Defense prep

*“the best defense is a good offense”*

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# Life-course hypotheses

## Net reclassification index

A few different approaches were explored in the development of this study, building off of **Mishra et al. (2009)** (Mishra, G., Nitsch, D., Black, S., DeStavola, B., Kuh, D., & Hardy, R. (2009**). A structured approach to modelling the effects of binary exposure variables over the life course**. *International Journal of Epidemiology*) , so using likelihood ratio test approach for nested models and comparing to the saturated as well as the demographics only models.

* [Net Reclassification Index Statistics Do Not Help Assess New Risk Models](https://pubs.rsna.org/doi/full/10.1148/radiol.222343) (Kerr, 2022, Radiology)
  + *Overall NRI statistics lack any clear interpretation, and incorrect interpretations appear in the literature (e.g., NRI does not measure the proportion of patients correctly reclassified); if you see a simple interpretation of an NRI statistic, there is a good chance it is wrong.*
  + *Although the AUC is criticized, fairly, because it does not quantify the clinical or public health benefit of a risk model, NRI statistics are a step in the wrong direction and should not be used.*

# Mediation

Report 2: *Page 57: The candidate noted that the total effect was equal to the summation of direct and indirect effects. However, the estimates come from different models. Was any constraint in the estimation of coefficients to force this equality?*

* Not quite correct that these come from different models: While there are two models fit for each cohort, (long & cross), the calculations are based within only one model
* Cross-world mediation assumption: [Insights into the cross-world independence assumption of causal mediation analysis](https://pubmed.ncbi.nlm.nih.gov/33512846/) (Andres & Didelez)

# Religion

# How do we consider the results of the study on religion in the context of targets that are modifiable and may impact inequalities in morality?

Not something to intervene on, but may be an important thing to prepare for. As with many metrics for populations as they become more, it is plausible that for Pacific NZers to converge with the

13% of Pacific People (general census population, all ages) in 2006 reported having no religion while 23% reported the same in the 2018 Census.

**Source**: Ethnic group (detailed total response - level 3) and religious affiliation (total responses) by sex, for the census usually resident population count, 2006, 2013, and 2018 Censuses (RC, TA, SA2, DHB). Retrieved from nzdotstat.stats.govt.nz.

# Methodology

* Interaction terms

# Gita’s questions

## *Do we stop investing in longitudinal studies?*

No! While there is not a strong case for needing repeated measures of official statistics based SEP across adulthood to predict mortality, my thesis did not consider childhood SEP nor other outcomes.

Future directions: I hope this helps simplify some analyses for researchers to enable these other interesting and important pathways to be pursued.

## *How does this body of work help inform what governments should invest in to reduce inequalities in mortality?*

Where I am absolutely fine with not being the first to find that poverty is associated with mortality, I am glad to be part of the chorus of voices

# Literature / other

## Mishra’s studies

* Swedish birth cohort (Uppsala) (cited)
* Recent work:
  + [Residential greenspace and anxiety symptoms among Australian women living in major cities: A longitudinal analysis](https://www.sciencedirect.com/science/article/pii/S0160412023003835)
    - Goldberg Anxiety and Depression Scale & information on where they are living at the time of the survey
  + [Symptom patterns and health service use of women in early adulthood: a latent class analysis from the Australian Longitudinal Study on Women’s Health](https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-023-15070-7)
    - Survey data linked with admin data
  + [Women’s midlife health: the unfinished research agenda](https://womensmidlifehealthjournal.biomedcentral.com/articles/10.1186/s40695-023-00090-5)
    - Menopause/hormone-sensitive conditions