STRENGTHS-BASED MINDFULNESS: 
EFFECTS ON MENTAL HEALTH AND WELL-BEING

MINDFULNESS BASADO EN FORTALEZAS: 
EFECTO SOBRE LA SALUD MENTAL Y EL BIENESTAR

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Abstract
Combining Mindfulness and character strengths involves living fully aware of our strengths and putting them into action for the common good. Several studies have found a positive effect on well-being, but the effect on mental health has not yet been described. The aim of this study is to test the effectiveness of an online program that combines Mindfulness with character strengths to reduce symptoms of depression, anxiety and stress, and increase satisfaction with life. For this purpose, a quasi-experimental study was carried out with a control group whose sample consisted of 103 adults with anxious-depressive symptomatology residing in Spain. The results show the capability of the program to reduce the levels of anxiety, depression and stress, as well as to increase the levels of satisfaction with life. It is concluded that Mindfulness and Strengths-based programs are valid alternatives to improve mental health and that they can be applied online, reaching more people and reducing costs.

Keywords: mindfulness, character strengths, anxiety, depression, well-being

Resumen
La combinación del Mindfulness y con las fortalezas personales, implica vivir plenamente conscientes de nuestras fortalezas y ponerlas en acción para un bien común. Diversos estudios han encontrado efecto positivo sobre el bienestar, sin embargo todavía no se ha descrito el efecto que tiene sobre la salud mental. El objetivo de este estudio es comprobar la efectividad de un programa online que combina Mindfulness con fortalezas personales para reducir síntomas de depresión, ansiedad y estrés, y aumentar la satisfacción con la vida. Para ello, se lleva a cabo un estudio cuasi-experimental con grupo control cuya muestra está compuesta por 103 adultos/as con sintomatología ansioso-depresiva y residentes en España. Los resultados muestran la capacidad del programa para reducir los niveles de ansiedad, depresión y estrés, así como para aumentar los niveles de satisfacción con la vida. Se concluye que los programas basados en Mindfulness y Fortalezas son alternativas válidas para mejorar la salud mental y que se pueden aplicar online, llegando a más personas y abaratando costes.

Palabras clave: mindfulness, fortalezas del carácter, ansiedad, depresión, bienestar
Although Mindfulness comes from the Buddhist tradition, it has been incorporated into the field of mental health. Sometimes it appears as a component of psychological treatments, as in Acceptance and Commitment Therapy (ACT), and sometimes as a main component, as in the Mindfulness-Based Stress Reduction Program (MBSR). Several studies support the effectiveness of Mindfulness training in reducing depressive symptoms (e.g., Chi et al., 2018; Cillessen et al., 2019; Fredrickson et al. 2008; Kabat-Zinn et al., 1985; Khoury et al., 2015; Nieto et al., 2021), anxiety (e.g., Borquist-Conlon, 2019; Cillessen et al., 2019; Kabat-Zinn et al., 1985), stress (e.g., Cillessen et al., 2019; Khoury et al., 2015), burnout (e.g., Roese et al., 2013; Sopezki et al., 2020; Shonin et al., 2014; Reb et al., 2015) and to work on pain management (e.g., Kabat-Zinn et al., 1985; Cillessen et al., 2019). However, it has not only been used as a means to cope with the aforementioned symptomatology or disorders, but has also been related to well-being variables, such as satisfaction with life (e.g., Kong et al., 2014).

Mindfulness has progressively broadened its meaning to include components such as non-judgment, acceptance and compassion, thus providing new avenues for the study and improvement of human functioning. It has also been combined with other approaches and constructs, such as character strengths. These are defined as psychological characteristics considered morally valuable (Peterson & Seligman, 2004), capable of generating positive affect, sense of mastery, personal growth and meaning in life (Harzer, 2016) and promoters of optimal functioning in people (Lavy & Littman-Ovadia, 2017).

Approaching contemplative sciences and strengths allows us to deepen our awareness of our best qualities and of how we use them through three elements: awareness of use, awareness of impact, and responsiveness (Herber, 2021).

This synergy also acts inversely: the practice of mindfulness is enriched by the use of strengths. Some have a central role in the Mindfulness process, as they enhance the practice. For example, activating the strengths of Perspective, Self-regulation or Curiosity favors a state of Mindfulness (Niemiec et al., 2012; Niemiec & Lissing, 2016).

Other strengths emerge as a result of Mindfulness practice. For example, when we combine Mindfulness with behavioral activation, people become more active and aware of their movements, and this together with an enhanced mood increases Zest and the desire to continue with the activity (Niemiec et al., 2012).

Ultimately, a virtuous circle or positive spiral is generated, which has been called “heartfulness” (Niemiec, 2017), meaning the act of living from the heart by being fully aware of our strengths and putting them into action for a common good.

Several empirical studies highlight the positive effect of Mindfulness-Based Strengths Practice (MBSP) on: Increased levels of well-being (e.g., Ivtzan et al., 2016; Niemiec, 2014); increased sense of engagement (e.g., Ivtzan et al., 2016; Niemiec, 2014); improved interpersonal relationships (e.g., Niemiec, 2014); higher levels of flourishing (e.g., Ivtzan et al., 2016); increased satisfaction with life (e.g.,
Ivtzan et al., 2016); increased work performance (e.g., Pang & Ruch, 2019a) and work well-being compared to programs that use Mindfulness to reduce stress (e.g., Monzani et al., 2021).

However, the effect of Strengths-based Mindfulness on mental health and satisfaction with life in people with anxious-depressive symptomatology has not yet been empirically described. Moreover, it is necessary to provide evidence of its effectiveness in studies that include a control group.

Therefore, the aim of this study is to test the effectiveness of an online program that combines Mindfulness with character strengths to reduce symptoms of depression, anxiety and stress, and increase satisfaction with life.

**Methods**

**Procedure**

A convenience sampling was carried out, selecting a sample of people over legal age, residing in Spain and with high levels of anxiety, depression and stress. The study was conducted between July 2020 and February 2021 (these dates correspond to the Covid-19 pandemic).

Two groups were conducted: The experimental group (EG), composed of participants who requested to participate in an online program based on Mindfulness. The control group (CG), made up of people who were interested in carrying out an evaluation of their emotional state.

It was the participants themselves who voluntarily requested their participation in the different groups, so a quasi-experimental study was conducted.

**Program**

An online and self-applied program is developed, which combines Mindfulness with character strengths. It is structured in 12 sessions of 1h (see Table 1), where the first two sessions are focused on familiarizing the participant with the practice of Mindfulness and getting to know his or her personal strengths. From the third session onwards, the concept of strengths and their combination with mindfulness is introduced, while the last four sessions focus on practical elements of daily life in which to put this knowledge into practice.

Each session’s content is presented in video format and divided into: theoretical content, where key concepts and how Mindfulness and strengths work are explained, and practical content, where participants put the content into practice through exercises and meditations. Meditation and practice is suggested between sessions. In addition, each month there is a live class where doubts are resolved and some of the key meditations of the program are worked on in groups. The program duration is 12 weeks, although it is up to the participant to decide when to do each of the sessions.
Table 1

*Strengths and Mindfulness-Based Program Structure*

<table>
<thead>
<tr>
<th>Session 1</th>
<th>Introduction to Mindfulness and Emotional Management</th>
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<tbody>
<tr>
<td>Session 2</td>
<td>Mindfulness attitudes and first steps</td>
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<tr>
<td>Session 3</td>
<td>“Emotional” strengths</td>
</tr>
<tr>
<td>Session 4</td>
<td>Creating awareness of automatic reactions</td>
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<tr>
<td>Session 5</td>
<td>Mindfulness practice through Appreciation of beauty, Curiosity and Vitality.</td>
</tr>
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<td>Session 6</td>
<td>Mindfulness practice through Acceptance, Harmony, Universalism, and Gratitude.</td>
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<td>Session 7</td>
<td>Benefits of Mindfulness</td>
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<tr>
<td>Session 8</td>
<td>Shifting the Focus: Empowering Positive Emotions</td>
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<td>Session 9</td>
<td>Mindful Relationships I</td>
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<td>Session 10</td>
<td>Mindful Relationships II</td>
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<tr>
<td>Session 11</td>
<td>Mindfulness for stress management I</td>
</tr>
<tr>
<td>Session 12</td>
<td>Mindfulness for stress management II</td>
</tr>
</tbody>
</table>

**Measures**

The *Depression, Anxiety and Stress Scale* (DASS-21) Lovibond and Lovibond (1995), adapted to Spanish by Bados et al., (2005), was used to measure the presence of distress and negative symptomatology. This scale was used to obtain the scores on the dependent variables of depression, anxiety and stress. It consists of 21 items; each scale comprises 7 Likert-type items with four response options ranging from 0: Did not apply to me at all to 3: Did not apply to me at all. Reliability indices are .84, .70 and .82 for depression, anxiety and stress respectively (Bados et al., 2005).

As a measure of well-being, the *Satisfaction with Life Scale* (SWLS) Diener et al., (1985) adapted to Spanish by Vazquez et al., (2013) was used, obtaining a reliability index of .88. It consists of 5 Likert-type items with 7 response options: from 1: strongly disagree to 7: strongly agree. The higher the score, the greater the satisfaction with life experienced.

**Participants**

The total sample consists of 103 people, with an age range between 19 and 62 years (M = 40.8; SD = 11.26). The experimental group consists of 65 participants between 19 and 62 years of age (M = 43.6; SD = 10). Ninety-four percent are women while 6 percent are men. The control group consists of 38 participants, with an age range between 19 and 56 years (M = 31.4; SD = 10.5). 86% were women and 14% men. On average, participants in the experimental group took 3 months to complete the program, with a range of 2 to 7 months.

**Results**

Descriptive analyses were obtained for the four dependent variables in both groups (see Table 2).

Table 2 shows the pre-treatment and post-treatment scores of both groups. The pre-anxiety, depression and stress scores in both groups are compatible with
mental health problems, whose cut-off point is at 5, 6 and 6, respectively (Román et al., 2016). Regarding satisfaction with life, the control group presents a score that indicates the existence of possible significant problems in some area of life (Pavot and Diener, 1993), while the experimental group has a score that coincides with the average in satisfaction with life in that same study.

Table 2
Comparison Between Groups

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
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<tbody>
<tr>
<td></td>
<td>Dep</td>
<td>Anx</td>
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<tr>
<td>Experimental Group</td>
<td>Mean SD</td>
<td>Range</td>
</tr>
<tr>
<td></td>
<td></td>
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</tr>
<tr>
<td>Dep</td>
<td>9</td>
<td>9.2</td>
</tr>
<tr>
<td>(3.3)</td>
<td>(3.1)</td>
<td>(3.1)</td>
</tr>
<tr>
<td>Range</td>
<td>6-21</td>
<td>5-18</td>
</tr>
<tr>
<td>Control Group</td>
<td>Mean SD</td>
<td>Range</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dep</td>
<td>10.7</td>
<td>9.9</td>
</tr>
<tr>
<td>(4.1)</td>
<td>(4.2)</td>
<td>(3.9)</td>
</tr>
<tr>
<td>Range</td>
<td>6-21</td>
<td>5-19</td>
</tr>
</tbody>
</table>

Note. Dep: Depression; Anx: Anxiety; Str: Stress and Sat: Satisfaction with life.

For inferential analyses, a repeated measures ANOVA was performed for each of the dependent variables. Also, due to noncompliance with the assumptions, nonparametric tests were used for the depression and anxiety variables.

Depression

Because pre-treatment homogeneity assumption was not met (p < .05), nonparametric U-Mann-Whitney and Wilcoxon tests were used for intergroup and intragroup comparisons, respectively. In turn, an ANOVA was used to test for interaction effects (Figure 1).

The results show significant differences in the Wilcoxon test between pre-treatment and post-treatment, both in the CG group ($W_{CG} = 486, z = -2.8, p = .005, r = -.45$) and in the EG ($W_{EG} = 2008, z = -6.9, p < .001, r = -0.84$), the effect size in the CG is small, while in the EG is large. Regarding the analyses comparing each group, there were significant differences in the pre-treatment time ($U = 903, z = -2.40, p = .017, r = -.23$), as in the post-treatment ($U = 604, z = -4.41, p < .001, r = -.43$) The effect size for both cases is moderate.

As for the ANOVA, the results are similar to those previously described: the differences between the time without taking into account the difference of the groups is significant ($F_{(1,101)} = 70.2; p < .001; \eta^2_p = .41$). The effect size is mediated. The interaction effect is also significant ($F_{(1,101)} = 7.4; p = .008; \eta^2_p = .07$) but the effect size is small. Regarding the difference between the groups without taking into account the time we also found significant results, with a small effect size ($F_{(1,101)} = 24.1, p < .001, \eta^2_p = .19$). It can be seen that the rate of change is higher in the EG.
As with the previous variable, we found non-compliance with the homoscedasticity assumption (p < .05). In this case, we proceeded in the same way. Significant differences were obtained using the Wilcoxon test between pre-treatment and post-treatment of both groups (W_{CG} = 491, z = -2.5, p = .013, r = .41.; W_{EG} = 1082, z = -6.5, p < .001, r = .80). In the CG the effect size is moderate, while in the EG it presents a large effect size. Regarding the ANOVA we found significant differences for the three levels of analysis, the two main effects: time (F_{(1,101)} = 62.4, p < .001, η^2 = .38) with a moderate effect size; group, with a small effect size (F_{(1,101)} = 15.8, p < .001, η^2 = .13) and for the interaction of the group factor at pre-treatment and post-treatment (F_{(1,101)} = 17.3; p = .008; η^2 = .15) with a reduced effect size. Although a reduction in anxiety occurs in both groups, we found a higher rate of change in the EG (Figure 2).
Strengths-based Mindfulness

Stress

The homoscedasticity assumption is met in this variable, while the normality assumption was only not met in the EG at the pretreatment time (p = 0.01). Since the ANOVA is robust to non-compliance with this assumption, it was used as a tool in the analysis. Significant results were also obtained for both the main effects and the interaction effect. Time: \( F_{(1,101)} = 74.4, p < .001, \eta^2_p = .42 \) with a medium effect size, Group: \( F_{(1,101)} = 8.9, p = .004, \eta^2_p = .08 \) and interaction: \( F_{(1,101)} = 15.8, p < .001, \eta^2_p = .18 \) both present a small effect size. If the Post Hoc tests are analyzed, it can be seen that there is a significant improvement in symptomatology in the EG and CG. But it is in the EG where we found a higher rate of change, with a difference between means of 4.8 points versus 2.3, respectively (Figure 3).

Figure 3
Pre/Post Stress Comparison

Satisfaction with Life

In this variable the assumptions necessary to perform an ANOVA are met: homoscedasticity (p > .05) and normality (p > .05). The results show that there are significant differences between the pre-treatment and post-treatment moments, independently of the group. With a small effect size \( F_{(1,101)} = 17.9; p < .001; \eta^2_p = .15 \). Significant differences are also found between group interaction with the treatment, the treatment effect differs in the groups. It also presents a small effect size \( F_{(1,101)} = 11.5; p < .001; \eta^2_p = .10 \). And finally a significant difference is found between groups, regardless of time \( F_{(1,101)} = 46.5; p < .001; \eta^2_p = .313 \), in this case the effect size is medium (Figure 4).

A Post Hoc comparison was performed to check in which direction the interaction occurred: finding that between pre-treatment and post-treatment of the control group there are no significant differences (p = 0.60).
Discussion

Several studies have shown positive results when implementing programs combining mindfulness and character strengths. These are based on the idea that when both practices are fed back to each other, a direct positive impact is generated in the people who perform them (Ivtzan et al., 2016, Niemiec, 2014). Despite this, the implications and possible benefits of combining Mindfulness and strengths on mental health have hardly been explored in depth. In this case, a 12-session and online application program that combines mindfulness with strengths has been constructed. The results found in this study support the hypotheses about the effectiveness of these programs.

The hypothesis that the practice of strengths based on Mindfulness has positive effects on mental health is confirmed, as a significant decrease in depression, anxiety and stress variables is observed. This trend is also detected in the control group, this may be due to the feedback obtained by the participants on the results of the completed questionnaires, as they received a detailed report with the use of their strengths, as well as on their emotional state, which could encourage them to make changes. However, the rate of change in the experimental group is significantly higher than in the control group. This means that programs based on the synergy between Mindfulness and Strengths are valid alternatives to reduce distress in cases with anxious-depressive symptomatology, results compatible with Nieto et al. (2021). Moreover, they can be applied online, reaching more people and reducing costs.

The validity of the results is reduced by the significant difference in satisfaction levels of both groups in the pre-treatment phase. A possible explanation lies in the fact that people who have discomfort and seek a solution for it, have already started on the road to recovery. Whereas those who only evaluate their emotional state, perhaps in a contemplative phase, are aware that they have problems, but have not yet begun to change. However, when we compare the groups we find a significant increase in the experimental group with respect to the control group, which does
not experience improvement. These results are in line with the work of Ivtzan et al. (2016), where increased satisfaction with life was found to be a consequence of Mindfulness-based strengths practice.

Although the results obtained support the proposed hypotheses, the limitations of the study must be taken into account, and the conclusions may be biased if these findings are not taken with caution. The first limitation is not having a representative sample with random assignment to the conditions of the study, since the sample has been obtained by convenience and may bias some results. To reduce this problem, variables such as the initial level of symptomatology have been controlled to make groups as homogeneous as possible. However, it is recommended to measure the level of Mindfulness of the participants before the study and to choose experimental designs with a waiting list.

Another limitation is the lack of a follow-up measure to corroborate whether the decrease in negative symptomatology or increase in satisfaction with life is sustained over time.

It is also recommended to use a more complete measure to measure the variable of well-being, since this study only addresses satisfaction with life.

Even with these limitations, it shows the effectiveness of an online program based on mindfulness and strengths, where we do not only find that it is able to reduce the discomfort experienced by a person, but also that it enhances one of the pillars of well-being such as satisfaction with life. Therefore, it is necessary to carry out further studies, where these limitations are solved and more robustness for the methodology used is provided.

References


