

INFORMATION LETTER

Health Decisions and Preferences

Investigators

Dr. Samuel Johnson, Department of Psychology, University of Waterloo, ON, Canada —
sgbjohns@uwaterloo.ca

Dogukan Demircioglu, Department of Psychology, University of Waterloo, ON, Canada —
dogukan.demircioglu@uwaterloo.ca

Avery Bernardin, Department of Psychology, University of Waterloo, ON, Canada —
avery.bernardin@uwaterloo.ca

Lingguo Xu, Department of Psychology, University of Waterloo, ON, Canada —
l346xu@uwaterloo.ca

To help you make an informed decision regarding your participation, this letter will explain what the study is about, the possible risks and benefits, and your rights as a research participant.

What You Will Be Asked to Do

If you decide to volunteer, you will be asked to complete an approximately **10-minute** online survey that is completed confidentially. The study will ask you to make a series of healthcare-related decisions. You will also be asked some demographic questions to describe the study sample.

Participation

Participation in this study is **voluntary**. Should you choose to participate, you will receive **£1.50 GBP**. Further details will be provided in the upcoming sections.

You may decline to answer any subsequent questions that you do not wish to answer by leaving them blank, and you can **withdraw your participation at any time** by not submitting responses without penalty. To receive remuneration, please proceed to the end of the survey.

Who May Participate in the Study?

You must be **18 years of age or older**, a resident of UK and fluent in English to participate.

Personal Benefits of the Study

Even though participation in this study will not provide any personal benefit to you, the data from this study will extend the scientific understanding of decision-making.

What Are the Risks Associated with the Study?

There are no known or anticipated risks associated with participation in this study. If a question makes you uncomfortable, you can choose not to answer.

Confidentiality

You will be completing the study by an online survey operated by Qualtrics. Qualtrics has implemented technical, administrative, and physical safeguards to protect the information provided via the Services from loss, misuse, and unauthorized access, disclosure, alteration, or destruction. However, no Internet transmission is ever fully secure or error free.

Please Note: We do not collect or use internet protocol (IP) addresses or other information which could link your participation to your computer or electronic device. Qualtrics temporarily collects your computer IP address to avoid duplicate responses in the dataset but will not collect information that could identify you personally.

The data collected from this study will be maintained on a password-protected computer database in a restricted access area of the university (i.e., the DICE lab in the Department of Psychology). As well the data will be electronically archived after completion of the study and maintained for at least 7 years, and then erased.

De-identified data related to your participation may be submitted to an open-access repository or journal (i.e., the data may be publicly available). These data will be completely de-identified/anonymized prior to submission by removing all personally identifying information before submission and will be presented in aggregate form in publications. This process is integral to the research process as it allows other researchers to verify results and avoid duplicating research. Other individuals may access these data by accessing the open-access repository. Although the dataset without identifiers may be shared publicly, your identity will always remain confidential.

If you provide consent now, but in the future wish to withdraw consent for us to use your data, you may email one of the investigators within one month following your participation to request that your responses are permanently deleted by providing your Prolific id number.

Questions and Ethics Clearance



information before submission and will be presented in aggregate form in publications. This process is integral to the research process as it allows other researchers to verify results and avoid duplicating research. Other individuals may access these data by accessing the open-access repository. Although the dataset without identifiers may be shared publicly, your identity will always remain confidential.

If you provide consent now, but in the future wish to withdraw consent for us to use your data, you may email one of the investigators within one month following your participation to request that your responses are permanently deleted by providing your Prolific id number.

Questions and Ethics Clearance

If, after receiving this letter, you have any questions about this study or would like additional information to assist you in reaching a decision about participation, please feel free to ask a student investigator or a faculty supervisor listed at the top of this page.

We would like to assure you that this study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Board (REB#47563). If you have questions for the Board, contact the Office of Research Ethics, toll-free at 1-833-643-2379 (Canada and USA), 1-519-888-4440, or reb@uwaterloo.ca.

Thank you for your interest in our research and for your assistance with this project. For all other questions related to this study, please contact Lingguo Xu (l346xu@uwaterloo.ca).

Consent to Participate

By indicating your consent, you are not waiving your legal rights or releasing the investigators or involved institutions from their legal and professional responsibilities.

With full knowledge of all the foregoing, I agree, of my own free will, to participate in this study.

I agree to participate

I do not wish to participate (please close your web browser now)

Submit →



BEFORE WE BEGIN

Your Prolific ID

Please enter your unique Prolific ID below. This is used to process your payment.

Prolific ID

You can find this on your Prolific dashboard.

Continue →

Thank You

You have chosen not to participate in this study. You may now close this browser window.

⌚ Approx. 10 minutes



WELCOME

What to Expect

- ✓ You will be asked to imagine being diagnosed with a **health condition** and to consider different **treatment options**
- ✓ You will indicate your preferences between treatments with different possible outcomes

Continue ▾

⌚ Approx. 10 minutes



WELCOME

What to Expect

- ✓ You will be asked to imagine being diagnosed with a **health condition** and to consider different **treatment options**
- ✓ You will indicate your preferences between treatments with different possible outcomes

Most people may face decisions like this at some point in their lives. **There are no right or wrong answers.** We are simply interested in your genuine personal preferences: what you would **actually choose if this situation were to happen to you.**

Begin Assessment →



HealthHorizon Patient Portal

YOUR SCENARIO

A Visit to Your Doctor

Imagine you are at a routine appointment. Your doctor begins by reviewing your background before sharing some news.

YOUR PATIENT PROFILE

You are **45 years old** and generally healthy

Continue reading ▾



YOUR SCENARIO

A Visit to Your Doctor

Imagine you are at a routine appointment. Your doctor begins by reviewing your background before sharing some news.



YOUR PATIENT PROFILE

You are **45 years old** and generally healthy

 **Important Finding**
Your doctor has identified a condition that requires attention

Your doctor tells you that a rare condition called **Beta-syndrome** has been detected. With standard care, your remaining life expectancy will be shortened — you can expect to live to **age 65**.

Your doctor is direct but calm. This is serious, but it is not the end of the conversation.

Is there anything that can be done? ▾

YOUR SCENARIO

A Visit to Your Doctor

Imagine you are at a routine appointment. Your doctor begins by reviewing your background before sharing some news.



YOUR PATIENT PROFILE

You are **45 years old** and generally healthy

 **Important Finding**
Your doctor has identified a condition that requires attention

Your doctor tells you that a rare condition called **Beta-syndrome** has been detected. With standard care, your remaining life expectancy will be shortened — you can expect to live to **age 65**.

Your doctor is direct but calm. This is serious, but it is not the end of the conversation.

Your doctor mentions that there is also an **experimental treatment**. It may **extend your life beyond age 65**, but it also carries **some risk**. Your doctor will explain both options on the next page.

65 Your expected lifespan with Beta-syndrome under standard care.

Take a moment to put yourself in this situation. On the next page, your doctor will explain both options in detail.

[Learn about the treatment →](#)

YOUR TREATMENT OPTIONS

Your Doctor's Recommendation

Your doctor explains that two treatment options are currently available for Beta-syndrome. They walk you through each one carefully.

OPTION A

Standard Care

A well-established treatment pathway. Your doctor knows exactly what to expect — the outcome is certain.

- ✓ You will live to **age 65**

⊙ No risk involved — what you see is what you get.

Now hear about Option B ▾

Your Doctor's Recommendation

Your doctor explains that two treatment options are currently available for Beta-syndrome. They walk you through each one carefully.

OPTION A

Standard Care

A well-established treatment pathway. Your doctor knows exactly what to expect — the outcome is certain.

- ✓ You will live to **age 65**

⊙ No risk involved — what you see is what you get.

OPTION B

Experimental Treatment

A newer treatment carried out at a hospital. The procedure takes no more than a few hours, is painless, and has no side effects. It could extend your life or shorten it.

- ✓ **Good outcome** (50% chance): live to **age 70** — gain 5 years
- ✗ **Bad outcome** (50% chance): live to **below age 65** — lose some years

△ IMPORTANT

The outcome of the experimental treatment will be revealed by a **harmless medical test 6 months** after the procedure.

During this period you will not know whether the outcome is good or bad.

I've read both options →

Treatment Options —
A: Standard Care (age 65) B: Experimental treatment

COMPREHENSION CHECK

Before You Decide

Please answer the following questions to make sure you understand both treatment options. You can click the summary bar above to review the options at any time.

Question 1 of 5

If you choose Option A (Standard Care), what will happen?

- You will live to age 70
- You have a 50% chance of living to age 65
- You will live to age 65

Check →



Treatment Options —
A: Standard Care (age 65) B: Experimental treatment

COMPREHENSION CHECK

Before You Decide

Please answer the following questions to make sure you understand both treatment options. You can click the summary bar above to review the options at any time.

Question 2 of 5

Option A outcome Correct

What is the chance of getting the good outcome vs. the bad outcome with Option B?

- 50% good, 50% bad
- 75% good, 25% bad
- 25% good, 75% bad

Not quite. The good and bad outcomes are equally likely. Each has a 50% chance of occurring.

Check →

Treatment Options —
A: Standard Care (age 65) B: Experimental treatment

COMPREHENSION CHECK

Before You Decide

Please answer the following questions to make sure you understand both treatment options. You can click the summary bar above to review the options at any time.

Question 3 of 5

- Option A outcome Correct
- Outcome probabilities Correct

What is the good outcome of Option B (Experimental Treatment)?

- You will live to age 75, gaining 10 years
- You will live to age 70, gaining 5 years
- You will live to age 65

Check →



Treatment Options —
A: Standard Care (age 65) B: Experimental treatment

COMPREHENSION CHECK

Before You Decide

Please answer the following questions to make sure you understand both treatment options. You can click the summary bar above to review the options at any time.

Question 4 of 5

- ✓ Option A outcome Correct
- ✓ Outcome probabilities Correct
- ✓ Good outcome Correct

What is the bad outcome of Option B (Experimental Treatment)?

- You will live to below age 65, losing some years
- You will live to exactly age 65
- You will not survive the procedure

Check →

Treatment Options —
A: Standard Care (age 65) B: Experimental treatment

COMPREHENSION CHECK

Before You Decide

Please answer the following questions to make sure you understand both treatment options. You can click the summary bar above to review the options at any time.

Question 5 of 5

- ✓ Option A outcome Correct
- ✓ Outcome probabilities Correct
- ✓ Good outcome Correct
- ✓ Bad outcome Correct

If you choose Option B, when will you find out whether the outcome is good or bad?

- 1 year after the procedure
- 6 months after the procedure
- Immediately after the procedure

Check →



Treatment Options —
A: Standard Care (age 65) B: Experimental treatment

COMPREHENSION CHECK

Before You Decide

Please answer the following questions to make sure you understand both treatment options. You can click the summary bar above to review the options at any time.

----- All correct!

- ✓ Option A outcome Correct
- ✓ Outcome probabilities Correct
- ✓ Good outcome Correct
- ✓ Bad outcome Correct
- ✓ When outcome is revealed Correct

I understand — make my choice →



The Months Ahead

Imagine you chose Option B – the experimental treatment. The procedure is done and the **6-month wait** has begun.

You don't yet know whether the outcome will be good (living to age 70, gaining 5 years) or bad (living to below age 65, losing some years). The follow-up test that will confirm the result is still **6 months away**.

Continue ▾

The Months Ahead

Imagine you chose Option B – the experimental treatment. The procedure is done and the **6-month wait** has begun.

You don't yet know whether the outcome will be good (living to age 70, gaining 5 years) or bad (living to below age 65, losing some years). The follow-up test that will confirm the result is still **6 months away**.

Think about what it would feel like to live through this waiting period. There are no right or wrong answers – we are interested in your honest reactions.

Question 1 of 5

While waiting for the results, how much time would you spend thinking about them?

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

Never crosses my mind

Constantly on my mind



The Months Ahead

Imagine you chose Option B – the experimental treatment. The procedure is done and the **6-month wait** has begun.

You don't yet know whether the outcome will be good (living to age 70, gaining 5 years) or bad (living to below age 65, losing some years). The follow-up test that will confirm the result is still **6 months away**.

Think about what it would feel like to live through this waiting period. There are no right or wrong answers – we are interested in your honest reactions.

Question 2 of 5

While waiting for the results, how much time would you spend thin... 6 / 10 EDIT

How much of that time would you spend fearing that your life expectancy will be decreased?

1 2 3 4 5 6 7 8 9 10

Almost never

Almost always



The Months Ahead

Imagine you chose Option B – the experimental treatment. The procedure is done and the **6-month wait** has begun.

You don't yet know whether the outcome will be good (living to age 70, gaining 5 years) or bad (living to below age 65, losing some years). The follow-up test that will confirm the result is still **6 months away**.

Think about what it would feel like to live through this waiting period. There are no right or wrong answers – we are interested in your honest reactions.

Question 3 of 5

While waiting for the results, how much time would you spend thin... 6 / 10 EDIT

How much of that time would you spend fearing that your life expe... 9 / 10 EDIT

How much of that time would you spend hoping that your life expectancy will be increased?

1 2 3 4 5 6 7 8 9 10 Almost never Almost always



The Months Ahead

Imagine you chose Option B – the experimental treatment. The procedure is done and the **6-month wait** has begun.

You don't yet know whether the outcome will be good (living to age 70, gaining 5 years) or bad (living to below age 65, losing some years). The follow-up test that will confirm the result is still **6 months away**.

Think about what it would feel like to live through this waiting period. There are no right or wrong answers – we are interested in your honest reactions.

----- Question 4 of 5

- While waiting for the results, how much time would you spend thin... 6 / 10 EDIT
- How much of that time would you spend fearing that your life expe... 9 / 10 EDIT
- How much of that time would you spend hoping that your life exp... 10 / 10 EDIT

When you thought about the bad outcome, how distressing do you think you would feel?

1 2 3 4 5 6 7 8 9 10

Not distressing at all Extremely distressing

Continue →



The Months Ahead

Imagine you chose Option B – the experimental treatment. The procedure is done and the **6-month wait** has begun.

You don't yet know whether the outcome will be good (living to age 70, gaining 5 years) or bad (living to below age 65, losing some years). The follow-up test that will confirm the result is still **6 months away**.

Think about what it would feel like to live through this waiting period. There are no right or wrong answers – we are interested in your honest reactions.

----- Question 5 of 5

- While waiting for the results, how much time would you spend thin... 6 / 10 EDIT
- How much of that time would you spend fearing that your life expe... 9 / 10 EDIT
- How much of that time would you spend hoping that your life exp... 10 / 10 EDIT
- When you thought about the bad outcome, how distressing do you... 6 / 10 EDIT

When you thought about the good outcome, how uplifting do you think you would feel?

1
 2
 3
 4
 5
 6
 7
 8
 9
 10

Not uplifting at all Extremely uplifting

[Continue →](#)



The Months Ahead

Imagine you chose Option B – the experimental treatment. The procedure is done and the **6-month wait** has begun.

You don't yet know whether the outcome will be good (living to age 70, gaining 5 years) or bad (living to below age 65, losing some years). The follow-up test that will confirm the result is still **6 months away**.

Think about what it would feel like to live through this waiting period. There are no right or wrong answers – we are interested in your honest reactions.

----- All done

- ✓ While waiting for the results, how much time would you spend thin... 6 / 10 EDIT
- ✓ How much of that time would you spend fearing that your life expe... 9 / 10 EDIT
- ✓ How much of that time would you spend hoping that your life exp... 10 / 10 EDIT
- ✓ When you thought about the bad outcome, how distressing do you... 6 / 10 EDIT
- ✓ When you thought about the good outcome, how uplifting do you t... 4 / 10 EDIT

Continue →



YOUR DECISION

Which Option Would You Choose?

We will show you a series of comparisons between Option A and Option B (the experimental treatment). For each comparison, the potential loss of Option B will change. Simply choose the option you would prefer in each case.

Remember: If you choose the experimental treatment, a medical test 6 months after the procedure will reveal the outcome.

Comparison 1 of 5

OPTION A

Standard Care

Certain outcome:
Live to age 65

VS

OPTION B

Experimental Treatment

GOOD OUTCOME 50% chance
live to age 70
gain 5 years

BAD OUTCOME 50% chance
live to age 59 years, 9 mo
lose 5 years, 3 mo

Outcome revealed after 6 months

Which option would you prefer?

Think carefully – once you click a button below, your choice is final.

I prefer Option A

I prefer Option B

YOUR DECISION

Which Option Would You Choose?

We will show you a series of comparisons between Option A and Option B (the experimental treatment). For each comparison, the potential loss of Option B will change. Simply choose the option you would prefer in each case.

Remember: If you choose the experimental treatment, a medical test 6 months after the procedure will reveal the outcome.

Comparison 2 of 5

OPTION A

Standard Care

Certain outcome:
Live to age 65

VS

OPTION B

Experimental Treatment

GOOD OUTCOME 50% chance
live to age 70
gain 5 years

BAD OUTCOME 50% chance
live to age 57 years, 5 mo
lose 7 years, 8 mo

Outcome revealed after 6 months

Which option would you prefer?

Think carefully – once you click a button below, your choice is final.

I prefer Option A

I prefer Option B

YOUR DECISION

Which Option Would You Choose?

We will show you a series of comparisons between Option A and Option B (the experimental treatment). For each comparison, the potential loss of Option B will change. Simply choose the option you would prefer in each case.

Remember: If you choose the experimental treatment, a medical test 6 months after the procedure will reveal the outcome.

Comparison 3 of 5

OPTION A

Standard Care

Certain outcome:
Live to age 65

VS

OPTION B

Experimental Treatment

GOOD OUTCOME 50% chance
live to age 70
gain 5 years

BAD OUTCOME 50% chance
live to age 56 years, 2 mo
lose 8 years, 10 mo

Outcome revealed after 6 months

Which option would you prefer?

Think carefully — once you click a button below, your choice is final.

I prefer Option A

I prefer Option B



YOUR DECISION

Which Option Would You Choose?

We will show you a series of comparisons between Option A and Option B (the experimental treatment). For each comparison, the potential loss of Option B will change. Simply choose the option you would prefer in each case.

Remember: If you choose the experimental treatment, a medical test 6 months after the procedure will reveal the outcome.

Comparison 4 of 5

OPTION A

Standard Care

Certain outcome:
Live to age 65

VS

OPTION B

Experimental Treatment

GOOD OUTCOME 50% chance
live to age 70
gain 5 years

BAD OUTCOME 50% chance
live to age 55 years, 7 mo
lose 9 years, 5 mo

Outcome revealed after 6 months

Which option would you prefer?

Think carefully – once you click a button below, your choice is final.

I prefer Option A

I prefer Option B



YOUR DECISION

Which Option Would You Choose?

We will show you a series of comparisons between Option A and Option B (the experimental treatment). For each comparison, the potential loss of Option B will change. Simply choose the option you would prefer in each case.

Remember: If you choose the experimental treatment, a medical test 6 months after the procedure will reveal the outcome.

Comparison 5 of 5

OPTION A

Standard Care

Certain outcome:
Live to age 65

VS

OPTION B

Experimental Treatment

GOOD OUTCOME 50% chance
live to age 70
gain 5 years

BAD OUTCOME 50% chance
live to age 55 years, 4 mo
lose 9 years, 8 mo

Outcome revealed after 6 months

Which option would you prefer?

Think carefully — once you click a button below, your choice is final.

I prefer Option A

I prefer Option B



View scenario details

OPTION A

Standard Care

Certain outcome:
Live to **age 65**

VS

OPTION B

Experimental Treatment

GOOD OUTCOME 50% chance
live to **age 70**
gain 5 years

BAD OUTCOME 50% chance
live to age 55 years, 2 mo
lose 9 years, 10 mo

Outcome revealed after 6 months

Almost there. Based on your choices, we've narrowed down your preference. Now, please use the slider below to find the **exact point** where both options feel *equally acceptable* to you.

Adjust the bad outcome of Option B:

live to age 55 years, 2 mo
lose 9 years, 10 mo



When both treatments feel about **equally acceptable** to you, click confirm.

Confirm My Choice →



NEW SCENARIO

A Second Consultation

Thank you for making that decision. Now, imagine that your doctor would like to discuss **one more treatment scenario** with you.

The situation is similar — you still have Beta-syndrome and the same two options are available — but one key detail is different. Please read the next page carefully.

As before, there are no right or wrong answers. Just choose what feels right to you in this new scenario.

See new scenario →



YOUR TREATMENT OPTIONS

Your Doctor's Recommendation

Your doctor explains that two treatment options are currently available for Beta-syndrome. They walk you through each one carefully.

OPTION A

Standard Care

A well-established treatment pathway. Your doctor knows exactly what to expect — the outcome is certain.

- ✓ You will live to **age 65**

⊙ No risk involved — what you see is what you get.

Now hear about Option B ▾

FOUR TREATMENT OPTIONS

Your Doctor's Recommendation

Your doctor explains that two treatment options are currently available for Beta-syndrome. They walk you through each one carefully.

OPTION A

Standard Care

A well-established treatment pathway. Your doctor knows exactly what to expect — the outcome is certain.

- ✓ You will live to **age 65**

⊙ No risk involved — what you see is what you get.

OPTION B

Experimental Treatment

A newer treatment carried out at a hospital. The procedure takes no more than a few hours, is painless, and has no side effects. It could extend your life or shorten it.

- ✓ **Good outcome** (50% chance): live to **age 70** — gain 5 years
- ✗ **Bad outcome** (50% chance): live to **below age 65** — lose some years

⚠ **IMPORTANT**
The outcome of the experimental treatment will be revealed by a **harmless medical test performed immediately** after the procedure.

I've read both options →

Treatment Options —
A: Standard Care (age 65) B: Experimental treatment

COMPREHENSION CHECK

Before You Decide

Please answer the following questions to make sure you understand both treatment options. You can click the summary bar above to review the options at any time.

Question 3 of 5

- Option A outcome Correct
- Outcome probabilities Correct

What is the good outcome of Option B (Experimental Treatment)?

- You will live to age 75, gaining 10 years
- You will live to age 70, gaining 5 years
- You will live to age 65

Check →

Treatment Options —
A: Standard Care (age 65) B: Experimental treatment

COMPREHENSION CHECK

Before You Decide

Please answer the following questions to make sure you understand both treatment options. You can click the summary bar above to review the options at any time.

Question 4 of 5

- ✓ Option A outcome Correct
- ✓ Outcome probabilities Correct
- ✓ Good outcome Correct

What is the bad outcome of Option B (Experimental Treatment)?

- You will live to below age 65, losing some years
- You will live to exactly age 65
- You will not survive the procedure

Check →

Treatment Options —
A: Standard Care (age 65) B: Experimental treatment

COMPREHENSION CHECK

Before You Decide

Please answer the following questions to make sure you understand both treatment options. You can click the summary bar above to review the options at any time.

----- Question 5 of 5

- Option A outcome Correct
- Outcome probabilities Correct
- Good outcome Correct
- Bad outcome Correct

If you choose Option B, when will you find out whether the outcome is good or bad?

- 1 year after the procedure
- 6 months after the procedure
- Immediately after the procedure

Check →

YOUR DECISION

Which Option Would You Choose?

We will show you a series of comparisons between Option A and Option B (the experimental treatment). For each comparison, the potential loss of Option B will change. Simply choose the option you would prefer in each case.

Remember: If you choose the experimental treatment, a medical test performed immediately after the procedure will reveal the outcome.

Comparison 1 of 5

OPTION A

Standard Care

Certain outcome:
Live to age 65

vs

OPTION B

Experimental Treatment

GOOD OUTCOME 50% chance
live to age 70
gain 5 years

BAD OUTCOME 50% chance
live to age 59 years, 9 mo
lose 5 years, 3 mo

Which option would you prefer?

Think carefully — once you click a button below, your choice is final.

I prefer Option A

I prefer Option B

ALMOST DONE

A Few Questions About You

Finally, we need to ask you a few demographic questions. If you feel uncomfortable answering these questions, you may skip any of them. Your answers will be anonymous because your data will be identified only by a participant number.

Question 1 of 8

What is your age?

Continue →

ALMOST DONE

A Few Questions About You

Finally, we need to ask you a few demographic questions. If you feel uncomfortable answering these questions, you may skip any of them. Your answers will be anonymous because your data will be identified only by a participant number.

Question 2 of 8

What is your age? 18 EDIT

What is your gender?

- Man / Transman
- Woman / Transwoman
- Genderqueer / Gender non-conforming / Gender non-binary / Gender Fluid
- Two-spirited
- I prefer to self-define (please fill in)
- I prefer not to answer

Continue →



ALMOST DONE

A Few Questions About You

Finally, we need to ask you a few demographic questions. If you feel uncomfortable answering these questions, you may skip any of them. Your answers will be anonymous because your data will be identified only by a participant number.

Question 3 of 8

✔ What is your age? 18 EDIT

✔ What is your gender? Man / Transman EDIT

Please enter the highest level of education that you have attained.

- Did not complete high school
- High school graduate
- Some college
- 2-year degree
- 4-year degree
- Graduate or professional degree

Continue →



ALMOST DONE

A Few Questions About You

Finally, we need to ask you a few demographic questions. If you feel uncomfortable answering these questions, you may skip any of them. Your answers will be anonymous because your data will be identified only by a participant number.

Question 4 of 8

✓ What is your age? 18 EDIT

✓ What is your gender? Man / Transman EDIT

✓ What is your highest level of education? Less than HS EDIT

What is your current employment status?

- Employed
- Unemployed
- Student

Continue →



ALMOST DONE

A Few Questions About You

Finally, we need to ask you a few demographic questions. If you feel uncomfortable answering these questions, you may skip any of them. Your answers will be anonymous because your data will be identified only by a participant number.

Question 5 of 8

- What is your age? 18 EDIT
- What is your gender? Man / Transman EDIT
- What is your highest level of education? Less than HS EDIT
- What is your current employment status? Employed EDIT

What industry do you work in?

- Agriculture, Forestry & Fishing
 - Manufacturing
 - Construction
 - Retail & Wholesale
- Scroll down for more

Continue →



A Few Questions About You

Finally, we need to ask you a few demographic questions. If you feel uncomfortable answering these questions, you may skip any of them. Your answers will be anonymous because your data will be identified only by a participant number.

Question 6 of 8

- What is your age? 18 EDIT
- What is your gender? Man / Transman EDIT
- What is your highest level of education? Less than HS EDIT
- What is your current employment status? Employed EDIT
- What industry do you work in? Construction EDIT

What is your annual household income?

- Under £15,000
- £15,000 – £25,000
- £25,000 – £35,000
- £35,000 – £50,000
- £50,000 – £75,000
- £75,000 – £100,000
- £100,000 or above



ALMOST DONE

A Few Questions About You

Finally, we need to ask you a few demographic questions. If you feel uncomfortable answering these questions, you may skip any of them. Your answers will be anonymous because your data will be identified only by a participant number.

Question 7 of 8

- What is your age? 18 EDIT
- What is your gender? Man / Transman EDIT
- What is your highest level of education? Less than HS EDIT
- What is your current employment status? Employed EDIT
- What industry do you work in? Construction EDIT
- What is your annual household income? £35-50k EDIT

Are you currently a resident of the United Kingdom?

Yes No

Continue →



ALMOST DONE

A Few Questions About You

Finally, we need to ask you a few demographic questions. If you feel uncomfortable answering these questions, you may skip any of them. Your answers will be anonymous because your data will be identified only by a participant number.

----- Question 8 of 8

- ✓ What is your age? 18 EDIT
- ✓ What is your gender? Man / Transman EDIT
- ✓ What is your highest level of education? Less than HS EDIT
- ✓ What is your current employment status? Employed EDIT
- ✓ What industry do you work in? Construction EDIT
- ✓ What is your annual household income? £35-50k EDIT
- ✓ Are you currently a resident of the United Kingdom? No EDIT

How many years have you lived in the United Kingdom?

Continue →



ALMOST DONE

A Few Questions About You

Finally, we need to ask you a few demographic questions. If you feel uncomfortable answering these questions, you may skip any of them. Your answers will be anonymous because your data will be identified only by a participant number.



- ✓ What is your age? 18 EDIT
- ✓ What is your gender? Man / Transman EDIT
- ✓ What is your highest level of education? Less than HS EDIT
- ✓ What is your current employment status? Employed EDIT
- ✓ What industry do you work in? Construction EDIT
- ✓ What is your annual household income? £35-50k EDIT
- ✓ Are you currently a resident of the United Kingdom? No EDIT
- ✓ How many years have you lived in the United Kingdom? 3 EDIT

Finish →



DEBRIEFING FORM

Investigators

Dr. Samuel Johnson, Department of Psychology, the University of Waterloo, sgbjohns@uwaterloo.ca, Canada

Dogukan Demircioglu, Department of Psychology, the University of Waterloo, dogukan.demircioglu@uwaterloo.ca, Canada

Avery Bernardin, Department of Psychology, the University of Waterloo, avery.bernardin@uwaterloo.ca, Canada

Lingguo Xu, Department of Psychology, the University of Waterloo, l346xu@uwaterloo.ca, Canada

About Research

The outcomes of our decisions unfold over time, making it crucial to understand how individuals approach delayed, risky choices. Poor decision-making has significant consequences, with approximately one million premature deaths annually in the U.S. attributed to suboptimal personal choices alone. Yet, conventional theories have typically treated risk and time preferences as separate aspects of decision-making, despite considerable evidence suggesting that they are closely intertwined. Although interest in the intersection of risk and time preferences has been growing among researchers in psychology and economics, a unified, comprehensive framework has yet to be developed. We propose that the absence of such a model stems primarily from the neglect of emotional factors in understanding delayed risky decisions.

Our research introduces the Affective Imagination Theory (AIT), integrating models of risk and time preferences. The central premise of AIT is that individuals strive to maximize their expected emotional utility. According to this theory, decision-makers forecast their emotional reactions both to experiencing outcomes (pleasure or displeasure) and to anticipating outcomes (dread or savoring). The strength and direction of these anticipatory emotions—how vividly people imagine future events and the degree to which dread outweighs savoring—are key factors that enhance the explanatory power of AIT.

We respectfully request that you refrain from sharing the study details with others while it is ongoing, as this may potentially impact participants' responses.



database in a restricted access area of the university (i.e., the DICE lab in the Department of Psychology). As well the data will be electronically archived after completion of the study and maintained for at least 7 years, and then erased.

De-identified data related to your participation may be submitted to an open-access repository or journal (i.e., the data may be publicly available). These data will be completely de-identified/anonymized prior to submission by removing all personally identifying information before submission and will be presented in aggregate form in publications. This process is integral to the research process as it allows other researchers to verify results and avoid duplicating research. Other individuals may access these data by accessing the open-access repository. Although the dataset without identifiers may be shared publicly, your identity will always remain confidential. If you provide consent now, but in the future wish to withdraw consent for us to use your data, you may email one of the investigators within one month following your participation to request that your responses are permanently deleted by providing your Prolific id number.

Questions and Ethics Clearance

If you have any questions about this study or would like additional information, please feel free to ask a student investigator or a faculty supervisor listed at the top of this page. We would like to assure you that this study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Board (REB #47563). If you have questions for the Board, contact the Office of Research Ethics, toll-free at 1-833-643-2379 (Canada and USA), 1-519-888-4440, or reb@uwaterloo.ca. Thank you for your interest in our research and for your assistance with this project. For all other questions related to this study, please contact Lingguo Xu at l346xu@uwaterloo.ca.

Additional References

- Johnson, S.G.B., Zhang, M., & Keil, F.C. (2016). Decision-making and biases in causal-explanatory reasoning. In *Proceedings of the 38th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.
- Johnson, S.G.B. (2016). Explaining December 4, 2015: Cognitive science ripped from the headlines. In *Proceedings of the 38th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

Continue →





Thank You

Your responses have been recorded. Thank you for participating in this study. Your input helps us understand how people make health-related decisions.

PROLIFIC COMPLETION CODE
C1GCRGTV

[Complete on Prolific →](#)

Click the button above to confirm your submission on Prolific.

