implementation of effective and safe interventions to reduce falls rates in the very old has significant benefit for the later life wellbeing of Australians. Outcomes from this project have the potential to impact on a substantial individual and national healthcare problem. Implications of the study include contributing to the health policy debate by challenging current residential aged care models, reducing the health care burden of falls and improving the wellbeing for residents of aged care adults across Australia.

IMMUNOMODULATORY AND GENOPROTECTIVE FUNCTION OF POLYPHENOLS FROM *CASSIA AURICULATA* FLOWERS ON AGED RAT MODEL

JOHN Cini M[1,2], SANDRASAIGARAN Pratheep[1], ADAM Aishah[2], RAMASAMY Rajesh[1]

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Aging is often accompanied by immunosenescence, oxidative stress and random gene mutations. The diminishment of immune cells' and genes' quality and volume predispose to ill health causing adverse aging characteristics. In this study we have examined the potential effect of *Cassia auriculata* flowers derived polyphenols (CA) in recapitulating immune integrity and genoprotective effect in aged rodents. Rats of 24-26 months old (approximately equal to human age 60-65 years) were supplemented with CA 25, 50 and 100 mg/kg dosages for 28 days. Flow cytometry analysis of CA supplemented aged rats showed an increased expression of T and B cells and enhanced proliferation of splenocytes in both resting and LPS stimulation. Increased expression of pan T cells is further supported by an elevation of CD4, CD8 and $CD4^{+}CD25^{+}$T helper cells. In term of innate immune cell activity, CA supplementation reduced the oxidative burst activity of neutrophils in response to PMA and E. coli activation. CA dosage upregulated mRNA expressions of superoxide dismutase (SOD) and catalase (CAT) and Gadd45a in liver. Comet assay was used to evaluate genoprotective effct. Our results collectively shows that polyphenols derived from *Cassia auriculata* modulated immune system through increasing T helper (CD4+CD25+) cells and enhanced splenocyte proliferation, and by increasing the number of T and B cells and its effectors. It has reduced oxidative stress by decreasing ROS production of neutrophils that could potentially harm the multiple biological systems and upregulated antioxidant genes; it also protected genes from mutations and upregulated genoprotective genes. These findings provide evidence for the usage of CA as a supplement or as adjunct to therapeutic agents in aged individuals. CA proves itself as a promise from the nature for healthy ageing.

A RANDOMISED CONTROLLED TRIAL INVESTIGATING THE EFFECT OF ADDITIONAL EXERCISE FOR BED BASED TRANSITION CARE PROGRAM CLIENTS

PARKER Carol[1], McBURNEY Helen[2]

[1] **La Trobe University**
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The Australian Transition Care Program (TCP) is a time limited, goal focussed discharge intervention providing additional temporary therapeutic interventions for elderly people assisting them to reach optimum function, independence and discharge destination. The objective of this randomised controlled trial was to evaluate whether the addition of Functional Incidental Training (FIT) to standard physiotherapy would improve discharge outcomes and functional abilities for older people in the bed-based TCP. FIT is an individualised program of goal based walking and sitting to standing practiced at least four times daily. Sixty older people admitted to bed-based TCP places in Bendigo, central Victoria were assessed and randomised. Intervention group participants were given an individualised FIT program. Research assistants visited twice weekly and encouraged participants to practice the program four times daily in addition to standard physiotherapy. The control group received standard physiotherapy only. Outcome measures included discharge destination, expected discharge destination, De Morton Mobility Index (DEMMI), Berg Balance Scale (BBS), timed five times sit to stand, Geriatric Depression Scale and EuroQol quality of life scale (EQ5D) at admission, discharge, three and six months. Forty-seven participants completed the six months assessment. There was no significant difference in discharge destination between groups (p=0.305). Both groups improved significantly on the functional scores of the DEMMI (t=-5.087, p=<0.001) and BBS (t=-6.616, p=<0.001) from admission to discharge but not on the other outcome measures. Intervention group functional improvement (BBS mean change = 8.1) was clinically significant and greater than the amount of the control group (BBS mean change = 4.6). Discharge destination seems to be more complex than being due to functional abilities alone as some people with better function moved to care whereas others with poorer function moved back to the community.

Posters

Impact of chronic disease on workforce participation
Tazeen Majeed, Julie Byles, Peta Forder

How is the experience of pain measured in older, community dwelling people with arthritis?
Katie DeLuca, Lynne Parkinson, Julie Byles, Fiona Blyth, Henry Pollard

Serum induced SIRT1 expression in older men
David Le Couteur, Shajjia Razi, Vicky Benson, Vasi Naganathan, Victoria Cogger

Behavioural smoking cessation programs targeted to elderly people: A systematic review
Masoud Mohammednezhad, Paul Ward, George Tsetuor, Carlene Wilson, Julie Ratcliff

Development and pilot of a survey instrument for measuring pain in older women with arthritis
Katie DeLuca, Lynne Parkinson, Julie Byles, Fiona Blyth, Henry Pollard

The relationship between diet and age-related changes in liver sinusoidal endothelial cells
Mashani Mohamad, Victoria Cogger, Samantha Solon, Aisling McMahon, Steve Simpson, David Le Couteur

IMPACT OF CHRONIC DISEASES ON WORKFORCE PARTICIPATION

MAJEED Tazeen[1], BYLES Julie[1], FORDER Peta[1]

[1] University of Newcastle

The *objective of the study* was exploring the prevalence of chronic diseases among a large sample of people according to their workforce participation. Data were from the 45 and Up Study baseline survey (n=35,542). Participants were prioritised into five employment groups: full time employed; part time employed; self employed; disabled/sick; and not in paid work. The prevalence of selected diagnosed chronic conditions (diabetes, asthma, arthritis, stroke, heart disease, high blood pressure and depression) was estimated for each group and their relationship to employment was explored. According to the *results* (see table 1); among participants in full time paid work, 6.7% had diabetes, 9.1% had asthma, 3.5% were treated for arthritis, 1. 6% had stroke, 6.9% had heart diseases, 32.7% had high blood pressure and 10.2% had diagnosed depression. Prevalence of these conditions was similar for those in part-time employment, although there was slightly higher prevalence for arthritis and depression. Self-employed people had similar prevalences, although the prevalence of arthritis was higher. Those who were not in paid work or were sick/ disabled had higher prevalences in all chronic conditions. The results suggest a strong relationship between chronic illness and employment participation by older workers and provide the basis for further detailed analysis of impact of these conditions across life course, particularly as people reach older ages. It is anticipated that these results will add impetus for a national action to reduce the chronic disease prevalence and to highlight the importance of creating working conditions favourable for ageing workforce.

	Full-time work (n=11,351)	Part-time work (n=6,256)	Self-employed (n=4,877)	Sick/Disabled (n=2,187)	Not in paid work (n=10,739)
Diabetes	756 (6.7%)	346 (5.5%)	262 (5.4%)	456 (20.9%)	866 (8.1%)
Asthma	1029 (9.1)	657 (10.5%)	432 (8.9%)	357 (16.3%)	1081 (10.1%)
Arthritis	397 (3.5%)	373 (6.0%)	217 (4.5%)	412 (18.8%)	766 (7.1%)
Stroke	100 (0.9%)	76 (1.2%)	54 (1.1%)	153 (7.0%)	178 (1.7%)
Heart Disease	782 (6.9%)	376 (6.0%)	336 (6.9%)	412 (18.8%)	728 (6.8%)
High Blood Pressure	3712 (32.7%)	1863 (29.8%)	1466 (30.1%)	987 (45.1%)	3793 (35.3%)
Depression	1155 (10.2)	916 (14.6)	466 (9.6%)	802 (36.7%)	1774 (16.5%)

HOW IS THE EXPERIENCE OF PAIN MEASURED IN OLDER, COMMUNITY DWELLING PEOPLE WITH ARTHRITIS?

DE LUCA, Katie[1], PARKINSON Lynne[1], BYLES Julie[1], BLYTH Fiona[2], POLLARD Henry[3]

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Background: There is a large and growing range of pain outcome measures in health care and research. These measures usually concentrate on location, intensity and duration of pain via verbal, numerical and visual analog scales. Questionnaires extend to cover the qualitative description of pain, individual response to pain and changes in behaviour due to pain. Outcome measures evaluate disease activity, discomfort, disability, damage and death. The choice of an outcome measure is dependent on the purpose of the instrument; the validity, reliability and consistency; responsiveness and the sensitivity to change. Osteoarthritis (OA) is a degenerative condition caused by the accumulative effect of 'wear and tear' on the joint. Repetitive mechanical stressors cause acute, localized inflammatory responses that result in the disruption of the joint surface. This destruction causes changes to the bone and surrounding

musculoskeletal structures, resulting in increased pain, reduced function and decreased quality of life. OA is the most common form of arthritis, affecting 1.6 million Australians. This project systematically reviewed the literature on how the experience of pain has been measured in population based studies of older, community dwelling people with OA. ***Methods***: Selection Criteria: Inclusion criteria included cohort/ observational and cross-sectional studies; specific diagnosis of OA; employed outcome measures of pain and/or health and/or quality of life which included questions about pain; considered older adults. Search Strategy: Five electronic databases using MeSH keywords. Quality Review: Articles will be reviewed for methodological quality using the Effective Public Health Practice Project Quality Assessment Tool for Quantitative Studies. ***Results***: 630 articles were identified in the search strategy. 170 articles were screened by title/abstract by two independent reviewers with 106 articles assessed for eligibility by full text. 50 articles have been included in the quantitative synthesis. Recommendations of appropriate outcome measures will benefit researchers assessing pain in people with arthritis.

SERUM INDUCED SIRT1 EXPRESSION IN OLDER MEN

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Circulating factors that have an effect on SIRT1 expression are influenced by caloric restriction. To determine the association between frailty and such circulating factors, we measured serum-induced SIRT1 expression from a nested cohort of frail (n = 77) and robust (n = 82) participants from Concord Health and Ageing in Men Project, a population-based study of community-dwelling men older than 70 years. Serum-induced SIRT1 expression was not different between frail and robust men (103.1 ± 17.0 versus 100.4 ± 19.3 μg/L). However, subsequent analyses showed that men with the lowest values (first quartile) were less likely to be frail (odds ratio = 0.5, 95% confidence interval = 0.2-1.0, p = .04) and had higher total body lean mass (p = .001) than the other participants. Serum-induced SIRT1 expression did not correlate with age, diseases, medications, albumin, fasting glucose, or lipids. Overall, there was no association between frailty and serum-induced SIRT1 expression; however, post hoc analysis suggested that there might be a paradoxical association between low serum-induced SIRT1 expression and robustness.

BEHAVIOURAL SMOKING CESSATION PROGRAMS TARGETED TO EDERLY PEOPLE: A SYSTEMATIC REVIEW

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Cigarette smoking is the leading cause of premature mortality among older persons. Older tobacco users have nearly double the mortality rate of non-smokers. Studies have shown that older adults can successfully quit smoking and do benefit from abstinence. Although 4.5 million older adults continue to smoke, few smoking cessation efforts have been directed at older smokers. Therefore, smoking cessation interventions need to take these groups into account. A systematic review was conducted of articles published between 1990 and 2011. The review Electronic databases including Medline, CINAHL, Cochrane Library, Web of Knowledge, PsychINFO and Scopus were searched and relevant published articles were identified. The review focused on randomized Controlled trials (RCTs) in which the specific effects of behavioural intervention on smoking abstinence among elderly people was examined. We also considered controlled studies with baseline and post-intervention measures. Studies of the association in behavioural intervention including minimal clinical intervention (brief advice from a healthcare worker), and intensive intervention, including individual, group, and telephone counselling were included. We used the most rigorous definition of abstinence in each trial, and biochemically validated rates where available. Data extraction was performed after articles were reviewed and interpreted. Twenty one articles were identified

that met the inclusion criteria. Ten studies (47.6%) increased smoking cessation among older smokers. Self -help materials plus brief telephone counselling were high frequency methods (twelve studies). In comparison with other behavioural intervention methods which are done among younger smokers, there were no studies that used group and social support methods to quit smoking among elderly smokers. Effective behavioural interventions can increase cessation rates by 1.2-60% compared with no intervention. Tailored materials and motivational interviewing had highest effect on smoking cessation. These results confirm that a wide array of effective smoking cessation intervention approaches may have a large positive impact on smoking cessation rates.

DEVELOPMENT AND PILOT OF A SURVEY INSTRUMENT FOR MEASURING PAIN IN OLDER WOMEN WITH ARTHRITIS

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Background: A pilot study is designed to test the methods and procedures prior to use in larger studies, and can reveal deficiencies in the procedure of the study to be addressed prior to the main study. The rationale behind this pilot study is to test a draft survey, constructed from a number of validated outcome measures on health, pain, arthritis and neuropathic pain, and assess the flow of questions, the ease of answering questions and the duration taken to complete the survey. The pilot of this draft survey will help to finalise a survey instrument for use in a future study on the profile of pain in older women with arthritis. ***Methods***: Design: A postal survey of women aged 60 years and over from the Hunter Medical Research Institute Research Register. Survey Development: The survey will ask participants about their experience of pain with questions developed from the International Association of the Study of Pain classification system, a series of systematic reviews of the literature, recommendations from the Osteoarthritis Research Society International and Outcome Measures in Rheumatology, and expert opinion. Questions will also include feedback questions. ***Results***: Summary statistics will be generated as frequency tables. Feedback provided by participants on the length of the survey and ease of answering the questions will guide finalising a survey instrument for use in a future study. Ultimately, this instrument will provide valuable information on the experience of pain, which has important implications in understanding the impact that arthritis has on the Australian population.

THE RELATIONSHIP BETWEEN DIET AND AGE-RELATED CHANGES IN LIVER SINUSOIDAL ENDOTHELIAL CELLS

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There is a long held, widespread understanding that eating fewer kilojoules (caloric restriction) results in a longer lifespan. However, recent studies suggest that the balance of macronutrients might also influence ageing. In this study we are exploring the detailed relationship between the balance of micronutrients and age-related changes in the microcirculation of the liver. Liver endothelial cells are perforated with pores called fenestrations (50-200 nm) which act as an important biofilter. Ageing is associated with a reduction in fenestrations called pseudocapillarization. In this study we have investigated the relationship between different diet compositions and age-related changes in endothelial fenestration. Livers from five groups of 15 month old mice fed lifelong with differing protein:carbohydrate:fat ratios (Diet A;5:75:20, Diet B;14:57:29, Diet C;23:38:38, Diet D;33:48:20, Diet E;60:20:20) were fixed and processed for scanning electron microscopy. 10 random micrographs of the liver endothelial cells were taken for each sample at 15000X magnification and analysed for fenestration diameter, frequency and liver porosity using ImageJ software.

Results showed a significant difference between all groups for average fenestration diameter ($p<0.001$) and liver porosity ($p=0.007$). Diet C, with the highest fat content showed the largest mean fenestration diameter (101.5 ± 3.6nm) while Diet E, with the highest protein content produced the greatest liver porosity ($4.55\pm0.38\%$). These results suggest that macronutrient composition is very important in determining fenestration morphology and hence the effects of ageing on liver function.

Peer Reviewed Papers

Session A

Pain and Chronic Disease

The assessment and management of pain in older people in acute care: What are the barriers and/or facilitators to the practice of nurses?
Joanne Harmon

Session B

Social and Experiential Dimensions

Representations of age and ageing in comedy film
Margaret Gatling

Successful ageing in Asia and the Pacific
Nicamil Sanchez

Advocacy in rural residential aged care facilities
Robyn Collins

Session C

Dementia and Depression

Choir therapy as a psychotherapeutic intervention for reducing depression in mid to later life
Kirstin Robertson-Gillam

Session D

Aged Care Workforce

The effects of personal and organisational resources on eldercare strain: A longitudinal study
Claire Greaves

Battle of the decades: Generational differences in the retention of Australian aged care employees
Katrina Radford

Session E

Evidence-Based Practice

Validation of decision support software for identification of drug-related problems in home medicines reviews
Colin Curtain

Session F : Housing and Resources

Equity release products allowing for individual house price risk
Adam Wenqiang Shao

Retirement and asset allocation in Australian households
Megan Gu

Transportation—implications of accessibility for older people
Elisabeth Zeitler

The effect of tax incentives on participation in salary sacrificing into superannuation
Jun Feng

Session G : Health Service Use and Planning

Understanding the social determinants of older men's health
Luckman Hlambelo

Modelling demand driven provision of formal aged care to baby boomers in Australia
Sarah Yu

Making an impact on ageing from space: A multidimensional approach
Hamish Robertson

Session H : Family and Carers

Literature Review: The cultural caregiving impact for Taiwanese caregivers with dementia patients
Wu (Chloe) Shunting

THE ASSESSMENT AND MANAGEMENT OF PAIN IN OLDER PEOPLE IN ACUTE CARE: WHAT ARE THE BARRIERS AND/OR FACILITATORS TO THE PRACTICE OF NURSES?

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Abstract
The prevalence of older people experiencing pain within acute care settings is an area of concern. Older people have high hospital admission rates; increased length of stay and high levels of pain (Herr, 2010). Of particular significance is that many of these older people are also likely to have either a temporary or permanent cognitive impairment (Draper, Karmel, Gibson, Peut, & Anderson, 2011; Seeher, Withall, & Brodaty, 2011). Current research regarding nurses' practices in relation to pain assessment and management for adult inpatients in acute care reports a consistent pattern of under assessment and inappropriate management of pain (Dunwoody, Krenzischek, Pasero, Rathmell, & Polomano, 2008; Ene, Nordberg, Bergh, Johansson, & Sjostrom, 2008; Herr, 2011; Tait & Chibnall, 2002). This paper will discuss the barriers and facilitators relating to the assessment and management of pain in older people. This discussion will focus on the findings of a systematic search and a critical review of the literature. The findings will be presented thematically based on an organisational framework by Schien (1992, 2010).

Background
The aim of this literature review is to explore the impact of nursing culture on the clinical practice of nurses when they are assessing and managing pain in older people in the acute care setting. The research questions underpinning this review are;

1. What aspects of nursing culture impact on nursing practice during pain assessment and management of older people in acute care?
2. What are the culturally mediated facilitators and barriers to practice?

Rationale

The organisational framework developed by Schien (1992, 2010) asserts a culture within an institution is learnt by experience based on socialisation leading to a proscribed way in which members will act, find meaning and get along with others within that setting. The result is the formation of a sub-culture that will respond to a contextual situation based on a set of *'social rules'*. In order to gain understanding of these social rules requires exploration of the artefacts within the setting, beliefs and values held and shared assumptions (Schein, 1992, 2010). The result is knowledge about the sources of influence based on the social rule formation of a sub culture, which although not dependant on an individual's action, will be learnt, perpetuated and replicated by interaction of individuals within the subculture as a whole (Glaeser, 2005; Murchison, 2010).This allows prediction to occur of the influences impacting on an individual which explains why or how they responded to a defined situation. Developing understanding about care delivery by nurses within acute care can help anticipate care behaviours not only in that group - but also within other geographical locations of that subculture as well (Gobo, 2008).

Methods
A systematic search of literature in CINAHL, EMBASE, SCOPUS and Web of Science databases was conducted by using 'free text searching', 'MESH' terms (where supported), 'subject headings using boolean operators of 'pain, assessment, management, acute care, and older people'. The limits applied were English, and articles located outside of acute care. The date range for the search strategy was 1996 to 2012. In total 190 articles were assessed for relevance by reading the abstract and opportunistic searching within the references resulted in an addition of two more studies for inclusion. The total number of articles included in the review was twenty (Albarran, Clarke, & Crawford, 2007; Anderson, Burman, & Skar, 2011; Bowman, 1997; Brown & McCormack, 2006; Closs & Briggs, 2002; Coker, et al., 2008; Dihle, Bjalseth, & Helseth, 2006; Esson, 2007; Idvall, Bergqvist, Silverhjelm, & Unosson, 2008; Joelsson, Olsson, & Jakobsson, 2010; Kim, Schwartz-Barcott, Tracy, Forthin, & Sjostrom, 2005; Manfredi, Breuer, Meier, &

Libow, 2003; Manias, Botti, & Bucknall, 2002, 2006; Manias, Bucknall, & Botti, 2005; Manias & Williams, 2007; Rejeh & Vaismoradi, 2010; Rustoen, Gaardsrud, Leegaard, & Wahl, 2009; Spilsbury, et al., 2007; Willson, 2000). The quality of each paper was assessed using the McMaster Critical review form for qualitative studies and guidelines (Letts, Wilkins, Law, Stewart, Bosch, & Westmorland, 2007). The qualitative studies lacked detail regarding descriptive clarity about data collection procedures, however, analytical rigor of the data analysis undertaken was high (Letts, et al., 2007). Only the study by Spilsbury et al (2007) undertook a systematic search of the literature and none of the papers undertook a critique of the literature.

Results

The main identified belief about pain held by acute care nurses is that they can determine the actual level and amount of pain that a person has, based on their subjective interpretation of how a patient looks and a typology of the procedure that they underwent (Joelsson, et al., 2010; Kim, et al., 2005; Manias, et al., 2002; Söderhamn & Idvall, 2003). Certainly nurses will under estimate pain and when compared to the patient's own rating, a patient will rate their pain higher (Coker, et al., 2008; Idvall, Berg, Unosson, & Brudin, 2005; Joelsson, et al., 2010; Shugarman, et al., 2010). Studies have also identified that patients themselves believed nurses were too busy for them to discuss their pain with, (Joelsson, et al., 2010; Rejeh & Vaismoradi, 2010) and they did not view nurses as providers of pain management (Rustoen, et al., 2009). Similarly Anderson et al (2011) identified that older people developed an assumption that regardless for what they asked for when in acute care, they would have to wait. Although the older patients acknowledged that nurses had duties to attend to, they felt that this did not assist them much when they needed help themselves and as a result were left feeling frustrated (Anderson, et al., 2011).

The values that a person holds or adheres to will involve a higher set or level of consciousness than a basic assumption. They are best described as what a person will say that they will do - rather than what is actually done in that situation when the espoused values should be operating (Carspecken, 1996; Schein, 1992, 2010). How much value a nurse places on the actual process of assessing and managing pain will influence how it is conducted (Dykes, 2003; Wikberg & Eriksson, 2008). In the observation studies by Manias et al (2002) & Manias et al (2005) of nurses in clinical practice, it was noted that a time delay would occur between the request by a patient for analgesia and the actual receiving of pain medication. The reason for this was proposed by Manias, et al (2005) and Manias, et al (2002) as being that nurses did not place a high value on performing this task, despite stating otherwise during the follow-up interview.

Assumptions are often invisible or implicit, they are used to guide the behaviour of a group to direct the behaviour on how to perceive, think or act when placed in a situation (Schein, 1992, 2010). It is known that in the initial period of days after surgery will be when pain is the most intense for patients, therefore this is when they are at most risk of experiencing a pain crisis (Gunningberg & Idvall, 2007; Joelsson, et al., 2010). A nurse's assumption for how to intervene in a pain crisis situation for a patient was identified by the Brown & McCormack (2006) study, who noted that nurses used a series of functional task completions to provide uncomplicated management of pain. However, they did not have an array of strategies available to cope with a situation of uncontrollable or problematic pain (Brown & McCormack, 2006). This assumption by nurses that all patients will have an unremarkable period of pain post surgery was also highlighted by Joelsson et al (2010) and Manias et al (2005). Although Manias et al (2005) noted that once the nurse is confronted with a situation of uncontrollable pain in a patient, nurses are proactive but the response is delayed.

Artefacts involve all the phenomena that one can see and hear in a culture used within their context. In this case, it will refer to modes of communication and language used by nurses in acute care for assessment and management of pain (Schein, 1992, 2010). How nurses speak to patients when assessing their pain and how the patients responded was the subject of the study by Closs & Briggs (2002). These authors compared patients descriptions with the McGill pain questionnaire, and found that patients relied on verbal descriptors or analogies in order to describe their pain and its intensity. Closs & Briggs (2002) also identified that patients will also use an array of sensory vocabulary for pain intensity, conversely they would characterise discomfort by describing the cause (Closs & Briggs.,2002). However, the language used by nurses to the patients was found to be completely dissimilar (Closs & Briggs, 2002) and this was also noted in the study by Manias et al (2006). Typically the nurses relied on simple direct questioning involving statements like 'how is your pain' or 'do you need anything for your pain' (Closs & Briggs, 2002; Manias, et al., 2006).

The process of care delivery in acute care is based on ritualised and routine based functional tasks. The main example of a ritual within acute care is the round with a medication trolley, which numerous studies have identified as a prioritised event (Brown & McCormack, 2006; Dihle, et al., 2006; Harmon, 2010; Higgins, Slater, & Peek, 2007). The study by Wilson (2000) noted that a major constraining factor of administration of analgesia was the formal set times of the drug round, as this was the time when pain relief was administered. This was also identified as an issue within the studies by Manias et al., (2002) and Manias et al., (2007). Although the administration of medications is an essential component of an acute care nurses' task, numerous studies have noted that if the patient indicates that they have pain, any intervention will not be prioritised over the completion of the set task being undertaken (Brown & McCormack, 2006; Dihle, et al., 2006; Harmon, 2010; Manias, et al., 2002; Manias, et al., 2005).

Implications for Policy and Practice

The literature clearly indicates the presence of culturally mediated barriers regarding the conduct of pain assessment and management within acute care. The most common reason for unrelieved pain is the failure of health care providers to systematically assess and treat it (Herr, Bjoro, Steffensmeier, & Rakel, 2006). What is not understood are the reasons for why this is still occurring. This paper has offered a novel approach for looking at the problem from a different perspective. It is noted that the main criticism of using Schien's (2010,1992) organisational framework in this manner is that professional behaviour exhibited by an individual is being viewed from an etic or outsiders view (being a perspective of institutional interactionism), rather than a true insiders or emic view (Bloor, 2001; Pollner & Emerson, 2001).

Summary

Although useful for a thematic framework for exploring the literature, an emic viewpoint is required. The use of ethnography for exploration of what aspects of nursing culture will impact on pain assessment and management of older people in acute care, and what are the culturally mediated facilitators or barriers to practice, is the focus of a PhD study by the author.

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REPRESENTATIONS OF AGE AND AGEING IN COMEDY FILMS

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Abstract
With the twin considerations of an age expectancy of around 85 years and the arrival of the baby boomer generation at the threshold of 'old age,' ageist attitudes and their consequences have the potential to negatively affect the lives of a growing numbers of people. Negative attitudes about ageing and older people can result in behaviours which are hurtful, discriminatory and deleterious to the health and well-being of the elderly. It has been demonstrated that exposure to negative depictions of age and ageing in the media, particularly on screen, has a pejorative effect on viewers attitudes to older people. This paper is indicative of a wider thesis which examines a number of popular comedy films to consider how age and ageing are depicted in a genre which attracts a diverse audience because of its ability to comfort, relax and cocoon viewers, at least temporarily, from the everyday anxieties of their lives. The images and language used by and about older characters are examined using the approach of Critical Discourse Analysis in order to reveal evidence of cultural hegemony, whereby the interests of the young and beautiful are privileged and those of older people are devalued.

Rationale
Ageism as a word to fit a concept was coined by Dr Robert Butler in 1969 and describes prejudice based on age mainly affecting older people rather than youth. Such prejudice is in itself an abuse and lies at the root of physical, sexual, emotional and financial exploitation of older people. Butler in a Declaration of the Rights of Older Persons states that older members of society are "often treated in cruel and inaccurate ways in language, images and actions" (2002, p. 152). It is the images, specifically the cinematic representations, of older people that are the focus of interest in this paper.

Research over a number of decades has shown that there is a nexus between what is viewed in film and television and the development of opinions and beliefs by viewers (Anderson et al., 2003; Gerbner & Gross, 1976). Much of the study into the influence of film and television on attitudes and behaviours has been related to depictions of violence. Gerbner's work led to the development of Cultivation Theory, which contends that the more frequently something is depicted on television the more likely that viewers will come to believe it is true. The work of Gerbner et al (1980) also examined television representations of age and ageing. Their research came to the conclusion that viewers who watch television frequently believe that the elderly are unhealthy and poor without even a sex-life to cheer their existence. Furthermore television represents this state of affairs as commencing earlier for women than men and in television world, as opposed to the real world, men live longer than women.

Inaccurate and misleading representations of ageing have a pejorative effect on the quality of life of older people. Stereotyping characteristics of older people has been shown to have an effect on health, self-confidence and employment opportunities. For example, one study demonstrated that when older people were told that they are likely to have poorer recall of facts and events than younger people there was a measurable decline in memory (Hess, Auman, Colcombe, & Rahhal, 2003). Employers appear to be particularly susceptible to being influenced by myths about ageing. Fears that older workers are more prone to taking sick leave and are slow to learn new skills has reduced the employability of the 'over 45s' despite government campaigns to encourage the baby boomer generation to delay retirement or even return to the workforce.

Exposure to ageist stereotyping in the media may be the genesis of the ageist attitudes and behaviours so endemic in western thinking. In particular, comedy film is a bastion of stereotypes of all kinds, and while acknowledging that humour offers relief against suffering and oppression it also encompasses *Schadenfreude* – laughing at the misfortunes of others. In the case of stereotyping of older people the misfortune appears to be that they are ageing and consequently saddled with apparently hilarious characteristics such as dribbling incontinence; loss of hearing, teeth, hair and sexual function; a tendency to speak in a high pitched querulous voice; a dependency on mobility aids of all kinds, a distrust of technology particularly mobile phones and a general air of irascibility, eccentricity and confusion. Because comedy as a genre is a vehicle for satire, parody, hyperbole, the ludicrous and the outrageous, almost 'anything goes' because what it portrays is generally accepted to be not real, not serious and 'only a joke'. It is under the guise of humour that stereotypes gain acceptance and therefore it is comedy films that have been selected as the focus of a study into the representation of age and ageing.

Methodological Approach
Critical discourse analysis (CDA) is not considered by its champions to be a methodology so much as an approach to finding meaning in the discourses which we employ in communication, entertainment, education and all other aspects of living. CDA is a transdisciplinary approach crossing the boundaries of politics, linguistics, education and sociology. Van Dijk, who prefers the term critical discourse *studies* (CDS), says that 'CDS is not a method but rather a critical perspective, position or attitude….'(2009, p. 62). In using CDA to critique comedy films it is possible to examine the films' data: semiotics of language, visual images, sound track, and metadata (marketing, DVD covers, posters and reviews) to uncover messages about age and ageing that maybe inaccurate, unappealing and can lead to the development of ageist views and a fear of ageing. CDA as an approach does not distance itself from the object under scrutiny. On the contrary, CDA challenges the text in order to expose an underlying cultural hegemony whereby those in power subtly, or not so subtly, influence readers, listeners or viewers (Fairclough, 2010; Locke, 2004; Wodak & Meyer, 2009). The purpose of CDA is to confront assumptions which have become widely accepted 'truths' with the intention of raising awareness that there may be an alternative view. Some researchers who work with a broader range of texts such as photos, films, music, prefer the term multimodal critical discourse analysis (MCDA), which has additional specific tools for the systematic analysis of the object of interest. As the two approaches are closely allied and CDA is the umbrella term for discourse analysis which is critical in nature, CDA is nomenclature used in this paper.

Method and Research Questions
In the larger study currently being undertaken, comedy films have been selected based on classifications in the Internet Movie Database (IMDb). The IMDb comedy film database was searched and if the name of the film or synopsis included reference to aspects of ageing, the film was considered for inclusion in the study. For the purpose of this paper Disney's *Old Dogs (Becker, 2009)* has been selected.

After viewing the film multiple times it was identified that the aspects of ageing appearing most frequently in the film are decreased mobility, impaired health and reliance on medications. Two scenes in which these themes underpin the language and action were selected for closer scrutiny. Using principles of CDA, the question asked is what linguistic and semiotic devices are employed to shape the representation of age in the selected scenes?

Data Analysis
This movie is, according to the DVD cover, a 'hilarious family comedy'. The opening aerial shots are of green, lush Central Park and chic Manhattan, signalling that this not a movie about struggling families in depressed urban battlefields, rather this is a film where the lifestyle of the characters is likely to be aspirational. Children may wish to identify with children in this movie with its upmarket apartments, sunny weather, expensive cars, and lavish birthday parties. The two main adult characters, Charlie and Dan are single, middle aged men in their 50s. They are business partners and their lifestyles indicate that they have enjoyed financial success in their ventures, however, as a vehicle for humour in this film, both men struggle with ageing particularly in relation to health and fitness. The opening credits unfold as a series of photos providing a chronology not only of the length of time the two men have been friends but also the development of their business partnership and pictorial history of the ageing process. The viewer witnesses Charlie changing from a slim teenager into a thickset, jowly middle aged man. Dan's physical appearance has changed even more dramatically: the quirky, long-haired youth has become by degrees conservatively dressed, greying and stiff limbed.

The theme of loss of function begins in the opening scene where the two men are walking with Charlie's elderly dog through Central Park. The context is related to exercise with the men dressed in tracksuits. Children are playing ball around them and two young attractive women jog towards them. Charlie is particularly keen to appear fit and virile in order to impress women. On his warning signal of 'girls girls girls', the men break into a run while Charlie calls out 'ten miles!'. The women pass by seemingly oblivious to this display of male prowess. Invisibility is a theme in representation of ageing on screen with older women particularly conspicuous by the absence. Being invisible while actually being present indicates that as two middle-aged men, Charlie and Dan are uninteresting, unimportant and consequently absent.

A clicking sound which Charlie attributes to the dog's elderly legs is identified by Dan as coming from his own knees. Dan's physical decline is matched by his lack of coordination when he inadvertently kicks a ball full into the face of a small boy. The boy reproachfully calls him a 'monster' and the other children are amazed at this display of incompetence. Thus in the opening scene, middle age is linked to a discourse of reduced fitness levels, arthritic knees, invisibility to the young members of the opposite sex and the scornful derision of children.

The premise of the film is that Dan unexpectedly finds himself to be the father of seven year old twins whom he has to look after with the help of Charlie while the children's mother is away. In a second scene which links middle age with failing physical function they are mistaken for the children's grandparents at a restaurant and Dan's protests at this error are undermined by the large damp patch on his crutch which is the result of a spilt water glass. The waitress appears to think that urinary incontinence is common in a man in his 50s and this view is supported by a fellow diner, a member of the 'Grandparents Club', who says that a glass of water 'gets his pump going too'. Urinary incontinence is not a normal part of ageing, but under the cloak of comedy it becomes one of the descriptors for a stereotype of older people. In a contrast to Charlie's warning 'girls girls girls' to describe adult women in an earlier scene, Charlie and Dan find themselves being described, in a song performed by restaurant staff, as 'seniors, seniors, seniors!' The effect is to expand the age divide between the attractive young people and these two faux grandfathers.

The term 'grandparent' is invested with more meaning than relational in a family structure. To members of the 'Grandparents Club' it appears to be a term to proud of, to denote elder status and indicate that a family has produced yet another generation, however, it is commonly used in Western cultures as a pejorative term for older people. Dan is acutely aware of this in this scene and attempts to distance himself from its association with age. His discomfort is no doubt heightened by an incident which occurred in the preceding scene where an irate driver calls Dan 'grandma' on account of his slow driving speed.

To summarise this brief look at two scenes from *Old Dogs,* the representations of ageing in this film relate to middle aged men who are depicted as having deteriorating health, a lack of fitness and being on a slippery slope towards old age. Given this gloomy scenario it comes as somewhat of a surprise and an incongruity in the discourse of ageing represented in this film that, fast-forwarding a year, as the closing credits roll we see that Dan has wooed an attractive younger woman and is the father of a three month old baby. There is indeed life in this old dog yet.

Summary

With life expectancy now reaching mid 80s and a contraction of pension and superannuation funding forcing the retirement age upwards, it is essential that the present baby boomer generation and following generations do not suffer from ageist attitudes which destroy their self-confidence, rob them of their health and impede their chances of employment. It is equally important that the preceding generation who have already retired, who may already be recipients of healthcare and may be living in aged care facilities, do not encounter discrimination and humiliation based on their age. Analysis of the messages embedded in the discourses of age and ageing in entertainment, particularly comedy film, exposes the inaccurate and unjust representations which feed the stereotypes at the heart of ageism. Comedy films which rely heavily on stereotyping and are pitched at a family market risk enculturing young audiences with inaccurate ideas about particular groups in society.

In critically analysing texts to uncover how certain groups are privileged over others and how injustices can continue unchecked because they are hidden in the accepted discourse of everyday life, a researcher attempts to identify the group to whom agency is attributed. Who is responsible? In comedy films where age and ageing are represented in inaccurate and unflattering ways, agency appears to reside in the film maker. In the case of *Old Dogs*, I suggest that rather than Disney having an ageist agenda, the filmmakers are tools of an industry which profits from offering to the public cheap laughs at the expense of reinforcing myths of ageing.

In critiquing the discourse of ageing in comedy film, the intention is not to be a 'kill joy' preventing viewers from laughing at aspects of ageing. Censorship is not the aim, the intent is to alert and remind viewers that everything on the screen is seen through the director's lens and even in cinema vérité or a documentary every shot is edited. Incorporating media literacy and awareness into school and university curricula would equip viewers to watch films through a critical lens and to question representations of ageing. It could ultimately be a personally beneficial process because as one researcher has noted "ageism is a strange case of prejudice against the older you" (Nelson, 2011, p. 37).

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SUCCESSFUL AGEING IN ASIA AND THE PACIFIC

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Abstract
This paper discusses the existing literature on Successful Ageing in Asia and the Pacific region and identifies the limiting and facilitating factors toward its attainment. Successful Ageing is a widely studied concept, but while it encompasses the World Health Organization's definition of health as well as the concept of active ageing and society of all ages, until now there is no universally accepted definition. This paper provides a comprehensive review of literature on successful ageing from 1999 until 2011 in countries located in Asia and the Pacific that are published in scholarly journals. This study identifies the emerging limiting and facilitating factors associated with successful ageing in countries located in three major geographical areas in the region namely: Southeast Asia, East Asia and Oceania. The findings suggest the need for more study on successful ageing in the region that focus on factors that facilitate or limit attainment of successful ageing. The multi-cultural and socio-economic background of each country in the region influences the common key factors and differences which needs further cross cultural studies. Lastly, there is a need to encourage researchers from developing countries and small island states to develop their own concept and study on successful ageing that could serve as their reference in developing and enhancing models of care, program intervention, and policy that will be responsive to the needs of their ageing population.

Rationale
Asia and the Pacific is the fastest growing ageing population in the world with 3.9 billion people that includes countries from East Asia, Southeast Asia, Oceania and home to the fastest growing elderly population (United Nations Population Fund, 2011). This demographic change is seen as both a positive development as well as a challenge for the older person to age successfully (Harper & Leeson, 2008; Moen, Dempster-McClain, & Williams, 1992; Strawbridge, Wallhagen, & Cohen, 2002). According to Depp and Jeste (2006), successful ageing is the widely used concept which has twenty nine different definitions but is short of having a universal accord. Defining successful ageing is widely influence by demographic, health and social economic variables, while Hughes and Heycox (2010) suggests the importance of self-perception and most scholars assert that it is about maximizing the desired outcomes by engaging older persons in community and family activities (Crowther, Parker, Achenbaum, Larimore, & Koenig, 2002; Jeste, 2005; Kendig, 2004). Given that successful ageing is the most commonly used term, and a majority of the studies are based on North American elderly population (Peel, Bartlett, & McClure, 2004), and our knowledge continues to be based on Western studies (Kendig, 2004). Since the Asia Pacific region is home to the largest number of older person and the need for more study on successful ageing in each country within the region given its multi-cultural context, it is also important to highlight and build on the existing research on the key factors associated with successful ageing in Asia and the Pacific. Lastly, there is a need to acknowledge the demographic, cultural, and socio-economic differences among countries within the region which influences the factors of successful ageing.

Methods
The following databases: www.scholar.google.com and EBSCohost were used to search for the following terms: Successful Ageing, Age Successfully, and included Asia and the Pacific or Asia Pacific Region, and the list of countries in the region. Next, we used the "related articles" function and examined reference lists from published articles to obtain additional papers. We restricted this search to only those articles that were published in English in peer reviewed journals that met the following criteria: 1) reported quantitative or qualitative data or mixed methodology, and 2) with 60 years old and above respondent.

Findings
There is a total of 22 peer reviewed papers on successful ageing included in the findings which were chosen based on the above criteria, and importantly, the study was conducted in any country located in Southeast Asia, East Asia, and Oceania.

Southeast Asian Countries
In the comparative study of Lamb and Myers (1999) in three Asian countries (i.e. Sri Lanka, Thailand and Indonesia), being in the young old category 60-64 years old and male, ability to manage one's money, and those who surpass life expectancy are the facilitating factors in the attainment of successful ageing, while having two or more morbid conditions in Sri Lanka, unskilled workers in Indonesia, and poor cognitive

health have been identified as limiting factors. While a study in Malaysia strengthens the finding that poor, oldest old, elderly women, and unmarried women are at risk in experiencing low psychological well-being which limit the attainment of successful ageing (Momtaz, Ibrahim, Hamid, & Yahaya, 2011) . In another study in Singapore, psychosocial factors like having a positive attitude, adaptability, spirituality, and nutrition are salient factors associated in the attainment of successful ageing, while less emphasis is given on longevity, genetics, absence of disease or disability, function and independence as facilitating factors among Chinese elderly populations (Ng, Broekman, Niti, Gwee, & Kua, 2009).

East Asia

In Shanghai, China, 95% of elderly subjects aged 65 or above, mostly male, attain successful ageing, the rate is much lower among those aged 85 years or over which they used Mini-Mental Status Examination (MMSE), Independence of Activity of Daily Living (IADL) and life satisfaction index (Li et al., 2006). The most common variable is chronological age being young old, and gender or being male, as the main factor associated with successful ageing among older populations in major cities like Shanghai (Chung & Park, 2008; Hsu, Tsai, Chang, & Luh, 2010; Jang, Choi, & Kim, 2009; Li et al., 2006; Momtaz et al., 2011). Also, (Jang et al., 2009) identifying low socio-economic status as the main limiting factor, while in another study in Korea by Chung & Park (2008, p. 1071) found that "success of adult children is an important factor for low-income Korean older people" and in the follow-up study, financial statue or personal success are not considered as limiting factors in the attainment of successful ageing, which contradicts the general findings from western and other Asian countries (Chung & Park, 2010). Meanwhile, in Taiwan health status, a healthy lifestyle and those who exercise regularly and eat vegetables (Hsu et al., 2010; K.-L. Lee, Ou, Chen, & Weng, 2009), and those who are socially active are the key facilitating factors in the attainment of successful ageing (Chiao, Weng, & Botticello, 2011; Hsu et al., 2010). In another qualitative study by P.-L. Lee, Lan, and Yen (2011) they identify leisure activities as a significant facilitating factor in the attainment of successful ageing which is relevant for both female and male older populations. Meanwhile the longitudinal study of Hsu (2005), identifies cumulative disadvantage associated in elderly women, depressive symptoms, and lack of engagement as the limiting factors toward attainment of successful ageing among Taiwanese elderly women. Lastly, the findings in Okinawa, Japan, which is home to the most number of centenarians, highlighted productivity and active engagement as the key facilitating factors. While occupational and financial problems are most frequently mentioned by men, women frequently mentioned family problems and distress in human relationships as limiting factors in the attainment of successful ageing (Willcox, Willcox, Sokolovsky, & Sakihara, 2007).

Oceania

In Australia, (Jorm et al., 1998) identified age, or being 70 years old and below, male, healthy lifestyle, and with higher verbal intelligence, facilitates attainment of successful ageing among older person. This finding highlighted the importance of continuing learning of older persons in Australian society. In connection, factors associated with unsuccessful ageing are health condition, disabling effects of stoke and fractured hip, increasing difficulties with daily tasks, and being categorize as old -old. In the recent findings, a stronger sense of self, better verbal and abstract reasoning ability, and proficient memory are considered emerging facilitating factors toward the attainment of successful ageing among Australian older populations (Andrews, Clark, & Luszcz, 2002). This supports the findings of MacArthur's studies which is the most influential study on successful ageing and which identifies chronic health conditions such as diabetes, heart attack, stroke, and hypertension, depressive symptoms as limiting factors that are strongly associated with the decline in cognitive performance and impairment of older populations (Chodosh, Kado, Seeman, & Karlamangla, 2007). The study of successful ageing was expanded by the late Gary Andrews in South Australia and was used by the Australian government in formulating their policy and program, and until now, is used by leading research universities given the multi-dimensional approach in the study of older persons. Meanwhile, the qualitative research conducted in Auckland, New Zealand identified the concept of social space or attachments to their homes and neighbourhoods, and extensive participation of older persons contribute in maintaining a sense of identity and well-being and promotes successful adjustments in old age (Wiles et al., 2009). In another qualitative research (McCann Mortimer, Ward, & Winefield, 2008), it suggests that well-being and social support are associated with facilitating factors like spiritual and religious affiliations of older women and identifies emerging factors like agency, social value and quality of life/quality of death or successful dying.

Discussions

Studies on successful ageing from countries in Oceania, Southeast Asia and East Asia, which are situated in Asia and the Pacific region, provide an overview on the limiting and facilitating factors that contributes in the attainment of successful ageing. Given the different criteria and methodology utilised in measuring successful ageing in older populations, it highlighted common facilitating factors like age (young old),

gender (male), physical health, socio-economic status, and positive attitude. In addition, the most common limiting factors associated with unsuccessful ageing are being female, age (old-old), chronic condition, physical inactivity, and lower socio-economic status. It is also important to note the emerging facilitating and limiting factors that are an important contribution to the multi-dimensional construct of successful ageing. The most notable emerging facilitating factors are productivity in old age, good relationships, social connection, level of intellect and religion, while cognitive decline and chronic condition as the emerging limiting factors. The emerging limiting and facilitating factors differs from each country within the region but there are also similarities that are identified in western societies.

Most of the studies on successful ageing capture the perspective of the community dwelling older person, it is interesting to know the factors of successful ageing from the perspective of the older person in residential institutions. Moreover, caution should be exercised in generalising the factors since most of the studies have been conducted in developed countries where the government ensures universal access to medical and welfare services. In addition, most of the participants are relatively healthy volunteers living in urban areas like in Seoul, Shanghai, and Taiwan that were recruited through convenience or snow-ball sampling methods (see Chung & Park, 2008; Hsu et al., 2010; Li et al., 2006). According to Depp, Vahia and Jeste (2010), older persons with low educational and economic resources may be less likely to participate in these studies. Also, most of the studies have not taken the perspective of rural, poor older person and elderly victims of calamities. In addition, the existing literature within the Asia and the Pacific region does not reflect the factors associated in ageing successfully from least developed and developing countries and small-island states, except in Sri Lanka, Thailand and Indonesia. Given the rising degenerative and chronic conditions, at the same time communicable diseases that are still existing in least developed countries, the multi-dimensional construct of successful ageing could serve as a guide in developing and enhancing effective policy and programs to address the holistic needs of the older person in each country within the region. It is now high time that each country should formulate their own construct of successful ageing and conduct an in-depth study to expand and expound the facilitating factors, and minimize the limiting factors, toward addressing ageing issues and challenges of the present and of the future. Overall, the facilitating and limiting factors identified does not reflect that situation of the entire region, which (Seeman, Lusignolo, Albert, & Berkman, 2001) suggested to look at the potential impact of social environment, and contribution of informal social network (Cowgill & Olen, 1986), and Depp & Jeste (2006) suggested to draw strength from cultural backgrounds as an important variable in understanding the factors of successful ageing.

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ADVOCACY IN RURAL RESIDENTIAL AGED CARE FACILITIES

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Currently, approximately half of all Australians over 65 years of age require some form of assistance to manage their activities of daily living. It is estimated that around 5.3% of the Australian population receive care in one of 3000 formal residential aged care facilities (RACF). Most of these residents (70%) are receiving high level care. While approximately 150,000 Australians currently reside in RACFs, this figure is expected to rise dramatically as the percentage of the population over 65 years is predicted to almost double by 2047.

Provision of future residential aged care services/programs will need to accommodate increasing community expectations to meet the needs of older people in ways that are flexible, responsive and considerate of Australia's cultural diversity. As these trends emerge, the importance of advocacy on behalf of those people in RACFs becomes increasingly more evident.

Formal advocacy services are largely absent in rural areas. In rural RACFs, advocacy becomes the responsibility of families and significant others of residents. Advocacy provides residents, through their families and friends, with a voice that they otherwise might not have, ensuring that the services they receive are consumer-oriented and tailored to their individual needs. It is this advocacy that ensures appropriate attitudes to elders and their roles / status within their culture and community.

This paper discusses rural RACF advocacy and collaboration as perceived by family members and significant others of residents within rural settings (RACFs) of Gippsland, Victoria. The importance of this study is in its impact on the promotion of improved collaborative practice within RACFs generally.

Rationale

In 2011 the Productivity Commission released its long-awaited final report, 'Caring for Older Australians' (Commonwealth of Australia, 2011) in response to a rapidly ageing Australian population over the next 30 years. The report identified the need for policy-makers to demonstrate financial responsibility in planning systems of care that are responsive to the needs of this changing demographic.

Planning for future population ageing will need to incorporate not only a sufficiency of community based aged care packages but also enough residential aged care facilities to meet the increased demand caused by population ageing, with these facilities being staffed with appropriately qualified nurses and carers. Additional strategies to aid the caring process include those which focus on the importance of family involvement. Such measures are both beneficial and reassuring to older people and their families, while still ensuring that all aspects of an elderly resident's needs are met appropriately (Haesler, Bauer, & Nay, 2007).

Families have demonstrated or expressed a desire for increased engagement by having a greater voice in the decision-making and care-planning process; meeting the social and psychological needs of their relatives and assisting with some personal hygiene tasks as they would have done if the older person was still at home (Bauer & Nay, 2011; Haesler et al., 2007). Increased engagement of families has the added benefit of reducing potential marginalisation of those residents who are no longer able to articulate their wishes to staff members. Indeed, this does already occur to a degree in some RACFs. Evidence shows that those places where family and person-centred care are the models of choice for the facility, enhanced communication and mutual positive experiences impact favourably on the general wellbeing of residents (Bauer et al., 2009; Douglas, 2010; Haesler et al., 2007). Generally speaking however, family care-giver and professional care-giver relationships and interactions are commonly considered to be both complex and stressful (Ward-Griffin & McKeever, 2000). International research shows that many families of elderly residents in RACFs find the aged care staff/family relationship somewhat problematic, thereby (potentially) impacting on resident care and well-being (Haesler et al., 2007; Shield, Wetle, Teno, Miller, & Welch, 2010).

Well recognised by aged care advocacy groups (Bauer et al., 2009; Commonwealth of Australia, 2011), residents in the aged care environment are often amongst the most powerless members of society. Further, their illness, frailty or impaired cognition may considerably hamper their ability to "… shop around and make

untrammelled choices in a marketplace of care choices … and are rarely in a position to take their custom elsewhere" (Biehal 1993, in Bateman, 2000, p. 41), thereby highlighting the importance for others to advocate on their behalf.

Current trends in Australia do appear to be moving towards a model of greater family involvement and collaborative practice in RACFs. However, such collaboration and advocacy is not routinely accepted by those involved. RACF staff describe some families as intrusive, interfering and demanding, while family care-givers voice concerns in relation to power and control by facility staff (Bateman, 2000; Bauer et al., 2009). Evidence suggests that many families desire a greater degree of communication, guidance and companionship from health professionals but feel let down and disappointed in this regard (Hennings, Froggatt, & Keady, 2010, pp. 124-125).

The majority of residents in care homes experience some degree of cognitive decline. These people may have limited ability to effectively advocate for themselves in relation to their care. Families, significant others and care staff often assume the role of advocate on behalf of residents in RACFs to ensure that care given, both in physical tasks and emotional support, is adequate, timely and acceptable to the resident (Haesler et al., 2007; Shield et al., 2010; Ward-Griffin & McKeever, 2000). In metropolitan areas families have access to formal advocacy services from which they can seek advice (Department of Health and Ageing, 2010). Such opportunities are quite limited in rural areas, further complicating the issues and adding additional burden to families, many of whom are already impacted by isolation and distance (Lord, 2011). Older people living in RACFs throughout Australia have the right to advocacy support (Department of Health and Ageing, 2010).

There are many types of advocacy, including self-advocacy, legal and human rights advocacy, and citizen advocacy. In the context of this study, the discussion revolves around personal advocacy, which is where an (usually) unpaid person (in this instance most often a family-carer), understands, responds to and represents the interests of another person as if those interests were the advocate's own (O'Brien 1987, in Bateman, 2000). These decisions are based on the intention of protecting vulnerable people.

It is important to acknowledge the many older people in RACFs who are actively engaged and able to self-advocate. However as physical or cognitive capacity declines, those who advocate on their behalf to express the wishes they are unable to articulate well for themselves become increasingly more important in the care relationship.

It is the forming of a partnership where residents and their families or significant others who are "experts by experience" engage in honest exchanges with care staff, thus bringing their experience to compliment the "expertise" of health professionals (Gosling & Martin, 2012, pp. 68-69). Such collaboration aims to achieve improved service delivery for residents who are unable to advocate for themselves and conversely should recognise the expertise of families and the experience of health professionals also, although this is often more difficult to achieve (Gosling & Martin, 2012).

Vulnerable people in the aged care environment include those of other cultures. The proportion of elderly people who were born overseas is rising rapidly due to post-war and more recent immigration trends. Advocacy is especially important for these people, many of whom are already marginalised (Lord, 2011; Singh & Mishra, 2012). Nurses may have the very best of intentions, yet still overlook care issues of which they have little understanding. While some similarities exist, family structure and cultural responsibilities cannot be generalised or stereotyped, even though the experience of ageing is universal. The uniqueness of the individual remains as relevant for people of other ethnicities as it does for Australian-born elderly residents in RACFs (Carmody & Forster, 2003).

As advocacy relies on open communication, additional efforts may be needed to effect good communication and engagement. When discussing care options with families of other cultures, many nurses have experienced misinterpretation of their words and gestures by residents and families, often resulting in unexpected responses that are centred in the cultural aspects of aged care provision in the resident's country of origin (Hudson & Richmond, 2000).

A primary focus of advocacy in aged care is the willingness to listen and preparedness to problem-solve. Factors thought to promote advocacy in the aged care environment are the development of open communication channels between all parties and two-way engagement in care planning where the input of family members on behalf of their relatives is valued, respected, and supported by management. Families who aim to develop and sustain such relationships should be supported by all levels of the paid aged care

workforce. RACF staff can offer the greatest encouragement to family-carers by actively initiating and maintaining collaborative engagement and being supportive of family advocacy (Haesler et al., 2007; Shield et al., 2010; Ward-Griffin & McKeever, 2000).

Methods

The authors are currently engaged in research into family members' constructs of collaboration and advocacy in rural RACFs. The study will be conducted in the Gippsland region of Victoria using a methodology of naturalistic inquiry. The method involves participant selection via advertisements in local newspapers to recruit up to 25 participants who will each engage in a semi-structured interview of approximately 60 to 90 minutes duration at a mutually agreed location, date and time. Volunteer participant criteria includes; being aged over 18 years; of either gender; having been regular visitors (at least twice per week) to support the wishes of residents residing in the RACFs and consistently advocating on their behalf. Interviews will be transcribed verbatim and data will be analysed using NVivo software. Results of the study will be published in peer-reviewed health and research journals.

An Ethics approval for the study has been sought and obtained from the University of Tasmania Human Research & Ethics Committee. Criteria for participants to withdraw from the study at any time and processes to address concerns and distress should issues arise have been accommodated.

Summary

Advocacy is an emerging field in the provision of culturally appropriate and quality focused residential care. Advocacy by family members and significant others plays an important role in providing quality care when residents can no longer articulate their wishes to staff members. It is the advocacy by others that is the focus of this study, providing a voice that otherwise would not be heard. The improved communication that develops within a collaborative partnership has the potential to reduce carer burden for residents of RACFs, thus providing an increased awareness of the benefits of advocacy resulting in the gradual improvement of person-centred quality care.

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CHOIR THERAPY AS A PSYCHOTHERAPEUTIC INTERVENTION FOR REDUCING DEPRESSION IN MID TO LATER LIFE

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Abstract
This research project investigated the efficacy of choir therapy to reduce mid to later life depression. Chronic mental and physical disorders can lead to the loss of resilience for coping with the stressors associated with mid to later life change in vulnerable individuals, leading to social isolation. Thirty-two community dwelling volunteers from the Blue Mountains, west of Sydney, aged 48-73 years participated in the study. Some were allocated to the choir group (N=21) and the remainder to a wait list control group (N=11). This latter group was given the opportunity to join the choir after the study. Both groups were interviewed and assessed for depression, post traumatic stress, well-being and quality of life before and after the intervention. A mixed methods approach compared results between the choir and control groups. In addition to the main study, a pilot trial (N=9), using encephalographic technology was conducted with participants randomly selected from the choir in order to investigate whether any brain changes occurred as the result of choir singing. The eight week choir therapy program included meditation, singing exercises and learning new songs. The wait list control group lived their lives as normal between the pre and post interviews and assessments. Results showed an overall significant decrease in depression and increase in wellness following the eight week choir therapy program. Furthermore, the post brain tests in the pilot trial showed an interhemispheric re-balancing with a lowered P3 novelty ($p<0.05$). This suggests that choir therapy was effective in reducing hyper-responsiveness to novel stimuli. All results indicated that choir therapy can reduce symptoms of depression, increasing feelings of wellbeing and impacting on healthier ageing.

Rationale
In previous studies, choir singing was found to be more effective than reminiscence therapy or ordinary residential care for reducing depression in elderly people with dementia (Robertson-Gillam, 2008; 2011). Other benefits included increased social awareness, improved verbal communication and less agitation. A sense of community and increased wellbeing was evident, particularly for those who were in the choir. Other research supported these findings (Clift & Hancox, 2008; Cohen, 2006). This current study, including the pilot trial, focused on mid to older aged community dwelling adults. It investigated whether choir therapy could reduce depressive symptoms, decrease social isolation and offset age-related delays in the brain which may lead to dementia (Parbery-Clark et al, 2012; Koelsch, Offermans & Franzke, 2010 Ozdemir et al, 2006).

Method
A mixed methods research design was used in which the data was collected concurrently and analysed to discern all relationships related to depression as a syndrome including physical, mental and social domains (Creswell & Plano Clark, 2011).

The study took place in the Blue Mountains, west of Sydney, NSW. Participants were recruited via a series of newspaper advertisements in the *Blue Mountains Gazette*, the local newspaper. The main criteria were age and state of health, including the physical, mental and social domains. A final sample of thirty-two subjects participated in the study. All 29 females and three males were white Caucasians of Australian or European descent. One Indigenous person participated in the control group.

Variables
The dependent variables were depressive symptoms, wellbeing status, physical health, social isolation and brain wave patterns as measured by the QEEG testing (N=9). Independent variables included choir singing and social interaction.

Quantitative Data
All assessments were conducted on valid and reliable instruments before and after the choir intervention. The Beck Depression Inventory (BDI-II) was administered to assess depressive symptoms (Beck et al, 1996). Many participants reported having a diagnosis of post traumatic stress so this was assessed using the PTSD Scale (Leahy & Holland, 2000). Quality of life was assessed using the World Health Quality of Life Index (WHO-QOL-BREF, 2004) and wellness was assessed using the Spirituality Index of Wellbeing (SIWB, Daaleman & Frey, 2004). Cognitive impairment was evaluated before the intervention because

depression is known to be comorbid with dementia. The Mini Mental State Examination was used (Folstein et al, 1975). All scores except one in the control group were above 28/30 so the test was not repeated at the post level.

QEEG Data
The Mitsar portable WinEEG program was used before and after the choir intervention with nine participants randomized from the choir. Their results were compared pre and post as well as to a normative data base. This was a pilot trial to validate the results of the psychometric tests and to ascertain whether choir singing could affect brain wave patterns.

Qualitative Data
Semi-structured interviews were conducted before and after the choir intervention on all 32 participants. These interviews included demographic details such as age, gender, partnering, education and employment status. Other data included accounts of personal and medical history and general worldviews. These interviews were audio recorded and transcribed for comparative thematic analysis.

Choir participants were asked to fill out self rating survey forms with the possibility of including comments after each practice session. Questions focused on feeling comfortable around people, social interactions, mood changes, expression of feelings, emotional responses to the song material and the choice of songs that were sung each week. During the third week, choir participants were asked to rate personal perceptions of their voice quality and negative comments from others over their lifetime and whether these might influence self esteem, confidence and motivation. The final choir survey asked participants to rate and make comments on any changes in self esteem, confidence, motivation, social interaction, expression of feelings, relaxation, coping strategies and moods.

Issues and Challenges
The small sample size was limiting and because of the unique nature of group singing and the problem of attrition during the study, those in the control group were invited to join the choir. Four participants responded, resulting in the study becoming a controlled mixed methods trial.

The “power” issue in the pilot QEEG study made conclusions speculative but promising. There was sufficient material in the results to suggest that QEEG measurements could have an important place in the outcome measures of the treatment of depression. Further research with QEEGs should have larger sample sizes and include participants from both experimental and control groups for increased validity.

The challenge of choir therapy research requires a highly specialised musician and therapist who understands the nature of music and the psychology of human development. Furthermore, a reliable and competent pianist is desirable and this can be a problem if funding is limited. In this study, the choir leader was also the researcher. Future replication of this study should specify a separate choir leader and researcher in order to validate the findings and allow for more objectivity.

Results
Demographics
T-test were carried out on both groups. A Fischer’s Exact p value was reported showing a statistically significant difference between the choir and control groups ($p=0.003$) with a higher proportion of tertiary educated subjects in the choir than the control group. This demographic was a confounding variable.

The following results were found to be significant:

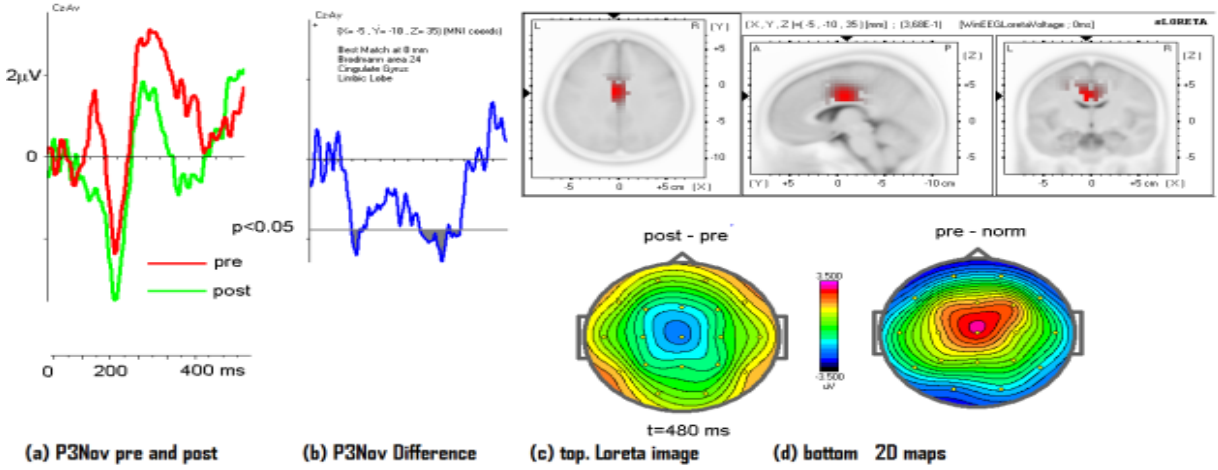
Depression- BDI-II
An analysis of covariance (ANCOVA) which controlled for education was conducted for depression. There was a statistically relevant difference between the groups ($F(1,28) = 17.29$, $p < 0.001$) with a power of 98.0% showing a significant decrease in depression.

Wellbeing correlated with Generic Spirituality- SIWB
Paired samples t tests, controlling for education, found a significant difference between the groups for wellness at post-intervention ($F(1,28) = 7.04$, $p = 0.013$), albeit slightly underpowered (72.6%), demonstrating that feelings of wellness improved significantly over the eight weeks trial.

QEEG tests

Background EEG activity showed a range of patterns generally seen in states of anxious or agitated depression (Davidson, 1992;94; McGilchrist, 2010). There were no subjects with depressive psychomotor retardation in the study.WinEEG analysis showed excessive right hemispheric activity in the higher frequencies. This reduced after treatment. The subjects had a heightened P3 Novelty response before the choir therapy program (see Figure 1 below (a) P3a Nov pre and post). This was consistent with a state of hypervigilance. Afterwards, this response was significantly lower ($p<0.05$). See below (b) P3a Nov differences)

Figure 1: Event Related Potentials – Novelty Response



Qualitative data supported the quantitative results by demonstrating that choir therapy can act as a buffer against social isolation, connecting people to each other through "creating something beautiful together" (choir member quote). The data also indicated that choir therapy can assist participants to sublimate their losses within the songs of their generations and "wallow in it" (choir member quote). This is an enabling process which stimulates brain function and motivates the life force, increasing quality of life (Koelsch, Offermans & Franzke, 2010). The qualitative data also demonstrated an increase in feelings of belongingness, e.g. "this group feels safe and there's a double advantage of not only singing in a choir but as a support group" (choir member quote).

Implications for Policy and Practice

A major implication for policy and practice would be to establish choir therapy as a therapeutic intervention for enhancing human development across the lifespan, especially in mid to later life. Singing enhances feelings of wellbeing which is counter to depressive symptoms. Forsman et al (2011) found that psychosocial activities for older people were effective in decreasing depressive symptoms and social isolation. People who sing together connect with each other which decreases social isolation (Cohen, 2006; Clift and Hancox, 2001;08).

Summary

These results suggest that further choir therapy research should include a larger sample size and QEEG comparisons between control and experimental groups for a deeper understanding of its psychosocial and biological impact. It is proposed that choir therapy, as a psychosocial intervention treatment, could effectively improve quality of life, thereby reducing depression in mid to later life.

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THE EFFECTS OF PERSONAL AND ORGANISATIONAL RESOURCES ON ELDERCARE STRAIN: A LONGITUDINAL STUDY

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Abstract
Due to population ageing in Australia, the number of older adults requiring care will noticeably increase over the ensuing decades. The goal of this study is to extend previous research which has examined the role of perceived organisational eldercare support (Zacher & Winter, 2011). The current study examines whether support resources buffer the negative health and workplace impacts of eldercare to lead to positive outcomes. In addition, the compensatory nature of various sources of support for caregiving employees is explored. Approximately 500 employed caregivers (aged 40-65 years) across Australia will be recruited to show how eldercare demands are related to strain and various support resources. Through structural equation modeling of longitudinal data, it is expected that resources moderate the relationship between eldercare demands and strain, specifically, this relationship will be positive for employees with low levels of support and weak and negative for employees with high levels of support. This research is important given the current demographic trends where balancing eldercare with one's paid work will become a crucial human resource agenda, paramount to the success of both organisational and employee/carer functioning. Practical implications include caregiver training and development in accruing personal resources to buffer negative health and workplace outcomes. Organisational implications include the utility of various human resource services and policies for older employees as workforce shifts pertain to this group balancing both employment and informal care roles.

Rationale
Australia, like many developed countries, is undergoing demographic change in the nature of its workforce, with an increase in the number of employees managing paid work and eldercare for parents or frail relatives (Neal & Hammer, 2007). Currently, nearly 600,000 Australians provide care for older relatives or friends (Australian Bureau of Statistics, 2005) and as the population continues to age, the prevalence of chronic diseases will generate even greater demand for informal care (Zacher, Jimmieson & Winter, 2012). Family members provide over 80 percent of the care required to people over 60 years of age and of those people working prior to assuming a caregiver role, 15 percent make changes to their work due to these responsibilities (Australian Bureau of Statistics, 2005). Within this context, eldercare is considered the unpaid family care of an older person who requires assistance due to physical (i.e., frailty) or psychological (i.e., Alzheimer's disease) impairment (Aggar, Ronaldson & Cameron, 2011). Therefore, the ageing of the population over the next decades will establish the role of unpaid family-based eldercare as a significant work-family concern of the 21st century.

Research surrounding the impact of eldercare on employment and the benefits of various supports is only beginning to be examined (Zacher, Jimmieson & Winter, 2012; Zacher & Winter, 2011). This lag in the literature, given the pending importance of this research area, is concerning as Smith (2004) notes that eldercare will equal or surpass childcare as the focal work-family issue for employees. This has even greater imperatives for organisations as eldercare is arguably more exhausting and less rewarding due to increasing dependency over time (Buffardi, Smith, O'Brien, & Erdwins, 1999). Eldercare providers are at risk for negative health consequences (i.e., anxiety and depression) (Lu et al., 2007) and also experience lower job and life satisfaction, higher turnover intentions and greater burnout (Allen et al., 2001; Ford et al., 2007). However, positive factors associated with the caregiver role are also experienced including a greater sense of meaningfulness and achievement (Tufte, Clausen & Nabe-Nielsen, 2011), improved caregiver relations (Pinquart & Sörensen, 2011), greater wellbeing (Booth & Matthews, 2011) and increased self-esteem (Aggar, Ronaldson & Cameron, 2011). Based on the current stage of eldercare research, this study aims to provide further examination on the role of relevant forms of support that may buffer against negative outcomes and promote positive enrichment from the caregiver role.

Our intent is to establish the relative importance and compensatory nature of various sources of support, and in identifying the relevant antecedents and consequences, we also examine the dual compensatory

role of positive and negative pathways in caregiving and how these may impact on the experiences and resources of caregivers. To date, few studies have included sources of support simultaneously (Ng & Sorensen, 2008; Zacher, Jimmieson & Winter, 2012; Zacher & Winter, 2011) and none have identifed the conditions and circumstances inherent in the use of certain resources. Comparing the effects of support could provide an integrative conceptualisation of employees' resources and their influence on health and work (Zacher & Winter, 2011).

Most research to date has focussed on the negative consequences of caregiving and the role of support networks to buffer against negative work and personal outcomes (i.e., burnout and turnover) (Stephens, Franks & Atienza,1997; Vitaliano, Zhang & Scanlan, 2003). Conservation of resources (COR) theory (Hobfoll, 2001) has been applied to the caregiving context to investigate the outcomes of employee stress and strain (Zacher & Winter, 2011) and we utilise this theoretical framework to examine the compensation of resources. COR theory posits that employees try to gain resources in order to avoid the negative outcomes encountered when resources are absent or diminished (Hobfoll, 1989). Employees who have access to additional resources are thus able to prevent losses from occurring (Frone, Yardley & Markel, 1997). However, employees who have a shortage of resources are vulnerable to additional losses and are thus restricted in their ability to obtain more (Grandey & Cropanzano, 1999). In the context of eldercare, employees may have access to various sources of support. For example, intrinsic personal resources (i.e. self-efficacy and esteem) or social resources further assist individuals' capacity to cope by providing emotional and informational support and guidance (Zacher & Winter, 2011).

Eldercare demands encompass the factors that can cause stress from the caregiving role and experience (Wagner & Neal, 1994; Zacher, Jimmieson & Winter, 2012). Demands can either cause strain or enrichment which are characteristics ostensibly encountered in the work-family literature (Spector & Jex, 1998). They involve individuals' responses to these demanding factors and identify the depletion or gain in psychological and physiological capital (Koeske & Koeske, 1993; Zacher & Winter, 2011). Research has suggested that engaging in numerous roles can buffer the negative effects of these roles on each other (Gryzwacz & Marks, 2000; Vitaliano, Zhang & Scanlan, 2003). Moreover, this enhancement or enrichment (i.e., positive outcomes of wellbeing) can generate additional resources that aid coping (Greenhaus and Powell 2006; Gryzwacz & Marks, 2000). Similarly, according to COR theory (Hobfoll, 2002), people with resources are less likely to encounter stressful circumstances that negatively influence both physical and psychological well-being. When stress is encountered, individuals with more resources are capable of overcoming dilemmas and less likely to be affected by stressful situations (Hobfoll, 2002; Zacher & Winter, 2011). We concur with this notion, as Williams et al. (2006) found that greater enrichment was related to better physical health, due to being better equipped to manage stress which leads to greater wellbeing.

We propose that support resources (i.e., perceived organisational, supervisor, co-worker and family support, organisational initiatives and individual resources) are a moderator of the relationship between demands and personal and work outcomes based on the enhancement hypothesis mentioned above. Our argument is also based on the notion of compensatory resources that is grounded in the substitution hypothesis by Hobfoll and Lieberman (1987). Resources are defined as conditions, characteristics or skills that are valued by an individual (Hobfoll & Shirom, 2001). According to the substitution hypothesis, when particular resources are deficient other alternative resources can substitute as a proxy for them (Hobfoll & Leiberman, 1987). The substitution hypothesis has been examined previously with findings demonstrating that resources can be compensatory (LePine & Van Dyne, 1998; Speier & Frese, 1997). Therefore, we theorise the anticipated relative importance of each source of support is determined by the interplay of whether individuals are in deficit or surplus of resources. This has not been examined previously as the only focal examination, Zacher and Winter's (2011) study, was limited solely to assessing the contribution of perceived organisational eldercare support (POES) and neglected other forms of support resources that may be available and utilised by employees. Thus, the relative importance of various support frameworks could not be established and to date, no study has collectively and simultaneously examined the available supports to employed caregivers. Also, despite emphasis that support is crucial for eldercare, investigation is required into the longitudinal causal relationships and the relative importance of these support networks for employees.

In conclusion, consistent with COR theory and the substitution hypothesis, we propose that employees' with

high levels of support (i.e., perceived organisational, supervisor, co-worker and family support, organisational initiatives and individual resources) possess additional psychological resources that help them to reduce their levels of strain at work. However, employee's experience of strain is dependent upon the deficits in resources they encounter and whether they hold a surplus in other areas to accommodate for those that are lacking. Therefore, we expect that certain sources of support may be relatively more important than others to buffer against the negative impacts on strain. Given the nascent stage of this area of research to date, we embark on the first empirical investigation to address the gaps and omissions for how employees can utilise available resources in order to prevent negative health and work outcomes as a result of their eldercare.

Method

Data for this study will come from approximately 500 employees with eldercare responsibilities across Australia. We will be recruiting both men and women for the study although previous research has indicated that mostly women provide eldercare (Pinquart & Sörensen, 2006). Targeted sampling will focus on employees between 40 and 65 years given the requirement of eldercare and current participation in the workforce (i.e., minimum of part-time work). At the commencement of the study, an email with a link to an online survey on the effects of support on caregiving and work will be sent to a variety of Australian organisations including Alzheimer's Australia, Carers Australia, Burnie Brae and Government Departments. From this recruitment process, employees will be directed to the official study website where they can gather more information on the research and register to participate. Participation in this two-wave longitudinal study will be undertaken over a 6-month interval. Participants are offered the incentive of a $40 gift voucher or the ability to donate $40 to Alzheimer's Australia at the conclusion of the second-wave of the survey.

The focal predictor (IV) of eldercare demands will be measured as the number of hours spent per week on eldercare-related tasks and activities. Previous research has shown that the number of hours spent on eldercare is a valuable and objective measure of eldercare demands (e.g., Hammer, Neal, et al., 2005; Zacher & Winter, 2011; Zacher, Jimmieson & Winter, 2012; Gordon, Pruchno, Wilson-Genderson, Murphy & Rose, 2011). One focal outcome (DV) of work performance at work will be measured with 12-items from Griffin, Neal and Parker's (2007) job performance scale with subscales of individual task proficiency, individual task adaptivity and individual task proactivity. This measure has been shown to be reliable and valid in several occupations and organisational contexts (Griffin, Neal & Parker, 2007; Kacmar, Collins, Harris & Judge, 2009; Zacher & Winter, 2011).

The key moderators will also be measured. Perceived organizational eldercare support (POES) will be measured using an 18-item POES scale (Zacher, Jimmieson & Winter, 2011). Supervisor and co-worker support will be measured using Thompson and Prottas' (2005) 10-item scale, with 5-items for each. Organisational initiatives will be measured based on 23 possible organisational practices that facilitate work -life balance (Bardoel, 2003) for example, "flexible hours". Personal resources will be measured using the 12-item Core Self-Evaluations Scale (Judge & Bono, 2001). We will also assess a number of control variables that may be related to the central variables in this study (Neal & Hammer, 2007; Smith, 2004; Westman & Etzion, 1995; Zacher & Winter, 2011).

Summary: Implications for policy and practice

A paucity of literature exists surrounding the available intervention frameworks of eldercare providers who balance care with work. At the organisational level, policies and practices appear to be the focal contributor to the process of supporting employees with their eldercare responsibilities (Van Houtven et al., 2011). Katz, Lownestein, Prilutzky and Halperin (2011) examined organisational policies for providing support programs for employed caregivers. These authors found that the number of organisations supporting employed eldercare providers has increased, however, the size of the organisation and the sector in which it belonged affected the overarching attitude towards policy implementation. This suggests that given current population demographic changes, organisations are finding it difficult to define their role as support providers for employed caregivers and in identifying the most effective support frameworks to adopt. Clearly, there is a strong need for research to go beyond the policies and practices available within organisations to facilitate organisational strategies that can assist employees with their eldercare. We anticipate that this research will facilitate organisational imperatives for employees and provide an impact on organisational policy.

At the caregiver level, meta-analytic evidence (Acton & Kang, 2001; Martire, Lustig, Schulz, Miller & Helgeson, 2004; Sorenson & Conwell, 2011) suggests that interventions for caregivers are typically small and lack application to the work domain. Unfortunately, to date, no intervention primarily targets dual-role

caregivers who provide full-time at home care and also engage in the paid workforce. This is a focal omission as tailoring and combining both individual-level and organisational-level eldercare interventions are required to reduce the negatives outcomes of the caregiving experience. The limited scope of current available interventions that apply to employees balancing eldercare with work specifically emphasises the continuing areas of need for caregiving research. This also emphasises the cross-disciplinary requirements of the field to incorporate a diversity of the applied research domains (i.e., nursing, psychology, occupational therapy, pharmacotherapy, business/HR, and management). Given the current focus on population ageing, it is vital that research considers interventions for caregivers, organisations and care-recipients in order to promote a functioning labour force and health-care providership.

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BATTLE OF THE DECADES: GENERATIONAL DIFFERENCES IN THE RETENTION OF AUSTRALIAN AGED CARE EMPLOYEES

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Abstract
The ageing workforce, global shortage of nurses and the increased reliance on quality health care services for the aged have created a need to ensure a quality workforce exists within the aged care sector. However, Australia's ageing population brings with it an ageing workforce, where for the first time in history, employers are left to respond to the benefits and challenges of having up to four generations of employees working alongside each other. For human resource management professionals, age diversity can be particularly challenging as research has found that each generation is motivated to stay in an organisation by different Human Resource Management strategies. Therefore, it becomes necessary to examine generational differences in the context of aged care employees to ensure an appropriate workforce exists to respond to the need. This paper presents the findings of 330 employee's qualitative responses to open ended survey questions relating to their short term and long term retention motives. Results suggest that older workers are motivated to stay in both the short term and long term by pay, job stability and security, the work itself, and a supportive culture from management and the organisations. However, younger workers are motivated to stay by ensuring career opportunities are available to them as well as the work itself, and supportive culture. This research provides the aged care sector with significant information on the retention of aged care workers that can be used to enhance policies, processes, and guidelines around the retention of its core workforce.

Rationale
Australia's ageing population brings with it an ageing workforce, where for the first time in history, employers are left to respond to the benefits and challenges of having up to four generations of employees working alongside each other. These generations are: The Veteran Generation (born 1925-1944), The Baby Boomer Generation (born 1945-1964), Generation X (born 1965-1980), and Generation Y (1981-2000). While age diversity in the workforce has its benefits such as improved creativity (Crampton& Hodge, 2007), and improved productivity (Ilmakunnas&Ilmakunnas, 2011), for human resource management professionals age diversity can be particularly challenging as some research has found that each generation is attracted to and motivated to stay in an organisation by different Human Resource Management (HRM) strategies (Wilson, Squires, Widger, Cranley, &Tourangeau2008).

A generation has been defined as an identifiable group of people who share the same birth years, age locations and significant life events at critical developmental stages during their lives (Kupperschmidt, 2000). Research examining this concept has argued that because of the differences in values developed by each generation as a result of the significant life events they have experienced, each generation tend to develop similar work and life values that shape their attitudes, behaviours and beliefs (Chen & Choi, 2008). These values then shape employees' attitudes, behaviours and beliefs about the type of retention strategies that entice them to stay at an organisation.

The existence of generational differences in the workplace has been debated in the literature for decades. On one hand, there is a body of research arguing that there is a relationship between generational differences and the effectiveness of retention strategies implemented. Whereas, another body of research argues that too much focus has been placed on explaining the differences found from a generational cohort perspective, and that instead the differences identified are a result of either an individual's career stage, age, or individual differences between people as a whole (Parry &Urwin 2011). This is important from a HRM perspective as if the first argument holds true, then HRM strategies are needed to be tailored to different generations, and as such, groups of employees would be motivated by similar things, and this makes the span of HRM retention initiatives required at organisations narrower. However, if the second argument holds true then the differences seen are a result of career stage, age or individual differences and a wider span of HRM strategies would be needed. Thus, examining if generational differences exist in a workforce is critical to ensure appropriate retention initiatives are implemented at organisations.

Within an Australian aged care context examining employee retention and turnover is particularly salient as the ageing population brings with it an increased demand for quality aged care services to support this population (Chou, Boldy & Lee, 2002).Therefore, research examining employee retention is needed in

order to identify if there are any differences between the generations in the factors that influence employees' intentions to stay at an organisation. As no research within an Australian Aged Care Sector was found that specifically examined differences in the factors that influence employees' intentions to stay, this research begins to address this literature gap by investigating the research question: Do generational differences exist in the factors that influence employees' short term and long term intentions to stay in the aged care sector?

Methods

Participants

This study invited 2100 employees from four aged care organisations to participate in this research. Participants were employed at not for profit organisations that ranged in size from small (less than 80 employees), medium (less than 300 employees), medium-large (less than 900 employees) and large (less than 4500 employees) across three states of Australia. Two of these organisations offered both residential aged care and community aged care services; the other two organisations offered either residential aged care or community aged care services. Of the invited participants, 330 valid surveys (304 Females, 26 Males) were returned to the researcher. These included 10 Veteran Generation employees (3.03%), 198 Baby Boomer employees (60%), 55 Generation X employees (16.67%) and 67 Generation Y employees (20.30%). This represented a total response rate of 17.6%.Participants were mostly employed in a direct care role (N=279, 84.55%), however responses were also received from administrative positions (N=51, 15.45%). Direct care roles included all employees working as a Registered Nurse, Enrolled Nurse, Enrolled Endorsed Nurse, Care Workers, Case Workers, Director of Nursing, Care Manager, Diversional therapists, Hotel Services, and Care Coordinators. Administrative roles included Administration, Receptionist, Retirement Living Coordinator, Business Support Officer, and Team Coordinator roles.

Procedure

Formal ethics approval was obtained from Griffith University's Human Research Ethics Committee prior to the commencement of the study. Upon approval, the researcher initially approached 15 organisations around Australia to participate in this study. This was completed by emailing the research department or the generic email under the "contact me" option on the organisations website describing the study and inviting them to participate. Upon receiving approval to continue, survey packs were then distributed to the each organisation's sites or services by post. These survey packs included a frequently asked question document, an instruction to participant sheet, an information sheet and the survey itself along with a sealable envelope. Participants were provided two options for returning the survey to the researcher. They could either return the survey directly using the address provided, or they could place it in the box provided by the organisation who would then return it to the researcher for them. Posters were supplied to participating organisations to place in the staff room to encourage responses from employees. An email was then sent to all sites/services through the organisation's nominated personnel two weeks and four weeks after distribution asking them to return completed surveys. Once they had been returned, data was entered into NVivo version 10 for further analysis. Data was analysed using an interpretative approach with three levels of coding (open, axial and reflective) conducted to examine the emerging themes in responses.

Measures

Two open-ended questions were asked in the survey of participants in order to understand the factors that affect employees' short-term and long-term retention. Note: the survey included other items, however, due to the scope of this paper only the open ended questions relating to employees' short term and long term retention will be examined. These questions were:

1. What factors influence your intentions to stay at your organisation for the next 12 months?
2. What factors influence your intentions to stay at your organisation for the next 5 years?

Results

Generational differences in Short-Term Retention

Employees from a veteran generation reported three motivators to their short term retention. These were the work itself, the attractiveness of work hours, and the financial need to stay. This was evidenced in responses such as, "I really enjoy my work as it is so enjoyable", "The shifts and the hours I am rostered" and "Personal Financial reasons" as motivators to short-term retention. Baby Boomer employees reported the work itself, the financial need to stay, the people they work with, job stability and security, management support and organisation support as key factors in their short term retention. This was evidenced in responses such as "I just enjoy the work and contact with clients and with the teams in the office", "(I) cannot afford to leave", "(Be)cause I am permanent and (I) do not want to go back to being casual" "Great management and support", and, "support from company and supervisors" Generation X employees reported three motivators that influenced their short-term retention. These were: the people they work with,

the work itself and management support. This was evidenced in participants responses that ranged from "My direct supervisor and team of fellow workers", "The satisfaction and enjoyment I get out of my job", and "Management look after their staff well." Generation Y employees identified four key motivators. These were: the people they work with, the work itself, the financial need to stay and career opportunities provided within the organisation through training and development and promotion opportunities. Responses to this question from this generation ranged from "staff all very helpful and caring", "I love what I'm doing, it's my passion working in the aged care", "need money to survive" and "job opportunities and promotion opportunities".

Generational differences in Long-Term Retention

The Veteran Generation reported three motivators to their long term retention. These were: the job itself, the financial need to continue and job security/stability. Specifically, participants reported that "I really enjoy my work as it is so rewarding", "personal financial needs", and "I feel my job is secure" as long term retention motivations. The Baby Boomer Generation reported four factors as important to their long-term retention. These were: the financial need to continue working, job security and stability, management support and the work itself. This was evidenced through responses that ranged from "Need income to support myself", "ongoing contract, long term position", "great support and encouragement" , to "I am enjoying the work and at the moment (I am) not thinking of going anywhere." Generation X employees reported four factors as important to their long-term retention. These were the people they work with, the work itself, the organisation they work for, and the career opportunities provided within the organisation through training and development and promotion opportunities. Generation Y employees reported three factors as important to their long-term retention. These were the career opportunities provided within the organisation through training and development and promotion opportunities, the financial need to continue working, and the work itself. This was evidenced through responses such as "Wanting to become a nurse" , "need money to live that's why we work" and "it's a fantastic job, love the clients, love the work."

Summary & Implication to Policy and Practice

This study set out to explore generational differences in the factors that influence aged care employees' short term and long term intentions to stay at their organisations within the context of Aged Care organisations. This study found similarities and differences between the generations in both their short term and long term retention motivators. Upon examining the short term motivators for the veteran generation, it was found that these employees were motivated by the work itself, work hours and financial need to work. The financial need to work and the work itself were also motivators for both Generation Y and Baby Boomers, however, no other generation reported the attractiveness of the work hours as a reason to stay in the short term. In addition to these factors, the Baby Boomer generation also reported job stability and security, management and organisational support as important to their short term retention. Indicating that while pay is still a motivator, organisations can influence older employees' short term retention through ensuring adequate support and encouragement is provided by middle and upper management. In contrast, both Generation X and Y employees reported that the people they work with and the work itself were important to their retention. Generation X also reported the influence of management support on their decision, and Generation Y employees reported the influence that career opportunities had on their short term retention.

This study also found that the job itself and the financial need to continue working were also motivations for long term retention of the Veteran Generation. However, job stability and security was an additional retention motivation in the long term by this generation. Similarly, for Baby Boomer employees, their long-term retention motives were the same as their short term retention motives, with the exception of organisational support which was found key in their short term retention, but not long term. For Generation X employees, the people they work with and the work itself were important for their long-term retention, however, this generation also considered the career opportunities provided by the organisation in their intention to stay long-term. Similarly, Generation Y reported career opportunities as important to their long term retention at their organisation, as well as the work itself and financial need to continue working. These findings suggest that older generations are motivated in the short and long term by finances, job security and stability and organisation/supervisor support over career opportunities. Whereas, the results for the younger employees suggest that clear career opportunities and support from their organisation and supervisors is required.

In conclusion, the results of this study suggest that there are generational differences in the factors that influence employees' intentions to stay with an organisation over the short and long term differ, although there are also similarities as well to take into account. Consequently, organisations should focus on

providing clear career pathways, financial and job security to their employees, and focus on developing a supportive culture within their organisation in order to retain their employees in both the short and long term.

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VALIDATION OF DECISION SUPPORT SOFTWARE FOR IDENTIFICATION OF DRUG-RELATED PROBLEMS IN HOME MEDICINES REVIEWS

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Abstract

Background

Accredited pharmacists in Australia are funded to conduct home medicines reviews (HMRs) to address drug-related problems (DRPs) and optimise patient medication use. HMRs are suited to older patients who are more likely to be associated with greater medication use and DRPs. The HMR process involves collation and analysis of patient-specific information to determine actual and potential DRPs and recommend solutions. Clinical decision support systems have been commercially implemented to assist with this task. This research performs validation of two such systems by comparison with the reviewing pharmacists' findings.

Method

HMR data collected during 2008 were entered into software which utilised artificial intelligence, Medscope™ Medication Review Mentor (MRM), and software which did not, Monitor-Rx (MRX). DRPs identified by each software program were recorded. A random sample of 20 HMRs with the DRP findings of MRM (N=125), MRX (N=259) and original pharmacist findings (N=73) were presented to 12 clinical pharmacy experts. Experts evaluated each source on a per case basis for clinical relevance, excessive DRP findings and missed clinically relevant DRPs.

Results

Experts agreed that MRM (193 of 240 opinions - 80%) and pharmacists (76%) identified clinically relevant DRPs, yet significantly less agreed MRX was clinically relevant (13%). No significant difference was found between pharmacists and MRM concerning relevant DRPs, yet MRM actually identified a greater number of DRPs. Experts agreed each source missed clinically relevant DRPs (pharmacists 69%, MRM 48%, MRX 76%), with significant difference between sources. Opinion concerning excessive DRP findings was also significantly different between sources. Experts agreed pharmacists (88%) and MRM (65%) did not identify excessive DRPs, in contrast to MRX (3%).

Conclusion

Software which utilises artificial intelligence, such as MRM, may assist pharmacists in performing HMR activities via identification of an acceptable number of relevant DRPs.

Introduction

The Commonwealth Government Department of Health and Ageing provides funding for HMRs conducted by accredited pharmacists (Department of Human Services, 2010). The intent of an HMR is to optimise medication use by assessing the patient's medication therapy, including patient knowledge and compliance with therapy, to detect actual and potential DRPs.

An HMR is instigated by the patient's general practitioner (GP) with patient consent. Patients are eligible if they meet specific criteria, including: taking 5 or more medications daily, more than 12 doses of medicine daily, substantial change to therapy (e.g. post-hospitalisation) or are known to be having difficulty in managing their medication (Department of Human Services, 2010).

Older Australian patients have been shown to be at increased risk of adverse drug events (Miller, Britth, & Valenti, 2006). Older patients tend to have increased co-morbidity and ensuant poly-pharmacy (Lee, Cigolle, & Blaum, 2009; McLean & Le Couteur, 2004) which in turn is associated with increased DRPs and hospitalisation.(Leendertse, Egberts, Stoker, & van den Bemt, 2008; Viktil, Blix, Moger, & Reikvam, 2007). Consequently, older persons are more likely to be eligible for and benefit from HMR assessment.

Preparation for an HMR requires the details of the patient's medical profile and medications to be provided to an HMR accredited pharmacist. The pharmacist conducts an interview with the patient, generally in the patient's home, to determine the patient's actual medication regimen. The interview garners patient understanding of their medications and medical conditions, and draws out therapy-limiting factors such as medication toxicity, and physical or cognitive restrictions. The information is assessed, culminating in a report of findings for the GP including identified DRPs and recommendations for their resolution.

There is some evidence HMRs can improve patient outcomes and reduce poly-pharmacy (Lenaghan, Holland, & Brooks, 2007; Roughead et al., 2009), as well as being cost-effective (Stafford, 2012). Despite this, some reservations exist. A 2008 consultant report identified concerns of GP criticism of HMRs "... sometimes supply irrelevant or unhelpful information ..." and pharmacist reported limitations "Lack of resources", "Lacking confidence in making clinical recommendations to GPs" and "time constraints" (Campbell Research and Consulting, 2008).

HMR assessment requires proficient knowledge, not only of medications, but of common medical conditions associated with the elderly and familiarity with current evidence-based medicine guidelines. Clinical decision support systems (CDSS) may assist with this task and address some of the reservations mentioned in the Campbell report.

Two commercial CDSS have been developed for assisting the medication review process – Medication Review Mentor (MRM) and Monitor-Rx (MRX) (ASCP foundation, 2011; "Medscope Medication Review Mentor (MRM)," 2011). The aim of this study was to validate, by expert opinion, the decision to support capability of these products, specifically the capacity to find clinically relevant DRPs, and to identify limitations concerning relevant DRPs being missed, and presentation of excessive (irrelevant) DRPs.

Methods

HMR data from 2008 collected for a previous project (Stafford, 2012) was entered into MRM and MRX and their DRPs were recorded. A representative random sample of 20 HMRs of patients aged 65 and older, using 13.6 ± 6.0 medications, containing DRPs found by MRM (N=125), MRX (N=259) and the original pharmacist findings (N=73) were presented online to medical and pharmacology experts, who were recruited by email from previous UMORE projects and professional networking.

Experts were blinded to each DRP source and provided opinions of the overall assessment of MRM, MRX and pharmacists in each case. Opinions on a 1 to 5 point Likert scale were obtained to the following statements:

- Overall, this source identified clinically relevant DRPs
- Clinically relevant DRPs were not identified
- The number of DRPs identified was excessive

Clinically relevant was defined as "If unresolved would have resulted in suboptimal outcome for this patient".

Statistical analysis for non-parametric data was performed for each Likert item using the Kruskall-Wallis test and, if needed, post-hoc Wilcoxon Rank Sum tests with Bonferroni correction (using $p < 0.025$) comparing software and pharmacists. Expert agreement was assessed using Kendall's coefficient of concordance (Kendall's W).

Results

Nine HMR accredited pharmacists, one GP and two clinical pharmacologists completed the assessment.

Clinical Relevance

A Kruskal-Wallis Test revealed a statistically significant difference in perceived clinical relevance across the three DRP sources, $X^2 = 357.5$, df = 2, $p < 0.001$. Post-hoc tests showed no significant difference between pharmacists and MRM (W = 27305, p = 0.21) and a significant difference between pharmacists and MRX (W = 51552.5, $p < 0.001$), indicating that the experts believed MRX lacked relevance. Agreement between experts was substantial (Kendall's W = 0.65).

Table 1: Responses to "Overall, this source identified clinically relevant DRPs"

Response	Pharmacists (%)	MRM (%)	MRX (%)
Strongly agree	13 (5)	17 (7)	0 (0)
Agree	169 (70)	176 (73)	30 (13)
Neutral	47 (20)	34 (14)	34 (14)
Disagree	10 (4)	12 (5)	93 (39)
Strongly disagree	1 (0)	1 (0)	83 (35)

Relevant DRPs Missed

A Kruskal-Wallis Test revealed a statistically significant difference across the three DRP sources, $X^2 = 67.3$, df = 2, $p < 0.001$. Post-hoc tests showed a significant difference between pharmacists and MRM (W = 34843, $p < 0.001$), indicating that the experts believed MRM was less likely to miss relevant DRPs; and between pharmacists and MRX (W = 22891, $p < 0.001$), showing MRX was less able to identify relevant DRPs. Agreement between experts was fair (Kendall's W = 0.29).

Table 2: Responses to "Clinically relevant DRPs were not identified"

Response	Pharmacists (%)	MRM (%)	MRX (%)
Strongly agree	11 (5)	8 (3)	55 (23)
Agree	154 (64)	108 (45)	127 (53)
Neutral	35 (15)	54 (23)	37 (15)
Disagree	40 (17)	68 (28)	19 (8)
Strongly disagree	0 (0)	2 (1)	2 (1)

Excessive DRPs Identifed

A Kruskal-Wallis Test revealed a statistically significant difference across the three DRP sources, $X^2 = 433.1$, df = 2, $p < 0.001$. Post-hoc tests showed a significant difference between pharmacists and MRM (W = 20742.5, $p < 0.001$) and between pharmacists and MRX (W = 1713, $p < 0.001$), indicating that the experts believed pharmacists were least likely to identify an excessive number of DRPs. Agreement between experts was substantial (Kendall's W = 0.75).

Table 3: Responses to "The number of DRPs identified was excessive"

Response	Pharmacists (%)	MRM (%)	MRX (%)
Strongly agree	0 (0)	8 (3)	108 (45)
Agree	7 (3)	39 (16)	116 (48)
Neutral	22 (9)	38 (16)	8 (3)
Disagree	180 (75)	141 (59)	6 (3)
Strongly disagree	31 (13)	14 (6)	2 (1)

Discussion

It is interesting to note that pharmacists identified an average of 3.7 DRPs per patient, highlighting the need for HMRs among older patients who meet the selection criteria. Experts were of the opinion that the reviewing pharmacists and MRM identified clinically relevant DRPs even though MRM identified 52 more DRPs. This result suggests that MRM may be more consistent at identifying relevant DRPs. MRM based its findings on a range of patient information including diagnoses and pathology results through the use of artificial intelligence algorithms. In stark contrast, experts thought that MRX was not clinically relevant; MRX based its findings only on the drug name so it could not provide patient contextual DRPs.

Each source was believed to have missed relevant DRPs, which may be interpreted as lacking thoroughness. MRM had the lowest number of opinions suggesting this was the case (48% versus 69% pharmacists and 76% MRX).

Experts agreed (93% opinions) that MRX presented an excessive number of DRPs. This is not surprising considering MRX presented more DRPs than pharmacists and MRM combined - and MRX DRPs were considered the least relevant. Pharmacists (88% opinions) and MRM (65%) were not considered to have presented excessive numbers of DRPs, not only because the actual numbers of DRPs were less than MRX but also because their DRPs were generally considered more relevant to patient care.

Software utilising minimal information and simple conditional statements, such as MRX, is not sufficient to provide good decision support, although it may provide a check list of medications of concern. Software, such as MRM, utilising the range of patient data available in HMRs and artificial intelligence algorithms, has

the capability to identify a reasonable quantity of clinically relevant DRPs. Further research comparing pharmacist HMRs with and without MRM assistance may clarify the benefit of this software.

Pharmacists using MRM to conduct HMRs can be reassured the decision support functionality is relevant to their clinical assessments. Secondly, further development and incorporation of artificial intelligence techniques within healthcare software may lead to improved prescribing practice and anticipated patient outcomes. Finally, with the current nationwide roll-out of electronic health records (EHRs), with standardised coding and collation of medical information, technology such as MRM could be developed to integrate with EHRs to maximise the potential benefits to patients.

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EQUITY RELEASE PRODUCTS ALLOWING FOR INDIVIDUAL HOUSE PRICE RISK

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Abstract
This paper quantifies the impacts of individual house price risk on the pricing of equity release products. An individual house price model is employed to explain house price variations by heterogeneous characteristics. A Vector Auto-Regression (VAR) model is adopted to project the overall house price index and risk-adjusted discount factors. Indices for houses with various characteristics are linked to the overall house price index by using a VAR Model with Exogenous Variables (VARX). The results indicate that the price of the No Negative Equity Guarantees (NNEGs) typically included in reverse mortgages is significantly undervalued, without taking into account individual house price risk.

Research Motivations
Australians hold a large proportion of their savings in the form of home equity, which can be used to provide post-retirement income and health care costs. This "nest egg" is recognised as an important component of financing retirement needs of an ageing population. It is recommended by the Productivity Commission (2011) that home equity should be considered as a means to pay for care costs and that home equity release products would allow individuals to unlock this wealth.

Previous studies on reverse mortgage pricing and risk management have typically assessed house price risk using an overall house price index which does not account for individual house price risk. The reason for this is the limited public access to individual house transactions data (Li, Hardy, & Tan, 2010). This paper uses a rich micro-level data set to study the trends and risks in individual house prices and how they impact the pricing of home equity release products.

This paper uses the individual house price model developed in Shao, Sherris, and Hanewald (2012) to model the risks in equity release products. Two research questions are investigated: (1) how to forecast individual house prices by linking individual house prices to an overall house price index; (2) how to price the NNEGs that are typically included in equity release products.

Methodology
The paper constructs price indices for individual houses with various characteristics as well as an overall house price index. Average house price growth rates, rental yields, Australian GDP growth rates, and zero-coupon bond yields are projected using a VAR(2) model. Stochastic Discount Factors (SDFs) are then estimated based on historical data for the term structure of zero-coupon bond yield rates (Ang, Piazzesi, & Wei, 2006). Individual house price indices are linked to the overall house price index through a VARX(1,0) model. Data sets employed in this paper include: individual house price transactions in the Sydney Statistical Division (1971-2011, from Residex), rental yield rates (1992-2011, from Residex), GDP growth rates (1992-2011, from ABS), and zero-coupon bond yield rates (1992-2011, from RBA).

Individual house price models
In the residential house price literature, the value of a house ($\tilde{V}_{it}$) is generally expressed as $\tilde{V}_{it} = \tilde{Q}_{it}\tilde{P}_t$, where $\tilde{Q}_{it}$ is the quality measure of the house and $\tilde{P}_t$ is the house price index (Englund, Quigley, & Redfearn, 1998; Quigley, 1995). Different methodologies are adopted to disentangle the two components, and these methods include the hedonic model, the repeat-sales model and the hybrid model.

The hedonic model assumes that the logarithm of the house price is a function of its characteristics, locations, amenities, and other variables that add value to the house (Bourassa, Hoesli, Scognamiglio, & Zhang, 2011). It is expressed as an equation: $V_{it} = \alpha + X_{it}\beta_t + T_{it}\gamma_t + \varepsilon_{it}$, where V_{it} is the logarithm of house price, X_{it} is a vector of characteristics, T_{it} is the time dummy variable representing the transaction time, and ε_{it} is the disturbance term.

The repeat-sales model is an alternative to the hedonic model. This method addresses the heterogeneity problem and specification errors by developing a regression of the differenced logarithms of repeat-sales house prices. The regression equation is $V_{it} - V_{is} = T_{it}\gamma_t + \varepsilon_{it} - \varepsilon_{is}$, notations are the same as in the hedonic

model. The repeat-sales model has limitations in that it discards data on houses with single sales, producing potential sample bias.

A hybrid model of house price based on the above two methods was first proposed by Case and Quigley (1991). This paper employs the hybrid model developed in a recent study by Shao, Sherris, and Hanewald (2012), which is represented as three stacked equations. The first equation is a modified equation from the hedonic model: $V_{it} = \alpha + X_{it}\beta_t + T_{it}\gamma_t + \delta_i + \xi_{it}$, where δ_i is a random variable representing the potential specification error, and ξ_{it} is a white noise term. This equation is applied to data on houses with single sales. The second equation is again the hedonic model but applied to data on houses with multiple sales, excluding the last sale. The third equation is the repeat-sales model with an additional intercept term (Goetzmann & Spiegel, 1995): $V_{it} - V_{is} = \mu + T_{it}\gamma_t + \xi_{it} - \xi_{is}$. It is applied to differenced repeat-sales data.

The covariance matrix of the system of these stacked equations accounts for the dependence between repeated sale transactions of the same property:

$$\mathrm{Cov} = \begin{pmatrix} \sigma_\epsilon^2 I & 0 & 0 \\ 0 & \sigma_\epsilon^2 I & -\sigma_\xi^2 I \\ 0 & -\sigma_\xi^2 I & 2\sigma_\xi^2 I \end{pmatrix},$$

where σ_ϵ^2 is the variance of $\varepsilon_{it} = \delta_i + \xi_{it}$, σ_ξ^2 is the variance of ξ_{it}, and I is an identity matrix. The estimated parameters γ_t and β_t are used to construct Sydney's house price index through the equation: $\tilde{P}_t = 100\exp(\gamma_t + \bar{X}_0\beta_t)$, where $\bar{X}_0$ is a row vector of average values of characteristics in the base year. The price index for a particular type of houses is $\tilde{P}_t^k = 100\exp(\gamma_t + X^k\beta_t) = \tilde{P}_t\exp((X^k - \bar{X}_0)\beta_t)$, where X^k is a row vector of the characteristic variables for the type k.

Projection of house prices and discount factors

A VAR(2) model is employed to project future average house price growth rates and future risk-adjusted discount factors. The optimal VAR lag length is selected based on the Schwarz criterion. The resulting VAR(2) model can be expressed as $Y_t = \kappa + \phi_1 Y_{t-1} + \phi_2 Y_{t-2} + \Sigma^{1/2} Z_t$, where Y_t is a vector of state variables, $\Sigma^{1/2}$ is the Cholesky decomposition of the covariance matrix Σ, and Z_t is a vector of independently distributed standard normal variables. Five variables are included in the model: Australian GDP growth rates, Sydney average house price index growth rates, Sydney rental yield rates, 1-quarter zero-coupon bond yield rates, and the spread of 5-year over 1-quarter zero-coupon bond yield rates. All the variables are continuously compounded quarterly rates from Sep 1992 to Jun 2011. Individual house price indices are not included in this VAR model since individual risk should not be priced according to the CAPM theory.

The short rate (1-quarter yield) is expressed as $y_t^1 = e_1^T Y_t$, where e_i is a column vector with the i^{th} item equal to 1 and all others entities equal to 0. The discount factor is expressed as: $m_{t+1} = \exp(-y_t^1 - \lambda_t^T\lambda_t - \lambda_t^T Z_{t+1})$, where $\lambda_t = \lambda_0 + \lambda_1 Y_t$ (Ang & Piazzesi, 2003), implying that the market price of risk is a linear function of the state variables. To derive stochastic discount factors using a VAR(2) model, this paper assumes that zero-coupon bond prices are exponential linear functions of contemporaneous and 1-quarter lagged state variables (Ang & Piazzesi, 2003): $p_t^n = \exp\{A_n + B_n^T Y_t + C_n^T Y_{t-1}\}$, where A_n, B_n and C_n are parameters that can be solved for using the following differenced equations:

$$\begin{aligned} A_{n+1} &= A_n + B_n^T\left(\kappa - \Sigma^{1/2}\lambda_0\right) + \frac{1}{2}B_n^T\Sigma B_n, \\ B_{n+1} &= \left(\phi_1 - \Sigma^{1/2}\lambda_1\right)^T B_n + C_n - e_1, \\ C_{n+1} &= \phi_2^T B_n, \end{aligned}$$

with initial values $A_1 = 0$, $B_1 = -e_1$, and $C_1 = 0$. The estimated quarterly yield rate with n quarters to maturity at time t is expressed as $\hat{y}_t^n = -(A_n + B_n Y_t + C_n Y_{t-1})/n$. The market price of risk is obtained by minimising the squared deviations of estimated yield rates from the observed rates: $\min_\lambda \sum_n (\hat{y}_t^n - y_t^n)^2$.

Individual house price indices are then linked to the average house price index using a VARX(1,0) model, where the exogenous variable is the average house price index. The optimal lags for the VARX model are again selected based on Schwarz criterion. Based on the VARX model, future cash flows of equity release products are simulated. The value of NNEGs in equity release products is calculated as the expected present value of these projected cash flows.

Results

Price indices for houses with specific characteristics are simulated. Figure 1 illustrates the projected average price index and the index for houses located in Central Business District (CBD). It is obvious that the price of a CBD house is more volatile than houses elsewhere in Sydney.

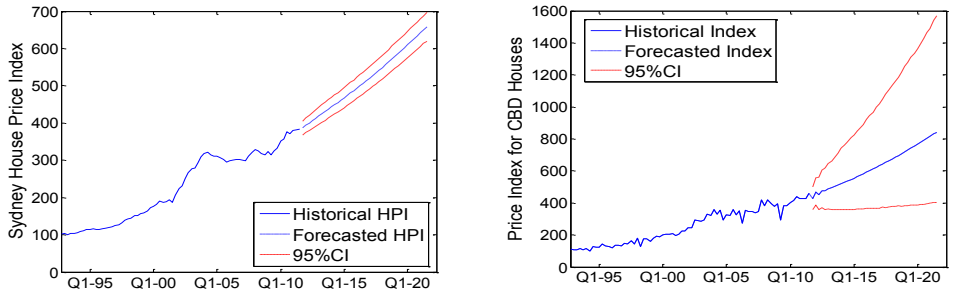

Figure 1 Projection for overall HPI and CBD houses index

10,000 simulation paths are used to compute mean values and the value at risk ($VaR_{99\%}$) of the NNEG in reverse mortgage contracts with different loan to value ratios (LTV) and with different borrower ages. It is assumed that the mortgage rate has a quarterly margin of 0.4% and that the NNEG premium charged is 0.15% of the outstanding loan on a quarterly basis. Results are presented in Table 1 to illustrate the risk underwritten by providers. The value of the NNEG varies significantly for houses with different characteristics, indicating that house characteristics are important factors that impact the risk of reverse mortgage products (which can only be quantified using individual house price data). For example, all else equal, a reverse mortgage contract based on a CBD house has substantially higher risk and should be charged a higher risk premium than a contract based on a coastline house.

Table 1 Values and risk measures of NNEG under various scenarios

Age		**65**			**75**			**85**	
LTV	0.1	0.2	0.3	0.2	0.3	0.4	0.3	0.4	0.5
Overall Sydney house price index, H_0 = $800,000									
Mean	0	29	1,031	1	79	1,094	2	67	718
VaR	0	810	17,346	7	2,004	17,626	24	1,545	11,496
Houses close to CBD, H_0 = $800,000									
Mean	46	1,315	6,806	269	2,107	7,798	347	1,906	6,534
VaR	1,098	27,731	81,811	7,067	37,274	86,392	8,477	32,995	75,221
Houses close to coastlines, H_0 = $800,000									
Mean	0	123	504	0	44	681	1	52	530
VaR	0	216	12,464	0	1,232	14,453	14	1,288	11,354
Houses with less than or equal to 2 bedrooms, H_0 = $500,000									
Mean	0	18	651	0	50	693	1	43	454
VaR	0	501	11,190	4	1,265	10,960	16	1,001	7,170
Houses with more than 2 bedrooms, H_0 = $1,200,000									
Mean	0	134	2,529	5	268	2,580	11	217	1,739
VaR	0	3,460	39,139	64	6,291	37,140	152	4,973	27,318

Conclusion

This paper investigates the values of NNEGs in equity release products allowing for individual risk of houses with heterogeneous characteristics. It is demonstrated in the paper that pricing NNEGs based on an average house price index substantially underestimates the risk involved in equity release products. It is suggested that risk factors associated with house characteristics should be used to price equity release products. The study provides new and improved insights into designing reliable and affordable home equity release products that effectively help retirees to finance their consumption and care costs.

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RETIREMENT AND ASSET ALLOCATION IN AUSTRALIAN HOUSEHOLDS

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Abstract
This paper examines the effect of the decision to retire on the asset allocation of Australian households using data from the Household Income Labour Dynamics of Australia (HILDA) Survey. It investigates the popular financial advice that as one approaches retirement one should reduce the proportion of risky assets held. Given the design of Australia's Superannuation Guarantee, there is an increased responsibility on individuals to make key superannuation and retirement decisions, including voluntary contribution rates, asset allocation and timing of retirement. This paper utilises the panel data nature of HILDA by estimating a pooled OLS model and then a Fixed Effects (FE) model to address the possibility of unobserved individual specific effects. This implies there is unobserved individual specific heterogeneity unaccounted for in the OLS model which may lead to invalid statistical inferences. Along with retirement, the impact of human capital, and individual and household demographics and characteristics are also considered. Preliminary results provide some evidence of a negative relationship between retirement and the proportion of gross risky assets held in the pooled OLS model. However, the results are not precisely estimated in the Fixed Effects model.

Rationale
The Australian retirement income system comprises of three pillars. The first pillar is a public funded pension - the Age Pension. The income and asset tested system provides a social welfare safety net for people who are unable to fully support themselves in retirement. The second pillar is a mandatory private retirement saving scheme – Superannuation Guarantee (SG) - consisting of compulsory employer contributions of 9%, into a privately managed superannuation fund of employee's choice. The third pillar comprises of voluntary employee contributions to their superannuation account, as well as home ownership, financial assets, investment property etc. Thus, household wealth can consist of a range of assets including a superannuation account (which could be invested in different assets), an owner-occupied house, financial assets such as bank accounts and shares, as well as investment properties and business investments.

A piece of financial advice given to individuals approaching retirement is that they should reduce the amount of risky assets held. This stems from economic foundations derived from the life cycle theory of consumption, saving and portfolio choice. Bodie, Merton and Samuelson (1992) explored the relationship between portfolio choice and labour supply. They concluded that individuals will tend to have more conservative investment behaviour as they near retirement due to human capital being a safe asset compared to equities and individuals' labour flexibility, i.e. flexibility in making work related decisions such as the number of hours to work or when to retire, decreases as they age. However this rests on the assumption of 'safe' human capital and not all can be considered 'safe'. For example, Milevsky (2003) postulated that if the individual works in the financial industry their income will be correlated with the stock market and thus should tilt their financial portfolio towards safer assets. Other factors influencing portfolio choice, including health risks (e.g. Yogo, 2008) and social security (e.g. Smetters & Chen, 2010), are also considered in the literature. Combining all these ideas, this paper examines the question – whether Australians reduce the proportion of risky assets held as they approach retirement using HILDA.

Previous work related to this area in the Australian context includes Gerrans, Clark-Murphy and Speelman (2006) who examined the asset allocation decisions of members of three Australian superannuation funds and found allocations to asset classes differed between age quintiles with some support for increasing allocations to conservative asset classes as age quintile increased. Cardak and Wilkins (2008) used HILDA wave 2 to investigate the determinants of risky asset holdings. They concluded that labour income uncertainty and health risks are important, along with credit constraints and risk preferences.

Data and Method
HILDA is a household based longitudinal study which commenced in 2001. It collects information on income, labour market, demographic and personal characteristics of Australian individuals and households. To date there are 10 waves, comprising both standard questions as well as special topic modules. This research uses data from the wealth module implemented in Wave 2 (2002), Wave 6 (2006) and Wave 10 (2010). The two samples selected for analysis are unbalanced panels consisting of approximately 700 single households and 2000 couple households in each wave. In all households, the single or the

household head (assumed to be male unless in same sex relationship) is at least aged 45 or over in 2002. Risky assets are defined as equities, property investments (excluding own home), superannuation (assumed to be in a balance fund where approximately 60% of the account balance is invested in risky assets) and business investments. Household wealth consists of superannuation accounts, owner-occupied house and financial assets (shares and bank accounts). Looking at wealth deciles, wealthier households tend to hold a broader composition of assets, while those at the bottom end of the wealth distribution tend to hold just their own home and superannuation.

This paper utilises a pooled Ordinary Least Squares (OLS) model across all three waves to estimate the relationship between the proportion of gross risky assets held by households, and retirement, controlling for individual and household demographic and personal characteristics. For couples, it is assumed that financial decisions are made jointly - both household heads' and partners' characteristics are taken into consideration. The dependent variable is risky assets as a proportion of total assets. The independent variables fall into three broad categories: labour market, individual and household characteristics. The pooled OLS approach assumes that there is no unobserved heterogeneity. However, since the retirement decision may be affected by unobserved individual characteristics, a Fixed Effects (FE) model is also used.

Results

The relationship central to this exploration is that between retirement and proportion of risky assets held. The estimation results are summarised in Table 1. Retirement is defined as when the individual is retired completely from the labour force in a particular wave. However, there are cases where it is reversed in the subsequent waves. The OLS results for singles show that single retired households tend to reduce the proportion of risky asset holdings by 4%. Similarly, for retired couple households the reduction is 2.1%. The results also show a negative relationship if either the household head or their partner is retired. However, for estimates using the FE model, these results are reversed for retired couple households and for those who are with retired partners. One plausible explanation is that the partners are predominantly women who tend to leave the work force earlier than men. Consequently, their partners may still be working. However, the FE results are not precisely estimated. A possible reason for this is that there is not enough variation in the retirement variable due to the way it is transformed in the FE model. Further exploration of the samples is needed to obtain more precise estimates.

Labour characteristics are also considered. Permanent work is used as proxy for safe human capital. In this case, the results are mixed. They show that having job security, i.e. a full time position, for all in the sample leads to a decrease in the proportion of risky asset held, which is not as expected. However, this relationship is only statistically significant for couple households and the magnitudes are quite small. Individuals working in the financial industry are used as proxy for risky human capital. For single households there is a negative relationship, while for couple households the relationship is generally positive. Only the OLS estimate for singles is statistically significant. One possibility that may partially explain the positive relationship is that many working in the financial industry are encouraged into buying shares in their company and may not realise the double exposure.

Other household level characteristics considered include debt, number of resident children and home ownership. These are proxies for the financial status of the household. The results show that owning the home or having a mortgage leads to a negative effect on the proportion of risky assets holdings for both singles and couples. This is likely to be due to mortgage being of a liquidity constraint. However, the relationship between the amount of debt owing and the proportion of risky assets are positive for both debts associated with risky and non-risky assets and is estimated precisely for couples in both models. The positive relationship with risky assets debt is due to households borrowing to invest in risky assets such as equities. Consequently, they tend to hold more risky assets. However, the positive effect that non-risky debt has on risky assets holdings is baffling. One possible explanation is that non-risky debt includes 'other debt' which HILDA does not specify and may also include borrowings against risky assets. There is some evidence of an increase in the number of children living at home leading to a decrease in risky assets holdings, which is likely to be due to a rise in household living expenses as a consequence.

Individual characteristics also play a role in risky asset holdings. As anticipated, income is a positive driving force for holding risky assets in both single and couple households. There is some evidence of age effects. The results also show that those who arrived in Australia before the introduction of Superannuation in 1992 tend to phase down on the amount of risky assets held for both samples (as expected) although for those arriving post 1992 their risky assets holdings increased. The pre-1992 cohort would have accumulated more in their superannuation accounts as they have been working for longer under the system. Subsequently, they may not be investing outside their superannuation. Conversely, those arriving after 1992 may be inclined to invest more outside superannuation in preparation for retirement.

Table 1

Independent Variable[1]	Sample: Single Households		Sample: Couple Households			
			Household Head		Partner	
	Pooled OLS	Fixed Effects	Pooled OLS	Fixed Effects	Pooled OLS	Fixed Effects
	Coefficient (Standard Error)		Coefficient (Standard Error)		Coefficient (Standard Error)	
Retired	-0.0399** (0.017)	-0.0097 (0.020)	-0.0443*** (0.010)	-0.0004 (0.013)	-0.0356*** (0.009)	0.0115 (0.012)
Both Retired			-0.0208* (0.012)	0.0058 (0.014)		
Age	0.0083 (0.005)	0.0138 (0.026)	0.0158*** (0.004)	0.0578* (0.030)	-0.0005 (0.003)	0.0095 (0.008)
Age^2	-0.0063* (0.004)	-0.0053 (0.005)	-0.1208*** (0.029)	-0.1000* (0.059)	0.004 (0.022)	-0.0698 (0.052)
Income	0.1042*** (0.024)	-0.0008 (0.029)	0.0244*** (0.005)	0.0317*** (0.008)	0.0202*** (0.006)	0.0386*** (0.009)
Risky Liabilities	0.0443*** (0.006)	0.0399*** (0.007)	0.0287*** (0.002)	0.0190*** (0.002)		
Non-risky Liabilities	0.0079 (0.007)	0.0065 (0.007)	0.0053** (0.002)	0.0089*** (0.003)		
Permanent Work	-0.0067 (0.015)	-0.008 (0.018)	-0.0122* (0.007)	0.0006 (0.009)	-0.0209*** (0.007)	-0.0057 (0.009)
Financial Industry	0.1041* (0.060)	0.0841 (0.081)	-0.0059 (0.020)	-0.0158 (0.035)	0.0145 (0.020)	-0.0147 (0.034)
No of Resident Child	-0.0166* (0.009)	-0.0014 (0.016)	-0.0135*** (0.003)	-0.0186*** (0.006)		
Own House	-0.0952*** (0.010)	-0.1877*** (0.022)	-0.1324*** (0.008)	-0.2302*** (0.014)		
Average Risk	0.1012*** (0.011)	0.0113 (0.013)	0.0617*** (0.005)	0.0094 (0.007)	0.0581*** (0.005)	0.0053 (0.007)
High Risk	0.1375*** (0.027)	0.0044 (0.029)	0.0738*** (0.010)	0.0261** (0.013)	0.0724*** (0.011)	0.0175 (0.013)
Age Pension	-0.0896*** (0.014)	-0.0301 (0.019)	-0.0666*** (0.011)	-0.016 (0.012)	-0.0663*** (0.011)	-0.0148 (0.012)
Arriving Pre 1992	-0.0254** (0.011)		-0.0294*** (0.006)		-0.0274*** (0.006)	
Arriving Post 1992	0.0298 (0.063)		0.0718*** (0.022)		0.0383* (0.020)	

*1 Selected variables listed. Also controlled for health, education, wave and planning horizon. P-values: * at 0.1, ** at 0.05 and *** at 0.01.*

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Other household level characteristics considered include debt, number of resident children and home ownership. These are proxies for the financial status of the household. The results show that owning the home or having a mortgage leads to a negative effect on the proportion of risky assets holdings for both singles and couples. This is likely to be due to mortgage being of a liquidity constraint. However, the relationship between the amount of debt owing and the proportion of risky assets are positive for both debts associated with risky and non-risky assets and is estimated precisely for couples in both models. The positive relationship with risky assets debt is due to households borrowing to invest in risky assets such as equities. Consequently, they tend to hold more risky assets. However, the positive effect that non-risky debt has on risky assets holdings is baffling. One possible explanation is that non-risky debt includes 'other debt' which HILDA does not specify and may also include borrowings against risky assets. There is some evidence of an increase in the number of children living at home leading to a decrease in risky assets holdings, which is likely to be due to a rise in household living expenses as a consequence.

Individual characteristics also play a role in risky asset holdings. As anticipated, income is a positive driving force for holding risky assets in both single and couple households. There is some evidence of age effects. The results also show that those who arrived in Australia before the introduction of Superannuation in 1992 tend to phase down on the amount of risky assets held for both samples (as expected) although for those arriving post 1992 their risky assets holdings increased. The pre-1992 cohort would have accumulated more in their superannuation accounts as they have been working for longer under the system. Subsequently, they may not be investing outside their superannuation. Conversely, those arriving after 1992 may be inclined to invest more outside superannuation in preparation for retirement.

Summary and Implications

The preliminary estimation results show weak support for the hypothesis of phasing down on the allocation of risky assets in Australian households, although further analysis is required in order to precisely estimate the relationship in a FE model. The evidence of some support for the hypothesis is of interest to policymakers as their objective is to ensure the elderly have adequate and secure income for retirement and are not overly reliant on government transfers. The support of the hypothesis is not overwhelming. This may be partially due to the fact that many Australians of the age 45 and above have few assets outside of their superannuation account and own home, and many have poor financial skills. Policymakers should ensure older Australians choose (or be directed to) safer asset allocations for their superannuation accounts in order to safeguard their retirement savings. In 2011, the total risky asset allocation of default investment strategy for Australian funds is 63% (Australian Prudential Regulation Authority, 2012), which could be considered risky for those who are retired and have depleted their human capital. Both policymakers and superannuation funds should consider developing investment strategies specific to individuals reaching retirement and in the post retirement phase. These could include life cycle and target date funds, where the asset allocation in the portfolio changes as the person ages or approaches specific target dates.

Another important question for policymakers is whether the means tested Age Pension acts as an incentive to engage in risky investment behaviour. From the preliminary results, this does not seem to be the case – for both single and couple households, receiving an Age Pension is associated with a reduction in the holdings of risky assets. This is likely to be due to pensioners not having the financial capacity to invest outside superannuation (although the results are not precisely estimated in the FE model). Furthermore, the distinction between part and full pensioners needs to be considered in further research, as part pensioners may have the financial means to invest outside superannuation and therefore exploit the means tests.

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TRANSPORTATION – IMPLICATIONS OF ACCESSIBILITY FOR OLDER PEOPLE

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Abstract

Objective: This research investigates older people's use of transportation to develop strategies for age-friendly transportation within the community.
Methods: Data for this study was derived from Global Positioning System (GPS) tracking of thirteen people aged 55 years and older, together with self-report information recorded in travel diaries about daily activities undertaken outside the home over a period of seven days. Semi-structured interviews were aided by individual maps to investigate engagement in out-of-home activities and verify the recorded GPS data.
Results: Overall, participants were highly reliant on the car for daily commuting. Walking, biking and public transport options were unattractive due to environmental conditions, accessibility and usability.
Conclusion: Participation within the community and access to services is facilitated by private and public transportation. It is therefore critical to address accessibility and usability issues faced by older people to enable them to maintain their mobility, and ensure access to services, especially when driving ceases.

Keywords: older people, transportation, accessibility, age-friendly, active ageing

Background

In recognition of an ageing population, the policy framework *Active Ageing* (World Health Organization, 2002) was established to support healthy ageing. This framework promotes participation as one of three main determinants of active ageing along with health and security, and encompasses both social (recreation, socialisation, cultural, educational and spiritual activities) and civic (paid and unpaid work) involvement (World Health Organization, 2007). Research shows a high degree of variability in older people participation levels because of factors such as the range of activities in which they engage, as well as the time they spend alone and in the company of others. A report (Australian Bureau of Statistics, 1999) on time-use by older people (aged 65 years and over) shows that on average, the majority of older adult time was spent on recreation/leisure, unpaid work, personal care, social participation and paid work. Although the majority of older people's time was found to be spent with others, those living alone spent far more of their waking time alone.

Access to affordable transportation is a key to enable participation within the community (World Health Organization, 2002). Findings from a number of studies that have examined driving cessation and its link to activity in later life provide some insight into the extent transportation acts as a determinant of the activity pattern of older people. Marottoli et al. (2000) for example found a strong relationship between driving cessation and a decrease in out-of-home activities (Marottoli et al., 2000). Kim and Richardson (2006) found that older people who give up driving need alternative transport options to facilitate greater levels of out-of-home activity, especially for higher order activities (Kim & Richardson, 2006). The shift from being a driver to a non-driver forces older people to rely on public or alternative forms of transport (such as taxis, family and friends) for travelling beyond walking distance. While public transport potentially allows older people the opportunity to avoid unwanted dependence on family and friends by providing an option which preserves their capacity to travel independently, research suggests that it is also fraught with problems for older age groups. Broome et al. (2009) concluded that the use of buses is an issue for a large proportion of older people, due to poor usability of and accessibility to buses. These findings are consistent with the results of an Australian study that focused on older people living in inner Sydney (Dent et al., 1999) where one third of the sample had difficulties using public transport, 29% had difficulties with both public and private transport, and 15% were deprived of any transportation.

There is currently little insight into the extent different modes of transport are related to both kilometers traveled and engagement in out-of-home activities of older people. This study uses real time travel data of older people, in combination with qualitative interviews, to develop an understanding of older people's use of transportation and therefore is able to inform strategies for age-friendly communities.

Methods

The sample used for this study (n=13) was drawn from a larger sample of 49 men and women recruited to participate in an Australian Research Council Linkage project *The neglected dimension of community liveability: impact on social connectedness and active ageing*. The participants lived in low density suburbs in Brisbane (Australia). The sample comprises eight men and five women, aged between 57 and 87 years.

The data for this study was collected using lightweight GPS devices, worn by participants every time they left home, for seven consecutive days. Participants wrote travel diaries for the same timeframe, including a brief questionnaire. Semi-structured interviews were aided by individual maps (Google Earth) showing the individual movements and activities of the participant.

The GPS data and travel diaries were used to classify mode of transport. The interview data was coded and analysed in terms of participant perceptions of the transportation system. Categories were devised for each of the different modes of transport and recreational activities.

Results

Table 1 summarizes the daily average kilometres travelled by transport option. Commuting by car was the main transport option used during the tracking period. Nine participants (P1-P9) travelled more than 90% of the kilometre commuted by car; four of these participants (P6-P9) also walked for travel (1-6% of kilometre travelled) and two of these participants (P7, P9) used also the bus (6-7% of kilometre travelled). Two participants (P3, P4) within this group participated in recreational walking or biking, but did not travel walking or biking. Two participants did not drive themselves (P9, P10) and another two did not use a car at all (P12, P13), from which one (P13) walked everywhere. Public transport was used by five participants (P7, P9, P10, P11, and P12). While four of these five participants used public transport for 5-7% of the kilometres travelled, one participant travelled by train for 59% of kilometres travelled (P12).

Table 1: Daily average kilometres travelled by transport options and participant

		Participant car usage for commuting (percentage of distance travelled)												
		100%					90-99%				75-77%		0%	
		P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13
Demographics														
Age		65	71	75	80	84	63	63	80	87	57	72	67	69
Gender	*Male*		x	x	x	x			x			x	x	x
	Female	x					x	x		x	x			
Tracked travel behaviour (km)														
Active Transport	*Walk*						0.1	0.2	0.3	0.2	0.6	0.2		6.3
	Bike										1.0		24.8	
Car	*Drove myself*	35.4	33.7	66.8	29.4	16.1	24.1	18.2	5.8			9.5		
	Someone else drove	1.9	5.2		1.0				0.9	13.6	8.7			
	Unspecified		2.2		3.3									
Public Transport	*Bus*							1.2		0.8	0.8	0.8		
	Train												36.3	
	Ferry											1.2	0.1	
	Taxi											1.0		
Recreational	*Walk*		0.4	0.1							1.8	3.7		
	Bike			2.8										

Participants P9, P10, P12 and P13 had different reasons for not driving during the data collection period. P10 and P12 could not afford to have a car; P13 was temporarily not driving due to health conditions, while P9 has never had a driving license. While giving up the car appeared to have positive benefits for P10 (I love not having the responsibility), P12 and P13 experienced not driving as an unsatisfactory situation. For one of them it meant to be restricted (Well I used to drive... but now I'm grounded - P13), while the other highlighted that access to a car would give the means to again use this as the preferred mode of transport

(I'll just go in the car - P12). The non-driving participants were found to travel a far smaller distance per day than drivers with the exception of P12, who travelled for work. Therefore, non-drivers were found to use a smaller area of their respective communities compared to participants who drove.

The participants were unlikely to use transport alternatives to the car. Environmental conditions within the study area (*As long as you don't mind walking up the hill* - P7) and safety issues (*I don't really feel safe riding on the roads* - P10), made the use of alternative transport options unattractive. Shared space between walkers and bikers were found to create safety issues and anger *(It's shared with pushbikes, shared with joggers; very rude people* - P8*).* Active commuting was found exhausting and therefore impeding other activities (*I object to having to sleep all the time* - P1). The use of public transport, especially buses, was disliked by most participants for reasons such as longer travel time (*I start walking into the city and quite often I beat the bus into the city* - P13), usability (*The buses aren't made to drop down so that you could wheel the walkers up* - P4), and accessibility (*There is no access to buses here* - P5).

Implications for Policy and Practice

Mobility of an ageing population is an urgent topic for policy development and practice. It is critical to identify the extent transportation hinders or promotes active ageing and the different modes of transport that are accessible to and used by older people. It is their connection to differences in levels of out-of-home activity that is also vital. The negative impact of driving cessation on participation in out-of-home activities (Marottoli et al., 2000) and the difficulties of older people using public transportation (Broome et al., 2009; Dent et al., 1999) illustrate the importance of developing an inclusive, age-friendly transportation system. In order to develop effective practice outcomes, practitioners should consider the extent transportation hinders or promotes engagement in services for older people.

While mobility studies using GPS tracking exist, the real time measurement of older people commuting using GPS is still limited in gerontology. The mixed methods approach of GPS tracking, travel diaries and interviews provides therefore, an effective approach to develop a comprehensive understanding of older peoples travel behavior. This means that service providers and policy makers can be informed by detailed and complex data of real-time transportation use and out-of-home activities of the older people. This enables barriers and facilitators of mobility in older age to be identified so as to initiate and create age-friendly communities. Retrofitting the community to be safe for walking and biking is one such example. Though this study included a small sample size and exaggerated activity levels may have been recorded, these results do provide comprehensive data and promotes the need for future research which focuses on the impact of transportation on participation in out-of-home activities.

Summary

Transportation is the key to facilitating opportunities for older people and to maximize their participation in out-of-home activities as a means to meet active ageing objectives. Future research is needed to explore how transportation can facilitate older people's participation within the community.

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THE EFFECT OF TAX INCENTIVES ON PARTICIPATION IN SALARY SACRIFICING INTO SUPERANNUATION

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Abstract

The adequacy of retirement incomes is a key concern for policymakers when considering the welfare of the retirees in an ageing society. Despite an increase in mandatory employer contributions under Australia's superannuation guarantee (SG) from 9 to 12% by 2020, academics and industry experts still argue about the level of savings required to fund a comfortable retirement. To supplement these SG contributions, the government also provides tax incentives to encourage voluntary superannuation contributions. These include the ability to salary sacrifice superannuation contributions, government co-contributions for low income earners, and tax offsets for spouse contributions and transition to retirement (TTR) pensions. Despite these incentives, only around 30% of the working population are actively making voluntary contributions. The aim of this paper is to examine the effectiveness of these tax incentives. Using a regression discontinuity (RD) framework, the paper measures the response of employees to tax incentives to salary sacrifice superannuation. Results indicate that tax incentives provided have no effect on the decision to salary sacrifice, contrary to similar studies using US data. It is likely that this is due to the complexity of the incentive schemes and competing demands for long term savings. The results provide some support for the increase of mandatory retirement saving rate from 9 to 12%.

Introduction

Government spending on retirement pensions has been increasing at a rapid rate due to the ageing of the populations both in the developed and developing countries, posing great burden on fiscal health. In the wake of recent government debt crises, various policies, such as lifting eligibility age, reducing benefit, have been suggested. However, such measures would reduce the welfare of the retirees. Thus systems that can provide self protection in retirement financing are being placed in an even more important position.

One focus is aimed at facilitating voluntary contributions to superannuation as a supplement to the compulsory employer contributions under the SG. The question of how to design fair and effective saving programs that increase voluntary contributions has been a challenge for many countries. In the US, the private retirement savings accounts (e.g. 401(k)s and IRAs (Individual retirement accounts)) are designed to promote voluntary savings with tax breaks during the accumulation phase. In Australia, a number of incentives have been introduced over the years to encourage voluntary contributions in superannuation (on top of the overall tax preferred nature of superannuation savings for most income earners).

Policies that are implemented include the ability to salary sacrifice (thereby taxing the member contributions at a flat 15% rate of tax, rather than under the marginal personal tax schedule), a tax offset for spouse contributions, and government co-contributions for low income earners. These can be costly: the foregone tax revenue when people save regardless of tax incentives; the cost of mass media communication on the policy change; the administrative costs etc. Therefore, it is important to evaluate the effectiveness of the measures.

The ability of tax incentives to encourage voluntary retirement savings has been shown to have mixed results. While a huge increase in participation in IRAs in the US between 1982 and 1986 is observed (e.g. Poterba, Venti et al. 1995), the participation rate of voluntary superannuation contributions in Australia decreased substantially over the past two decades despite various incentives (ABS 1994-1995; 2001; 2009). Even in the US, academics studying tax deferred retirement saving accounts disagree about the effectiveness of tax breaks on participation in retirement saving accounts. Collins and Wyckoff (1988) found a very limited impact of marginal tax rates on participation in both 401(k)s and IRA accounts. In contrast, O'Neil and Thompson (1987) and Long (1988) confirmed a positive relationship between marginal tax rates and participation while Power and Rider (2002) and Eaton (2002) conclude a substantial effect of tax incentives. Eaton (2002) further disentangles the effects and suggests that the greatest impact on participation is by tax change due to income increase (change of marginal tax rate), but not due to income increase alone or statutory change of marginal tax rate over time. Given the differences in the retirement saving systems, and particularly the tax treatment of retirement savings between the US and Australia, it is even harder to conclude whether the tax incentives provided through the superannuation system are effective in encouraging participation in voluntary superannuation savings.

In order to boost retirement savings, the Australian government has in place a number of tax incentives to encourage voluntary superannuation contributions, in particular salary sacrifice to superannuation. Personal superannuation contributions can be made after-tax (and are therefore taxed under the personal marginal income tax schedule) or before-tax. Before-tax contributions are called salary sacrifice contributions and are taxed at the same rate as employer contributions, which is a flat rate of 15%[1]. This is equivalent to a 15 percentage point or more tax reduction for median and high income earners where marginal tax rates (MTR) are 30%, 38%, and 45%[2]. In addition, individuals age 55 and over and still working are allowed to convert part or all of their superannuation account into non-commutable pension where the income stream from this pension fund enjoys a 15% tax offset.

This paper explores the impact of these tax incentives to salary sacrifice superannuation contributions. In particular, this paper utilises tax concessions available for higher income earners and for people in the transition to retirement (TTR) period, to evaluate the impact of tax incentives on participation.

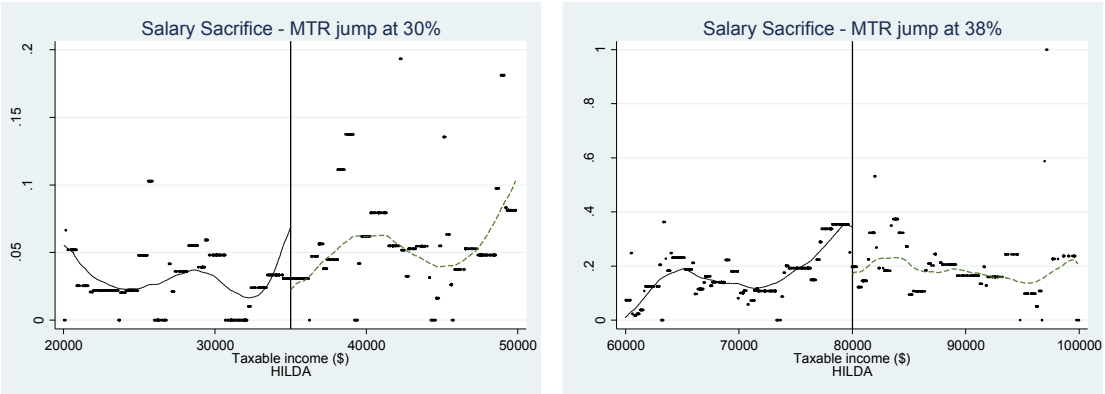
Methods

The analysis here exploits the discontinuity in the design of the marginal personal income tax schedule (i.e., the rate jumps) and the age eligibility for the transition to retirement (TTR) pension fund, to examine the impact of the tax incentives for salary sacrifice. In particular, it is assumed that individuals on either side of the cut-off points (that is, the thresholds where the marginal tax rate increases to higher rate, or the eligibility age) have similar characteristics and only behave differently because of the difference in tax treatments. Participation decisions on salary sacrifice contributions to superannuation for the financial year 2009-10 from HILDA[3] wave 10 are used to examine this tax incentive effect.

Results

First examined is the participation in salary sacrifice to superannuation for different nominal marginal tax rates. Figure 1 shows the participation rate for taxable income around two thresholds where MTR changes (15% to 30% and 30% to 38%). The dots on each graph indicate actual participation rates in a small income range. Contrary to findings in the US literature, neither graph show a significant change of participation around the thresholds. In fact, in both cases, the fitted participation trend show a small decline in participation when the MTR jumps to a higher rate.

Figure 1: salary sacrifice participation at marginal tax rate (MTR) jumps with fitted smooth line



Consistent with the observation in Figure 1, the regression discontinuity (RD) estimation results (summarized in Table 1) indicate a small negative but insignificant effect at both thresholds. The baseline considers individuals with taxable income within $3500 of the thresholds. In addition to linear income specification, quadratic and cubic forms are also tested. The results from different specifications are very similar to one another. Alternative bandwidths of 50% and 200% show similar results.

One of the concerns is that individual decisions are made based on the average tax rate taking tax offsets into account instead of the nominal marginal tax rate. Thus I examine whether there is any difference in the decision to salary sacrifice according to average tax rate. The regression results are presented in Table 1. The point estimates suggest a smaller negative effect in all specifications, but none of the estimates are significant at any conventional levels.

[1]The employer and salary sacrifice contributions are called concessional contributions, which are currently capped at $25,000pa.
[2]Marginal Tax Rates for the 2009-10 financial year, which matches time period of the data used.
[3]The Household, Income and Labour Dynamics in Australia (HILDA) Survey is a household-based panel study which began in 2001. It covers a wide range of topics including employment information, demographic information, household wealth information (in selected waves) and financial attitudes questions.

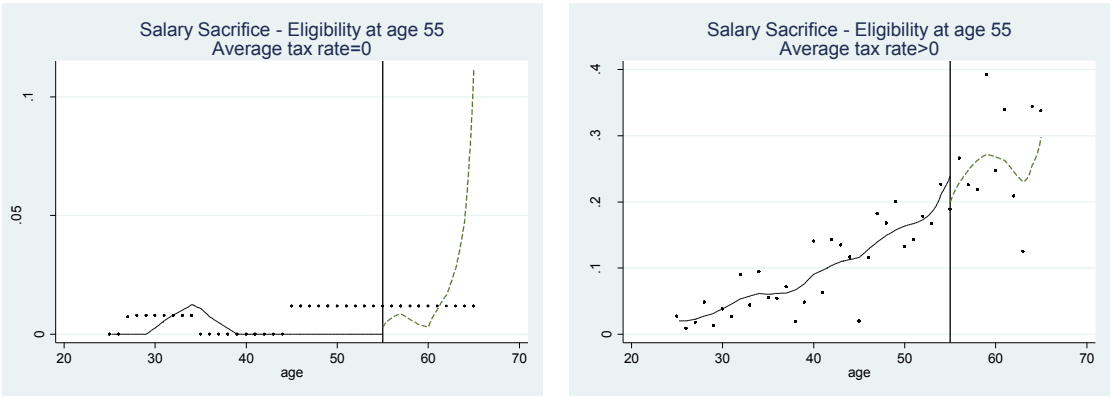
Table 1. Regression Discontinuity Estimation Results

	MTR jump at 30%		MTR jump at 38%		Avg. TR at 15%	
	coeff.	s.d.	coeff.	s.d.	coeff.	s.d.
Bandwidth[a]: 100%						
Linear	-0.047	(0.040)	-0.175	(0.142)	-0.016	(0.016)
Quadratic	-0.053	(0.049)	-0.141	(0.228)	-0.021	(0.022)
Cubic	-0.020	(0.044)	-0.081	(0.334)	-0.008	(0.030)
Bandwidth: 50%	-0.047	(0.052)	-0.122	(0.224)	-0.022	(0.020)
Bandwidth: 200%	-0.009	(0.028)	-0.185**	(0.093)	-0.010	(0.015)
Significance level: * p<.1 ** p<.05 *** p<.01 Default bandwidth: $3500 for taxable income at MTR jumps, 19.07% for effective tax rate jump						

Another concern is that people are able to manipulate their taxable income to be right below the thresholds of MTR jump and thus violating the assumptions of RD design. An examination of the density of taxable income around the thresholds suggests only a negligible difference on the sides of the thresholds, hence continuity of the forcing variables (taxable income or effective tax rate) can be reasonably assumed.

In an attempt to avoid the possibility of violation of RD design under the 'tax rate' jumps, the effect of tax incentives is explored using the age eligibility characteristics of the TTR pension arrangements which are available from age 55, since age is much harder to manipulate than taxable income. Figure 2 shows the salary sacrifice participation rate at different ages for those with and without tax liability. The group that has some tax liabilities and is eligible will benefit from the TTR pension arrangement as the effective tax rate on their salary sacrifice contribution is zero, while the group that has no tax liability will have no benefit. From Figure 2, neither group exhibit a sharp change in participation around 55 years old. The fitted lines show a small increase in participation for the no tax liability group with a minor decrease for the other group.

Figure 2: salary sacrifice participation by age and effective tax rate with fitted smooth line



The estimation results shown in Table 2 indicate a small decrease in participation in salary sacrifice to superannuation for the two groups, but none of them are significantly different from zero. This suggests that the eligibility for tax concessions has no effect. The results for the group without a tax liability (which serves as a falsification test) shows no significant effects. The findings are robust on different specifications and various bandwidths. They are also consistent with those based on taxable income and the average tax rate.

Table 2: Regression Discontinuity Estimation Results

	Average tax rate=0		Average tax rate>0	
	coeff.	s.d.	coeff.	s.d.
Bandwidth: 5 years				
Linear	0.003	(0.003)	-0.039	(0.062)
Quadratic	-0.002	(0.003)	-0.083	(0.122)
Cubic	-0.001	(0.001)	-0.285	(0.301)
Bandwidth: 4 years	-0.000	(0.001)	-0.039	(0.075)
Bandwidth: 3 years	-0.003	(0.003)	-0.085	(0.100)

Discussion and Policy Implication

The effectiveness of the tax incentives for voluntary superannuation contributions is an important component of policies to increase retirement savings among the working population. Contrary to some of the findings from the US literature, this study identified no effects for the Australian tax incentives using a RD framework which explored the difference in marginal tax rates and age eligibility of transition to retirement pensions. The results are more closely in line with Collins and Wyckoff (1988) and Chetty et. al. (2012) where only a very limited effect is identified in the US context.

There are a number of potential reasons for the lack of responsiveness to the tax concessions associated with salary sacrifice. First, recent evidence show that people have little knowledge about superannuation (Bateman, Eckert et al. 2012). There is limited awareness among the working population of the ability to make salary sacrifice contributions and the associated tax implications. The participation rate of salary sacrifice is around 10% (ABS 2012) and the tax benefit is not directly reflected in any pay slips. There is similar ignorance of transition to retirement pensions. Second, there are competing demands for long term savings. The exemption of owner-occupier housing from the capital gains tax and from the Age Pension assets test encourages investment in residential property over savings in superannuation. The historically lower returns compared to other investment opportunities and illiquid feature of the savings make it less competitive. Third, many may see the mandatory employer contribution rate under the SG as 'de facto' advice and believe that they are already saving enough. This is further exacerbated by myopia and status quo bias shown in the literature (Bailey, Nofsinger et al. 2003).

The results presented here provide some support to the government decision to increase mandatory employer contribution rate in an effort to increase retirement savings. Further research could be directed at identifying and examining the main reasons behind the low participation in voluntary superannuation contributions. It can facilitate the design of a more effective incentive scheme to facilitate greater savings.

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UNDERSTANDING THE SOCIAL DETERMINANTS OF OLDER MEN'S HEALTH

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Abstract

This work is grounded in the author's theoretical framework for a study of the impact of Men's Sheds on the health of the older men involved as part of ongoing PhD research. Much of what passes as approaches to older men's health, including their use of services, is based on social constructions of gender, often focusing on their reluctance to seek help. As such, negative stereotypes about older men are perpetuated, which may, despite best intentions, reinforce negative health behaviours among older men. In this work, I will argue that the health promotion community is well positioned to strategically free older men from the constraints of hegemonic masculinity through adopting a "social determinants of health approach" to frame professional responses to their health needs. I will support the ideas with evidence from three issues – social isolation, social exclusion and lack of social support, which are addressed here as significant for older men. These issues will be discussed in light of long-term psychological stress, which can make some men more vulnerable to many serious illnesses such as cardiovascular, and immune system diseases and adult-onset diabetes.

Keywords: Older men, social determinants of health, salutogenesis, social isolation, social exclusion, and social support

Introduction

The lack of consensus in framing men's health issues in Australia means existing programs and practices for older men are influenced by prevailing cultural norms. Until recently, men's health, including their use of services has tended to be based on social constructions of gender, often focusing on "male deficiency: 'men don't take care of themselves', 'men don't go to the doctor', 'men are not in touch with their feelings', 'men don't communicate about their health'" (Macdonald, 2005, p.100). As such, negative stereotypes about older men are perpetuated, which may, despite best intentions, reinforce negative health behaviours among older men. This review paper suggests adoption of a "social determinants of health approach" to frame professional responses to older men's health to help bring about a cultural shift that will help practitioners depart from these prevailing mind-sets and practice. In doing so, it is also hoped that it may chart a way towards a more rational and compassionate view of older men's health, and hopefully more effective professional practice.

Older Men Health Issues

Notwithstanding increased longevity, older men continue to suffer higher levels of serious morbidity and mortality than older women, mainly from preventable and easily treatable causes (Australian Bureau Statistics, 2010; Australian Institute of Health and Welfare, 2010; Snowdon & Baume, 2002; Yeap et al., 2011; Yeap et al., 2009). A particularly telling example is that of suicide mortality, where older men's prevalence rates are tragically among the highest in Australia (Erlangsen et al., 2011; Stanaway et al., 2010). In 2008, suicide accounted for nearly one-fifth of all deaths amongst men over 75 years. Statistically, this translates to more than 20 male deaths per 100,000. Such mortality is alarming and the tragic loss of life causes terrible grief for people left behind. Given the current focus on men's health seeking behaviours in Australia and other Western countries, it is perhaps little wonder that an explanation for poor older men's health might be sought in 'social construction of gender'. Indeed, attention has been paid to the ways in which dominant masculine cultures and values such as 'hegemonic masculinity' might negatively impact on patterns of illness and men's experiences and health practices, including seeking for help (Courtenay 2000; Saunders & Peerson, 2009).

It has been asserted that some men are sicker and die earlier because normative hegemonic masculinity encourages them to be bloated with self-confidence and impervious to health problems. This has led to a general consensus within the literature that hegemonic masculinity causes men to 'behave badly' by being unwilling to seek help, unable to express their feelings, ignorant of their bodies and being involved in anti-health behaviours such as drinking and smoking more and having poorer diets (Connell & Messerschmidt, 2005; Lee & Owens, 2002). However, some researchers believe that blaming cultural constructs of masculinity for this tragedy is a way of passing the buck (see, for example, Macdonald, 2011; Smith, 2007). Instead, these researchers have powerfully challenged practitioners to consider the role of the social environment in which the men live.

The role social determinants play in older men's health may seem not important to people not involved in men's health policies and programs, but its consequences have been observed among older men. For instance, it has been observed older men have fewer friends and a smaller social network than older women (Ajrouch, Blandon, & Antonucci, 2005; Dykstra & Fokkema, 2007; Thompson & Whearty, 2004). Some scholars think that this increases the chance of older men becoming socially isolated as older women are more likely to be "embedded within", and by implication protected by, "a network of family relationships" (Phillipson, Bernard, Phillips, & Ogg, 2001, p. 230). Cacioppo and Hawkley (2009) have suggested the negative health outcomes associated with social isolation are comparable to those of smoking and other major lifestyle factors. Indeed, in clinical cardiology, social isolation is a malignant bio-behavioural risk factor for cardiovascular morbidity (Grant, Hamer, & Steptoe, 2009; Hafner et al., 2011). Cardiovascular disease is not just the major cause of death in Australia; it is also responsible, more than any other group, for the higher mortality among older men (Australian Institute of Health and Welfare, 2009).

Social exclusion has considerably increased among vulnerable groups worldwide (Wilkinson & Marmot, 2003). Older men have not been untouched by this phenomenon. Indeed, it has been observed that in many societies, older men post-retirement "experience that they are not valued", which increases the risk for social exclusion (Macdonald, 2005, p. 106). The transition to social locations other than work may denote relinquishing of identity, and diminish the experience of being 'valued' (Brown, 2008). For many, old age becomes a solitary journey. As Clare observes, these older men feel like they have lost the things that define them and give them purpose and "[t]hey just slowly wither away" (2000, p.90). For some of these men, the sense of exclusion becomes even greater when they are *forced* to relocate, mostly to nursing homes or hostels due to diminishing physical and mental abilities (Capezuti, Boltz, Renz, Hoffman, & Norman, 2006). We know that socially excluded people are sicker and die quicker than members of the socially included population (Daiski, 2007).

From the above literature, it is clear that morbidity in older men may be steeper due to various factors that place potential strain on their social lives, health and wellbeing. This again is known to increase stress (Uchino, 2009), which may affect health in various ways, for instance through the endocrine or immune system, or both. Older men exposed to prolonged stress may become more vulnerable to illnesses ranging from infectious diseases to cardiovascular conditions. This is an important point that is worth noting by the health promotion community in Australia and internationally. Practitioners must stop blaming older men for their worsening health statistics and start looking at the role of context or environment in men's health. We need a way of thinking and acting about older men's health which sees health within their total environment; that is, physical, emotional and social contexts. Some parts of this environment can be controlled or manipulated to promote their wellbeing and health promotion interventions should focus on these; for example, promotion of social support for older men at risk of social isolation. For other dimensions of the environment, as in the case of men feeling *useless* and unvalued after retirement, a social inclusion approach should be used. Ideally, this would see a shift in health system planning and resource allocation towards the fostering of environments which support older men's health.

The idea of *salutogenesis* can help here. The concept is borrowed from Antonovsky (1979) and grounded in understanding the social factors that are perceived to create and sustain health in spite of adversity, in contrast to those that promote illness and disease. Macdonald (2005) expands the concept of salutogenesis beyond Antonovsky's definition, of overcoming adversity, to the dynamic health creating interaction between individuals and their environments. A salutogenic approach to older men would acknowledge their wellbeing as a process in which they interact dynamically with their total environment: their physical, emotional and social contexts and potentially have feelings of confidence in their internal and external environments. The approach generally fits comfortably with health promotion and public health interventions (Macdonald, 2005). It is noteworthy that this approach has been advocated by Australian men's health scholars, and others to frame professional responses to men's health (see, for example, Brown & Macdonald, 2009; Macdonald, 2006, 2011; Smith & Robertson, 2008). There is a need to build on these researchers' work, to show that social determinants of health and salutogenesis can complement each other and that their convergence provides a holistic way to understand intervention and prevention programs that are not just about accessing health care facilities, but are more conducive to keeping older men healthy and alive.

By shifting focus to include supportive environments that foster health, along with greater understanding of the impact of social, economic, political and cultural contexts, practitioners and policy makers would be able to better support older men at risk of social isolation. Towards this direction, practitioners should for instance, focus on programs that adopt a social inclusion approach to older men and their health. Research

should then focus on exploring the impact of programs such as Men's Sheds on the health of the older men involved. The Men's Shed movement is an important grass-root prevention initiative "with well over 400 sheds all over the country offering a safe place for men, often after retirement, to meet, exchange ideas and talk 'shoulder to shoulder' as their motto proclaims" (Macdonald, 2011, p. 84). However, despite being one of the fastest growing movements in Australia with a combined membership of more than 100,000, and growing at around 4 sheds per week (Golding, 2011), the impact of social inclusion provided by Men's Sheds on the health of the men involved has been somewhat neglected by Australian scholars. This is perhaps not surprising, given the lack of consensus about what men's health constitutes in Australia (Smith, 2007). Therefore, using a social determinant of health approach, it is certainly worthy of examining Men's Sheds more systematically to explore whether they can be considered as offering salutogenic effect, which helps older men in the direction of positive health.

Conclusions

There are three general observations arising out of this review. First, I have identified key social determinants of older men's health. These have included social isolation, lack of social support, social exclusion and stress. Second, lack of consensus on what men's health constitutes in Australia has perpetuated negative stereotypes about older men, which may, despite best intentions, reinforce negative health behaviours among older men. Noteworthy, is the observation that until recently, the bulk of literature on men's health topic had risen from a dominant academic discourse relating to the social construction of masculinity. Some scholars claim that this approach is far too narrow and simplistic as it fails to account for the *contexts* of older men's lives. Third, adopting a social determinant of health perspective, complemented with a salutogenic approach, provides a holistic framework to understand intervention and prevention programs such as Men's Sheds that are more conducive to keeping older men healthy and alive.

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MODELLING DEMAND DRIVEN PROVISION OF FORMAL AGED CARE TO BABY BOOMERS IN AUSTRALIA

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Abstract
Population ageing has become a critical public policy issue in Australia. The existing literature suggests that demand for aged care services and support is highly variable, with diverse provision of care to aged persons. The baby boomer generation approaches retirement and their likely needs for aged care services are generating major concerns. However, very limited research on potential need for formal aged care to the baby boomers in a global context has been conducted. Therefore, this research attempts to facilitate better future projection of the provision of aged care.

Based on the research gap identified, this study addresses the central question: How will demand and preferences of the unique baby boomers impact on the future aged care service? This study aims to explore and analyse the needs and preferences of the baby boomers for aged care at the level of the individual and family, and to understand and model the demand of baby boomers to better inform projections of the future supply of formal aged care that will be needed to meet the expected demand. This will involve developing and incorporating a demand modelling tool into the aged care module of Australian Population and Policy Simulation Model (APPSIM).

The research is part of a broader research program at the National Centre for Social and Economic Modelling (NATSEM) which aims to investigate and evaluate the need for aged care and financing options that will help mitigate the widening fiscal gap predicted for the Australian economy. This aim is being achieved by building a computer modelling tool – the Aged Care Module (ACM) in the dynamic microsimulation model - The Australian Population and Policy Simulation Model (APPSIM) - that will provide the infrastructure to assist policy makers in assessing the economic consequences of various aged-care financing options. The modelling tool will identify options that support the delivery of long-term care which is acceptable to ageing Australians, baby boomers, while ensuring fiscal sustainability.

Rationale
Population ageing is occurring on a global scale, with faster ageing projected for the coming decades than has occurred in the past. The old-age dependency ratio is an important indicator of the pressures that demographics pose for pension systems (Gavrilov and Heuveline, 2003). According to the World Bank (2011), Australian's old-age dependency ratio increased from 14.00 per cent in 1960 to 19.90 per cent in 2010. The Australian Bureau of Statistics (ABS) defined the Baby Boomers as 'those who were born in Australia or overseas during the years 1946 to 1964 (ABS 1997). The baby boomers almost "double Australia's population from 1946 to 1964, which come from 7 to 12 million" (McCrindle and Wolfinger, 2010, p.10). 1st January, 2011 was the moment when the first baby boomers started reaching retirement age. With baby boomers approaching retirement age, they will make a bigger impact on aged care than ever before.

Most major industrialised nations such as United Kingdom, Japan, Germany and United States have adopted a social insurance model to provide long-term care to all who need it. Purchase of insurance is mandatory, often through payroll taxes, although some nations also finance their long-term care systems with premiums and general fund revenues (Gleckman，2010). Globally, when governments forecast budget deficits or consider regulatory change, they use a variety of economic models. Since 1990s, the UK, Japan, Germany and US, have introduced various models of private and/or social long-term care insurance policies, as a means of keeping the cost to the government manageable while meeting the increasing demand for services.

The growing number of baby boomers who are approaching retirement age has become a matter of increased concern, as this group is likely to require various aged care and better services. According to Mackay (1997, p.62), the combination of growing prosperity and the threat of the Cold War creates a generation obsessed with the idea that "we are not here for a long time, we are here for a good time". This ethos was manifested in the need for "instant gratification", and the focus on self-betterment and personal freedom led some commentators to nickname the boomers the "me generation". Baby boomers are also referred to as the "me generation" due to their relative power and wealth. This emphasis on the short term meant that the boomers were "destined to become poor planners, unenthusiastic savers but voracious

consumers" (Mackay 1997, p.63). Although baby boomers have their common characteristics, they are further divided into five segments based on attitudes and behaviours in relation to retirement, the strugglers (9 per cent); the anxious (23 per cent); the enthusiasts (13 per cent), the self-reliants (30 per cent) and today's traditionalists (25 per cent) (AARP, 1999, pp. 19-20).

Similarly, expectations for aged care from baby boomers are increasing in Australia. The *Demographic Change and Liveability Panel Report* (Hugo *et al.*, 2010) notes that baby boomers made up 27.5 per cent of the population and 41.8 per cent of the labour force. There appears to be a wide-spread expectation that baby boomers will have a potentially transformational effect on the provision of aged care services, as their values and attitudes of turning into older age are different from previous generations. According to Riggs and Turner (2000, p. 1), the boomers "reshaped many social norms, including family composition and living arrangements, assisted by enhanced contraceptive choices, secularisation, and the women's movement" and had a reputation for maintaining their cultural and social influence through the decades as they age.

Based on the research gap identified in the literature review, the study addresses the central question: How will demand and preferences of the unique baby boomers impact on the future supply of aged care services? In order to understand the issues, the dynamic microsimulation modellings are used to project the impact of Baby Boomers on formal aged care services, entitled *Modelling Demand Driven Provision of Formal Aged Care to Baby Boomers in Australia*.

There are three sub-questions arising from the central question.

- How will Baby Boomers' wealth (income and assets), health and disability status, and living arrangements (including family structure) affect their demand for aged care?
- How will the preferences for aged care of Baby Boomers impact on the number and types of care place needed?
- How will the different assumptions about the Baby Boomers' willingness to pay impact on number and types of care place needed?

Methods

The study employs quantitative research methods based on a dynamic econometric and behavioural microsimulation modelling. Economic theory of willingness to pay, demand and preferences will underpin the dynamic microsimulation modelling.

Aims

This study aims to explore and analyse the needs and preferences of the Baby Boomers for aged care at the level of the individual and family, and to understand and model the demand of Baby Boomers to better inform projections of the future supply of formal aged care that will be needed to meet the expected demand. This will involve developing and incorporating a demand modeling tool into the aged care module of APPSIM. This study also aims to explore and provide insights into bridging the gap between demand and supply of aged care on current provision and future projection of Baby Boomers.

Microsimulation

Microsimulation models are special forms of simulation, which are built on computer programs using individual level data. To begin with, microsimulation models use the individual data to determine what is happening currently at the individual level. Then the program starts to simulate and predict what the population would do in the future based on certain assumptions. The assumptions can include looking at the behavior of the individuals over time, then extrapolating the behavior into the future. It can also include making assumptions about changes in behavior that may occur over time. Finally, the results are aggregated in order to understand the behavior of the population as a whole, or sections of the population.

Data Source to be Used

To build microsimulation models of the aged care system for the baby boomer generation, individual level data is required. Two kinds of data are used in the projects for different purposes. Firstly, the base file is the APPSIM base file, which is the unit record file of the one per cent sample of the 2001 Census of Housing and Population. These data provide the demographic information and updated population structures on baby boomer generation. Secondly, the source data is in compliance with ACM using data from 2003 ABS Survey of Disability, Ageing and Carers, a cross-sectional survey. This administrative data helps to create the microsimulation model for baby boomer generation retiring since 2011. It also provides health services information on the baby boomer generation.

Implications for Policy and Practice

To achieve the aims of the study, this research seeks to:

- Build a profile of the baby boomer generation based on literature review, construct their future aged care profile on needs, preferences and willingness to pay
- Analyse the current supply system of aged care and compare with the demand for aged care, and demonstrate and evaluate policy intent on the aged care services to improve the future supply and adaptability of the services to baby boomers
- Use microsimulation methods to model impact of various preferences and willingness to pay on demand for aged care
- Paint a picture of what the future world of aged care provision would be based on preferences and willingness to pay of baby boomers
- Enhance and help the continuity and complementarity of aged care for the baby boomers, and better attune to the needs of individuals of the baby boomer

The innovation of this research is that instead of being restricted to residential aged care, it incorporates home and community-based aged care. This study endeavours to provide answers to the research questions by exploring and understanding the impact of 'wealth', 'preference' and 'willingness to pay' on baby boomers in terms of their formal aged care provision. In this study, the researcher tries to pursue multifaceted and flexible provisions that work with the specific features of the demands of the diverse aged people such as baby boomers. This means that all the research in this study informs the various strategies that the nations employ.

Summary

The baby boomer generation is pivotal. Its members were born into a nation transformed by four years of war, and as their lives unfolded they experienced social change and responded by creating new lifestyles that set the patterns for later generations. Therefore, the research on the baby boomer generation will provide guidance to policy makers, and facilitate correct predictions to benefit other generations as well. It is the hypothesis that arising demand and aged care provision driven by this baby boomer generation will make some contributions to the extent on the national policy and academic literature materials for the further research.

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MAKING AN IMPACT ON AGEING FROM SPACE: A MULTIDIMENSIONAL APPROACH

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Abstract
The importance of space is underplayed in contemporary aged care policy and analysis. The dimensions of space, time and scale are enormously important for developing effective systemic responses to the complex human problems associated with population ageing. In the wider social sciences, space and place are often left to geography, and in government we occasionally see old-style atlases (or their updated digital equivalents) produced to illustrate social variables at the national, state or more local level. This is a very limited approach to the contribution that the spatial sciences can make to health and social support in the context of ageing societies. In this presentation we illustrate some aspects of how emerging spatial science can support and extend our knowledge of population ageing and its wider social and systemic impacts now and into the future. We use research on Alzheimer's disease to illustrate the case for making a more informed impact on ageing from and through spatial approaches. We argue that the lack of sophisticated spatial methods in the health sciences generally and in aged care planning and service development are a limiting factor in current planning approaches.

Rationale
The concepts of space, location and place are central to successful ageing and yet their utilisation in ageing research, practice and policy development remains marginal. However, there exists a long-established literature on the links between location and health status including disease patterns, treatment variations and access to services (Tatem et al, 2012; Welch, Sharp, Gottlieb, Skinner & Wennberg; Schurmaan, B´erub´e & Crooks, 2010). From Hippocrates "Airs, Waters and Places" to John Snow's cholera map there has always been an understanding that health and disease vary by location and environmental factors (Meade & Erickson, 2005). In the 21st century this is being explored through new technologies including not only computer-based mapping systems but also systems that can link, analyse and model spatial data from a wide variety of sources. This includes social media developments such as crowd-sourcing information about health events via GPS-enabled mobile devices (e.g. Boulos et al, 2011).

The spatial sciences are one of the most dynamic growth areas in which theory, technology, techniques and research development converge in increasingly pervasive ways (Batty & Smith, 2001; Sui, 2004). Al Gore (1998) proposed the idea of a virtual earth as a way of linking disparate information sources within a complex data capture, analysis and visualisation system that could support solutions to political, social and environmental challenges. This situation is rapidly coming to pass as new and innovative work attempts to link, visualise, theorise and 'virtualise' a variety of spatial information systems in a single digital environment (Kuhn, 2012). The ability to capture and locate not only data but to manipulate and produce improved data analysis outputs has huge implications for the way we currently approach health care service design, development and delivery. Increasingly, we contend, health care needs to be a spatially literate field because the complexities of modern health systems require spatial understanding and analysis to maximise successful population and system outcomes (Berry, 2012).

In the Australian context, it is a major issue that the uneven distribution of health services and health workforce capacity mean that many regional, rural and remote communities do not have access to the same levels of health care as urban areas and health status and outcomes vary accordingly (e.g. Department of Finance and Services NSW, 2012). This situation is likely to become more pronounced as the differential nature of population ageing unfolds across the different states and also within each state and territory (Jackson, 2004). For example, some small area projection modelling has been done in Australia to estimate older peoples' care needs over time using spatial methods (Brown, Lymer, Yap, Singh & Harding, 2005).The situation faced by a large and unevenly populated country like Australia also has important implications for supporting developing countries, many of which may lack the capacity to collect population data or to fund service infrastructure for ageing population cohorts.

The capacity to model the real world in a virtual environment has beneficial implications for health systems research and policy development that go well beyond current mainstream approaches (e.g. Charfeddine & Montreuil, 2008). These include activities such as capturing epidemiological data in real time, supporting first responders in the event of natural or man-made disasters, re-configuring our systems to adapt to

climate change or locating new residential aged care facilities so that people with dementia and their families are not separated by large distances.

Methods

This project utilises a number of modelling techniques to combine current demographic data, population forecasting and epidemiological information (using Alzheimer's disease (AD) rates and severity) to produce a number of scenarios describing the likely pattern of AD from 2015 to 2050 when population ageing in Australia is likely to peak. This model includes the use of the 2006 and 2011 censuses and population projection scenarios developed by the Australian Bureau of Statistics (Australian Bureau of Statistics [ABS], 2008). These scenarios have then been exported to a geographic information systems software package to permit both coarse and fine-scale visualisations of these resulting patterns. AD is utilised in this exercise as it is a specific disease state with established prevalence rates and it represents the cause for the majority of dementia-related conditions in Australia, especially those in residential aged care facilities (Australian Institute of Health and Welfare [AIHW], 2012). This initial model can potentially be extended to include other causes of dementia and a range of neuroepidemiological conditions and their population-level implications.

As well as mapping projected scenarios over time, the incorporation of current health system infrastructure information permits the identification of areas that are likely to be affected to a greater or lesser degree by population ageing, Alzheimer's disease and disease severity issues. The purpose in incorporating infrastructure data is to help link the scope of our current systemic capacity to respond to population ageing to those future mapped scenarios. Key infrastructure data included in the modelling process include the location of acute care hospitals (defined as those with an emergency department), General Practitioners, pharmacists, residential aged care facilities and, lastly, Aged Care Assessment Teams. This is not an exhaustive list of health or social support infrastructure but the flexibility of this approach means that additional infrastructure can be added to the database and, then, to our modelled scenarios. Also, once a dataset has been added to the modelling system, it is a simple process to update elements of the dataset by adding extra facilities or extending the data included on any facility type. For example, as new residential aged care facilities are commissioned they can be added to the model and scenarios remodelled. If new data become available about residential care facilities (e.g. quality reports, safety incidents, antipsychotic drug use etc), that can be added permitting the mapping and analysis of that data as well.

Results

This initial development and analysis shows how we have taken demographic and epidemiological data to construct a basic two-dimensional map of the current and projected impact of Alzheimer's disease on the Australian population. This is a fully scalable map permitting the user to zoom in or out and use the standard analytical tools available in geographic information systems (GIS) software. Because distance and density are major analytical categories in GIS this means that it is relatively easy to identify how many people fitting the analytical criteria reside within a given geographic area, how far they need to travel to access services and the density of service provision within their local area. In addition, we have begun to add infrastructure data such as the location of hospitals, residential aged care facilities, General Practitioners, pharmacies and Home and Community Care (HACC) services such as Meals on Wheels.

There is also the issue of enhancing the visualisation of data for expert and non-expert users alike. One of the major growth areas for spatial data analysis is the development of software, such as digital earth technologies, to visualise patterns identified in more complex software environments. Many GIS packages now permit some degree of export to Google Earth™ in support of this approach. The mapped data identified above has, for illustrative purposes, been exported to Google Earth™ in the Keyhole Markup Language (KML) file format to illustrate possible applications for a broad audience. By this we mean not only direct, funded health and social support service providers but also lay users such as people caring for those with dementia or advocacy groups seeking to influence policy change through evidence-based practices.

Implications for Policy and Practice

The potential applications of spatial methods, such as those utilised in this project, are varied and still largely underutilised. Firstly, the process described here permits the user to zoom in and out of particular locations permitting the production of models for quite particular, or quite general, areas while remaining within the same consistent information environment. This means that it is relatively simple to produce small area analyses of projected data and infrastructure issues as it is to produce them at the state or national level. Scale ceases to be a major problem in analytical and visual terms. Secondly, this approach is potentially accessible by all involved parties, from funders to carers, making spatial analysis a genuinely

democratic decision support for aged care planning and service delivery, as well as other health and disability conditions. Lastly, we can readily add information about current service locations (e.g. HACC services) and utilisation patterns to produce maps of patient/client estimates for where we might expect to see people presenting for services versus current service utilisation patterns. This offers a solution to the information and decision-making silos that plague much of the health and social support sectors. The potential of spatial system support for health policy and planning is recognised but poorly integrated into current practices (Green, 2000).

Summary

This paper is a brief overview of research currently being undertaken, and an example of some of the potential applications in the wider field of ageing research and health systems analysis. The capacity to link different types of data (population, disease, financial, infrastructure) within a geographic information system, analyse that data and then visualise the outputs adds considerably to the current mainstream approaches in this area. In addition, the preliminary data analysis illustrates how areas most likely to be affected by population ageing and related burden of disease factors, as illustrated with Alzheimer's disease, can be planned for more effectively by enhancing our spatial skills and knowledge. Public data sharing lies at the heart of modern democratic and scientific responses to social change, including population ageing (see NSGIC, 2012). We have attempted to briefly illustrate the utility of a spatial approach to population ageing and the dementias for future service design and community support activities. We also suggest that an informed spatial approach is essential for effective aged care planning, especially in an environment where demands on funding and resources can only continue to grow into the foreseeable future.

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LITERATURE REVIEW: THE CULTURAL CAREGIVING IMPACT FOR TAIWANESE CAREGIVERS WITH DEMENTIA PATIENTS

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Abstract

Figures predict that the number of older persons with dementia will rise to 81.1 million worldwide by 2040. As dementia progresses, patients' physical and psychological wellbeing decrease dramatically, this consequently increases the care burden levels of those dementia caregivers. Most dementia caregivers are family members, neighbours and close friends. Care burden of caregivers providing support for a person with dementia (PWD) is now a widely discussed topic in dementia. Cultural beliefs and values of dementia caregivers can influence their caring approach for the person. This literature review focuses on examining the disparity between Taiwanese and Western family caregivers of PWD regarding cultural background. Additionally, it outlines international research that analyses care burden variations experienced by Taiwanese caregivers. There is ample evidence demonstrating that taking care of a PWD results in a high cost of family caregivers' care burden. To be more specific, dementia caregiving can negatively and greatly affect their physical, psychological and social well-being. For Taiwanese caregivers of a PWD, cultural beliefs and values have also been identified as an overwhelming obstacle for interventions that may assist the caregiver. With a lack of social support in caring for a PWD, it is predictable that Taiwanese caregivers will experience accumulated care burden levels.

Rationale

Dementia, one of the chronic diseases prevalent in this population, is characterised by progressive and irreversible symptoms. These include a loss of memory and intellectual capacity, rationality, social skills and emotional reaction impairments (Y. P. Chang, Schneider, & Sessanna, 2011; Fortinsky, Kulldorff, Kleppinger, & Kenyon-Pesce, 2009; Martindale-Adams, Nichols, Burns, & Malone, 2002). A World Alzheimer's Report commissioned by Alzheimer's Disease International has suggested that the number of patients living with dementia will reach almost 66 million by 2030 and overtake 100 million by 2050 (Alzheimer's Disease International, 2010). As dementia progresses, many patients lose the ability to live independently and often require assistance for their daily activities. Family caregivers have been widely identified to be the largest group providing care to people living with dementia (Bookman & Harrington, 2007; S. W. C. Chan, 2011; Fuh, Cummings, & Ames, 2009).

With the irreversible and progressive characteristics of dementia, it is predictable that families and friends who provide care to a PWD will be negatively affected within their personal, emotional, financial and social domains. Additionally, caregivers must continually monitor their care recipient and witness as their wellbeing deteriorates. The natural development of dementia can cause considerable stress for the caregiver and this is further exacerbated by the long term nature of dementia and the associated functional decline (Adams, 2008; Bruce, McQuiggan, Williams, Westervelt, & Tremont, 2008; Y. P. Chang, et al., 2011; Elliott, Burgio, & DeCoster, 2010; Gaugler, Mittelman, Hepburn, & Newcomer, 2010; Huang, Lee, Liao, Wang, & Lai, 2011; Joling, van Marwijk, Smit, van der Horst, & Scheltens, 2012; Lavretsky, 2005; Papastavrou, Kalokerinou, Papacostas, Tsangari, & Sourtzi, 2007; Selwood, Johnston, Katona, Lyketsos, & Livingston, 2007). Accordingly, caring for a PWD can be a challenging task for both Western and Eastern (Taiwan) family caregivers (Fu, Anderson, Courtney, & McAvan, 2006; Glass, Chen, Hwang, Ono, & Nahapetyan, 2010; Jun, 2005; Tong, 2007).

Taiwan has been influenced by several Chinese major philosophies, religions and beliefs that have a history of thousands of years. One principal philosophy that strongly influences the socio-cultural beliefs and values of Taiwanese culture is the ideology of Confucianism. In Fan's (2007) study, she identified that the Confucian ethics resources play an important role in the policy development of the long-term care system. Other researchers have also applied Taiwanese caregivers' behaviours as an example of the Confucian ethics resources: loyalty, self-respect, self-reliance, self-control, righteousness, reciprocity and benevolence (Chan, 2011; S. W. C. Chan, 2011; Fan, 2007; Lee, 2007; Lin & Yi, 2011; Yeh, Wierenga, & Yuan, 2009). These self-demand behaviours are adherent components that represent the central idealism of Confucianism. For the relationship between the PWD and family members, filial piety has been the core model in the principle concept of Confucianism (Glass, et al., 2010; Huang, Shyu, Chang, Weng, & Lee, 2009; Lau, Lin, Shyu, & Yang, 2008; Liang, 2002; Lin & Yi, 2011; Wang, Liu, & Wang, 1999; Yang et al., 2006).

In Confucian culture, it is customary that children will be instilled with the traditional concept of filial piety – a traditional concept comprising cultural, family values and social interaction. When the adult-children take care of a family member with dementia, filial piety should be genuinely carried out first before all virtues, not only in thoughts but also in deed (Fan, 2007; Smith & Hung, 2012). Additionally, such phenomenon also has the same influence to those foreign immigrants who come from a traditional concept of Chinese filial piety. Smith and Hung (2012) reviewed Chinese philosophy and emphasized that the notion of filial piety is significantly associated with social norms, crucial elements and stamina in the Chinese conception of family. Adult-children to provide sufficient care provision for elderly family can be seen as fitting-in the socio-moral obligation (Brodaty & Donkin, 2009; S. Chang, 2010; Department of Health, 2008; Huang, Lee, et al., 2011; Huang, Weng, & Yeh, 2011; Lee, 2007; Liang, 2002; Neri et al., 2012; Smith & Hung, 2012; Taiwan Alzheimer's Disease Association, 2012; Tsai, Chen, & Tsai, 2008). It is interesting to note that even though these immigrants were raised and cultured in Western society, the inspiration of filial piety is still robustly presented.

Under the principle of filial piety, adult-children are taught that caring for parents is recognised as reciprocating for their parents (Chen, 2008; Lai, 2010; Wang, et al., 1999; Wang, Yen, & OuYang, 2009). It advocates that adult-children must obey and respect their parents and provide both livelihood and emotional support in their old age or retirement (Chen, 2008; Fan, 2007; Koehn et al., 2012; Lai, 2010; Tsai, et al., 2008). Thus, caring for parents in Confucian terms is a familial obligation that should be accomplished by their children. Conversely, placing an aged parent in a nursing home facility and being cared for by nurses (family outsiders) can be regarded as reprehensible behaviour. In fact, adult-children who have chosen the nursing home facility to care for their parents with dementia can be socially belittled as being unfilial children. Such phenomenon demonstrates that filial piety is a substantial and complex culture rooted in Taiwanese family caregivers of PWD. It not only forms the traditional virtues of respecting the elderly, but also maintains the harmony and stability of the family and society. This social-rooted perception towards Taiwanese family caregivers can lead to a role conflict where caregivers may confront various challenges against the social norms, especially when seeking nursing home placements for their parents with dementia.

As an alternative to nursing home placement, caregivers may seek interventions to assist them to care for a PWD. Numerous interventions have demonstrated to be effective and feasible for family caregivers in reducing caregiver's care burden level, such as community educational programmes (Buckwalter, Davis, Wakefield, Kienzle, & Murray, 2002; Docherty et al., 2008; Morano & King, 2010; Ostwald, Hepburn, Caron, Burns, & Mantell, 1999; Roberto & Jarrott, 2008; Signe & Elmståhl, 2008), support groups (Choo et al., 2003; Chu et al., 2011b; Etters, Goodall, & Harrison, 2008; Gräßel, Trilling, Donath, & Luttenberger, 2012; Graazel, Trilling, Donath, & Luttenberger, 2010; Roberto & Jarrott, 2008) and respite care services (Chou, Tzou, Pu, Teppo, & Lee, 2008; David, Kevin, & James, 2007; Jardim & Pakenham, 2010; Jeon, Brodaty, & Chesterson, 2005; Phillipson & Jones, 2011; Roberto & Jarrott, 2008; Shaw et al., 2009; Vecchio, 2008). These interventions have also been substantiated for Taiwanese family caregivers of PWD (Chou, et al., 2008; Chu, et al., 2011b; Hsiao, 2010; Huang, et al., 2009; Huang, Weng, et al., 2011; Yeh, et al., 2009).

Nevertheless, while synthesizing previous studies, empirical barriers of the cultural background and values seem to be an overwhelming obstacle for Taiwanese family caregivers applying these interventions (Chan, 2011; Jun, 2005; Li, 2004; Smith & Hung, 2012). Consequently, it is foreseeable that Taiwanese family caregivers of a PWD may undergo a greater impact of care burden. However, there are limited studies exploring cultural barriers regarding Taiwanese family caregivers of PWD in applying caregiver's interventions (Kao, 2003; Kao & McHugh, 2004). Without sufficient studies to examine cultural barriers that impede caregivers in applying interventions, it may result in a lack of theoretical framework explaining the collaborative relationship between family caregivers of a PWD and the effectiveness of caregiver's interventions in Taiwan. Thus, the purpose of this research aims to identify cultural barriers that may hinder family caregivers accessing caregiver interventions.

Methods

In order to develop a theoretical framework, the author has chosen Grounded Theory (Glaser & Strauss, 1967) to explore cultural barriers regarding Taiwanese dementia caregivers and available interventions. The Grounded Theory methodology stresses that a theory is derived from data through a process of systemic data collection and analysis. It is chosen for this study because the interest is to identify variables and then build a conceptual framework to illustrate complex phenomena. This fits the purpose of this research which aims to explore the process of development of collaborative relationship between family caregivers and the caregiver's intervention. Unlike Western countries, where general medical practitioners are the primary healthcare services, instead, clinics and hospitals are the front line healthcare services in Taiwan.

Therefore, it can be assumed when recruiting the participants, these hospitals will be the most beneficial site to recruit the caregivers.

In this research, the means of data collection will be semi-structured interviews, featuring open-ended questions. This allows new perspectives to be brought up during the interview as a result of what the interviewee says (Saldana, Leavy, & Beretvas, 2011). Purposive sampling will also be designed to enhance the understanding of selected individuals' or groups' experiences or for developing theories and concepts. The inclusion criteria of the participant background will be 1) a formal or a current family caregiver of a PWD who is admitted to the hospital for any treatment, 2) the caregiver must be aged between 30 and 55, 3) both male and female and 4) cohabitating with the PWD. The expected sample size will be 20 to 25 participants. To enhance the trustworthiness of the interview process, audio-recording will be undertaken. Following the recording, the content transcript will be translated into English. Additionally, the content will be revised by two professional linguistic translators to ensure correct translation of content.

Implications for Policy and Practice

Several interventions have been introduced to the healthcare system in Taiwan, such as nursing home placements, respite care services and day care centres. These interventions have been considered to be the best way to effectively reduce the care burden. Studies have shown that the intervention can effectively reduce family caregivers' care burden in physical, social and objective aspects (Bowling & Stafford, 2007; Chou, Fu, Lin, & Lee, 2011; Kim et al., 2009). In Taiwan, these caregiver interventions have also been identified as an efficient approach in reducing the care burden for Taiwanese family caregivers (Chou, et al., 2011; Chou, et al., 2008; Chu et al., 2011a; Hsiao, 2010; Huang, et al., 2009; Huang, Weng, et al., 2011). Additionally, the approach has been extensively promoted by the Taiwanese government and non-profit community organizations, including Taiwan Alzheimer's Disease Association (2012). However, according to the Department of Social Affairs that is in command of dementia issues, there is a rather low rate of dementia caregivers applying for caregiver's interventions (Taiwan Ministry of the Interior, 2011).

On the other hand, there is an increased proportion of people who are admitted to hospital for sleep disturbance and depression, identified as formal and/or current family caregivers of dementia patients (Department of Health, 2008). This adverse increase between the usage of caregiver's intervention and patient admission may be related to the following factors: 1) a number of family caregivers of PWD are experiencing considerable care burden, 2) caregivers of a PWD have limited access to interventions, or 3) information provided to the caregiver regarding the interventions is not available. The most recent studies on family care giving for PWD have been conducted in Western countries (Arksey & Hirst, 2005; Connell, Janevic, & Gallant, 2001; Edwards & Ruettiger, 2002; Fortinsky, et al., 2009; Karlijn et al., 2012; Parker, Mills, & Abbey, 2008; Pattanayak, Jena, Vibha, Khandelwal, & Tripathi, 2011) which cannot equally apply to the Taiwanese situation. Thus, this research will aim to analyse the impact of cultural values and beliefs that influence dementia caregiver's in choosing interventions. Foremost, it will emphasize the importance for policy makers and multi-disciplinary teams to help family caregivers developing a broader social network than that associated with hospitals and community services.

Summary

Dementia caregiving can be associated with both positive and negative care burden. This literature review identified that Taiwanese family caregivers of a PWD have experienced similar care burden levels as Western family caregivers. However, because of the overwhelming influence of the filial peity, the cultural background and values may be an additional care burden for Taiwanese family caregivers. Numerous caregiver interventions have been progressively introduced to alleviate Taiwanese family caregivers' care burden levels. For example, psychosocial interventions to improve the social interaction of family caregivers with PWD, and respite care services for caregivers having a break from the stress of care provision. However, considering the impact brought by the cultural background and values, there is little evidence, including theoretical frameworks indicating what interventions may be able to minimize the barriers. Hence, Glaser and Strauss's Grounded Theory may be a feasible approach, in order to comprehend cultural barriers that affect Taiwanese family caregivers with a PWD accessing interventions.

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The UQ School of Nursing and Midwifery and Blue Care have forged a formal academic link and developed The University of Queensland/Blue Care Research and Practice Development Centre

About the UQ/Blue Care Research & Practice Development Centre:

- The UQ/Blue Care Research and Practice Development Centre (RPDC) is a unique collaboration between research academics and industry professionals
- Our industry partner Blue Care, is Australia's largest not-for-profit provider of community health and residential aged care
- The RPDC is part of a global collaborative focused on generating research that translates into clinical practice
- The RPDC has supported research scholars enrolled in the Summer Research Scholarship, Honours, MPhil and PhD programs.
- Much of the research undertaken at the RPDC informs current health practice across aged and community settings
- The RPDC proactively seeks to provide opportunities to world class researches and a diverse range of research projects
- The UQ/Blue Care RPDC hosts the Australian Centre for Evidence Based Community Care (ACEBCC) a Joanna Briggs Collaborating Centre

Areas of Research

Research undertaken at the RPDC seeks to positively impact healthcare practices, the wider community and its members by:

- Developing evidence that will inform policy in relation to aged care, including age care provision, cost effectiveness, and outcome evaluation
- Investigating specific aged care clinical practice problems and evaluating the effectiveness of specific aged care strategies
- Identifying new models of service in response to changing community and client requirements with respect to aged care

For further information contact:

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THE UNIVERSITY OF QUEENSLAND AUSTRALIA

BlueCare UnitingCare Queensland

Australian Association of Gerontology

Students and Early Career Researchers/Practitoners

The Australian Association of Gerontology (AAG) is Australia's leading and largest multi-disciplinary professional association with people working in the diverse field of ageing. Membership includes academics, practitioners, allied health professionals, students, researchers, policy makers, and other professionals working in ageing and aged care.

In addition to providing members with the latest information and news on ageing research through academic peer-reviewed journals, electronic newsletters, and trade journals, the AAG also runs educational events both locally and nationally including seminars, conferences, and workshops.

Furthermore, joining the AAG National Student and Early Career Group provides the following opportunities:

- Participate in educational, professional development and social events at the local and national level
- Network with other likeminded early career professionals through events and dedicated online communities
- Expand international connections and encourage the sharing of ideas and achievements
- Provide opportunities to connect with mid to late career professionals through informal networks and mentoring programs
- Access to discounted AAG Membership and the National Conference registration
- Develop leadership skills and help shape the future of the AAG

For more information, or to join the AAG, please visit: www.aag.asn.au

Don't forget to **LIKE** the "**AAG Student and Early Career Group**" on Facebook to stay connected

Come to Sydney for
ERA 2013

12th National Emerging Researchers in Ageing Conference

25-26 November 2013
Sydney, NSW

The 2013 ERA conference will be hosted by the Ageing, Work and Health Research Unit (AWHRU), Faculty of Health Sciences, The University of Sydney. The AWHRU finds ways of improving ageing experiences and enhancing the health of individuals and workers across the life span and includes research teams on: Ageing and Health; Participation, Safety and Ageing; and Work and Health. More information at sydney.edu.au/health_sciences/ageing_work_health.

More information about the conference including the venue and call for abstracts will be available at www.era.edu.au/ERA+Conferences early next year.

The conference will be held immediately prior to the Australian Association of Gerontology (AAG) conference in Sydney making it easy for participants to transition between the two conferences.

ERA Emerging Researchers in Ageing Australia

THE UNIVERSITY OF SYDNEY

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