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# Nine beautiful things: A self-administered online positive psychology intervention on the beauty in nature, arts, and behaviors increases happiness and ameliorates depressive symptoms☆

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ABSTRACT

We tested the effectiveness of a self-administered online positive psychology intervention which addressed the appreciation of beauty and excellence on happiness and depression directly after the intervention, after one week, and one, three, and six months. One hundred thirteen adults were randomly assigned to a "9 beautiful things" intervention (IG; n = 59), or a placebo control group ("early memories"; n = 54). Participants in the IG were asked to write down (a) three beautiful things in human behavior; (b) three things they experienced as beautiful in nature and/or the environment; and (c) three beautiful things related to beauty in general that they observed. Findings show increased levels of happiness in the intervention group at post-test, after one week and one month, and amelioration of depressive symptoms at the post-test and one week after the intervention. The effect sizes were small to medium ($\eta^2$ = .03 to .07). Overall, this initial study provides support for the notion that the "9 beautiful things" intervention may be effective in increasing people's well-being—at least in a short term.



## 1. Introduction

The study of aesthetics and beauty has a long tradition in psychology (e.g., Berlyne, 1974; Birkhoff, 1933; Eysenck, 1940; Martindale, 1988). Recently, research in this area has focused on numerous facets including moral beauty, awe, excellence, openness to aesthetics, and beauty as a character strength (e.g., Costa & McCrae, 1992; Diessner, Solom, Frost, Parsons, & Davidson, 2008; Güsewell & Ruch, 2012b; Haidt & Keltner, 2004; Keltner & Haidt, 2003; Martínez Martí, Avia, & Hernández-Lloreda, 2014a, 2014b; Peterson & Seligman, 2004; Reber, Schwarz, & Winkielman, 2004). Models such as the *appreciation of beauty and excellence* model (Haidt & Keltner, 2004) or the *appreciation of and engagement with beauty* model (Diessner et al., 2008) have been developed and contribute to the understanding of inter-individual differences in how beauty is perceived.

One of the objectives of the emerging field of positive psychology is the evaluation and development of so-called positive psychology interventions (i.e., "[…] treatment methods or intentional activities that aim to cultivate positive feelings, behaviors, or cognitions"; Sin & Lyubomirsky, 2009; p. 468). There is robust meta-analytic evidence that these deliberate activities are effective in increasing subjective well-being and ameliorating depression (Bolier et al., 2013; Sin & Lyubomirsky, 2009), but none of these studies has addressed the role of the appreciation of beauty and excellence. A recent study also shows that the way people work with these interventions is predictive of happiness and depressive symptoms after a time-span of 3.5 years (Proyer, Wellenzohn et al., 2015).

The notion that positive psychology interventions that are based on the *appreciation of beauty and excellence* (ABE) may be effective for increasing well-being and ameliorating depressive symptoms receives support from a broad range of studies. For example, Güsewell and Ruch (2012b) found a robust positive relation between ABE as a strength of character and different types of positive emotions as assessed via the *Dispositional Positive Emotion Scales* (Shiota, Keltner, & John, 2006); numerically highest relations were found for awe, object or situation specific positive emotions, joy, and self-oriented positive emotions. The strength of appreciation of beauty and excellence is also positively associated with various indicators of subjective well-being—although low in size, it is robust across a broad range of studies (e.g., Peterson, Ruch, Beermann, Park, & Seligman, 2007; Proyer, Ruch, & Buschor, 2013; Ruch et al., 2010). Recently, Martinez-Marti and colleagues, (2014a,b) found that 97% of the participants in a three-week web-based intervention to train ABE

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reported a higher degree of well-being after the intervention (authors do not report comparisons with a control condition).

This study builds upon earlier work by Diessner, Rust, Solom, Frost, and Parsons's (2006); Diessner et al.'s (2008) framework. As mentioned, Diessner argues that three components should be distinguished: namely, natural, artistic, and moral beauty. Diessner et al. (2006) showed that engagement with natural, artistic, and moral beauty led to an increase in the trait *hope* in college students ($n = 32$ in the experimental and $n = 29$ in the control condition at the beginning of the program) in comparison with a control condition (students in a different lecture that did not receive any assignments). Additionally, the intervention led to an increase in the engagement with moral beauty. Students in the intervention condition were required to keep "Beauty logs" for 12 weeks as part of the syllabus for the class they attended with this instruction:

> "The assignment is to identify and describe three aspects of beauty that you observe during the week before the assignment is due. 1) Describe something you felt was beautiful that is from nature. 2) Describe something you felt was beautiful that is human-made (arts and crafts in its broadest definition). 3) Describe something you felt was beautiful in human behavior (good deeds in their broadest definition). A minimum of three sentences is required (one sentence for each of the three: nature, art, morality), and a maximum of three paragraphs is allowed" (Diessner et al., 2006; p. 309).

Our aim was to extend this study in several ways. Diessner et al. (2006) did not have a placebo-control condition and the sample size was rather small and consisted of students only. Therefore, we employed a placebo-controlled design with a larger and more diverse sample, provided the interventions in a self-administered online setting, and adapted the dependent variable from the trait *hope* to happiness and depressive symptoms for testing the contribution of a beauty intervention on these variables.

The beauty intervention is an adaptation of Diessner et al.'s (2006) instruction combined with elements of the "three good things" (Seligman, Steen, Park, & Peterson, 2005)/"three funny things"-intervention (Gander, Proyer, Ruch, & Wyss, 2013; Proyer, Gander, Wellenzohn, & Ruch, 2014; Wellenzohn, Proyer, & Ruch, in press) to make it more suitable for application in a self-administered setting. This led to the development of the "9 beautiful things"-intervention. The task of the participants was to write down (a) three beautiful things on *human behavior* (morally positively valued behavior, good deeds); (b) three things they experienced as beautiful in *nature and/or the environment*; and (c) three beautiful things *in general* (referring to aesthetics) that they noticed during the day. Additionally, participants were required to note why they found each of these things beautiful. We tested this intervention first in an earlier program in a variant that allowed its administration in a group setting. However, it was not possible to test the effectiveness of this intervention separately, because it was administered together with interventions for creativity, kindness, love of learning, and perspective (Proyer et al., 2013). The placebo-control condition in the present study was the "early memories" intervention (writing about early childhood memories each night for seven consecutive days; see Seligman et al., 2005). Changes in happiness and depression were measured directly after the completion of the intervention (post measure), after one week, and one, three, and six months.

Overall, we expected that the "9 beautiful things" intervention would be effective in increasing well-being and ameliorating depression in a placebo-controlled online intervention. This study enables testing long-term effects for the intervention. However, the expectations for the sustainability of the effects are of exploratory nature only. Only few interventions are effective for a time span of up to six months (see e.g., Gander et al., 2013; Mongrain & Anselmo-Matthews, 2012; Proyer et al., 2014; Seligman et al., 2005). Nevertheless, we wanted to examine this time span for a better approximation of the effectiveness of the interventions. It was expected that the intervention would be effective for a longer period than only directly after the completion of the intervention (post-test), as focusing on beautiful things could be easily integrated in the participants' daily life and, thus, facilitate long-term effects (cf. Lyubomirsky, Sheldon, & Schkade, 2005). Furthermore, we tested for moderating effects of happiness and depression at baseline (see e.g., Gander et al., 2013; Proyer, Wellenzohnet al., 2015). It was expected that those participants with greater levels of depressive symptoms and lower levels of happiness at pretest would benefit more from the intervention (see Sin & Lyubomirsky, 2009).

## 2. Method

### 2.1. Participants

The sample consisted of 113 German-speaking adults (9.7% men); $n = 59$ were in the beauty intervention group (IG) and $n = 54$ in the placebo control group (PCG). Their mean age was 43.8 years ($SD = 9.93$; range 18–68 years). The largest portion was married (46%); 22.1% were in a relationship, 18.6% were single, and 3.3% were separated or divorced. The sample was rather well-educated with 37.2% holding a degree from university, 19.5% had a degree from an applied university, 22.1% had vocational training and 1.8% had finished school, and two participants had not finished school. Participants in the two groups did not differ in age ($t[1, 111] = .78$, $p = .44$), gender ($\chi 2\ [1, N = 113] = 0.22$, $p = .64$), or educational level, $\chi 2(4, N = 93) = 0.12$, $p = 1.00$.

### 2.2. Instruments

The *Authentic Happiness Inventory* (AHI, Seligman et al., 2005; German version as used by Ruch et al., 2010) was developed as a sensitive measure for changes in happiness in intervention studies. It consists of 33 sets of five statements describing an individual's feelings during the past week (e.g., "My life is a bad one" through "My life is a wonderful one"). The AHI has been widely used in research; good psychometric properties and support for its validity have been reported (e.g., Gander et al., 2013; Proyer et al., 2014; Shapira & Mongrain, 2010). The alpha coefficient in this sample was .93 (pre-test).

The *Center for Epidemiologic Studies Depression Scale* (CES-D, Radloff, 1977; German version by Hautzinger & Bailer, 1993) consists of 20 items assessing the presence and duration of depressive symptoms during the past week (e.g., "I thought my life had been a failure"). It utilizes a 4-point answer format ranging from 0 = "Rarely or None of the Time [Less than 1 Day]" to 3 = "Most or All of the Time [5–7 Days]". It is widely used in research and practice (see Shafer, 2006) and has already been used in numerous intervention studies. The alpha coefficient in this sample was .94 (pre-test).

### 2.3. Procedure

The study was advertised as an online intervention program for *strengthening your strengths* via flyers and in local newspapers. As in earlier studies (Gander et al., 2013; Proyer, Gander, Wellenzohn and Ruch, 2014, 2015; Proyer et al., 2013), we omitted advertising the program as "happiness activities" to avoid priming the participants towards the dependent variables. Prospective participants were guided to the study website for procedure instructions and registration. Participants had to create a personal account, secured with a username and password. At this point, participants were randomly assigned (using an automated algorithm, based on a Mersenne-Twister) to the beauty intervention or the early childhood memories activity (placebo control condition; see Seligman et al., 2005). Firstly, participants had to fill in basic questionnaires to assess demographic information (basic assessment) and the pretest data for happiness and depression (plus questionnaires on a broad range of personality variables to avoid a focus on the dependent