

# Demographic Background

Please make sure that you have the right to refuse to answer any of the following questions if you do not wish to answer.

Today's date: (dd/mm/yyyy) \_\_\_\_\_

1. Sex: male ☐ female ☐ other ☐ prefer not to say ☐
2. Age: \_\_\_\_\_
3. Handedness: left ☐ right ☐
4. Do you have hearing problems? **yes** ☐ **no** ☐ If **yes**, do you wear a hearing aid?
5. Do you have vision problems? **yes** ☐ **no** ☐ If **yes**, do you wear glasses/contacts?
6. Is your vision corrected to normal with glasses/contacts?
7. Have you ever experienced issues with motion sickness? **yes** ☐ **no** ☐
8. Do you have a valid driver's license? **yes** ☐ **no** ☐
9. How many years of driving experience do you have?  
**Less than a year** ☐ **1-2 year** ☐ **2-4 year** ☐ **+5 year** ☐
10. How often do you drive in an average week?  
**Everyday** ☐ **2-3 times a week** ☐ **once a week** ☐ **Rarely** ☐ **I have a driver's license but I don't drive** ☐ **other** ☐
  - a. Explain:\_\_\_\_\_
11. How many hours do you drive in an average week?  
**Less than an hour** ☐ **1-2 hours** ☐ **2-5 hours** ☐ **5-10 hours** ☐ **10- 20 hours** ☐ **20+ hours** ☐ **other** ☐
  - a. Explain:\_\_\_\_\_
12. Approximately, how many hours a week do you play video games?  
  
Indicate a number\_\_\_\_
13. How many years have you played video games?  
  
Indicate a number\_\_\_\_

## McGill GPS Questionnaire

In the following questions, please rate the frequency for each action. Consider the past month as you answer the questions.

	Never	Sometimes	Often	Very often	Always
1. How often do you use a GPS when you are driving?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. How often do you use a GPS to travel <b>new</b> routes to an <b>unfamiliar</b> destination? For example, you are meeting friends at a new restaurant, and you are traveling there for the first time. How often do you use a GPS in such a situation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. How often do you use a GPS to travel <b>new</b> routes to a <b>previously visited</b> destination? For example, you usually leave from home to go to a doctor's appointment. This time, however, your appointment is scheduled right after work. Therefore, you have to travel a new route to get to a destination you have visited before. How often do you use a GPS in such a situation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. How often do you use a GPS to travel <b>familiar</b> routes to a <b>previously visited</b> destination? For example, you usually leave from home to visit your family. You are taking the same route as you always do. How often do you use a GPS in such a situation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. How often do you try to find a <b>new</b> route, without a GPS, to a <b>previously visited</b> destination? For example, you usually travel a specific route to go to your friend's house. This time, you think you may get there faster by taking a different route. How often do you take new routes to travel to places you have visited before?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. How often do you use a GPS <b>to travel to</b> a destination outside of your current hometown, for example if you are driving from Montreal to Toronto?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. When <b>finding your way around a city</b> outside of your hometown, how often do you use a GPS? For example, you are in New York. How often do you use a GPS to explore the city?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Supplementary Figure S1: GPS reliance scale of the McGill GPS questionnaire.

Readers are free to use this scale, in which case the current article should be cited.

Please answer the following questions by circling 1, 2, 3, 4, or 5. Consider the past month as you answer the questions.

	Strongly disagree	1	2	3	4	5	Strongly agree
1. I feel anxious when driving without a GPS.		1	2	3	4	5	
2. I get lost easily in a new environment when I am not using a GPS.		1	2	3	4	5	
3. I can easily remember a new route after I have traveled it once using a GPS.		1	2	3	4	5	
4. My sense of direction has gotten worse since I have been using a GPS.		1	2	3	4	5	
5. I do not pay attention to landmarks when I am using a GPS.		1	2	3	4	5	
6. I feel comfortable driving to unfamiliar destinations without a GPS.		1	2	3	4	5	
7. I would rather use a GPS than read a map.		1	2	3	4	5	
8. After driving to a new destination using my GPS, I have difficulty remembering what I saw on the way.		1	2	3	4	5	
9. After reaching a destination using my GPS, I have difficulty finding my way back without using it again.		1	2	3	4	5	
10. I can only find my way using a GPS.		1	2	3	4	5	
11. While using a GPS, I am unaware of my location in the city while I am driving until I reach my destination.		1	2	3	4	5	
12. I feel comfortable driving in familiar environments without a GPS.		1	2	3	4	5	
13. I use my GPS to find alternative routes to a known destination (e.g., when there is a road block/construction).		1	2	3	4	5	

**Supplementary Figure S2: Sense of GPS dependence scale of the McGill GPS questionnaire.** Readers are free to use this scale, in which case the current article should be cited.

# ADULT EXECUTIVE FUNCTIONING INVENTORY (ADEXI)

## SELF-REPORT VERSION

*Below you will find a number of statements. Please circle a number to the right of each statement to indicate how well that statement describes how you are as a person. People that you know might feel differently about you – we want to know what you think about yourself. Try to respond as honestly as possible.*

	Definitely not true 1	Not true 2	Partially true 3	True 4	Definitely true 5
1. I have difficulty remembering lengthy instructions	1	2	3	4	5
2. I sometimes have difficulty remembering what I am doing in the middle of an activity	1	2	3	4	5
3. I have a tendency to do things without first thinking about what could happen	1	2	3	4	5
4. I sometimes have difficulty stopping myself from doing something that I like even though someone tells me that it is not allowed.	1	2	3	4	5
5. When someone asks me to do several things, I sometimes remember only the first or last	1	2	3	4	5
6. I sometimes have difficulty refraining from smiling or laughing in situations where it is inappropriate	1	2	3	4	5
7. I have difficulty coming up with a different way of solving a problem when I get stuck	1	2	3	4	5
8. When someone asks me to fetch something, I sometimes forget what I am supposed to fetch	1	2	3	4	5
9. I have difficulty planning for an activity (e.g., remembering to bring everything necessary when going on a trip/to work/to school)	1	2	3	4	5
10. I sometimes have difficulty stopping an activity that I like (e.g., I watch TV or sit in front of the computer in the evening even though it is time to go to bed)	1	2	3	4	5
11. I sometimes have difficulty understanding verbal instructions unless I am also shown <u>how</u> to do something	1	2	3	4	5
12. I have difficulties with tasks or activities that involve several steps	1	2	3	4	5
13. I have difficulty thinking ahead or learning from experience	1	2	3	4	5
14. People that I meet sometimes seem to think that I am more lively/wilder compared to other people my age	1	2	3	4	5

## SCORING

Fill in the total score for the two factors WORKING MEMORY and INHIBITION and fill in the ADEXI total score.

<input type="text"/>	<b>= Subscale 1: Working Memory</b> Total score for items: 1, 2, 5, 7, 8, 9, 11, 12, 13	}	<input type="text"/> <b>TOTAL SCORE</b>
<input type="text"/>	<b>= Subscale 2: Inhibition</b> Total score for items: 3, 4, 6, 10, and 14		

### Scientific articles using the ADEXI:

Holst, Y. & Thorell, L.B. (2016). *Adult Executive Functioning Inventory (ADEXI): Validity, Reliability, and Relations to ADHD*. Manuscript under revision for publication

Holst, Y. & Thorell, L.B. (in press). Neuropsychological functioning in adults with ADHD and adults with other psychiatric disorders: The issue of specificity, *Journal of Attention Disorders*

## Spatial Anxiety Questionnaire

The items in the questionnaire below refer to situations and experiences that may cause tension, apprehension, or anxiety. For each situation, choose the response that describes how much it would make you feel anxious. Work quickly, but be sure to think about each item.

### Responses:

(A)	(B)	(C)	(D)	(E)
Not at all	A little	A fair amount	Much	Very much

For each situation, choose the response that describes how much it would make you feel anxious.

### Response

	Asked to recreate your favorite artist's signature from memory
	Finding your way back to your hotel after becoming lost in a new city
	Asked to imagine the 3-dimensional shape created by rotating a complex 2-dimensional plane on an exam
	Tested on your ability to create a drawing or painting that reproduces the details of a photograph as precisely as possible
	Imagining on a test what a 3-dimensional landscape model would look like from a different point of view
	Asked to do the navigational planning for a long car trip
	Asked to recall the exact details of a relative's face whom you have not seen in several years
	Memorizing routes and landmarks on a map for an upcoming exam
	Asked to imagine the motion of a mechanical system given a static picture of the system
	Trying a new route that you think will be a shortcut without the benefit of a map
	Asked to imagine and describe the appearance of a radio announcer you've never actually seen
	Using a 3-dimensional model of an airport to complete a homework assignment
	Asked to give a detailed description of a person's face whom you've only met once
	Trying to get somewhere you have never been to before in the middle of an unfamiliar city
	Asked to recall the shade and pattern of a person's tie you met for the first time the previous evening
	Asked to determine how a series of pulleys will interact given only a 2-dimensional diagram
	Asked to imagine and mentally rotate a 3-dimensional figure
	Finding your way to an appointment in an area of a city or town with which you are not familiar
	Asked to imagine a 3-dimensional structure of the human brain from a 2-dimensional image
	Describing in detail the cover of a book to a bookseller because you've forgotten both the title and author of the book
	Asked to imagine the 3-dimensional structure of a complex molecule using only a 2-dimensional picture for reference
	Finding your way back to a familiar area after realizing you have made a wrong turn and become lost while driving
	Asked to follow directions to a location across town without the use of a map
	Given a test in which you were allowed to look at and memorize a picture for a few minutes, and then given a new, similar picture and asked to point out any differences between the two pictures

## Spatial Anxiety Questionnaire

### Scoring

Response	Score
A	0
B	1
C	2
D	3
E	4

### Category Key

Item	Category
1	I (Imagery)
2	N (Navigation)
3	M (Mental Manipulation)
4	I (Imagery)
5	M (Mental Manipulation)
6	N (Navigation)
7	I (Imagery)
8	N (Navigation)
9	M (Mental Manipulation)
10	N (Navigation)
11	I (Imagery)
12	M (Mental Manipulation)
13	I (Imagery)
14	N (Navigation)
15	I (Imagery)
16	M (Mental Manipulation)
17	M (Mental Manipulation)
18	N (Navigation)
19	M (Mental Manipulation)
20	I (Imagery)
21	M (Mental Manipulation)
22	N (Navigation)
23	N (Navigation)
24	I (Imagery)

### Citation:

Lyons IM, Ramirez G, Maloney EA, Rendina DN, Levine SC, Beilock SL (in press). Spatial Anxiety: A novel questionnaire with subscales for measuring three aspects of spatial anxiety. *Journal of Numerical Cognition*. [Ahead of print: <https://osf.io/4fy6j/>]

# DASS

Name:

Date:

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you *over the past week*. There are no right or wrong answers. Do not spend too much time on any statement.

*The rating scale is as follows:*

- 0 Did not apply to me at all
- 1 Applied to me to some degree, or some of the time
- 2 Applied to me to a considerable degree, or a good part of time
- 3 Applied to me very much, or most of the time

1	I found myself getting upset by quite trivial things	0	1	2	3
2	I was aware of dryness of my mouth	0	1	2	3
3	I couldn't seem to experience any positive feeling at all	0	1	2	3
4	I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion)	0	1	2	3
5	I just couldn't seem to get going	0	1	2	3
6	I tended to over-react to situations	0	1	2	3
7	I had a feeling of shakiness (eg, legs going to give way)	0	1	2	3
8	I found it difficult to relax	0	1	2	3
9	I found myself in situations that made me so anxious I was most relieved when they ended	0	1	2	3
10	I felt that I had nothing to look forward to	0	1	2	3
11	I found myself getting upset rather easily	0	1	2	3
12	I felt that I was using a lot of nervous energy	0	1	2	3
13	I felt sad and depressed	0	1	2	3
14	I found myself getting impatient when I was delayed in any way (eg, elevators, traffic lights, being kept waiting)	0	1	2	3
15	I had a feeling of faintness	0	1	2	3
16	I felt that I had lost interest in just about everything	0	1	2	3
17	I felt I wasn't worth much as a person	0	1	2	3
18	I felt that I was rather touchy	0	1	2	3
19	I perspired noticeably (eg, hands sweaty) in the absence of high temperatures or physical exertion	0	1	2	3
20	I felt scared without any good reason	0	1	2	3
21	I felt that life wasn't worthwhile	0	1	2	3

Please turn the page ➡



*Reminder of rating scale:*

- 0 Did not apply to me at all
- 1 Applied to me to some degree, or some of the time
- 2 Applied to me to a considerable degree, or a good part of time
- 3 Applied to me very much, or most of the time

22	I found it hard to wind down	0	1	2	3
23	I had difficulty in swallowing	0	1	2	3
24	I couldn't seem to get any enjoyment out of the things I did	0	1	2	3
25	I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat)	0	1	2	3
26	I felt down-hearted and blue	0	1	2	3
27	I found that I was very irritable	0	1	2	3
28	I felt I was close to panic	0	1	2	3
29	I found it hard to calm down after something upset me	0	1	2	3
30	I feared that I would be "thrown" by some trivial but unfamiliar task	0	1	2	3
31	I was unable to become enthusiastic about anything	0	1	2	3
32	I found it difficult to tolerate interruptions to what I was doing	0	1	2	3
33	I was in a state of nervous tension	0	1	2	3
34	I felt I was pretty worthless	0	1	2	3
35	I was intolerant of anything that kept me from getting on with what I was doing	0	1	2	3
36	I felt terrified	0	1	2	3
37	I could see nothing in the future to be hopeful about	0	1	2	3
38	I felt that life was meaningless	0	1	2	3
39	I found myself getting agitated	0	1	2	3
40	I was worried about situations in which I might panic and make a fool of myself	0	1	2	3
41	I experienced trembling (eg, in the hands)	0	1	2	3
42	I found it difficult to work up the initiative to do things	0	1	2	3

**SANTA BARBARA SENSE-OF-DIRECTION SCALE**

Participant: \_\_\_\_\_

The following statements ask you about your spatial and navigational abilities, preferences, and experiences. After each statement, you should circle a number to indicate your level of agreement with the statement. Circle “1” if you strongly agree that the statement applies to you, “7” if you strongly disagree, or some number in between if your agreement is intermediate. Circle “4” if you neither agree nor disagree.

1. I am very good at giving directions.

strongly agree   1      2      3      4      5      6      7      strongly disagree

2. I have a poor memory for where I left things.

strongly agree   1      2      3      4      5      6      7      strongly disagree

3. I am very good at judging distances.

strongly agree   1      2      3      4      5      6      7      strongly disagree

4. My “sense of direction” is very good.

strongly agree   1      2      3      4      5      6      7      strongly disagree

5. I tend to think of my environment in terms of cardinal directions (N, S, E, W).

strongly agree   1      2      3      4      5      6      7      strongly disagree

6. I very easily get lost in a new city.

strongly agree   1      2      3      4      5      6      7      strongly disagree

7. I enjoy reading maps.

strongly agree   1      2      3      4      5      6      7      strongly disagree

8. I have trouble understanding directions.

strongly agree   1      2      3      4      5      6      7      strongly disagree

9. I am very good at reading maps.

strongly agree   1      2      3      4      5      6      7      strongly disagree

10. I don’t remember routes very well while riding as a passenger in a car.

strongly agree   1      2      3      4      5      6      7      strongly disagree

11. I don’t enjoy giving directions.

strongly agree   1      2      3      4      5      6      7      strongly disagree

12. It’s not important to me to know where I am.

strongly agree   1      2      3      4      5      6      7      strongly disagree

13. I usually let someone else do the navigational planning for long trips.

strongly agree   1      2      3      4      5      6      7      strongly disagree

14. I can usually remember a new route after I have traveled it only once.

strongly agree   1      2      3      4      5      6      7      strongly disagree

15. I don’t have a very good “mental map” of my environment.

strongly agree   1      2      3      4      5      6      7      strongly disagree