

# The Effects of Two Novel Gratitude and Mindfulness Interventions on Well-Being

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## Abstract

**Objective:** To examine the efficacy of two dual-component interventions, one based on mindfulness and one based on gratitude, to reduce depression and stress and increase happiness levels.

**Design:** Randomized, controlled study with data collected at baseline, 3 weeks, and 5 weeks.

**Settings:** Participants completed an online gratitude or mindfulness intervention at home. Self-report questionnaires were completed at home or at work.

**Participants:** Sixty-five women aged 18–46 years (mean age  $\pm$  standard deviation,  $28.35 \pm 6.65$  years).

**Interventions:** Participants were randomly assigned to a wait-list control condition or to either a gratitude or a mindfulness intervention condition. The interventions were used four times a week for 3 weeks. The gratitude intervention involved a gratitude diary and grateful reflection. The mindfulness intervention involved a mindfulness diary and mindfulness meditation, the Body Scan.

**Outcome measures:** The outcome variables were depression, stress, and happiness measured by using the Edinburgh Depression Scale, the Perceived Stress Scale, and the Subjective Happiness Scale, respectively.

**Results:** All outcome variables improved over time in both interventions group but not in the wait-list control group. Efficacy of the interventions differed between the interventions.

**Conclusions:** These short novel interventions seem to provide a useful way to enhance well-being. Further research in the area is warranted.

## Introduction

MINDFULNESS AND GRATITUDE ARE consistently and positively associated with well-being in diverse populations. Mindfulness is the intentional and nonjudgmental awareness of all thoughts, feelings, and sensations that occur in the present moment. It is associated with higher levels of quality of life,<sup>1</sup> sleep quality and duration,<sup>2</sup> and life satisfaction and happiness.<sup>3</sup> It is also associated with lower levels of stress<sup>4</sup> and depression and anxiety.<sup>3</sup> Mindfulness practice typically involves group sessions and at-home practice for approximately 8 weeks, during which individuals learn to regulate their awareness and approach all stimuli openly, in the present moment.

Gratitude is a tendency toward appreciating the positive in life. Although gratitude is not as widely used in practice as mindfulness, a growing body of gratitude research has found robust and consistent associations with well-being. It is associated with reduced anxiety,<sup>5</sup> stress and depression,<sup>6</sup> and increased life satisfaction,<sup>6</sup> positive affect, and health

behaviors.<sup>6</sup> Gratitude interventions tend to involve thinking or writing about things one feels grateful for over a period of time. Such single-component gratitude interventions are usually quick to complete, easy to use, and cost-effective.

A main limitation in evaluating the usefulness of gratitude interventions to date is that intervention components differ between studies and often lack suitable control conditions. Mindfulness interventions, on the other hand, tend to involve a considerable time commitment, which may limit its usability for individuals with little available free time. In addition, the social nature of many mindfulness interventions may contribute to any improvements in well-being. As such, no reported studies have fully examined the effects of mindfulness components or assessed brief, at-home mindfulness exercises. Rigorously examining the effects of two new brief interventions based on gratitude and mindfulness is essential to determine their potential to improve health and well-being in a cost-effective and accessible manner.

## Materials and Methods

### Participants

Sixty-two women took part in this randomized, controlled trial. Participants were aged 18–46 years (mean age  $\pm$  standard deviation,  $28.35 \pm 6.65$  years). All participants had completed secondary education; most were in a relationship or married (67.7%). Twenty-nine participants were assigned to the gratitude intervention; 22 were assigned to the mindfulness intervention; and 10 were assigned to a wait-list control. Thirty-five participants completed the full study.

### Materials

Both interventions were completed online on the research website 4 times a week for 3 consecutive weeks. The gratitude intervention involved a gratitude diary for listing up to 5 things participants felt grateful for and a guided gratitude reflection that focused on 1 thing they were grateful for. The mindfulness intervention involved a mindfulness diary for listing thoughts, feelings, and emotions in the present moment. It also involved a mindfulness meditation, the Body Scan, that guided attention to the breath and body. The interventions took 10–15 minutes to complete.

Self-report questionnaires were used to indicate levels of stress, depression, and happiness: the Perceived Stress Scale,<sup>7</sup> which measures the extent to which people view situations in their life as stressful; the Edinburgh Depression Scale,<sup>8</sup> and the 4-item Subjective Happiness Scale,<sup>9</sup> respectively.

### Procedure

The University Ethics Committee approved the study, and all participants provided informed consent. At study commencement, all participants completed baseline (time 1) self-report measures. Self-report measures were completed again at the middle of the study (week 3) and at the end of the study (week 5). Participants began using the intervention 1 week after baseline measures and used it 4 times a week for 3 weeks. Wait-list participants completed only self-report measures during the study and were given access to both interventions at study completion. Data were analyzed using SPSS software, version 20 (SPSS, Inc., Cary, NC).

## Results

Mean scores and standard deviations for stress, depression, and happiness for each experimental group at each time point were calculated (Table 1). A mixed between- and within-subjects analysis of variance was conducted for each outcome measure. No significant change was found for stress ( $F[8, 58] = 0.65$ ;  $p = 0.73$ ;  $\eta^2 = 0.08$ ), depression ( $F[4, 46] = 1.61$ ;  $p = 0.34$ ;  $\eta^2 = .09$ ), or happiness ( $F[4, 64] = 1.21$ ;  $p = 0.31$ ;  $\eta^2 = 0.07$ ). However, all outcome measures improved during the study (Fig. 1). Both intervention conditions demonstrated reductions in stress and depression and increases in happiness from baseline to week 3. The control condition demonstrated negligible change over time.

## Discussion

All observed changes in outcome variables were in the expected directions. Reductions in stress and depression and increases in happiness were observed for the gratitude and

TABLE 1. MEAN STRESS, DEPRESSION, AND HAPPINESS AT EACH TIME POINT

Variable	Gratitude (n = 15)	Mindfulness (n = 13)	Control (n = 7)
<b>Stress</b>			
Week 1	30.87 $\pm$ 7.90	26.92 $\pm$ 5.74	32.43 $\pm$ 7.81
Week 2	27.33 $\pm$ 8.93	26.92 $\pm$ 5.63	30.86 $\pm$ 8.86
Week 3	26.53 $\pm$ 7.23	23.61 $\pm$ 7.34	32.14 $\pm$ 9.25
<b>Depression</b>			
Week 1	20.08 $\pm$ 5.21	20.44 $\pm$ 3.94	20.17 $\pm$ 5.85
Week 2	19.83 $\pm$ 6.41	18.11 $\pm$ 5.90	19.33 $\pm$ 6.02
Week 3	18.00 $\pm$ 5.10	14.89 $\pm$ 2.98	19.67 $\pm$ 8.38
<b>Happiness</b>			
Week 1	17.07 $\pm$ 5.98	18.62 $\pm$ 4.59	15.71 $\pm$ 3.68
Week 2	17.40 $\pm$ 7.16	19.92 $\pm$ 3.95	15.86 $\pm$ 3.13
Week 3	18.87 $\pm$ 6.15	22.00 $\pm$ 4.06	16.00 $\pm$ 4.40

Percentage change in stress from weeks 1 to 3: gratitude, 14.06%; mindfulness, 7.67%; control, 0.06%. Percentage change in depression from weeks 1 to 3: gratitude, 10.36%; mindfulness, 27.15%; control, 2.48%. Percentage change in stress from weeks 1 to 3: gratitude, 10.54%; mindfulness, 18.15%; control, 1.85%.

mindfulness interventions. These changes did not occur for the wait-list control participants, highlighting the potential benefits of incorporating mindfulness or gratitude interventions into daily life. The gratitude intervention was most efficacious for reducing stress, demonstrating a continuous decline across the 5 weeks. The mindfulness intervention was most effective in reducing depression and increasing happiness.

Although the results of this study are promising, they may have limited generalizability because of the homogenous participant group of well-educated women. The attrition rate in this study (43%) was also problematic and resulted in a small sample size at completion. This could have affected the ability to detect a significant effect of the interventions because the study may have been underpowered to detect an effect.

In conclusion, both the novel gratitude and mindfulness interventions in this study demonstrated improvements in well-being over 5 weeks. The interventions resulted in differing outcomes between variables; gratitude appears more useful for reducing stress, while mindfulness is more

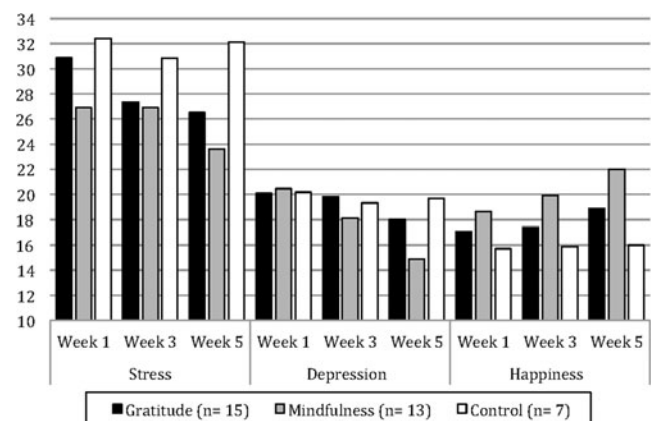


FIG. 1. Mean levels of stress, depression, and happiness for 5 weeks of study.

beneficial for happiness and depression. These findings indicate that mindfulness and gratitude interventions are potentially beneficial and could also be usefully combined to further improve well-being. Further research on brief interventions such as these is warranted.

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#### Author Disclosure Statement

No competing financial interests exist.

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