

The Effect of a Multi-Week Nostalgia Intervention on Well-Being:

Mechanisms and Moderation

Supplemental Material

Kristin Layous¹, Jaime L. Kurtz², Tim Wildschut³, and Constantine Sedikides³

¹California State University, East Bay; ²James Madison University, ³University of Southampton

Corresponding author: Kristin Layous, Department of Psychology, 25800 Carlos Bee Boulevard,
Hayward, CA 94542. E-mail: kristin.layous@csueastbay.edu.

Table of Contents

Study Timeline

Materials

Satisfaction With Life Scale

Subjective Vitality Scale

Brown Humility Scale – Systemic Perspective

Waterman’s Eudaimonic Well-Being

Positive and negative affect

Past Positive Scale (Zimbardo & Boyd) – only at baseline for moderator analyses

State Authenticity

Southampton Nostalgia Scale

Social Connectedness, Meaning, and Self-continuity (framed as “right now”)

Guay’s motivation scale – only at baseline for moderator analyses

Kruse’s state humility scale – discussed not including this one, but I wanted to leave it in
as only 6 questions and wanted to see how it performs

Demographics

Nostalgia Manipulation (Event Reflection Task)

Social Connectedness, Meaning, and Self-Continuity (following nostalgic reflection)

Table 1: Indirect Effect of Nostalgia on Outcomes via Social Connectedness

Table 2: Indirect Effect of Nostalgia on Outcomes via Meaning

Table 3: Indirect Effect of Nostalgia on Outcomes via Self-Continuity

Table 4: Correlations Among Outcome Variables at all Time Points

Table 5: Unstandardized Regression Coefficients (Standard Errors) Predicting Post-Intervention
and Follow-up Outcomes from Condition and Mid-Intervention Outcomes

Table 6: Unstandardized Regression Coefficients (Standard Errors) Predicting Post-Intervention
and Follow-Up Outcomes from Condition, Baseline Outcomes, and Mid-Intervention
Outcomes

Summary of Moderated Mediation Analyses

Study Timeline (in order of participant completion)**T1 (Baseline)**

Informed consent
Satisfaction With Life Scale
Subjective Vitality Scale
Brown Humility Scale – Systemic Perspective
Waterman’s Eudaimonic Well-Being
Positive and negative affect
Past Positive Scale (Zimbardo & Boyd) – only at baseline for moderator analyses
State Authenticity
Southampton Nostalgia Scale
Social Connectedness, Meaning, and Self-continuity (framed as “right now”
Guay’s motivation scale – only at baseline for moderator analyses
Kruse’s state humility scale
Demographics

T2 (Intervention Week 1)

Welcome
Intervention or Control
Social Connectedness, Meaning, and Self-continuity (thinking about this event makes me...)
Positive and negative affect
Kruse’s state humility
Close

T3 (Intervention Week 2)

Welcome
Intervention or Control
Social Connectedness, Meaning, and Self-continuity (thinking about this event makes me...)
Positive and negative affect
Kruse’s state humility
Close

T4 (Intervention Week 3; Mid-Intervention)

Welcome
Intervention or Control
Social Connectedness, Meaning, and Self-continuity (thinking about this event makes me...)
Positive and negative affect
Kruse’s state humility
Satisfaction with life scale
Subjective Vitality Scale
Brown Humility Scale – Systemic Perspective
State Authenticity
Waterman Eudaimonic Well-Being
Southampton Nostalgia Scale
Social Connectedness, Meaning, and Self-Continuity (“right now” version)

Closing

T5 (Intervention Week 4)

Welcome

Intervention or Control

Social Connectedness, Meaning, and Self-continuity (thinking about this event makes me...)

Positive and negative affect

Kruse's state humility

Close

T6 (Intervention Week 5)

Welcome

Intervention or Control

Social Connectedness, Meaning, and Self-continuity (thinking about this event makes me...)

Positive and negative affect

Kruse's state humility

Close

T7 (Intervention Week 6; Post-Intervention)

Welcome

Intervention or Control

Social Connectedness, Meaning, and Self-continuity (thinking about this event makes me...)

Positive and negative affect

Kruse's state humility

Satisfaction with life scale

Subjective Vitality Scale

Brown Humility Scale – Systemic Perspective

State Authenticity

Waterman Eudaimonic Well-Being

Southampton Nostalgia Scale

Social Connectedness, Meaning, and Self-Continuity (“right now” version)

Closing

T8 (Follow-up)

Welcome

Satisfaction with life scale

Subjective Vitality Scale

Brown Humility Scale – Systemic Perspective

State Authenticity

Waterman Eudaimonic Well-Being

Positive and negative affect

Southampton Nostalgia Scale

Social Connectedness, Meaning, and Self-Continuity (“right now” version)

Kruse's state humility

Closing

Debriefing

Satisfaction With Life Scale

Diener, E. D., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). *The satisfaction with life scale. Journal of Personality Assessment, 49*(1), 71-75.
https://doi.org/10.1207/s15327752jpa4901_13

Instructions: Please rate your agreement with each of the five statements below.

Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	Strongly agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

1. In most ways my life is close to my ideal.
2. The conditions of my life are excellent.
3. I am satisfied with my life.
4. So far I have gotten the important things I want in life.
5. If I could live my life over, I would change almost nothing.

Subjective Vitality Scale

Ryan, R. M., & Frederick, C. (1997). On energy, personality, and health: Subjective vitality as a dynamic reflection of well-being. *Journal of Personality, 65*(3), 529-565.
<https://doi.org/10.1111/j.1467-6494.1997.tb00326.x>

Instructions: Please rate how true each of the following statements are of you and your life at the present time.

Scale in article: 7-point from *Not at all true* to *Very true*. We added middle option “*Somewhat true*”

1. I feel alive and vital
2. I don't feel very energetic (Reverse)
3. Sometimes I feel so alive I just want to burst
4. I have energy and spirit
5. I look forward to each new day
6. I nearly always feel alert and awake
7. I feel energized

The Humility Inventory (only using Systemic Perspective subscale)

Brown, S. L., Chopra, P. K., & Schiraldi, G. R. (2013). Validation of the humility inventory (HI), a five-factor, self-report measure of humility. *The International Journal of Educational and Psychological Assessment, 12*(2), 57-77.

Instructions: Please indicate your level of agreement with each of the following statements.

Scale: *Strongly disagree, Disagree, Somewhat disagree, Neither agree nor disagree, Somewhat agree, Agree, Strongly agree*

Originally a 5-point agree-disagree scale, but changed to a 7-point scale.

Systemic Perspective

I recognize I need help from other people.

I need strength beyond my own.

I find other's opinions are often quite good.

I accept it that things don't always go my way.

My way of doing things isn't always the best.

I wouldn't do as well as I do without help from others.

Other subscales not included here: Other Esteem and Acceptance of Fallibility

The Questionnaire for Eudaimonic Well-Being

Waterman, A. S., Schwartz, S. J., Zamboanga, B. L., Ravert, R. D., Williams, M. K., Agocha, V. B., Kim, S. Y., & Donnellan, M. B. (2010). The Questionnaire for Eudaimonic Well-Being: Psychometric properties, demographic comparisons, and evidence of validity. *The Journal of Positive Psychology*, 5(1), 41-61. <https://doi.org/10.1080/17439760903435208>

Instructions: This questionnaire contains a series of statements that refer to how you may feel things have been going in your life. Read each statement and decide the extent to which you agree or disagree with it. Try to respond to each statement according to your own feelings about how things are actually going, rather than how you might wish them to be.

Original Scale: Strongly Disagree 0 1 2 3 4 Strongly Agree

Changed scale to label all options and provide a middle: *Strongly disagree, Disagree, Somewhat disagree, Neither agree nor disagree, Somewhat agree, Agree, Strongly agree*

1. I find I get intensely involved in many of the things I do each day.
2. I believe I have discovered who I really am.
3. I think it would be ideal if things came easily to me in my life. (R)
4. My life is centered around a set of core beliefs that give meaning to my life.
5. It is more important that I really enjoy what I do than that other people are impressed by it.
6. I believe I know what my best potentials are and I try to develop them whenever possible.
7. Other people usually know better what would be good for me to do than I know myself. (R)
8. I feel best when I'm doing something worth investing a great deal of effort in.
9. I can say that I have found my purpose in life.
10. If I did not find what I was doing rewarding for me, I do not think I could continue doing it.
11. As yet, I've not figured out what to do with my life. (R)
12. I can't understand why some people want to work so hard on the things that they do. (R)
13. I believe it is important to know how what I'm doing fits with purposes worth pursuing.
14. I usually know what I should do because some actions just feel right to me.
15. When I engage in activities that involve my best potentials, I have this sense of really being alive.
16. I am confused about what my talents really are. (R)
17. I find a lot of the things I do are personally expressive for me.
18. It is important to me that I feel fulfilled by the activities that I engage in.
19. If something is really difficult, it probably isn't worth doing. (R)
20. I find it hard to get really invested in the things that I do. (R)
21. I believe I know what I was meant to do in life.

Positive and Negative Affect

Following nine items taken from Affect-Adjective Scale (Diener & Emmons, 1985): Happy, Worried/Anxious, Pleased, Angry/Hostile, Frustrated, Depressed/Blue, Joyful, Unhappy, Enjoyment/Fun

Diener, E., & Emmons, R. A. (1985). The independence of positive and negative affect. *Journal of Personality and Social Psychology*, 47(5), 1105-1117. <https://doi.org/10.1037/0022-3514.47.5.1105>

Following three items added due to findings from below article (Van Tilburg et al., 2018): Pride, Self-Compassion, Embarrassment, and Shame.

Van Tilburg, W. A., Wildschut, T., & Sedikides, C. (2018). Nostalgia's place among self-relevant emotions. *Cognition and Emotion*, 32(4), 742-759. <https://doi.org/10.1080/02699931.2017.1351331>

Also added "Content" as another low-arousal positive emotion

Instructions: Using the options below, please indicate the extent to which you have felt this way in the past week (last 7 days):

Scale: *Not at all, Very slightly, Somewhat, Moderately, Much, Very much, Extremely*

Final list of emotions:

1. Happy
2. Worried/Anxious
3. Pleased
4. Angry/Hostile
5. Frustrated
6. Content
7. Depressed/Blue
8. Joyful
9. Unhappy
10. Enjoyment/Fun
11. Embarrassment
12. Pride
13. Shame
14. Self-compassion (defined as being compassionate toward oneself in perceived instances of inadequacy, failure, or general suffering--treating yourself as you would a friend in those instances)

Time Perspective Inventory (Only used Past-Positive Subscale)

Zimbardo, P. G., & Boyd, J. N. (1999). Putting time in perspective: A valid, reliable individual-differences metric. *Journal of Personality and Social Psychology*, 77(6), 1271-1288.
<https://doi.org/10.1037/0022-3514.77.6.1271>

Instructions: Please read each statement carefully and, as honestly as you can, answer the following question: “How characteristic or true is this of you?”

Adapted response options: *Very uncharacteristic, Moderately uncharacteristic, Slightly uncharacteristic, Neither characteristic nor uncharacteristic, Slightly characteristic, Moderately characteristic, Very characteristic*

1. It gives me pleasure to think about my past.
2. I get nostalgic about my childhood.
3. Happy memories of good times spring readily to mind.
4. On balance, there is much more good to recall than bad in my past.
5. I enjoy stories about how things used to be in the “good old times.”
6. Familiar childhood sights, sounds, and smells often bring back a flood of wonderful memories.
7. I like family rituals and traditions that are regularly repeated.
8. I find myself tuning out when family members talk about the way things used to be. (reverse)
9. The past has too many unpleasant memories that I prefer not to think about. (reverse)

State Authenticity

Lenton, A. P., Bruder, M., Slabu, L., & Sedikides, C. (2013). How does “being real” feel? The experience of state authenticity. *Journal of Personality*, 81(3), 276-289.
<https://doi.org/10.1111/j.1467-6494.2012.00805.x>

Instructions: *Please look at the pairs of circles below. In each pair, the circle on the left represents who you feel yourself to be **RIGHT NOW** and the circle on the right represents your **REAL SELF**. Your real self is who you truly are (which may not necessarily be the same as who you would like to be).*

Which pair of circles best represents how close you feel at this moment to your real self? (circle one label below)



Instructions: Please read the statements below and select the number that best characterises your response to each (this is a state version of Wood and colleagues’ (2008) 12-item authenticity scale—adapted by Lenton et al., 2013):

Wood, A M, Linley P A, Maltby J, Baliousis M & Joseph S (2008). The authentic personality: A theoretical and empirical conceptualization and the development of the Authenticity Scale. *Journal of Counseling Psychology*, 55(3), 385–399.
<https://doi.org/10.1037/0022-0167.55.3.385>

Scale: *Strongly disagree, Moderately disagree, Slightly disagree, Neither agree nor disagree, Slightly agree, Moderately agree, Strongly agree*

1. Right now, I feel it is better to be myself than to be popular.
2. Right now, I'm unsure how I'm really feeling inside (reverse)
3. Right now, I'm being influenced by the opinions of others (reverse).
4. Right now, I feel willing to defend my beliefs if need be.
5. Right now, the expectations of others are guiding my behavior (reverse).
6. Right now, I feel out of touch with the "real me" (reverse).
7. Right now, I feel as if I don't know myself very well (reverse).
8. Right now, I am willing to follow instructions from others (reverse).
9. Right now, I feel true to myself.
10. Right now, I'm feeling greatly influenced by other people (reverse).
11. Right now, I'm behaving in accordance with my values and beliefs.
12. Right now, I feel distant from myself (reverse).

*Reverse-score 2, 3, 5, 6, 7, 8, 10, and 12 before combining

Southampton Nostalgia Scale

Barrett, F. S., Grimm, K. J., Robins, R. W., Wildschut, T., Sedikides, C., & Janata, P. (2010). Music-evoked nostalgia: Affect, memory, and personality. *Emotion, 10*(3), 390-403. <https://doi.org/10.1037/a0019006>

Routledge, C., Arndt, J., Sedikides, C., & Wildschut, T. (2008). A blast from the past: The terror management function of nostalgia. *Journal of Experimental Social Psychology, 44*(1), 132-140. <https://doi.org/10.1016/j.jesp.2006.11.001>

Sedikides, C., Wildschut, T., Routledge, C., Arndt, J., Hepper, E. G., & Zhou, X. (2015). To nostalgize: Mixing memory with affect and desire. *Advances in Experimental Social Psychology, 51*, 189-273. <https://doi.org/10.1016/bs.aesp.2014.10.001>

Instructions: According to the Oxford Dictionary, “nostalgia” is defined as a “sentimental longing for the past.” Please answer the following questions about your experience with nostalgia on the scales provided.

Original scale anchor: 1 = *Not at all*; 7 = *Very much*; We added part of question stem to anchor and added a middle point: 1 = *Not at all valuable*; 4 = *Somewhat valuable*; 7 = *Very valuable*

1. How valuable is nostalgia for you?
 2. How important is it for you to bring to mind nostalgic experiences?
 3. How significant is it for you to feel nostalgic?
 4. How prone are you to feeling nostalgic?
 5. How often do you experience nostalgia?
 6. Generally speaking, how often do you bring to mind nostalgic experiences?
 7. Specifically, how often do you bring to mind nostalgic experiences? (Please check **one**.)
- Scored so that bringing to mind nostalgic experiences more frequently received highest score (At least once a day).*
- _____ At least once a day
 - _____ Three to four times a week
 - _____ Approximately twice a week
 - _____ Approximately once a week
 - _____ Once or twice a month
 - _____ Once every couple of months
 - _____ Once or twice a year

Social Connectedness, Meaning, and Self-Continuity (“right now” version)

Citations:

Connectedness (Items 1-4):

Hepper, E. G., Ritchie, T. D., Sedikides, C., & Wildschut, T. (2012). Odyssey’s end: Lay conceptions of nostalgia reflect its original Homeric meaning. *Emotion, 12*(1), 102-119. <https://doi.org/10.1037/a0025167>

Wildschut, T., Sedikides, C., Arndt, J., & Routledge, C. (2006). Nostalgia: Content, triggers, functions. *Journal of Personality and Social Psychology, 91*(5), 975-993. <https://doi.org/10.1037/0022-3514.91.5.975>

Meaning (Items 5-8):

Hepper, E. G., Ritchie, T. D., Sedikides, C., & Wildschut, T. (2012). Odyssey’s end: Lay conceptions of nostalgia reflect its original Homeric meaning. *Emotion, 12*(1), 102-119. <https://doi.org/10.1037/a0025167>

Self-Continuity (Items 9-12):

Sedikides, C., Wildschut, T., Routledge, C., & Arndt, J. (2015). Nostalgia counteracts self-discontinuity and restores self-continuity. *European Journal of Social Psychology, 45*(1), 52-61. <https://doi.org/10.1002/ejsp.2073>

Sedikides, C., Wildschut, T., Cheung, W.-Y., Routledge, C., Hepper, E. G., Arndt, J., Vail, K., Zhou, X., Brackstone, K., & Vingerhoets, A. J. J. M. (2016). Nostalgia fosters self-continuity: Uncovering the mechanism (social connectedness) and the consequence (eudaimonic well-being). *Emotion, 16*(4), 524-539. <https://doi.org/10.1037/emo0000136>

Please indicate your level of agreement with each of the following statements regarding how you feel RIGHT NOW.

Scale: *Strongly disagree, Disagree, Somewhat disagree, Neither agree nor disagree, Somewhat agree, Agree, Strongly agree*

Right now I feel connected to loved ones

Right now I feel protected

Right now I feel loved

Right now I feel I can trust others

Right now I feel life is meaningful

Right now I feel life has a purpose

Right now I feel there is a greater purpose to life

Right now I feel that life is worth living

Right now I feel connected with my past

Right now I feel connected with who I was in the past

Right now I feel that there is continuity in my life

Right now I feel like important aspects of my personality remain the same across time

Global Motivation Scale

Guay, F., Mageau, G. A., & Vallerand, R. J. (2003). On the hierarchical structure of self-determined motivation: A test of top-down, bottom-up, reciprocal, and horizontal effects. *Personality and Social Psychology Bulletin*, 29(8), 992-1004.
<https://doi.org/10.1177/0146167203253297>

Instructions: Indicate to what extent each of the following statements corresponds generally to the reasons why you do different things.

Scale: 1 = *Does not correspond*, 4 = *Corresponds moderately*, 7 = *Corresponds completely*.

In general, I do things...

1. ...in order to feel pleasant emotions.
2. ...because I do not want to disappoint certain people.
3. ...in order to help myself become the person I aim to be.
4. ...because I like making interesting discoveries.
5. ...because I would beat myself up for not doing them.
6. ...because of the pleasure I feel as I become more and more skilled.
7. ...although I do not see the benefit in what I am doing.
8. ...because of the sense of well-being I feel while I am doing them.
9. ...because I want to be viewed more positively by certain people.
10. ...because I chose them as means to attain my objectives.
11. ...for the pleasure of acquiring new knowledge.
12. ...because otherwise I would feel guilty for not doing them.
13. ...for the pleasure I feel mastering what I am doing.
14. ...although it does not make a difference whether I do them or not.
15. ...for the pleasant sensations I feel while I am doing them.
16. ...in order to show others what I am capable of.
17. ...because I chose them in order to attain what I desire.
18. ...for the pleasure of learning new, interesting things.
19. ...because I force myself to do them.
20. ...because of the satisfaction I feel in trying to excel in what I do.
21. ...even though I do not have a good reason for doing them.
22. ...for the enjoyable feelings I experience.
23. ...in order to attain prestige.
24. ...because I choose to invest myself in what is important to me.

Accidentally left out items 25-28

25. ...for the pleasure of learning different interesting facts.
26. ...because I would feel bad if I do not do them.
27. ...because of the pleasure I feel outdoing them.
28. ...even though I believe they are not worth the trouble.

Scoring: Intrinsic motivation—to know (4, 11, 18, 25); Intrinsic motivation—toward accomplishment (6, 13, 20, 27); Intrinsic motivation—to experience stimulation (1, 8, 15, 22);

Extrinsic motivation—identified (3, 10, 17, 24); Extrinsic motivation—introjected (5, 12, 19, 26); Extrinsic motivation—external regulation (2, 9, 16, 23); Amotivation (7, 14, 21, 28).

Brief State Humility Scale

Kruse, E., Chancellor, J., & Lyubomirsky, S. (2017). State humility: Measurement, conceptual validation, and intrapersonal processes. *Self and Identity, 16*(4), 399-438.
<https://doi.org/10.1080/15298868.2016.1267662>

Instructions: Please answer these questions based on how you feel right this moment.

Scale: *Strongly disagree, Disagree, Slightly disagree, Neither agree nor disagree, Slightly agree, Agree, Strongly Agree*

- (1) I feel that, overall, I am no better or worse than the average person.
- (2) I feel that I have both many strengths and flaws.
- (3) I feel that I do not deserve more respect than other people.
- (4) To be completely honest, I feel that I am better than most people.
- (5) I feel that I deserve more respect than everyone else.
- (6) I feel that I do not have very many weaknesses.

Items 4–6 are reverse-scored.

Demographics

Instructions: This last page of questions asks you to tell us a little more about yourself (your age, gender, etc.) to put your responses into context.

What is your age (in years)?

Drop-down menu from 18 to 99 or older

What gender do you identify with?

Options: Male, Female, I do not identify as either male or female, Prefer not to state

What is your ethnicity (please choose one)?

Options: American Indian/Alaskan Native, Asian, Black/African American, Hawaiian/Pacific Islander, White, Hispanic Latino, More than one (please list), Other (please list), Prefer not to state.

What year in school are you?

Options: Freshman, Sophomore, Junior, Senior, Other (with opportunity to explain)

Event Reflection Task

Sedikides, C., Wildschut, T., Routledge, C., Arndt, J., Hepper, E. G., & Zhou, X. (2015). To nostalgize: Mixing memory with affect and desire. *Advances in Experimental Social Psychology*, 51, 189-273. <https://doi.org/10.1016/bs.aesp.2014.10.001>

Nostalgia Condition

According to the Oxford Dictionary, “nostalgia” is defined as a “sentimental longing for the past.” Please think of a nostalgic event in your life. Specifically, try to think of a past event that makes you feel most nostalgic. Bring this nostalgic experience to mind. Immerse yourself in the nostalgic experience. How does it make you feel? Please spend a couple of minutes thinking about how it makes you feel.

In the space provided below, please write down FOUR keywords relevant to this nostalgic event (i.e., words that describe the experience). [space provided]

Now, using the space provided below, for the next few minutes, we would like you to write about the nostalgic event. Immerse yourself into this nostalgic experience. Describe the experience and how it makes you feel. [space provided]

You will not be able to advance to the next page until five minutes have passed

Ordinary (Control) Condition

According to the Oxford Dictionary, “ordinary” is defined as something with “no special or distinctive features.” Please bring to mind an ordinary event in your life. Specifically, try to think of a past event that is ordinary. Bring this ordinary experience to mind. Immerse yourself in the ordinary experience. How does it make you feel? Please spend a couple of minutes thinking about how it makes you feel.

In the space provided below, please write down FOUR keywords relevant to this ordinary event (i.e., words that describe the experience). [space provided]

Now, using the space provided below, for the next few minutes, we would like you to write about the ordinary event. Immerse yourself into this experience. Describe the experience and how it makes you feel. [space provided]

**Notes: Only defined nostalgia and ordinary experience the first and fourth administration. On the second and subsequent administrations, participants were told they could continue writing about the event they wrote about last time if they wanted.

Social Connectedness, Meaning, and Self-Continuity (“thinking about this event” version)

Citations:

Connectedness (Items 1-4):

- Hepper, E. G., Ritchie, T. D., Sedikides, C., & Wildschut, T. (2012). Odyssey’s end: Lay conceptions of nostalgia reflect its original Homeric meaning. *Emotion, 12*(1), 102-119. <https://doi.org/10.1037/a0025167>
- Wildschut, T., Sedikides, C., Arndt, J., & Routledge, C. (2006). Nostalgia: Content, triggers, functions. *Journal of Personality and Social Psychology, 91*(5), 975-993. <https://doi.org/10.1037/0022-3514.91.5.975>

Meaning (Items 5-8):

- Hepper, E. G., Ritchie, T. D., Sedikides, C., & Wildschut, T. (2012). Odyssey’s end: Lay conceptions of nostalgia reflect its original Homeric meaning. *Emotion, 12*(1), 102-119. <https://doi.org/10.1037/a0025167>

Self-Continuity (Items 9-12):

- Sedikides, C., Wildschut, T., Routledge, C., & Arndt, J. (2015). Nostalgia counteracts self-discontinuity and restores self-continuity. *European Journal of Social Psychology, 45*(1), 52-61. <https://doi.org/10.1002/ejsp.2073>
- Sedikides, C., Wildschut, T., Cheung, W.-Y., Routledge, C., Hepper, E. G., Arndt, J., Vail, K., Zhou, X., Brackstone, K., & Vingerhoets, A. J. J. M. (2016). Nostalgia fosters self-continuity: Uncovering the mechanism (social connectedness) and the consequence (eudaimonic well-being). *Emotion, 16*(4), 524-539. <https://doi.org/10.1037/emo0000136>

Please think about what you just wrote and indicate the extent to which you agree with each of the following statements.

Scale: *Strongly disagree, Disagree, Somewhat disagree, Neither agree nor disagree, Somewhat agree, Agree, Strongly agree*

Thinking about this event...

- makes me feel connected to loved ones
- makes me feel protected
- makes me feel loved
- makes me feel I can trust others
- makes me feel life is meaningful
- makes me feel life has a purpose
- makes me feel there is a greater purpose to life
- makes me feel that life is worth living
- makes me feel connected with my past
- makes me feel connected with who I was in the past
- makes me feel that there is continuity in my life
- makes me feel like important aspects of my personality remain the same across time

Table 1

Indirect Effect of Nostalgia (vs. Control) Condition on Outcomes via Social Connectedness

Outcomes	Mid-Intervention (T ₄)		Post-Intervention (T ₇)		Follow-Up (T ₈)	
	<i>Effect (SE)</i>	95% CI	<i>Effect (SE)</i>	95% CI	<i>Effect (SE)</i>	95% CI
Positive Affect						
<i>a</i>	1.34 (0.18)***	[0.98, 1.70]	1.21 (0.17)***	[0.88, 1.54]	1.20 (0.16)***	[0.88, 1.52]
<i>b</i>	0.18 (0.06)**	[0.05, 0.30]	0.33 (0.08)***	[0.18, 0.48]	0.25 (0.07)***	[0.11, 0.38]
Indirect Effect (<i>ab</i>)	0.24 (0.08)	[0.09, 0.40]	0.40 (0.11)	[0.21, 0.64]	0.30 (0.10)	[0.12, 0.52]
Direct Effect (<i>c'</i>)	0.28 (0.17) [†]	[-0.05, 0.61]	-0.16 (0.18)	[-0.52, 0.21]	-0.20 (0.16)	[-0.53, 0.12]
Negative Affect						
<i>a</i>	1.31 (0.18)***	[0.95, 1.67]	1.18 (0.17)***	[0.84, 1.51]	1.17 (0.16)***	[0.85, 1.49]
<i>b</i>	-0.05 (0.06)	[-0.17, 0.06]	-0.13 (0.06)*	[-0.25, -0.01]	-0.17 (0.06)**	[-0.30, -0.05]
Indirect Effect (<i>ab</i>)	-0.07 (0.08)	[-0.21, 0.09]	-0.16 (0.08)	[-0.32, -0.002]	-0.20 (0.08)	[-0.36, -0.06]
Direct Effect (<i>c'</i>)	-0.21 (0.16)	[-0.52, 0.10]	0.17 (0.14)	[-0.11, 0.46]	0.34 (0.15)*	[0.04, 0.63]
Life Satisfaction						
<i>a</i>	1.31 (0.18)***	[0.96, 1.66]	1.18 (0.16)***	[0.85, 1.50]	1.18 (0.16)***	[0.86, 1.49]
<i>b</i>	0.10 (0.06) [†]	[-0.01, 0.21]	0.16 (0.07)*	[0.03, 0.30]	0.30 (0.06)***	[0.17, 0.42]
Indirect Effect (<i>ab</i>)	0.14 (0.08)	[-0.01, 0.29]	0.19 (0.08)	[0.05, 0.37]	0.35 (0.09)	[0.19, 0.53]
Direct Effect (<i>c'</i>)	0.15 (0.15)	[-0.13, 0.44]	-0.04 (0.16)	[-0.36, 0.28]	-0.32 (0.14)*	[-0.60, -0.03]
Subjective Vitality						
<i>a</i>	1.32 (0.18)***	[0.96, 1.68]	1.20 (0.17)***	[0.87, 1.53]	1.19 (0.16)***	[0.87, 1.51]
<i>b</i>	0.14 (0.05)**	[0.04, 0.24]	0.19 (0.06)**	[0.07, 0.30]	0.23 (0.06)***	[0.12, 0.34]
Indirect Effect (<i>ab</i>)	0.19 (0.07)	[0.05, 0.34]	0.22 (0.08)	[0.09, 0.39]	0.27 (0.08)	[0.11, 0.45]
Direct Effect (<i>c'</i>)	-0.03 (0.14)	[-0.29, 0.24]	-0.31 (0.14)*	[-0.58, -0.03]	-0.39 (0.14)**	[-0.66, -0.13]
Eudaimonic Well-Being						
<i>a</i>	1.33 (0.17)***	[0.99, 1.68]	1.22 (0.16)***	[0.91, 1.54]	1.21 (0.15)***	[0.91, 1.51]
<i>b</i>	0.07 (0.03)*	[0.01, 0.12]	0.05 (0.04)	[-0.02, 0.13]	0.10 (0.03)**	[0.03, 0.16]
Indirect Effect (<i>ab</i>)	0.09 (0.05)	[0.002, 0.19]	0.07 (0.05)	[-0.02, 0.17]	0.12 (0.04)	[0.04, 0.21]
Direct Effect (<i>c'</i>)	0.08 (0.08)	[-0.07, 0.23]	-0.05 (0.08)	[-0.22, 0.11]	-0.16 (0.08)*	[-0.31, -0.01]

Note: Condition is dummy-coded (nostalgia = 1; control = 0). Standard errors and 95% confidence intervals for the indirect effect were calculated with the percentile bootstrap approach based on 5,000 bootstrap samples (Hayes, 2018). The unstandardized parameter estimates and 95% confidence intervals for the *a*, *b*, and *c'* paths were calculated with Ordinary Least Squares regression. For effects out to mid-intervention, the mechanism was the average of social

connectedness scores from T₂-T₄. For the effects out to post-intervention and follow-up, the mechanism was the average of social connectedness scores from T₂-T₇. For indirect effects analyses, confidence intervals are considered significant if they do not include zero. For *a*, *b*, and *c*' paths, we used the following schema to indicate significance: †*p* < .10; **p* < .05; ***p* < .01; ****p* < .001***.

Table 2

Indirect Effect of Nostalgia (vs. Control) Condition on Outcomes via Meaning

Outcomes	Mid-Intervention (T ₄)		Post-Intervention (T ₇)		Follow-Up (T ₈)	
	<i>Effect (SE)</i>	95% CI	<i>Effect (SE)</i>	95% CI	<i>Effect (SE)</i>	95% CI
Positive Affect						
<i>a</i>	0.95 (0.16)***	[0.63, 1.27]	0.88 (0.15)***	[0.58, 1.19]	0.92 (0.15)***	[0.62, 1.21]
<i>b</i>	0.15 (0.07)*	[0.01, 0.29]	0.33 (0.08)***	[0.17, 0.49]	0.21 (0.08)**	[0.06, 0.36]
Indirect Effect (<i>ab</i>)	0.14 (0.07)	[0.01, 0.29]	0.29 (0.09)	[0.14, 0.48]	0.19 (0.08)	[0.03, 0.37]
Direct Effect (<i>c'</i>)	0.38 (0.16)*	[0.06, 0.69]	-0.05 (0.18)	[-0.39, 0.30]	-0.10 (0.16)	[-0.41, 0.22]
Negative Affect						
<i>a</i>	0.91 (0.17)***	[0.57, 1.24]	0.84 (0.16)***	[0.53, 1.15]	0.87 (0.15)***	[0.57, 1.18]
<i>b</i>	-0.06 (0.06)	[-0.19, 0.06]	-0.15 (0.06)	[-0.27, -0.02]	-0.16 (0.07)*	[-0.29, -0.02]
Indirect Effect (<i>ab</i>)	-0.06 (0.06)	[-0.17, 0.05]	-0.12 (0.06)	[-0.25, -0.01]	-0.14 (0.06)	[-0.27, -0.02]
Direct Effect (<i>c'</i>)	-0.22 (0.15)	[-0.52, 0.07]	0.14 (0.14)	[-0.13, 0.41]	0.27 (0.15) [†]	[-0.02, 0.55]
Life Satisfaction						
<i>a</i>	0.90 (0.17)***	[0.58, 1.23]	0.84 (0.15)***	[0.54, 1.15]	0.88 (0.15)***	[0.59, 1.17]
<i>b</i>	0.15 (0.06)*	[0.04, 0.27]	0.18 (0.07)*	[0.03, 0.32]	0.27 (0.07)***	[0.14, 0.40]
Indirect Effect (<i>ab</i>)	0.14 (0.06)	[0.02, 0.27]	0.15 (0.07)	[0.03, 0.30]	0.23 (0.08)	[0.10, 0.39]
Direct Effect (<i>c'</i>)	0.15 (0.14)	[-0.12, 0.42]	0.001 (0.15)	[-0.30, 0.31]	-0.20 (0.14)	[-0.48, 0.07]
Subjective Vitality						
<i>a</i>	0.93 (0.17)***	[0.60, 1.26]	0.87 (0.15)***	[0.56, 1.17]	0.90 (0.15)***	[0.60, 1.20]
<i>b</i>	0.19 (0.05)***	[0.08, 0.29]	0.21 (0.06)***	[0.09, 0.33]	0.24 (0.06)***	[0.11, 0.36]
Indirect Effect (<i>ab</i>)	0.17 (0.06)	[0.07, 0.30]	0.18 (0.06)	[0.07, 0.32]	0.21 (0.07)	[0.07, 0.35]
Direct Effect (<i>c'</i>)	-0.01 (0.13)	[-0.26, 0.24]	-0.27 (0.13)*	[-0.53, -0.01]	-0.34 (0.13)*	[-0.59, -0.08]
Eudaimonic Well-Being						
<i>a</i>	0.94 (0.16)***	[0.62, 1.25]	0.88 (0.15)***	[0.59, 1.18]	0.91 (0.14)***	[0.63, 1.19]
<i>b</i>	0.07 (0.03)*	[0.001, 0.13]	0.05 (0.04)	[-0.03, 0.12]	0.09 (0.04)*	[0.02, 0.16]
Indirect Effect (<i>ab</i>)	0.06 (0.04)	[-.005, 0.14]	0.04 (0.04)	[-0.02, 0.12]	0.08 (0.04)	[0.01, 0.15]
Direct Effect (<i>c'</i>)	0.11 (0.07)	[-0.04, 0.25]	-0.03 (0.08)	[-0.18, 0.13]	-0.12 (0.07) [†]	[-0.27, 0.02]

Note: Condition is dummy-coded (nostalgia = 1; nontrol = 0). Standard errors and 95% confidence intervals for the indirect effect were calculated with the percentile bootstrap approach based on 5,000 bootstrap samples (Hayes, 2018). The unstandardized parameter estimates and 95% confidence intervals for the *a*, *b*, and *c'* paths were calculated with Ordinary Least Squares regression. For effects out to mid-intervention, the mechanism was the average of meaning scores

from T₂-T₄. For the effects out to post-intervention and follow-up, the mechanism was the average of meaning scores from T₂-T₇. For indirect effects analyses, confidence intervals are considered significant if they do not include zero. For *a*, *b*, and *c'* paths, we used the following schema to indicate significance: †*p* < .10; **p* < .05; ***p* < .01; ****p* < .001***.

Table 3

Indirect Effect of Nostalgia (vs. Control) Condition on Outcomes via Self-Continuity

Outcomes	Mid-Intervention (T ₄)		Post-Intervention (T ₇)		Follow-Up (T ₈)	
	<i>Effect (SE)</i>	95% CI	<i>Effect (SE)</i>	95% CI	<i>Effect (SE)</i>	95% CI
Positive Affect						
<i>a</i>	0.90 (0.14)***	[0.62, 1.18]	0.82 (0.15)***	[0.53, 1.11]	0.83 (0.14)***	[0.56, 1.11]
<i>b</i>	0.27 (0.08)***	[0.11, 0.43]	0.37 (0.09)***	[0.20, 0.55]	0.26 (0.08)**	[0.11, 0.42]
Indirect Effect (<i>ab</i>)	0.24 (0.08)	[0.09, 0.41]	0.31 (0.09)	[0.15, 0.51]	0.22 (0.08)	[0.06, 0.40]
Direct Effect (<i>c'</i>)	0.28 (0.16) [†]	[-0.04, 0.59]	-0.06 (0.17)	[-0.41, 0.28]	-0.12 (0.16)	[-0.43, 0.19]
Negative Affect						
<i>a</i>	0.86 (0.15)***	[-0.57, 1.16]	0.78 (0.15)***	[0.48, 1.08]	0.79 (0.14)***	[0.51, 1.08]
<i>b</i>	-0.11 (0.07)	[-0.26, 0.03]	-0.20 (0.07)**	[-0.33, -0.07]	-0.25 (0.07)***	[-0.39, -0.11]
Indirect Effect (<i>ab</i>)	-0.10 (0.07)	[-0.25, 0.03]	-0.16 (0.06)	[-0.29, -0.04]	-0.20 (0.06)	[-0.33, -0.09]
Direct Effect (<i>c'</i>)	-0.18 (0.13)	[-0.48, 0.11]	0.17 (0.13)	[-0.09, 0.44]	0.33 (0.14)*	[0.05, 0.61]
Life Satisfaction						
<i>a</i>	0.87 (0.14)***	[0.59, 1.15]	0.79 (0.14)***	[0.51, 1.07]	0.81 (0.14)***	[0.53, 1.08]
<i>b</i>	0.20 (0.07)**	[0.07, 0.34]	0.21 (0.08)**	[0.06, 0.37]	0.27 (0.07)***	[0.13, 0.41]
Indirect Effect (<i>ab</i>)	0.18 (0.08)	[0.03, 0.36]	0.17 (0.07)	[0.05, 0.32]	0.22 (0.08)	[0.06, 0.39]
Direct Effect (<i>c'</i>)	0.11 (0.14)	[-0.16, 0.38]	-0.02 (0.15)	[-0.32, 0.29]	-0.19 (0.14)	[-0.46, 0.09]
Subjective Vitality						
<i>a</i>	0.90 (0.14)***	[0.62, 1.18]	0.81 (0.15)***	[0.53, 1.10]	0.82 (0.14)***	[0.55, 1.10]
<i>b</i>	0.21 (0.07)**	[0.08, 0.34]	0.20 (0.07)**	[0.07, 0.33]	0.28 (0.07)***	[0.15, 0.41]
Indirect Effect (<i>ab</i>)	0.19 (0.07)	[0.06, 0.32]	0.16 (0.06)	[0.05, 0.28]	0.23 (0.06)	[0.10, 0.36]
Direct Effect (<i>c'</i>)	-0.02 (0.13)	[-0.28, 0.23]	-0.25 (0.13) [†]	[-0.51, 0.01]	-0.35 (0.13)**	[-0.61, -0.10]
Eudaimonic Well-Being						
<i>a</i>	0.90 (0.14)***	[0.63, 1.18]	0.82 (0.14)***	[0.54, 1.10]	0.83 (0.14)***	[0.56, 1.10]
<i>b</i>	0.07 (0.04) [†]	[-0.01, 0.14]	0.04 (0.04)	[-0.04, 0.12]	0.07 (0.04) [†]	[-0.01, 0.14]
Indirect Effect (<i>ab</i>)	0.06 (0.04)	[-0.02, 0.15]	0.03 (0.04)	[-0.04, 0.11]	0.06 (0.03)	[-0.004, 0.13]
Direct Effect (<i>c'</i>)	0.11 (0.07)	[-0.04, 0.25]	-0.02 (0.08)	[-0.17, 0.14]	-0.10 (0.07)	[-0.25, 0.04]

Note: Condition is dummy-coded (nostalgia = 1; control = 0). Standard errors and 95% confidence intervals for the indirect effect were calculated with the percentile bootstrap approach based on 5,000 bootstrap samples (Hayes, 2018). The unstandardized parameter estimates and 95% confidence intervals for the *a*, *b*, and *c'* paths were calculated with Ordinary Least Squares regression. For effects out to mid-intervention, the mechanism was the average of self-continuity

scores from T₂-T₄. For the effects out to post-intervention and follow-up, the mechanism was the average of self-continuity scores from T₂-T₇. For indirect effects analyses, confidence intervals are considered significant if they do not include zero. For *a*, *b*, and *c'* paths, we used the following schema to indicate significance: †*p* < .10; **p* < .05; ***p* < .01; ****p* < .001***.

Table 4

Correlations Among Outcome Variables at all Time Points

	Baseline (T ₁)					Mid-Intervention (T ₄)					Post-Intervention (T ₇)					Follow-Up (T ₈)				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Baseline (T ₁)																				
1. LS	--																			
2. SVS	.60	--																		
3. QEWB	.46	.54	--																	
4. PA	.59	.66	.50	--																
5. NA	-.39	-.43	-.36	-.52	--															
Mid-Intervention (T ₄)																				
1. LS	.75	.60	.50	.56	-.37	--														
2. SVS	.43	.76	.50	.57	-.31	.64	--													
3. QEWB	.37	.43	.76	.40	-.24	.57	.54	--												
4. PA	.42	.52	.36	.56	-.28	.60	.65	.48	--											
5. NA	-.21	-.32	-.23	-.30	.48	-.44	-.48	-.26	-.53	--										
Post-Intervention (T ₇)																				
1. LS	.67	.54	.49	.52	-.28	.75	.57	.49	.47	-.34	--									
2. SVS	.53	.76	.46	.59	-.34	.58	.75	.40	.48	-.31	.71	--								
3. QEWB	.37	.44	.76	.41	-.26	.57	.47	.79	.35	-.20	.57	.57	--							
4. PA	.45	.43	.34	.48	-.26	.46	.46	.32	.50	-.29	.60	.57	.45	--						
5. NA	-.30	-.24	-.23	-.29	.44	-.31	-.22	-.25	-.15	.44	-.38	-.37	-.32	-.57	--					
Follow-Up (T ₈)																				
1. LS	.69	.52	.45	.45	-.32	.73	.53	.43	.46	-.31	.75	.67	.46	.55	-.45	--				
2. SVS	.51	.70	.47	.54	-.39	.60	.73	.48	.51	-.36	.63	.82	.49	.55	-.37	.68	--			
3. QEWB	.32	.40	.76	.39	-.27	.52	.47	.79	.34	-.21	.47	.48	.77	.38	-.30	.54	.56	--		
4. PA	.53	.62	.43	.59	-.39	.61	.61	.42	.58	-.33	.66	.72	.47	.61	-.34	.77	.76	.52	--	
5. NA	-.29	-.29	-.28	-.28	.49	-.43	-.33	-.30	-.21	.50	-.47	-.40	-.29	-.30	.55	-.54	-.54	-.41	-.56	--

Note: LS = Life Satisfaction; SVS = Subjective Vitality Scale; QEWB = Questionnaire for Eudaimonic Well-Being; PA = Positive Affect; NA = Negative Affect. All correlations include data from at least 153 participants and thus correlations above .16 are significant at $p < .05$.

Table 5

Unstandardized Regression Coefficients (Standard Errors) Predicting Post-Intervention and Follow-Up Outcomes from Condition and Mid-Intervention Outcomes

Outcomes	Post-Intervention (T ₇)		Follow-Up (T ₈)	
	<i>b</i> (SE)	95% CI	<i>b</i> (SE)	95% CI
Positive Affect				
Constant	5.11 (0.12)***	[4.87, 5.34]	4.93 (0.11)***	[4.72, 5.15]
Centered Mid-Intervention	0.50 (0.07)***	[0.36, 0.64]	0.60 (0.07)***	[0.47, 0.73]
Condition (Nostalgia vs. Control)	-0.08 (0.17)	[-0.41, 0.26]	-0.29 (0.15) [†]	[-0.59, 0.004]
Negative Affect				
Constant	2.07 (0.09)***	[1.89, 2.25]	2.39 (0.10)***	[2.20, 2.58]
Centered Mid-Intervention	0.39 (0.07)***	[0.27, 0.52]	0.51 (0.07)***	[0.38, 0.65]
Condition (Nostalgia vs. Control)	0.12 (0.13)	[-0.14, 0.38]	0.31 (0.14)*	[0.04, 0.57]
Life Satisfaction				
Constant	5.05 (0.10)***	[4.86, 5.24]	5.35 (0.09)***	[5.17, 5.53]
Centered Mid-Intervention	0.75 (0.06)***	[0.65, 0.86]	0.70 (0.05)***	[0.60, 0.80]
Condition (Nostalgia vs. Control)	-0.04 (0.13)	[-0.30, 0.23]	-0.16 (0.13)	[-0.41, 0.10]
Subjective Vitality				
Constant	5.14 (0.09)***	[4.96, 5.32]	5.06 (0.09)***	[4.89, 5.23]
Centered Mid-Intervention	0.77 (0.06)***	[0.66, 0.87]	0.69 (0.05)***	[0.59, 0.79]
Condition (Nostalgia vs. Control)	-0.23 (0.13) [†]	[-0.48, 0.03]	-0.25 (0.12)*	[-0.48, -0.01]
Eudaimonic Well-Being				
Constant	5.11 (0.05)***	[5.01, 5.20]	5.20 (0.04)***	[5.11, 5.29]
Centered Mid-Intervention	0.84 (0.05)***	[0.74, 0.95]	0.80 (0.05)***	[0.71, 0.90]
Condition (Nostalgia vs. Control)	-0.14 (0.07)*	[-0.27, -0.01]	-0.18 (0.06)**	[-0.31, -0.06]

Note: Condition is dummy coded (nostalgia = 1; control = 0) and mid-intervention level of each outcome is centered. Thus, the constant is the average score on the dependent variable for people in the control condition at the average level of the mid-intervention outcome. Condition is the effect of being in the nostalgia (vs. control) condition in addition to the constant. Unstandardized parameter estimates and confidence intervals are calculated with Ordinary Least Squares regression (i.e., they are not bootstrapped).

[†] $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$

Table 6

Unstandardized Regression Coefficients (Standard Errors) Predicting Post-Intervention and Follow-Up Outcomes from Condition, Baseline Outcomes, and Mid-Intervention Outcomes

Outcomes	Post-Intervention (T ₇)		Follow-Up (T ₈)	
	<i>b</i> (SE)	95% CI	<i>b</i> (SE)	95% CI
Positive Affect				
Constant	5.04 (0.12)***	[4.81, 5.27]	4.85 (0.10)***	[4.65, 5.05]
Centered Baseline	0.32 (0.10)**	[0.13, 0.51]	0.45 (0.08)***	[0.28, 0.62]
Centered Mid-Intervention	0.33 (0.09)***	[0.17, 0.50]	0.37 (0.08)***	[0.22, 0.52]
Condition (Nostalgia vs. Control)	0.05 (0.17)	[-0.28, 0.38]	-0.12 (0.14)	[-0.40, 0.16]
Negative Affect				
Constant	2.11 (0.09)***	[1.94, 2.29]	2.44 (0.09)***	[2.26, 2.63]
Centered Baseline	0.32 (0.09)***	[0.15, 0.50]	0.38 (0.09)***	[0.20, 0.56]
Centered Mid-Intervention	0.26 (0.07)***	[0.12, 0.41]	0.36 (0.08)***	[0.21, 0.51]
Condition (Nostalgia vs. Control)	0.06 (0.13)	[-0.19, 0.31]	0.24 (0.13) [†]	[-0.02, 0.49]
Life Satisfaction				
Constant	5.02 (0.09)***	[4.84, 5.21]	5.31 (0.09)***	[5.13, 5.48]
Centered Baseline	0.28 (0.09)**	[0.10, 0.46]	0.38 (0.09)***	[0.21, 0.55]
Centered Mid-Intervention	0.56 (0.08)***	[0.40, 0.73]	0.45 (0.08)***	[0.30, 0.60]
Condition (Nostalgia vs. Control)	0.02 (0.13)	[-0.24, 0.28]	-0.08 (0.12)	[-0.32, 0.16]
Subjective Vitality				
Constant	5.10 (0.08)***	[4.94, 5.26]	5.02 (0.08)***	[4.86, 5.18]
Centered Baseline	0.48 (0.08)***	[0.32, 0.63]	0.34 (0.08)***	[0.18, 0.49]
Centered Mid-Intervention	0.43 (0.07)***	[0.29, 0.58]	0.45 (0.07)***	[0.30, 0.60]
Condition (Nostalgia vs. Control)	-0.15 (0.11)	[-0.38, 0.08]	-0.19 (0.11) [†]	[-0.42, 0.03]
Eudaimonic Well-Being				
Constant	5.06 (0.04)***	[4.98, 5.15]	5.17 (0.04)***	[5.08, 5.25]
Centered Baseline	0.44 (0.07)***	[0.30, 0.59]	0.35 (0.07)***	[0.21, 0.49]
Centered Mid-Intervention	0.51 (0.07)***	[0.37, 0.65]	0.54 (0.07)***	[0.40, 0.68]
Condition (Nostalgia vs. Control)	-0.07 (0.06)	[-0.19, 0.05]	-0.14 (0.06)*	[-0.25, -0.02]

Note: Condition is dummy coded (nostalgia = 1; control = 0) and mid-intervention and baseline levels of each outcome are centered. Thus, the constant is the average score on the dependent variable for people in the control condition at the average level of the mid-intervention and baseline outcome. Condition is the

effect of being in the nostalgia (vs. control) condition in addition to the constant. Unstandardized parameter estimates and confidence intervals are calculated with Ordinary Least Squares regression (i.e., they are not bootstrapped).

† $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$ ***

Summary of Moderated Mediation

We also examined whether baseline nostalgia proneness moderated the a or c' paths reported in our indirect effects analyses (Hayes, 2018; PROCESS Model 8). In these analyses, the PROCESS macro provides the parameter estimate of the a or c' path at the 16th, 50th, and 84th percentile of the moderator, which corresponds to one standard deviation below the mean (low nostalgia proneness), the mean (average nostalgia proneness), and one standard deviation above the mean (high nostalgia proneness) in a normally distributed variable (baseline nostalgia proneness is normally distributed).

We found no significant interactions between condition and nostalgia proneness when predicting our mediator (the average of social connectedness, meaning, and self-continuity) in any of our outcome models (a paths), indicating that, regardless of nostalgia proneness, participants in the nostalgia condition reported more connectedness, meaning, and self-continuity than those in the ordinary condition. Importantly, all significant a and b paths from our indirect effect analyses (Table 3) remained intact when including nostalgia proneness as a moderator (but the b path for mid-intervention eudaimonic well-being became marginal).

Furthermore, we obtained three significant interactions between nostalgia proneness and the direct condition effects (c' paths) on post-intervention NA ($p = .02$), follow-up NA ($p = .04$), and follow-up life satisfaction ($p = .02$). On post-intervention NA, participants low on nostalgia proneness had significantly higher NA when in the nostalgia (vs. control) condition ($p = .01$). At follow-up, participants low on nostalgia proneness again showed higher NA in the nostalgia (vs. control) condition ($p = .003$). Finally, we obtained an interaction between nostalgia proneness and condition on follow-up life satisfaction, such that participants low on nostalgia proneness had lower life satisfaction when in the nostalgia (vs. control) condition ($p = .003$). These interactions between condition and nostalgia proneness on the direct effects partially explain our previous inconsistent mediation findings. Specifically, nostalgia absent social connectedness, meaning, and self-continuity can be negative for well-being, but likely only for those low in nostalgia proneness. Notably, the a path was not moderated by nostalgia proneness, indicating

that, regardless of nostalgia proneness, participants in the nostalgia condition reported higher social connectedness, meaning, and self-continuity than those in the control condition. Thus, the moderated c' path indicates that, in addition to feeling higher social connectedness, meaning, and self-continuity, those low in nostalgia proneness were likely also experiencing relatively higher levels of the negative aspects of nostalgic experience (e.g., sadness, longing, loneliness).