

The effects of having a defined benefit pension plan on well-being

2024



HOOPP
Healthcare of Ontario
Pension Plan



THE
**BEHAVIOURAL
INSIGHTS
TEAM**



Executive summary (1/4)

Challenge

Many workers rely on pensions for their financial security during retirement. While there is evidence demonstrating how pensions impact members' health and well-being during retirement, **less is known** about how **having a high-quality pension** (e.g., defined benefit pension plan or DBPP) impacts **health and well-being pre-retirement**.

Approach

To understand how DBPPs impact health and well-being pre-retirement, we used the **salience of DBPP benefits** as a stimulus (i.e., prompting workers to reflect on the advantages of their pension). We hypothesized that if reflecting on one's DBPP increases financial well-being, then it is likely that *having* a DBPP increases financial well-being.



Increasing financial well-being and reducing financial stress: pathways to improving health and well-being

Financial well-being refers to an individual's ability to meet their financial obligations, feel secure in their financial future and make choices that allow them to enjoy life. It considers factors like income stability, savings and debt management. Financial well-being can contribute to overall well-being in a number of ways: higher life satisfaction and happiness, better relationships, a healthier lifestyle, increased self-efficacy and lower stress.

Financial stress refers to psychological strain related to managing finances, like worries about meeting financial obligations, income insecurity, or challenges with savings or debt.

Generally, financial stress has an inverse relationship with financial well-being—the lower the financial stress, the higher the financial well-being.

Executive summary (2/4)

Experiment

To **establish a causal relationship** between salience of DBPP benefits and well-being, we randomly assigned workers with a DBPP into one of two groups 1) a control group exposed to **neutral information** or 2) a treatment group exposed to **information about the advantages of a DBPP**. We then asked questions about financial well-being and stress on validated scales of **subjective financial well-being, financial stress and retirement expectations**.

Companion study

To allow for a **descriptive comparison** between those **with** and **without** a DBPP on baseline measures of financial well-being and stress, we surveyed a similar population of workers without a pension about financial well-being and stress using the same scales.



Intervention: 25-second video on the advantages of a DBPP

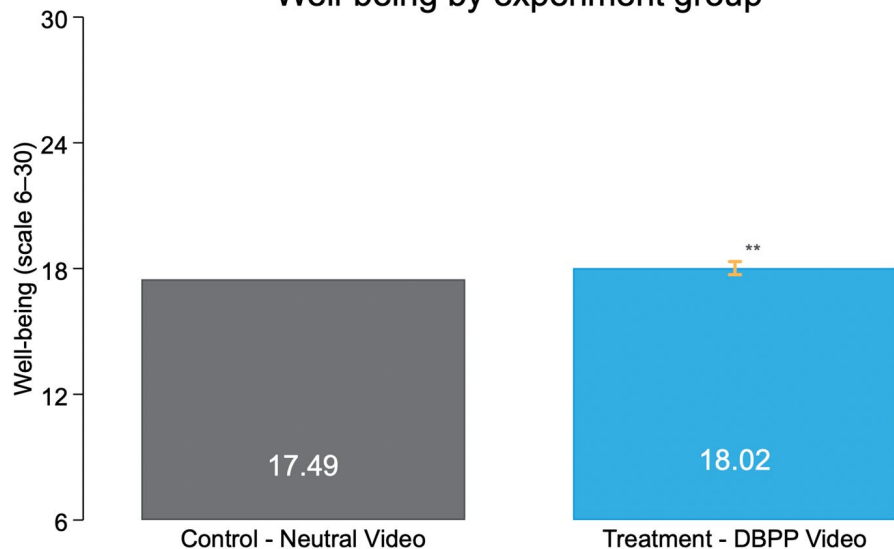


“You can enjoy peace of mind knowing your retirement is financially secure. That’s because you have a high-quality workplace pension plan. That means you will have a secure income every month after you retire. The rule of thumb for people without a pension is to save 10–15% of their paycheck every year. For you, it’s taken care of! So, enjoy the peace of mind. You are already doing a lot to save for your retirement.”

Executive summary (3/4)



Well-being by experiment group



n = 2,864

** p < 0.01, * p < 0.05, + p < 0.10

Primary analysis controlling for gender, age, education, marital status, value of assets and dependants

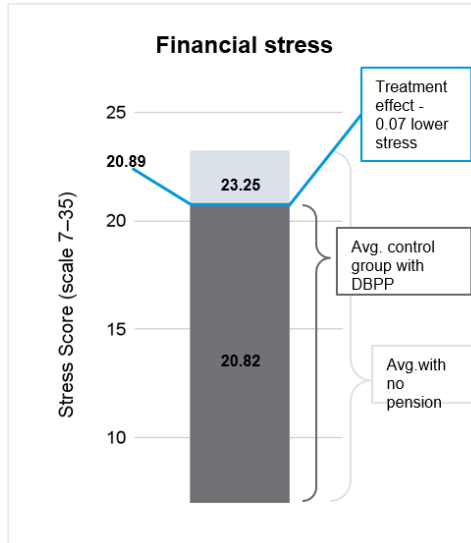
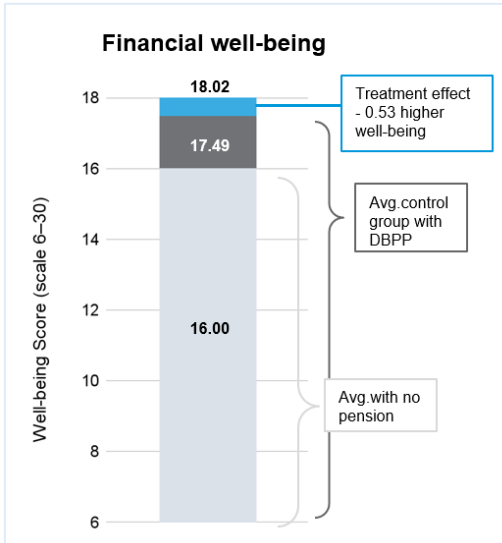
Key Results

Among DBPP members that saw a video prompting them to think about their pension, **financial well-being was 3 per cent higher** than members who did not receive this prompt.

This suggests that **having a DBPP has a positive impact on workers' financial well-being**—a key contributor to health and well-being overall.

The video did not impact financial stress; our results suggest that short-term financial concerns are the dominant factor in financial stress. Future research could explore how to help workers think more about their long-term financial outlook or more fully integrate the value of their pension into their short-term outlook.

Executive summary (4/4)



Key Results

Full-time workers aged 40-60 who have a DBPP reported **9 per cent higher financial well-being and 10 percent lower financial stress** than those without a pension.

These graphs illustrate how people without a pension descriptively compare to those with a DBPP who watched a 25-second video featuring neutral information (control group) and people with a DBPP who watched a 25-second video highlighting the advantages of a DBPP.

While there are many other correlated factors, our collective results support our underlying hypothesis: **pre-retirement well-being is higher, stress is lower and expectations toward retirement are more positive among people who have a DBPP compared to those who do not.**

Study overview



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Study background

Challenge

Many healthcare workers rely on pensions for their financial security *during* retirement. A scan of the literature demonstrated that less is known about how, or if, having a pension conveys benefits to health and well-being *pre-retirement*. The results from this experiment will provide a deeper understanding—and articulation of—the true value of a pension.

Approach

To understand whether and to what degree pensions impact health and well-being pre-retirement, we used the *salience* of pension benefits as a stimulus (i.e., prompting people to reflect on their pension). Given the long-term nature of pensions, we assumed that pensions are not top of mind when a person is considering their financial well-being—unless prompted to reflect. We hypothesize that if reflecting on one's pension increases well-being, then it is likely that having a pension increases well-being. This was tested with an experiment to produce causal evidence and a companion survey, to produce descriptive evidence.

Population

Our experiment included full-time Canadian workers with a DBPP, aged 40–60 years old. Our companion survey included a population with the same characteristics but without a defined benefit pension plan. Participants with a DBPP were recruited using panels, word-of-mouth and an email campaign by the British Columbia General Employees Union (BCGEU). Participants without a DBPP were recruited using panels.

Intervention

Experiment participants were randomized into one of two conditions: a video providing neutral information (describing the Great Lakes) or a video making the advantages of having a pension more concrete and clear. Both conditions included the same imagery, pacing and tone. To ensure sufficient exposure to the intervention, participants were asked to confirm their understanding of the video in an open-text field and were presented with the same message in a static text image.

Companion survey participants were exposed to the video providing neutral information.

Comparison & Outcome Measures

We compared measures of financial well-being, stress and expectations toward retirement between conditions. We also compared these measures between the control-group participants and the companion-survey participants (those without a pension); these results are for descriptive purposes only.

Overview of our approach

Experimental Set-up

Participants were included in the experiment if they currently reside in Canada, were between the ages of 40–60 years, were currently working full-time and have a DBPP.

Intervention

Control
N = 1,394

Pension
N = 1,470

Participants randomly assigned to see one of two videos.

Primary Analysis

Financial well-being

Secondary & Exploratory Analysis

Secondary: Financial stress
Exploratory: Expectations toward retirement


Covariates


Our OLS regression $Y_i = \beta_0 + \beta_1 \text{Treatment} + X_i\beta_j + \varepsilon_i$ where X_i is a vector of covariates controlled for age, gender, education, value of assets, marital status and dependants.


— Participants without a DBPP in the companion survey (n = 495) completed a similar experiment set-up to the Control group.


We recruited a sample of 2,864 participants with a Defined Benefit Pension Plan


A sample of 2,864 Canadians between the ages of 40–60 years with a DBPP who currently work full-time completed the online trial that ran from October 6–Dec 13, 2023.

 Gender	
Male	36%
Female and other genders	64%


 Dependents	
Yes	46%
No	54%


 Occupation	
Government and public administration	30%
Health care	15%
Social services	15%
Education and research	7%
Retail and customer service	6%
Information technology	5%
Finance and banking	5%
Other**	17%

 Planning to stay with current employer	
< 3 years	11%
> 3 years	76%
Not sure	13%

 Age	
40–44	31%
45–49	25%
50–54	22%
55–60	22%

 Married	
Yes	57%
No	43%

 Value of assets*	
Under \$50,000	47%
\$50,000 and over	53%

 Degree	
Yes	75%
No	25%

Median survey completion time: 7m 49s

Methodology

Experiment participants were randomized to view one of two videos, both approximately 25 seconds in length and featuring identical imagery

Control: Great Lakes facts
N = 1,394



“Canada stretches from the Atlantic Ocean, along the Arctic Ocean, and to the Pacific Ocean. It is the second-largest country in the world by land area. Canada also has the world’s longest coastline, and the largest area of freshwater lakes. This includes the Great Lakes. The Great Lakes have been a major resource for activities like transportation, migration, trade, and fishing.”

Intervention: DBPP advantages
N = 1,470



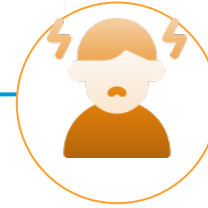
“You can enjoy peace of mind knowing your retirement is financially secure. That’s because you have a high-quality workplace pension plan. That means you will have a secure income every month after you retire. The rule of thumb for people without a pension is to save 10-15% of their paycheck every year. For you, it’s taken care of! So, enjoy the peace of mind. You are already doing a lot to save for your retirement.”

We measured participants' self-reported financial well-being and stress



Financial well-being

- **Financial well-being** refers to an individual's ability to meet their financial obligations, feel secure in their financial future and make choices that allow them to enjoy life.
- It considers factors like income stability, savings and debt management, and can influence overall well-being in a number of ways (e.g., contributing to higher life satisfaction and happiness, better relationships, a healthier lifestyle, increased self-efficacy and lower stress).



Financial stress

- **Financial stress** refers to psychological strain related to managing finances (e.g., present worries about meeting financial obligations, income insecurity, challenges with savings or accumulating debt).
- Generally, there's an inverse relationship between financial well-being and financial stress; higher levels of financial well-being correspond to lower levels of financial stress. Overall, we know that stress is a key mechanism influencing both physical health and mental health, and that it is difficult to separate from well-being.

We selected validated self-reported measures of financial well-being and stress

We selected financial well-being as our primary outcome for this study since it is more future-focused (e.g., prompts someone to think about their financial future), which better fits our intervention design.

Financial well-being

Having **financial security and financial freedom of choice**, in the present and in the future.



Measurement: Part 1 of the [CFPB Financial Well-being scale](#) (6 questions)



Elements:

- Having control over one's finances
- Having capacity to absorb a financial shock
- Being on track to meet financial goals
- Being able to make choices that allow one to enjoy life

Financial stress

Psychological response to **the perception of imbalance, uncertainty and risk** in the realm of financial resource management and decision making.



Measurement: The Affective Reaction section of the [APR Financial Stress Scale](#) (7 questions)



Elements:

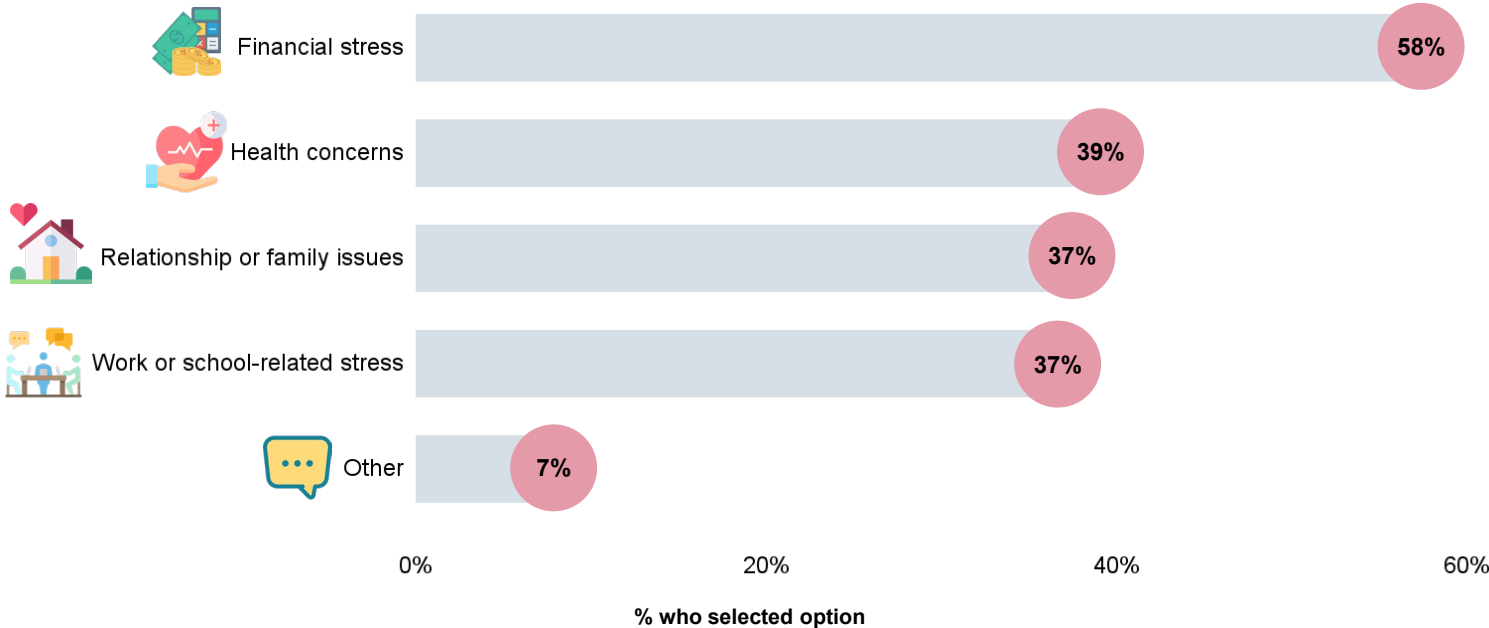
- Depression
- Anxiety
- Emotional exhaustion

We selected validated self-report measures of financial well-being and stress and included components of the scales based on relevance and practicality (e.g., keeping the survey short).

The questions that make up each scale are presented on [page 27](#).

Financial stress was the most frequently reported driver of stress among experiment participants

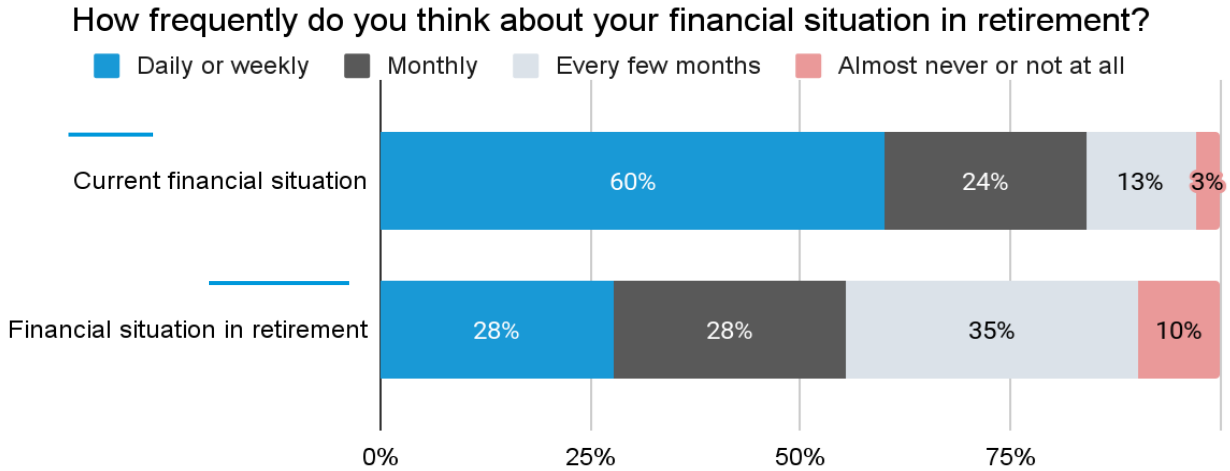
What are the biggest sources of stress in your life? Select up to two.



Participants think more frequently about their current financial situation than their financial situation in retirement

While participants appear to think frequently about their financial situation in retirement (over 50 per cent think about it at least monthly), they think about their current financial situation much more frequently (60 per cent think about it daily or weekly).

This short-term bias likely mediates (and limits) the effects of pensions on well-being pre-retirement. To fully unlock pre-retirement benefits, we may need to encourage workers to consider the future more actively—or to understand how having a pension positively impacts their present finances.



Results



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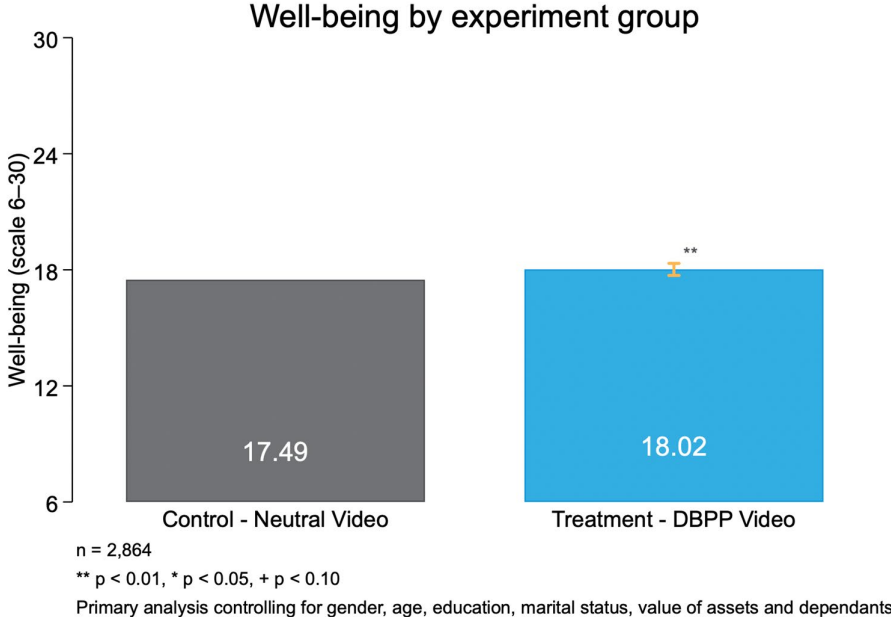
Prompting participants to think about their DBPP increased financial well-being

Participants who were prompted to think about their DBPP had a **0.53 higher financial well-being score (3 per cent increase)** than those in the control group, a **statistically significant difference**. Simply reminding people about the advantages provided by their pension conveys well-being benefits to workers pre-retirement.

This half-point increase on the adapted CFPB scale is a relatively small but meaningful difference given the light-touch stimulus (a 25-second video). As pension salience increases financial well-being, simply having a DBPP could have a much larger and sustained impact on individuals' financial well-being pre-retirement.

The questions that make up each scale are presented on [page 27](#).

Note: Baseline financial well-being scores were higher among panel participants compared to those recruited through word of mouth, but the treatment effect was consistent across both samples.



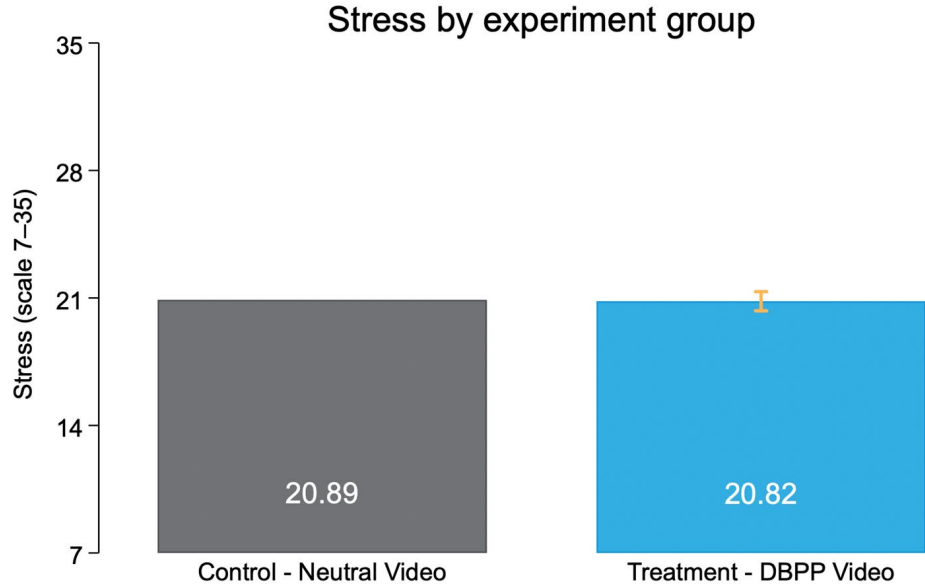
The intervention did not change participants' financial stress

There was **no statistically significant difference between** the self-reported stress of participants who were prompted to think about their pension compared to the control group.

The scale used to measure financial stress in this experiment focuses on *affective reaction**, which emphasizes the role stressors play in shaping the way people feel about their current financial situation.

We also learned that [participants appear to think more frequently about their current financial situation](#) compared to their financial situation in retirement. Feelings of financial stress may be difficult to shift without altering participants' perception of their current financial situation.

*The questions that make up each scale are presented on [page 27](#).



n = 2,864

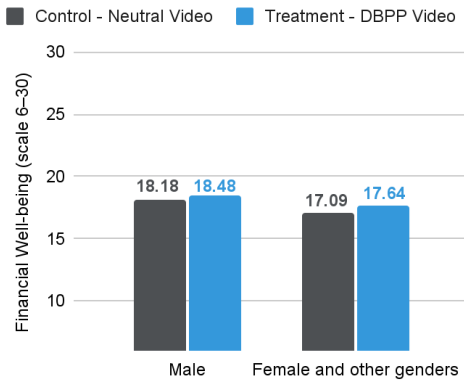
** p < 0.01, * p < 0.05, + p < 0.10

Secondary analysis controlling for gender, age, education, marital status, value of assets and dependants

Women and people of other* genders had lower baseline well-being and higher stress compared to men. The gaps persisted among the treatment group, as the video appears to have had a similar effect on all genders

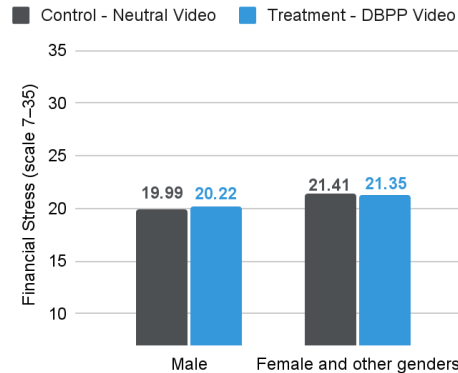
The purpose of these subgroup analyses was to understand whether different trends in well-being and stress were observed among women and people of other genders and men.

Well-being by experiment group and gender



Descriptively, female and other genders had **a lower baseline well-being by about 1.1 points** on the scale compared to males. Consistent with the overall results, the treatment appears to have had **a small, positive effect** on well-being among both groups.

Stress by experiment group and gender



Descriptively, female and other genders had **higher baseline stress by about 1.4 points** on the scale compared to males. Consistent with the overall results, the treatment appears to have had **a null effect** on stress among both groups.

*Other genders refers to those who selected “non-gender conforming” (including nonbinary, pangender, gender fluid, bi gender, agender, transgender or other) and “I prefer not to say”.

We recruited a sample of 495 participants without a workplace pension plan to compare baseline levels of financial well-being and stress

A sample of 495 Canadians between the ages of 40–60 years without a workplace pension plan who currently work full-time completed the online trial that ran from December 1–18, 2023.

Gender	
Male	45%
Female and other genders	55%

Age	
40–44	34%
45–49	22%
50–54	22%
55–60	22%

Dependents	
Yes	42%
No	58%

Married	
Yes	47%
No	53%

Value of assets*	
Under \$50,000	59%
\$50,000 and over	41%

Occupation	
Retail and customer service	16%
Construction and real estate	10%
Health care	9%
Information technology	8%
Manufacturing and engineering	7%
Transportation and logistics	5%
Finance and banking	5%
Other*	38%

Planning to stay with current employer	
< 3 years	13%
> 3 years	52%
Not sure	35%

Degree	
Yes	64%
No	36%

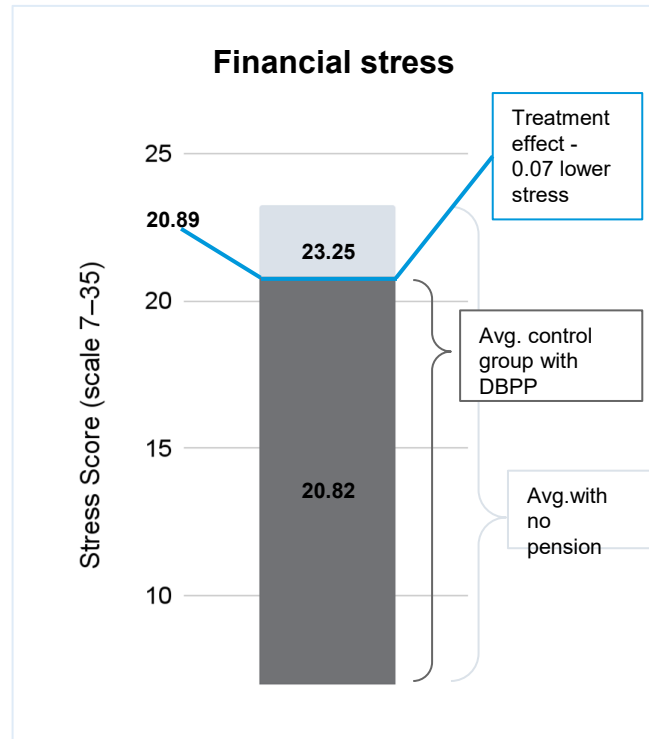
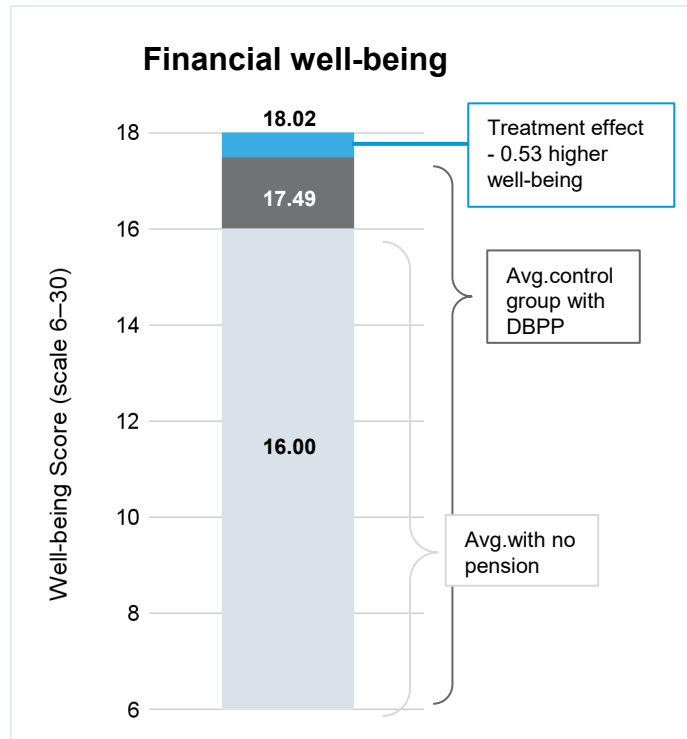
Median survey completion time: 5m 63s

Unprompted, DBPP members reported higher financial well-being and lower stress than non-pension members

We collected data from 495 full-time workers within the same age range (40–60 years) who do not have a workplace pension to compare baseline levels of financial well-being and stress with those of the control group.

DBPP members reported higher levels of financial well-being, lower levels of financial stress, and more positive expectations toward retirement compared to non-pension members. The differences in average financial well-being and stress were **statistically significant**. We cannot be certain that the difference is due to having a pension.

There are many other correlated factors, but this suggests that the **underlying hypothesis is correct: pre-retirement well-being is higher and stress is lower among people who have a DBPP** compared to those who do not.



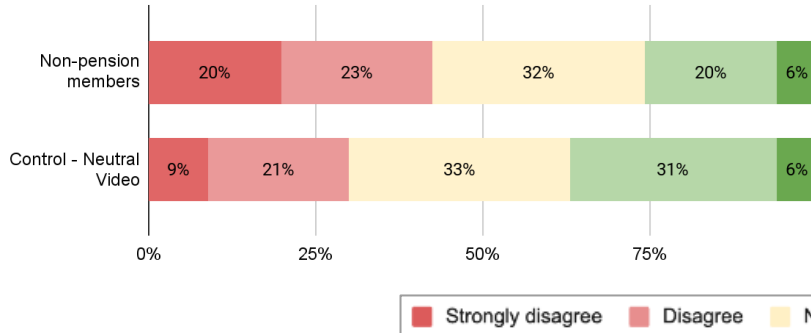
Unprompted, DBPP members also reported more positive expectations for retirement than non-pension members (1/2)

We also compared expectations for retirement between the group without a workplace pension and DBPP members in the control group who viewed the neutral video. The differences in agreement with each sub-question were statistically significant. We cannot be certain that these differences are due to having a pension.

There are many other correlated factors, but this supports that the underlying hypothesis: expectations for retirement are more positive among people who have a DBPP compared to those without one.

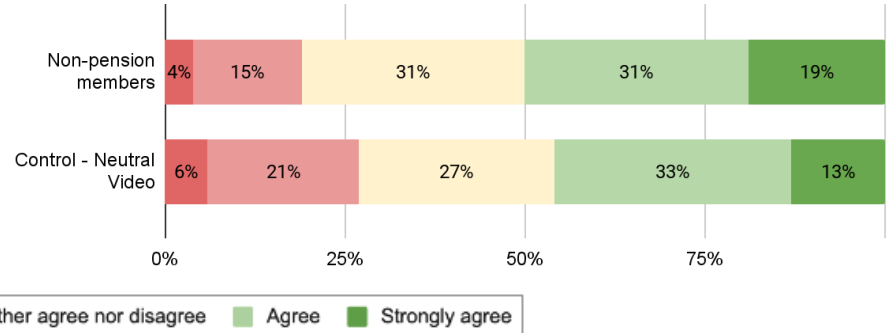
1. I will be able to meet my financial needs in retirement*

On average, unprompted DBPP members **reported higher levels of agreement** that they will be able to meet their financial needs in retirement.



2. My quality of life will decrease in retirement*

On average, unprompted DBPP members **reported higher levels of agreement** that their quality of life will decrease in retirement.

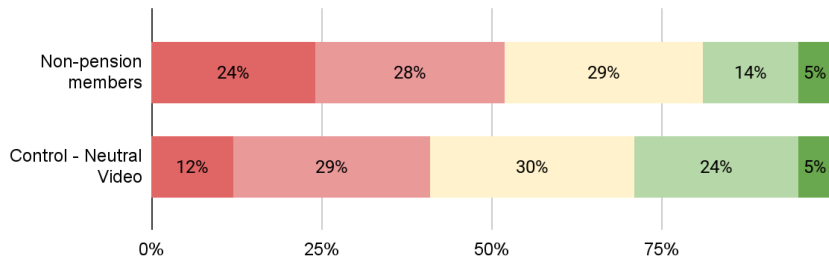


*Significant differences were found in the average response score between the control and non-pension member groups in a two-sample t-test.

Unprompted, DBPP members also reported more positive expectations for retirement than non-pension members (2/2)

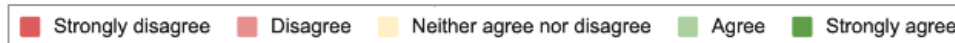
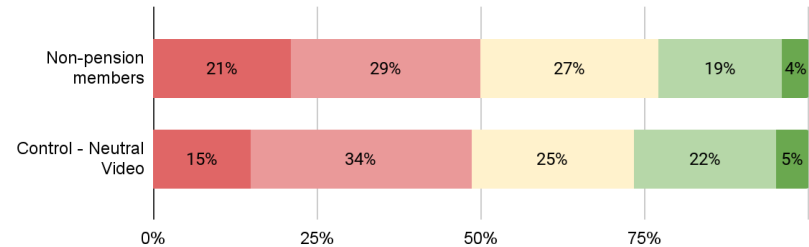
3. I'll feel satisfied with my financial situation during retirement*

On average, unprompted DBPP members **reported higher levels of agreement** that they will be satisfied with their financial situation during retirement.



4. I'll be able to maintain my current lifestyle and spending habits*

On average, unprompted DBPP members **reported higher levels of agreement** that they will be able to maintain their current lifestyle and spending habits.



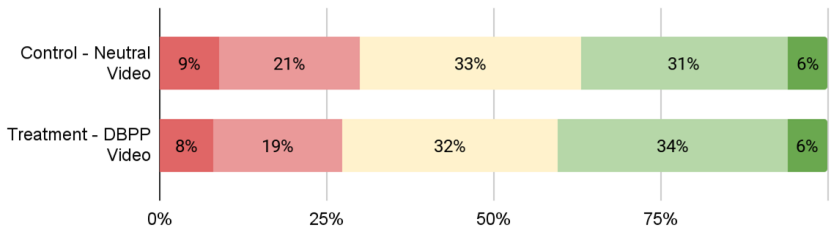
*Significant differences were found in the average response score between the control and non-pension member groups in a two-sample t-test.

The DBPP video had a positive impact on participants' attitudes and expectations toward retirement (1/2)

To capture participants' attitudes and expectations toward retirement, we asked them the extent to which they agreed with a series of statements relating to what their life might look like in retirement. Participants in the treatment group reported higher levels of agreement with positive statements in three out of the four measures.

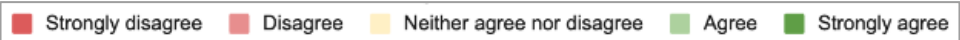
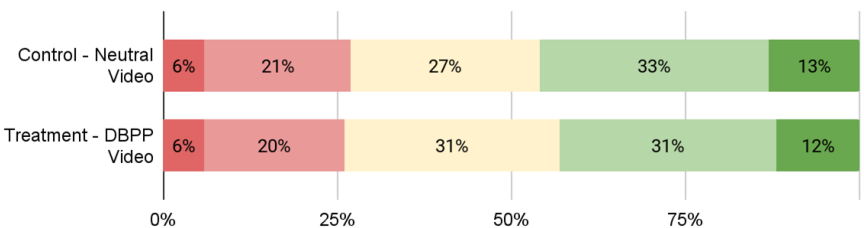
1. I will be able to meet my financial needs in retirement*

On average, participants in the treatment group **reported higher levels of agreement** that they will be able to meet their financial needs in retirement.



2. My quality of life will decrease in retirement

On average, participants in the treatment group **reported similar levels of agreement** that their quality of life will decrease in retirement.

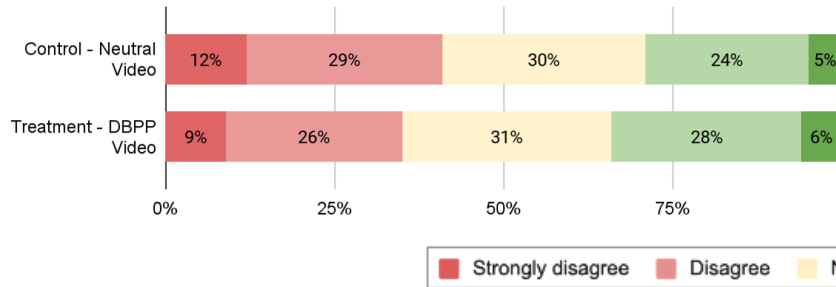


*Significant differences were found in the average response score between the control and intervention groups in an OLS regression controlling for gender, age, education, marital status, value of assets and dependants.

The intervention had a positive impact on participants' attitudes and expectations toward retirement (2/2)

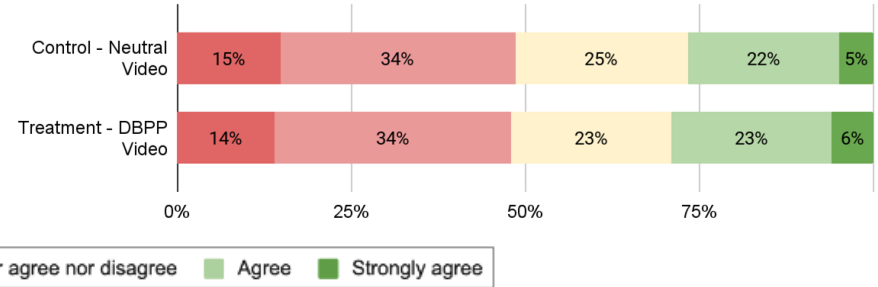
3. I'll feel satisfied with my financial situation during retirement*

On average, participants in the treatment group **reported higher levels of agreement** that they will be satisfied with their financial situation during retirement.



4. I'll be able to maintain my current lifestyle and spending habits*

On average, participants in the treatment group **reported higher levels of agreement** that they will be able to maintain their current lifestyle and spending habits.



Overall, the differences in attitudes and expectations toward retirement are small but meaningful, demonstrating that reminding people of the advantages of their pension has an immediate impact on their perceptions of retirement. The advantages of a DBPP highlighted in the video were quite general (i.e., peace of mind). In the future, communications that focus on the link between a pension and these specific aspects of retirement (e.g., ability to maintain current lifestyle and spending habits) could have a larger impact on individuals' attitudes and expectations toward retirement.

*Significant differences were found in the average response score between the control and intervention groups in an OLS regression controlling for gender, age, education, marital status, value of assets and dependents.

Conclusion

Many workers rely on pensions for their financial security during retirement. Our research demonstrates that pensions may have a positive impact on individuals' well-being during the pre-retirement years as well.

Full-time workers aged 40–60 who have a DBPP reported a 9 per cent higher financial well-being and 10 per cent lower financial stress than those without a pension. They also had more positive expectations toward their retirement. Among DBPP members that saw a video prompting them to think about their pension, financial well-being was 3 per cent higher than members who did not receive this prompt. This suggests that having a DBPP has a positive impact on workers' financial well-being—a key contributor to health and well-being overall.

The intervention did not impact financial stress, which appears to be primarily determined by short-term financial concerns.



Appendix



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Well-being and stress scales

Financial well-being

How well does this statement describe you or your situation?
1 - Not all, 2 - Very little, 3 - Somewhat, 4 - Very well, 5 - Completely
I could handle a major unexpected expense
I am securing my financial future
Because of my money situation, I feel like I will never have the things I want in life*
I can enjoy life because of the way I'm managing my money
I am just getting by financially*
I am concerned that the money I have or will save won't last*
*Reverse-coded

Financial stress

How much do you agree with the following statement?
1 - Strongly disagree, 2 - Disagree, 3 - Neither agree nor disagree, 4 - Agree, 5 - Strongly Agree
I feel depressed because of my financial situation
I feel sad because of my financial situation
I am fearful because of my financial situation
I feel anxious because of my financial situation
I worry a lot because of my financial situation
I am easily irritated because of my financial situation
I feel frustrated because of my financial situation

Note: The order of the sub-questions presented to each participant was randomized.



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