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The **PATH Through Life** Project
Being undertaken by the Centre for Research on Ageing Health and Wellbeing (CRAHW)

"Science to improve mental health and wellbeing across the lifespan"

2014 Newsletter

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Progress in 2014

In 2014 Karen Maxwell and Trish Jacomb reduced their hours of work significantly prior to retirement. Kristine Koh has taken on much of their work this year. Elizabeth Webb has also been working part-time on the project. At this stage we have not received funding for next year.

This year has been a very busy one for the PATH team with not only the 60+ PATH interviews but also the sub studies that have been run in conjunction with the primary PATH interview. These included asking our 60+ sample to have a retinal scan and to provide a blood sample. Also, the MRI sub group was asked to take part in a study of activity levels. The 60+ interviews are still underway with interviews of Canberra residents being nearly completed by the end of the year. Then, early next year our interviewer, Liz Parkes, will be travelling to interview participants who are now living in other states.

Message from our Director, Professor Kaarin Anstey

"I would like to thank all our participants for their continued dedication and contribution to the PATH study. In particular in 2014 the assessments have involved some new tests which have taken longer than previous follow-ups. The PATH team here at ANU is particularly grateful for your patience in completing the longer interviews and assessments. We very much appreciate your time and are always open to feedback about our processes and how we can improve."

Collaborations

As well as the research undertaken at CRAHW, the PATH data has contributed to the research undertaken by a number of international research teams. These include:

1. **The Integrative Analysis of Longitudinal Studies of Aging (IALSA)** An International Collaboration for Reproducible Longitudinal Research on Lifespan Determinants of Change in Cognitive and Physical Capabilities, Health, Personality, and Well-Being

The study of ageing and health-related change demands an integrative life span / life course developmental framework, involving interdisciplinary collaborations and advanced methodological approaches for understanding how and why individuals change with age. Results from such longitudinal studies also provide a basis for the early detection of change related to neurodegenerative disorders and the identification of periods in the lifespan when interventions will potentially have their greatest impact.

The IALSA collaborative network was formally established in 2005 for the coordination of interdisciplinary, cross-national research aimed at the integrative understanding of within-person ageing-related changes in cognitive and physical capabilities, health, personality, and well-being. It is comprised of investigators associated with over 45 longitudinal studies on ageing.

2. The **CAPA Consortium: Cohorts for Alzheimer's Prevention Action**

In order to translate epidemiologic research into actionable interventions, highly detailed research results are needed. To achieve this we need extremely large sample sizes that might be best obtained by pooling or meta-analysing the data from existing cohorts. The aim of this consortium is to use cross-cohort pooled analyses of actionable interventions to potentially protect against cognitive ageing, Alzheimer's disease, and related dementias. Exposure/risk factor variables of interest include drugs used to manage other health conditions, natural products, dietary supplements, nutrition and specific dietary choices, and biomarkers that can indicate these choices.

Some Recent Research Highlights

In 2014, 21 research papers based on analysis of PATH data have been published. This is a major achievement by our PATH researchers. These include:

Cognitive development over 8 years in midlife and its association with cardiovascular risk factors. Kaarin Anstey and colleagues analysed the 40+ age cohort data to determine if cardiovascular risk factors for late onset dementia influence cognitive change in midlife. A single 'risk' score was calculated for each participant based on smoking, high blood pressure, depression, being overweight, diabetes and insufficient physical activity. They found an association between having a high 'risk' score and poorer cognitive performance. Identifying these risk factors in midlife provides the opportunity to develop strategies to prevent cognitive decline in ageing.

Temporal effects of separation on suicidal thoughts and behaviours. Divorce is known to be a risk factor for suicide. Philip Batterham and colleagues examined the effects over time of relationship breakdown and separation on suicidal thoughts and behaviours. The effects of separation on suicidal thoughts were strongest soon after separation (3-fold increase) and an 8-fold increase in plans/ attempts in the 2 years following separation. The period up to 4 years before separation was also found to be a time of increased risk. This study shows that separation is a strong risk factor for suicidal thoughts and behaviours and mental health services should target recently separated individuals.

Our PhD students

We have a number of PhD students working on Path DATA. One of these is Lily O'Donoughue Jenkins who describes her work here.

My PhD focuses on PATH participants in the 60+ age group. I look at how often these participants visit their doctor and if they are admitted to, and for how long they stay in, hospital. I then look at some things that might affect this use- for example you may have more doctor visits if your family and friends encourage you to go and visit a doctor regularly, alternatively you may visit a doctors less because they are caring for you or suggest alternative treatments. My PhD also looks at how cognition affects the level of peoples service use. For example, does someone who is experiencing some problems with their memory visit their doctor more or less?

So far I have found that the relationship you have with your spouse or partner influences how much you visit a doctor- if you have a positive and supportive relationship with your spouse than you will visit a doctor more often. I have also found that people who have some problems with their memory visit a doctor more than those who don't have a problem and if you have another condition (like depression, arthritis or diabetes) you visit a doctor even more (sometimes even twice as much as other people of the same age).

Average Physical results for 60+ (for the first 1,000 interviewed)

Blood pressure: The average systolic pressure is 141 and the average diastolic pressure, 75 .
Pulse rate: The average pulse rate is 68 beats per minute.
Handgrip: The average handgrip strength for men is 34 kgs and the average for women was 21 kgs
Lung function:

Height	Men		Women	
	FEV-*	FVC-**	FEV	FVC
Less than 160 cms	NA		1.59	2.08
160-169 cms	2.29	2.98	1.84	2.39
170-179 cms	2.56	3.29	1.96	2.56
180-189 cms	2.80	3.71	2.26	2.96
190cms or taller	3.00	4.09	NA	

* Expired volume in 1 second (litres) ** Full lung volume (litres)