

Age 38 assessments for Dunedin cohort

One of the most intimately monitored group of New Zealanders around are reaching age of 38 and many of the original cohort of 1,000 for the Dunedin Multidisciplinary Health and Development Study are getting their latest assessment this year.

The HRC-funded study has followed a representative cohort of 1,037 Dunedin born individuals at birth and ages 3, 5, 7, 9, 11, 13, 15, 18, 21, 26 and 32, assessing a range of biological, psychological, social and economic factors to see how they come together to shape good and poor mental, cardiovascular, respiratory, oral, musculoskeletal, sexual and reproductive health outcomes.

They have enjoyed an unparalleled 96 per cent retention rate amongst study participants.

The 'phase 38' assessment includes repeat assessments from past phases and new assessments which, Professor Poulton says, reflect the age group or perhaps reflect moves into greater depth in some areas.

"An example of that would be in the cardiovascular session where we don't just measure the usual cardiovascular risk factors. We have now included non-invasive measures of cardiovascular health by taking pictures of the retina using a specialised camera. The magnified view of the retina and in particular the blood vessels in the retina means you can inspect and grade the health of those blood vessels and that will tell you about the person's cardiovascular health status and their progression towards an atherosclerotic state."

They are also adding a test of how well the endothelium, which lines the blood vessels, is performing, as a measure of cardiovascular health.

In the cognitive sessions data is collected on memory, information processing, concentration, attention and psychomotor flexibility and dexterity.

"The way your brain works has such an ubiquitous effect on all sorts of life outcomes and we will be able to make linkages between how the study members were doing as kids and at age 38."

It will be the first time such a cohort, who were tested during childhood with state of the art measures, have been followed up over three decades.

Continuing to do thorough assessments of emotional health and psychosocial function also remains a core strength of their work, and capitalising on the work of the multidisciplinary database.

"We take one particular set of data – it might be oral health data or drug use data – and married that with data traditionally collected from other disciplines. We showed in one paper how the psycho-social world, for example maltreatment stress during childhood can lead to a higher level of systemic inflammation by the early thirties, which is a risk factor for all sorts of negative outcomes. For example cardiovascular disease, lung function, diabetes, and how that predictive relationship was robust even when adjusted for all sorts of potential confounding factors."

They were also able to establish links between marijuana use and periodontal disease.

Spin-off studies are developing as well - the parenting study has generated home visits with over 500 children now, while the next generation study, of the 15 year olds of the study members, has so far involved over 100 people.



Professor Richie Poulton

Key words:

- Biological, psychological, social and economic factors, cardiovascular health

Aims of this research:

- To understand how a range of biological, psychological, social and economic factors experienced during the first 38 years of life come together to shape mental, cardiovascular, respiratory, oral, musculoskeletal, sexual and reproductive health outcomes
- To inform policy and practice aimed at promoting good health and positive aging

"They are adding real value to the study, particularly in the context of having also gone back to see the parents of the study members between 2003 and 2006 to collect information on them and their health outcomes after 60-plus years. So we've got these three generations - parents, study members in detail and children."

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