AN EXPERIMENTAL APPROACH TO STUDYING PERSONALIZED NUDGES IN RETIREMENT SAVINGS DECISIONS

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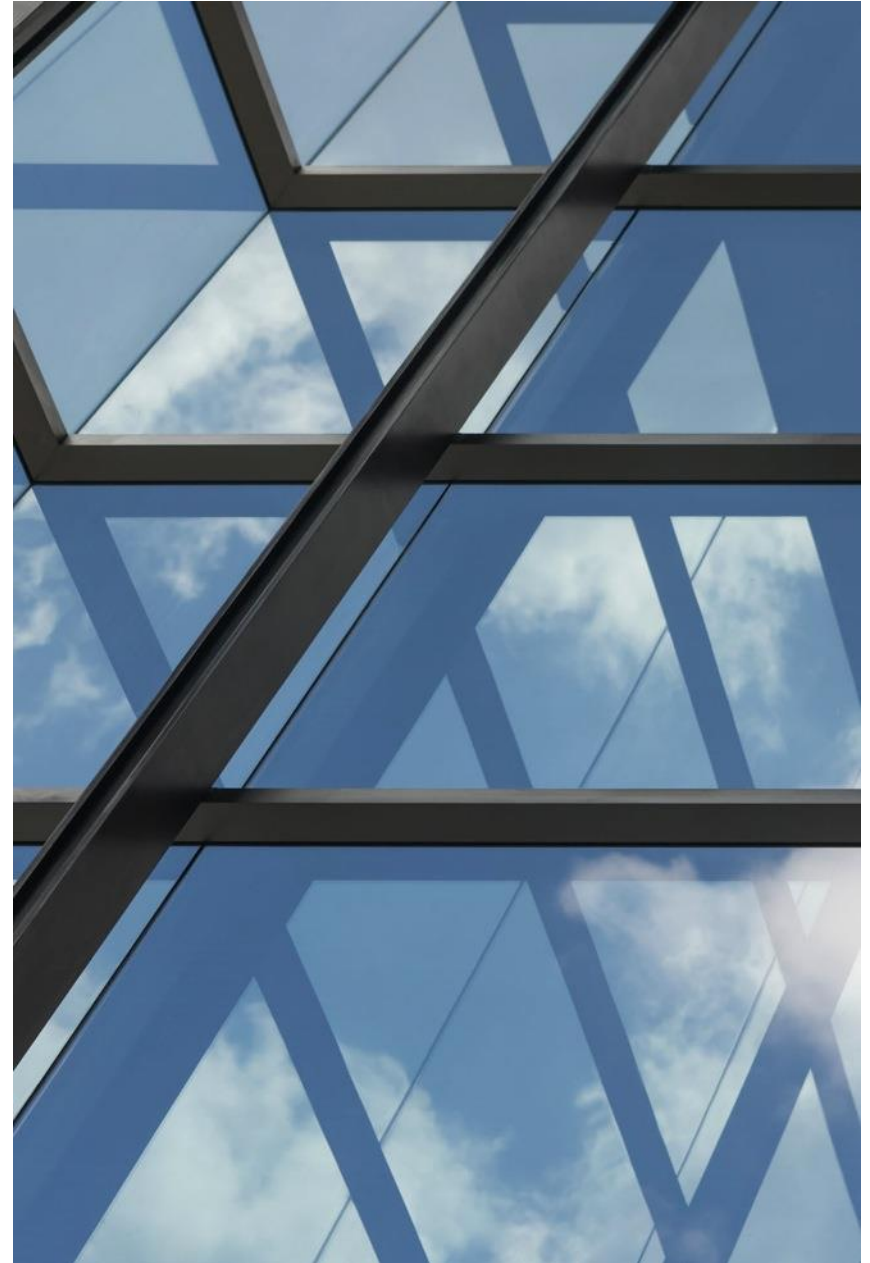[1]University of Sydney, CEPAR
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RESEARCH BACKGROUND

Background and motivation

➤ Many save too little for retirement, which can lead to increased dependence on social safety nets and economic instability.

    ➤ 54% of male and 46% of female Australian retirees rely on the government pension as the main source of income in 2022-23 (ABS, 2024)

➤ Nearly half of Australians are uncertain whether their funds will last throughout retirement (Kaye, 2024).

➤ More than half of Americans worry about their ability to achieve financial security in retirement (Doonan and Kenneally, 2024).

➤ Almost 90% of people in the UK struggle to save for retirement (Cribb et al., 2023)

Background and motivation

➢ **Problem**: People often fail to decide how much to save to reach retirement income adequacy (Agnew, 2023).

➢ **Objective**: This study examines if and how personalized nudges (targeted messages) about a retirement income adequacy target can help facilitate individual retirement savings decisions.

Targeted messages might affect retirement savings choices.

Q: Can messages that suggest a way to reach a retirement income adequacy target change retirement savings decisions?

According to the Association of Superannuation Funds of Australia (2023), to obtain a comfortable retirement lifestyle, one person (half a couple) needs:

$\Rightarrow$A retirement lump sum of $345,000.

$\Rightarrow$A projected retirement income of $36,000 p.a.

Previous studies show nudge is effective.

- Suggesting specific contribution rates can significantly increase participation and contribution into retirement savings plans (Goldin et al., 2017, 2019; Choi et al., 2017).

- In our prior empirical study, suggesting an extra $20 contribution significantly motivated savings of those who had not voluntarily contributed pre-treatment.

➢ Here, we look at the effects of targeted messages with suggestions to attain the ASFA comfortable standard sent to different age groups and hypothetical super accounts.

Research contributions

This study aims to provide guidance on enhancing communication to support different groups of individuals' decision-making in retirement savings.

– We use an **experiment** to test **message-based nudges** targeting retirement savings decisions.

– We examine message effects **across age groups** and **financial profiles**.

– We highlight the diverse impact of different message types (congratulations, motivational, aspirational) on choices.

THE EXPERIMENT

Experimental setting

- We conduct an online survey.

- We set a single choice task for respondents who are Australian superannuation fund members aged from 25 to 64 in the accumulation phase of retirement savings.

- The choice task requires them to choose an amount they would like to save more per week considering a given hypothetical background.

Different messages targeting different people

- **Congratulations:** For those on track to reach the ASFA comfortable standard.

- **Motivational:** For those close to the target, motivating an extra $20 weekly contribution to super to achieve the target.

- **Aspirational**: For individuals far from the target, encouraging an extra $20 weekly contribution to super to move towards, but not reach, a comfortable retirement.

Hypotheses

- **Congratulations**: People who are congratulated for reaching the retirement income adequacy target save less.

- **Motivational**: Suggesting adding $20 per week to super to achieve the target could motivate savings.

- **Aspirational:** Individuals far from the target can be nudged to save $20 weekly to get closer to the target, even if the target remains unattainable.

Experimental design

- **Participants:** 1,000 superannuation members, age groups split into young (25–34), middle-aged (35–54), and older (55–64).

- **3 x 3 x 2 conditions:**

  - Randomly assigned to treatment groups (message type) and control groups (no message).

  - Each participant evaluated a hypothetical savings scenario based on income, superannuation balance, and projected retirement income.

  - Average income varied across age groups, reflecting typical income distributions in Australia.

- **Choice Task:** After viewing a hypothetical background and a targeted message (if treated), participants chose among various saving options into superannuation: $0, $5, $20, $30, and Other
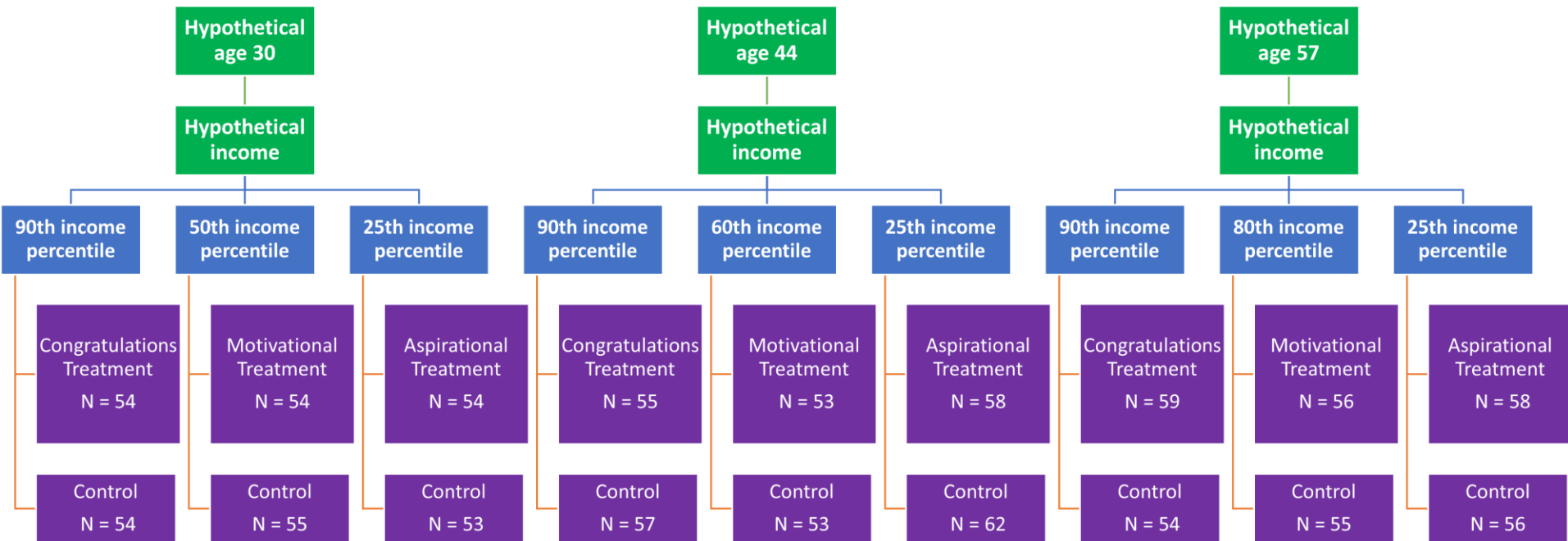
Information about you and your superannuation	
Age	44
Weekly income	$2,848
Weekly employer superannuation	$230
Weekly income after tax	$2,081
Weekly living expenses	$1,410
Weekly income leftover	$671
Current superannuation balance	$179,960
Your estimated superannuation account balance at age 67	$722,000
Your estimated weekly income from your superannuation savings from age 67 to 92 could be	$782

A comfortable retirement costs about $607 per week if you own your home when you retire.

Congratulations! You are on track to afford a comfortable life in retirement.

Would you save more of your leftover income into your superannuation fund? Saving more means spending less now.

How much would you save into your superannuation fund every week?

Saving amount ($)
○ 0
○ 5
◉ 20
○ 30
○ Other amount

If you continue adding this amount into your super until you are 67 years old, your estimated income from age 67 to 92 could grow to **$823** per week and your estimated superannuation balance at age 67 could grow to **$757,000**.

Summary statistics

- Approx equal distribution among three age groups: younger (25-34), middle-aged (35-54) and older (55-64) (~33% each)

- Approx equal distribution between male and female participants (~50% each)

- **No significant demographic or financial differences** between treatment and control groups, validating the randomization process.

Our sample is representative of the population

	Our sample	Australian population
Weekly median personal income ($)	1250	1300
Weekly median household income ($)	2000	1770
Median age (years)	44	38.3
% of males	46.4	49.6

Effects of targeted messages on the probability to save more into superannuation

Message group	Dependent variable: Save more		
	Congratulations	Motivational	Aspirational
	(1)	(2)	(3)
Treated	−0.02	−0.11**	−0.02
	(0.08)	(0.05)	(0.05)
Middle-aged group	−0.02	−0.02	−0.10
	(0.08)	(0.05)	(0.06)
Older group	0.01	−0.02	−0.08
	(0.07)	(0.05)	(0.06)
Treated*Middle-aged group	0.01	0.09	0.14*
	(0.11)	(0.07)	(0.08)
Treated*Older group	−0.11	0.05	−0.06
	(0.11)	(0.07)	(0.09)
Constant	0.83***	0.96***	0.93***
	(0.05)	(0.04)	(0.04)
Observations	305	308	322

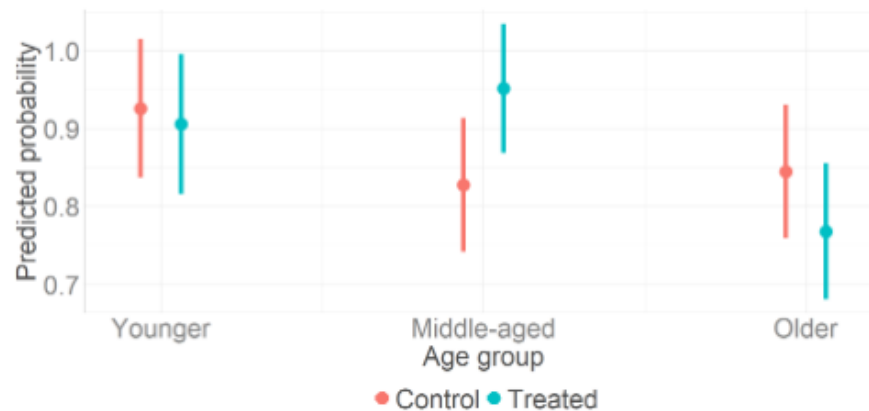*Note:* Standard errors in parentheses; $*p<0.1; **p<0.05; ***p<0.01.$

Predicted probabilities of choosing to save more into superannuation

((a)) Congratulations message

((b)) Motivational message
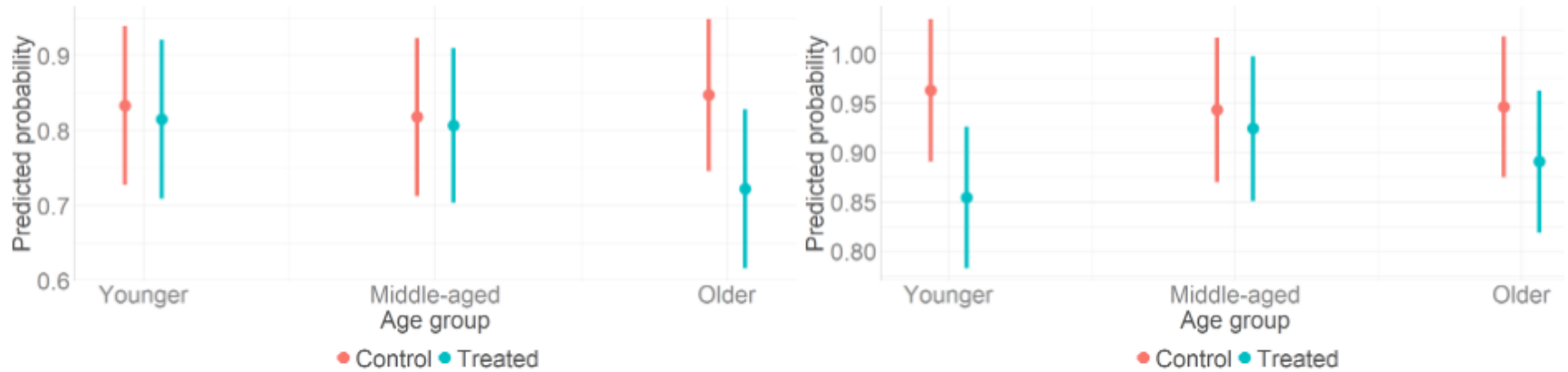
((c)) Aspirational message

Effects of targeted messages on the probability to save more into superannuation

Message group	Congratulations (1)	Motivational (2)	Aspirational (3)
Younger group	−0.02 (0.81)	−0.11** (0.04)	−0.02 (0.75)
Middle-aged group	−0.01 (0.88)	−0.02 (0.72)	0.12** (0.03)
Older group	−0.13* (0.09)	−0.06 (0.28)	−0.08 (0.30)

Note: p-values in parentheses;   *p<0.1; **p<0.05; ***p<0.01

Congratulation messages discourage the older respondents' savings.

– **Older respondents** receiving **congratulations messages** for having an estimated retirement income reached the ASFA standard were **13%** ($p < 0.1$) **less likely** to save more into superannuation than the control.

– People nearing retirement may interpret the message as confirmation of success, so they should stop saving.

Motivational message reduced savings of younger individuals

– **Younger respondents** receiving **motivational messages** that suggest an additional $20/week contribution to reach the ASFA comfortable retirement standard, were **11%** ($p < 0.05$) **less likely** to save more than the control.

– These individuals may have felt the suggestion was financially infeasible given their current income levels or life priorities (Xie et al., 2023).

Aspirational message motivates the middle-aged group to save

− **Middle-aged respondents** receiving **aspirational messages** that encourage adding an extra $20/week to superannuation to move closer to the ASFA standard, even if the target was beyond reach, were **12%** ($p < 0.05$) **more likely** to save more than the control.

− Aspirational messages can be effective in promoting savings for those in mid-career who are likely to prioritize retirement planning (Greenwald Research, 2023).

Different messages influence retirement saving choices of a particular age group.

– The effects of different types of messages vary by hypothetical age and financial status that links to the messages sent.

– Messages that suggest contributing $20/week more to superannuation do not promote the $20 saving option.

– Overall, congratulations messages reduce savings of the older; motivational messages demotivate savings of the younger; whereas aspirational messages encourage the middle-aged group to save.

RESEARCH SCOPE AND FUTURE EXTENSION

Research Scope & Future Extension

Implications

Targeted messages can lead to unexpected behavior changes.

Targeted message should be designed and used carefully.

Limitations

Do not capture long-term reactions to repeated messages

Generic retirement income adequacy target

THANK YOU!

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Effects of targeted messages on the amount saved more into superannuation

Message group	Congratulations	Motivational	Aspirational
	(1)	(2)	(3)
Younger group	1.94	−2.77	−5.10
	(0.81)	(0.71)	(0.31)
Middle-aged group	0.06	−1.60	3.75
	(0.99)	(0.83)	(0.43)
Older group	−14.94*	−11.26	−5.26
	(0.06)	(0.13)	(0.28)

Note: p-values in parentheses; $^*p<0.1$; $^{**}p<0.05$; $^{***}p<0.01$

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