

Perceived Financial Well-Being of Canadians in Mid to Later Life: A Longitudinal and Multi-Method Analysis

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Overview

- While lower income is known to be associated with poorer health over life courses, the potential influence of perceived financial stress on life course well-being trajectories has been less explored
- Cross-sectional research suggests that older people reporting financial stress or subjective financial worries have worse health outcomes
- The longitudinal relationship of perceived financial stress and physical/mental health from mid-life to the later years is not well examined
- And the longitudinal relationship over the life courses of those in different birth cohorts also calls for closer study

Our focus is on perceived financial stress,
regardless of socio-economic level



Background

- Low income well known association with poorer health outcomes (Marmot *et al.* 1991 – Whitehall study, among many others)
- Even with universal health care (Lasser *et al.*, 2006; and other studies)
- May be even more the case with ageing
- Policy interest in reducing income disparities to improve well-being outcomes of older adults is long standing – Canada a leader in this (Epp, 1986)
- Ameliorating low income of older adults to enhance later life well-being: a key tenet of Canada's policy since WW2 -- with some success

Research questions

- How is perceived financial health associated with physical and mental well-being in mid-life as individuals age into their older years?
- How do changes over time in perceived financial health affect late life well-being?
- What relationship between financial health and well-being do people anticipate in their later years?
- Do the effects of perceived financial health over time vary by individual characteristics and differ for those in mid and later life?

Previous research

- Cross-sectional research: Negative effects of perceived financial stress on well-being (Arber *et al.* 2014; Präg *et al.* 2016; Starkey *et al.*, 2013; Tucker-Seely *et al.* 2013)
- Relation of Low SES and perceived financial stress on well-being – independent associations (Wilkinson 2016 in US; Gardiner *et al.* 2015 in Australia; Arber *et al.* 2014 in UK)
- Longitudinal studies of relationship of SES to well-being (Landerman *et al.* 2011; Mckenzie *et al.* 2014)
- Few longitudinal studies of relationship of perceived financial stress on well-being

Three previous studies

- **Wilkinson (2016)** U.S. 2006-2010 Health and Retirement Survey, adults 51+: Financial strain a strong and robust predictor of worsening mental health
- **Dijkstra-Kersten *et al* (2015)** Netherlands study of depression and anxiety – a 4 year study: Finds an association between perceived financial stress and anxiety disorders irrespective of income level
- **Chiao et al. (2011)** Taiwan Longitudinal Survey find older adults with perceived financial strain had significantly poorer well-being

Our interest perked up

- By O’Rand (2015) who argues that cumulative advantage NOT the opposite of cumulative disadvantage
- By Ferraro et al. (2009): One’s sense of status can only be understood by perception of relative disadvantage....
- By McDaniel & Bernard (2011) who distinguish gravity from shocks

Perceived financial stress

- Possibly one pathway through which low income → poorer health outcomes
- May be a way of sorting out ‘gravity’ effects from ‘shock’ effects on life course trajectories
- If shock effects, which can happen in any SES, are found to matter, policy implications may be significant



Our contribution

- A specific focus on Canada
- Look simultaneously on cumulative inequalities PLUS shocks
- Sort out objective financial well-being from perception
- Compare two cohorts
- Add an in-depth qualitative component
- Explore implications for policy

Framing

- Social determinants of health -- broadened
- Welfare state theory
- Life course perspective – gravity (SES) vs shocks (perceived financial stress)
- Longitudinal analyses of SES/perceived financial stress on well-being from mid-life to later years
- Multi-method approach -- Quantitative & Qualitative

Data -- quantitative

- **Data:** Canadian National Population Health Survey (NPHS) (2000/01 through 2010/11)
- **Sample** ($N = 6,289$)
- Respondents age 45 + in Cycle 4 (2000/01) followed longitudinally over six cycles of NPHS, over 10 year period in two cohorts in cycle 4:
 - 45-64 = 3,690 / age 65-74 in 2010/11
 - 65+ = 2,599 / age 75+ in 2010/11

Statistical analysis

Dependent variables

- **Self-reported fair or poor health:** Respondents' evaluations of their health as poor, fair, good, very good, or excellent (scored 0 through 4, respectively). Dichotomised into 0 = good (good, very good and excellent) and 1= poor (fair and poor)
- **Self reported high psychological distress:** K6 distress scale for mental health (Kessler *et al.*, 2002) - interval measure scaled 0 - 24 (higher scores indicate more distress: recoded as 1 for K6 Psychological Distress Scale score ≥ 4)

Statistical analysis (continued)

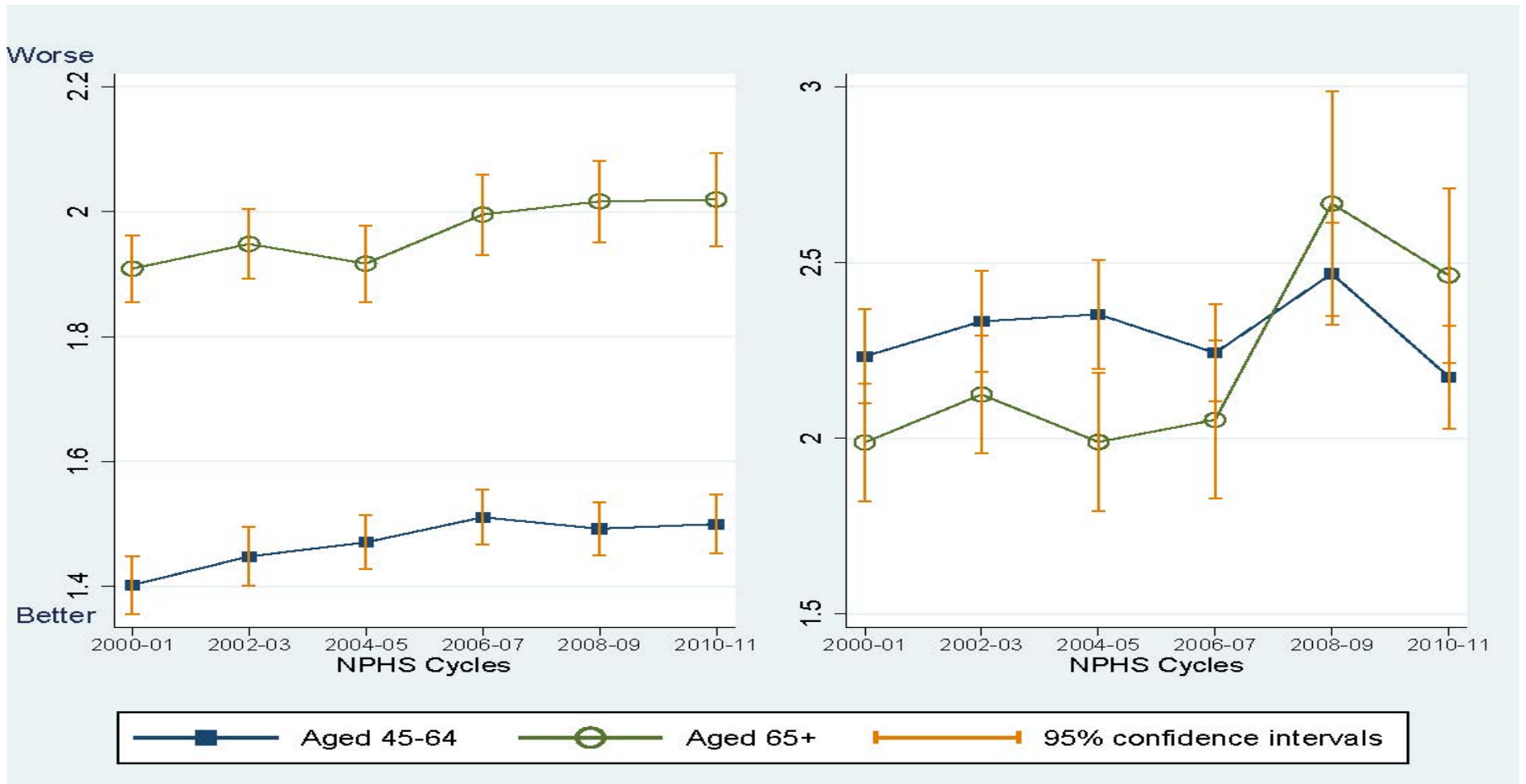
- **Method- mixed effects logistic regression models**
 - Multilevel random coefficient (intercepts & slopes) models were utilized to account for non-independence of repeated measures.
 - A two-level model was structured with time (level 1) being nested within individuals (level 2).
- **Key predictor variable**
 - **Financial Problems Stress Index (FPSI):** An index derived by Statistics Canada through the statement: *“You don’t have enough money to buy the things you need.”* Respondents answered either true (coded as 1) or false (coded as 0).

Statistical analysis (continued)

- **Model specification in regression analysis:**
 - Sequentially adjusted multivariate models for ages 45-64 (mid-life cohort) and 65+ (later life cohort) separately
- **Model 1** adjusted for time and Financial Problems Stress Index
- **Model 2** adjusted for **Model 1** plus income
- **Model 3** adjusted for **Model 2** plus education, employment status, marital status, age, Social Support Index, chronic condition, sex, visible minority status, and immigration status
- **Model 4** adds **Model 3** to the interaction term between time and Financial Problems Stress Index

Quantitative findings

Mean levels of Self-Reported Health (left) and Psychological Distress (right) across NPHS Cycles, for mid-life and later life cohorts



Multilevel odds ratios for self-reported fair or poor health

Financial Problems Stress Index	Respondents in Mid-Life (age 45-64) OR [95% CI]	Respondents in Later-Life (age 65+) OR [95% CI]
Model 1 ^a	4.36 [3.20,5.95]	1.65 [1.22,2.21]
Model 2 ^b	3.72 [2.74,5.05]	1.51 [1.08,2.12]
Model 3 ^c	3.35 [2.51,4.47]	1.43 [1.03,2.00]
Model 4 ^d	3.25 [2.20,4.80]	1.13 [0.65,1.97]

Source: 2000/01 to 2010/11 National Population Health Survey.

^a Model 1: Adjusted for time and Financial Problems Stress Index.

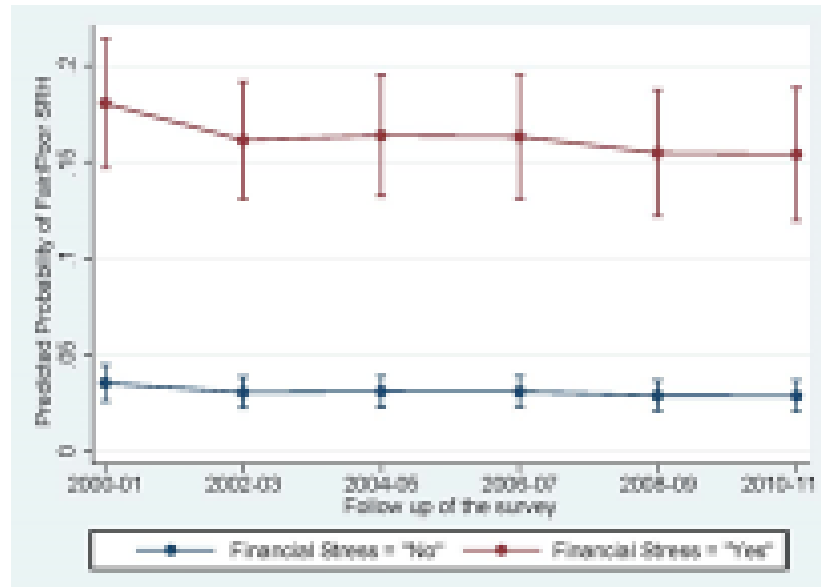
^b Model 2: Adjusted for time, Financial Problems Stress Index, and income adequacy quartiles.

^c Model 3: Adjusted for Model 2 and education, employment status, marital status, age, Social Support Index, chronic condition, sex, visible minority status, and immigration status.

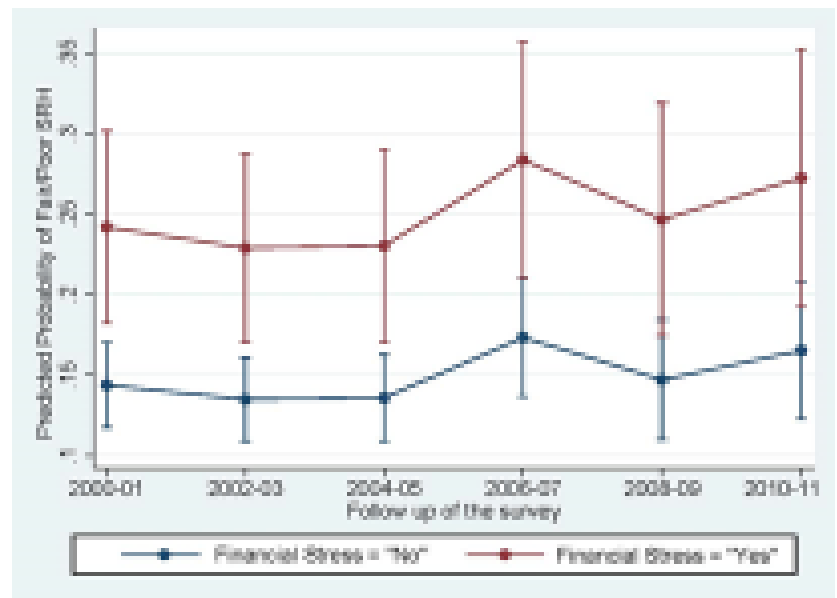
^d Model 4: Model 3 plus the interaction term between time and Financial Problems Stress Index.

Trajectories of self-reported fair or poor health by financial stress

Respondents aged 45-64



Respondents aged 65+



Source: 2000/01 to 2010/11 National Population Health Survey.

Note: Predicted probabilities of self-rated fair or poor health by financial stress status over NPHS Cycles based on mixed-effects logistic regression analyses (final models, Model 4).

Multilevel odds ratios for self-reported high psychological distress (K6 distress scale: 4+)

Financial Problems Stress Index	Respondents in Mid-Life (age 45-64) OR [95% CI]	Respondents in Later-Life (age 65+) OR [95% CI]
Model 1 ^a	2.84 [2.37,3.39]	1.82 [1.33,2.47]
Model 2 ^b	2.58 [2.15,3.09]	1.65 [1.16,2.35]
Model 3 ^c	2.48 [2.09,2.93]	1.73 [1.25,2.38]
Model 4 ^d	3.03 [2.33,3.95]	1.73 [1.06,2.81]

Source: 2000/01 to 2010/11 National Population Health Survey.

^a Model 1: Adjusted for time and Financial Problems-Stress Index.

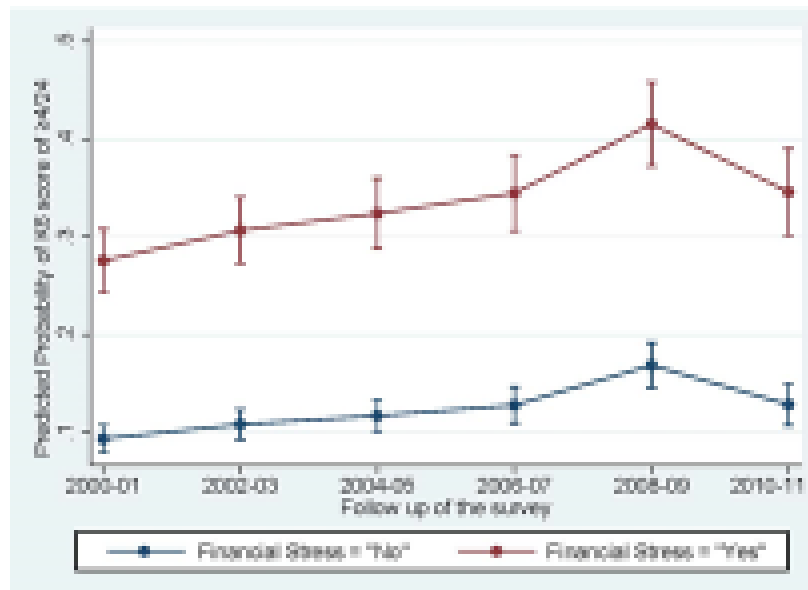
^b Model 2: Adjusted for time, Financial Problems Stress Index, and income adequacy quartiles.

^c Model 3: Adjusted for Model 2 and education, employment status, marital status, age, Social Support Index, chronic condition, sex, visible minority status, and immigration status.

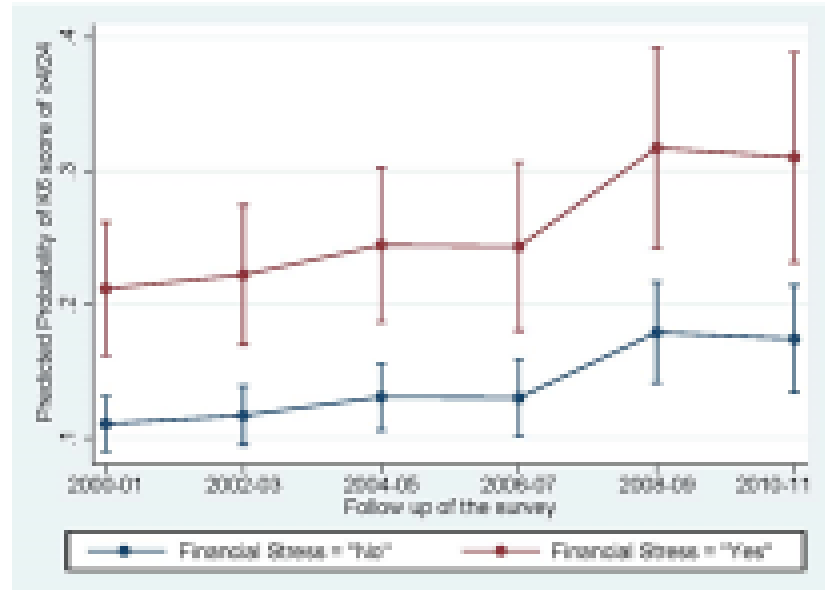
^d Model 4: Model 3 plus the interaction term between time and Financial Problems Stress-Index.

Trajectories of self-reported high psychological distress by financial well-being status

Respondents aged 45-64



Respondents aged 65+



Source: 2000/01 to 2010/11 National Population Health Survey.

Note: Predicted probabilities of self-reported high psychological distress by financial well-being status over NPHS Cycles based on mixed-effects logistic regression analyses (final models, Model 4).

Does the effect of perceived financial stress differ among individuals?

- We add random slope for Financial Problems Stress Index (FPSI).
 - The significant variance (random effect) estimate for the FPSI slope addresses our research question: The effect of FPSI varies in our sample of respondents.
- The variance of the random slope coefficient for FPSI remains significantly different from zero in each model. Indicates that our control variables (both constant and time-varying) cannot explain all of the inter-differences in FPSI gaps in physical and mental health.

Qualitative analysis

- **Data:**
 - In-depth interviews with working-class and middle-class Canadians and Americans in mid-life and living in two comparable cities
 - Interviews conducted at two points in time: 2008-10 (when the Great Recession was beginning) and again in 2013
 - Focus here on interviews with Canadians aged 46-63 in 2013 – (comparison with Americans in another paper)

Qualitative findings

- Financial precariousness, whether current or anticipated, is a recurrent theme, in both 2008-2010 and 2013 interviews with Canadians
 - In 2013, **more than 1/3** of respondents reported lacking confidence in their financial situation in old age
 - **More than 1/2** expect their financial situation to change for the worse when they retire; **middle class respondents, in particular, expect their financial prospects to be worse and express perceived financial stress**

Qualitative findings (continued)

- *There'll be a cut I'm sure. Things might be a lot harder if they don't fix the economy. It's like everything has blown up. Housing costs are ridiculous. I don't understand how people afford those new houses. Food is way more expensive than it used to be. (WC)*

Qualitative findings (continued)

- Working and middle class Canadians are noticeably concerned about their children's financial futures.

(This concern also voiced by 2008-2010 respondents.)

- *My daughter she lives here rent free, we help her with her school. We've helped her in the past with educational costs, as well as my step-son . . . I don't mind, they're my children. We don't mind but hopefully she'll find a job. (WC)*
- *It'll be harder now that we only have one main income but we're not going to deprive him of the medication he needs. (MC: Her son has an eye problem and requires expensive treatments.)*

Qualitative analysis (continued)

- Respondents' see financial precariousness related to psychological distress
 - *My parents passing away. I don't have anyone to care for me. This is scary for me. I don't have any family anymore. (WC)*

– *I guess it would be harder for me because I don't have family and depend on my friends . . . I guess the fact that I'm single. I don't have anyone to depend on except my friends . . . I guess I wonder if something does happen to me, who can I depend on if my friends couldn't be there. Now that I'm thinking about that, it's an important consideration. (WC)*

Discussion and conclusion

- In both cohorts, respondents increasingly report worse health and higher psychological distress as they grow older.
- We find strong associations between subjective financial stress and self-reported overall health and psychological distress in both cohorts.
- Those reporting financial stress have worse subjective health over their life courses.
- The effect of financial stress on physical and mental health is greater in mid-life than in later life.

Discussion and conclusion (continued)

- Investigations of the effect of SES on health should include measures of perceived financial stress
- Income alone does not capture the difficulty individuals and families experience in trying to meet their needs

Discussion and conclusion (continued)

- Interview findings echo our quantitative findings:
 - Respondents connect their financial well-being to their emotional well-being in reports of worry or concerns about the present and future
 - General worry and concern stemming from the link between financial and emotional well-being are greater when anticipating children's futures

Discussion and conclusion (continued)

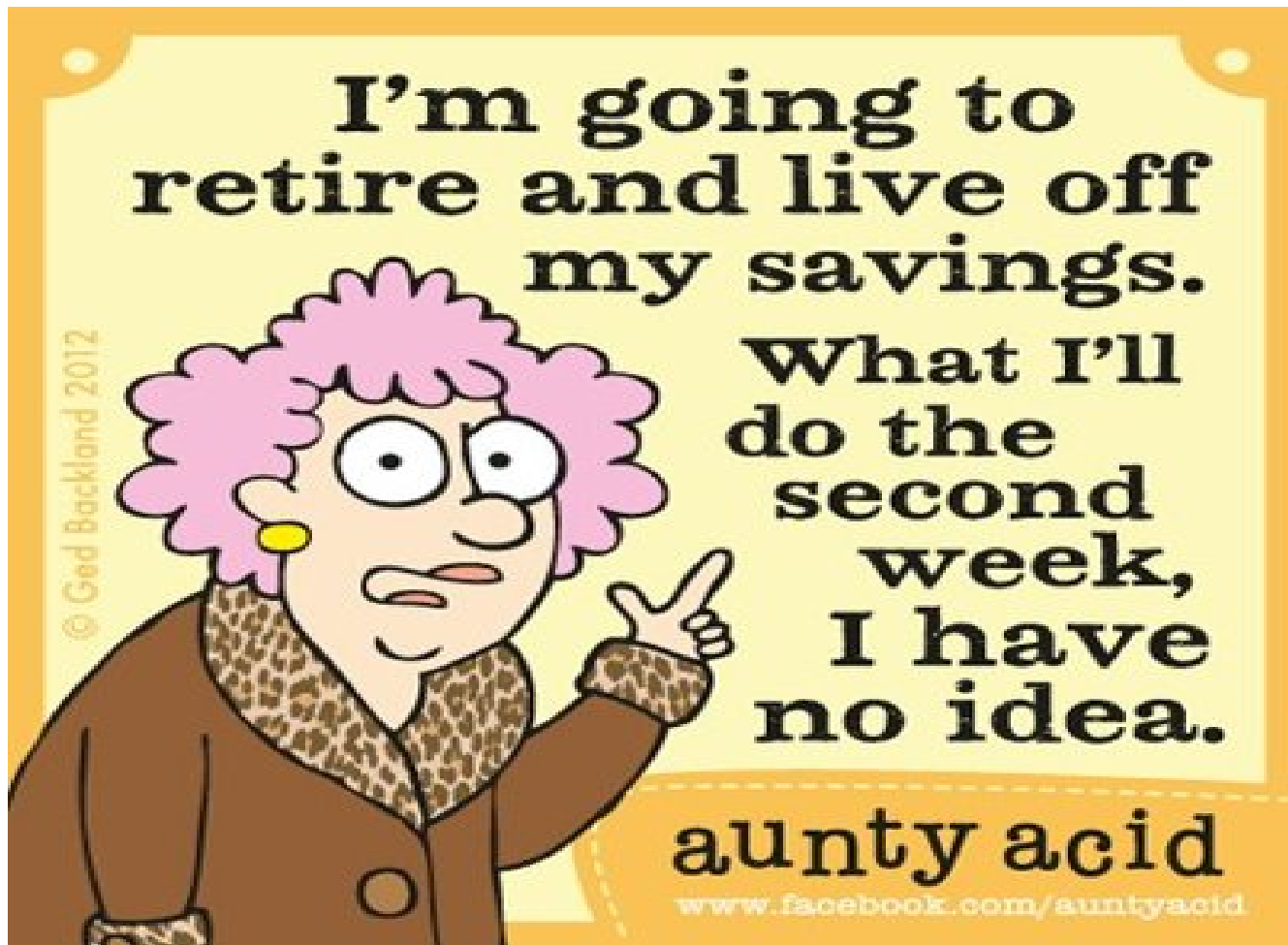
- Policy discussions about aging in Canada could attend to the link between perceived financial stress and well-being
- Strong evidence exists on the income security challenges of some in later life, but less is known about those in mid life – who carry financial stresses into their later years and transmit to their children
- Attention only to income security with aging is insufficient; Need to focus on how financial stress from mid to later life links with health and well-being.
- Policy attention is needed beyond income supports to health issues connected to financial stress over life courses

Strengths & Limitations

- Strengths: Large cohort, population-based sample; long window of observations; qualitative interviews add insights; captured changes over time in financial stress and two measures of health
- Limitations: Not a perfect measure of financial stress; attrition in any longitudinal study; missing data (which we assume are random); self-reported health subject to bias; Qualitative interviews not longitudinal

Possible next steps

- Need to understand more about the duration of effects of perceived financial strain
- In particular, the effects of sharp economic declines, such as the Great Recession 2008+
- And how financial strain may differentially affect those in different SES
- In terms of welfare state policy, would be fascinating to find out what effect of GAI might be on well-being with ageing



Thank you

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