

Wellbeing Study Twin Activities

In the web implementation of these activities, twins completed each questionnaire activity by clicking on a radio button (equivalent to a tick box) for each item, then clicking on a submit button at the bottom of the screen. In the feedback activities, twins were asked to type text into text boxes before clicking the submit button.

Other than the initial consent form, there were a total of 22 twin activities as listed below. The activities differed between the pilot study and the main study: 7 new activities (*) were added for the main study, the items of 3 other activities (**) were changed, and the weekly order of activities were changed. Furthermore, in the pilot study twins were divided between a "control" group and an "intervention" group, but in the main study all twins were placed in the "intervention" group - this affected the nature of the "list of three" and "written task" activities in weeks 4, 5 and 6.

1. List of three results
2. Written task
3. Hedonic adaptation*
4. Effort*
5. Affect & satisfaction
6. Health
7. Emotional report
8. Gratitude*
9. NSF**
10. Life satisfaction**
11. Sensation seeking*
12. STAI
13. Meaning in life*
14. Subjective happiness
15. Personality
16. Prosocial*
17. Moods & feelings
18. Fit**
19. Task feedback
20. List of three instructions
21. Gratitude letter feedback*
22. Study feedback

Only a subset of the activities were presented in any given week. The weekly order of activities is documented elsewhere.

List of three instructions

This activity was unchanged from the pilot study to the main study, except that some twins in the pilot study were in a "control" group and were presented with a different activity in weeks 3, 4 and 5 (see below). The list of three instructions appeared in weeks 0, 1, 2, 3, 4 and 5. The "activity" is really a set of instructions for a practical task to be completed over the following week. To complete the activity, twins were asked simply to read the instructions and then to click on the submit button (they could return and re-read the page at any time within the same week).

Weeks 0, 1 and 2 (all twins): three locations

This activity was the same for all twins (intervention or control) in both the pilot and the main study.

- One day this week, ideally tomorrow, please **pay special attention to the locations you visit** (e.g. bus stop, supermarket, school hall, etc).
- When you log in to the study next week, you will be asked to list **three** places you spent time in on that day.
- If you want to make a note of the three places in order to help you remember them then please feel free to do so.
- Do not worry about recording whom you are with or the emotions you are experiencing when in the locations, only details of the places (i.e. the facts) are important.

Weeks 3, 4 and 5 (intervention group): three acts of kindness

This activity was presented only to "intervention" twins (a subset of the pilot study twins, and all the main study twins).

From time to time, we all perform acts of kindness for others. These acts may be large (like taking old clothes to a charity shop) or small (like opening a heavy door for someone), and the person for whom the act is done may or may not be aware of the act. Examples of kind acts include helping your parents cook dinner, doing a chore for your sister or brother, helping a friend with homework, or visiting an elderly relative.

- One day this week, ideally tomorrow, you are to **perform three acts of kindness** – all three in one day.
- The three kind acts do not need to be for the same person, and it doesn't matter if the person knows whether you did it or not.
- The three kind acts may be similar to the examples above, but they don't have to be.
- When you log in next weekend, you will be asked to provide a brief description of each act you performed.
- If you want to make a note of what acts you did in order to help you remember them then please feel free to do so.

Please do not do any kind acts that may place you or others in danger.

Weeks 3, 4 and 5 (control group): three surfaces

This activity was presented only to "control" twins (a subset of the pilot study twins).

- One day this week, ideally tomorrow, please take a moment to deliberately touch three different surfaces as you go about your day (for example a classroom wall, your desk, the canteen table, etc).
- Please note, they must be inanimate surfaces – that is, what you touch must not be something that is alive.
- When you log in next weekend, you will be asked to list the three surfaces that you touched.
- If you want to make a note of the surfaces you touch in order to help you remember them then please feel free to do so.
- If you choose to do this, do not worry about mentioning whom you are with or the emotions you are experiencing when touching the surfaces, only the details of the surfaces themselves (i.e. the facts) are important.

List of three results

This activity was unchanged from the pilot study to the main study, except that some twins in the pilot study were in a "control" group and were presented with a different activity in weeks 4, 5 and 6 (see below). The list of three results activity appeared in weeks 1, 2, 3, 4, 5 and 6. This activity asks for feedback from the list of three task that was set for each twin the previous week in "list of three instructions". To complete the activity, twins had to enter at least some text in each of the three boxes (there were no checks on the nature of the text), or else to tick the box indicating that they had not completed the activity, then to click on the submit button at the bottom of the page.

Weeks 1, 2 and 3 (all twins): three locations

This activity was the same for all twins (intervention or control) in both the pilot and the main study.

- Last week you were given a practical activity to do - to pay special attention to the locations you visited during the course of one day. Please now write down three places you visited.
- Please only include the factual details of the location itself (not how you were feeling at the time, whom you were with, or any other information of this kind).
- There is no need to worry about perfect grammar or spelling, simply list the three places you visited in any format you please.
- Please be assured that anything you write will remain strictly confidential.

Please list the three locations you visited on your chosen day last week:

Location 1: [text box]

Location 2: [text box]

Location 3: [text box]

Please ONLY tick here if you did NOT complete the activity this week: [tick box]

Weeks 4, 5 and 6 (intervention group): three acts of kindness

This activity was presented only to "intervention" twins (a subset of the pilot study twins, and all the main study twins).

- Last week, you were given a practical activity to do - to perform three acts of kindness during the course of one day. Please now write down these acts.
- There is no need to worry about perfect grammar or spelling, simply provide a brief description of each act you performed in any format you please.
- Please be assured that anything you write will remain strictly confidential.

Please list the three acts of kindness that you completed on your chosen day last week:

Act 1: [text box]

Act 2: [text box]

Act 3: [text box]

Please ONLY tick here if you did NOT complete the activity this week: [tick box]

Weeks 4, 5 and 6 (control group): three surfaces

This activity was presented only to "control" twins (a subset of the pilot study twins).

- When you logged in to the study last weekend you were given a practical activity to do - to deliberately touch three surfaces during the course of one day. Please now write down the three surfaces that you touched.
- Please only include the factual details of the surface itself (not how you were feeling at the time, whom you were with, or any other information of this kind).
- Please be assured that anything you write will remain strictly confidential.

Please list the three surfaces that you touched on your chosen day last week:

Surface 1: [text box]

Surface 2: [text box]

Surface 3: [text box]

Please ONLY tick here if you did NOT complete the activity this week: [tick box]

Written task

This activity was unchanged from the pilot study to the main study, except that some twins in the pilot study were in a "control" group and were presented with a different activity in weeks 4, 5 and 6 (see below). The written task activity appeared in weeks 1, 2, 3, 4, 5 and 6. Twins were required to enter at least some text in the text box for this activity, although there were no attempts to check the nature of the text entered. Also, twins were required to spend at least 5 minutes on the written task screen (the submit button was hidden until 5 minutes had expired), in an attempt to discourage very brief responses.

Weeks 1, 2 and 3 (all twins): room description

This activity was the same for all twins (intervention or control) in both the pilot and the main study. In each week, they were asked to describe a different room: bedroom (week 1), kitchen (week 2) and living room (week 3).

On the next screen is the online wellbeing activity for this week. This activity needs to be completed in one session. You should spend about 10 minutes on the activity. It is ok for you to spend longer, but the page will time out after around 25 minutes.

- Please take a moment to think about your [bedroom/kitchen/living room].
- Now, for the next 10 minutes, please write a detailed description of that room.
- Be as detail-oriented as possible, but try to leave out emotions, feelings, or opinions relating to the room. In other words, just describe exactly what is in the room.
- There is no need to worry about perfect grammar or spelling.
- Please be assured that anything you write will remain strictly confidential.

[text box]

Please spend around 10 minutes on this task. A 'Next' button will appear below after 5 minutes.

Weeks 4, 5 and 6 (intervention group): gratitude letter

This activity was presented only to "intervention" twins (a subset of the pilot study twins, and all the main study twins). In each week, a different example of the letter recipient was given in the first bullet point: a family member (week 4), a teacher (week 5) and a friend (week 6).

On the next screen is the online wellbeing activity for this week. This activity needs to be completed in one session. You should spend about 10 minutes on the activity. It is ok for you to spend longer, but the page will time out after around 25 minutes.

- Please take a moment to think back over your life and remember an instance when someone did something for you for which you are extremely grateful. For example, think of [someone in your family/one of your teachers or someone at school/one of your friends] who has been especially kind to you but may have never heard you express your gratitude.
- Now, for the next 10 minutes, write a letter of thanks to one of these individuals.
- There is no need to worry about perfect grammar or spelling.
- Please be assured that anything you write will remain strictly confidential.

Use the instructions below to help guide you through this process:

1. Use whatever letter format you like, but remember to write as though you are directly addressing the individual to whom you are grateful. If it is helpful, feel free to head the letter 'Dear so-and-so,' and end with 'Sincerely, xxx,'.
2. Describe in specific terms why you are grateful to this individual and how his or her behaviour affected your life.
3. Describe what you are doing now and how you often remember their efforts.
4. Although you may show or give this letter to anyone you please, we do not encourage you to do so. For the purposes of this study, the letter you write is an opportunity for you to express your gratitude freely without anyone else needing to see it.

[text box]

Please spend around 10 minutes on this task. A 'Next' button will appear below after 5 minutes.

Weeks 4, 5 and 6 (control group): 24-hour activity

This activity was presented only to "control" twins (a subset of the pilot study twins).

On the next screen is the online wellbeing activity for this week. This activity needs to be completed in one session. You should spend about 10 minutes on the activity. It is ok for you to spend longer, but the page will time out after around 25 minutes.

- Please take a moment to think about what you did during the last 24 hours. That is, create a mental outline of what you did during that time.
- Now, for the next 10 minutes, please write out these activities in list format.
- Be as detail-oriented as possible, but try to leave out emotions, feelings, or opinions relating to your activities. Just focus on the facts of what you did.
- There is no need to worry about perfect grammar or spelling.
- Please be assured that anything you write will remain strictly confidential.

[text box]

Please spend around 10 minutes on this task. A 'Next' button will appear below after 5 minutes

Task feedback

In this activity, twins were asked to give feedback (in the form of text) about the "list of three" and "written task" activities that they had just completed. This activity was unchanged from the pilot study to the main study, except that some twins in the pilot study were in a "control" group and were presented with different activities in weeks 4, 5 and 6 (see also above). The task feedback appeared in weeks 1, 2, 3, 4, 5 and 6. This activity was entirely optional - twins were allowed to continue by clicking on the submit button even if they had left the text box empty.

Weeks 1, 2 and 3 (all twins): three locations and room description

How did you find the two wellbeing activities this week – noticing the locations you passed through and describing your [bedroom/kitchen/living room]? For example, do you have any general thoughts or feelings about these activities or any comments that you would like to pass on to us?

[text box]

Weeks 4, 5 and 6 (intervention group): three acts of kindness and gratitude letter

How did you find the two wellbeing activities this week – performing acts of kindness for others and writing a letter of gratitude? For example, do you have any general thoughts or feelings about these activities or any comments that you would like to pass on to us?

[text box]

Weeks 4, 5 and 6 (control group): three surfaces and 24-hour activity

How did you find the two wellbeing activities this week – noticing the surfaces you touched and describing your actions over the past 24 hours? For example, do you have any general thoughts or feelings about these activities or any comments that you would like to pass on to us?

[text box]

Gratitude letter feedback

This activity appeared only in week 9 in the main study (it was not included in the pilot study). Twins were required to respond to the first question. Responses were only required in the following two questions if the response to the first question was not "none".

You wrote three letters of gratitude as part of the study. How many (if any) did you share with someone else?	0 (none)	1	2	3
If you answered 1, 2 or 3: ... who did you share your letter(s) with? (tick all that apply)	The person to whom the letter was written			Other
... and how did you share the letter(s)? (tick all that apply)	in person	by email	by post	by phone

Study feedback

This was the final activity in week 9 for all twins, both in the pilot and in the main study. A response was required in the first question (about vouchers), but the second question was optional and the text box could be left blank.

Thank you for taking part in the TEDS Wellbeing Study!

We would like to send you a £30 voucher as a thank you for completing the study.

Please state which type of voucher you would prefer to receive:

Love2shop

iTunes

We are very interested to know about your experience of taking part in this study. If you have any comments that you would like to pass on to us, please feel free to use the space provided below.

[text box]

Hedonic adaptation

This activity appeared in weeks 3, 6 and 9 in the main study (it was not included in the pilot). The activity differed slightly between the three weeks, as shown below.

Week 3

Responses to both questions were required.

The following questions look at how you found last week's activities. Please indicate how bored you became during each activity on the 7-point scale below.

To what extent did you get bored with describing a room?						
1	2	3	4	5	6	7
Not at all bored			Somewhat bored			Extremely bored
To what extent did you get bored with describing locations you visited?						
1	2	3	4	5	6	7
Not at all bored			Somewhat bored			Extremely bored

Week 6

Responses to both questions were required.

The following questions look at how you found last week's activities. Please indicate how bored you became during each activity on the 7-point scale below.

To what extent did you get bored with writing gratitude letters?						
1	2	3	4	5	6	7
Not at all bored			Somewhat bored			Extremely bored
To what extent did you get bored with doing acts of kindness?						
1	2	3	4	5	6	7
Not at all bored			Somewhat bored			Extremely bored

Week 9

Responses to the first two questions were required. A response was required in each of questions 3 and 4 unless the respective responses to questions 1 and 3 were "not at all".

The following questions are designed to find out if you have carried on with any of the tasks you did during the study.

Have you continued to do acts of kindness for people since the end of the study?						
1	2	3	4	5	6	7
Not at all			Sometimes			Often
Have you continued to write letters of gratitude since the end of the study?						
1	2	3	4	5	6	7
Not at all			Sometimes			Often

If you have carried on doing the activities, please rate how bored you became whilst carrying them out on the 7-point scale below.

To what extent did you get bored with writing gratitude letters?						
1	2	3	4	5	6	7
Not at all bored			Somewhat bored			Extremely bored
To what extent did you get bored with doing acts of kindness?						
1	2	3	4	5	6	7
Not at all bored			Somewhat bored			Extremely bored

Effort

This activity appeared in weeks 1, 2, 3, 4, 5 and 6 in the main study (it was not included in the pilot). The activity consists of one question, in which a response is compulsory.

How much effort did you put into completing this week's activities?						
1	2	3	4	5	6	7
No effort at all			Some effort			A great deal of effort

Affect and Satisfaction

This activity appeared every week (0 to 6 and 9) in both the pilot and the main study. Responses were required in both questions.

For each item below, indicate the point on the scale that most appropriately reflects your feelings **during the past week**.

How have you felt this week?	1	2	3	4	5	6	7
	Extremely negative			Neutral			Extremely positive
How satisfied with your life have you felt this week?	1	2	3	4	5	6	7
	Extremely dissatisfied			Neutral			Extremely satisfied

Health

This activity appeared every week (0 to 6 and 9) in both the pilot and the main study. Responses were required in questions 1 and 2. Questions 3 and 4 could be left unanswered, except that if the response to question 3 was "yes" then a response was required in question 4.

Please answer the following questions relating to your health **over the past week**.

How would you say your health has been over the past week?	Very poor	Poor	Fair	Good	Very good
To what extent has your health affected how you have felt emotionally over the past week?	Not at all	A little	A lot	Completely	Not sure

Has anything else specific or out of the ordinary had a significant impact on how you have felt emotionally over the past week?	Yes	No				
IF YES: what kind of impact has it had?	Extremely negative	Very negative	Negative	Positive	Very positive	Extremely positive

NSF (Need Satisfaction Flow)

This activity appeared every week (0 to 6 and 9) in both the pilot and the main study. The number of items was reduced from 15 in the pilot study to just 3 in the main study, as shown below. In the main study, responses were required in at least 2 of the 3 items.

Pilot study version (15 items):

Please indicate how often you felt the following ways **during the past week** (last 7 days).

	1	2	3	4	5	6	7
	Never			Sometimes			All the time
I felt like I was free to decide for myself how to live my life.							
I felt a sense of contact with people who care for me, and whom I care for.							
I felt very interested in what I was doing.							
I felt that I was successfully completing difficult tasks and projects.							
I felt free to do things my own way.							
I felt close and connected to people who are important to me.							
I felt unaware of myself; I was only aware of the task-at-hand.							
I felt that I was taking on and mastering hard challenges.							
I felt very absorbed in what I was doing.							
I felt a strong sense of enjoyment.							
I felt a strong sense of intimacy with the people I spent time with.							
I felt like I could pretty much be myself.							
I felt totally immersed in what I was doing.							
I felt very capable in what I did.							
I felt very stimulated and challenged.							

Main study version: 3 items

Please indicate how often you felt the following ways **during the past week** (last 7 days).

	1	2	3	4	5	6	7
	Never			Sometimes			All the time
I felt a sense of contact with people who care for me, and whom I care for.							
I felt close and connected to people who are important to me.							
I felt a strong sense of intimacy with the people I spent time with.							

Sensation seeking

This activity appeared in week 0 only in the main study (it was not included in the pilot). Responses were required in at least 5 of the 8 items.

For each item below, indicate the point on the scale that most appropriately reflects your feelings.

	Strongly disagree	Disagree	Neither disagree or agree	Agree	Strongly agree
I would like to explore strange places	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I get restless when I spend too much time at home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I like to do frightening things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I like wild parties	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I would like to take off on a trip with pre-planned routes or timetables	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I prefer friends who are excitingly unpredictable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I would like to try bungee jumping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I would love to have new and exciting experiences, even if they are illegal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

STAI

This activity appeared in weeks 0, 3, 6 and 9 in both the pilot and the main study. Responses were required in at least 4 of the 6 items.

Read each statement below and indicate the extent to which it describes how you feel **right now**. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings .

	Not at all	A little	Somewhat	Very much so
I feel calm				
I am tense				
I feel upset				
I am relaxed				
I feel content				
I am worried				

Personality

This activity appeared in week 0 only, in both the pilot and the main study. Twins were required to answer at least 5 of the 10 questions.

For each item below, please indicate the point on the scale that most appropriately reflects your feelings.
I see myself as:

	Disagree strongly	Disagree moderately	Disagree a little	Neither agree nor disagree	Agree a little	Agree moderately	Agree strongly
Extraverted, enthusiastic							
Critical, quarrelsome							
Dependable, self-disciplined							
Anxious, easily upset							
Open to new experiences, complex							
Reserved, quiet							
Sympathetic, warm							
Disorganized, careless							
Calm, emotionally stable							
Conventional, uncreative							

Prosocial

This activity appeared in weeks 0, 3, 6 and 9 in the main study (it was not included in the pilot). Responses were required in at least 3 of the 5 questions.

How well do the following statements describe you? Please base your answers on how things have been for you over the **past two weeks**.

	Not true	Somewhat true	Very true
I try to be nice to other people			
I usually share with others			
I am helpful if someone is hurt, upset or feeling ill			
I am kind to younger children			
I often volunteer to help others			

Moods and feelings (MFQ)

This activity appeared in weeks 0, 3, 6 and 9 in both the pilot and the main study. Twins were required to answer at least 7 of the 13 questions, unless they ticked the tick box at the bottom of the screen (in which case no responses were required).

How true are the following statements when you think about your feelings and behaviours over the last 2 weeks?

Over the last two weeks ...

	Not true	Quite true	Very true
I felt miserable or unhappy			
I didn't enjoy anything at all			
I felt so tired I just sat around and did nothing			
I was very restless			
I felt I was no good anymore			
I cried a lot			
I found it hard to think properly or concentrate			
I hated myself			
I felt I was a bad person			
I felt lonely			
I thought that nobody really loved me			
I thought I could never be as good as others			

I would prefer not to answer these questions: [tick box]

Fit

This activity was presented in week 0 only, in both the pilot and the main study. The number of items was reduced from 13 in the pilot to 9 in the main study. The 4 removed items are highlighted yellow in the table below (*). In the main study, twins were required to answer all 9 items.

The following questions ask questions about a variety of activities that a person might try to do on a regular basis (e.g., once a week). Please indicate the extent to which you think you would enjoy the activity and the extent to which you think the activity would feel natural. Use the scales provided below.

* How enjoyable would it be for you to write down your daily activities on a regular basis?						
1	2	3	4	5	6	7
Not at all enjoyable			Somewhat enjoyable			Extremely enjoyable
* How natural would it feel for you to write down your daily activities on a regular basis?						
1	2	3	4	5	6	7
Not at all natural			Somewhat natural			Extremely natural
How enjoyable would it be for you to express gratitude to another person on a regular basis?						
1	2	3	4	5	6	7
Not at all enjoyable			Somewhat enjoyable			Extremely enjoyable
How natural would it feel for you to express gratitude to another person on a regular basis?						
1	2	3	4	5	6	7
Not at all natural			Somewhat natural			Extremely natural
How enjoyable would it be for you to practice acts of kindness on a regular basis?						
1	2	3	4	5	6	7
Not at all enjoyable			Somewhat enjoyable			Extremely enjoyable

How natural would it feel for you to practice acts of kindness on a regular basis?						
1	2	3	4	5	6	7
Not at all natural			Somewhat natural			Extremely natural
How enjoyable would it be for you to take note of places you pass through/locations you visit on a regular basis?						
1	2	3	4	5	6	7
Not at all enjoyable			Somewhat enjoyable			Extremely enjoyable
How natural would it feel for you to take note of places you pass through/locations you visit on a regular basis?						
1	2	3	4	5	6	7
Not at all natural			Somewhat natural			Extremely natural
* How enjoyable would it be for you to stop and be aware of your surroundings on a regular basis?						
1	2	3	4	5	6	7
Not at all enjoyable			Somewhat enjoyable			Extremely enjoyable
* How natural would it feel for you to stop and be aware of your surroundings on a regular basis?						
1	2	3	4	5	6	7
Not at all natural			Somewhat natural			Extremely natural
How enjoyable would it be for you to describe places you spend time in on a regular basis?						
1	2	3	4	5	6	7
Not at all enjoyable			Somewhat enjoyable			Extremely enjoyable
How natural would it feel for you to describe places you spend time in on a regular basis?						
1	2	3	4	5	6	7
Not at all natural			Somewhat natural			Extremely natural
In general, how motivated are you to put effort into becoming a happier person?						
1	2	3	4	5	6	7
Not at all motivated			Somewhat motivated			Extremely motivated