Co-hosted by the
Australian National University
and UNSW, Sydney

PATH Through Life

A population based longitudinal cohort study

NEWSLETTER 2020

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Research continues...

Welcome to the 2020 PATH Through Life project newsletter. In what has been a very challenging year for us all, we are pleased to report that the PATH project has continued during 2020 with data collection for Wave 5 of 40s cohort completed and Wave 6 for the 60s cohort begun. Thank you to all participants who have already completed their interviews or questionnaires and to the project team for their flexibility. Every answer from every participant is important to us and makes the PATH project such a valuable resource for researchers

Projects like PATH that will provide value looking to the future in areas of mental health and wellbeing. The longitudinal nature of the project enables us to quantify the short term effects of traumatic events, such as bushfires and Covid, and longer term effects over the life course . It is possible to identify risk and protective factors influencing individual differences in depression and anxiety, substance use, and cognitive ability and dementia. These are just a few of the current questions and findings we wish to share with you in the future.

We hope you enjoy this newsletter and wish you all the best for 2021.

Seasons Greetings,

Professor Kaarin Anstey

Cohort updates

20s Cohort

Born 1975-79

Research data from all 5 waves of the 20s cohort are currently being analysed in a range of research projects examining the risk and protective factors associated with mental, physical and cognitive health. We thank all participants in the PATH 20s cohort for continuing to support the project. The longitudinal nature of the data (from multiple interviews) is unique, and allows us to identify which life experiences across early to mid-adulthood are most important for health and wellbeing.

40s Cohort

Born 1956-60

We would like to offer our sincere appreciation to all of the 40s cohort who took the time to complete a face to face/online/phone and/or supplementary survey this year. Thank you all for rising to the challenge of completing a health survey in such a dynamic environment.

The data is currently being checked and collated, please look to our website for a snapshot of results in the new year.

60s Cohort

Born 1937-41

Wave 6 data collection for the 60s cohort has begun! Interviews will be conducted over a few phone calls for participants, with a shorter supporting survey for a friend or family member. Once again we have engaged ORIMA research to streamline interview bookings and ensure data quality. We will also be asking for your consent to link your data to administrative datasets.

If your contact details have changed recently please get in touch to update.

Project manager reflections 2020

Tanya Price
PATH Project Manager

"The safety of our participants and interviewers has always been a top priority"

Challenges of 2020 from the PATH Project Manager

Following the 2019-2020 bushfires and the COVID-19 pandemic, 2020 has been a year like no other, and all of us have been affected in some way or another. In relation to PATH, we were in the field collecting data for the fifth wave of the 40+ cohort as the pandemic intensified. The restrictions announced in March meant that we unfortunately had to stop all face-to-face interviews with our participants. This also meant working from home for all PATH staff which brought new challenges and obstacles with it. The PATH team adapted quickly and developed a new interview format that could be completed over the phone, which included modified versions of some of the cognitive tests that have been used in face-to-face interviews. Even though we couldn't perform the physical tests that many PATH participants are used to (e.g. blood pressure, hand grip, balance etc.), phone interviews allowed us to reach many out-of-area participants in remote areas who we often don't get to see for a face-to-face interview. Due to the substantial impact 2020 has had, we also added new questions to the online survey focusing on participant experiences of the bushfires and COVID-19 which will provide relevant first-hand data. I would sincerely like to thank all interviewers and participants in this wave for your adaptability and commitment during this time. We are proud that we successfully completed this wave in May, and the team are now working hard to prepare the data for analysis in the new year.
The public health directions and ongoing restrictions have also affected the current wave for the 60+ cohort. We originally had planned face-to-face interviews for this wave too, and again, this has now been adapted to phone interviews as the safety of our participants and interviewers has always been a top priority. We are looking forward to catching up with all of our 60+ participants in the coming months!

Tanya Price
PATH Project Manager

PhD Completion- Joe Northey

PhD research by Joe Northey has used the PATH data to examine how physical activity might impact on the health of our brains. Joe used data from the 60s cohort and found that some types of physical activity (particularly more minutes spent in moderate-vigorous activity) are associated with preserved grey matter in the frontal regions of the brain. The next step in this research is to investigate whether this association between physical activity and brain health translates to preventing cognitive decline. A paper on this research was recently published in the scientific journal *NeuroImage (2020; vol. 221)*. Joe graduated from his PhD in October 2019 and we congratulate him on this major achievement.

Publication through an in International research collaboration

It is common for older adults to have several chronic health conditions, which are often managed with medications containing anticholinergic properties – a type of drug that acts on the central nervous system. However, these medications are associated with a variety of adverse effects, including cognitive impairment and greater risk for falls in older adults.
In response to concerns that the adverse effects associated with these drugs may persist after discontinuing use, a recent study examined the potential long-term effects associated with the use of these medications on cognitive functions using data collected over 4-years from adults 60 years and older in the PATH Through Life study. Interestingly, this study found that although most cognitive functions were not significantly affected, exposure to high levels of these medications adversely affected processing speed (that is, how long it takes to do mental tasks). These findings are important as they highlight the need for more research to help us understand the potential long-term effects associated with certain types of medications.

These results can be found by the following citation

Neelamegam M, et al. The Effect of Cumulative Anticholinergic Use on the Cognitive Function of Older Adults: Results from the Personality and Total Health (PATH) Through Life Study. J Gerontol A Biol Sci Med Sci. 2020 Sep 16;75(9):1706-1714. doi: 10.1093/gerona/glaa145. ID: 32514523; PMCID: PMC7494035.

These findings are important as they highlight the need for more research to help us understand the potential long-term effects associated with certain types of medications

PhD Student- James Lian

James Lian completed his Bachelor of Psychology (Honours Class I) at UNSW in 2019, and has received a scholarship to undertake a PhD at UNSW and NeuRA under the supervision of Prof Kaarin Anstey.

James was previously awarded a Science Vacation Research Scholarship to examine virtual reality as a tool to study psychological responses to blood donation. He has also completed a research internship to investigate domestic violence patterns in the United States using big data, and his work on this project was published in the prestigious journal – Psychological *Science*.

James' PhD research aims to explore the impact of childhood adversity on late-life cognition and mental health, and this research will use data from the PATH Through Life Study Wave 1 60s cohort. Specific outcomes that will be examined are depression, anxiety, and dementia. James plans to use a factor analytical approach for adversity, as well as examine protective factors to psychopathology in older adults.

Contact the PATH team

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If you have recently changed your contact details, have any questions or would like to provide feedback, please get in touch

Staying mentally healthy

1. **Maintain a healthy lifestyle with regular exercise and enjoyable activities, eating well and staying connected with family and friends**
2. **Keep informed**
3. **Stay positive**
4. **Access support**

Research into risk factors

Research data from all cohorts in PATH (the 20s, 40s and 60s) were recently used in work led by Dr Richard Burns aiming to understand the role of the Apolipoprotein ε4 allele (*APOE* ε4) in the risk of depression onset across the lifecourse. The *APOE* ε4 allele (a genetic marker) has been identified as a risk factor for Alzheimer's disease and other age-related diseases, but the risks associated with dementia is much less clear. The results showed no evidence that the *APOE* ε4 allele was a risk factor for developing future depression and this was a consistent results across all of the PATH cohorts. The PATH data is unique in that it includes data from 3 cohorts across multiple time-points (every time we have interviewed you!), and that makes this the first large, population-based study that has been able to look at development of depression across the lifespan.

The results of this study were recently published in the *British Journal of Psychiatry (Open Access) (2020; vol 6)*.

The current wave of PATH is funded by the ARC Centre of Excellence in Population Ageing Research and Neuroscience Research Australia