

2021

Does a mindfulness intervention have a significant effect on preference for intrinsic or extrinsic benefits of environmentally friendly behaviours?

Lobb, Annabelle

Lobb, A. (2021) 'Does a mindfulness intervention have a significant effect on preference for intrinsic or extrinsic benefits of environmentally friendly behaviours?', 14(1), pp. 568-582.

<http://hdl.handle.net/10026.1/17321>

The Plymouth Student Scientist

University of Plymouth

All content in PEARL is protected by copyright law. Author manuscripts are made available in accordance with publisher policies. Please cite only the published version using the details provided on the item record or document. In the absence of an open licence (e.g. Creative Commons), permissions for further reuse of content should be sought from the publisher or author.

Appendices

Appendix A: Participant information sheet

Project title: Eco-friendly behaviour

You are being invited to take part in a research study on pro-environmental behaviour and the reasons why you may choose to exhibit some behaviours. The research is conducted by Annabelle Lobb, a Stage 4 psychology student within the University of Plymouth.

The project has been approved by the Psychology Research Ethics Committee, and you have the right to withdraw at any time during the study without explanation and will not be penalised. All information collected during the study will be anonymised and only identifiable using your participant number. You have the right to ask that any data you have supplied to that point to be withdrawn.

In this study, you will be asked to answer a few questions regarding your views on the environment, complete a categorisation task, and complete an IAT.

The study typically takes 30 minutes and you will receive 1 point in return for participation.

There are no perceived risks to the participant while taking part in this study.

You have the right to ask any questions about the study (unless it would interfere with the study's outcome), and to receive satisfactory answers. If you have any questions that have not been covered by the information sheet, please ask the researcher before the study begins.

Appendix B: Debrief sheet

Thank you for taking part in this research project.

Many environmental campaigns are focused on extrinsic benefits when encouraging public behaviour change. However, previous studies have found that individuals who are extrinsically motivated are less likely to sustain the behaviour over a long period of time, when compared to individuals who are intrinsically motivated (van der Linden, 2015). If found to be effective, this study could be used to help to motivate people to act in an environmentally friendly way and sustain these behaviours over a longer period.

This experiment investigated whether participants in the mindfulness condition have a significant preference for intrinsic benefits of pro-environmental behaviours over extrinsic benefits when compared to participants in the mindlessness condition.

The purpose of this experiment was to increase connection to nature using a mindfulness intervention. This was measured implicitly using an Implicit Association Test (IAT), and explicitly measured using a psychometric scale and Inclusion of Self in Nature scale.

All information collected will remain confidential and anonymous.

If you would like any further information about the experiment, or have any questions, please contact the researchers below. If you have a question or complaint that has not been resolved, you can contact the ethics board.

Project researchers:

Annabelle Lobb: annabelle.lobb@students.plymouth.ac.uk

Sabine Pahl: sabine.pahl@plymouth.ac.uk

Ethics board: hhsethics@plymouth.ac.uk

Appendix C: IAT blocks

- Block 1. Nature–Built (practice)
- Block 2. Me–Not me (practice)
- Block 3. Nature/Me–Built/Not me (compatible pairings)
- Block 4. Nature/Me–Built/Not me (compatible pairings)
- Block 5. Built–Nature (practice)
- Block 6. Built/Me–Nature/Not me (incompatible pairings)
- Block 7. Built/Me–Nature/Not me (incompatible pairings)

Categories			
Nature	Built	Me	Not me
Animals	Building	I	It
Birds	Car	Me	They
Plants	City	Mine	Their
Trees	Street	Myself	Them

Appendix D: INS scale

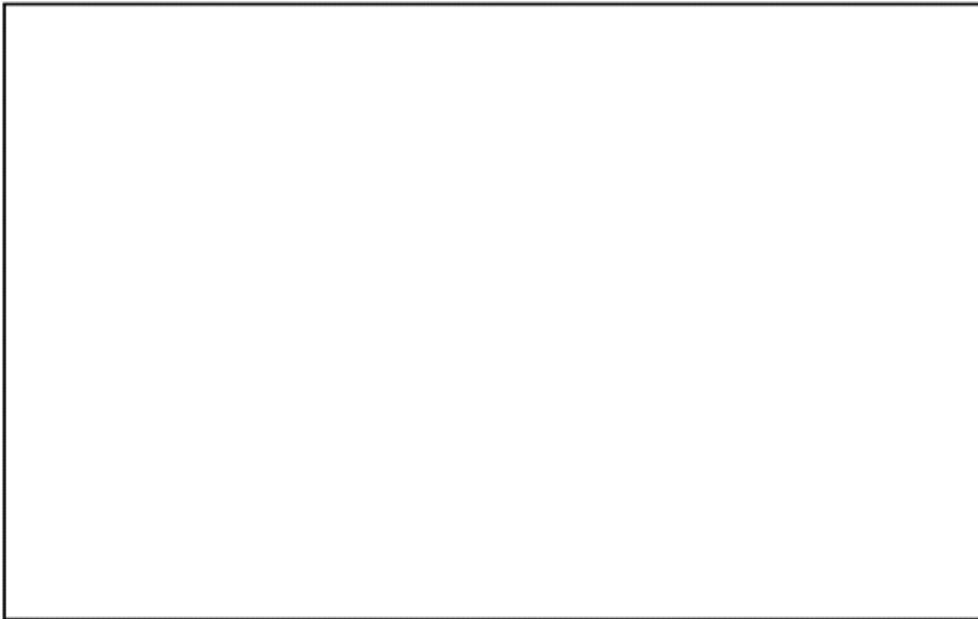


Appendix E: Mindfulness material

First categorization task:

You have 4 minutes. Please sort the words below into different categories with certain standards. Do it several times and sort them with different groups each time. Write down the groups briefly in the text box below.

(1) Apple (2) Cloud (3) Leisure (4) Hammer (5) Sheep (6) Candle (7) Moon (8) Sun (9) Enlist (10) Horse (11) Sunshine (12) Keyboard (13) Mobile Phone (14) Prairie (15) Gunpowder (16) Ocean (17) Fox (18) Tax (19) Banana (20) Depression



Second categorization task:

You have 5 minutes. Please match the adjectives with the occupation below. (Words can be used more than one time. Click and drag the mouse to connect words)

Lawyer	Fake
	Strict
	Patience
	Exquisite
	Innovate
	Boring
	Tough
Doctor	Sentimental
	Enthusiasm
	Rational
Teacher	Reality
	Calm
	Amiable
Painter	Conservative
	Doubt
	Imagine
Actor	Independent
	Optimism
	Direct
	Understanding
	Intellectuality
	Decisive
	Bossiness
	Impulse

Free association task:

You have 3 minutes. Please make up a story relating these two pictures together and type it in the box below.

Originally an iconic image of Albert Einstein
(removed for copyright reasons)

Originally an image of a crow on a branch
(removed for copyright reasons)

Multi-perspective taking task:

'You have 2 minutes. Write down 10 possible functions for a bottle of purified water.'

Appendix F: Mindless material

Multi-perspective taking task:

'Please write down 2 basic functions of a bottle of purified water.'

First categorization task:

You have 3 minutes. Sort the words below by tools, fruit and animals. Drag and drop into the correct category.

Tools	Fruit	Animals	
Hammer	Orange	Cantaloupe	Lemon
Apple	Banana	Strawberry	Fox
Sheep	Tiger	Shovel	Screwdriver
Hammerhead	Forceps	Dog	Shovel
Pig	Scissors	Cat	

First completion task:

You have 2 minutes. Please answer the following questions.

How many wives did King Henry VIII have?

- Six
- Ten

You call your mum's husband...

You call your grandfather's wife...

The seven colours in a rainbow are...

True and False:

Pink is a primary colour.

- True
- False

The capital of England is London.

- True
- False

Second categorization task:

You have 4 minutes. Please count the number of the fruit, vegetable and other foods in the picture below separately. Write the number in the separate boxes below.

Originally an image of various cartoon fruit, vegetables, and other foods (removed for copyright reasons)

Fruit =

Vegetables =

Other foods =

Second completion task:

You have 4 minutes. Please choose the task for different jobs. Click and drag the mouse to connect words.

Farmer	Painting
Cleaner	Diagnose
Lawyer	Selling
Doctor	Farming
Teacher	War
Actor	Cleaning
Painter	Lawsuit
Seller	Driving
Driver	Performance
Soldier	Teaching

Appendix G: Motivation for environmentally friendly behaviours test phase

Pro environmental behaviour	Intrinsic motivation	Extrinsic motivation	NA
I buy recycled products because...	I want to reduce the amount of resources wasted.	I want to be viewed as environmentally friendly.	NA
I buy organic food because...	I see it as better for me and the environment.	It is associated with higher social status.	NA
I use public transport because...	It reduces pollution.	Other people also do it.	NA
I walk to shops, work etc. because...	It is a stress reliever.	I want to reach my daily step count.	NA
I use reusable cups and bottles because...	I enjoy feeling organised.	I want to avoid paying the 'latte levy', and I can save money.	NA
I reduce my meat consumption because...	It is in line with my ethics.	I want to avoid judgement from others.	NA
I recycle because...	It prevents waste from going to landfill.	Others expect me to do it.	NA
I turn down the central heating because...	It lowers carbon emissions.	It keeps costs low.	NA
I buy second-hand products because...	It saves resources, and I will not be contributing to the 'fast fashion' industry.	I want to get a bargain.	NA
I turn off lights when I leave a room because...	I do not want to waste electricity.	I want to conform to environmental norms.	NA
I bring my own bags to the supermarket because...	I want to reduce my consumption of single use plastics.	I want to avoid having to pay for disposable bags.	NA