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How do personality traits influence the experience of positive emotions?

Shotton, E.

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Appendices

Appendix A Consent form and Brief

[First page of the survey, participant information and consent form]

Welcome to this survey on personality and positive emotions!

Statement of Purpose of Research

This research uses a survey to understand the effects of personality on the experience of positive emotions. This study is conducted by Dr Sonja Heintz, Elenie Shotton, Jessica Thomson, Olivia Pillinger, Hannah McGowan and Camelia Florentina Galiceanu, School of Psychology, University of Plymouth.

Description of Procedure

Should you wish to participate, you will be asked to provide responses to various questions. The questions will ask about your everyday behaviours, thoughts, feelings, and motivations. You will be asked to describe a situation where you experienced positive emotions, or a imagine a situation where you experienced positive emotions, and at the end of the survey, you will be asked about this situation. There are no right or wrong answers in the survey; we are just interested in your personal views and experiences. This survey should take no more than 30 minutes to complete. If you sign up for this survey using the University of Plymouth's SONA system, you will be rewarded with 1 participation point.

Description of Risk

This research poses no risk of harm and should cause no psychological distress. If, however, you should find any question or procedure to be invasive or offensive, you are free to omit answering or participating in that aspect of the survey. If you experience any distress, or any associated concerns are raised, please contact the responsible researchers (sonja.heintz@plymouth.ac.uk; [List of student researcher emails removed by Editor]), your GP, or visit www.mind.org.uk, who offer help and advice on a large range of mental health related issues.

Confidentiality and Disclosure of Information

Data from participation in this research will be used for analysis and publication in final year student projects, scientific journals and conference presentations. The data will be reported and publicly released in an open-access repository in such a way that responses will not be able to be linked to any individual; that is, data will be anonymised to protect confidentiality by removing or changing any personal information that could identify individuals. Any information will be disclosed only with your permission or as required by law.

Consent and Right to Withdraw

Participation in this research is voluntary. You are required to provide informed consent before participating. You have the right to decline answering any questions and to withdraw from the survey at any time without explanation, prejudice, or penalty. If you would like to have your data deleted after completing the survey, please send a request to sonja.heintz@plymouth.ac.uk, quoting your participant ID or self-generated ID, latest 1 month after your participation.

Complaints and Enquiries

Should you have any questions, enquiries, or concerns about this study or your participation, please contact the responsible researchers (sonja.heintz@plymouth.ac.uk; [List of student researcher emails removed by Editor]). If you feel the problem has not been resolved, please contact the Research Administrator of the Faculty Research Ethics and Integrity Committee (HHSethics@plymouth.ac.uk). The Data Protection Officer of the University of Plymouth can be contacted via dpo@plymouth.ac.uk.

By signing this form, you agree that you have read and understood your rights and provide consent to participate in this research.

[Tick box] I have read and understood the study information and give my consent to continue.

If you do not wish to participate, please close the browser.

[Participants can only proceed with the survey if they gave their consent to continue]

Appendix B

Debrief

[Last page of the survey]

Thank you very much for your participation in the survey on personality and positive emotions.

If you experienced any distress, or any associated concerns were raised, please contact the responsible researchers (sonja.heintz@plymouth.ac.uk; [List of student researcher emails removed by Editor]), your GP, or visit www.mind.org.uk, who offer help and advice on a large range of mental health related issues.

Should you have any questions, enquiries, or concerns about this study or your participation, please contact the responsible researchers (sonja.heintz@plymouth.ac.uk; [List of student researcher emails removed by Editor]). If you feel the problem has not been resolved, please contact the Research Administrator of the Faculty Research Ethics and Integrity Committee (HHSethics@plymouth.ac.uk). The Data Protection Officer of the University of Plymouth can be contacted via dpo@plymouth.ac.uk.

You can close the browser/tab now.

Appendix C

Materials

Appendix C.1

Demographic Questions

q4 What gender do you identify as?

- Female (1)
 - Male (2)
 - Other (3)
 - Prefer not to say (4)
-

q5 What is your age?

- 18-20 (1)
 - 21-25 (2)
 - 26-30 (3)
 - 31-35 (4)
 - 36-40 (5)
 - 41-45 (6)
 - 46-50 (7)
 - 51-55 (8)
 - 56-60 (9)
 - 61-65 (10)
 - 66+ (11)
-

q6 Are you currently a university student?

- Yes (1)
 - No (2)
-

q7 If Yes, which graduate are you?

- Undergraduate (1)
 - Postgraduate (2)
-

q8 Are you currently employed?

- Yes, full-time (1)
- Yes, part-time (2)
- No (3)
- Prefer not to say (4)

Appendix C.2

Big Five Aspect Scales (BFAS)

(DeYoung, Quilty & Peterson, 2007)

Please read the statements below and report how much each one is **correct for you**. For each statement, select an answer from **Strongly disagree** to **Strongly agree** on scale below

Neuroticism

Volatility

- Get angry easily
- Rarely get irritated (R)
- Get upset easily
- Keep my emotions under control (R)
- Change my mood a lot
- Rarely lose my composure (R)
- Am a person whose moods go up and down easily
- Am not easily annoyed (R)
- Get easily agitated
- Can be stirred up easily

Withdrawal

- Seldom feel blue (R)
- Am filled with doubts about things
- Feel comfortable with myself (R)
- Feel threatened easily
- Rarely feel depressed (R)
- Worry about things
- Am easily discouraged
- Am not embarrassed easily (R)
- Become overwhelmed by events
- Am afraid of many things

Extraversion

Enthusiasm

- Make friends easily
- Am hard to get to know (R)
- Keep others at a distance (R)
- Reveal little about myself (R)
- Warm up quickly to others
- Rarely get caught up in the excitement (R)
- Am not a very enthusiastic person (R)
- Show my feelings when I'm happy
- Have a lot of fun
- Laugh a lot

Assertiveness

- Take charge
- Have a strong personality
- Lack the talent for influencing people (R)
- Know how to captivate people
- Wait for others to lead the way (R)
- See myself as a good leader
- Can talk others into doing things

Hold back my opinions (R)
Am the first to act
Do not have an assertive personality (R)

Openness/Intellect

Intellect

Am quick to understand things
Have difficulty understanding abstract ideas (R)
Can handle a lot of information
Like to solve complex problems
Avoid philosophical discussions (R)
Avoid difficult reading material (R)
Have a rich vocabulary
Think quickly
Learn things slowly (R)
Formulate ideas clearly

Openness

Enjoy the beauty of nature
Believe in the importance of art
Love to reflect on things
Get deeply immersed in music
Do not like poetry (R)
See beauty in things that others might not notice
Need a creative outlet
Seldom get lost in thought (R)
Seldom daydream (R)
Seldom notice the emotional aspects of paintings and pictures (R)

Appendix C.3 Scale of Positive and Negative Experience

Please think about what you have been doing and experiencing during the (trait- **past 4 weeks/ state- currently feeling**). Then report how much you experienced each of the following feelings. For each item, select an answer from **Never** to **Always** on the scale below.

	Never (1)	Sometimes (2)	About half the time (3)	Most of the time (4)	Always (5)
Positive (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Negative (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Good (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bad (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pleasant (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Unpleasant (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Unhappy (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Happy (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sad (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Afraid (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Joyful (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Angry (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Contented (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix C.4

State and trait hope and nurturant love items

Please think about how you are (trait- **felt in the past 4 weeks**, state- **currently feeling**). Then report how much you are experiencing each of the following feelings.

For each item, select an answer from **Not at all** to **A great deal** on the scale.

Hope (Weidman & Tracey, 2020)

State

I am engaging in some wishful thinking

I am drawing on my inner strength

I am trying to believe in myself

I'm feeling challenged

I'm trying to stay positive

I'm feeling hopeful (additional)

I'm feeling optimistic (additional)

Trait

I engage in some wishful thinking

I draw on my inner strength

I try to believe in myself

I feel challenged

I try to stay positive

I feel hope (additional)

I feel optimistic (additional)

Nurturant Love (Weidman & Tracey, 2020)

State

I am giving my full attention to someone

I am trying to show my patience with someone

I want to help someone grow

I want to sacrifice my needs for someone

I'm feeling love (additional)

I'm feeling fondness (additional)

Trait

I give my full attention to someone

I try to show patience with someone

I want to help someone grow

I want to sacrifice my own needs for someone

I feel love (additional)

I feel fondness (additional)

Appendix C.5

Control Questions

Pre-Emotion Induction Control Questions

q14 What is your motivation for completing this study? (multiple answers possible)

- Interested in task (1)
- Participation points (2)
- Unsure (3)
- Other (4) _____

q15 What gives you hope? (multiple answers possible)

- Religion/spirituality (1)
- Past experiences (2)
- Relationships (3)
- I'm just a lucky person (4)
- Other (5) _____

q16 What reminds you of love? (multiple answers possible)

- Family (1)
- Friends (2)
- Pets (3)
- Relationships (4)
- Hobbies (5)
- Other (6) _____

q17 What makes you feel positive? (multiple answers possible)

- Family (1)
- Friends (2)
- Pets (3)
- Hobbies (4)
- Music/entertainment (5)
- Sports (6)
- Other (7) _____

q18 Do you often think of times where you are hopeful?

- Always (1)
- Most of the time (2)
- About half the time (3)
- Sometimes (4)
- Never (5)

q19 Do you often think of times where you experienced love?

- Always (1)
- Most of the time (2)
- About half the time (3)
- Sometimes (4)
- Never (5)

Post-Emotion Induction Control Questions

q43 How easy did you find the task?

- Extremely easy (1)
- Somewhat easy (2)
- Neither easy nor difficult (3)
- Somewhat difficult (4)
- Extremely difficult (5)

q44 Did you like or dislike the task?

- Like a great deal (1)
- Like somewhat (2)
- Neither like nor dislike (3)
- Dislike somewhat (4)
- Dislike a great deal (5)

q45 Have you done any similar tasks to this in the past?

- Yes (1)
- Maybe (2)
- No (3)

q46 Were you able to successfully reminisce about the emotions felt in a past event, or alternatively the imagined scenario?

- Extremely well (1)
- Very well (2)
- Moderately well (3)
- Slightly well (4)
- Not well at all (5)

q47 Do you think it would benefit you to think of a time when you were hopeful daily?

- Definitely yes (1)
- Probably yes (2)
- Maybe (3)
- Probably not (4)
- Definitely not (5)

q48 Do you think it would benefit you to think of a time that reminds you of love daily?

- Definitely yes (1)
- Probably yes (2)
- Maybe (3)
- Probably not (4)
- Definitely not (5)

q49 Do you think it would benefit you to think of positive emotions daily?

- Definitely yes (1)
- Probably yes (2)
- Maybe (3)
- Probably not (4)
- Definitely not (5)

Appendix C.6

Hope autobiographical recall induction procedure

q22 **Think of a time when you have felt the emotion hope very strongly.** Hope is an optimistic state of mind where you expect a positive outcome. (For example, you expected good medical news/overcome a health issue, an exam went really well and you expected good test/exam results at school or university, you performed your best at an interview and felt hopeful for a job promotion/offer, your training has been going better than you could have hoped for and you're on track for a personal achievement in sports). Please provide a brief description (keywords suffice) of the situation of hope that you experienced.

Try and focus on the emotion of hope you felt.

q23

When was it?

q24

Where were you?

q25

Who were you with?

q26

What happened?

q27

How did you feel?

Appendix C.7

Hope Imagery Scenario Induction Procedure

Hope Imagery Scenario 1

If you can't think of a situation where you experienced hope at the moment, then we would like to ask you to imagine a hope scenario instead. (If you have described a hope situation above, you can skip the following questions and continue with the next page of the survey.)

We want you to picture yourself in the following scenario, place yourself in it and try to focus on embracing the emotions it brings up.

Imagine the world at its worst. Now, there's a huge news announcement and the thing you hoped the most for in the world might be happening soon (for example, no more child hunger, world peace, global warming is no longer a threat). You feel hopeful that this will change the world and it will become a better place.

Try and focus on the emotion of hope you would feel.

q29 What best change in the world would you wish for?

q30 How would this make you feel?

Hope imagery scenario 2

If you can't think of a situation where you experienced hope at the moment, then we would like to ask you to imagine a hope scenario instead. (If you have described a hope situation above, you can skip the following questions and continue with the next page of the survey.)

We want you to picture yourself in the following scenario, place yourself in it and try to focus on embracing the emotions it brings up.

Imagine you are sat on the sofa with your friend and turn on the television, there's a huge news announcement of a breakthrough vaccination.

This vaccination will cure an up till now uncurable illness. You and your friend turn to each other both thinking of the prospects this will bring, it means you will be able to travel freely and see all your friends and family again. You feel hopeful and positive about the future.

Try and focus on the emotion of hope you would feel.

q29 What best change in the world would you wish for?

q30 How would this make you feel?

Appendix C.8

Nurturant love autobiographical recall induction procedure

Think of a time when you have felt the emotion love very strongly. Love is a deep feeling of care, and affection for someone or something. (For example, your love for your grandparents when you were child, your love for a pet that has accompanied you throughout life, the love you feel when you're hugging your child/children, your love for your parents and everything they do for you, your love for your friends and the fondness you have for spending time with them). **Please provide a brief description (keywords suffice) of the situation of love that you experienced.**

Try and focus on the emotion of love you felt.

q32

When was it?

q33

Where were you?

q34

Who were you with?

q35

What happened?

q36 How did you feel?

Appendix C.9

Nurturant love imagery scenario induction procedure

Nurturant Love Imagery Scenario 1

If you can't think of a situation where you experienced love at the moment, then we would like to ask you to imagine a love scenario instead. (If you have described a love situation above, you can skip the following questions and continue with the next page of the survey.)

We want you to picture yourself in the following scenario, place yourself in it and try to focus on embracing the emotions it brings up. **Imagine someone you love has informed you that one of their biggest dreams has become true about themselves and they are excited to share it with you. You feel overwhelmed with the amount of joy and love this news brings to you. You reflect on how much that person means to you and all the affection and love they make you feel.**

Try and focus on the emotion of love and the fondness you have for them.

q38 Who would be there?

q39 Why are you close to them?

q40 How would this make you feel?

Nurturant Love Imagery Scenario 2

If you can't think of a situation where you experienced love at the moment, then we would like to ask you to imagine a love scenario instead. (If you have described a love situation above, you can skip the following questions and continue with the next page of the survey.)

We want you to picture yourself in the following scenario, place yourself in it and try to focus on embracing the emotions it brings up. **Imagine you are surrounded by your closest family or friends on a relaxed evening. Think of how much they mean to you and what you love about them. Remind yourself of the nice things they have done for you and the affection you feel for them.**

Try and focus on the emotion of love and the fondness you have for them.

q38 Who would be there?

q39 Why are you close to them?

q40 How would this make you feel?

Appendix D

Pilot Study for emotion induction procedure

Table D1: Ratings for the induction procedures of nurturant love.

Procedure	Love intensity	Hope intensity	Positivity intensity	Time taken (min)	Difficulty
Autobiographical recall	4.33	1.83	4.17	3.00	1.50
Imagery 1	3.67	2.17	3.83	4.00	1.50
Imagery 2	3.80	1.80	3.60	2.00	1.40

Note. Mean ratings were taken for love, hope and positivity intensity and difficulty from a scale of 1-5. The maximum time taken to complete the procedure was recorded. $N = 6$.

Table D1 shows the autobiographical recall procedure had the highest mean rating of love intensity. Imagery scenario 2 had the second highest mean rating of nurturant love intensity and the lowest hope intensity.

Table D2: Ratings for the induction procedures of hope.

Procedure	Love intensity	Hope intensity	Positivity intensity	Time taken (min)	Difficulty
Autobiographical recall	2.08	4.17	3.17	5.00	2.00
Imagery 1	1.67	3.33	3.00	2.00	1.67
Imagery 2	1.50	4.17	4.17	2.00	1.17

Note. Mean ratings were taken for love, hope and positivity intensity and difficulty from a scale of 1-5. The maximum time taken to complete the procedure was recorded. $N = 6$.

Table D2 shows the autobiographical recall procedure had the highest mean rating of hope intensity. Imagery scenario 2 had the second highest mean rating of hope intensity and the lowest nurturant love intensity.