Mindfulness based psychotherapy: impact of a post-pandemic context on teachers quality of life

Psicoterapia basada en Mindfulness: impacto de un contexto postpandemia sobre la calidad de vida de docentes

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Abstract
Introduction: The therapeutic approach known as Mindfulness, belonging to the third generation of psychotherapies, focuses on mindful awareness of the present moment. This study, which encompasses a wide cultural and socioeconomic diversity in the population, seeks to understand how Mindfulness promotes emotional well-being in crisis situations. Objective: The purpose of this study is to determine the effectiveness of Mindfulness in improving the quality of life of teachers. Material and methods: A descriptive-explanatory study was carried out, using a pretest and retest design with a quantitative approach. The sample, selected on a non-probabilistic basis, consisted of 50 teachers chosen by convenience sampling. A form was developed that included demographic variables and the GHQ-28 test. The data collected were analyzed using SPSS V 22.00 statistical software. Conclusion: A significant improvement in teachers’ quality of life was observed after the implementation of the Mindfulness-based intervention plan. It is recommended to consider Mindfulness as an effective intervention to alleviate psychological distress in specific contexts.

Keywords: Mindfulness; Psychotherapy; Quality of Life; Post pandemic; Covid 19; Teachers.

Resumen
Introducción: El enfoque terapéutico conocido como Mindfulness, perteneciente a la tercera generación de psicoterapias, se centra en la conciencia plena del momento presente. Este estudio, que abarca una amplia diversidad sociocultural en la población, busca comprender cómo el Mindfulness promueve el bienestar emocional en situaciones de crisis. Objetivo: El propósito de este estudio es determinar la efectividad del Mindfulness en la mejora de la calidad de vida de los docentes. Material y métodos: Se llevó a cabo un estudio descriptivo-explorativo, utilizando un diseño pretest y re-test con un enfoque cuantitativo. La muestra, seleccionada de manera no probabilística, consistió en 50 docentes elegidos mediante muestreo por conveniencia. Se desarrolló un formulario que incluía variables demográficas y la prueba GHQ-28. Los datos recopilados fueron analizados utilizando el software estadístico SPSS V 22.00. Conclusión: Se observó una mejora significativa en la calidad de vida de los docentes después de la implementación del plan de intervención basado en Mindfulness. Se recomienda considerar el Mindfulness como una intervención eficaz para aliviar el malestar psicológico en contextos específicos.

Palabras clave: Mindfulness; Psicoterapia; Calidad de Vida; Post pandemia; Covid 19; Docentes.
INTRODUCTION

As countries around the world implemented social distancing measures to mitigate the spread of the COVID-19 virus, teachers were forced to radically adapt their daily teaching routines, which generated stress and anxiety. This situation negatively impacted teachers’ mental health, especially their emotional well-being, both at the individual and family levels (WHO, 2022). These psychological effects were aggravated by the transition to remote work, which implied significant changes in the educational system.

In the post-pandemic context, the impact on teachers’ daily lives continues to be notable, especially in terms of their self-perceived well-being and ongoing connectedness (Gordon, 2020). The research provides a rigorous assessment of quality of life and its implications for mental health during the period of confinement. This study encompasses a culturally and socio-economically diverse population, providing insight into how Mindfulness practice promotes emotional well-being in times of crisis.

Mindfulness, known as “vipassana” in Pali, is defined as paying attention to seeing things as they are (Lopez, 2022). It is a third-generation or contextual psychological therapy that focuses on mindfulness. It consists of developing committed mental work that focuses on the conscious reality of the present moment, cultivating intentional and sustained attention toward individual purpose. The main objective is to reduce stress, anxiety, depression, and sleep problems. Mindfulness practice involves training awareness to live fully in each moment and be aware of one’s sensations, emotions, and thoughts. This involves moving from mental reactivity, characterized by automatic and unconscious responses, to responsibility, adopting controlled and conscious responses, and getting out of autopilot (Bazzano et al., 2018; Lopez, 2022).

Mindfulness training offers benefits for both mental and physical health. First, it has been shown to significantly reduce stress levels. By focusing on the present and observing thoughts without judgment, people can learn to more effectively manage the worries of the past and the uncertainties of the future, which promotes an overall state of health and well-being (Carroll et al., 2022).

From a therapeutic perspective, Mindfulness acts as a complementary tool to cognitive psychotherapy by providing skills to address psychological problems mindfully. Those who adopt this practice on an ongoing basis tend to be more resilient and respond more adaptively to difficult situations rather than reacting impulsively from emotionality, which promotes greater emotional self-regulation and well-being (Shires et al., 2020).

When examining the quality of life theory and the integration of Mindfulness practice in the educational context, significant challenges arise, such as the need for more time to engage due to the daily pressure and stress of teaching duties. However, it is crucial to address these issues and meet the challenges in order to foster healthier and more resilient educational environments (Chavez, 2021).

Third-generation psychological therapies, grounded in mindfulness, represent an innovation aimed at promoting awareness of individual thoughts and feelings, as well as fostering a greater understanding of emotional resilience. This therapeutic approach is a potentially useful tool in managing the wide range of problems that people face in their daily lives (Schuman-Olivier et al., 2020).

In a study conducted in China, the impact of Mindfulness-based intervention on the quality of life and psychological state of 1600 participants experiencing mental health difficulties, particularly those with Post-Traumatic Stress Disorder (PTSD) symptoms and physical problems such as fatigue and insomnia, was investigated in the context of COVID-19 recovery. The results demonstrated the efficacy of the intervention in improving both the quality of life and the psychological state of the participants (Si et al., 2021).

On the other hand, in Portugal, a study was conducted that evaluated the relationship between stress experienced by teachers and its impact on classroom climate. Through a program specifically designed to strengthen teachers’ socioemotional competencies, it was found that the implementation of mindfulness not only improved teachers’ well-being but also had positive effects on the classroom environment (de Carvalho et al., 2021).
In Italy, the effect of a mindfulness-based intervention on the resilience of teachers before and after the COVID-19 outbreak was evaluated. The results revealed a significant increase in resilience levels, as well as an improvement in the ability to cope with daily difficulties, which supports the effectiveness of mindfulness as a therapeutic strategy to strengthen teachers' ability to cope with crises (Matiz et al., 2020).

Likewise, in Spain, the efficacy of mindfulness techniques in significantly reducing levels of psychological distress among teachers was confirmed. The data collected supported this conclusion by showing a notable decrease in psychological distress after the application of mindfulness (Franco et al., 2010).

In the United States, several investigations have highlighted the benefits of mindfulness in improving mental health in non-clinical settings, as well as in reducing job burnout among health professionals and teachers (Galante et al., 2021; Luken & Sammons, 2016).

In Argentina, a study conducted with public school teachers revealed that mindfulness-based intervention led to a significant decrease in stress levels and a notable increase in participants' emotional regulation, underscoring its potential contribution to emotional well-being in educational settings (D'Adamo & Lozada, 2019).

However, in Ecuador, as in many other countries, the emotional and psychosocial consequences derived from the COVID-19 pandemic have yet to be the subject of comprehensive studies, and post-pandemic health measures, especially regarding psychological care, are minimal. This information gap could have significant implications for mental health and social well-being, particularly in the educational setting (Llerena et al., 2022).

The present study aims to determine the effectiveness of mindfulness in improving the quality of life of teachers.

**METHOD**

**Research design**

A quantitative study was carried out with a prospective design that focused on a psychotherapeutic intervention based on Mindfulness. The research was developed in Ecuador, specifically in the population of teachers of the Cayambe Educational Unit.

**Participants**

The sample was selected through a non-probabilistic approach using purposive sampling, which included a total of 50 participants. Inclusion criteria included teachers who were active during the period of confinement due to the COVID-19 pandemic.

**Instruments**

A data collection form was designed and consisted of two distinct sections. The first section addressed sociodemographic variables such as sex, age, marital status, educational level, and experience of COVID-19 infection. In the second section, the study variables were included: V1, referring to post-pandemic quality of life, and V2, related to the use of Mindfulness as a therapeutic strategy.

The GHQ-28 test is commonly used in research to assess the quality of life of individuals. Through its 4 subscales, it allows the measurement of somatic symptoms, anxiety-insomnia, social dysfunction, and depression, offering a comprehensive assessment of health. This 28-item instrument has proven to be reliable and valid, with Cronbach's alpha coefficients for each scale ranging from .71 to .97 and an overall coefficient of .97 (p < .05), indicating high internal consistency (Goldberg DP, 1979). Quality of life is assessed at two different times: before the intervention (pre-test) and after the intervention (retest). This methodological approach allows the effectiveness of the intervention to be analyzed (Galdeano et al., 2007).

**Statistical analysis**

Data collection on the Mindfulness-based therapeutic strategy was carried out through group sessions over three months, during which the psychological well-being of the teachers was measured before and after the intervention to evaluate its effectiveness. The evaluation of the results was based on parametric tests since the population was selected through inclusion and exclusion criteria, achieving a total of 50 participants.

For the analysis of the results, the statistical software SPSS version 22.0 for Windows in Spanish was used. Descriptive statistics were
applied to the sociodemographic variables (age, sex, marital status, educational level, kinship, occupation, COVID-19 infection). At the same time, bivariate relational analysis was used to verify the dependent and independent variables (Mindfulness and post-pandemic quality of life). The results were presented in statistical tables together with their respective analyses.

The evaluation of the development of the proposal is carried out considering the time dedicated to the research activities. A checklist is carried out that allows a precise appreciation of the principle of the assessment of the teachers' quality of life, both at the end of the research and in each of the relevant points addressed.

RESULTS

The sociodemographic results reveal a marked preponderance of middle adulthood, which constitutes 64% of the sample, contrasting with the 36% corresponding to early adulthood. Likewise, a slight majority of male participants stands out, representing 54% of the total. In terms of marital status, the majority are married, comprising 54% of the sample, followed by singles with 34%.

Divorced people represent 8%, while free union and widowed make up 2% of the total each.

The variable of the number of children reflects a significant distribution in the family experiences of the participants. It is observed that the majority have exactly 1 or 2 children, comprising 66% of the sample, followed by those with more than 3 children, constituting 18%, and finally those with no children, with 16%.

In relation to formal education, 60% of the teachers had a third-level education, while 40% had a fourth-level degree. Regarding health problems experienced in the last 12 weeks, 64% reported having experienced them during this period, in contrast to the remaining 36%.

Regarding the time elapsed since the last visit to the doctor, 70% of the participants had visited the doctor in the last 0 to 6 months. On the other hand, 4% mentioned having consulted between 7 months and 1 year, and the remaining 26% had visited the doctor more than 1 year ago.

Finally, in relation to the number of participants infected by COVID-19, 54% reported having been infected during this period, prevailing as the majority in comparison with teachers not affected during this contingency.

Table 1
Sociodemographics of the sample

<table>
<thead>
<tr>
<th>Variable</th>
<th>N=100</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primera juventud</td>
<td>18</td>
<td>(36.0 %)</td>
</tr>
<tr>
<td>Mediana edad</td>
<td>32</td>
<td>(64.0 %)</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>27</td>
<td>(54.0 %)</td>
</tr>
<tr>
<td>Female</td>
<td>23</td>
<td>(46.0 %)</td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>27</td>
<td>(54.0 %)</td>
</tr>
<tr>
<td>Divorced</td>
<td>4</td>
<td>(8.0 %)</td>
</tr>
<tr>
<td>Single</td>
<td>17</td>
<td>(34.0 %)</td>
</tr>
<tr>
<td>Unmarried</td>
<td>1</td>
<td>(2.0 %)</td>
</tr>
<tr>
<td>Widowed</td>
<td>1</td>
<td>(2.0 %)</td>
</tr>
</tbody>
</table>
Findings are evident, indicating that 30% of teachers are classified with a quality of life involving the presence of somatic symptoms, anxiety-insomnia, social dysfunction, and depression, providing a detailed understanding of their health status under the category “Quality of Life Condition with severe symptoms.” In contrast, 70% fall under the category of “Quality of Life Condition with moderate symptoms.”

Table 2
**Evaluation results, Quality of Life. Pretest**

<table>
<thead>
<tr>
<th>Variable</th>
<th>N=50</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of Life condition with severe symptoms</td>
<td>15</td>
<td>(30%)</td>
</tr>
<tr>
<td>Quality of Life condition with moderate symptoms</td>
<td>35</td>
<td>(70%)</td>
</tr>
</tbody>
</table>
### Table 3
**Design of the intervention proposal**

<table>
<thead>
<tr>
<th>N° Sesión</th>
<th>Objective</th>
<th>Actividades</th>
<th>Duración</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Session 1</strong>&lt;br&gt;Initial Evaluation</td>
<td>Identify and explore the client's emotional and cognitive challenges. Establish short and long term therapeutic goals.</td>
<td>- Initial interview and assessment. - Establishment of SMART objectives (Specific, Measurable, Achievable, Relevant and Time-bound).</td>
<td>80m.</td>
</tr>
<tr>
<td><strong>Session 2</strong>&lt;br&gt;Objectives</td>
<td>Pre Test GHQ-28 General Health Understanding the basics of mindfulness. Basic mindfulness exercises.</td>
<td>- Evaluation of the general health status of teachers. - Education about mindfulness and its benefits. - Breathing and mindfulness exercises.</td>
<td>60m.</td>
</tr>
<tr>
<td><strong>Session 3</strong>&lt;br&gt;Body-Mind</td>
<td>Explore the connection between physical sensations and emotions. Introduce mindfulness body exploration.</td>
<td>- Mindfulness body scanning exercises. - Reflection on the connection between emotions and physical sensations.</td>
<td>60m.</td>
</tr>
<tr>
<td><strong>Session 4</strong>&lt;br&gt;Acceptance and Detachment</td>
<td>Cultivate acceptance of thoughts and emotions. Practice detachment from negative thoughts.</td>
<td>- Mindfulness applied to thoughts and emotions. - Detachment techniques.</td>
<td>80m.</td>
</tr>
<tr>
<td><strong>Session 5</strong>&lt;br&gt;Mindfulness in Daily Life</td>
<td>Integrate mindfulness into daily activities. Apply mindfulness in stressful situations.</td>
<td>- Mindfulness exercises during daily tasks. - Discussion on the application of mindfulness in specific situations.</td>
<td>60m.</td>
</tr>
<tr>
<td><strong>Session 6</strong>&lt;br&gt;Stress Management with Mindfulness</td>
<td>Develop mindfulness strategies to manage stress. Practice stress reduction through mindfulness.</td>
<td>- Identification of stress triggers. - Development of a mindfulness toolkit for stress.</td>
<td>60m.</td>
</tr>
</tbody>
</table>
The mindfulness intervention has demonstrated a remarkable effect size, according to the results obtained and evaluated by Cohen's point estimation, which revealed a substantial value of 0.680. This result points to a significant difference between the pretest and posttest measurements. Furthermore, when analyzing the 95% confidence interval, support was found for the magnitude of this difference, given that it did not encompass the zero value, confirming the effectiveness and statistical significance of the observed effect measure. These joint findings reinforce the validity of the conclusions obtained in the study, indicating that the intervention or treatment has had a considerable and statistically significant impact on the variable of interest.

Table 4
Results of the mindfulness intervention.

<table>
<thead>
<tr>
<th></th>
<th>DS</th>
<th>Estimate</th>
<th>IC 95%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pretest</td>
<td>2.706</td>
<td>.680</td>
</tr>
<tr>
<td></td>
<td>Posttest</td>
<td>2.748</td>
<td>.670</td>
</tr>
</tbody>
</table>

The post-intervention and re-test analysis, focused on the implementation of mindfulness, showed significant improvements in the quality of life of the teachers involved. It is observed that only (5.5%) of the teachers did not experience notable improvements in their quality of life, in contrast to (92%) who reported perceiving an improvement.

Table 5
Re-test evaluation.

<table>
<thead>
<tr>
<th>Variable</th>
<th>PRETEST</th>
<th>RE-TEST</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Quality of Life condition with severe symptoms</td>
<td>15</td>
<td>(30%)</td>
</tr>
<tr>
<td>Quality of Life Condition with moderate symptoms</td>
<td>35</td>
<td>(70%)</td>
</tr>
</tbody>
</table>
Paraphrase and improve the academic writing of this text, which is part of a scientific article, assuming that you are a specialist in psychometrics and research and that it will be addressed to a demanding academic community: The application of the T-test analysis in this study reveals a pretest mean of 3.78 (SD=4.599), based on a sample of (N=50), with a mean standard error of 0.650. In contrast, the posttest mean shows a value of 1.94 (SD=2.253), with an equally consistent N of 50 and a mean standard error of 0.319. These findings suggest significant changes in the participants' responses after the intervention or treatment applied. The marked reduction in the post-test scores indicates an alteration in the variable assessed, and the consistency in the N, together with the decrease in the post-test standard deviation, supports the stability and reliability of the results obtained.

Table 6
T-test (Pre-post)

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>n</th>
<th>DS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>3.78</td>
<td>50</td>
<td>4.599</td>
</tr>
<tr>
<td>Posttest</td>
<td>1.94</td>
<td>50</td>
<td>2.253</td>
</tr>
</tbody>
</table>

The relationship between pretest and posttest results, analyzed through paired sample correlation with a constant sample of N=50, reveals a positive and strong association, as indicated by a robust correlation coefficient of 0.912. Statistical significance is highlighted with a p-value of less than 0.001 for both single and two factors, highlighting the high probability that the relationship between pretest and posttest measurements is not random.

This positive and significant connection indicates a consistency in participants’ responses on both measurements, strengthening the validity of the study and pointing to a consistency in responses over time. The high correlation supports the stability of the measurements. The observed changes, as evidenced in the previous T-test analysis, are reliably related to the intervention or treatment implemented. This finding helps to reinforce the conclusions about the relationship between pretest and posttest measurements in the context of the study.

Table 7
T-test (Pre-post)

<table>
<thead>
<tr>
<th></th>
<th>Correlation</th>
<th>P a factor</th>
<th>P two factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest &amp; Posttest</td>
<td>.912</td>
<td>&lt;.001</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

Analysis of the paired tests indicates that the mean difference between pretest and posttest results is 1.840, with a standard deviation of 2.706 and a mean standard error of 0.383. The 95% confidence interval for this difference is between 1.071 and 2.609, which evidences the expected variability in the population and provides a plausible range for the actual difference.

The critical t value is 4.409 with 49 degrees of freedom, and the significance values for both single and two factors are less than 0.001. These results indicate that the observed difference between pretest and posttest measurements is statistically significant, supporting the notion that the intervention or treatment has had a noticeable effect on the variable of interest.

The consistency in the paired test results reinforces the validity of the conclusions derived from the study, strongly suggesting that the observed changes are not random and are linked to the intervention implemented. These findings strengthen confidence in the effectiveness of the intervention and contribute to a deeper understanding of the dynamics of change in the population analyzed.
Table 8
Paired samples test

<table>
<thead>
<tr>
<th>Matched differences</th>
<th>Significance</th>
<th>IC 95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest &amp; Posttest</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Li</td>
<td>Ls</td>
</tr>
<tr>
<td></td>
<td>.840</td>
<td>2.706</td>
</tr>
<tr>
<td></td>
<td>2.609</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

Note: This table details the level of confidence in the effectiveness of the hypothesis proposed in the intervention.

DISCUSSION

The mental health of educators is a crucial aspect, as psychotherapeutic interventions are implemented to address various symptoms such as stress, anxiety, depression, sleep disorders, and difficulties in interpersonal relationships in the post-pandemic context. These manifestations may affect their ability to provide quality education to students (Carroll et al., 2022).

Educators who experience greater emotional balance tend to have a greater ability to cope with the changing challenges of the educational environment. Therefore, this study has the potential to improve educators’ quality of life by reducing stress levels, improving symptoms of anxiety and depression, and promoting their overall well-being. This positive impact could be reflected in all aspects of education in which professionals are involved (Bazzano et al., 2018).

The quality of life of teachers in educational institutions has been significantly impacted as a result of the COVID-19 pandemic, representing a critical challenge that requires priority attention. The health crisis has generated multiple repercussions in the work and personal lives of educators, directly affecting their emotional, physical, and social well-being. Factors such as the sudden transition to distance learning, the adaptation to new technologies, and the management of educational demands in a virtual environment have contributed to this situation (Ramirez, 2019).

The importance of this project lies in the need to provide effective tools to promote the mental and physical health of teachers, who play a crucial role in society and whose work has been severely affected by the COVID-19 pandemic. Research on the application of mindfulness in this specific group of professionals will provide valuable information on its potential as a therapeutic and self-care strategy at a time of great relevance (Galdeano et al., 2007).

The consistency between pretest and retest responses, supported by the high correlation of matched samples in the study, is in line with the present research, which highlights the stability and persistence of mindfulness effects over time. This finding suggests that improvements in teachers’ quality of life are not short-lived but endure over an extended period (de Carvalho et al., 2021).

Both versions consistently highlight the positive effects of mindfulness-based interventions on teachers. These findings not only indicate an improvement in teachers’ mental health and well-being but also point to a positive impact in the educational setting, especially on classroom behavior and students’ perceptions of the quality of interaction with their teachers. Four key points stand out in both studies:

1. Reduction in teacher burnout
2. Cultivating emotional safety and well-being.
3. Improving classroom behavior and student engagement
4. Positive student perceptions.
Findings reveal a remarkable effectiveness of Mindfulness, evidenced by a significant reduction of 49% in the overall measure of psychological distress and 44% in a study based on Mindfulness intervention that addressed levels of stress, anxiety-depression, sleep problems, and difficulties in interpersonal relationships among teachers (Franco et al., 2010).

CONCLUSIONS

The evaluation of the quality of life of the participating teachers showed significant impairments. The Mindfulness-based intervention program proved to be highly effective, supported by a positive correlation of 0.912 among the 50 participants. This finding confirms better stress management, improvements in emotional well-being, and the development of skills to focus attention on the present. In addition, teachers were able to practice accepting and releasing thoughts and emotions without judgment, resulting in a significant reduction in symptoms of anxiety, insomnia, and depression.

The assessment of quality of life before and after the implementation of the intervention plan acquires substantial relevance by consistently demonstrating positive progress and efficacy of each intervention. Statistically significant and sustained differences indicate an effective impact. Mindfulness techniques have played a key role in the significant changes observed in teachers’ perceptions and life experiences.

The research has provided conclusive evidence for the effectiveness of Mindfulness as a psychotherapeutic intervention to improve teachers’ quality of life.

BIOETHICAL ASPECTS


FUNDING

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AUTHOR CONTRIBUTIONS

Conceptualization, methodology, JSM; and MLL; research writing: JSM; and MLL validation: WOO, MMP, PSML; preparation of the original draft, JSM; and MLL writing: revision and editing, MLL, JS-M, WOO, MMP, PSML; formal analysis, statistics and data curation, JS-M and MLL; supervision, mentoring JS-M WOO, MMP, PSML; The authors have read and accepted the published version of the manuscript.

COMPETING INTERESTS

The authors declare under oath that they have no conflict of interest in the preparation of this article.

REFERENCES


