



## Mindfulness, health promotion, and semiotics: Bases for communication models in online health\*


Patricia Silveira Martins<sup>1</sup>

 <https://orcid.org/0000-0003-3634-8466>


Rita Maria Lino Tárzia<sup>2</sup>

 <https://orcid.org/0000-0003-1186-7526>


Daniervelin Renata Marques Pereira<sup>3</sup>

 <https://orcid.org/0000-0003-1861-3609>


Vera Lúcia Moraes Antônio de Salvo<sup>1</sup>

 <https://orcid.org/0000-0003-0223-2780>


Daniela Ferreira Araújo Silva<sup>1</sup>

 <https://orcid.org/0000-0003-4955-1340>


Márcio Sussumu Hirayama<sup>4</sup>

 <https://orcid.org/0000-0001-6042-003x>

Ricardo Monezi Julião de Oliveira<sup>1</sup>

 <https://orcid.org/0000-0002-7201-5100>

Ana Cristina Bastos Ferreira de Paula<sup>1</sup>

 <https://orcid.org/0000-0002-3732-0978>


Ausiàs Cebolla<sup>5</sup>

 <https://orcid.org/0000-0002-3456-9743>


Rosa Baños<sup>6</sup>

 <https://orcid.org/0000-0003-0626-7665>

Javier Garcia-Campayo<sup>6</sup>

 <https://orcid.org/0000-0002-3797-4218>

Marcelo Marcos Piva Demarzo<sup>2</sup>

 <https://orcid.org/0000-0002-7447-1839>

Objective: to analyze an online course on health promotion based on mindfulness (mindfulness) through the theory of discursive semiotics in one of its most recent developments, the visual or plastic aspect. The objective is to identify how the verbal-visual text of the course produces meanings and how it can help in the design of other courses. Method: a semiotic analysis of two practices and a screen print of the course called Mindfulness-Based Self-Care Program, in distance learning, developed by the Brazilian Center for Mindfulness and Health Promotion ("Open Mind"), of the Department of Preventive Medicine at the Federal University of São Paulo. Results: the aesthetic elements that contributed to the construction of an euphoric practice environment (linked to health) were evaluated and relationships were established between the content plan and the practice expression plan, responsible for the construction of a semi-symbolic system. Conclusion: it was confirmed the appreciation of an aesthetics of simplicity of colors and shapes that was converged to an affirmation of the values of calm and well-being compatible with the practices of mindfulness. From this analysis, we seek to reflect on the bases for the development of communicational models related to health promotion in a digital environment.

Descriptors: Mindfulness; Online; Discursive Semiotics; Health Promotion.

\* This article refers to the call "Mindfulness and other contemplative practices".

<sup>1</sup> Universidade Federal de São Paulo, Departamento de Medicina Preventiva, Centro Brasileiro de Mindfulness e Promoção de Saúde ("Mente Aberta"), São Paulo, SP, Brazil.

<sup>2</sup> Universidade Federal de São Paulo, São Paulo, SP, Brazil.

<sup>3</sup> Universidade Federal de Minas Gerais, Belo Horizonte, MG, Brazil.

<sup>4</sup> Instituto de Saúde da Secretaria do Estado, Núcleo de Análise e Projetos de Avaliação de Tecnologias de Saúde, São Paulo, SP, Brazil.

<sup>5</sup> Universidade Jaume I Castellon de la Plana, Castelló, Spain.

<sup>6</sup> Universidade de Zaragoza, Zaragoza, Spain.

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## ***Mindfulness*, promoção da saúde e semiótica: bases para modelos comunicacionais em saúde online**

Objetivo: identificar como o texto verbo-visual do curso produz sentidos e como isso pode auxiliar na construção do *design* de outros cursos. Método: foi feita a análise semiótica de duas práticas e de um *print* de tela do curso denominado *Programa de Autocuidado Baseado em Mindfulness*, na modalidade Educação à Distância, desenvolvido pelo Centro Brasileiro de Mindfulness e Promoção da Saúde ("Mente Aberta"), do Departamento de Medicina Preventiva da Universidade Federal de São Paulo. Foram avaliados os elementos estéticos que contribuiriam para a construção de um ambiente de prática eufórico (ligado à saúde) e estabelecidas relações entre o plano de conteúdo e o plano de expressão das práticas, responsáveis pela construção de um sistema semi-simbólico. Resultados: confirmou-se a valorização de uma estética da simplicidade de cores e formas que converge para uma afirmação dos valores calma e bem-estar compatíveis com as práticas de *mindfulness*. Conclusão: a partir dessa análise, busca-se refletir sobre as bases para o desenvolvimento de modelos comunicacionais relacionados à promoção da saúde em ambiente digital.

Descritores: *Mindfulness*; Online; Semiótica Discursiva; Promoção da Saúde.

## ***Mindfulness*, promoción de la salud e semiótica: bases para modelos de comunicación en salud em línea**

Objetivo: analizar un curso en línea sobre promoción de la salud basado en la atención plena (*mindfulness*) a través de la teoría de la semiótica discursiva en uno de sus desarrollos más recientes, el aspecto visual o plástico. El objetivo es identificar cómo el texto verbal-visual del curso produce significados y cómo puede ayudar en el diseño de otros cursos. Método: se llevó a cabo un análisis semiótico de dos prácticas y una impresión de pantalla del curso llamado Programa de autocuidado basado en la atención plena, en educación a distancia, desarrollado por el Centro Brasileño de Mindfulness y Promoción de la Salud ("Mente Abierta"), del Departamento de Medicina Preventiva de la Universidad Federal de São Paulo. Resultados: se evaluaron los elementos estéticos que contribuyeron a la construcción de un entorno de práctica eufórica (vinculado a la salud) y se establecieron relaciones entre el plan de contenido y el plan de expresión de práctica, responsables de la construcción de relaciones semi-simbólicas. Conclusión: se confirmó la valoración de una estética de simplicidad de colores y formas, que convergió en una afirmación de los valores de calma y bienestar compatibles con las prácticas de *mindfulness*. A partir de este análisis, buscamos reflexionar sobre las bases para el desarrollo de modelos comunicacionales relacionados con la promoción de la salud en un entorno digital.

Descriptorios: *Mindfulness*; Online; Semiótica Discursiva; Promoción de la Salud.

## Introduction

*Mindfulness* is defined as a psychological characteristic or psychological state, or even as a set of exercises arising mostly from traditional meditation practices<sup>(1)</sup>, concerned with the experience of the present moment.

The main characteristic of *mindfulness* consists of recognizing the development of an "embodied" cognition. Also known as *embodiment*, this approach relates body postures and movements to cognitive and emotional changes<sup>(2)</sup>.

The first use of *mindfulness* in the medical practice occurred in 1979, from the MBSR (Mindfulness Based Stress Reduction) program, proposed for the management of stress, anxiety, and chronic pains<sup>(3)</sup>. One of its most known derivations is the MBCT (Mindfulness Based Cognitive Therapy), a program conceived specifically for the treatment of mental dysfunctions, such as recurrent depression<sup>(4)</sup>.

There is growing evidence of stress control through *mindfulness* programs based on the Internet, with results similar to those obtained in face-to-face formats<sup>(5)</sup>. In the online format, the participants learn to use breathing, body scan, mindfulness movements, and compassion practices by means of audios and videos organized in a didactic manner in order to build a virtual situation that favors learning. However, the means of communication of these programs, in the digital environment, still needs a more consistent analysis in order to reach greater integration and adherence by the respective users to the online format.

It is argued that the operationalization of semiotic models can contribute to more effective communication of contents relevant to public health<sup>(6)</sup>.

This article aims to analyze the semiotic aspects of a course called *Mindfulness-Based Self-care Program*, offered remotely online, to health professionals working in the Unified Health System (*Sistema Único de Saúde*, SUS), based on one of the most recent developments of discursive semiotics, the plastic strand. A screenshot of this course and two images of *mindfulness* practices were selected. Priority was given to categories of the fundamental level (content plan) and elements of expression, in the topological, chromatic, and sound dimensions for analysis.

With this analysis, it is sought to reflect on the bases for the development of communication models related to health promotion in the digital environment.

Hypermediatic communication models, that is, models based on interactivity, hypertextuality and multimedia<sup>(7)</sup>, represent a proposal of analysis and constructions of contents available on the Internet, taking into account several communicative experiences present in digital environments.

The theoretical and conceptual convergence between semiotics and communication occurs mainly by the inter-, multi- and trans-disciplinary nature of both by the increasingly greater expansion of their fields in the face of the boom of communication networks that are establishing a new language: the hypermedia<sup>(8)</sup>.

Known as the Science of signs and symbols or as the Science of communication, in its classical conception, semiotics contemplates the possibility of using language and innovation creatively in the elaboration of new signs system<sup>(9)</sup>, being an important study field for digital media designers and researchers. Semiotics can embrace the language hybridism and the complexity of the processes aimed at communicating contents conveyed on the Internet, broadening its semantic value and, therefore, communication.

Through one of its theories, discursive or Greimasian semiotics (in a reference to Algirdas Julien Greimas, founder of that school), it is sought to understand and explicit the mechanisms of meaning construction in the text from the content plane analysis (intelligible part, related to discourse) and from the expression plane (sensible part, related to verbal and/or non-verbal language that conveys the content)<sup>(10)</sup>.

According to this theoretical perspective, human activities happen in two main axes: the production axis, through which man acts on things, transforming nature; and the communication axis, through which man, by means of inter-subjective relations, acts on other men<sup>(11)</sup>.

In the thematic path of communication, discourse is built by the relationship between the enunciator/co-enunciator. Between them, a contract of truth is established, understood as a presumption of truth between the parties. What exists is "true saying" by the enunciator and "true belief" by the co-enunciator, whose agreement remains more or less stable in the communication process: so that the discourse users understand around the same "truth effects", it is necessary to establish prior understanding, implicit or explicit, between the two communication poles: the enunciator and the co-enunciator. Such an understanding is actually an authentic "veridiction contract", the basic epistemic presupposition of each and every enunciative act. Unless they receive a clear contrary indication, the interpretation that the co-enunciator assigns to the discourse-enunciation is based on the belief that the enunciator transmits a piece of knowledge and that this knowledge is of the being order, that is, it is "true"<sup>(12)</sup>.

Through the content plane analysis, the meaning of the text is sought, that is, the apprehension and production of meaning. The result of this analysis is known as the *generative path of meaning*, which is materialized by the articulation of three organized

structures from the most abstract and deepest to the most concrete and superficial. Thus, taken as a theory of meaning, semiotics aims to show the conditions of apprehension and production of meaning. In other words: by being interested in the text materialized in any language – verbal, non-verbal (painting, sculpture, photography, etc.) or syncretic (cinema, comic books, etc.) – the individual makes sure to study the mechanisms that engender it, that is, seeks to describe what the texts says and how it says it, firstly examining its content plane by means of a model that “simulates” the production and interpretation of a text. It is the generative path of meaning, ranging from the simplest and most abstract (fundamental level) to the most complex and concrete (discursive level), passing through an intermediate level: the narrative<sup>(10)</sup>.

Briefly, we have: fundamental structure, field of the base semantic oppositions, inferred from the text from an opposition of two categories, one with positive value and the other with negative value; narrative structure, field of relation of the subject with an object-value and/or with another subject; and, finally, the discursive structure, the level at which strategies of projection of the subject are found in the enunciation. Each of these levels of meaning organization is endowed with syntax (arrangements that organize the content) and semantics (content invested in the syntactic arrangements)<sup>(10)</sup>.

If, on one hand, the discursive approach presents itself as the one which better adapts to a content plane analysis, given its consistency and operationalization<sup>(13)</sup>; on the other hand, in relation to the expansion plane analysis, Greimasian semiotics stands as a theoretical perspective still recent and subjected to some adaptations.

It is in this context that the association of aesthetic knowledge with semiotics has been consolidating a sub-area of discursive semiotics: visual or plastic semiotics. Through this strand, the analysis of non-verbal and syncretic texts can be performed<sup>(14)</sup>. Actually, this new approach has ensured access to new visual texts as language, that is, the construction of meaning for the visual text, a communication resource increasingly present in the context of digital environments.

Semi-symbolic systems are those produced from the articulation between content and expression, seeking to homologate categories of these two planes<sup>(10)</sup> in order to ensure the establishment of an interdependence and reciprocate relationship between them both<sup>(6)</sup>. Semi-symbolism guarantees a form of reading that comes from the direct association between the two planes in such a way that the interaction of elements such as color, shape, rhythm, variations of shades and gradations<sup>(15)</sup> ends up allowing for the manifestation of new meaning

effects of a complex and singular nature<sup>(6)</sup>. This is what happens in the case of visual or syncretic texts, whose analysis, based on the most appropriate semiotic theories for verbal texts, sometimes proves ineffective.

In this sense, plastic semiotics emerges as a new form of content analysis, focusing on what is beyond the generative path<sup>(14)</sup>. One of its main precursors was Jean-Marie Floch. A disciple of Greimas, Floch established aesthetic-semiotics, a sub-area of discursive semiotics in which there is an association of the aesthetic knowledge with the semiotic knowledge<sup>(16)</sup> which, in turn, allows access to visual images as texts<sup>(6)</sup>. By ensuring a more consistent analysis of semi-symbolic relationships, this strand has required more and more attention in studies involving meaning.

Figure 1 presents an adaptation of a generative path of meaning model for the expression plane, in the light of plastic semiotics<sup>(17)</sup>.

	Visual	Musical
Superficial level	Shape (eidetic dimension) e.g.: circular, rectilinear  (topological dimension) e.g.: high, low, central, peripheral	Tone (melody, harmony) e.g.: melody, accompaniment
Intermediate level	Color (chromatic dimension)	Pulse (rhythm) e.g.: fast, slow
Deep level	Light (and its relations with color - photochromatic) e.g.: light, dark	Frequency e.g.: high, low

Figure 1 - Adaptation of a meaning path model for the expression plane<sup>(18)</sup>

A contribution of plastic semiotics, in particular, lies in its possible application in the analysis of contents related to health promotion.

## Method

Nowadays, health promotion is one of the main theoretical-conceptual models that support health policies worldwide<sup>(18)</sup>, encompassing ads, campaigns, and preventive and educational character programs.

If current communication is hypermediatic, *mindfulness*-based programs have been adapting to this reality, using these means by availing didactically organized contents for the digital environments. It is certain that, in these environments, the intersection between pedagogy and communication deepens, although the former is not the object of this study.

The semiotic analysis of a course called *Mindfulness-Based Self-Care Program*, in the remote format, was conducted from a screenshot (Figure 2) of the course available in Moodle® (Modular Object-Oriented Dynamic Learning Environment), version 3.1. The

address where the course is available is: <http://www.eadmindfulnessbrasil.com/cursos/course/view.php?id=8>.

This course was developed by the Brazilian Center for Mindfulness and Health Promotion (“*Mente Aberta*”), of the Department of Preventive Medicine at the Federal University of São Paulo (*Universidade Federal de São Paulo, UNIFESP*), having as purpose to train SUS professionals in *mindfulness*, aiming at the increase of rest and awareness abilities, and at the development of positive emotions. This course is structured by offering, in the platform, texts, audios, and videos related to practical perspectives, in addition to the inclusion of exercise proposals, such as keeping diaries, and a space for clarifying doubts and deepening on the topic.

Before a semiotic analysis of a screenshot of the course that is the study object of this article, a semiotic analysis was conducted of the *mindfulness* practices that make up the program (Figures 3 and 4), which will be presented below.

In this way, it was sought to facilitate the understanding of the articulation between the content plane and the expression plane identified in the practices,

as well as of an occasional emergence of semi-symbolic relationships in this study process.

The use of the “euphoria and dysphoria” semiotic model, by Floch<sup>(16-19)</sup>, is proposed as an operational concept for the semiotic analysis of content related to health<sup>(10)</sup>. The euphoria (positive values, health meaning effects) and dysphoria concepts (negative value, disease meaning effects) ensure meaning to the basis semantic oppositions due to their materialization in the content and expression planes.

In general, contents from the health area make terms like happiness, pleasure, tranquility, and calm euphoric, with the meaning effects they arise represented, in the expression plane, by visual resources related to the use of clear, gradual, colored, subtle, continuous, sharp, high, simple, symmetrical, unique, joint and pictorial. On the other hand, such contents make other terms like sadness, anxiety, pain, and anguish dysphoric, generally expressed, in the expansion plane, by the use of monochrome, dense, discontinuous, blurred, low, complex, asymmetric, multiple, disjointed and graphical<sup>(6)</sup>.



Figure 2 - Screenshot of the Mindfulness Course (*Mente Aberta*, 2017)



Figure 3 – Breathing Practice (*Mente Aberta*, 2017)





Figure 4 - Body scan practice (*Mente Aberta*, 2017)

## Results

### *Semiotics and mindfulness*

Figures 3 and 4 correspond to images of two practices available in the course platform: one related to the breathing practice, and the other related to the body scan practice.

Contrary to the historical paradigm of communication in health, which reinforces vertical transmission, centered in the figure of the physician<sup>(20)</sup> and structured by language (whether verbal or non-verbal), *mindfulness* practices essentially work on a communication process based on self-listening, content being built by the subjects from their personal experiences.

At the fundamental level, these practices allow raising an initial base opposition, the health-disease pair that, at the discursive level, can be decomposed in the themes of tranquility-restlessness, silence-noise.

A particularity of these practices consists in the fact that they are guided, essentially, within a context of silence, with the insertion of brief moments of group experience exchanges, known as *inquiry*. However, *mindfulness* contemplates a category of silence different from the "eloquent silence" that linguistics sees as a sign, whose emotional function inserts it into the communication process<sup>(21)</sup>.

Rather, it is an approach that encompasses three other categories: decentralized (self-guided), interpersonal (an agreement among the group), and semiotic (postures, sounds, and signs) silence. Due to this peculiarity, *mindfulness* would correspond to a form of re-structuring of the *self* for a second-order instance, defined as a field of reflexivity, clarity, attention, objectivity, and proximity with the unconscious<sup>(22-23)</sup>.

Also, by the analysis of the images in Figures 3 and 4, the practices herein approached assume, at the superficial level (shape), a topological dimension from

the adoption of postures in two different planes: lying down and sitting down. Considering the analysis of the expression planes based on the *horizontality vs verticality* and *silence vs speech* pairs, we homologate, a priori, the thematic-figurative categories of */quietness/ vs /movement/* and */silence/ vs /noise/* (discursive level of the content plane). If the alternation of postures consolidates the experiential character of the practices, the slow pace adopted in the conduction of the practices inserts them, at the intermediate level, in the instance of silence, field of action of the attentional practices.

From the above, the following homologation chart between the content plane and the expression plane of the *mindfulness* practices responsible for the construction of semi-symbolic relations is proposed (Figure 5).

Content plane	<i>Quietness vs movement</i>	
	<i>Silence vs noise</i> (physical and/or cognitive-emotional) (thematic-figurative/discursive level category)	
Expression plane	Health (well-being) vs disease (base semantic category/fundamental level)	
	Sound category	<i>silence vs speech</i>
	Topological category	<i>horizontality vs verticality</i>

Figure 5 - Adaptation of the homologation chart between the content plane and the expression plane for the *mindfulness* practices<sup>(10)</sup>

The correlation of the expression plane categories with the base semantic category */health/ vs /disease/* (fundamental level of the content plane), although it exists, shows itself at first as less evident, as it is inserted in the deepest and most abstract level.

Referring back to Floch's model<sup>(16)</sup>, the aesthetic elements present in Figures 3 and 4 which contributed to the construction of a euphoric practice environment (linked to health) would be those linked to the simple and symmetric (related to the shape, superficial level), to the continuous (related to the pulse, intermediate level), and to the clear (related to light, deep level).

However, it is pointed out that meaning effects involving communication and health are not exclusively euphoria. On the contrary, when using images, the construction of meaning always has a non-linear character.

What exists is the predominance of elements that determine well-being meaning effects in order to ensure a coherent discourse aiming at the object in question, including its relationship with persuasive doing and with the veridiction contract<sup>(6)</sup>.

We are now going to analyze the screenshot of the course offered on the Moodle platform.

## Discussion

### ***Semiotic analysis of screenshots of Mindfulness-Based Self Care Program course, available on the Internet.***

For an analysis, based on plastic semiotic, of a screenshot of the *Mindfulness-Based Self Care Program* course, available on the Internet, it is considered that there is a veridiction and trust contract between enunciator (*Mente Aberta* Center) and co-enunciators (SUS professionals), based on the co-enunciator believing in the competence of the enunciator and in the teaching-learning bionic power of the course. The enunciator relies on health and well-being values that lie on the *mindfulness* proposal, resuming, for this, the base semantic opposition of *health vs disease* and its thematic derivations *quietness vs movement* and *silence vs noise*, previously mentioned.

The particularities occasionally present in the adoption of an aesthetic aligned with the pedagogical proposal of the course must be taken into account, in order to facilitate learning and the incorporation of the practices in a regular and progressive manner.

For an aesthetic-semiotic analysis of the screenshot (Figure 2), the euphoria vs dysphoria category proposed by Floch's semiotics was adopted<sup>(16)</sup>.

It is observed that minimal elements of expression are present. There is predominance of euphoric visual elements, aligned with the course values (self-care and health promotion), accepted in the veridiction contract, with the use of clear, continuous, clarity, and simple.

The title of the course, although predominantly verbal, brings non-verbal elements by the use of an image commonly related to the meditative practices: the lotus flower. Its stylized shape is no different from that present in the natural world, thus making it accessible for reading by common sense. Another image, a branch in an oblique direction, at the end of the title, gives a sense of ascendancy effect to the text.

If, on one hand, the deconstruction of the figures into minimal elements (colors and lines) eliminates the need for some knowledge of the image; on the other, a tendency to abstraction leads to the implicit intentions of *mindfulness*, among them, the reinforcement of its experiential character through the transition from the rest state (figure to the left) to the movement state (figure to the right).

The two figures (lotus flower and branch) are presented as symmetrically positioned units in relation to the title (centered), joined by a horizontal path. The shapes and colors of both (leaf shapes of different sizes, predominantly purple with yellowish pigments on the edges) bring them closer together. This approach consolidates the use of the same purple color applied to the title. The purple color is symbolically associated with healing at the physical, mental and emotional levels. As a result, there is a uniform mass that defines a visual path in a horizontal direction while it divides the screen in two asymmetric blocks, a smaller upper part and a larger lower part. If the absence of contrast between image and title reinforces color as the main aesthetic element, the contrast of this pictorial unit in relation to the white and smooth background confirms the asymmetry.

Thus, the following aesthetic categories can be identified<sup>(16)</sup>: clear x dark; gradual x contrasting; monochrome x colored; continuous x discontinuous; simple x complex; joint x disjoined; conjugated to the base semantic oppositions<sup>7</sup>: figure x background; purple x any other color; symmetric x asymmetric; horizontal x vertical; central x lateral; simplicity x complexity; chromatic neutrality x colored. Although not all of them are present in the image, they are present because they constitute an opposing pair.

According to the semi-symbolic analysis, the valorization is confirmed of an aesthetics of simplicity of colors and shapes that converges to an affirmation of the values of calm and well-being compatible with the *mindfulness* practices. Other communication situations present in the program could be analyzed to confirm this relationship and broaden the semi-symbolism but, in this article, the intention was to focus on the initial presentation of the course as a means to contribute to the first reflections.

## Conclusion

### ***Bases for the development of communication models related to health promotion in the digital environment from the case of a mindfulness-based intervention***

Given the above and according to our objective, some initial questions can be raised regarding the application of plastic semiotics in the visual

communication of health-related content: Which elements, among several visual resources, could facilitate communication and, as a consequence, adherence of the user to protocols applicable in the context of health promotion? Would there be any guidelines to be observed that would contribute to the proposal of a communication model for health promotion programs in a digital environment?

In this sense, the present article sought to contribute to these reflections based on the analysis of a communication proposal of a self-care program, available on the Internet, based on *mindfulness*.

The importance of identifying semiotic theories that best fit each particular content is acknowledged. In the case of *mindfulness*, it is proposed to analyze a *mindfulness* online program from the perspective of the plastic strand, adopting the euphoria x dysphoria semiotic model proposed by Floch. We perceived that the "euphoria" category was important to create health meaning effects, pleasure and well-being, thanks to expressive resources such as clear, gradual, colored, subtle, continuous, sharp, high, simple, symmetric, unique, joint, and pictorial.

It is understood that the scope of semi-symbolism, in an online *mindfulness* program, could be better dimensioned by the fusion of texts and images with audios and videos, available on the platform. Reinforcing the plastic strand as framework, it is suggested to elaborate online *mindfulness* programs structured based on a design that favors the integrated set of experiences by using different shapes, colors, and planes.

Since this is a health intervention, the importance is emphasized of a greater incentive for research studies that contemplate the semiotic analysis of how these messages are apprehended and understood by the users.

Even if it is not up to semiotics to answer which visual elements (euphoric or dysphoric) should be used in the elaboration of content, but to define *what* and *how* they convey the message, the following question arises: What visual resources could be employed in the designs of online *mindfulness* programs to encourage more adherence of users to the respective practice in a regular way?

The answer to this question would meet the research studies related to the development of communication models in Public Health and the studies on language modeling aiming at proposing more effective formats involving *mindfulness* and health promotion. Our analysis presented meanings linked to euphoria, which can be verified in other contexts and better studied in other research studies.

Based on a case of an online *mindfulness*-based intervention, it is expected that new research

studies are encouraged related to the development of communication models for health promotion programs in order to ensure the proposal of formats more consistent with the digital environment.

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- Piva Demarzo. Obtaining financing: Javier Garcia-Campayo and Marcelo Marcos Piva Demarzo. Drafting the manuscript: Patricia Silveira Martins, Rita Maria Lino Tárzia, Daniervelin Renata Marques Pereira, Vera Lúcia Morais Antônio de Salvo, Daniela Ferreira Araújo Silva, Márcio Sussumu Hirayama, Ricardo Monezi Julião de Oliveira, Ana Cristina Bastos Ferreira de Paula, Ausiàs Cebolla, Rosa Baños, Javier Garcia-Campayo and Marcelo Marcos Piva Demarzo. Critical review of the manuscript as to its relevant intellectual content: Patricia Silveira Martins, Rita Maria Lino Tárzia, Daniervelin Renata Marques Pereira, Vera Lúcia Morais Antônio de Salvo, Daniela Ferreira Araújo Silva, Márcio Sussumu Hirayama, Ricardo Monezi Julião de Oliveira, Ana Cristina Bastos Ferreira de Paula, Ausiàs Cebolla, Rosa Baños and Javier Garcia-Campayo.


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## Author's Contribution

Study concept and design: Patricia Silveira Martins, Rita Maria Lino Tárzia and Marcelo Marcos Piva Demarzo. Obtaining data: Patricia Silveira Martins, Javier Garcia-Campayo and Marcelo Marcos Piva Demarzo. Data analysis and interpretation: Patricia Silveira Martins, Rita Maria Lino Tárzia, Daniervelin Renata Marques Pereira, Vera Lúcia Morais Antônio de Salvo, Daniela Ferreira Araújo Silva, Márcio Sussumu Hirayama, Ricardo Monezi Julião de Oliveira, Ana Cristina Bastos Ferreira de Paula, Ausiàs Cebolla, Rosa Baños and Marcelo Marcos

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Corresponding Author:  
Patricia Silveira Martins  
E-mail: martinsparra@gmail.com  
 <https://orcid.org/0000-0003-3634-8466>

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