

The Spotlight Activity: Development and Feasibility Test of a Naturalistic Attention- Redirection Well-Being Intervention

Journal of Positive Psychology and Wellbeing
2018, Volume 2(1): 64–91
www.journalppw.com
ISSN 2587-0130
OPEN ACCESS

Lilian J. Shin¹, Peter M. Ruberton²,
and Sonja Lyubomirsky¹

Abstract

Positive activities, such as savoring, gratitude, and optimism, have been shown to boost positive emotions and reduce negative emotions. We argue that a shared mechanism driving their well-being benefits is the redirection of attention. In this feasibility study, we develop and pilot-test this mechanism with a novel positive activity intervention, the “spotlight activity,” that taught participants how to become mindful of where their attention was and to redirect it as needed. Individuals (initial $N = 108$) were randomly assigned to a 5-week spotlight activity intervention or to a waitlist control group and were assessed on measures of psychological well-being, need satisfaction, and hassles and uplifts. Preliminary results showed that, at post-test, the spotlight group reported significantly higher life satisfaction, meaning in life, and general weekly affect, as well as significantly lower negative affect and hassle intensity. The study provided initial evidence for the feasibility of a novel attention-redirection intervention and its potential to increase psychological well-being.

Keywords

Happiness interventions, attention, subjective well-being, and positive affect.

¹Department of Psychology, University of California, Riverside

²Department of Psychology, University of California, Riverside and The Pennsylvania State University, United States

Corresponding Author: Lilian J. Shin, Department of Psychology, University of California, Riverside, 900 University Ave., Riverside, CA 92521. Phone: 951-827-7738

Email: lilian.shin@email.ucr.edu

Article History: Received: 24 December 2017 | Accepted: 02 February 2018 | Published Online: 14 March 2018

“My experience is what I agree to attend to.”
--William James (1842-1910 AD), psychologist and philosopher

Across historical periods, nations, and cultures, people have desired happiness and pursued it in a variety of ways (Bergsma, 2008; Diener, 2000). This preoccupation is not surprising, because happiness is associated with numerous tangible benefits, such as stronger physical health, improved interpersonal relationships, higher work productivity, and even longer life (Lyubomirsky, King, & Diener, 2005). Accordingly, the question of how to become happier has become a topic of growing scientific interest (for reviews, see Bolier et al., 2013; Layous & Lyubomirsky, 2014; Lyubomirsky, Sheldon, & Schkade, 2005). Today, hundreds of studies present evidence for a wide array of ostensibly distinct happiness-increasing strategies—from meditation to savoring to strengthening relationships—but few have considered what these activities have in common (e.g., see Dolan, 2014, for an exception).

In sum, positive activities have been shown to effectively boost positive emotions and/or alleviate negative emotions in multiple ways (Bolier et al., 2013; Sin & Lyubomirsky, 2009). These empirically-supported activities include, but are not limited to, writing letters of gratitude (Layous et al., 2017; Lyubomirsky, Dickerhoof, Boehm, & Sheldon, 2011; Seligman, Steen, Park, & Peterson, 2005); performing acts of kindness (Dunn, Aknin, & Norton, 2008; Nelson et al., 2015; Nelson, Layous, Cole, & Lyubomirsky, 2016); practicing optimism (Layous, Nelson, & Lyubomirsky, 2013; Lyubomirsky et al., 2011); counting one's blessings (Emmons & McCullough, 2003; Froh, Sefick, & Emmons, 2008; Seligman et al., 2005); affirming one's most important values (Nelson, Fuller, Choi, & Lyubomirsky, 2014); and meditating on positive feelings towards oneself and others (Fredrickson, Cohn, Coffey, Pek, & Finkel, 2008).

By increasing positive emotions, thoughts, and behaviors, as well as satisfying basic psychological needs (e.g., autonomy, competence, connectedness), each positive activity has been shown to provide unique benefits (Layous & Lyubomirsky, 2014). For instance, people who practiced optimism and gratitude construed their memories of neutral experiences more positively and optimistically (Dickerhoof, 2007). A meditation activity fostered participants' personal resources such as social relationships and health (Fredrickson et al., 2008). Finally, an intervention combining instructions to practice acts of kindness with autonomy-supportive messages from peers boosted participants' perceived sense of choice (Nelson et al., 2015). At first glance, these activities—and their associated benefits—appear to be quite distinct from one another, but could there be a common mechanism that underlies their success?

In this paper, we argue that the shared mechanism driving the well-being-improving benefits of most positive activities is redirection of attention. For example, by practicing gratitude, people are redirecting their thoughts toward what is “right” with their lives instead of what is wrong. By practicing kindness, people are encouraged to take the focus off of themselves and turn it onto other people. And, by practicing optimism, people are directed to think about the future in a positive rather than an anxious, fearful, or depressive way. We believe there are an endless variety of ways in which one can redirect attention that will lead to enhanced well-being.

Prior research has shown that attention—especially selective attention to positive information—may be a valuable tool for regulating emotion (Wadlinger & Isaacowitz, 2011). Several emotion

regulation strategies involve the deployment of attention and have been identified as effective. They include distraction (shifting attention from one aspect of a situation to another or away from the situation altogether), concentration (fully utilizing cognitive resources within an activity), and positive “rumination” or savoring (directing attention selectively inward towards positive feelings) (Gross, 1998). These emotion regulation strategies have been incorporated into different types of attention training methodologies, such as auditory attention training used in clinical psychology, which have been shown to affect alerting, orienting, and executive control attentional processes with repeated practice (Watson & Purdon, 2008). These attentional processes, in turn, regulate emotional experience, emotional expression, and the neurobiology of emotions (Wadlinger & Isaacowitz, 2011). In other words, after individuals undergo an attention training period, what they learn is presumed to transfer to situations that involve emotional regulation in their daily lives.

Although such lab-based training interventions have effectively modified patterns of attentional deployment to regulate emotion, they require an extensive or onerous training period, are only distally related to well-being outcomes in daily life, and are often designed for clinical populations. Could laypeople learn to monitor and refocus their own attention more directly—that is, precisely during the situation in which this action is needed rather than during a distal “training” period that is expected to transfer to daily life? We propose that learning how to redirect one’s attention when naturalistically entrenched in negative patterns of thinking, emotion, or behavior could be a simple, direct, concrete, feasible, and effective way to sustainably boost well-being.

The current study served as a preliminary test of whether people who learn to become cognizant about where their attention (“spotlight”) is—and when it is prudent to divert it—become happier over time. To this end, we developed a novel positive activity intervention, which we labeled the “spotlight activity,” that taught participants how to become mindful of where their attention is and to redirect it as needed. We also pilot tested the spotlight activity over 4 weeks to examine its feasibility and acceptability for community participants. Although the primary aim of the spotlight activity pilot was to examine its feasibility rather than to draw definitive inferences about its effectiveness, we also expected that those who practiced the activity would increase in life satisfaction, subjective happiness, positive affect, psychological need satisfaction (i.e., connectedness, competence, autonomy), meaning in life, and daily uplifts—as well as decrease in negative affect and daily hassles—compared to those assigned to a waitlist control group. Because the redirection of attention is proposed to be the shared key mechanism driving the positive activities that have been reliably established to improve well-being (e.g., Dunn et al., 2008; Emmons & McCullough, 2003; Froh et al., 2008; Layous et al., 2013, 2017; Lyubomirsky et al., 2011; Nelson et al., 2015; Nelson et al., 2014, 2016; Seligman et al., 2005), we expected that the spotlight activity would similarly enhance well-being.

Method

Participants

One hundred-eight adults worldwide were recruited online for the study via posts on the third author's Facebook, LinkedIn, and Twitter profiles. Out of this group, 61 participants failed to complete at least one of the follow-up surveys, leaving a total of 47 complete cases. No significant differences, however, emerged between those who remained in the study until the end and those who dropped out with respect to age, gender, ethnicity, education, income, and marital status. Demographic predictors of attrition from the study at any major assessment wave were examined using logistic regression models. No significant differences emerged between those who remained in the study until the end and those who dropped out with respect to gender, ethnicity, education, income, and marital status. Age was significantly associated with increased retention, $b = .032$, $\chi^2(1, N = 108) = 3.88$, $p = .049$, although the association was only marginally significant using a Wald test, $z = 1.93$, $p = .054$. Because of the relatively small effect size, and because of the low base rate of retention, we will not consider the role of age in completing the study further in this paper. (See Results section for a complete description and discussion of the psychological predictions of participant attrition.)

Participants who completed any portion of the study ranged from ages 22 to 77 ($M_{\text{age}} = 45.3$ $SD = 12.4$), with 75% female. Sixty-seven percent self-identified as White, 15% as Latino(a), 5% as Asian, 2% as Black, 2% as Middle Eastern, 5% as more than one ethnicity, and 3% as other ethnicities. The three most common countries where participants completed the survey were the United States, Mexico, and Canada. The participants were generally highly educated: 61% had post-baccalaureate or graduate education, 30% were college graduates, 5% of people had attended some college, and 2% had graduated from high school. The participants' modal income was \$100,000 to \$149,000, ranging between less than \$20,000 to over \$200,000. (Fifteen percent chose not to respond to this question). Fifty-four percent of participants were married, 26% were single, 17% were separated/divorced, and 1% were widowed.

Measures

Weekly Affect and Life Satisfaction. Participants' weekly affect and life satisfaction were measured with the items, "How have you been feeling in the past week?" and "How satisfied with your life have you been in the past week?" (Jacobs Bao, 2012; $\alpha = .80$ to $.93$). A 100-point sliding scale with increments of 10 points was used, with endpoints of the scale marked with a graphical frowning face at 0 and a graphical smiling face at 100.

Global Life Satisfaction. Global life satisfaction was assessed with the Satisfaction With Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985; $\alpha = .87$). The SWLS consists of five items (e.g., "In most ways my life is close to my ideal") rated on a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*). Reliability of the scale in this sample was excellent (Cronbach's $\alpha = .90$ at Day 1; $\alpha = .94$ at Day 35).

Subjective Happiness. Participants' happiness was measured with the Subjective Happiness Scale (SHS; Lyubomirsky & Lepper, 1999; $\alpha = .79$ to $.86$). All items were rated on a 7-point Likert-type scale. The items asked participants how generally happy they are, how happy they are relative to

their peers, and the extent to which a description of a “very happy” person characterized them (1 = *not at all*, 7 = *a great deal*). The fourth item from the SHS was dropped because it had low reliability and did not hang together with the other items. Cronbach’s α coefficients were .92 at Day 1 and .95 at Day 35.

Positive and Negative Affect. Participants’ affect was assessed using the Affect-Adjective Scale (AAS; Diener & Emmons, 1985; $\alpha = .89$ to $.84$ for positive and negative affect, respectively), which includes four positive affect items (happy, pleased, joyful, enjoyment/fun; $\alpha = .92$ at Day 1, $\alpha = .96$ at Day 35) and five negative affect ones (worried/anxious, angry/hostile, frustrated, depressed/blue, unhappy; $\alpha = .86$ at Day 1, $\alpha = .92$ at Day 35). Participants rated the extent to which they felt each emotion in the past week using a 7-point scale (1 = *not at all*, 7 = *a great deal*).

Psychological Need Satisfaction. The degree to which participants’ core needs were met was assessed with the Balanced Measure of Psychological Needs (BMPN; Sheldon & Hilpert, 2012). The BMPN consists of 18 items, with six representing autonomy (e.g., “I felt free to do things my own way”; $\alpha = .78$), six representing connectedness (e.g., “I felt a sense of contact with people who care for me, and whom I care for”; $\alpha = .78$), and six representing competence (e.g., “I felt that I was taking on and mastering hard challenges”; $\alpha = .79$). Participants rated the extent to which they agreed with each statement for the past week on a 5-point scale (1 = *no agreement*, 5 = *much agreement*). Results were analyzed by separately examining autonomy ($\alpha = .76$ at Day 1 and $.62$ at Day 35), connectedness ($\alpha = .75$ and $.78$, respectively), and competence ($\alpha = .74$ and $.85$, respectively).

Meaning in Life. A four-item scale assessed participants’ meaning in life (Nelson et al., 2014; $\alpha = .73$ to $.79$). The items were designed to be sensitive to weekly changes in felt meaning (e.g., [during the past week] “I have felt a sense of purpose in my daily life”) and were rated on a 7-point scale (1 = *not at all*, 7 = *very much*). Reliability of the scale was good in this sample ($\alpha = .86$ at Day 1; $\alpha = .87$ at Day 35).

Hassles and Uplifts Scale. Daily hassles (i.e., things that irritate or annoy) and uplifts (i.e., events that make one feel good) were assessed using a short version of the Hassles and Uplifts Scale (DeLongis, Folkman, & Lazarus, 1988). Participants rated the extent to which 14 items in the areas of family, friends, work, health, housework, and recreation were a hassle and an uplift over the past week on a 4-point scale (0 = *none or not applicable*, 3 = *a great deal*). Reliability of both the hassles and uplifts scales was adequate (hassles: $\alpha = .69$ at Day 1, $\alpha = .70$ at Day 35; uplifts: $\alpha = .79$ at Day 1 and Day 35.)

Effort. Participants’ effort put forth towards the spotlight activity was measured with three Likert-type items. The items asked, “How much effort did you put into the spotlight activity?” (1 = *no effort at all*, 9 = *a great deal of effort*); “How hard did you try monitoring and redirecting your attention?” (1 = *not hard at all*, 9 = *extremely hard*); and “How often did you practice the spotlight activity because you wanted to do it for yourself (as opposed to for the study)?” (1 = *never*, 9 = *often*).

Feasibility Study Design, Development, and Procedure

Design. Participants took part in a 5-week online feasibility study in which they were randomly assigned either 1) to keep track of their attention (their “spotlight”) on daily experiences, as well as how positive or negative they felt (i.e., their affect), and then to divert their attention as needed or 2)

to serve in a waitlist control group. All participants began the study on a Monday, with 6 waves of participant start dates starting in May through June 2015. Participants completed the online study in the course of their normal lives.

Development of 3-Day Tracking Activity. To orient participants to the practice of attending to their activities, attention, and affect, we designed a 3-day tracking activity to be completed after baseline measures. During this trial period, we asked participants to track 4 times per day over the course of 3 days what they were doing, where their attention was focused, how much attention they were paying to this activity, and how they positive or negative they felt about it, without attempting to alter their attention or behavior. (See Appendix A for the full 3-day tracking activity instructions that participants were shown.)

Development of Spotlight Activity. After the 3-day tracking activity, participants were asked not only to keep track of what their attention was on, but also to redirect or shift their attention when they deemed it necessary. Prior research has shown that providing autonomy and choice in exercising a positive activity enhances the impact of the intervention on people's subjective well-being (Nelson et al., 2015). Accordingly, we gave participants the choice of whether to redirect their attention, when to redirect their attention, and if they did choose to redirect, what strategy to use during the spotlight activity intervention. Because this was a feasibility study, we also offered participants the opportunity to describe their experiences, to list insights gained, and to provide their feedback on ways to improve and tailor the spotlight activity to different types of people and situations.

Procedure for Spotlight Activity Condition

Baseline. Figure 1 displays the flow diagram and participant enrollment for the study. At baseline (Day 1), participants gave informed consent and completed all measures (demographic information, weekly affect and life satisfaction, global life satisfaction, happiness, positive and negative affect, psychological need satisfaction, meaning in life, and hassles and uplifts). They also chose one of three mood-color grids that indicated what colors they typically associated with different (e.g., high and low) moods. (See Appendix B for one example of a mood-color grid consisting of green for high moods, orange for neutral moods, and red for low moods.) Participants completed this and all subsequent measures through the Qualtrics online survey platform at any location convenient to them (e.g., computers or mobile phone in their home or workplace).

3-Day Tracking Activity. Participants then read instructions for an exercise tracking their attention and corresponding affect 4 times per day for 3 days. Over the next 3 days (Days 2 through 4), participants were asked to monitor and record the following four times each day (at times of their choosing): 1) what they were doing (e.g., changing a diaper or remembering last night's party), 2) what their attention (or spotlight) was directed to (e.g., how cute my baby is or the awkward conversation I had); 3) how much attention they were paying to it (from 0% to 100%, in increments of 10%), and 4) how they felt about the activity right now (0 = extremely negative; 50 = neutral, 100 = extremely positive, in 10-point increments).

After finishing the 3-day tracking activity, participants chose a time during the subsequent 3 days (Days 4 through 7) to complete questionnaires about their weekly affect and life satisfaction, as well as their positive and negative affect, and to enter their results from the 3-day exercise. To this end, they were presented with a figure displaying their 3-day exercise results using their preselected

mood-color grid (see Appendix B for a sample 3-day exercise figure). Participants were asked at this time to reflect upon their personal activity record by writing a paragraph about what patterns they noticed in their levels of attention, insights about their daily life and moods as a result of the 3-day activity, what activities or events made them happiest, and how they could modify their daily activities to flourish. Experimental participants who did not complete the 3-day activity follow-up were not allowed to proceed to the rest of the study, including the next step, the spotlight activity, because the 3-day activity served as a “training period” for the spotlight activity.

Spotlight Activity. On Day 8, after completing the 3-day activity, participants received instructions for the experimental spotlight activity, in which they were asked to continue to monitor their daily experiences, but instead of writing them down or rating them, they were encouraged to redirect or shift their attention when they thought it was necessary or beneficial to do so (e.g., if their attention was focused on something distressing, anxiety-provoking, irritating, etc.) over the next week. Participants were presented with a written document and an audio recording of the third author describing the activity. Both the document and audio file were available for participants to download for later access. (See Appendices C and D for the written instructions and full transcript of the audio file of the spotlight activity instructions, respectively.)

Participants completed the spotlight activity over the next 7 days (Days 8 through 14). Each evening, they received a link to a survey that prompted them to report how often they attended to their experiences, how many times they decided to redirect their attention, how many times they successfully redirected their attention, when and why they did not redirect their attention, and their reflections and thoughts about redirecting their attention. (See Appendix E for the full daily questionnaire.)

At the end of the week (Day 14), participants completed questionnaires about how much effort they put into the spotlight activity, as well as the same questionnaires completed at baseline measuring their weekly affect and life satisfaction, global life satisfaction, happiness, positive and negative affect, psychological need satisfaction (i.e., connectedness, competence, and autonomy), meaning in life, and daily hassles and uplifts. They were also given an opportunity to describe any insights or suggestions they gained from engaging in the spotlight activity. Finally, participants were instructed to continue the spotlight activity (monitoring and redirecting their attention on daily experiences) over the next 3 weeks (Days 15 through 35), but they did not receive end-of-day prompts about their experiences during the rest of the spotlight intervention.

Follow-Up. At the end of the three weeks (Day 35) of engaging in the spotlight activity, participants again completed the same questionnaires they completed at baseline (weekly affect and life satisfaction, global life satisfaction, happiness, positive and negative affect, psychological need satisfaction, meaning in life, and daily hassles and uplifts), including a measure of effort towards the spotlight activity. At this time, participants could also provide any insights or suggestions they gained from engaging in the spotlight activity. After participants completed the post-test questionnaires, they were debriefed about the purpose of the study.

Procedure for Waitlist Control Condition

Baseline Questionnaires. At baseline (Day 1), participants gave informed consent and completed the same baseline measures as the experimental group—namely, demographic information, weekly

mood and life satisfaction, global life satisfaction, happiness, positive and negative affect, psychological need satisfaction, meaning in life, and hassles and uplifts.

3-Day Tracking Activity Questionnaires. Control participants did not complete the 3-day exercise, but did complete questionnaires about their weekly affect and life satisfaction, as well as positive and negative affect, between the end of Day 4 and Day 7, to match the behavior of the experimental group.

Spotlight Activity Questionnaires. Control participants also did not complete the spotlight activity from Day 8 through Day 14, but did complete the same questionnaires they completed at baseline (except demographics).

Follow-Up Questionnaires. At the end of Day 35, like the experimental participants, control participants again completed the same questionnaires filled out at baseline (except demographics). Finally, if they wished, the control participants were given the opportunity to complete the experimental positive activity (the spotlight activity) at the end of the study (starting on Day 35).

Data Analyses

We first explored descriptive indicators of participant attrition from the study. To understand participants' reactions to the spotlight activity, we then evaluated descriptive statistics and qualitative data regarding spotlight participants' daily attention redirection, effort towards the spotlight activity, self-reported change in well-being, and overall responses to the spotlight activity.

To test the feasibility of the spotlight activity as a happiness intervention, we examined the Cohen's *d* effect sizes of the differences between the spotlight and waitlist control conditions on each outcome at Days 1, 7, 14, and 35. Because the spotlight condition imposed more stringent requirements on participants to remain in the study than did the waitlist control condition, these analyses included only participants who completed all of the Days 1, 7, 14, and 35 surveys.

Finally, to evaluate the effects of condition on change in well-being over the course of the study, we conducted a set of ANCOVA regression models (using complete-case participants only) predicting scores on each dependent variable at Day 35 from spotlight condition, controlling for scores on the variable at Day 1. Condition was dummy coded with the waitlist condition as the comparison group, and outcome and covariate scores were standardized within each time point. All data analyses were conducted using SPSS 24 and R.

Results

Participant Enrollment

Figure 1 displays participant enrollment for the study by day and condition. The considerable attrition in the spotlight condition suggests that fewer than one in two individuals who began to engage in the positive activity did not complete it—a rate very similar to the proportion of people who sustain New Year's resolutions (Norcross, Ratzin, & Payne, 1989). Because our study examined feasibility, we aimed to achieve naturalistic conditions, which involved no material compensation or incentives. Accordingly, the rate of attrition represents a notable finding in itself.

Additionally, one pattern we found in the 3-day tracking activity open-ended responses was that participants who practiced the intervention through the end of the experiment also wrote that they

derived pleasure from working or being productive whereas individuals who dropped out during the spotlight activity tended to write that they did not enjoy their work. Therefore, we believe the high attrition was not due to the infeasibility of attention redirection (spotlight activity) but due to self-selected characteristics (e.g., not self-motivated, their dislike of work) of those who dropped out.

Spotlight Activity Evaluation

Daily Reports on Redirection. To understand participants’ reactions to the spotlight activity, we examined responses to the daily reports that spotlight participants completed during the second week of the study, when they first started completing the spotlight activity.

Figure 1. Flow diagram and participant enrollment in the study

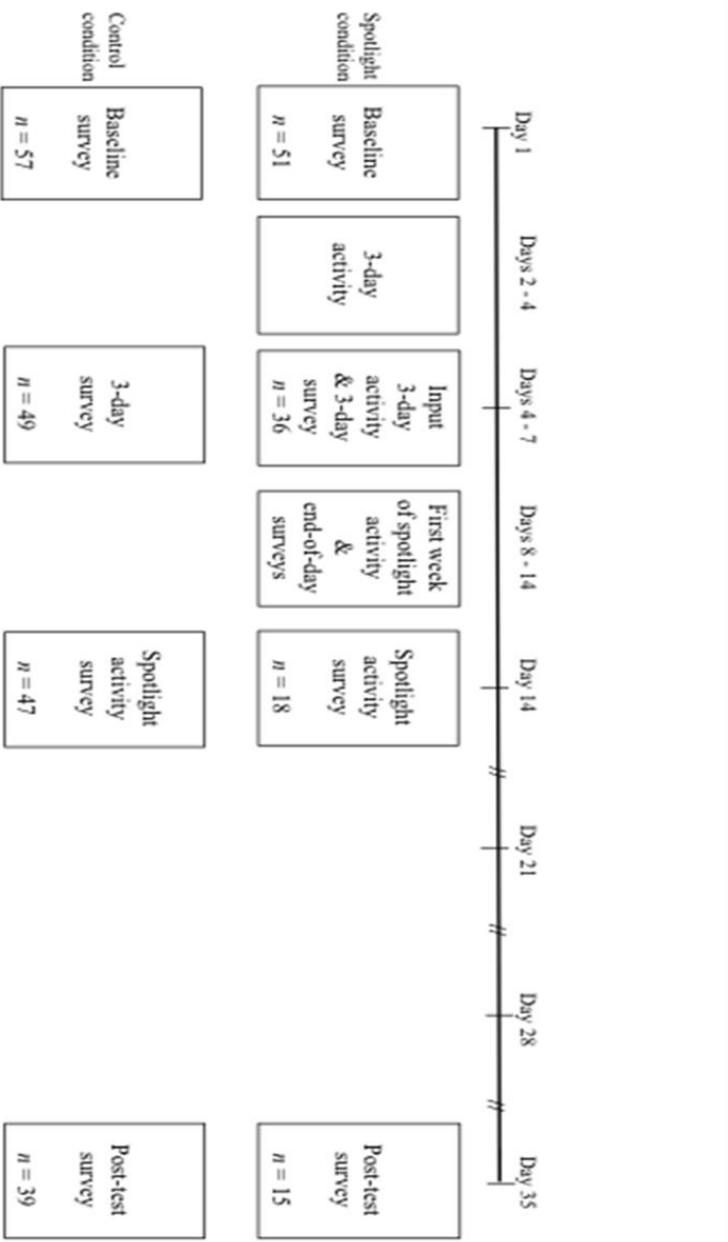


Table 1. Participant activity reports during the first 7 days of the spotlight activity

Day in study	<i>n</i>	Number of experiences monitored <i>M</i> (<i>SD</i>)	Number of redirection attempts <i>M</i> (<i>SD</i>)	Number of successful redirections <i>M</i> (<i>SD</i>)
8	17	3.53 (2.24)	1.47 (1.23)	1.35 (1.22)
9	16	4.19 (2.83)	2.25 (2.02)	1.88 (1.59)
10	18	3.33 (2.22)	1.67 (1.50)	1.56 (1.42)
11	12	4.67 (2.27)	2.17 (2.82)	1.92 (2.57)
12	12	3.50 (2.15)	1.83 (1.53)	1.50 (1.24)
13	13	3.77 (2.35)	1.38 (1.85)	1.15 (1.63)
14	18	3.67 (2.33)	1.61 (1.46)	1.94 (2.24)

Note. Spotlight participants only.

As shown in Table 1, participants monitored their experiences approximately 3 to 4 times per day over the first 7 days of the spotlight activity (Days 8-14 of the study). They subsequently decided to redirect their attention approximately 1 to 2 times per day (or 40 to 50 percent of occasions in which they monitored their experiences) and successfully shifted their attention on most of the occasions (68-70%) in which they decided to redirect their attention.

Effort and Self-Reported Change. Furthermore, spotlight participants who completed the Day 35 survey ($n = 15$) reported exerting moderate to high effort towards the spotlight activity over the course of the study on average ($M = 5.33$ out of 9, $SD = 1.88$; mode = 7). These participants also generally reported that they tried moderately hard to redirect their attention during the study ($M = 5.27$ out of 9; $SD = 1.83$; mode = 7) and that they performed the spotlight activity for their own sakes (rather than for the study) at least some of the time during the study ($M = 6.20$ out of 9; $SD = 1.93$; mode = 6). Finally, they reported experiencing moderately more positive emotions ($M = 5.47$ out of 9; $SD = 2.23$; mode = 6 and 7) and fewer negative emotions ($M = 5.53$ out of 9; $SD = 2.33$; mode = 5) after they started practicing the spotlight activity. Taken together, these findings suggest that participants—at least those who remained in the study after the 3-day tracking exercise—actively engaged in the spotlight activity of their own volition and experienced at least some improvement in their well-being after completing the activity.

Characteristics of Redirection and No Redirection. Each day after the first week of the spotlight activity, participants were asked to describe instances in which they decided not to redirect their attention and why, as well as instances in which they did attempt to redirect their attention, reasons for redirecting, strategies used in redirecting, their perception of successfully redirecting, and what they learned from the experience (see Methods section for specific questions). We qualitatively examined participants' open-ended written responses for themes and patterns. Participants reported redirecting their attention most from work-related activities (e.g., "I had an issue at work, in which someone misunderstood a request I had provided via email") and second most from social activities (e.g., "My son disrespected me"). While redirecting, people were most likely to be alone (but usually thinking about other people—e.g., "Caught up thinking about sad situation related to the family"), distantly followed by interacting with a child or significant other.

The redirecting strategy participants were most likely to use was changing what they were doing (e.g., "I turned off my phone ringer and focused on my work"), followed by changing what they

were thinking about (e.g., “To get through the few minutes of pain I focus on another part of my body that isn't hurting and the pain subsides”), and lastly by changing how they thought about the activity they were doing (e.g., “...decided to exercise self-compassion and forgive myself instead of beating myself up about it”). Among instances in which participants chose not to redirect, the most common reason was that they did not want to (i.e., they were happy doing what they were doing), followed by external pressures (e.g., something about the situation compelled them to keep their attention on what they were doing), and, lastly, because they felt incapable of redirecting their attention. In summary, the typical redirecting attempt was done alone by changing what one was doing.

Spotlight Activity Participant Reflection. Participants were also asked for overall feedback regarding the spotlight activity, and two overall themes emerged. One was that happiness is in one's control, that it is one's own responsibility, and that it is not dependent on external events. A representative quote: “At 25 I looked for happiness outside of my mind in my work, in my friends, and in my ambitions and dreams. At 50 I'm finding happiness by looking into my mind which I have learned is still eager to help me discover what true happiness really means.” The other theme was that people realized that there were more positive events in their lives than negative ones: “I confirmed that I have a really great life and so much to be grateful for. My hassles are very few compared with others.”

Descriptive Statistics and Effect Sizes: Happiness, Need Satisfaction, Hassles and Uplifts

Although not intended to test hypotheses so much as to show that the intervention is feasible, Table 2 reports means and standard deviations for each dependent variable by day and condition, as well as effect size estimates (Cohen's *ds*) for the differences between the spotlight and waitlist control conditions over time.

Notably, the spotlight condition imposed more stringent requirements on participants to remain in the study than did the waitlist control condition. For example, spotlight participants could not continue the study past Day 7 if they did not submit their results from the 3-day exercise. The participants in the spotlight condition who completed the entire study may therefore have been naturally more motivated, and perhaps happier, than participants in the control condition who completed the entire study. As such, the baseline differences between conditions in the entire sample may not accurately reflect differences between conditions when considering only those participants who did not leave the study. As shown in Table 2, participants in the spotlight condition were, in fact, significantly happier than control participants at Day 1. In conjunction with the results for the entire sample as reported in Appendix F, this finding suggests that spotlight participants (but not control participants) who were relatively happier at the start of the study were more likely to complete the entire study than were less happy participants. We therefore examined the effects of the spotlight condition over time using only those participants ($N = 47$; 11 spotlight, 36 control) who completed the surveys on all of Days 1, 7, 14, and 35.

At post-test (Day 35), participants in the spotlight condition reported significantly higher life satisfaction (both weekly and global), meaning in life, subjective happiness, general weekly affect, and positive affect, as well as significantly lower negative affect, than participants in the waitlist

control condition. Furthermore, between-condition differences were stronger—and in the expected direction—at Day 35 than at any earlier time points for weekly life satisfaction, meaning in life, subjective happiness, general weekly affect, and positive affect, as well as significantly lower negative affect, each of the well-being variables, with strong effect sizes at post-test. In other words, consistent with findings using the entire sample, participants in the spotlight condition were consistently happier at the end of the study than participants in the control condition. Nevertheless, the possibility of study completion differences among groups challenges the assumption of random assignment and compels restraint in drawing causal conclusions from these data. Because our primary goal was simply to test whether this attention-redirection intervention can potentially increase well-being—rather than to establish that it does increase well-being—this limitation on causal inference should not be a major cause of concern.

Because all our well-being variables were highly correlated with one another (absolute value r s between .49 and .92 at Day 1), we created a well-being composite variable to assess the effect of the spotlight activity on overall psychological well-being. All seven well-being variables (positive affect, negative affect [reversed], global life satisfaction, weekly affect, weekly life satisfaction, meaning in life, and subjective happiness) were first z-scored within each major time point (Days 1, 7, 14, and 35). The z-scored positive variables were then averaged for each participant at each time point to create the composite well-being variable. (The Day 7 composite variable used only positive and negative affect and weekly affect and life satisfaction.) Consistent with our findings for the individual well-being variables, participants in the spotlight condition reported higher composite well-being at Day 35 than did participants in the control condition, even though the groups did not differ at the beginning of the study.

No significant differences in need satisfaction (autonomy, competence, and relatedness) between the spotlight and control conditions were found at any time point. In contrast with our findings for well-being, the effect sizes for need satisfaction at Day 35 were weak, although they were stronger than the effect sizes at Day 1 for all three need satisfaction variables. Finally, participants in the spotlight group reported significantly less intense hassles than control participants at Day 35, but not at Day 1; the groups did not differ consequentially in perceived intensity of uplifts at any time point.

Table 2. Descriptive statistics and effect sizes of all dependent variables, by day and condition (complete cases only)

Positive affect				Negative affect			
Day	Spotlight <i>M</i> (<i>SD</i>)	Control <i>M</i> (<i>SD</i>)	<i>d</i> [95% CI]	Spotlight <i>M</i> (<i>SD</i>)	Control <i>M</i> (<i>SD</i>)	<i>d</i> [95% CI]	
1	5.25 (0.96)	4.79 (1.45)	0.34 [-0.38, 1.05]	2.22 (0.67)	2.97 (1.32)	* -0.62 [-1.34, 0.10]	
7	5.18 (0.99)	4.64 (1.15)	0.49 [-0.23, 1.20]	2.22 (0.74)	2.86 (1.24)	* -0.55 [-1.27, 0.17]	
14	5.57 (1.44)	4.91 (1.29)	0.50 [-0.22, 1.21]	2.16 (1.11)	2.84 (1.26)	-0.55 [-1.27, 0.17]	
35	5.66 (1.00)	4.61 (1.58)	* 0.71 [-0.01, 1.44]	1.87 (0.55)	2.92 (1.41)	*** -0.82 [-1.55, -0.09]	
Weekly life satisfaction							
Day							
1	78.18 (9.82)	66.39 (25.76)	* 0.51 [-0.21, 1.23]	79.09 (9.44)	62.50 (26.55)	*** 0.70 [-0.03, 1.42]	
7	78.18 (16.62)	71.94 (17.04)	0.37 [-0.35, 1.08]	80.00 (13.42)	67.78 (21.66)	* 0.61 [-0.11, 1.33]	
14	76.36 (25.41)	73.33 (21.78)	0.13 [-0.58, 0.84]	85.45 (12.14)	68.06 (25.28)	*** 0.76 [0.03, 1.48]	
35	87.27 (10.09)	66.94 (24.82)	*** 0.91 [0.17, 1.64]	88.18 (10.79)	66.39 (25.54)	*** 0.94 [0.21, 1.68]	
Subjective happiness							
Day							
1	5.87 (0.72)	4.66 (1.59)	** 0.84 [0.11, 1.57]	5.94 (0.65)	4.99 (1.53)	** 0.69 [-0.04, 1.41]	
7	5.98 (0.51)	4.61 (1.43)	*** 1.07 [0.32, 1.82]	6.00 (0.82)	5.13 (1.57)	* 0.60 [-0.12, 1.33]	
35	6.05 (0.59)	4.59 (1.54)	*** 1.05 [0.31, 1.80]	5.97 (0.81)	4.88 (1.67)	** 0.72 [-0.01, 1.44]	
Well-being composite							
Day							
1	5.93 (0.73)	5.53 (1.42)	0.31 [-0.41, 1.02]	0.48 (0.26)	-0.11 (0.98)	** 0.67 [-0.05, 1.40]	
7	5.95 (1.02)	5.42 (1.25)	0.45 [-0.27, 1.16]	0.48 (0.66)	-0.02 (0.94)	† 0.57 [-0.15, 1.29]	
14	5.95 (1.02)	5.42 (1.25)	0.45 [-0.27, 1.16]	0.49 (0.63)	-0.05 (0.82)	* 0.70 [-0.03, 1.42]	
35	6.20 (0.66)	5.13 (1.25)	*** 0.93 [0.20, 1.67]	0.60 (0.36)	-0.24 (0.95)	*** 0.99 [0.25, 1.73]	
Competence							
Day							
1	3.14 (0.36)	3.08 (0.49)	-0.19 [-0.90, 0.52]	2.92 (0.26)	2.84 (0.65)	0.14 [-0.57, 0.85]	
7	3.05 (0.34)	3.12 (0.49)	-0.01 [-0.72, 0.70]	2.74 (0.45)	2.73 (0.59)	0.02 [-0.69, 0.73]	
35	3.05 (0.29)	2.88 (0.45)	0.11 [-0.60, 0.82]	2.91 (0.43)	2.61 (0.60)	† 0.53 [-0.19, 1.24]	
Connectedness							
Day							
1	2.97 (0.27)	3.06 (0.51)	0.11 [-0.60, 0.82]				
7	3.05 (0.39)	3.05 (0.44)	-0.16 [-0.87, 0.55]				
35	3.00 (0.39)	2.94 (0.54)	0.39 [-0.33, 1.10]				
Hassles intensity							
Day							
1	0.70 (0.27)	0.72 (0.38)	-0.06 [-0.77, 0.65]	1.38 (0.58)	1.38 (0.53)	0.01 [-0.70, 0.72]	
7	0.50 (0.21)	0.73 (0.39)	* -0.64 [-1.37, 0.08]				
14	0.50 (0.21)	0.73 (0.39)	* -0.64 [-1.37, 0.08]	1.54 (0.62)	1.39 (0.63)	0.23 [-0.48, 0.94]	
35	0.57 (0.17)	0.75 (0.35)	* -0.56 [-1.28, 0.16]	1.53 (0.70)	1.33 (0.59)	0.32 [-0.39, 1.03]	

Note. *** $p < .001$. ** $p < .01$. * $p < .05$. † $p < .10$. All *p*-values are two-tailed and are based on a Welch's two-sample *t*-test between the spotlight and waitlist control conditions. $N_{\text{spotlight}} = 11$; $N_{\text{control}} = 36$.

ANCOVA Regression Models on Complete Cases. To evaluate these increases in the effect of condition over the course of the study, we conducted a set of regression models (using complete-case participants only) predicting scores on each dependent variable at Day 35 from spotlight condition, controlling for scores on the variable at Day 1. That is, did the spotlight activity lead to improvements in well-being, need satisfaction, and perceived hassles and uplifts above and beyond participants' initial statuses? Condition was dummy coded with the waitlist condition as the comparison group, and outcome and covariate scores were standardized within each time point. The results of these models are shown in Table 3.

Table 3. Regression models predicting outcome variables on Day 35 from condition, controlling for scores at Day 1 (completed cases)

Dependent variable	$\beta_{\text{condition}}$	SE	t	p
Well-being				
Positive affect	.52	.29	1.78	.081
Negative affect	-.42	.27	-1.55	.128
Weekly affect	.67	.31	2.16	.036
Weekly life satisfaction	.51	.28	1.83	.074
Global life satisfaction	.33	.19	1.72	.092
Subjective happiness	.13	.18	0.70	.489
Meaning in life	.72	.27	2.61	.012
Well-being composite	.50	.25	1.99	.053
Need satisfaction				
Autonomy	.21	.31	0.68	.500
Competence	.45	.29	1.52	.135
Relatedness	.33	.30	1.09	.280
Hassles & uplifts				
Hassle intensity	-.51	.28	-1.81	.077
Uplift intensity	.31	.28	1.12	.270

Note. Models were analyzed using only participants with responses at all of Days 1, 7, 14, and 35. Denominator $df = 44$. Condition was dummy coded (0 = waitlist control, 1 = spotlight).

$\beta_{\text{Condition}}$ = standardized (excluding condition dummy variable) regression coefficient for experimental condition. SE = standard error.

Controlling for Day 1 scores, participants who engaged in the spotlight activity experienced significantly greater weekly mood and meaning in life at Day 35 than did control participants. In addition, experimental condition had marginally significant effects on positive affect, global life satisfaction, weekly life satisfaction, composite well-being, and intensity of hassles; these dependent variables may have achieved significance with a larger sample size. The effect of condition was notably in the expected direction, but nonsignificant, for all other dependent variables

Discussion

This paper presents the background, rationale, methodology, and preliminary proof-of-concept results for an intervention targeting our proposed common mechanism underlying nearly all successful happiness-boosting strategies—namely, the redirection of attention. As an easy, simple alternative to burdensome attention training methodologies (Gross, 1998; Watson & Purdon, 2008), the spotlight activity was designed with the goal of offering immediate and direct control over laypersons' well-being in naturalistic day-to-day settings.

Summary of Findings

Participants who engaged in the spotlight activity successfully redirected their attention most (approximately 70%) of the time. Participants were also generally highly intrinsically motivated, as shown by the effort put forth towards the activity as well as their motivation to do the activity for their own sakes (e.g., even though spotlight activity participants were not compensated in any way, a number of them still completed the intervention). Spotlight activity participants who chose not to redirect most commonly reported that they chose not to because they were happy with what they were doing (rather than because they felt incapable), underscoring the feasibility of attention redirection without formal training.

When compared with control participants, those who practiced the spotlight activity reported significantly higher life satisfaction (both weekly and global), meaning in life, and general weekly affect, as well as significantly lower negative affect, after the intervention ended. The between-condition effect sizes at post-test were moderate to strong for each of the well-being variables. Participants in the spotlight condition also reported experiencing less intense hassles than did control participants at post-test. Although spotlight (but not control) participants who were happier at baseline were also more likely to complete the study, consistent with our findings using the entire sample, when analyzing complete cases, our effect sizes indicating between-group differences increased between baseline and post-test for all well-being variables and were significant at post-test. Finally, controlling for baseline scores, spotlight activity participants experienced significantly greater improvements in weekly affect and meaning in life at post-test than control participants and marginally greater improvements in positive affect, global life satisfaction, weekly life satisfaction, composite well-being, and intensity of hassles.

Notably, participants who practiced the spotlight activity did not feel more connected, competent, or autonomous than those in the control group at any time point. One reason participants may not have experienced a boost in their psychological needs is that the spotlight activity did not directly require participants to engage in a specific positive activity after their redirection attempts. In other words, although participants were encouraged to redirect their attention away from negative events such as rumination, upsetting experiences, or unproductive behaviors, no alternative positive activities such as kindness, meditation, or gratitude were suggested or required to participate in the study. Moreover, the strategies that our participants used to redirect might have varied greatly in how positive they were from participant to participant and from situation to situation; hence, although some strategies (e.g., goal pursuit) may have led participants to feel more autonomous, others (e.g., strengthening a friendship) may have had a null or inverse impact on autonomy.

Despite the small sample size of the study, this proof-of-concept study provides encouraging preliminary evidence for the feasibility of an attention redirection intervention to increase positive affect, life satisfaction, and meaning in life, as well as to reduce negative affect and hassles. The findings are not only consistent with prior studies of attention training methodologies that have been linked with emotion regulation, but also advance this program of research by showing that community participants in their naturalistic settings generally report feeling able and motivated to redirect their attention without an extensive training period (such as the ones used in Wadlinger & Isaacowitz, 2011). Participants were also able to monitor and autonomously select an appropriate redirection strategy among a number of strategies, including but not limited to distraction, concentration, and savoring.

Limitations and Future Directions

Although our results are encouraging, we did not have a large enough sample size ($n = 11$ complete cases in the spotlight condition at post-test) to make a definitive determination about the spotlight activity's effects on well-being. As a consequence of the small sample size, most of the well-being effects were in the expected direction but not statistically significant. The high level of attrition in the spotlight activity condition also limits causal conclusions from our findings to people who consciously choose to practice the spotlight activity. As such, although our results show the feasibility of such an activity as a means of boosting happiness, they do not, by themselves, definitively demonstrate the effects of the activity. Future studies should refine our design—for example, by streamlining participant activities, offering incentives to participate in the study through post-test, or sending friendly text message reminders during the spotlight activity. These changes might increase engagement with the activity and minimize attrition so that more conclusive statements about the effects of the spotlight activity can be drawn. Additionally, although 4 weeks was a relatively long period of time, future investigators will need to follow participants for longer periods, such as 6 months to a year, to test whether the effects of the spotlight activity are durable.

Another limitation of the present study is that the control condition was a waitlist control group rather than an active control group comparable to the spotlight condition. That is, participants in the control group did not complete an alternative neutral activity but rather continued their daily activities as usual. As such, our findings cannot rule out the possibility that the spotlight activity's effects were merely due to participants' expectations or a placebo effect (though still an important finding, as people may not care how they become happier as long as they do). A hypothesis-testing study—one that goes beyond exploring feasibility—thus requires an active control group, preferably one that is comparable to the spotlight activity but without its attention-redirection element.

Another limitation of our design was that we did not directly examine participants' abilities to redirect attention at pre-test and post-test. Ideally, we would have included these measures for both the control and spotlight participants to examine whether the redirection abilities of participants in the spotlight condition had grown as a result of their participation in the spotlight activity. Relatedly, the spotlight condition participants tracked their attention on specific tasks only during the 3-day activity and not during the spotlight activity itself; future studies could have participants track and enter their attention on specific tasks (rather than in general), although this could increase attrition.

Because participants were most likely to be alone when redirecting their attention but thinking about other people, we also recommend that future studies offer more specific directions to participants about how to redirect or restructure thoughts about others (e.g., conflict resolution strategies). Moreover, as the redirecting strategies participants used most were essentially shifting what they were doing and thinking about, future interventions should test under what conditions it is most valuable for participants to change what they are doing versus to change what they are thinking about.

Finally, the volunteer participants in this study were primarily upper middle class Caucasian individuals; therefore, the present study's results may not generalize to lower-income earners and people of diverse ethnic backgrounds. For example, individuals with low socioeconomic status may face more frequent daily stressors and therefore have less capacity, flexibility, or resources to redirect their attention at any time they wish. Further studies are needed to test the effects of the spotlight activity on well-being in more diverse samples.

Concluding Words

The present study was the first, to our knowledge, to develop and test the feasibility of an explicit attention-redirecting well-being intervention. The initial results are consistent with the notion that redirecting attention could be the mechanism underlying the well-being benefits of a variety of positive activities, such as practicing gratitude, kindness, or optimism. Although further research is needed to understand the strength of the spotlight activity's effects, and the conditions (e.g., redirection situations, strategies to redirect, redirection frequency) under which it operates most successfully, our findings present an exciting new direction for well-being intervention research..

Declaration of Conflicting Interests

The author(s) declared no conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

This work was partially supported by a National Science Foundation Graduate Research Fellowship (Grant 1326120) to the second author.

References

- Bergsma, A. (2008). Do self-help books help? *Journal of Happiness Studies*, 9, 341–360. <http://dx.doi.org/10.1007/s10902-006-9041-2>
- Bolier, L., Haverman, M., Westerhof, G. J., Riper, H., Smit, F., & Bohlmeijer, E. (2013). Positive psychology interventions: a meta-analysis of randomized controlled studies. *BMC Public Health*, 13(1), 119. <http://dx.doi.org/10.1186/1471-2458-13-119>
- DeLongis, A., Folkman, S., & Lazarus, R. S. (1988). The impact of daily stress on health and mood: Psychological and social resources as mediators. *Journal of Personality and Social Psychology*, 54(3), 486–495. <http://dx.doi.org/10.1037/0022-3514.54.3.486>
- Dickerhoof, R. M. (2007). Expressing optimism and gratitude: A longitudinal investigation of cognitive strategies to increase well-being. *Dissertation Abstracts International*, 68, 4174 (UMI No. 3270426). <http://gradworks.umi.com/32/70/3270426.html>
- Diener, E. (2000). Subjective well-being: The science of happiness and a proposal for a national index. *American Psychologist*, 55, 34–43. <http://dx.doi.org/10.1037/0003-066X.55.1.34>
- Diener, E., & Emmons, R. A. (1985). The independence of positive and negative affect. *Journal of Personality and Social Psychology*, 47, 1105–1117. <http://dx.doi.org/10.1037/0022-3514.47.5.1105>
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction With Life Scale. *Journal of Personality Assessment*, 49, 71–75. http://dx.doi.org/10.1207/s15327752jpa4901_13
- Dolan, P. (2014). *Happiness by design: Change what you do, not how you think*. New York: Hudson Stress Press.
- Dunn, E. W., Aknin, L. B., & Norton, M. I. (2008). Spending money on others promotes happiness. *Science*, 319, 1687–1688. <http://science.sciencemag.org/content/319/5870/1687.full>
- Emmons, R. A., & McCullough, M. E. (2003). Counting blessings versus burdens: An experimental investigation of gratitude and subjective well-being in daily life. *Journal of Personality and Social Psychology*, 84, 377–389. <http://dx.doi.org/10.1037/0022-3514.84.2.377>
- Fredrickson, B. L., Cohn, M. A., Coffey, K. A., Pek, J., & Finkel, S. M. (2008). Open hearts build lives: Positive emotions, induced through loving-kindness meditation, build consequential personal resources. *Journal of Personality and Social Psychology*, 95, 1045–1062. <http://dx.doi.org/10.1037/a0013262>
- Froh, J. J., Sefick, W. J., & Emmons, R. A. (2008). Counting blessings in early adolescents: An experimental study of gratitude and subjective well-being. *Journal of School Psychology*, 46(2), 213–233. <http://dx.doi.org/10.1016/j.jsp.2007.03.005>
- Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. *Review of General Psychology*, 2(3), 271–299. <http://dx.doi.org/10.1037/1089-2680.2.3.271>
- Jacobs Bao, K. (2012). The course of well-being in romantic relationships: Predicting positive affect in dating participants. *Psychology*, 3(12A), 1091–1099. <http://doi.org/10.4236/psych.2012.312A161>

- Layous, K., & Lyubomirsky, S. (2014). The how, why, what, when, and who of happiness: Mechanisms underlying the success of positive interventions. In J. Gruber & J. T. Moskowitz (Eds.), *Positive emotion: Integrating the light sides and dark sides* (pp. 473–495). New York: Oxford University Press.
- Layous, K., Nelson, S. K., & Lyubomirsky, S. (2013). What is the optimal way to deliver a positive activity intervention? The case of writing about one's best possible selves. *Journal of Happiness Studies*, 14, 635-654. <http://dx.doi.org/10.1007/s10902-012-9346-2>
- Layous, K., Sweeny, K., Armenta, C. N., Na, S., Choi, I., & Lyubomirsky, S. (2017). The proximal experience of gratitude. *PLOS ONE*, 12(7): e0179123. <https://doi.org/10.1371/journal.pone.0179123>
- Lyubomirsky, S., Dickerhoof, R., Boehm, J. K., & Sheldon, K. M. (2011). Becoming happier takes both a will and a proper way: An experimental longitudinal intervention to boost well-being. *Emotion*, 11, 391-402. <http://dx.doi.org/10.1037/a0022575>
- Lyubomirsky, S., King, L. A., & Diener, E. (2005). The benefits of frequent positive affect. *Psychological Bulletin*, 131, 803-855. <http://dx.doi.org/10.1037/0033-2909.131.6.803>
- Lyubomirsky, S., & Lepper, H. (1999). A measure of subjective happiness: Preliminary reliability and construct validation. *Social Indicators Research*, 46, 137-155. <http://dx.doi.org/10.1023/A:1006824100041>
- Lyubomirsky, S., Sheldon, K. M., & Schkade, D. (2005). Pursuing happiness: The architecture of sustainable change. *Review of General Psychology*, 9, 111-131. <http://dx.doi.org/10.1037/1089-2680.9.2.111>
- Nelson, S. K., Della Porta, M. D., Jacobs Bao, K., Lee, H. C., Choi, I. & Lyubomirsky, S. (2015). 'It's up to you': Experimentally manipulated autonomy support for prosocial behavior improves well-being in two cultures over six weeks. *The Journal of Positive Psychology*, 10, 463-476. <http://dx.doi.org/10.1080/17439760.2014.983959>
- Nelson, S. K., Fuller, J. A. K., Choi, I., & Lyubomirsky, S. (2014). Beyond self-protection: Self-affirmation benefits hedonic and eudaimonic well-being. *Personality and Social Psychology Bulletin*, 40(8), 998–1011. <http://dx.doi.org/10.1177/0146167214533389>
- Nelson, S. K., Layous, K., Cole, S., & Lyubomirsky, S. (2016). Do unto others or treat yourself?: The effects of prosocial and self-focused behavior on psychological flourishing. *Emotion*, 16, 850- 861.
- Norcross, J. C., Ratzin, A. C., & Payne, D. (1989). Ringing in the New Year: The change processes and reported outcomes of resolutions. *Addictive Behaviors*, 14, 205–212. [http://doi.org/10.1016/0306-4603\(89\)90050-6](http://doi.org/10.1016/0306-4603(89)90050-6)
- Seligman, M. E. P., Steen, T. A., Park, N., & Peterson, C. (2005). Positive psychology progress: Empirical validation of interventions. *American Psychologist*, 6, 410–421. <http://dx.doi.org/10.1037/0003-066X.60.5.410>
- Sheldon, K. M., & Hilpert, J. C. (2012). The Balanced Measure of Psychological Needs (BMPN) scale: An alternative domain general measure of need satisfaction. *Motivation and Emotion*, 36(4), 439–451. <http://doi.org/10.1007/s11031-012-9279-4>

- Sin, N. L., & Lyubomirsky, S. (2009). Enhancing well-being and alleviating depressive symptoms with positive psychology interventions: A practice-friendly meta-analysis. *Journal of Clinical Psychology*, 65(5), 467–487. <http://dx.doi.org/10.1002/jclp.20593>
- Wadlinger, H. A., & Isaacowitz, D. M. (2011). Fixing our focus: Training attention to regulate emotion. *Personality and Social Psychology Review*, 15(1), 75–102. <http://dx.doi.org/10.1177/1088868310365565>
- Watson, C., & Purdon, C. (2008). Attention training in the reduction and reappraisal of intrusive thoughts. *Behavioural and Cognitive Psychotherapy*, 36(1), 61–70. <http://dx.doi.org/10.1017/S1352465807003773>

Appendix A

Welcome to the Spotlight Study and thank you for agreeing to try out a new happiness-increasing activity! You will be instructed to engage in several positive exercises over the course of about a month, and we will track your feelings, thoughts, and experiences across this time. Please try your best to follow the instructions and to remember to log in to report on your progress and mood when prompted.

Your first exercise is one that people who have tried it have found very enjoyable and meaningful. Starting tomorrow (Tuesday), we would like you to track four experiences per day, over the course of three days (please see sample form below). In other words, four times a day – say, roughly at 10am, 2pm, 6pm, and 10pm – you will note down very briefly what you’re doing, your attention on it, and how positive/negative you feel. (You can choose the four time periods—for example, another alternative is 9am, 1pm, 5pm, and 9pm—but they should be roughly equally spaced out across your day.)

To remind yourself, you can set four alarms on your cell phone (say, at 10am, 2pm, 6pm, and 10pm) or use a free app (like TextMinder) that will text you during those times or a calendar or email program (like Outlook’s Calendar or FollowUpThen) to alert you during those times. It doesn’t matter how you remind yourself, as long as you remember to do it.

At each of those four time periods, you can write down what you’re doing on the form we provide (download our PDF, see below), on a piece of paper, in your cell phone Notes app, or in a computer file. It doesn’t really matter—it probably will take less than a minute each time. If you can’t write it down at that moment (e.g., because you’re driving), just remember your responses (e.g., “I’m driving and listening to the radio, my attention is 80%, and my positivity/negativity is 60 out of 100”). See an example below:

TUESDAY, TIME 1 (Exact time: 1:59pm)

WHAT: “What are you doing?” (briefly)
Working on a budget

WHERE’S YOUR SPOTLIGHT: “What’s your attention primarily on right now?” (briefly)
budget

HOW MUCH: “How much attention are you directing to what you’re doing right now?”

0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
None					Partial					Full

HOW FEEL: “How do you feel about this activity right now?”

0	10	20	30	40	50	60	70	80	90	100
Extremely Negative					Neutral					Extremely Positive

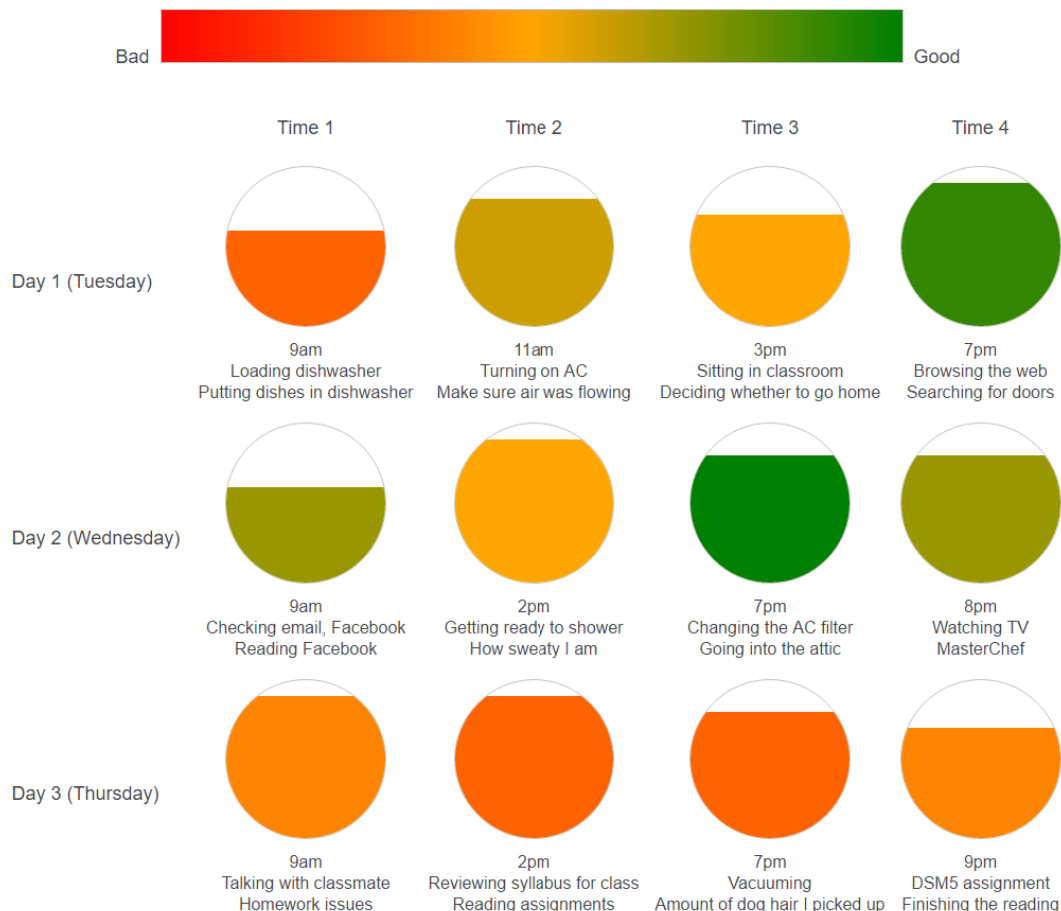
Click on the button below to download a PDF of the experience log and a copy of these instructions. (You don’t have to use this form to track your experiences, but you should record all of the necessary information on whatever form you use.) You will receive an email at the end of the three days with a link to input your answers.

Note: The form will open in a new tab in your web browser; if you have a popup blocker enabled in your web browser, you may need to disable it to download the form.

Clicking the download button will automatically complete this survey. You must submit the survey in order to save your responses.

Appendix B

Here are the results of your 3-day exercise in which you tracked your experiences four times per day. Each circle represents one experience. The *color* reflects how *positive/negative* you rated it at the time (see below the color grid you'd previously chosen) and the *amount that the circle is filled in* reflects *how much attention* you reported paying to the experience.



Appendix C

Now that you have completed the 3-day exercise, you are ready to begin trying the Spotlight activity developed by Professor Sonja Lyubomirsky's lab. For the next 7 days (starting on Monday), we would like you to continue monitoring your daily experiences (though you don't have to write them down or rate them, unless you find it helpful). Importantly, this time, in addition to monitoring your experiences, we want you to try to change them.

First, to get an overview of the idea behind this Spotlight activity, please listen to a short audio clip in which Professor Sonja Lyubomirsky gives a description and explanation of the activity. You are welcome to pause or rewind/replay the clip as often as you want.

In sum, one of the wisest definitions of happiness is "I'm happy when I want to continue doing what I'm doing." So, during the next week, every time you don't want to continue feeling what you're feeling, thinking what you're thinking, or doing what you're doing, ask yourself, "Where is my spotlight?" In other words, "What is my attention primarily focused on right now?" Answer that question for yourself and then make a determination: "Should I redirect my attention or is this something that I have to do?" (After all, sometimes there is stuff we have to do—e.g., a house chore, work task, or conversation—that is unpleasant, but there are long-term benefits to doing it.)

If you do decide that you need to redirect your attention, you'll need to choose which strategy to use. There are probably a hundred ways to do it—for example, you can try to appreciate the positives, meditate for 8 minutes, distract by phoning a friend, or watch a funny video, etc. In other words, feel free to choose whichever strategy you think will work best for you and for whatever situation that you're in.

We would like to know how the Spotlight Activity is going for you and will ask you to log in at the end of each day to tell us about it. This will help us a lot in understanding how and why this activity might be working. Please try as hard as you can to log in every night; it should only take a few minutes. However, if you forget or cannot get to it, then skip that day and try again the next day.

When you're ready to proceed, please click the button below (you'll receive a copy of these instructions by email). You must click the button below to continue the study.

Appendix D



Hi! I am Sonja Lyubomirsky, the director of the Positive Activities & Well-Being Lab at the University of California, Riverside. Along with my graduate students, I have been doing research on happiness for 25 years and I have written two books on the subject—*The How of Happiness* and *The Myths of Happiness*.

I want to personally thank you for volunteering to participate in this important new study being conducted by myself and two of my grad students. In short, we are testing a new happiness-promoting intervention.

The idea for this new intervention comes from one of my favorite quotes of all time, from William James, who was a philosopher and one of the fathers of modern psychology. James wrote: “My experience is what I agree to attend to. Only those items which I notice shape my mind.” So... “My experience is what I agree to attend to.” It’s an incredible piece of wisdom. A mind-boggling statement, when you think about it. The quote suggests that if you’re not paying attention to something, it’s as though it doesn’t exist. It’s not part of your experience.

So, if you think of your attention as a spotlight, whatever your spotlight is shining on, that is your experience; it is your life. For example, say you suffer from back pain, but you are not aware of it at this moment—your attention is not directed at it—then it’s as though you have no pain. Say you’re fighting with a family member but you are not directing your attention to this person—to this conflict—right now (instead, perhaps you’re thinking about your dinner tonight), then it’s as though it’s not happening. Or, if you are stressed about a deadline at work or school but at this moment you are really engaged and focused on your work—on getting the job done; if you are not paying attention to the deadline, then there is no stress.

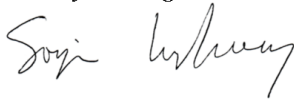
Indeed, when you think about today, every part of your day, every emotion, every thought that you had is the direct result of where you chose to turn your attention. Perhaps you were excited at one point today, because you received an email for a new idea—you were focusing on the exciting possibilities. Perhaps you were sad because you were remembering your grandparents, who are no longer here. And that memory maybe was triggered by an intense event, but after the trigger, the choice of what to think about—whether it was a funny memory or how lonely you were—was yours.

Now, I’m not saying that you should always redirect your attention or always focus on the positive. I’m not saying that behavior (without attention) doesn’t matter or that critical events (such as your boss yelling at you) can’t direct attention in compelling ways. But I am saying that the most critical insight about your life is the role of *what you agree to attend to* during 99% of your day. So, 99 percent of our experience are not acute events but the aftermath of those events; how we attend to them.

What's important about this, I think, is that almost all self-help advice or self-improvement recommendations can be boiled down to this one idea. Almost everything that we're told to do to become happier or to live the life we want to live is all about directing attention. For example, you will find in my and other authors' books and articles recommendations for different ways that people could learn to be happier—for example, about how to express gratitude, how to practice forgiveness, how not to ruminate on negative events, how to live in the present moment, how to focus on your relationships, how to focus on lifelong goals, how to learn to meditate. Every single one of these strategies is all about directing and redirecting attention—for example, turning your attention on what and whom you're grateful for (as opposed to taking things for granted or having a negative perspective), turning your attention onto the positives (rather than the negatives) in your future and onto what you admire and appreciate in your spouse or friends.

One of my favorite descriptions of happiness is "I'm happy when I want to continue doing what I'm doing." So, here are your instructions for what we're calling the Spotlight Activity: Every time you don't want to continue feeling what you're feeling, thinking what you're thinking, or doing what you're doing, ask yourself a key question—something like "Where's my spotlight? What's my attention on?" Then, you determine: "Should I redirect my attention or should I continue focusing? If I need to redirect, what strategy should I use? Do I try to appreciate the positive or should I meditate for 8 minutes?" or do whatever works for you. Remember: What your attention is on at any given moment is your experience; it is your life!

Thank you and good luck!



Appendix E

1. How many times today were you able to monitor an experience (by mentally judging your attention and feelings towards it)?

- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7
- ☐ 8
- ☐ 9+

2. Out of the experiences from Question 1, how many were ones for which you decided to redirect your attention (or "spotlight")?

- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7
- ☐ 8
- ☐ 9+

3. Out of the experiences from Question 2, how many were ones for which you successfully were able to shift your attention, even for a short time?

- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7
- ☐ 8
- ☐ 9+

4. If applicable and not too private, describe an experience (or two) today during which you decided not to redirect your attention and why. [open-ended]

5. If applicable and not too private, describe an experience (or two) today during which you attempted to redirect your attention. Why did you decide to redirect? What strategy did you use to do it? Were you successful? Did you learn something today about this experience that you might apply next time? [open-ended]

Descriptive statistics and effect sizes of all dependent variables, by day and condition						
Spotlight		Control		Spotlight	Control	
M (SD)		M (SD)		M (SD)	M (SD)	
		Positive affect		Negative affect		
Day			d [95% CI]			d [95% CI]
1	4.90 (1.18)	4.79 (1.29)	0.09 [-0.30, 0.47]	2.58 (1.06)	2.83 (1.27)	-0.21 [-0.60, 0.18]
7	4.62 (1.16)	4.60 (1.13)	0.02 [-0.42, 0.47]	2.64 (1.02)	2.83 (1.25)	-0.16 [-0.61, 0.28]
14	5.29 (1.40)	4.76 (1.38)	0.38 [-0.18, 0.95]	2.39 (1.17)	2.88 (1.33)	-0.38 [-0.95, 0.19]
35	5.40 (1.19)	4.74 (1.60)	0.44 [-0.19, 1.06]	2.03 (0.63)	2.86 (1.38)	** -0.68 [-1.32, -0.05]
Weekly affect						
Day				Weekly life satisfaction		
1	69.41 (22.22)	66.14 (25.62)	0.14 [-0.25, 0.52]	69.02 (22.56)	63.68 (26.77)	0.21 [-0.17, 0.60]
7	70.00 (17.24)	72.65 (15.91)	-0.16 [-0.60, 0.28]	68.06 (19.97)	68.78 (20.98)	-0.04 [-0.48, 0.41]
14	72.78 (23.96)	70.21 (24.09)	0.11 [-0.46, 0.67]	75.56 (22.29)	67.45 (26.17)	0.32 [-0.24, 0.89]
35	81.33 (16.42)	68.97 (24.90)	* 0.54 [-0.09, 1.17]	83.33 (13.97)	68.46 (25.60)	** 0.65 [0.01, 1.28]
Global life satisfaction						
Day				Subjective happiness		
1	5.04 (1.17)	4.71 (1.56)	0.24 [-0.15, 0.63]	5.29 (1.23)	5.09 (1.32)	0.15 [-0.23, 0.54]
7						
14	5.49 (1.14)	4.65 (1.52)	* 0.59 [0.02, 1.16]	5.65 (1.09)	5.04 (1.49)	† 0.44 [-0.13, 1.00]
35	5.97 (0.58)	4.71 (1.54)	** 0.94 [0.29, 1.58]	5.69 (1.06)	4.97 (1.63)	† 0.48 [-0.15, 1.11]
Meaning in life						
Day				Well-being composite		
1	5.42 (1.18)	5.63 (1.33)	-0.17 [-0.56, 0.22]	0.07 (0.75)	-0.06 (0.90)	0.15 [-0.24, 0.54]
7				-0.00 (0.85)	0.00 (0.90)	-0.00 [-0.44, 0.44]
14	5.67 (1.29)	5.42 (1.23)	0.20 [-0.37, 0.76]	0.25 (0.74)	-0.09 (0.86)	0.41 [-0.16, 0.98]
35	5.97 (1.01)	5.22 (1.25)	* 0.62 [-0.01, 1.26]	0.43 (0.54)	-0.17 (0.95)	** 0.70 [0.06, 1.33]
Autonomy						
Day				Competence		
1	3.07 (0.46)	3.07 (0.50)	-0.02 [-0.40, 0.37]	2.90 (0.55)	2.85 (0.60)	0.08 [-0.30, 0.47]
7						
14	3.06 (0.37)	3.00 (0.48)	0.15 [-0.41, 0.71]	2.88 (0.51)	2.72 (0.59)	0.28 [-0.28, 0.85]
35	3.01 (0.42)	2.97 (0.55)	0.09 [-0.53, 0.71]	2.81 (0.47)	2.64 (0.59)	0.31 [-0.32, 0.93]
Connectedness						
Day						
1	3.04 (0.49)	3.08 (0.48)	-0.10 [-0.49, 0.29]			
7						
14	3.05 (0.39)	3.09 (0.46)	-0.10 [-0.66, 0.47]			
35	2.90 (0.47)	2.89 (0.43)	0.03 [-0.60, 0.65]			
Hassles intensity						
Day				Uplifts intensity		
1	0.82 (0.42)	0.74 (0.37)	0.22 [-0.18, 0.61]	1.43 (0.51)	1.39 (0.53)	0.08 [-0.32, 0.47]
7						
14	0.62 (0.36)	0.77 (0.41)	-0.38 [-0.95, 0.19]	1.48 (0.56)	1.40 (0.61)	0.13 [-0.44, 0.70]
35	0.58 (0.18)	0.77 (0.40)	* -0.56 [-1.19, 0.07]	1.47 (0.66)	1.40 (0.62)	0.12 [-0.50, 0.74]

Note. ***p* < .001. **p* < .01. †*p* < .10. All *p*-values are two-tailed and are based on a Welch's two-sample *t*-test between the spotlight and waitlist control conditions.

Note. ^{***} $p < .001$, ^{**} $p < .01$, ^{*} $p < .05$, [†] $p < .10$. All p -values are two-tailed and are based on a Welch's two-sample t -test between the spotlight and waitlist control conditions.