



### ARTIGO DE REVISÃO NARRATIVA/REVIEW ARTICLE

# Mindfulness as Adjuvant Treatment for Obsessive-Compulsive Disorder: An Integrative Review

### Mindfulness como Tratamento Adjuvante para o Transtorno Obsessivo Compulsivo: Uma Revisão Integrativa

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### Resumo

O transtorno obsessivo compulsivo é caracterizado pela presença de obsessões e/ou de compulsões. O tratamento padrão, apesar de efetivo na melhora de sintomas, em casos mais graves podem não ser suficiente. O objetivo desse estudo foi identificar na literatura dados sobre a eficácia da atenção plena (*mindfulness*) como tratamento complementar na redução dos sintomas em pacientes com transtorno obsessivo compulsivo. Essa revisão integrativa foi realizada nas bases de dados Medline, Lilacs, Embase, Cochrane, CINAHL e Web of Science. Foram encontrados 135 resultados, dos quais apenas 11 artigos foram utilizados após a aplicação da exclusão de duplicatas e dos critérios de elegibilidade. Desse modo, identificamos que a terapia cognitiva baseada na atenção plena quando comparada a tratamentos mais tradicionais, como a terapia cognitivo-comportamental, mostrou-se promissora, sobretudo na melhora da autoconsciência frente aos sintomas do transtorno. Todavia, estudos com maior tempo de exposição e com variáveis mais específicas precisam ser elaborados para verificar a eficácia da terapia cognitiva baseada na atenção plena a longo prazo, principalmente, em pacientes mais graves e mais velhos.

### Abstract

Obsessive-compulsive disorder is characterized by the presence of obsessions and/or compulsions. Standard treatment, although effective in improving symptoms, in more severe cases may not be sufficient. The objective of this study was to identify in the literature data on the effectiveness of Mindfulness as a complementary treatment in reducing symptoms in patients with obsessive-compulsive disorder. This integrative review was performed in Medline, Lilacs, Embase, Cochrane, CINAHL, and Web of Science databases. A total of 135 results were found, of which only 11 articles were used after applying the duplicate exclusion and eligibility criteria. Thus, we identified that mindfulness-based cognitive therapy (MBCT) when compared to more traditional treatments, such as cognitive-behavioral therapy, showed promise, especially in improving self-awareness regarding the symptoms of the disorder. However, studies with longer exposure time and with more specific variables need to be designed to verify the long-term efficacy of MBCT, especially in more severe and older patients.

Palavras-chave: Atenção Plena; Perturbação Obsessivo-Compulsivo/tratamento; Resultado do Tratamento; Terapia Cognitivo-Comportamental

Keywords: Cognitive Behavioral Therapy; Mindfulness; Obsessive-Compulsive Disorder/therapy; Treatment Outcome

Recebido/Received: 2021-11-26 Aceite/Accepted: 2023-05-25 Publicado Online/Published Online: 2023-06-15 Publicado/Published:

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### **INTRODUCTION**

Obsessive-compulsive disorder (OCD) is characterized by the presence of obsessions and/or compulsions. Obsessions can be thoughts, ideas, impulses, and images intrusive and uncomfortable. These can be created from any substrate of the mind, such as words, fears, worries, memories, images, music or scenes.<sup>1</sup> Compulsions are repetitive behaviors or mental acts performed to reduce the discomfort or anxiety caused by obsessions or to prevent a feared situation from occurring. Thus, while obsessions cause emotional discomfort, compulsive rituals (always excessive, irrational or magical) tend to alleviate them, but are not pleasant.<sup>2</sup>

In this sense, individuals with OCD have lower averages in the domains of quality of life (physical, psychological, social and environmental health), which makes this disorder one of the most disabling.<sup>3</sup> In order to alleviate the situation, psychotherapy and psychopharmacology are used as traditional treatments. Among the drugs used, clomipramine hydrochloride and selective serotonin recreation inhibitors (SRIs) stand out.<sup>4</sup> In more severe cases of OCD, these drugs may not be enough to provide the patient with a good quality of life.<sup>5</sup>

The insertion of integrative health practices (PIS) can be an alternative as a complementary treatment, especially in cases where traditional treatment is not enough. With regard to OCD, the PIS that has been most investigated is mindfulness-based cognitive therapy (MBCT). This mindfulness-based cognitive therapy combines aspects of cognitive therapy with meditation training. This technique teaches people skills that enable them to become more aware of their thoughts without judgment, seeing negative thoughts (positive and neutral) as transient mental events rather than facts.<sup>6</sup>

Thus, the general objective of this study is to identify in the current scientific literature whether mindfulness is effective as a complementary treatment to the traditional one in reducing symptoms in patients with obsessive-compulsive disorder. The following specific objectives were established: to identify the symptoms that were most affected by the insertion of mindfulness; describe subjective changes in experience and behavior associated with the treatment; analyze useful and problematic aspects related to the treatment.

### **METHODS**

The study is characterized as an integrative literature review. This type of review makes it possible to summarize published research and draw conclusions from the guiding question.<sup>7</sup> A quality-quantitative approach and descriptive objective was used. All stages of the review were carried out independently by two independent researchers and, in case of disagreement, analyzed by a third party. Although this review was not submitted to the International Prospective Register of Ongoing Systematic Reviews (PROSPERO) platform, it followed the recommendations of the Preferred Reporting Items Protocol for Systematic Reviews and Meta-Analyses (PRISMA),<sup>8</sup> adapting them to the methodological design of the integrative review.

This study was operationalized through six stages, which are closely interconnected: elaboration of the guiding question, literature search, data collection, critical analysis of the included studies, discussion of results, and presentation of the integrative review.<sup>9</sup> The guiding question of the review process was constructed using the PICO strategy (P=Patient, I=Intervention, C=Comparison, O=Outcomes).<sup>10</sup>

The literature search was carried out on October 17, 2020, in the following databases: "Literatura Latino-Americana e Caribenha em Ciências da Saúde" (LILACS), via "Biblioteca Virtual em Saúde (BVS)"; Excerpta Medica data-BASE (Embase), via Elsevier; Medical Literature Analysis and Retrieval System Online (MEDLINE) via PubMed, and Cochrane via Willey Library. Complementary databases were also used: Web of Science, via Clarivate and Cumulative Index to Nursing and Allied Health Literature (CINAHL) via EBSCO Host. For this, a specific combination of descriptors was used for the search in each database, as shown in Table 1: Descriptors in Health Sciences (DECS) for the search in LILACS; Embase Subject Headings (EMTREE) for searching Embase; Medical Subject Headings (MeSH), for PubMed and Cochrane search. For the complementary databases, keywords were used, as they do not use specific descriptors.

Table 1	. Literature searc	h strategy: bo	oolean d	escriptors a	and operators

Database	Search strategy			
LILACS	(mindfulness) OR (atenção plena) OR (atención plena) AND (obsessive-compulsive disorder) OR (transtorno obsessi -compulsivo) OR (trastorno obsesivo compulsivo) AND (adult) OR (adulto)			
Embase	'obsessive compulsive disorder'/exp AND 'mindfulness'/exp AND 'adult'/exp			
MEDLINE	(("mindfulness" [Mesh]) AND "Obsessive-Compulsive Disorder" [Mesh]) AND "Adult" [Mesh]			
Cochrane	Obsessive-Compulsive Disorder:ti,ab,kw AND mindfulness:ti,ab,kw AND Adult:ti,ab,kw (Word variations have been searched)			
Web of Science	((mindfulness OR Atenção Plena) AND (Obsessive-Compulsive Disorder OR Atenção Plena OR Atención Plena) AN (Adult OR Adulto))			
CINAHL	CINAHL (obsessive compulsive disorder OR obsessive-compulsive disorder OR ocd OR Trastorno Obsesivo Compulsivo O Transtorno Obsessivo-Compulsivo OR toc ) AND (mindfulness OR mbsr OR mindfulness based stress reduction mindfulness intervention OR Atenção Plena OR Atención Plena ) AND (adults or adult )			

To organize the base articles database, the Rayyan QCRI ® reference manager was used, which allowed both the blinded analysis by two evaluators without one having access to the other's opinion, as well as the partial exclusion of duplicate articles. After manual exclusion of persistently repeated publications, an initial screening was performed based on their title and abstract by two different researchers, initially including the primary studies that were in line with the general objective of the review. These were published in Portuguese, English, Spanish, and French for the period 2010 to 2020.

After excluding publications that did not meet the screening criteria, the studies were read in full and organized in the form of a collection instrument using Microsoft Word® software. In this software there was a table for each article, containing title, authors, year, journal, level of evidence, study design, and study alignment with each specific objective of the review. The analysis of the studies based on the variables present in the collection instrument was carried out by two independent researchers. In case of disagreements about the content to be published in this article, the decision was taken by a third reviewer. At this stage, studies that did not meet the specific objectives of the review were excluded, as well as those with quality evidence level 5, according to the Oxford evidence criteria. Thus, expert opinions without critical evaluation or based on basic materials were excluded.<sup>11</sup> After these procedures, the results that would compose the structure of this text were presented.

### RESULTS

A total of 135 titles were identified, of which 37 studies were excluded because they were duplicates. Thus, 98 abstracts were read by two independent researchers, who excluded 59 abstracts: 26 for not meeting the general objective of the review, 11 for not addressing OCD, 12 for not mentioning mindfulness, and 10 for covering children. From this, 39 articles were read in full and after applying the eligibility criteria, 28 articles were removed from the sample: 5 for presenting a low level of evidence, 6 for being, in fact, unfinished primary studies, 5 for focusing on another therapy approach and 12 because, despite working on the use of mindfulness in OCD, they did not address any of the objectives of the present study: listing the symptoms most affected by the insertion of mindfulness, describing changes in behavior associated with this therapy, and not even analyzing the aspects more comprehensively. useful and problematic aspects related to the treatment.

Thus, 11 studies were considered for the composition of this review. The entire route was carried out as shown in Fig. 1.

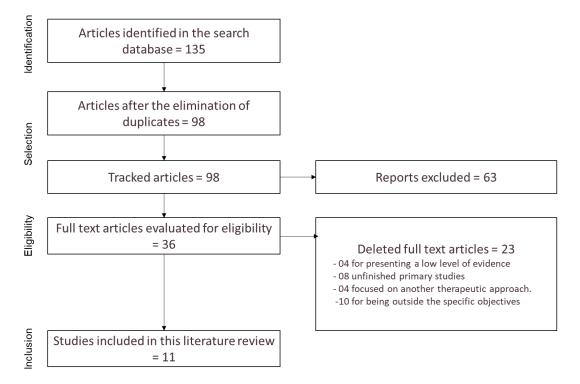


Figure 1. Flowchart of steps in the selection process of integrative review articles.

The 11 selected scientific articles met the inclusion criteria: belonging to a level of evidence more expressive than 4 and meeting the specific objectives of the review. Of the 11 articles selected, 10 were in English and 1 in French, 5 from Medline via PubMed, 3 were from Cochrane via Willey Library, 2 from Embase via Elsevier, and 1 from Lilacs

via BVS. Table 2 represents the specifications regarding the title, authors, journal, level of evidence, and thematic considerations of each of the studies.

Summary			

Article title	Authors	Journal (vol., p., year)	Design of study	Level of evidence	Objective
Long-term effects of Mindfulness-based cognitive therapy in patients with obsessive- -compulsive disorder and residual symptoms after cognitive behavioral therapy: Twelve-month follow-up of a randomized controlled trial.	Cludius <i>et al.</i>	Psychiatry Res, 291: 113-119, 2020.	Randomized Clinical Trial	1B	Determine the number of treatment responders, partial responders, and non-responders, as well as the effect of MBCT in reducing OCD symptoms. Evaluate the existence of changes in depressive symptoms and quality of life.
Mindfulness-based cognitive therapy in obsessive-compulsive disorder – A qualitative study on patients' experiences	Hertenstein et al.	BMC Psychiatry, 12: 185, out. 2012.	Cohort Study	2B	Investigate whether MBCT represents a viable and effective complementary treatment option for patients with OCD who are familiar with the principles of CBT, including ERP.
Efficacy of mindfulness- -integrated cognitive behavior therapy in patients with predominant obsessions	Kumar <i>et al</i> .	Indian J Psychiatry, 58: 366-371, 2016.	Cohort Study	4C	Examine in 27 patients the effect of integrating mindfulness training with CBT in the treatment of patients with non-predominant obsessions.
Mindfulness-based cognitive therapy as an augmentation treatment for obsessive-compulsive disorder	Key et al.	Clin Psychol Psychother	Randomized Clinical Trial	2B	Assess the feasibility and impact of providing a mindfulness-based cognitive therapy (MBCT) intervention 8 weeks after completion of a CBT intervention for patients with OCD who continued to suffer from significant symptoms.
Mindfulness-based Cognitive Therapy for Obsessive-Compulsive Disorder: A Pilot Study.	Didonna <i>et</i> al.	J Psychiatr Pract.	Case-control study	3B	Assess the impact of treatment, called Mindfulness-based on Active Cognitive Therapy for OCD.
Changes in the daily life experience of patients with obsessive- -compulsive disorder following Mindfulness based cognitive therapy: Looking beyond symptom reduction using ecological momentary assessment	Landmann et al.	Psychiatry Res, 286: 1128-42, 2020.	Randomized Clinical Trial	2B	Assess whether MBCT, compared to the psychoeducational control group, would lead to more experience of positive affect, decreased negative affect, an increased level of awareness, less suffering associated with the occurrence of OC symptoms, and greater acceptance of momentary emotions from the pre- to post- -treatment as measured by the EMA.
Les interventions basées sur la pleine conscience dans le trouble obsessionnel compulsif: mécanismes d'action et présentation d'une étude pilote	Gasnier <i>et al.</i>	L'Encéphale	Cohort Study	4C	To investigate whether the MBCT therapeutic strategy could complement the classic ERP therapy, as a "maintenance" treatment, with the objective of prolonging the recurrence of OCD symptoms.
Mindfulness, Obsessive– Compulsive Symptoms, and Executive Dysfunction	Crowe.; Mckay	Cognit Ther Res.	Case-control study	3B	The first objective was to identify whether individuals with OCD symptoms significantly differ in their levels of inherent mindfulness from individuals with related symptoms (depression and anxiety) and healthy controls. Understand whether WM and CI components are explanatory mechanisms for low levels of inherent mindfulness.
Mindfulness-based cognitive therapy: Further issues in current evidence and future research	Williams et al	J Consult Clin Psychol. 76:524– 9, 2008.	Ecological study	2C	Evaluate the effectiveness of mindfulness-based cognitive therapy (MBCT) for patients with a history of depression and inform future research.

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Article title	Authors	Journal (vol., p., year)	Design of study	Level of evidence	Objective
Mindfulness-based cognitive therapy in patients with obsessive- -compulsive disorder and residual symptoms after cognitive behavioral therapy: a randomized controlled trial	Külz et al.	Eur Arch Psychiatry Clin Neurosci, 269: 223–233, 2019.	Randomized Clinical Trial	1B	To investigate the effectiveness of mindfulness-based cognitive therapy in patients with OCD in a large sample using a randomized controlled clinical trial.
Comparing effects of detached Mindfulness and cognitive restructuring in obsessive-compulsive disorder using ecological momentary assessment	Rupp et al.	Psicol Clin Psicoterap. 27: 193–202, 2020.	Ecological study	2C	Investigate whether newly learned coping behaviors are applied more often after or before treatment, whether the increase in coping behaviors depends on the treatment condition (CR vs. DM), ie whether treatment effects are specific or general, and whether CR and DM differ as to their applicability.

### DISCUSSION

## a. Symptoms that were most affected by the insertion of mindfulness.

Of the six studies that evaluated the main symptoms of OCD affected by mindfulness-based therapies from the perception of patients,<sup>12-17</sup> four-pointed to direct and immediate benefits resulting from this therapeutic proposal.<sup>12-15</sup> In this sense, it is worth highlighting the improvement in sleep quality and the ability to deal with obsessive thoughts,<sup>12</sup> reduction of self-reported depressive symptoms,<sup>14</sup> and daily concerns related to compulsions.<sup>15</sup> One of the studies did not detect improvement in typical OCD symptoms with the use of MBCT. Despite this, it identified, in the group of patients investigated, the development of a greater capacity to identify and separate obsessive-compulsive symptoms in moments of crisis.<sup>15</sup>

Regarding the verification of the severity of OCD using internationally validated instruments, such as the Yale-Brown Obsessive-Comppulsive Scale (Y-BOCS), only 3 articles showed significant reductions, with a drop of more than 4 points in the Y-BOCS scale, from the beginning to the end of follow-up of individuals in mindfulness-based therapy.<sup>13-15</sup> These data are in line with another study that followed, for 12 months, individuals with OCD who underwent MBCT and found the positive and lasting effects of these interventions in terms of symptom relief, in contrast to the traditional cognitive-behavioral therapy (CBT) prescribed.<sup>5</sup>

However, one of the productions analyzed found little significant results for the use of techniques based on mindfulness.<sup>17</sup>

### b. Subjective changes in experience and behavior associated with treatment.

Nine participants in one of the studies stated that during the application of the MBCT, they discovered a new way of dealing with OCD. Eight-week changes included a perceived decline in obsessive-compulsive symptoms and a calmer attitude toward OCD. Patients also perceived an accepting attitude towards OCD and reported that they learned to relate to their obsessions in a different way, for example, recognizing them as floating events in their mind and letting them pass without devaluing themselves.<sup>12</sup> In addition, another production indicated subtle changes regarding the perception of irrationality involving obsessions and compulsions.<sup>16</sup>

According to Hertenstein *et al*<sup>12</sup> the changes in eight weeks include a more active life in the present moment. Another component of the MBCT that study participants found helpful was improving self-acceptance. In addition, two other studies address improvements in relation to the ability to conform with reality to internal experiences (including obsessions).<sup>14,18</sup>

This improvement in the ability to confront obsessions with reality may lead to a metacognitive shift, strengthening the idea that "thoughts are not facts", which helped patients to become more aware of behavioral impulses, rather than responding in the pilot automatic.<sup>14</sup> Some of the patients in this study also mention a greater ability to allow unpleasant emotions without them serving as a trigger for OCD.<sup>14</sup> A similar result was found in the study by Crowe & McKay, which also points to positive MBCT results in reducing experiential avoidance and improving emotional regulation.<sup>18</sup> This seems especially relevant, as obsessive-compulsive symptoms often arise as responses to unpleasant emotions.<sup>12</sup>

Four out of twelve participants reported that they saw no improvement in OCD symptoms after MBCT.<sup>12</sup> The study by Landmann *et al*<sup>16</sup> did not identify significant improvement in the MBCT group regarding positive affect, negative affect, anguish associated with OCD symptoms, or acceptance of momentary emotions. However, it indicates subtle changes in the perception of irrationality involving obsessions and compulsions and demonstrates that there may be potential in the clinical use of mindfulness.<sup>16</sup>

### c. Useful and problematic aspects related to treatment

As for the useful and problematic aspects related to the treatment, according to the analyzed literature, the effects of mindfulness in the treatment of obsessive-compulsive disorder (OCD) are positive, but there is variation between studies regarding the association or not with other therapeutic forms.<sup>5,16,18</sup> Such variations can be explained by methodological differences between the articles.

One of the productions sought to observe, through a randomized clinical trial, the long-term effects, 12 months, of the therapeutic form based on mindfulness for patients with OCD who did not respond to cognitive-behavioral therapy. Furthermore, the results were compared with an active control group receiving psychoeducation. The research was able to demonstrate that the symptoms of OCD significantly decreased after the end of the treatment, not containing, however, relevant differences regarding the positive results of the control group.<sup>5</sup> Among the limitations of the study are the impossibility of evaluating patients at home, the reuse of reports from a previous study, and the decrease in internal validity by including patients who were already undergoing psychological care.<sup>5</sup>

However, other researchers developed a randomized clinical trial that evaluated a mindfulness group and an active control group using psychoeducational therapy with pre--and post-treatment assessments, to work on changes in the daily lives of patients with OCD after MBCT, demonstrating a reduction in the depressive symptoms.<sup>16</sup>

Studies<sup>5,16</sup> have found that the 8-week MBCT treatment model employed by other studies is insufficient to make such significant changes in the daily lives of patients with OCD. Thus, for the patient to have a more effective result, he needs to remain in mindfulness practice for at least 12 months, as they consider that the duration of therapy strongly influences the results.

Based on the subjective experience of those patients who underwent mindfulness-based cognitive therapy using a qualitative methodology, one of the researchers sought to further investigate the efficacy and feasibility of MBCT as a complementary therapy for patients who previously underwent traditional methods of cognitive therapy-behavioral.<sup>19</sup> The 12 participants in the experiment approved of the program and declared their satisfaction with having participated. Specifically, concerning OCD, the results of the study demonstrate that mindfulness contributes not only to the relief of symptoms of obsessive-compulsive disorder but also to benefits that go beyond the reduction of symptoms.<sup>19</sup> This is because, through the qualitative and subjective analysis of the patients, it was possible to observe that the teachings transmitted in the therapy were used in broad aspects of the patients' lives: use of techniques before going to sleep - with positive consequences for sleep; easier not to engage in compulsive rituals.<sup>19</sup>

However, one patient turned MBCT techniques into compulsive rituals, as he could not stop repeating what he heard.<sup>19</sup> In addition, 25% of patients had difficulty using one of the mindfulness methods and 25% of participants also considered mindfulness a long-term technique, to the detriment of the desire to improve OCD as quickly as possible.<sup>19</sup>

A pilot study analyzed<sup>17</sup> sought to assess whether an effective protocol for interventions based on mindfulness for OCD is feasible. In this study, the main and most

interesting finding was that all participants completed the experiment without giving up, suggesting the feasibility of the treatment. The study also suggests that mindfulness would be inversely proportional to the age and duration of OCD. In other words, the four youngest participants and those with the shortest disease duration were the ones who showed the best responses to the treatment, while the oldest patient showed a worsening of the condition. Therefore, a better response is hypothesized in younger patients with less severe OCD.<sup>17</sup>

The study by Didonna *et al*<sup>15</sup> observed that MBCT brings benefits about increased tolerance to emotional discomfort, anxiety, and sensitivity. The latter may arise as negative consequences of traditional cognitive-behavioral treatment. This, in addition to favoring "mindfulness" as a therapeutic option, reduces the chances of abandoning the therapeutic process. Furthermore, "mindfulness" reduces negative self-perception and gives rise to greater self--awareness. Therefore, in general, Didonna *et al*<sup>15</sup> suggest that mindfulness-based therapy may be able to reduce OCD symptoms.

Finally, Crowe and Mckay,<sup>18</sup> working in a case--control study format, demonstrated the effectiveness of mindfulness-based therapy both as a main method and as a complementary tool to traditional treatments.

### d. Traditional treatment versus mindfulness--associated treatments

Of the three included studies that compared mindfulness with a psychoeducational program,  $^{5,16,20}$  one registered improvements in obsessive-compulsive symptoms related to self-assessment capacity,  $^{20}$  the rest did not find significant benefits of mindfulness when compared with the psychoeducational program. The article by Rupp *et al*<sup>21</sup> did not observe significant differences in the applicability and effectiveness of mindfulness when comparing it with cognitive restructuring (CR) therapy.

However, for patients who have residual symptoms after cognitive-behavioral therapy (CBT), mindfulness seems to be indicated, as well as for those who have depressive symptoms and pathological anxiety. Marcks and Woods<sup>22</sup> and Hofmann *et al*<sup>23</sup> presented results that also showed the benefits of mindfulness to decrease anxiety levels. In addition, Van Dam *et al*<sup>24</sup> also reported improvements in symptoms of depression and anxiety in those undergoing mindfulness. This also occurred in the studies by Strege *et al*<sup>25</sup> and Garland *et al*,<sup>26</sup> in which increases in positive affect were observed.

### CONCLUSION

In light of these considerations, mindfulness seems to have great therapeutic potential in OCD and may be an important option for approaching this disorder, especially for young patients or those in whom cognitive behavioral therapy has not made great advances. The decline in anxiety, the reduction in negative self-perception, and the increase in self-knowledge promoted by MBCT can significantly improve the quality of life for individuals with OCD. It

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would be interesting that future studies seek to identify the minimum time using MBCT to obtain a significant improvement in OCD symptoms, the most indicated weekly frequency of use, and the observation of long-term benefits of mindfulness in OCD patients.

### Declaração de Contribuição

LT: Conceção do estudo, desenho do trabalho, redação do trabalho, revisão crítica do conteúdo intelectual e aprovação da versão final a ser publicada.

**FF, TP, PP e VL:** Redação do trabalho, revisão crítica do conteúdo intelectual e aprovação da versão final a ser publicada. **GL:** Contribuições substanciais para a revisão crítica do trabalho quanto ao conteúdo intelectual importante e para a aprovação final da versão a ser publicada.

### **Contributorship Statement**

LT: Conception of the study, design of the work, writing, critical review of the intellectual content, and approval of the final version to be published.

FF, TP, PP and VL: Writing of the work, critical review of the intellectual content, and approval of the final version to be published.

**GL:** Substantial contributions to the critical review of the work for important intellectual content and to the final approval of the version to be published.

### **Responsabilidades Éticas**

**Conflitos de Interesse:** Os autores declaram não possuir conflitos de interesse. **Suporte Financeiro:** O presente trabalho não foi suportado por nenhum subsidio o bolsa ou bolsa. **Proveniência e Revisão por Pares:** Não comissionado; revisão externa por pares.

### **Ethical Disclosures**

**Conflicts of Interest:** The authors have no conflicts of interest to declare. **Financial Support:** This work has not received any contribution grant or scholarship. **Provenance and Peer Review:** Not commissioned; externally peer reviewed.

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