

# I International Congress on Mindfulness, Zaragoza (Spain), 11-14 June 2014

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For almost 40 years, empirical studies have examined the construct of mindfulness and its definition has been continuously revised and clarified. The same has occurred in the last 10 years with the construct of compassion as a fundamental mediating variable in re-establishing emotional balance. The growing body of research aimed at defining and measuring mindfulness has also coincided with an extensive examination of its benefits in mental and psychosocial health, especially in its clinical applications. Worldwide, researchers' interest in the practice of mindfulness and, recently, also in the practice of compassion, has grown enormously. This research has revealed their beneficial effects, including how the brain responds to the practice with said effects.

Our country has not remained on the sidelines of this trend towards exponential growth in research on and application of mindfulness and compassion; to the contrary, it has carried out significant activity, comparable to all other leading countries. Educational proposals in universities and institutions, an initiative to create a regulatory framework for educational standards on a national scale, the creation of a good ethical practices guide and the organisation of international conferences are only some of the landmarks being achieved in Spain right now.

Since 2006, with the publication of the *Revista de Psicoterapia's* exemplary monograph on mindfulness (No. 66/67), whose authors were mainly founders of what was then the AMYS (Mindfulness and Health Association) and is today the Spanish Mindfulness Association (AEMind, from the Spanish *Asociación Española de Mindfulness*), a document of these characteristics had not been published. Since then, mindfulness and compassion have entered what we could call a stage of consolidation and expansion. Therefore, we believe it is time to present this supplement, including the Oral Presentations from the I International Congress on Mindfulness, that was held in Zaragoza (Spain), 11-14 June 2014. This includes the latest research, reviews and educational initiatives being carried out in Spain. Both the supplement and the First International Meeting was a collaborative event carried out by the University of Zaragoza and the Spanish Mindfulness Association, which are both pioneers in establishing a secular, scientific approach to

these two disciplines in our country. This publication does not aim to be exhaustive, nor will it be the last.

In this we have divided the Oral Presentations into two main sections:

The first is on the Foundations of Mindfulness; it deals with topics such as the historical origins of this field, a review of the educational standards that ensure quality in training, information on specific educational models, and the importance of the body and bodily awareness in the practice.

The second section is on Clinical Applications of Mindfulness and Compassion; it includes research and reviews related to compassion in clinical practice, mindfulness and ADHD, as well as applications in eating disorders, grief, chronic pain and fibromyalgia, psychosis and sport.

We hope that these contributions will be useful to the thousands of excellent professionals in our country who use mindfulness and compassion in their work on a daily basis, performing committed, serious, rigorous work. This publication is especially dedicated to them all.

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## FOUNDATIONS OF MINDFULNESS

### Abhidharma and Mindfulness

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Buddhism considers suffering to be inherent to human existence and offers a method to achieve release: meditation;

however, all responsibility is left to the individual. Nothing is left for an afterlife or in the hands of other beings, whether earthly or celestial.

Without meditation not only can it be said that there is no release, but also that there would even be no Buddhism. Meditation is the systematic cultivation of one's attention, which enables other different states to be developed. These are characterized by specific qualities and perfectly described experiences. Through these states an understanding of the true nature of reality is attained. This is a natural, spontaneous and non-subjective realization, which is therefore distinct from the experience of suffering.

Not knowing or overlooking the causes that lead to this state, or not favouring such conditions deprives the individual of this experience or, if it were to occur, it would pass unnoticed and could not be stabilized in daily life. Key to the practice of meditation is knowing what is taking place: if the experience is part of the meditative state and leads to release from suffering, or if it is nothing more than another mental state, the result of my mental noise, which only serves as temporary relief and for losing time.

The description of all these states is found in *Abhidharma*. Part of the premise is that there is no way to extinguish (mental) afflictions other than through the discernment of reality as it is (*dharmas*). It defines the subjective as the dynamics of the five aggregates of consciousness. It provides a detailed description of all that is included in each and every one of its states. In other words, it is a description of everything that is, has been and will be. Meditation is only a tool. This distinction is not trivial: if I use a hammer and nails to make a chair, I can sit down; but nobody would think of sitting on a hammer.

Keywords: Meditation, Mindfulness, Buddhism, Abhidharma

## Abhidharma y Mindfulness

El budismo considera el sufrimiento como inherente a la propia existencia y propone un método para la liberación: la meditación, dejando toda la responsabilidad en cada uno. Sin meditación no solo se puede decir que no hay liberación sino que incluso no habría budismo. La meditación es el cultivo sistemático de la atención lo que permite el desarrollo de distintos estados caracterizados por cualidades específicas y experiencias perfectamente descritas. A través de estos estados se alcanza una comprensión de la verdadera naturaleza de la realidad. Es una realización natural, espontánea y no subjetiva, y por ello ajena a la experiencia del sufrimiento.

Desconocer o ignorar las causas que conducen a este estado, o no favorecer las condiciones, priva de la experiencia o, si surgiera, pasaría desapercibida y no se podría estabilizar en

la vida cotidiana. En la práctica de la meditación es clave saber qué está pasando: si esa experiencia es propia de un estado meditativo y conduce hacia la liberación del sufrimiento o no es más que un estado mental más, fruto de mi ruido mental, que sólo sirve para consuelo temporal y para perder el tiempo.

La descripción de todos estos estados se encuentra en el *Abhidharma*. Parte de la premisa de que no hay forma de extinguir las corrupciones (mentales) que no sea el discernimiento de la realidad tal y como es (los *dharmas*). Define lo subjetivo como la dinámica de los cinco agregados de la conciencia. Y entra en detalle de todo lo que incluye todos y cada uno de sus estados. En suma, es la descripción de todo lo que es, ha sido y será. La meditación solo es la herramienta. La distinción no es baladí: si con un martillo y unos clavos hago una silla me podré sentar, pero a nadie se le ocurriría sentarse en el martillo.

Palabras clave: Meditación, Mindfulness, Budismo, Abhidharma

## Introduction and sources

Buddhist scriptures are classified into three categories: *Sutras* (sermons of the Buddha), *Vinaya* (regulations of monastic life) and *Abhidharma* (Buddhist phenomenology, in the literal sense of "the world as manifestation"). The *Abhidharma* is a very complex and extensive text. Buddhist tradition considers that "its study extends beyond the life span" of a monk. For this reason, scripts or compendia of the *Abhidharma* were created in the early years of the Common Era. These continued to include interpretations in accordance with the lines of the two classical Buddhist schools: Theravāda and Sarvāstivāda. Each of the schools had its own compendium: the *Abhidhammattha Sangaha* by Anurudha (abbreviated to *Sangaha*) for the former, and the *Abhidharmakośabhāṣyam* by Vasubandhu (abbreviated to *Kosa*) for the latter.

## What is Abhidharma?<sup>1-3</sup>

The second line of the *Kosa* says that "Abhidharma is pure *prajña* (Sanskrit; Pali: *paññā*) with its following." And it continues: "Apart from the discernment of the *dharmas*, there is no means to extinguish the defilements, and it is by reason of the defilements that the world wanders in the ocean of existence."

*Prajña* means wisdom: what is, and what can be known. It is not what "I" know or what "I" can know; neither is it what can be understood nor what "I" understand. It is not restricted to the rational or to one's own abilities. It includes intellect, intuition, whether or not this is manifested, whether it is of the individual or cultural. In other words, it encompasses all forms of understanding. Pure *prajña* is the discernment of the *dharmas*. The *dharmas* (Sanskrit; Pali:

*dhamma*) are reality in its most elemental state; the essence of the phenomenon and the basic unit of whatever occurs. When something takes place: seeing a colour, feeling heat or an attack of ire, it is the fruit of a conjunction of the simplest of "things", which are dharmas. The "following" of *prajña* is the "five aggregates", the "mechanism" by which we perpetuate our (illusory) way of seeing reality.

Pure and impure have no moral connotations in Buddhism; rather, they refer to the presence of "afflictions", in other words, of other things. Thus a thing that is painted blue will appear to be a blue thing, and a blue thing is not the same as a yellow thing painted blue. Consequently, *Abhidharma* is the treatise that allows wisdom to be attained through the understanding of the true nature of all the dharmas, of all phenomena, taking into considerations both their nature and the psychological moment in which they occur.

### The five aggregates

Our true nature is pure transparency, clarity, without struggle or conflict, but an open and unbounded space. The idea we have of our skin or our body is that of a boundary with the exterior, with otherness, is just that: an idea. The body is not separate from what it touches. One may think that the skin is one thing and that the air or clothing is another, but even from a physical or chemical perspective, there would be no difference. The carbon atoms that constitute the molecular chains of my cells and tissues are no different from those of cellulose or the fabric in my clothing, and no electron exists that is different from any other. This state of clarity, which is the only true state in Buddhism, is known as *vidya*. The opposite, the lack of clarity, is known as *avidya*, which translates as ignorance and is seen as a cause of suffering.

By what process does the mind distort reality? In a given moment in our lives, as we assimilate information and take shape as physical, emotional and mental organisms, the internal sensation of our separation from otherness begins to grow. Because "I" excludes "the other" and there is no room for the notion that "I" and "the other" are not distinct. It is a natural process; we are creating this (ourselves), and creation works in this way. But this recognition of self has a bitter side, and the result of it is the sensation of separation and the family of feelings commonly associated with it: isolation, loneliness. However, this is not all. The certainty grows within us that not only are we separated, but also that it has "always been this way" – that our natural state is one of separation. This is the second error, which we make definitive with the third: we are constantly on our guard that it should continue to be so. This system of vigilance by which we perpetuate this error is known as the five aggregates of consciousness.

**The first aggregate is matter or form (Sanskrit: *rupa*).** What lies outside and enters by means of the senses. This refers to the sense organs and sense objects. For instance, the eye, the organ of sight, together with colours and shapes. Visible matter is traditionally considered to have twenty-one possible forms, which combined give rise to countless (visible) manifestations. Sound has eight forms; taste has six; there are four odours; and there are eleven tangible sensations. There are great many details, some of which are not so immediate. For example, hunger is considered a form for the sense organ of touch; it is "what is caused by the desire to eat", in the same way that cold is what is caused by the desire for warmth. The interesting thing about the aggregate of form is the expression "what is produced by the desire", because desire is the fuel that binds us to pain and suffering.

**The second aggregate is feeling or sensations (Sanskrit: *vedana*).** There are basically three types of sensations: pleasant, unpleasant and neither-painful-nor-pleasant. Five sensations are sometimes described, given that the pleasant sensation includes both physical and mental pleasure, the same as unpleasant sensations include both physical and mental pain. The neither-painful-nor-pleasant sensation is neutral. The Sutras speak only of two sensations: pleasure (*sukha*) and pain (*dukkha*), with the former including healthy neutral sensation, and the latter including unhealthy neutral sensations.

This neutral sensation is sometimes known as indifference, and has the characteristic of neither intensifying nor deteriorating the associated states; i.e. promoting states of consciousness without pleasurable interest. It should be pointed out that the sense consciousnesses, except for the body itself, experience the object in a different way. Only the body experiences pleasure or pain. It is evident that the colour of a thing "does not hurt", but it can be pleasant or unpleasant. However, this is subsequent mental process, in other words, a mental sensation. When the visual sensation is produced (in this case), it is neutral.

**The third aggregate is perception (Sanskrit: *samjna*).** In the sense of what is perceived as in the form of a concept or idea. This can be the mental representation of form and the impression left by sense objects; for example: man, woman, tall, short, yellow, cloud, etc.

**The fourth aggregate is mental formations (Sanskrit: *samskara*).** These are mental states, excluding sensations and perceptions, which belong to the mind. The *Abhidharma* mentions as many as fifty-one mental states, including volition, faith, calm, equanimity, modesty, anguish, laziness, mindfulness, etc. The two previous aggregates are also considered to be mental formations, but are given separately because Buddhist teachings consider sensations and perception to be aggregates

in which the roots of conflict lie. These roots are attachment, aversion and indifference. A root is a mental factor that gives strength and stability to the consciousnesses and the mental factors with which it is associated. Buddha said that attachment to pleasures and opinions, which emerge from feelings and ideas, is the cause of transmigration.

The fifth aggregate is consciousness (Sanskrit: *vijnana*). This is the impression relative to each object. Contact is made with sense objects through the sense organs and a corresponding sense consciousness is produced. Six sense consciousnesses are described: the five associated with the sense organs, and the mind as the sixth (thoughts are considered their sense object).

### What are dharmas?

Dharmas are the building blocks of what is occurring anywhere and everywhere, both tangible and mental. They have an intrinsic existence or an essential nature. Nonetheless, the Abhidharma insists that dharmas are not substances, atoms or points in space with a geometry. They exist in space (which is a dharma), but have no extension or dimensions. They exist in time, but are instantaneous - even having no duration, according to some schools of Buddhist thought. They make up a causal network of dependent origin (the concatenation of infinite causes and infinite effects). They are not compounds, nor are they simple elements. They are particular, not universal, and as such, are abstract "characteristics".

Everything that exists in "our world" - objects, people, feelings - are nothing more than a construct of the mind built from the raw materials that are dharmas. Only dharmas possess ultimate reality, as the Sutras explain: "existence determined from their own side", independent of the mental process. Wisdom, the discernment of the dharmas, is knowing what has existence on its own side and what is nothing more than a mental construct. It is knowing to distinguish what is actually taking place at this moment from what I imagining.

Dharmas are classified in different ways. Essentially, the different classifications consider four categories: matter - form (*rupa*); the mind or state of consciousness (*citta*); mental factors; and the unconditioned dharmas (in contrast to the three previous categories of conditioned dharmas).

1. **Matter-form** is aligned with the matter or form aggregate described previously. The remainder, whatever is not form, is considered mind, which means that the other four aggregates are mind.
2. **Mind** (or state of consciousness) is what is known as mind: an instant of consciousness, the formation of a thought, emotion or act of volition or the will. Intuitive

and non-discriminating mental action is also included, as are states not associated with mental or bodily actions, and (coming to) awareness. It is the knowledge or cognition of an object. It is not an instrument; nor is it anything that has a true existence beyond the act of knowing. There is no permanent entity or self that is known. According to tradition, there are eight consciousnesses, described in Table 1.

The first six consciousness fluctuate. For this reason, they are not considered awarenesses for "use" during meditation. One is not meditating when chasing stimuli (visual, olfactory, etc.) or thoughts. Moreover, mental peace does not exist, because the mind works as it does, and the mind works by drifting from one thought to another. The remaining consciousnesses are non-fluctuating; we are aware of them when we are not caught up by the activity of the six first, although they do not necessarily cease. Meditation teaches us to steady ourselves through these non-fluctuating consciousnesses, according to the degree of penetration into one or another, in the consciousness of self or in the consciousness of being (which is not the same).

3. **Mental factor.** There are different classifications depending on whether these are present in a state, or whether they are favourable, unfavourable or indifferent. Among mental factors, the dharmas that are ever-present in any type of consciousness or in the act of cognition of any object are:

Table 1	The eight consciousnesses
	<ol style="list-style-type: none"> <li>1) Visual (sight) consciousness;</li> <li>2) Auditory (hearing) consciousness;</li> <li>3) Olfactory (smell) consciousness;</li> <li>4) Gustatory (taste) consciousness;</li> <li>5) Tactile / kinetic consciousness</li> <li>6) Mental (thought) / empirical (Sanskrit: <i>mano vijñāna</i>): discriminating mind, sensations, perceptions, the object of which is the exterior world;</li> <li>7) Intuitive mind (Sanskrit: <i>manas</i>): intuitive thought and mind, reflection, the object of which is the interior world, discriminating I / not I;</li> <li>8) Storehouse consciousness (Sanskrit: <i>ālaya-vijñāna</i>): the base of all the dharmas, non-discriminating.</li> </ol>
	The Yogācāra school adds a ninth consciousness, <i>amala-vijñāna</i> , considered by certain masters as pure consciousness associated with nirvāna, while for others it is a pure aspect of <i>ālaya-vijñāna</i> .

- 1) Contact (*phassa*): concurrence of sense object, sense organ and sense consciousness.
- 2) Sensation (*vedanā*): affective quality of experience. This is not emotion, because it involves the concurrence of different mental factors. Basically, it is pleasant, unpleasant or neutral.
- 3) Perception - ideation (*saññā*; Sanskrit: *samjna*). Perceiving qualities or marks, which allows us to know that an object is what it is and not something else, because we recognize something we have seen before.
- 4) Volition (*cetanā*): mental factor responsible for accomplishing a goal. It arranges the mental factors in its action towards and over the object.
- 5) Unification (*ekagattā*) of the mind and sense object (of the five senses or of the mind).
- 6) Vitality of mind (*jivitindriya*): maintains mental states.
- 7) Attention (*manasikāra*; Sanskrit: *manaskara*): mental application, attention, the act of focusing attention, what makes our senses or mind spontaneously stop on an object, what makes something "catch" our attention, advertence.

Etymologically, it refers to "making or bringing something inside the mind". Attention is a mental factor that notices an object, making the object present in the mind. Its role is to lead the other mental states towards the object and "attach them" to it. *Manasikāra* is the first "confrontation with an object" by the mind and "orders the concomitant mental factors associated with the object". It is therefore the factor that predominates in the consciousnesses involved with advertence; i.e. in the cognitive processes of the five sense consciousnesses and of mental consciousness. By cutting the flow of the life-continuum, these two states of consciousness form the first step in the cognition process. Without *manasikāra* the mind is like a rudderless boat, and it cannot become aware of an object. For example, the cognitive process of seeing requires four elements: the sight organ, the visual object, conditions for sight (the presence of light) and attention (*manasikāra*).

The following mental factors are no longer continuously present:

- 8) Immediateness in the cognitive process is known as *vitakka* (Sanskrit: *vitarka*). Just as *manasikāra* is the rudder of the boat (pointing towards the object), *vitakka* is the rowers (taking it towards the object). It is the initial application of the cognitive process towards the object. It is a crude form of the mind. Our gaze rests on something (*manasikāra*) that catches its attention and sets off a series of mental

factors in the direction of that object (*vitakka*). What is this? Reflection. The idea here is that the mind "hits or crashes into" the object.

- 9) This is followed by a mental factor known as *vicarā*, which means investigation. It involves the examination of the object. It is the sustained application of mental states to the object, continued scrutiny of the object.
- 10) Finally *sati* (Sanskrit: *smṛti*): means full attention. This is commonly referred to as mindfulness. This attention is different from anything coming before it. *Sati* means "remember" – a memory in the sense of what makes us not forget the object. As a mental factor it means presence of the mind; it is not a faculty of memory relative to the past. It has the characteristic of not fluctuating; it does not stray from the object. It prevents confusion and forgetfulness.

Among mental factors there are many more dharmas. Others that also arise in meditative states are *sraddha* (faith, certainty) and *upekka* (equanimity).

4. **Unconditioned dharmas.** Depending on the classification, there may be one or several of these. Space features in all classifications, and then there are variations. Nirvana is present in some of these; while others distinguish "release" through understanding and "release" without understanding. Others include "a state of undetermined consciousness".

## The cognitive process

Before entering into this brief description of the cognitive process, you must take into account two axioms: 1. Consciousness of self or self-awareness is not the same as consciousness of being; and 2. We become aware of things BEFORE we become aware of this.

There are six gateways or doors in the process of cognition: the sense doors and the mind door. Through them consciousness encounters the object, and objects "enter" the sphere of consciousness and of mental factors. At the same time, the mind interrelates and interacts with the objective world three doors of action: body, speech and mind (as thought).

Different types of consciousness operate in the cognitive process, performing as many as fourteen different functions, as described in the following. Not all the functions coincide in the process; only a maximum of ten, owing to these functions including five sense doors, which may not all coincide, and a mind door, which without a prior sensory impression (dreams) excludes the five previous ones.

1. **Linking-Rebirth (*patisandhi*):** During conception, this type of consciousness arises by connecting the new existence to the previous one. The consciousness that performs this function only arises once in each individual existence, during the moment of rebirth. This is not rebirth in the sense of reincarnation. It does not refer to a self becoming to another self; rather, it refers to the continuity of "information", to paraphrase this in scientific terms, which is independent of dimensions or forms, but which condition them in the same way as a lead iodide solution will precipitate to form crystals of the same geometry, whether in Santander or New York.
  2. **Life-Continuum (*bhavaga*):** Factor (*aga*) of existence (*bhava*), the indispensable condition for existence. Its function is to preserve the continuity of individuality throughout the duration of an existence, from conception to death. It arises after *patisandhi* (the previous consciousness) and ceases definitively just before death. *Bhavaga-cittas* flow continuously during existence, in a constant process of arising and ceasing (birth and death). When an object comes into contact with a sense door, the flow of *bhavaga* consciousness is cut (shifting to the background or becoming attached) and the cognitive process develops. *Bhavaga* emerges immediately afterwards, continuing on until the subsequent active cognitive process. *Bhavaga* is most evident in the state of deep, dreamless sleep and in states of wakefulness without active cognition (the "empty mind").
  3. **Advertence (*āvajjana*):** When an object comes into contact with one of the sense doors or the mind door, a mental moment arises, known as *bhavaga-calana* – vibration of the *bhavaga* – during which the *bhavaga* "vibrates" for one moment. It is followed by *bhavaga-upaccheda*, a moment in which the *bhavaga* is paused. A *citta* (consciousness) arises immediately after this, turning towards the object (sense or mind). This function is known as advertence.
  - 4-8. **The five sense doors:** After advertence, when an object is noticed, a consciousness of direct knowledge of the object arises. The sense consciousness and the specific function that is triggered by the nature of the object (e.g. if it is a visible form, sight consciousness arises). This is a rudimentary consciousness through which the sense data is experienced immediately and simply, prior to identification. In other words, I see but I am not aware of what I am seeing. *Manasikāra* is the predominant factor in these sense consciousnesses, the previous advertence consciousness and in the mind door, and this directs *āvajjana* (advertence consciousness) towards the sense door and/or mind door.
  - 9-11. **Reception:** Subsequently, a series of consciousnesses arise which operate by receiving (*sampaticchana*), investigating (*santirāa*) and determining the object (*votthapana*). In the case of the mind door cognitive process (independently of the sense consciousnesses), these three functions do not arise; however, after the *bhavaga* is cut, mental advertence arises without intermediate functions.
  12. ***Javana*:** This consists of seven consciousnesses (of an identical type) that "run swiftly" over the object during the act of understanding it. It is at this point where healthy and harmful consciousnesses originate; in other words, where we begin to manage and catalogue the information on what is happening from the perspective of our personal background.
  13. **Registration (*tadārammana*):** This works by accepting the object understood by the *javanas* as an object, "possessing" the object. It occurs when the object is very prominent to the senses or clear to the mind; otherwise, this function is not performed. After this, the mental stream is again submerged in the life-continuum (*bhavaga*).
  14. **Death (*cuti*):** This is the last consciousness that arises in an individual existence. It marks the exit from a given existence. This consciousness is of the same type as the two first (*patisandhi* and *bhavaga*) and, likewise, belongs to the process of rebirth, outside the cognitive and active processes. It differs from them in that it performs the function of dying.
- The duration of these instants of consciousness is infinitesimal. Buddhist texts state that there are thousands of conscious instants in the duration of a lightning strike. This premise is coherent with current scientific assumptions, in which humans and primates are able to see objects at rest owing to continuous micro-movements of the eyes that can take twenty milliseconds. There are fifty times twenty milliseconds in a second. Each movement is information that reaches the neuronal circuits and is processed.

### The path of meditation

At this point, it is important to remember something that was mentioned earlier. The cause of suffering is ignorance. Ignorance sets off a system of self-perpetuation. The "fuel" for this system is desire, and the expression of our action and the stabilization of states is through the three roots (*hetu*): attachment, aversion or indifference towards whatever is taking place. The combination of

mental factors in consciousness (the act of knowing) in which any of these roots are present creates and fixes our way of seeing the world. All of this takes place in what Buddhists call the realm of desire. This is the world in which we spend ninety-nine per cent of the time when we are not asleep. Discernment of the dharmas (which leads to contentment) means realizing this and not feeding it, because if we feed the wolf that would eat us, it will eat us. The realm of desire does not refer to the world of meditation or that of meditative absorption, or the like. The path to realization is the path of meditation, and what it opens to us is the Realm of Form. Desire is not extinguished, but our relationship with it begins to take on a different form, at first with certain control, and later by placing it at our service until it is exhausted.

The Pali word for meditation is *kammaṭṭhāna*, which literally means "place of work".

There are two types of meditation: calming (*samatha*) and insight (*vipassanā*).

- **Samatha** means tranquillity of the mind; it is a similar term to *samādhi*, concentration, although it is derived from a different root word. The root *sam* means to be in peace. Samatha is a state of unifying the mind stream, which causes the mind's fluctuations to cease. Calming meditation is found in different traditions, although Buddhism uses it because it provides a solid base on which to develop vipassanā.
- **Vipassanā** means "seeing things in different ways". In Buddhism it is the meditation of the three characteristics of phenomena: impermanence, insubstantiality and suffering. Perception of the three characteristics is the function of the mental factor wisdom (*paññā*) directed towards insight into the real nature of all things. The latter is a distinguishing factor of Buddhist teachings and allows the truths described in the teachings to be achieved.

In developing tranquillity, Buddhism proposes forty meditation objects, and recommends one or other according to the nature of the meditation. Among the forty objects a number are familiar in the most widespread meditative practices, such as:

- Four reflections: body (thirty-two body elements are observed); breathing (sensation of the breath in contact with the airways); death (contemplating death as a certainty whose time is unknown and in which everything will have to be abandoned); peace (contemplating the attributes of a peaceful state).
- Four boundless states: loving-kindness (*mettā* – desiring well-being and happiness for all beings – counteracts ill will); compassion (*karuṇā* – the opposite of cruelty – is desiring the elimination of suffering in all beings,

suffering with the pain of others), altruistic joy (*muditā* – rejoicing at the success of others – does away with envy); and equanimity – (*upekkhā* – seeing others impartially – is opposed to resentment and partiality).

The classic texts dealing with the development of meditative practices are the *Anapanasati Sutra* (Discourse on the Mindfulness of Breathing) and the *Satipatthana Sutra* (Discourse on the Establishment of Mindfulness, also known as the Four Foundations of Mindfulness). A complete (and very extensive) description of the meditative states is given in the *Visuddhimagga* (The Path of Purification) by Buddhaghosa.

The factors (dharmas) that intervene in the meditative process are the same as those involved when we become "absorbed" when watching a good film or a sunset, for instance. What we do on the path of meditation is to have them present. It should be recalled that manasikāra is the dharma that causes our mind to rest on an object, the one that makes something attract our attention or makes us notice something. It is an omnipresent dharma in all kinds of consciousnesses and it what makes us "realize".

Meditation takes into consideration five factors (dharmas), some of which have already been mentioned:

- **Vitakka**: discerning reflection. It is a crude form of the mind in operation. This is not concentration because it is subject to the constant movements of ideation. "Mental activity that seeks".
- **Viccāra**: evaluation, investigation, the ability to keep the mind "interested" on that point. It is a subtle form of the mind in operation. It is what scrutinizes something from close up.
- **Priti**: ecstasy, pleasant interest. A sensation experienced with great energy, which penetrates the entire body and turns it transparent, as if there were no body. This is not a feeling of peace; it is stimulating. It is the joy or excitement that appears when one is thirsty and sees a well; it does not quench the thirst, but provides the energy to go to the place where there is water).
- **Sukha**: pleasure, joy without ecstasy: drinking water from the well.
- **Ekaggatā**: unification, the mind is at "a single point" (single-point awareness).

The five factors are present when we enter into the processes of meditative absorption, and as we pass from one absorption to another, they cease to "function" one at a time in the order they are listed. The Theravāda tradition speaks of five states of absorption (*jhanas* or *jhānas*), while the Sarvāstivāda tradition lists four plus an intermediate state between the first and the second, where viccāra ceases.

An object of attention is chosen (this is breathing in the *Anapanasati*) and attention is focused on this object, which counteracts lethargy and drowsiness (*middha*). By keeping attention on the object, doubt (*vicikicchā*) is kept away. As we are increasingly able to sustain our attention, vitakka and viccāra give way to ecstatic joy, the pleasant interest that inhibits ill will (*vyāpāda*). This gradually gives way to the pleasure (*sukha*) that counteracts nervousness and worry (*kukkucca*). A state of unification is finally attained that dissolves sensual desire (*kāmacchanda*).

They are described consecutively here because they become "disabled" consecutively in the different levels of absorption. However, the five hindrances are present in the first jhāna (vitakka - viccāra - piti - sukha - ekaggatā) and disable the five hindrances or obstacles: drowsiness, doubt, ill will, worry and sensual desire (*middha - viikicchā - vyāpāda - kukkucca - kāmacchanda*).

### States of meditative absorption<sup>4,5</sup>

**First state of absorption (jhāna; Sanskrit: *dhyāna*):** As described, once a state of calm is created, the five hindrances are dissolved and the ideal conditions for contemplation are produced. These are:

- Attention (*vitarka*) to sensations, emotions, thoughts, ideas. The four foundations of mindfulness are practised. Attention is focused on breathing and the emergence and cessation of mental formations are observed. On other words, things are allowed to arise and let go. However, if something is strong enough and "letting go" becomes very difficult, it becomes the object of attention and what is occurring is investigated.
- Investigation (*viccāra*). The process would be like this: What is this? Acknowledgement: "this is what it is". Acceptance: "this is what there is". Transcendence: "I am not this". Integration: "I am everything I am". If this point is achieved, the content will have dissolved, or if a point is reached where the content does not have sufficient "weight" with which to hold attention, one returns to breathing.

The fact should not be overlooked that the simple workings of the cognitive process causes the object on which attention is placed to become the sole reality.

In this state of meditative absorption, and produces mirror-like wisdom is developed and produced: there is no separation between myself and the others or with phenomena (both "out there" and "in here"). The mind is at a single point.

*Vivekajam* – separation – is produced. To become separated is to renounce what can be. There is dissociation. There

is also joy (*piti*) and pleasure (*sukha*), although these are latent owing to there being a greater burden of "afflictions" (the three roots) characteristic of the realm of desire. Separation arises to the degree that these cease.

**Second state of meditative absorption** Unification of the mind. *Vitarka - viccāra* is left behind (here is where Theravāda tradition includes a jhāna so that first vitakka is left behind, then viccāra). Mental agitation ceases. There is concentration (*samadhijam*). Inner serenity is developed (*adhyatmasamprasada*, which arises to the degree that vitarka - viccāra cease).

Ecstatic joy (*priti*). The mind remains focused on joy. Internal clarity, focus.

Purification of pride. This comes in three forms: believing that we are better than others (and the idea that something is good or bad), believing we are superior (which hinders us from learning from others) and believing that what we do is superior. A purified mind does not distinguish: good - bad, pure - impure, I - others. Wisdom of equality is developed.

**Third state of meditative absorption** Separation from ecstasy. No joy or sadness. Equanimity (*upekka*) and understanding. Clear comprehension (*sampajañña*) arises, and it is in this state of absorption that mindfulness (*sati*; Sanskrit: *smṛti*) arises. These three qualities arise to the degree that ecstatic joy (*priti*) ceases.

*Sati* and *sampajañña* are also developed, which work together in the development of the foundations of mindfulness (*satipatthana*). There is joy without ecstasy, pleasure (*sukha*). Empathy towards all beings and their qualities. Purification of desire. Desire keeps the mind unsettled and restless, and brings about the release of the three unhealthy roots of consciousness. Wisdom of discernment. This is similar to a lamp that allows things to be discerned in the darkness.

**Fourth state of meditative absorption** No pain or pleasure (Sanskrit: *adhukasukhavedana*). In this state of meditative absorption where desire has been purified, mindfulness is pure (Sanskrit: *smṛtiparissudhi*). Pure equanimity (Sanskrit: *upeksaparissudhi*). Both arise to the degree that *sukha* (pleasure) ceases.

*Samadhi*. Awakening. The dissolving of time is experienced.

Meditative absorptions do not remain in this state. They would enter into the realm of **no-form**, an intangible plane of existence given this name because form is no longer the object of attention. There has been complete transcendence of matter and only consciousness and mental factors exist. For this reason, energy is no longer available for the senses and is reabsorbed into the state of presence (which is also a mental factor).

## Conclusions

- Desire keeps the mind in constant operation. There is no peace in the realm of desire.
- The three roots: attachment, aversion and indifference fix and intensify mental formations.

Attention is a quality of the cognitive process.

- If we disregard the influence of desire and the three roots, all of our capacity for attention will be innate, nothing more, and will not allow states of calm, concentration or investigation to be developed. The boat will have a rudder, but there will be nobody to row and save us from the breaking waves.
- To the extent that we cease to be victims of desire and caught up by the roots, through certain discipline in observation and concentration, mindful states (sati) will arise. We should not spend our lives looking at the lambs in the field when we should be looking at the field.

"Without directly knowing and fully understanding the all, without developing dispassion towards it and abandoning it, one is incapable of destroying suffering." Saṃyutta Nikāya

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## Mindfulness Teaching. Competence Criteria

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The demonstrated effectiveness of mindfulness, both at a personal and professional level (in treating several physical and mental alterations and disorders) has contributed to the spectacular, continuous growth in interest in and demand for mindfulness trainings and interventions in a variety of contexts related to health, education, business, prisons, etc. However, the reality is that as of right now there is a limited number of certified teachers who can clearly not meet this growing demand. The purpose of this paper is to review the standards, evaluation criteria, supervision and certification of mindfulness-based teaching and interventions currently in place in different counties, which could be used as guidelines in Spain to develop training standards and a best practices guide adapted to different contexts.

**Methodology.** We have reviewed and performed an in-depth analysis of different existing protocols for mindfulness-based training and interventions.

**Results.** There is an enormous disparity and lack of consistency in the competences and their evaluation, the teaching process, as well as the criteria and standards used to guarantee the quality and integrity of mindfulness-based training and intervention.

**Conclusions.** There is a need to create guides in order to develop national standards that, by identifying and evaluating the appropriate competences using different methodologies, and through a learning process that allows for the identification and evaluation of different levels of training, will guarantee the quality and integrity of training and interventions in mindfulness and compassion.

**Keywords:** Mindfulness, Training, Teacher training, Mindfulness-based interventions, Skills, Standards

## Mindfulness Enseñanza. Criterios de competencia

La eficacia demostrada de mindfulness, tanto a nivel personal como profesional (en el tratamiento de diferentes enfermedades médicas y psicológicas), ha contribuido a que la demanda en el entrenamiento en mindfulness, en contextos relacionados con la salud, la educación, la empresa o las prisiones, haya experimentado un desarrollo espectacular y continuo. Sin embargo, la realidad es que existe hasta ahora un número limitado de profesores certificados que, claramente, no pueden satisfacer esta creciente demanda. El propósito de esta ponencia es revisar los estándares, criterios de evaluación, supervisión y certificación de las intervenciones basadas en mindfulness, que actualmente se desarrollan en diferentes países, y que pueden ser utilizadas en España, para desarrollar estándares de formación y guías de buena práctica en diferentes contextos.

**Metodología.** Hemos revisado y llevado a cabo un análisis en profundidad de los diferentes protocolos existentes sobre entrenamientos e intervenciones basadas en mindfulness.

**Resultados.** Existe una enorme disparidad e inconsistencia en las competencias y en su evaluación, en el proceso de enseñanza, así como en los criterios utilizados para garantizar la calidad e integridad de los entrenamientos e intervenciones basadas en mindfulness.

**Conclusiones.** Existe la necesidad de crear guías para desarrollar estándares nacionales, identificando y evaluando las competencias apropiadas y usando diferentes metodologías, mediante un proceso de aprendizaje que permita identificar y evaluar los niveles de entrenamiento, de forma que se garantice la calidad e integridad de las intervenciones en mindfulness y compasión.

**Palabras clave:** Mindfulness, Formación, Formación de formadores, Intervenciones basadas en mindfulness, Competencias, Estándares

## Introduction

### *The effectiveness of mindfulness-based interventions. A starting point*

From a scientific point of view, the practice of mindfulness has demonstrated its close relationship to several indicators of physical and mental health. Thus, mindfulness is effective for a **better-functioning body** (promotes healing processes, immune response, nervous system balance and quality of sleep<sup>1,2</sup>); **increasing well-being** (regulating emotions both in adults and children with problems internalising and externalising their emotions<sup>3</sup>, reactions to stress, fighting emotional dysfunctions, optimising cognitive patterns, reducing negative thoughts, strengthening relationships with oneself and with others, increasing the ability for empathy and compassion<sup>4</sup>); **generating positive emotions** (increasing the perception of self-effectiveness and self-regulation, higher levels of positive affect, vitality, satisfaction with life, happiness, serenity, love, gratitude, as well as subjective sensations related to an increased appreciation for the little, everyday things that surround us<sup>5</sup>, increasing creativity<sup>6</sup> and academic performance<sup>7</sup>); as well as for **treating several physical symptoms and mental disorders**<sup>8</sup> such as: chronic pain<sup>9-11</sup>, fibromyalgia<sup>12,13,14</sup> and oncological problems<sup>15,16</sup>, depression<sup>17-20</sup>, anxiety<sup>21-23</sup>, as well as for modifying aggressive behaviour in adolescents<sup>24</sup>. Mindfulness has also been shown to be effective for **improving the personal and professional well-being of the therapist who practises it**. Specifically, several studies performed on health professionals have shown that the practice of "being aware" improves stress levels in health environments<sup>21,23</sup>, as well as the patients' prognosis and the professional's quality of life and

**clinical practice**, as regards managing emotions and the identification of thoughts and cognitive bias<sup>25</sup>.

In an educational context, although there are few studies on training teachers in mindfulness<sup>26</sup>, several studies have shown that mindfulness practice helps teachers<sup>27-30</sup> reduce their stress levels, provides them with strategies to control behaviour in the classroom, improves their self-esteem, and also helps them have a holistic view of the curriculum and of the key concepts that they have to teach, overcoming feelings of exhaustion.

Such encouraging results have contributed to the current dilemma on an international level: there is enormous demand for courses, programmes and interventions based on mindfulness and/or compassion; at the same time, there is a very limited number of formally qualified teachers (except for the first and second generation who have received a deep, substantial education on the principles of mindfulness) to teach and implement mindfulness-based interventions.

### *The multi-disciplinary mindfulness personality*

One of the main reasons for this deficiency is that **currently there are no formal international regulations (or certifications) on the training and experience needed to apply mindfulness-based interventions** (or for teacher training). There is no single international criteria; that is, each country (USA, European Union countries, Latin America, Canada, etc.) has a series of filters that, to a certain extent, guarantee the appropriate accreditation for psychotherapists, as well as the quality and rigour of professional practice. The only guidelines for professional training (to perform mindfulness-based interventions as well as to train teachers or instructors) are those developed by the Center for Mindfulness, founded by Jon Kabat-Zinn, and the UK Network for Mindfulness-Based Teachers. Specifically, the only regulated protocols for mindfulness training and practice organised in trans-cultural structures are: MBSR (Mindfulness-Based Stress Reduction)<sup>31</sup>; MBCT (Mindfulness-Based Cognitive Therapy)<sup>20</sup>; MSC (Mindfulness and Self-Compassion)<sup>32,33</sup> and DBT (Dialectical Behaviour Therapy)<sup>34</sup>.

The factors that may have contributed to the lack of regulation in the training for and application of mindfulness-based interventions include, among others: the essence and origin of mindfulness itself, the Western cultural conditions in which mindfulness emerged, as well as the mutual mistrust between philosophical-religious-wisdom traditions and science on the legitimacy of mindfulness. There can be no doubt that the **essence of mindfulness itself**, as "a basic, universal human capacity that enables us to be aware of the mind's contents from one moment to the next,

something that we have all experienced on several occasions in our everyday life when we are aware of what we are doing, thinking or feeling"<sup>35</sup>, makes it very difficult to operationalise or establish the level of skill needed to guarantee the quality and integrity of mindfulness- and compassion-based training and interventions.

Furthermore, the fact that mindfulness is a system shared by a large number of philosophical-wisdom traditions also contributes to the lack of regulation of its training and interventions. More specifically, if we focus on the double consideration of mindfulness as: a) an inseparable knowledge that illuminates, revealing depth and possibilities while transforming everyday life; and b) a path to inner liberation; we find that **mindfulness is rooted in philosophy and life wisdom. This perennial wisdom** (as it is called by many 20th century thinkers because it has not undergone modifications associated with a change in place and time) is not a theoretical system, but rather a series of self-sufficient theoretical doctrines, a set of operational indications, of practical suggestions to begin down this path. Neither does it reference a manual of knowledge, but rather the person who is capable of finding it: the "wise one", the "life master" who is not one who has reached the height of knowledge and virtue, but more generically, one who is committed to "experiencing a new state of knowing and being" and who enjoys this state in his everyday life. It does not attempt to explain, but rather to inspire. It does not invite us to possess knowledge, but rather to access the experience of a new state of knowing and being, whose rewards are inner peace and freedom. It is not a privilege belonging to experts, but is instead within the reach of those who desire it with purity, persistence and devotion. This perennial wisdom has remained faithful, harmonious and consistent in all times and places. Thus, mindfulness is present in pre-Socratic philosophy (and is especially represented by the figure of Heraclitus); in Hermeticism (from whose mysterious Egyptian sources many Greek philosophers and wise men drew inspiration); in Roman stoicism (Epictetus, Marcus Aurelius, etc.), the best heirs of Greek thought philosophy; in Zen Buddhism; in contemporary wise men who were not philosophers, such as Krishnamurti or Albert Einstein; in thinkers such as Ralph W. Emerson, Soren Kierkegaard, Friedrich Nietzsche, Simone Weil, etc.; in Western speculative mysticism, represented by Meister Eckhart; in the Taoist thinking of Lao Tsé and Chuang Tzu; as well as in Indian thought, specifically in the Upanishads and in one of the traditions inspired by them: the Vedanta Advaita, or the Vedanta of non-duality (whose founder was Shankara and whose main contemporary representatives have been Ramana Maharshi and Nisargadatta Maharaj), among others<sup>36</sup>.

From this perspective, Kabat-Zinn,<sup>37</sup> with the aim of clarifying the origin and essence of mindfulness teachings

for different professional contexts as well as for a secular audience, contemplates two major considerations: a) keeping in mind that **Buddha was not Buddhist** and that the word **Buddha means one who has awoken, mindfulness has little or nothing to do with Buddhism, in the sense that it transcends Buddhism**; and b) the main aspects that the term **mindfulness includes ("being awake", "compassion" and "wisdom") are universal qualities, and therefore not specific to a particular tradition. This is the meaning of the word that we refer to when in our organisation the adjective "secular" is used.**

Thirdly, the West's own cultural conditions, including its main religious and philosophical traditions (Egyptian hermeticism, predecessor to Buddhism in the East and of pre-Socratic thought in the West, Sufi Islam and Christian mysticism), **past and present scientific paradigms**, as well as **different forms of language**, have resulted in the **proliferation of different perspectives, branches and schools of thought on mindfulness** that, constructed on a foundation of differing beliefs and rituals, combine different doses of tradition and change. Thus, the **enormous complexity and diversity of current mindfulness practices** is understandable; however, this evidently makes it difficult to regulate mindfulness training and its application. More specifically: identical terms are used in significantly different perspectives and discourses (various spiritual traditions, humanist psychotherapy, scientific psychology and even subjective descriptions of people with more, fewer or different practices); there is basic confusion regarding the consideration of mindfulness as a practice, a process, a result, a passing state to be explored, a way of life that should be cultivated, or simply a construct<sup>38</sup>; dissimilar didactic and experiential components are included in mindfulness interventions that provide an enormous number of competing action mechanisms<sup>39</sup>; this leads to a large number of operational definitions of mindfulness modulated by different objectives and strategies related to the contents and participants being included at one time or another, among others.

Furthermore, **the mutual mistrust between spiritual traditions and the scientific context has also substantially contributed to the lack of regulation of requirements to be a trainer and to apply mindfulness in different contexts.** Thus, the spiritual tradition is suspicious of academics as they consider that, by isolating mindfulness from its original discourse and ethics, they are offering a reductionist, utilitarian vision of the practice of mindfulness. On the other hand, the fact that mindfulness originates in the spiritual or religious realm and that, consequently, it is associated with a sense of spiritual search or transcendence, has meant that for many years scientists have classified it as a pseudo-scientific practice and, therefore, have limited its influence in the clinical environment and in promoting

health. We believe that this discourse has been overcome and is now obsolete.

Considering all these aspects together demonstrates the need for our country to have agreed upon standards or quality criteria that, through the training-learning process, will allow us to guarantee the quality and integrity of mindfulness-based training and intervention in different contexts.

### The Main Pillars Of Mindfulness And Compassion Training. Competences, Teaching Process And Training Standards

The main pillars that guarantee the quality and integrity of mindfulness-based interventions (MBI) which, at the same time, must be considered and evaluated in parallel, are: a) criteria or standards for good practices (for teachers) and evaluation criteria for said practices; b) the training/learning process to be a teacher (contents and methodologies) that consists of a series of stages or levels; and c) competences and their evaluation<sup>40</sup>. From a theoretical perspective, a competence is a structure that defines a necessary aspect for performing a professional role. The concept of competence includes the components of **integrity** (fulfilling objectives); **adherence** (incorporation and application of the programme's ingredients at the appropriate time); and **differentiation** (with regard to other interventions)<sup>41</sup> and includes knowledge, skills and attitudes that prepare the student to exercise the practice.

From a functional perspective, a competence evolves, as it depends on the level or status of professional operation that the person has.

From an applied perspective, generally, a competence is understood to be "preparation for the practice". Specifically, a competence implies the *"acquisition of specific knowledge, abilities and attitudes that together make a person competent to practise"*<sup>40</sup>.

From the perspective of mindfulness, *"it is not possible to conceive of a competence as an added bonus, as a collection of skills (making reference to the classic consideration of competence) or as a set of techniques that characterise the learning process"*<sup>40</sup>. Thus, the concept of competence is completely separate from the mental state "I am competent" or "I have the competence to", usual considerations that lead to the process of identification and separation from others, instead of promoting openness and connection. Analysis of the different mindfulness-based intervention programmes (MBI), mainly of MBSR and MBCT<sup>37,42,43</sup>, which offer a solid foundation for developing competence descriptors has shown that there are two types of competences: basic competences to be a mindfulness

trainer in a specific professional context; and specific competences for being a trainer for the application of specific mindfulness protocols.

The basic competences for being a mindfulness trainer include the following aspects<sup>40</sup>:

- a) Minimum professional experience of 3 years of independent professional practice in the specific field in which the intervention is to be implemented (health, education, business, etc.), which ensures professional competence and experience before developing the competences necessary for performing the specialised training in mindfulness.
- b) Mindfulness training includes three closely related aspects that increase with practice<sup>5</sup>. Mindfulness training includes closely related aspects: mindfulness attitudes (fundamental and differentiating aspect of training and interventions), the exercise of the practice or personal experience, the level of procedural knowledge and skills (communication, ability to relate and lead groups).

In addition to these basic competences, **specific competences** include knowledge of the psychological models and treatments for different contexts of application (clinical, educational, business, etc.), some of which we will discuss in the next point.

After the first and second generation of mindfulness teachers in MBCT in the United Kingdom, the **evaluation of mindfulness competences** currently presents serious limitations and deficiencies. These include: a) there is not a sole, complete or "rule of thumb" methodology that enjoys empirical support, that is, "the complexity of the competency to be a mindfulness teacher has never been summarised in a single evaluation method"; b) the existing evaluation processes do not include all necessary requirements; and, c) some methods do not directly evaluate mindfulness training competencies, but rather the areas that they believe are related to the development of said competences<sup>40</sup>.

These are the main reasons that over the last several years in the United Kingdom, expert mindfulness researchers from Bangor, Oxford and Exeter Universities – which also offer MBSR and MBCT training (programmes that include competences evaluation) – have worked together to develop a system (nationally agreed-upon criteria) as well as an appropriate methodology to evaluate both the competences necessary for teaching mindfulness and the adherence to intervention programmes applied to different contexts. Furthermore, this system is open to examination and debate from mindfulness professionals and makes it possible to decide when a future teacher is prepared to teach mindfulness<sup>40</sup>.

Dreyfus and Dreyfus<sup>44</sup>, through systematic observation and with the aim of explaining different contexts that require continuous application (including: airline pilots, chess players, drivers, as well as adult learning of a second language), argue that the main characteristics of the **general teaching-learning process through which a competence or skill is developed** are: a) experience (and experiential learning), instruction and imitation; and b) it is a task as long as life itself with subtle changes that can be classified as **different stages or levels**. Later<sup>45</sup>, trying to adjust the Dreyfus and Dreyfus model<sup>44</sup> to clinical psychology, a reinterpretation of this model was offered, using language more appropriate to the processes related to mindfulness teaching.

From this perspective, Crane<sup>40</sup>, based on the Dreyfus and Dreyfus model<sup>44</sup>, created a system that includes six stages or levels (fields or areas) through which the trainer develops mindfulness competence through understanding, training and a good process of practice.

Furthermore, with the final goal of guaranteeing and ensuring the integrity of mindfulness, there are research programmes and evaluations (performed with mindful awareness, accompanied by qualitative feedback and guidance based on respect and sensitivity) of the consistency, reliability and validity of the competences needed at each of the **different levels or fields of competence**.

**Standards** are quality criteria, points of reference, guidelines or the values of a profession<sup>46</sup>. They are the **essential level (therefore, required, sought after and expected) of personal and professional competence that ensures the integrity of the trainer and of the mindfulness training**. Therefore, they require a **clearly established evaluation system** that allows for an evaluation of compliance with the competences required to teach mindfulness, thus providing the process with consistency and transparency.

The purpose of this paper is to review the standards, evaluation criteria, supervision and certification of mindfulness-based teaching and interventions currently in place in different countries, which could be used as a guide to develop standards for training and intervention in our country. This objective is part of a project that is currently taking shape and which involves the participation of several universities and institutions both on a national and international level: the creation of a good practices guide in Spain for mindfulness and compassion training and application which would be compatible with its pragmatic application in relevant contexts, and which would ensure consistency for competences and their evaluation, the process of developing and learning said competences and, therefore, guarantee the quality criteria that contribute to maintaining the integrity of mindfulness. All of this is in line

with the by-laws of the Spanish Mindfulness Association, and this project is one of the organisation's main objectives and initiatives. To reach this objective, we have analysed the standards or quality criteria included in several international training and intervention programmes. Thus, we have presented programmes that have a curriculum aimed at attaining a certification (Table 1), those which are characterised by a more academic focus (Table 2) and those focused on therapies that use mindfulness as a therapeutic tool (Table 3).

## Conclusions

the purpose of this study was to review the standards, evaluation criteria, supervision and certification of mindfulness-based teaching and interventions currently in place in different countries, which could be used as a guide to develop standards for mindfulness and compassion training and intervention in our country. An analysis of the information presented allows us to observe the general deficiency in various programmes in defining and operationalising the main aspects which guarantee the quality and integrity of mindfulness- and compassion-based interventions. Consequently, there is a need to establish the basic pillars upon which mindfulness-based training and interventions should be designed in various contexts of application. Firstly, there is no clearly-defined system of competences (attitudes, skills and behaviours) needed (basic and specific) for each context of training and intervention. For example: in some cases the trainer's complete commitment (on an existential level) to internalising mindfulness is required; while in others the only requirement is that the trainer be a professional who has experiential knowledge on certain mindfulness techniques, based on an understanding of mindfulness principles. Furthermore, and in accordance with the discrepancy between competences, there is also not a sole, complete, valid and reliable methodology for evaluating said competences which, in addition to direct observation, includes a supervision, recognition and certification process for these competences. In fact, some methods do not directly evaluate the competences for mindfulness training, but rather areas that are believed to be related to developing said competences.

Secondly, we observe the existence of blurred boundaries between the different levels of competence that characterise the teaching process and which qualify individuals to be mindfulness teachers or to train mindfulness teachers. Keeping in mind the deficiencies mentioned regarding clarifying competences as well as the evaluation thereof, there can be no doubt that it is very difficult to adequately identify the level of competence reached by the candidate to be a teacher or to train mindfulness teachers. From this perspective, it is clear that we need useful tools that offer

feedback to the candidate regarding his or her level of competence, that provide transparency and consistency in the teaching-learning process and which, at the same time, contribute to decreasing the subjectivity associated with any competence evaluation process.

Thirdly, we see that currently there are only guidelines for training and for teacher training in some Anglo-Saxon mindfulness intervention protocols. That is, there are no internationally accepted standards that would allow for an

evaluation of compliance with the competences necessary to teach mindfulness (a fundamental aspect in all contexts aimed at developing teachers) and that therefore regulate and guarantee the entire training process and, thus, the quality, integrity and qualification of mindfulness training. We find differences between different training programmes, such as that some programmes (MBSR, MBCT, MSC, CCT) are applied to the general and clinical fields, and that MBSR is applied to a wider scope, including educational, sport and prison environments. The MBCT programme is the most

Table 1		Characteristics of international protocols for mindfulness-based interventions, with curricula designed to train teachers			
	MBSR	MBCT	MSC	CCT	
International Centre of Reference	University of Massachusetts: <i>Center for Mindfulness in Medicine, Health Care, and Society</i> (UMASS Medical School).	Bangor University: <i>Centre for Mindfulness Research and Practice (CMRP)</i> . Note: Agreement between AEMind and the CMRP, offering the official curriculum in Spain.	Center for Mindful Self-Compassion with the UCSD- MBPTI: University of California San Diego Note: The presidents of AEMind currently teach the basic training programme in Spain.	Stanford University: <i>The Center for Compassion and Altruism Research and Education</i>	
Description	Psycho-educational and experiential learning programme, based on the principles of mindfulness for stress reduction. Developed by Dr Jon Kabat Zinn in 1979.	Programme to prevent relapse episodes in major depression, developed by Segal, Williams Et Teasdale (2002). The programme combines Beck's (1979) cognitive therapy and Dr Jon Kabat-Zinn's (1979) MBSR.	The programme combines mindfulness skills with self-compassion in order to develop emotional resilience. Developed by Dr Kristin Neff and Dr Christopher K. Germer. Both are pioneers in the study and teaching of self-compassion (2009).	A programme that strengthens the qualities of compassion, empathy and loving kindness for oneself and for others. Developed by a group of contemplative researchers, clinical psychologists and researchers at Stanford University.	
Professionals	Preferably: participants with higher education (psychology, medicine or education) or equivalent professional experience. No previous experience with meditation required.	Professionals or people with a minimum of 5 years' equivalent experience in: mental or physical health, education or social services. Priority is given to participants with mindfulness experience.	The general public as well as professionals who wish to include self-compassion in their work. No prior meditation practice required.	Care-givers, educators, health professionals, therapists, executives, public service. No prior meditation experience required, although it is preferable.	
Audience receiving the intervention	Clinical, educational, prisons, sports training and general.	Clinical (prevention of depression relapses), educational and general.	Clinical and general	Clinical and general	
<b>DESCRIPTION OF THE CURRICULA FOR CERTIFICATION</b>					
Prerequisites Teacher Training Pathway - TTP	8-week programme in MBSR. Or, intensive 5-day programme + online MBSR course. Participation in at least one silent retreat (5-10 days).	<i>Foundation:</i> Participation in a basic 8-week MBCT or MBSR programme (or intensive format) + Personal mindfulness practice + Attend at least one guided meditation retreat (2-4 days) + Written reflection	5-day or 8-week programme + Participation in at least one silent retreat (1 day). Experience in teaching group mindfulness-based stress release (MBSR) meditation, or in a clinical context.	8-week educational programme.	

Table 1	Continuation			
	MBSR	MBCT	MSC	CCT
Teacher	<p>Practicum in MBSR: 8-week or 9-day practicum and Practicum Seminar (4 days) + Preliminary teaching experiences + Retreat (5-10 days) + Residential MBSR course in mind-body medicine (7 days).</p> <p><i>Teacher Development Intensive-TDI (8 days).</i></p>	<p><i>Teacher Training-Level 1</i> Requirements: Complete Foundation Level + Attend a 7-day residential seminar (Teacher Training Retreat Level 1 - TTR1) + Teach 8-week supervised course in MBCT/MBSR + Specialised training in MBCT/MBSR (5 days) + Take a 2-3 day specific skills course (investigation, movement, groups, etc.) + Write a critical reflection + Supervisor report. <i>Certificate of Readiness to begin to teach with supervision</i></p>	<p>Complete Teacher Training - TT (7 days) + Lead or co-lead an 8-week group MSC course + 9 sessions of online consultation (supervision of MSC group course) + Personal mindfulness and self-compassion practice</p> <p><i>Trained MSC Teacher</i></p>	<p>Length: two academic years. Perform 45 minutes of meditation a day and daily journal + Four 1.5 hour telephone sessions with the CCT teacher + Attend two residential retreats + Attend a professional session.</p>
Teacher Certification (Teacher Trainer)	<p>Teach eight 8-week MBSR courses + Supervision (8-10 sessions) + At least 2 silent retreats (minimum 9 days) + Post-supervision and student evaluation.</p> <p>Prepare own materials in order to be certified</p> <p><i>Teacher Certification review</i></p>	<p><i>Teacher Training-Level 2:</i> Teach at least 3 supervised MBCT/MBSR courses. + Attend Teacher Training Retreat Level 2 - TTR2 (8-day residential seminar) + Participate in a 7-day silent retreat + Specific 2-3 day course + Evaluation of recording of an 8-week MBCT programme + Written reflection on teaching. <i>Certificate of Competency in Teaching MBSR or MBCT</i></p>	<p>Teach a minimum of 5 MSC courses (at least four with 8-week format) + Minimum 6 seminars from the advanced MSC programme (90 minutes) + 10 one-hour mentoring sessions, supervising a 9-week training + Recordings of formal meditations (20 minutes) + Recordings teaching MSC (15 minutes) + Recordings of group investigation</p> <p>Advanced training</p> <p>4 Recordings of guided meditations.</p> <p><i>Certified MSC Teacher</i></p>	<p>Teach an 8-week course with supervisor + Teach two 8-week CCT courses and present course evaluations to a supervisor.</p> <p>Includes:</p> <ol style="list-style-type: none"> <li>1) Daily visualisation and breathing meditation exercises to develop loving kindness, empathy and compassion.</li> <li>2) Two hours a week of class: lectures and sharing experiences with the group.</li> <li>3) Work between sessions on thought and compassionate action.</li> <li>4) Group investigation sessions on compassion.</li> </ol>
<p>Training curricula from different international mindfulness-based intervention programmes: Mindfulness Based Stress Reduction (MBSR)<sup>47</sup>, Mindfulness Based Cognitive Therapy (MBCT)<sup>48</sup>, Mindfulness Self Compassion (MSC)<sup>49</sup>, Compassion Cultivation Training (CCT)<sup>50</sup>.</p>				

specific, given its nature of focusing on preventing relapses in depression. With regard to professional experience, MBCT is the most demanding programme in terms of its requirements, prioritising those participants who also have prior meditation experience. As regards the duration of each programme, there is a similar 8-week format, including a silent retreat. On the other hand, we see that the CCT programme has a more academic format, as it consists of two courses. To be certified as a teacher for each of the protocols, participants are required to teach courses in

which each particular protocol is put into practice: MBSR, MBCT, MSC or CCT, with the highest number of courses required by MBSR, followed by MBCT.

If we compare the CFT and MBRP programmes, although both are aimed at the clinical environment, we see that the first does not require prior meditation experience, unlike MBRP. On the other hand, MBRP is characterised by requiring a greater number of prerequisites for entering the training. In terms of the structure of the protocol, CFT is a more

Table 2		Other International Protocols for Mindfulness/Compassion-Based Interventions	
	CFT	MBRP	
International Centre of Reference	<b>Birmingham University (UK)</b>	<b>University of San Diego: <i>Center for Mindfulness (UCSD CFM)</i>.</b>	
Description	Note: AEMind offers the different levels of Compassion Focused Therapy in Spain, taught by Dr Paul Gilbert.  A compassion-based psychotherapeutic intervention. Founded by Dr Paul Gilbert. The programme provides tools for understanding and directing the difficulties that may arise during therapeutic relationships. It teaches how to develop self-compassion and overcome shame and self-criticism in psychological disorders, including serious ones.	The programme was created for patients recovering from substance abuse, as well as to prevent relapses.  Developed by Dr Sarah Bowen and Dr Neha Chawla. Consists of Dr Marlatt's relapse prevention therapy (RPT) interventions, along with the MBSR and MBCT programmes.	
Professionals	Clinical scope: psychology, psychiatry, nursing and occupational therapy.  No prior meditation practice required.	Related to health (psychologists, social workers or counselling), although professionals may have other profiles and not intend to apply the protocol.  Daily meditation a minimum requirement.	
Audience receiving the intervention	People who have a high degree of shame, or self-criticism or who have difficulty managing compassion/self-compassion. Applied to people with everything from anxiety disorders to psychosis.	Clinical population	
Training	<b>Post-graduate diploma in CFT, 16 months long.</b>  <b>Module 1 (M1):</b> Basic skills of the therapeutic model. M1 Evaluation: 3000-word paper on the theory of and research into CFT, presentation of a topic and a case study.  <b>Module 2 (M2):</b> Intervention skills in the therapeutic environment. Retreat and 15 hours of clinical group supervision. M2 Evaluation: 2500-word case study, recording of a clinical session, written reflection  <b>Module 3 (M3):</b> CFT for the general and specific populations, such as: work with children, CFT for anger, CFT for treating trauma. Additionally, 15 hours of clinical group supervision. M3 Evaluation: case study (2500 words), recording of a clinical session, presentation of an extended case of group supervision.	In order to do the 5-day programme, it is recommended that participants:  <ul style="list-style-type: none"> <li>- Have practice in Vipassana or insight meditation.</li> <li>- Be familiarised with cognitive therapy techniques.</li> <li>- Have experience with and understand addictive behaviour models.</li> <li>- Have experience in group facilitation.</li> <li>- Have attended at least one silent retreat (5-10 days).</li> <li>- After the course, the participants must be able to present:</li> <li>- Knowledge of the principles of MBRP and the role of mindfulness in preventing relapses + Describe RPT and mindfulness techniques + practice key MBRP exercises + MBRP meditation exercises + Strengthen formal meditation practice</li> </ul>	

Compassion Focused Therapy (CFT)<sup>51</sup>, Mindfulness Based Relapse Prevention (MBRP)<sup>52</sup>.

academic model, with modules that are taken over 16 months in a master's programme. On the other hand, the ACT and DBT programmes require higher education in the field of health, but do not require prior mindfulness training. DBT is a more specific training and both are applied to a wide range of mental disorders, with the latter focusing on Borderline Personality Disorder in particular and ACT centred

on experiential avoidance. The MBSR, MBCT, MSC and CCT programmes include training pathways that lead to the student's certification to become a teacher trainer for said protocol, unlike the training programmes in CFT, MBRP, ACT and DBT, which qualify participants to train other students for applications in contexts of mental health interventions.

Table 3 Certification for therapies that use mindfulness as a therapeutic tool

	ACT	DBT
International Centre of Reference	Association for Contextual Behavior Science (ACBS)	Marsha Linehan Institute
Brief description	Acceptance and commitment therapy (Hayes, Strosahl, & Wilson, 1999) is a type of intervention based on psychological acceptance and focused on personal values. It maintains that the basis of psychological problems can be found in language.	Psychotherapeutic model that consists of a treatment programme that includes a dialectical-cognitive-behavioural approach. Its main dialectic is the recognition and acceptance of polar opposites in order to manage behaviour changes. Programme developed by Marsha Linehan.
Who the programme is aimed at	Advanced training in clinic  Prior mindfulness training not required	Master's degree or higher in mental health professions. For certification in the programme, mindfulness training acquired in one of 4 ways is required: retreat, participation in formal practice in a community, be a student of a Zen teacher or of a contemplative practice, recognised and/or at least formal training in mindfulness. Additionally, the participant must describe their regular practice.
Audience receiving the intervention	Wide range of psychological disorders, above all those that include experiential avoidance	Borderline personality disorder and a wide range of mental disorders that are associated with a difficulty in regulating emotions.
<b>DESCRIPTION OF THE CURRICULA</b>		
Basic Training	Acceptance, cognitive defusion, mindfulness, self-observation, values, commitment.	A minimum of 40 hours of specific didactic training in DBT is required + Clinical experience in DBT + Experience on a clinical team (12 months of participation in one or more consultation teams and current participation in a DBT team) + Knowledge or experience in DBT + Exam (based on the Manual "Cognitive-Behavioral Treatment of Borderline Personality Disorder" by Marsha Linehan (1993)
Certification	There is no certification process for ACT, according to ACBS.  Training is received by a supervising instructor  Prerequisites: Professionals in the behaviour field who fulfil the requirements established by ACBS.	Case conceptualisation (video recording of 3 sessions of DBT treatment with the client)  Individual DBT Therapist. The certification is backed by the Standards for the Accreditation of Certification Programs (NCCA), created in 1987 by the Institute for Credentialing Excellence.
Acceptance and Commitment Therapy (ACT) <sup>53</sup> , Dialectical-Behavioural Therapy (DBT) <sup>54</sup> .		

Thus, we can see the need to design and create standards or quality criteria (principles, guidelines, reference points, etc.) that, according to the expected levels of personal and professional competence, along with the pedagogy and specific context of application, guarantee the quality and integrity of the teacher, the teacher trainer, professionals in the clinical environment, as well as the mindfulness and compassion training process.

We are certainly facing an important challenge: create a good practices guide that will guarantee the quality and integrity of mindfulness and compassion training and intervention in different contexts of application in our country. With the aim of contributing to achieving this goal, AEMind (Spanish Mindfulness Association) has proposed a National Commission for Mindfulness Standards open to all

expert institutions in our country who wish to participate in the creation of national standards regarding mindfulness and compassion training.

Additionally, in order to achieve this project, AEMind is receiving advising from the Centre for Mindfulness Research and Practice (CMRP) from Bangor University, the Center for Mindfulness - University of California San Diego, the Massachusetts Center for Mindful Self-Compassion, the Compassionate Mind Foundation (Dr Paul Gilbert) and the European Associations of Mindfulness Based Approaches (EAMBA).

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Mindfulness-based interventions, such as Mindfulness-Based Stress Reduction (MBSR) originated in the United States in the 1970s. They were developed in the context of private health care, for patients with a high cultural and socio-economic level and who were highly motivated to practise them. Moreover, the use of mindfulness techniques has mainly been limited to English-speaking countries, and it is generally understood that the characteristics and types of therapist-patient relationships that are formed in those countries are very different from those occurring in Latin American and Southern European countries. Little use has been made to date of mindfulness in systems of public and universal health care. Aside from the cultural differences between our countries and English-speaking ones, clinical experience suggests that the main reason for this is the complexity of target patients, who commonly present with somatic and psychological comorbidity, and a general lack of compliance with the practice of mindfulness. One of the consequences of this is that the philosophy governing the intervention requires modification, with the resulting changes in the structure and content of intervention programmes. This article presents the general programme for mindfulness interventions developed by our group for public and universal health care systems, with particular focus given to primary care. It consists of seven two-hour sessions, each of which is held on a weekly basis. The programme content is summarized in the article. This intervention is applicable to medical patients, psychiatric patients with minor disorders and healthy individuals.

## Compassion and values-based mindfulness intervention: the mindfulness intervention programme by the University of Zaragoza, Spain, and the Federal University of São Paulo – UNIFESP, Brazil

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Keywords: Mindfulness, Primary care, Health service, Protocol, Latin America

## Compassion and mindfulness-based mindfulness intervention: el programa de intervencion en mindfulness de la Universidad de Zaragoza, España, y Universidad Federal de Sao Paulo, Brasil

Las intervenciones de *mindfulness*, como el MSBR (*mindfulness-based stress reduction*) surgieron en los años 70 del siglo pasado en Estados Unidos. Estos programas fueron desarrollados en un contexto sanitario privado, con pacientes de elevado nivel cultural y socioeconómico, y fuertemente motivados para practicar. Además, la utilización de las técnicas de *mindfulness* se ha realizado mayoritariamente en países de cultura anglosajona, siendo conocido que las características y el tipo de relación terapeuta-paciente que se establece en estos países es muy diferente de la que ocurre en países latinos y del sur de Europa. La utilización de *mindfulness* en sistemas sanitarios públicos y universales ha sido escasa hasta el momento. En nuestros países, aparte de las razones descritas en culturas anglosajonas, la experiencia clínica sugiere que la principal razón es que los pacientes diana son complejos, con frecuente comorbilidad somática y psicológica, así como con escasa adherencia a la práctica de *mindfulness*. Una de las consecuencias es que la filosofía de la intervención debe modificarse, con los consiguientes cambios en estructura y contenidos de los programas de intervención. En este artículo presentamos el programa general de *mindfulness* desarrollado por nuestros grupos para sistemas sanitarios públicos y universales, con enfoque especial para la Atención Primaria. Consta de 7 sesiones de 2 horas de duración que se realizan con frecuencia semanal. Los contenidos del programa se resumen en el artículo. Esta intervención es aplicable a pacientes médicos, a enfermos psiquiátricos con trastornos no graves y a individuos sanos.

**Palabras clave:** Mindfulness, Atención primaria, Servicios de salud, Protocolo, Latinoamérica

### Introduction

Structured programmes in mindfulness used internationally, such as Mindfulness-Based Stress Reduction (MBSR), originated in the United States in the late nineteen-seventies<sup>1,2</sup>. Since that time, the practice of mindfulness, both for the purpose of prevention and therapy and for use in education, business and sport, has grown exponentially. Mindfulness has actually become one of the most widely studied areas in neuroscience research<sup>3</sup>.

These intervention programmes were developed for professionals working in the context of private health care (as is habitual in the US), for patients with a high cultural and socio-economic level and who were highly motivated to

practise mindfulness (generally chronic patients who had chosen to participate in the intervention). Moreover, the greatest use of mindfulness techniques has been made in English-speaking countries (US, Canada, Australia, United Kingdom). Although the positive impact resulting from the practice of mindfulness, both in patients and health professionals, is similar in all cultural settings<sup>4</sup>, the characteristics and type of doctor/therapist-patient relationships that are formed in those countries are very different from those occurring in Latin American and Southern European countries<sup>5</sup>.

In general, patients in these countries tend to be more passive and less assertive than in countries of Anglo-Saxon background and participate less in health-related decision-making. They have a tendency for lower compliance with therapeutic recommendations that require commitment (such as the daily practice of mindfulness for a certain number of minutes)<sup>5</sup>. These circumstances limit some of the aspects originally used in MBSR, making them difficult to apply in our medical and cultural environments.

### Limitations of mindfulness models for application in public health systems

Except for the isolated case of Britain<sup>6</sup>, there have been few attempts at a systematic introduction of more general models (appropriate for primary care) of mindfulness, such as MBSR, in universal and free public health systems common to countries in Europe (e.g. the UK, Netherlands and Spain) or Latin America (e.g. Brazil and Chile). Other subsequent developments, such as Mindfulness-Based Cognitive Therapy (MBCT)<sup>7</sup> and other third-generation psychotherapies, such as acceptance and commitment therapy (ACT)<sup>8</sup> and dialectical behaviour therapy (DBT)<sup>9</sup>, contain highly specific formats designed for their targets (recurring depressive disorder for MBCT and borderline personality disorder for DBT), which require intense and specific training and broad experience in dealing with these types of patients, meaning that they are taught in secondary care settings rather than in primary care.

Our research and education groups are dedicated to the development and implementation of effective and efficient pharmacological and psychological interventions in primary care<sup>10</sup>. Primary care is considered the most efficient and cost-effective level of health care in which to carry out any intervention because<sup>11</sup>:

- a) All patients access the health system at this level (particularly in countries with universal and free systems);
- b) Conditions are detected and may become chronic at this

level if appropriate action is not taken, making this the ideal setting for treatment and prevention of diseases; and

- c) It enables long-term monitoring focused on the patient (not on the condition) and there is no stigma (which can cause problems for psychiatric patients) associated with primary care.

There has been little use made of mindfulness in the health system to date. A recent meta-analysis performed by our group<sup>12</sup> was only able to retrieve six randomized controlled trials in which any mindfulness-based interventions were carried out in primary care (MBSR had been used in three studies and MBCT in the other three). In general terms, the studies were of limited quality, with small samples and dealing with very different conditions (anxiety, depression, pain). The magnitude of the effect on improvement in general and psychological health was moderate (Hedges'  $g=0.48$  and  $0.56$ , respectively), while it was low on improvement in quality of life ( $g=0.29$ ).

What lies behind the scarce utilization of mindfulness in primary care? In an unrelated article we explained some of the reasons for the difficulty in implementing mindfulness techniques in health systems in general and in primary care in particular, even in countries like the UK, which has a special commitment in this area<sup>13</sup>.

In the specific case of Latin American and Southern European countries, aside for the reasons described for English-speaking countries<sup>13</sup>, our clinical experience suggests that the main reason is that target patients are complex, with frequent somatic and psychological comorbidity, and little compliance with the practice of mindfulness. Far from being an excuse for giving up, these circumstance should be considered a challenge for professionals interested in mindfulness. One of the consequences of this is that the philosophy governing the intervention requires modification, with the resulting changes in the structure and content of intervention programmes (anticipated in the implementation of "complex interventions" such as mindfulness<sup>13</sup>) as described in the following.

### **Modifications made to mindfulness programmes for their adaptation to primary care in latin american and southern european countries**

Based on our group's experience, the following modifications should be made to mindfulness-based therapies over the MBSR model in order to adapt them to health care settings:

- GENERAL PHILOSOPHY RELATED TO THE HEALTH

SYSTEM: MBSR was created and developed in a context of private, fee-for-service health care. The (relatively high) cost of this therapy involves a specific and determined choice by the patient who chooses it. Therefore, individuals who participate in MBRS groups, both in the US and other countries without publicly funded health systems, are highly motivated and committed, which is an important predictive factor for a good outcome. However, in publicly funded health systems, patients do not normally choose this therapy, which is provided free of charge; instead, it is offered to them by their doctor. This explains why both patients' motivation and commitment are lower, and therefore reducing the effectiveness of the treatment. This lower level of motivation typically leads to many patients not wishing to perform the formal practice of mindfulness – meditation exercises to train the awareness to a achieving a mindful state – and discontinuing the treatment (because they do not like it or have neither the time nor physical conditions for it), rates of which tend to be even higher than normal. Moreover, there is a broader range of target patients and with greater medical and psychiatric comorbidity, meaning that groups are more heterogeneous than for MBRS. A number of the points that must be taken into account are summarized in Table 1.

In summary, the programme will have to be adapted to the profile of patients in public health systems, with the modification of both structure and content.

- STRUCTURE: It will not be feasible to include a mindfulness retreat in a programme designed for primary care, even one lasting several hours and offered voluntarily, owing to the complexity of the facilities and intense motivation required, and its high cost. In addition, one of the greatest challenges for the effectiveness of mindfulness is its discontinuation within weeks of basic training, a problem which is aggravated even more in primary care. For this reason, the inclusion of maintenance sessions in an open-group format (in include anybody who has completed initial training) with a frequency of two weeks or at least once a month will provide significant reinforcement for maintaining the practice and endeavouring to incorporate it as a lifestyle habit. In a separate article in this issue we describe a model for maintenance sessions proposed by our group.
- CONTENT: Based on the philosophy we have described, the main content added to basic MBRS and included in the therapy programmes of the University of Zaragoza-Federal University of São Paulo is summarized in Table 2.

Table 1	Points to take into account when designing a mindfulness programme for primary care in Latin American and Southern European countries
	<ol style="list-style-type: none"> <li>1. Although formal practice is taught and there is insistence on this, important emphasis should be made and explanation given on informal practice (using the idea of mindfulness in routing activities such as eating, walking, conversing, housework, etc.), which individuals will be able to put into practice more easily. In this type of practice, it is important to stress the concept of "decentering" (observing thoughts and emotions with emotional detachment) because it is considered to be one of the most therapeutic components of mindfulness<sup>14</sup>.</li> <li>2. Informal practice must be adapted to the context of the individual, allowing them to reinforce healthy habits and to understand it as a new way of life. Given the importance of healthy habits in disease prevention, the ideal situation is to interweave mindfulness into the healthy that are recommended as standard in preventive activities in primary care (e.g. diet, sleep, physical exercise, social network and avoidance of toxic substances).</li> <li>3. It is recommended that psychoeducational models are included, which enable some of the objectives of mindfulness to be attained without making formal practice (which will be rejected by many patients) essential. These models (e.g. radical acceptance) should be taken from other third-generation therapies associated with mindfulness (such as DBT) and developed in complex patients such as those with personality disorders<sup>9</sup>.</li> </ol>

Table 2	Main content added to the programme
	<ul style="list-style-type: none"> <li>- <b>Linking mindfulness to healthy activities:</b> Informal mindfulness is very important for patients, such as those in primary care, from whom intense formal practice is not expected. Associating mindfulness with lifestyle habits that are healthy in themselves allows both positive lifestyles to become mutually enhanced. It has even been suggested that mindfulness may improve the health effects of physical fitness activity<sup>15</sup>.</li> <li>- <b>Radical acceptance:</b> Originating in DBT<sup>9</sup>, this psychoeducational model is particularly useful for people with difficulties in performing formal practice, a common aspect in primary care. It focuses on the need to accept that suffering is unavoidable and on the understanding that when we feel other people are causing us harm, their margin of freedom is greatly restricted by biological and biographical circumstances.</li> <li>- <b>Values:</b> Clarification of values is a technique of ACT, which we consider to be essential for reinforcing the effectiveness of mindfulness and connecting it with the individual's values and approach to life. It is one of the most effective ways for reducing discontinuation of the practice of mindfulness, which is very common in the short and medium term, and for incorporating mindfulness as a core part of our lives. ACT is one of the most effective psychotherapies for coping with chronic, painful and/or debilitating illnesses<sup>16</sup>, which are very common in primary care.</li> <li>- <b>Compassion:</b> This technique is being configured as a complementary intervention to mindfulness, and is particularly useful for certain conditions such as depression or when there is guilt or self-criticism. A number of specific points of this technique (equanimity in the condition of human suffering; receiving affection and showing affection to oneself) are basic elements of a programme for treating psychiatric disorders such as depression<sup>17</sup>.</li> <li>- <b>Positive psychology:</b> In recent years, there has been a pan-theoretical current for forging a link between mindfulness and positive psychology given that they share many aspects that can be enhanced in clinical practice, despite important conceptual differences. In fact, some simple techniques, such as smiling, gratitude and savouring, fit well with the philosophy of mindfulness and reinforce it<sup>18</sup>.</li> </ul>

### Structure of the University of Zaragoza-Federal University of São Paulo "compassion and values-based mindfulness intervention" programme

This intervention programme is applicable to medical patients, psychiatric patients with non-acute disorders and healthy individuals. The paradigm is the population of primary care who tend to suffer from minor, mild-moderate intensity psychiatric disorders (anxiety, depression, adjustment disorders) associated with different, frequently chronic medical conditions. It can also be applied preventively to individuals presenting with subthreshold psychological disorders (i.e. not fulfilling operative diagnostic criteria such for psychiatric nosology, such as DSM-5, but show psychological distress), and to completely healthy individuals seeking to increase their psychological well-being and reduce discomfort.

This programme is relatively shorter than traditional MBSR, as experiences have shown that shorter interventions

are also effective<sup>19,20</sup>, and it places emphasis on the self-learning that has also shown to be effective in mindfulness<sup>21</sup>. The programme consists of seven two-hour sessions, each of which is held on a weekly basis. The final session is exclusively devoted to practices for consolidating what has been learned during the course of the programme. The duration and frequency of sessions can show flexibility depending on the

possibilities available to the health services, and one extra session can be incorporated for silent practice (reinforcement of formal practices) to simulate a retreat. The programme content is summarized in Table 3.

Table 3	General Proposal for Content of the intervention programme by the University of Zaragoza (www.webmindfulness.com ) and "Mente Aberta" – Brazilian Centre for Mindfulness and Health, Federal University of São Paulo (UNIFESP) (www.mindfulnessbrasil.com), for primary care settings in health systems.	
SESSION	THEORY CONTENT	PRACTICAL
Session 1: What is mindfulness?	Presentation and aims Stress and dispersion What is and isn't mindfulness? Characteristics and attitudes in mindfulness Motivation in mindfulness Brief information on posture Introduction to practice diaries	- 3-minute breathing space (always initiating practice) - Eating a grape - Simple mindfulness exercises (listening to sounds, areas of contact with your body, the feel of your feet touching the floor) - Introduction to informal practices - Brief body scan
Session 2: Mindfulness in breathing	What to do with the body What to do with the mind Breathing Preconceptions/fears/ challenges of meditation (formal practice)	- Mindfulness in breathing Hello, thank you and goodbye - Metaphor of the mind: the mountain
Session 3: Mindfulness in the body	Importance of the body Primary and secondary suffering Acceptance How mindfulness works Doing mode/being mode	- Full body scan lying - Mindful walking (in mindfulness and in Zen tradition)
Session 4: Mindfulness in the body (part II) Effectiveness of mindfulness Reinforcing formal and informal practices	How to structure mindful practice (formal and informal) Reinforcing daily practice Obstacles and objections to the practice Effectiveness of mindfulness in health and education	- Mindfulness in body movements - Mindfulness in breathing
Session 5: Values and meaning in life Radical acceptance	Hedonic and eudaimonic well-being Meaning of life Values and committed action Importance of acceptance	- The old man (exercise for identifying values) - Practising committed action - Everything is perfect as it is
Session 6: SILENT practice		- Mindfulness in breathing - Mindful walking - Mindfulness in motion - Body scan
Session 7: Compassion	What is and isn't compassion? Biological basics Ways of training compassion: receiving compassion, showing compassion to oneself and to others Fear of compassion in Western society Introduction to mindfulness in daily life	- Receiving affection from friends, strangers and enemies - <i>Mettā</i> (to others and oneself)
Session 8: (ONLY FOR TRAINING PROFESSIONALS; NOT FOR PATIENTS) Mindfulness for life Closure	Mindfulness in daily life 2 Mindfulness in thoughts and emotions (practising 3-minute breathing space in pairs) Recommendations for long-term maintaining of mindfulness practice and closing Mindful poetry (optional) Final questions and programme assessment	- Breathing practice - 3-minute breathing space in pairs - Closing <i>mettā</i>

This is the introductory programme. There is a reinforcement programme with the same structure that analyses more aspects such as compassion, values, acceptance and informal practice. There are other complementary programmes focusing only on compassion. Finally, in addition to models of all of these programmes in a weekend format, there are group practices for maintenance with a weekly format and 90-minute duration.

### Training programme by the University of Zaragoza and "Mente Aberta" Centre of the Federal University of São Paulo

Our universities have structured a system for education and training based on a Master's degree course with a duration of two years. It is offered online to provide training to professionals in any part of the world. The face-to-face format includes 10 weekend seminars with a duration of 10 hours each, in addition to complementary distance-learning tasks, which include formal and informal mindfulness practices, and basic and advanced guided readings.

The contents span the basics of mindfulness and touch on basic elements of other psychotherapies that may be useful for professionals, such as group, cognitive-behavioural and transpersonal therapies, positive psychology and third-generation therapies (ACT, DBT and mindfulness-based cognitive-behavioural therapy). The content, with minimum 50% practical (which can be carried out in Spain or Brazil) is structured as follows: The first year (expert) is considered personal education and training, as it is impossible to use mindfulness on other people if one does not practise mindfulness habitually. The second year (Master) aims to train professionals to apply mindfulness in the areas of health, education, business and sport.

The programme is accompanied by retreats of varying duration (between one day and 2-4 days), open to other students from outside the course in order to broaden perspectives. It includes regular lectures by recognized professionals, complementary training in the form of short online courses and weekly online practice with teaching staff. The possibility of creating a secular, face-to-face or online *sangha* (community) to reinforce practice on different days and with different timetables is considered a significant asset for training. Ongoing contact with teaching staff and personal tutors assigned to each student. The course includes training in research, which enables students to produce research works, including a doctoral thesis. Lastly, the course finalizes with an optional study trip to some of the cradles of mindfulness in Asia (India, Tibet, Thailand or Sri Lanka), enabling the deepening of academic and cultural ties with some of the universities in these countries with which we are collaborating in this aspect.

All of the information on both programmes (intervention and education) is available at [www.webmindfulness.com](http://www.webmindfulness.com) and [www.mindfulnessbrasil.com](http://www.mindfulnessbrasil.com). A handbook is available that condenses the main aspects of intervention<sup>22</sup>. More instrumental professional training is offered in Spain and Brazil as a series of modules with a minimum duration of one year (face-to-face format includes three 24-hour seminars, in addition to distance formal and informal mindfulness practices, guided readings, and co-facilitation of mindfulness groups) (<http://mindfulnessbrasil.com/curso-de-formacao-de-instrutores/>). The aim of these courses is to promote more technical education and training of intermediate duration for the purpose of increasing the number of professionals trained to teach mindfulness in our countries, which is still insufficient.

### Conclusions

Structured mindfulness-based programmes for therapeutic intervention such as MBSR originated in the US in the late nineteen-seventies in the context of private health care. These have had little systematic use in universal and free public health systems. In fact, little use has been made of mindfulness in health systems. There are only six randomized controlled trials, and these are of limited quality and deal with very different conditions. Efficacy was found to be in low or moderate ranges.

Points to take into account when designing a mindfulness programme for primary care are: 1. Emphasis on informal practice, which individuals will be able to put into practice more easily. 2. Informal practice must be adapted to the context of the individual. The ideal situation is to interweave mindfulness into the healthy that are recommended as standard in preventive activities in primary care. 3. It is recommended that psychoeducational models are included, which enable some of the objectives of mindfulness to be attained without making formal practice essential.

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## Mindfulness maintenance groups: the University of Zaragoza model

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Mindfulness has become a third-generation very effective psychotherapy technique for the treatment of diverse psychiatric and medical illnesses, but also for the prevention of illness and the development of psychological well-being in healthy individuals.

Mindfulness should be understood as a way of life, as a practice that needs to be maintained for life. In fact, one of the greatest challenges for its implementation and expansion is the development of practice groups that enable those utilizing this technique to maintain discipline and motivation over time, so that they will be able to continue to practise regularly.

There is scarcely any literature describing the characteristics and format of these maintenance groups despite their importance. This article describes the practice groups that we have created and are offered at the University of Zaragoza and the Federal University of São Paulo. It describes the importance of these groups, their philosophy and characteristics, and the contents of the programme and structure of sessions. It also includes a timetable for a standard three-month period so that the basic model can be followed by interested individuals, with adjustments suited to a specific setting.

Keywords: Mindfulness, Maintenance, Practice group

## Grupos de mantenimiento en mindfulness: el modelo de la Universidad de Zaragoza

Mindfulness se ha convertido en una psicoterapia de tercera generación muy efectiva para el tratamiento de diversas enfermedades psiquiátricas y médicas, pero también para la prevención de las enfermedades y para el aumento del bienestar psicológico en individuos sanos.

Mindfulness debe ser entendido como una forma de vida, como una práctica que necesita ser mantenida a lo largo de nuestra existencia. De hecho, uno de los mayores desafíos para su implementación y expansión es el desarrollo de prácticas grupales que capaciten para la utilización de estas técnicas, de forma que se mantenga la disciplina y motivación a lo largo del tiempo, de forma que el individuo pueda practicar de forma regular.

Pese a su importancia, apenas existe bibliografía describiendo las características y formato de estos grupos de mantenimiento. Este artículo describe las prácticas grupales que han sido creadas y que se ofrecen en la Universidad de Zaragoza y en la Universidad Federal de Sao Paulo. Describen la importancia de estos grupos, su filosofía y características, así como los contenidos, programas y la estructura de las sesiones. También incluye un calendario para un periodo estándar de tres meses, de modo que el modelo básico pueda ser seguido por las personas interesadas, adaptándolo a su entorno particular.

Palabras clave: Mindfulness, Mantenimiento, Práctica grupal

## Importance of mindfulness maintenance groups

Mindfulness defines a state of mind that can be described as complete awareness, clear observation or full consciousness<sup>1</sup>. However, in addition to identifying a mental state, mindfulness can be used to describe a specific type of third-generation psychotherapy in which a series of techniques such as mindful breathing, mindful walking, body scan, mindful movement, etc. can be used<sup>1</sup>. It can also be used to denominate certain specific psychological techniques (which can be used within mindfulness therapy or within the framework of other therapies, such as cognitive behavioural therapy, acceptance and commitment therapy and dialectical behaviour therapy) and is characterized by developing metacognition. It can be achieved through the use of different objects of attention.

Whether a single mindfulness technique is used, or mindfulness therapy on the whole, the effectiveness of these interventions bears no relation to our beliefs (whether or not we trust in its effectiveness) or our preferences (whether we like it more or less), but to the time devoted to its practice<sup>2</sup>. Specifically, the aspects that correlate more highly with level of mindfulness are the regularity of practice and total time devoted to its practice over a lifetime, but not the duration of each session or the specific type of practice<sup>2</sup>.

The problem is that after having been trained in mindfulness (whether Mindfulness-Based Stress Reduction (MBSR), Mindfulness-Based Cognitive Therapy (MBCT) or any other mindfulness-based therapy), more than 70% of individuals discontinue its practice, with the great majority

reducing their levels of practice to a large degree<sup>3</sup>. The consequence of this is that in many studies, the amount of practice only correlates with the post-treatment assessment, but not with follow-up at 6 or 12 months<sup>4</sup>. This is why it is considered necessary to increase informal practice<sup>4</sup> or to maintain regular formal practice by means of groups that create cohesion and are able to encourage individuals to continue to practice at home. These regular practice groups are known as secular *sangha*, with reference to the groups of formal practice found in the Buddhist tradition<sup>1</sup>. The following describes the formal characteristics of these maintenance groups, their philosophy, structure and main contents.

## Formal characteristics of the University of Zaragoza maintenance groups

Our education and research groups are particularly involved with the Spanish public health system, more specifically with primary care. Given this base, our concern has always been to implement mindfulness in primary care in a way that is stable and sustainable<sup>5</sup>. Considering our specific model of primary care (similar to that of other Western countries such as the United Kingdom, Netherlands, Chile and Brazil), maintenance groups should have certain characteristics and a philosophical grounding. Both are described in the table 1.

## Philosophy of the University of Zaragoza mindfulness maintenance group model

The main aspects that characterize the philosophy of these groups are:

1. INCLUSION OF COMPASSION, ACCEPTANCE AND COMMITMENT, AND POSITIVE PSYCHOLOGY TECHNIQUES: In keeping with the core aspects of the Value and Compassion-Based Mindfulness model, not only are the habitual mindfulness practices included, but also a number of specific practices of compassion<sup>7</sup>, acceptance and commitment<sup>8</sup>, and positive psychology<sup>9</sup>. These are simple practices that are easy to apply informally, and reinforce the effectiveness of mindfulness practices.
2. COMMITMENT TO PRACTISING, PARTICULARLY INFORMAL PRACTICE: Studies suggest that the efficacy of mindfulness correlates with practice, more particularly with informal practice<sup>2</sup>. For this reason, emphasis is placed on tasks to be performed at home, both in formal and informal practice, and on the use of diaries. No emphasis is given to formal daily practice (45 minutes as required in MBSR) because the great majority of participants not only would be unable to accomplish this, but would also be made to feel discouraged and/or guilty.

Table 1

### Characteristics of the practice maintenance groups within the Value and Compassion-Based Mindfulness Intervention model

1. **HETEROGENEOUS:** The groups are designed for application in any healthcare setting (e.g. primary care, where patients can present with multiple psychiatric and medical comorbidities), but also in patient associations, workplaces and academic or sporting institutions (where people who are healthy and others with different conditions may be combined). Logically, it can also be applied to homogeneous groups. The only exclusions are psychotic disorders and highly debilitating medical conditions that may hinder the ability to follow this type of therapy.
2. **CLOSED, RENEWABLE ON A THREE-MONTH BASIS:** The group is closed to facilitate homogeneous learning of the techniques by all participants. However, individuals have the option of leaving the group after three months or staying on for another three-month period. It is structured by three-month periods in order to adapt to the academic year in Spanish universities, which run between September and June. This structuring into three-month modules avoids the risk of weekly repetition of the same practices and of causing boredom. However, in addition to maintaining interest, a repetition of practices every three months gives rise to spiral learning, allowing greater levels of depth to be achieved gradually with each repetition.
3. **MEDIUM SIZE.** The groups are larger (20–25 individuals) than standard psychotherapy groups (8–12 patients), given that they have a psychoeducational orientation and focus on the learning of practices, with very little room for self-disclosure of conflicts within the group.
4. **NO PREVIOUS SELECTION INTERVIEW:** Given the time restrictions and/or shortage of staff in a number of settings (primary care, academic institutions, patient associations), and the larger size of these groups, the process for prior selection in order to form groups would be unworkable. The only prerequisite is that individuals should have some sort of mindfulness instruction before joining the group.
5. **TWO COMPLEMENTARY CO-THERAPISTS:** Given the size of the group, the usefulness of co-therapy was considered. As is usually recommended in group psychotherapy, the professionals are of different gender to encourage different identification processes<sup>6</sup>. Moreover, each of them has greater specialization in a specific field (mindfulness, yoga, compassion, acceptance and commitment, etc.).

Brief practice of 20 minutes is recommended, and informal practice is stressed.

3. **EMPHASIS ON THE BODY:** Body awareness is one the basic therapeutic mechanisms in mindfulness<sup>10</sup>. Integrated practice starting with the body is a main part of the design, which involves a "return to the body", some-

thing that has been greatly overlooked in Western culture. All sessions incorporate exercises of mindful movement, which are specific yoga exercises that allow body awareness to be developed and enable emotions to be dealt with by the body instead of the mind, in order to prevent individuals from becoming overwhelmed by the contents of their mind.

4. **INCORPORATING TRADITION:** The origins of mindfulness are found mainly in Buddhist traditions, and also in Hindu tradition. Without entering into religious content, the frequent reference to the sense and meaning of the practice in Buddhist and Hindu tradition and psychology<sup>11–13</sup> often helps to provide a better understanding of why mindfulness works and encourages adherence to its practice.

### Structure of sessions

Maintenance sessions are highly structured to increase effectiveness and to prevent unnecessary use of time. The standard structure of the 90-minute sessions carried out with these groups is summarized in Table 2.

### Programme content and timetable

The models being applied in mindfulness practice are based on the eight-session protocol by John Kabat Zin, which was designed specifically as an "initiation" to mindfulness. However, as there are no models described for advancement in the practice, initial training is the only type that a patient or non-professional practitioner can receive. The model we describe – conducted over one academic year (18–20 hours/three-month period and 48–50 hours/year), with two optional weekend retreats lasting 20 hours each – aims to be a broader approach that accompanies the advancement that comes with the continuous practice of mindfulness.

The course was developed on the foundations of mindfulness and compassion therapy, in addition to the development of values (based on acceptance and commitment techniques). The entire practice is infused with the pillars of Buddhist and Hindu tradition, specifically teachings of yoga in its different forms, and the Zen and Vajrayana Buddhist traditions. The practices offered take form gradually and enrich the intervention with mindfulness. They are useful for both the psychological well-being of healthy individuals and for application in the treatment of the most common illnesses present in the population, such as pain, depression, anxiety and cognitive impairment.

The design involves a 90-minute weekly session, 70% of which is devoted to formal practice, and the remainder devoted to listening to the group, sharing its experiences

Table 2

**Formal characteristics of the University of Zaragoza mindfulness maintenance sessions for groups**

1. INITIAL PRACTICE (5 min): At the beginning of the session, before the presentation or discussion of tasks to be performed at home, a short practice is performed so that participants become better settled into the here and now, and to enable them to develop responsiveness to the group activities.
2. PRESENTATION OF THE DAY AND QUESTIONS (5 minutes): With a more steady and open mind, group members are introduced (first session), and discussion is made of tasks recommended for home or of difficulties and experiences that have emerged in practices during that period.
3. BASIC TEACHING (5 minutes): Sessions are not meant to be a setting for theoretical teachings, but they are suitable for micro-lessons and their subsequent implementation.
4. FIRST CORE PRACTICE (20 minutes): This is the core of the group practice for the day. It is meant to provide an in-depth description and supervised implementation of the basic practices of the programme.
5. BODY MOVEMENT (20 minutes): A few minutes of physical activity based on yoga techniques improve body awareness and facilitate assimilation of the subsequent practice. The exercises performed in this section are described in detail in a separate article. This section aims to reinforce core practices. Their characteristics are described in a separate article.
6. SECOND CORE PRACTICE (20 minutes): This section has the same characteristics as the first core practice. The two core practices and body movement are performed without interruption so that the therapists can adjust the structure of the core practice to the session and to the characteristics of the group at the time.
7. GROUP RESPONSE (10 minutes): Comment is made on the difficulties, experiences and doubts in relation to the practices performed, inviting active listening from group members in order to avoid narratives.
8. GROUP CLOSURE (5 minutes): A series of formal and informal practices are recommended as tasks to be performed at home until the following session.

and introducing a brief and specific theory-based topic. The session always ends with a commitment to daily practice, both formal and informal.

In addition to the weekly group session, the design systematically includes two weekend retreats: one dealing with advancement in mindfulness in general, and the other with compassion. We understand the retreats to provide practitioners with exclusive space and time for interior work,

allowing them the opportunity to distance themselves from their daily reality and to perform a more in-depth practice with fewer distractions. The retreat also offers the possibility of experiencing coexistence with others, even in situations that occur rarely in daily life, such as silence, in order to learn how to live with the world and others. It also allows us to become aware of how others show us a reflection of ourselves, of our autobiographical self, enabling us to approach our real or core self through the process of de-identification. The general content addressed in the maintenance sessions is described in Table 3.

The programme content is organized over a three-month timetable, divided into the four and a half sessions that take place on average each month. Table 4 summarizes this timetable.

The basic structure of the session is the same in each three-month period, with the same points being followed, but with modification of the actual practices. It can be observed that each section contains different practices, which can be varied in each three-month period. The only ones that are repeated are the core mindfulness practices: mindful breathing, mindful walking, mindfulness in body movements and 3-minute practices.

### Efficacy of mindfulness maintenance groups

There are no studies on the efficacy of these groups, given very few groups of this type have been described. Our group came into existence at the same time as the Master's Degree in Mindfulness of the University of Zaragoza, in October 2013, which means that one full year has been completed to date. A controlled trial to study efficacy would not be feasible with a control group and placebo, given that a relaxation group of any other type with the same duration would have a significant rate of attrition, in addition to a high cost. Owing to the characteristics of the group, the only viable control group would be a waiting list, or a pre-post design, which is already in progress.

The general impression gained from these groups is that:

1. Motivation and adherence are very high, given that attrition is very low (less than 5%), and the average number of sessions missed by each participant is a maximum of 2.
2. Satisfaction is high, as shown by written satisfaction surveys and verbal comments given during the sessions.
3. Changes in the level of mindfulness, compassion and reduction of psychological distress are significant in pre and post-intervention assessments, with magnitudes of effect of 0.5–0.7 in the main variables.

Table 3	General content for mindfulness maintenance sessions
1.	MINDFUL POSTURE: <ul style="list-style-type: none"> <li>- Meditation postures according to tradition and mindful posture*</li> <li>- The four traditional postures: sitting, walking, standing and lying</li> <li>- Astronaut posture*</li> <li>- Feeling contact with the floor, feeling the body in contact with clothing*</li> </ul>
2.	AWARENESS OF BREATHING: <ul style="list-style-type: none"> <li>- Natural breathing (<i>Anapanasati</i>)*</li> <li>- Full yogic breathing</li> <li>- Feel breathing with the body</li> </ul>
3.	AWARENESS OF BODY: <ul style="list-style-type: none"> <li>- Body scan*</li> <li>- Mindfulness in body movements</li> <li>- Hatha Yoga postures</li> <li>- Learning to relate to physical discomfort*</li> </ul>
4.	AWARENESS OF WALKING: <ul style="list-style-type: none"> <li>- Mindful walking*</li> <li>- Mindful walking according to Zen tradition (<i>kinhin</i>)</li> </ul>
5.	AWARENESS OF THE SENSES: <ul style="list-style-type: none"> <li>- Hearing (external noise, mantras, bells)</li> <li>- Taste (eating a grape, eating a chocolate)</li> <li>- Smell (scented oil)</li> <li>- Touch (self-caressing, self-hugging, feeling the touch of another person)</li> <li>- Sight (external: candle-gazing; internal: visualization)</li> </ul>
6.	INFORMAL PRACTICE IN DAILY LIFE: <ul style="list-style-type: none"> <li>- Practice diaries*</li> <li>- Routine tasks*</li> <li>- Informal practices to perform in daily life*</li> <li>- 3-minute practices*</li> </ul>
7.	AWARENESS OF THOUGHTS: <ul style="list-style-type: none"> <li>- "Hello, thank you and goodbye" practice*</li> <li>- Metaphors of the mind: the mountain, the riverbank, the pond, the room with mirrors, bursting balloons*</li> </ul>
8.	AWARENESS OF EMOTIONS: <ul style="list-style-type: none"> <li>- Feel emotions in the body</li> <li>- Non-verbal communication of emotions with touch and eye gaze</li> <li>- Shared joy and sadness</li> <li>- Awareness and acceptance of opposites</li> </ul>
9.	AWARENESS OF THE MIND: <ul style="list-style-type: none"> <li>- Observer or witness</li> <li>- The mind as an instrument (<i>Antahkarana</i>)</li> <li>- Metaphor of room with mirrors*</li> </ul>
10.	VALUES <ul style="list-style-type: none"> <li>- Ethics in Buddhist and Hindu tradition</li> <li>- Epitaph exercise*</li> <li>- The old man exercise*</li> <li>- Funeral exercise*</li> <li>- Eulogy exercise*</li> <li>- Practices of radical acceptance*</li> </ul>

Table 3	Continuation
11.	COMPASSION AND SELF-COMPASSION <ul style="list-style-type: none"> <li>- Receiving compassion/affection</li> <li>- Contacting attachment figures and with style of attachment</li> <li>- <i>Mettā</i> towards oneself and others*</li> <li>- <i>Tonglen</i> towards oneself and others</li> <li>- Compassionate body scan*</li> <li>- Informal practice of <i>mettā</i>*</li> <li>- Working with envy*</li> <li>- Forgiveness*</li> <li>- Equanimity</li> </ul>
12.	SELF-AWARENESS <ul style="list-style-type: none"> <li>- Autobiographical self and core self</li> <li>- Identifying the biographical self: Main characteristics</li> <li>- Biographical events: differentiating facts from interpretation</li> </ul> <p>Work on becoming aware of attitudes (balance, inner strength, openness, presence) is also carried out, mainly during the body movement practices, based on yoga techniques.</p> <p><i>The practices marked * are described in the Mindfulness Handbook<sup>1</sup>, which is the reference text for students.</i></p>

Nevertheless, there are aspects that can be improved, such as:

- A common request is for an individual space in which to discuss doubts with the instructors without having to explain the experience to the group. This space could not be structured within the session because it would interrupt group dynamics, which means that it would have to be set up in another time frame.
- Another problem is that of adjusting the pace of the sessions to the different experience of the participants. However, this would mean that the process would be too fast for some and too slow for others. The only solution would be to refine this by means of an individual interview so that the experience of participants might be more homogeneous; however, this would not be in keeping with the philosophy of the group.

## Conclusions

Mindfulness maintenance groups are a logical necessity and an essential tool for achieving adequate adherence to the practice of mindfulness over time. Very few descriptions have been given of models involving these groups. We propose a heterogeneous model, which can be renewed every three months. These are highly focused on practice, particularly on informal practice, and include other relevant aspects such as compassion and values in addition to mindfulness. The preliminary results are promising, although

Table 4 Timetable for content of mindfulness maintenance groups in a three-month period

	Week one	Week two	Week three	Week four
<b>Month one</b>	TEACHING: Basic posture in mindfulness and in tradition PRACTICE 1: Feeling contact with the floor PRACTICE 2: Feeling the body in contact with clothing	TEACHING: Introduction to breathing PRACTICE 1: Full yogic breathing PRACTICE 2: Mindfulness in breathing	TEACHING: The importance of the body in mindfulness PRACTICE 1: Body scan PRACTICE 2: Mindfulness in body movements	TEACHING: Difference between relaxation of the body and awareness of the body PRACTICE 1: Mindfulness in motion PRACTICE 2: Mindfulness in motion (Zen <i>kinhin</i> tradition)
<b>Month two</b>	TEACHING: Anchoring awareness in the present: the body and the senses PRACTICE 1: Awareness of the senses (I): hearing, smell PRACTICE 2: Awareness of the senses (II): sight, taste, touch	TEACHING: Importance of informal practice PRACTICE 1: 3-minute practice PRACTICE 2: Mindfulness in breathing	TEACHING: Dealing with thoughts PRACTICE 1: Hello, thank you and goodbye PRACTICE 2: Balloon metaphor	TEACHING: The nature of emotions PRACTICE 1: Feeling emotions in the body PRACTICE 2: Sharing joy and sadness
<b>Month three</b>	TEACHING: The nature of the mind according to tradition The observer exercise PRACTICE 1: Mountain metaphor PRACTICE 2: Mirror metaphor	TEACHING: Importance of values PRACTICE 1: The old man exercise PRACTICE 2: Funeral exercise	TEACHING: Introduction to compassion. Primary and secondary suffering PRACTICE 1: <i>Mettā</i> towards others PRACTICE 2: <i>Mettā</i> towards oneself DAY OF SILENCE	TEACHING: Autobiographical self and core self PRACTICE 1: Identifying the biographical self: Main characteristics PRACTICE 2: Biographical events: differentiating facts from interpretation

studies designed to assess efficacy and cost-effectiveness are required to confirm the usefulness of these groups and their feasibility in healthcare settings and in the general population.

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## Body awareness: mindfulness attitudes

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In this mindfulness practice, the focus of attention is the internal experience created by the body through physical sensations, breathing and associated mental phenomena (thoughts, emotions). An attitude is developed in order to transcend avoidance of internal experience and allow all perceived sensations to be assimilated without exception. Mindfulness is defined as the awareness that arises when we focus our attention on the present moment, deliberately and without judgement<sup>1</sup>. This awareness, this atmosphere in which the present is being and can be perceived, arises instantaneously the moment this attention is placed on the body. However, a world of sensations, emotions and thoughts are manifested; the mind receives thousands of stimuli (*vrittis*)<sup>2</sup>, creating a modifications of the mind that confuse and occasionally drown out true reality, distancing us from this awareness. How can this attention to the present be maintained beyond movement and without causing a reaction? Body awareness is one of the essential therapeutic mechanisms in Mindfulness<sup>1</sup>. The proposal is to develop four basic attitudes through materialization: balance, openness, strength and presence by using Yoga Darshana<sup>3</sup> in its different forms.

Keywords: Yoga, Mindfulness, Body awareness

## Conciencia corporal. Mindfulness en las actitudes

En esta práctica de mindfulness, el foco de la atención se sitúa en la experiencia interna que brinda el propio cuerpo a través de las sensaciones físicas, de la respiración y los fenómenos mentales (pensamientos, emociones) que van asociados; se desarrolla una actitud para trascender la evitación de la vivencia interna y facilitar así la integración de todo lo percibido sin exclusión. Se define Mindfulness como la conciencia que surge cuando prestamos atención al momento presente, de forma deliberada y sin juzgar<sup>1</sup> y lo cierto es que el momento en que la atención se posa en el cuerpo instantáneamente surge esa Conciencia, ese ambiente en el que el presente está siendo y puede ser percibido. Sin embargo, un universo de sensaciones, emociones, pensamientos se manifiesta; la mente recibe miles de estímulos (*vrittis*)<sup>2</sup> creando un incisamente movimiento mental, que confunde y en ocasiones ahoga nuestra autentica realidad, apartándonos de esa conciencia. ¿Cómo mantener esa atención presente más allá del movimiento sin reaccionar? La conciencia corporal es uno de los mecanismos terapéuticos fundamentales en Mindfulness<sup>1</sup> y la propuesta es desarrollar a través de la corporeización cuatro actitudes básicas: equilibrio, apertura, fortaleza y presencia utilizando el yoga darshana<sup>3</sup> en sus distintas vías.

Palabras clave: Yoga, Mindfulness, Conciencia corporal

## Yoga Darshana

Different schools of philosophy (*darshana*) exist in Hinduism. The system most widely known in India and elsewhere owing to its universal nature is yoga. The origins of yoga date back to the Dravidian culture, a pre-Aryan matriarchal culture in which the worship of a goddess, feminine values and sexuality predominated, which we know today as *Tantra*. Many of the yogic teachings that are practised today come from the Tantra, particularly *Hatha Yoga*, the form most practised and widely known in Western countries, through two of its most basic techniques: *asana* and *pranayama*.

Yoga is *samadhi* (release)<sup>4</sup> and begins with the cultivation of attention, mindfulness. Without awareness of the present moment there is no yoga. It works with all the physical, emotional, mental, existential and spiritual components of the human being, which is also the case in transpersonal psychology<sup>5</sup>. They are all interrelated, and it is necessary to work to integrate all of them. There are several forms of practice in order to achieve this<sup>6</sup>. In addition to *Hatha Yoga*, some of these considered the most important are *Raja*, *Karma*, *Bhakti* and *Jnana Yoga*. *Hatha Yoga* focuses on the body and its vital functions as instruments for realization. *Raja Yoga* chooses the mental being in all its different manifestations. *Karma Yoga* focuses on awareness of daily actions without expecting any results. *Bhakti Yoga*, offers self-transcendence, beyond the small self that believes itself to be in control of everything, through love. *Jnana Yoga* uses discernment, differentiation between what is real and what is illusion, through de-identification.

The ultimate purpose of yoga is self-realization. In order to progress along this path, the *Yoga Sutras of Patanjali*<sup>7</sup>, a foundational text for the practice of this discipline, makes it clear from the start that "complete mastery over the modifications of the mind is called yoga", and that "then the seer abides in itself, resting in its own true nature", in other words, in awareness. The most valuable thing about this teaching is that it offers a form of application, a methodology that allows this state of being to be known, and present. This is described as eight *angas* (limbs), which range from a precise set of internal and external ethics, to awareness of body and breath for concentration and the attainment of *Samhadi*<sup>8</sup>.

## Body awareness: body psychotherapy and *asana*

*Asana*, a Sanskrit word meaning meditative body posture, is the third of the eight *angas* described in the *Yoga Sutras of Patanjali*. "Asana is perfect firmness of body, steadiness of intelligence and benevolence of spirit. Perfection in an *asana* is achieved when the effort to perform it becomes effortless and the infinite being within is reached. From then on, the *sadhaka* [practitioner] is undisturbed by dualities."<sup>8</sup>

In the practice of asana, the focus of attention lies in the internal experience of the senses by the body, leading to dissociation from the body. Through this attention to one's own body, the individual becomes open to feeling; we shift from thinking beings to feeling beings. According to Jon Kabat-Zinn, "Through the practice of mindful yoga, we can expand and deepen our sense of what it means to inhabit the body and develop a richer and more nuanced sense of the lived body in the lived moment."

Since the time of Wilhelm Reich<sup>9</sup>, considered the father of body psychotherapy, we have accepted that our body is the main repository of the unconscious; that the body somatizes our experiences, traumas and difficulties, meaning that all of our personal history is recorded in it; and that it contains more information than our autobiographical self can offer us.

The body shows us everything we are; through its careful observation, we can become aware of what is hidden, what conditions us, and the automatisms in which we are trapped. Approaching "the shadow"<sup>10</sup> through serene conscious action will give rise to the progressive integration of all its positive and negative qualities that have been repressed or denied by the self.

Attention focused on the body offers a great flow of experiences. Perceived physical sensations cause emotions, thoughts and pleasant and unpleasant states to reverberate. Using this to embody mental attitudes will enable us to confront basic emotions, such as fear, sadness and anger, with a mindful, detached, non-avoidant and non-judgmental attitude, allowing us to channel them towards trust, joy and inner strength, and contributing to encouraging values that have been greatly overlooked today.

## Teachings for the practice

The practice of body awareness through asana implies the development of a suitable attitude, which is explained by both Yoga Darshana and transpersonal psychology.

Asana is much more than a specific physical posture; its experience is meditation in a pure state. In order to make its effects truly relevant, it is necessary to apply three basic principles to its execution: stillness, duration and relaxation. In other words, you need to adopt the posture for an appropriate length of time, with total stillness, and activating the areas of the body that are necessary to maintain the posture, while relaxing those that are not required for its execution, for the purpose of "working with the body in order to become fully aware of it when one is motionless in different asanas; in other words, spatial manipulation of the unconscious so that the conscious mind can feel aspects of it that have been unknown until then, and accept and integrate them."<sup>11</sup>

Practising asana in this way allows one to allow to stop living in the mind, to no longer be confused by a sea of thoughts and emotions, so as to perceive what is felt, receiving what arises with a smile, encouraging its acceptance and afterwards releasing it through non-identification and the discernment of what is real and what is illusion.

Likewise, the teachings of Yoga Darshana explain that it is essential to develop *abhyasah* (constant practice) and *vairagya* (dispassion, non-attachment, non-identification with what is perceived). As an instrument of awareness, it is necessary to pay attention to *raga* (desire, attachment), *dvesa* (rejection, aversion); advocating instead *ishvara pranidhana* (surrender), the cultivation of non-reaction to the attachment to pleasure and the rejection of pain, and de-identification with all that is felt, with an equanimous attitude, simply allowing even that which is painful and destabilizing for us to be manifested<sup>12</sup>.

Awareness of the body and learning to listen to it through the practice of asana brings us closer to discovering what we really are, beyond what we believe to be the root of our identification with what is manifested: sensations, emotions, thoughts. In this regard, body awareness is today one of the fundamental therapeutic mechanisms of third-generation therapies.

## Mental attitudes in body awareness (asana)

The term attitude can be understood as the disposition of the mind and as a way in which a person behaves or acts when faced with a certain fact or situation, and also as a posture of the body that reveals an intention or state of mind. The body speaks, and even teaches. A person who feels emotionally and existentially light also feels light-bodied; a depressive says much more with the body than with words. And we always know that the body of a person in love emanates energy, strength and joy.

Four attitudes will be developed by means of the practice of different asanas, in addition to a work giving a detailed description of the specific exercises for each of these attitudes: balance, strength, openness and presence. It is understood that as we become open to each of them, we will also be shown their opposite attitudes.

For this purpose, becoming aware of the actual posture of the body, whether during the practice of asana or in our daily lives, will provide us with ample space for us to gain a deep knowledge of ourselves and a lesson in discovering what we really are from the kind acceptance of everything we are shown.

### 1. *Embodying balance: attention and equanimity (Figure 1)*

Cultivating attention is essential if one is to progress in the required self-knowledge. Asanas for balance are an excellent way of experiencing, knowing and developing this valuable faculty of the mind.

Its aim is to influence the level of the mind, by means of focusing constantly on maintaining posture, taking the suitable time to perform it, making the proper effort for stability and relaxing areas of the body that are not required to maintain posture. In order to make this possible, the mind has to concentrate, calmly and without movement. If you think, you will lose your balance. This is the reason that to perform these asanas it is essential to develop a kind and understanding attitude towards ourselves, with equanimity towards the success or failure of its execution. Coming close to balance will also bring contact with instability and insecurity.

Balance is embodied not only in the body, but also in the mind, including thoughts and emotions. If the mind concentrates while the body is relaxed, and the right amount of effort is applied, there will be steadiness and calm. The lower the effort we make, the closer we will come to balance and relaxed steadiness.

The most typical asanas for balance are performed in a standing position, which offers a metaphor for keeping contact with a firm base of solid roots, in order to grow. When adopting these postures, the body expresses the idea of being raised, just as a tree rooted into the ground grows in search of sunlight: from the physical to the subtle, from the earth to the sky. We need to feel this notion of taking



Figure 1

Embodying balance

root, which will grow stronger as we gain clarity to know who we are, what we are looking for, what we want, and what strength we can rely on in order to achieve it.

### 2. *Strength: embodying the strength of desire (Figure 2)*

Another of the mental attitudes to enhance is the connection with the inner strength that comes from desiring happiness that is shared by everybody. Strength, will, ability to serenely bear everything that arises during the practice of asana and in life, focusing on the conscious, serene and generous action and letting ourselves be guided by the innate desire to be happy.

Positions that require strength are those that tend to be applied to facilitate the connection with this attitude. The execution of these asanas requires intentional actions with intelligently measured application of effort. This form of "doing" is described in the *Bhagavad Gita*<sup>13</sup>: "He who sees the inaction that is in action, and the action that is in inaction, is wise indeed. Even when he is engaged in action, he remains poised in the tranquillity of the Atman" and "He who controls the senses by the mind and engages his active organs in works of devotion, without attachment, is by far superior."

During the practice of this asana, we will apply **will/intention, openness and intelligence**. **Will**, experiencing the posture through the effort needed to sustain it serenely; **openness** to feel everything that is conveyed by the posture; **intelligence** to measure the application of effort by prolonging the time in which one remains in this posture, with the possibility of deepening what is perceived.

When adopting this posture through the necessary effort and with an attitude of kind acceptance, we are able



Figure 2

Strength

to recognize our actual strength, our inner strength; however, weakness, fragility, even helplessness may also arise. The duality of opposites may once again be faced, as we have explained, through awareness of *raga* (desire), *dvesa* (rejection) and *vairagya* (de-identification), making their integration possible. The Sutras point out in this case: "From the attainment of a perfected posture [asana], there arises an unassailable, unimpeded freedom from suffering owing to the pairs of opposites"<sup>8</sup>.

Practice will help us to cope with everyday situations. It is often said that the true practice of yoga takes place in life, when we have to cope with and deal with complex situations; and we ask ourselves: what position shall I take, what is my posture, my attitude to the difficulties that life brings me? The ideal thing would be to be able to answer: "with serene strength, trust and understanding". But this is not always the case; situations often overwhelm us and we find ourselves in spaces filled with discouragement and helplessness.

Postures of strength are also a good framework for coming to know the ego (*asmita*)<sup>14</sup>, given that excessive or default practice of these entails a risk of developing a disproportionate, proud and arrogant ego, or its opposite: an ego trapped by inability. The aim of the exercise is to structure the ego suitably so as to be able to transcend it. Only a strong ego is capable of being transcended<sup>11</sup>.

During the practice we will be able to observe our inner mental workings, our automatisms. We will find a series of aspects that range from strength to weakness, from determination to impotence, from will to laziness, from arrogance to humility, from the ego to the being. This is undeniably a good training ground for coping with the complex situations that life presents us with at any time.

### 3. Openness: embodying trust (Figure 3)

Feeling open is an essential requisite in introspection. If we are not open, nothing will reach us, and we will not be able to feel anything. We experience this attitude through postures of posterior flexion of the spine, which symbolically exposes the space that houses the heart. The body adopts an open posture, offering the most vulnerable area, which we feel to be the most sensitive. It is exposed to ourselves and to the world. We say that we feel open when we face life with sufficient trust and little fear, giving love an opportunity, willing to love, and willing to be loved.

When adopting these asanas, the softening of the "breastplate"<sup>9</sup> through relaxation of the area allows us to approach the experience of being open to the ability of feeling, of giving, of receiving, of sharing, as if one is an offering, as if surrendering. In practice, it is an invitation to



Figure 3

Openness

listen to the body, to become aware of each area of the body, and to see which part can be relaxed and which is active. It is an invitation to experience more deeply the sensations that appear, without becoming caught up in the mental discourse, to feel and accept what is perceived without attachment (*raga*) or rejection (*dvesa*) of what is perceived. The execution of this posture will bring about as many easily manageable spaces of trust as spaces of fear, which can also be experienced and sustained without the need for and through de-identification (*vairagya*), which will enable their expression, acceptance of their presence, and the paying of kind and equanimous attention to what is felt and expressed by the body. Feeling and not thinking is how we can experience ourselves internally with greater awareness<sup>12</sup>.

### 4. Presence: Embodying the witness (Figure 4)

Classic yoga texts describe thousands of asanas that offer a wide framework for internal investigation. "Asanas, when done with the right intention, will help to transform an individual by taking the person away from an awareness of just the body toward the consciousness of the soul." (Iyengar)<sup>12</sup>. Awareness of the motionless body in a posture, as described, is an authentic meditative practice, and all of these in turn facilitate the posture of formal meditation, in which the verticality of the trunk predisposes the individual to a state of attention and of being centred. When the essence of asana is described in yoga, the specific reference is to the seated pose or posture, for meditation.

We can meditate in any position. Siddharta, the Buddha, advised monks to try to preserve their awareness of impermanence, suffering and impersonality at all times and in any position, whether seated, standing, walking or lying



Figure 4

Presence

down. When we practise meditation seated with a straight back, in silence and for a certain length of time, this is differentiated, formal practice.

There are different seated poses for meditation. The most classic in the Hindu tradition are *Ardha Siddhasana* and *Padmasana*, in which the straight spine and folded legs enable balance between the necessary relaxation of a number of areas and the muscle tone required to prolong relaxed steadiness. Moreover, a suitably still body affects the alignment of the entire nervous system and provides fluidity to the "pranic" system<sup>15</sup>. The folding of the legs allows better channelling of energy through the *sushumna nadi*, enhancing concentration.

Two words are used to describe the essence of asana in meditation in classic texts: *Sthira* and *Sukha*<sup>4</sup>. The first translates as steadiness, firmness, state of alert, and the second means the ability to remain comfortably in the posture.

The body is undoubtedly the gateway to meditation. If we become aware of the body, we situate ourselves in the present and cease to live in a mental state that constantly tends to wander and stray. Awareness of the body also immediately and continuously shows us the flow of natural breathing, the point of connection between the voluntary nervous system and the autonomic voluntary and autonomous nervous system, between the rational mind and the wisdom of the body. It comes as no surprise that it is the most common anchoring point for the mind in both tradition and mindfulness.

Practising seated meditation from the establishment of awareness in the upright body posture provides a secure anchor with which to deal with our tension, changing states of mind and unceasing modifications of the mind (*vrittis*). It reveals the constant oscillation between pairs of opposites and brings us closer to understanding the origin of the tension (*kleshas*)<sup>14</sup> that they produce.

In this meditation pose we embody the witness awareness (*sakshin*) and approach the experience of equanimity. We experience presence, metaphorically like the mountain and tree, which remain impassive to the wind and breezes, to calm and storm, hail, snow or gentle rain. This allows the establishment of the state of being spoken of in yoga as when one is beyond the influence of the pairs of opposites<sup>4</sup>.

One of the most precise and simple techniques for becoming familiar with meditation postures is *Kaya Sthairyam*<sup>16</sup>, in which attention is focused on the body that has adopted the meditation posture, enhancing the awareness of each area under focus, with the rest being excluded. After intense practice even for a few minutes, we realise that awareness is spontaneously directed inwards, facilitating the necessary introspection of the meditative practice.

Meditating on the body allows us to know our physical and mental workings; to learn to know ourselves through awareness, acceptance and loving understanding; to mitigate the unnecessary suffering largely produced by modifications of the mind; to abandon ourselves to each moment of the practice without reaction; and to enable the organic growth within ourselves of kindness, empathy, joy, equanimity and compassion.

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body posture. *Pranayama*, breathing techniques. *Pratyahara*, withdrawal of the senses in awareness. *Dharana*, concentration. *Dhyana*, meditation. *Samadhi*, release.

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13. Bhagavad Gita, part of the epic text The Mahabharata which is believed to date from between 5,000 and 27,000 years ago. It was transmitted orally until a written form was created, allowing it to endure until the present. It explains the teachings on the three main forms of yoga which illustrate the work on attitudes: *Karma*, *Jnana* and *Bhakti* Yoga.
14. *Kleshas* are the cause of modifications of the mind: *avidya*, ignorance; *asmita*, identification with self; *raga*, attachment to pleasure; *dvasa*, rejection of pain; and *abhinivesah*, attachment to life and consequent fear of death. *Yoga Sutras of Patanjali* 2.3–2.10
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## Embodied Mindfulness: review of the body's participation in the changes associated with the practice of mindfulness

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The body is a key to understanding the effectiveness of the practice of mindfulness. In fact, it is included as one of the five explanatory mechanisms of the effects of mindfulness on well-being. Theoretical models such as *the Interactive Cognitive Subsystems* or theories of *embodiment* may help to explain some of the effects of mindfulness and support the importance of observing the body during its practice. Furthermore, the results of several experimental and qualitative studies indicate that the continued practice of mindfulness increases body awareness and can alter the processes of agency and body ownership. The aim of this article is to carry out a theoretical review of the role of the body as a mechanism for effective mindfulness and propose some working hypotheses. The investigation of the role of the body in the practice of mindfulness can help us to understand the processes associated with its effectiveness and improve clinical protocols in order to intervene more efficiently and effectively.

Keywords: Mindfulness, Embodiment, Body therapy, Yoga, Contemplative practices

## Mindfulness corporeizado: una revisión de la participación del cuerpo en los cambios asociados a la práctica de mindfulness

El cuerpo es un elemento fundamental para entender la eficacia de la práctica de mindfulness. De hecho, se incluye como uno de los cinco mecanismos explicativos de los efectos de la práctica de mindfulness sobre el bienestar. Modelos teóricos como el *Interactive Cognitive Subsystems* o las teorías del *embodiment* pueden ayudar a explicar algunos de los efectos del mindfulness y apoyar la importancia que tiene la observación del cuerpo promovida en la práctica de mindfulness. Por otro lado, los resultados de diversos estudios experimentales y de tipo cualitativo indican que la práctica continuada de mindfulness aumenta la conciencia corporal y pueden alterar los procesos de agencia y propiedad del cuerpo. El objetivo del presente artículo es hacer una revisión teórica del papel del cuerpo como mecanismo de eficacia de mindfulness y plantear algunas hipótesis de

trabajo. La investigación del papel del cuerpo en la práctica de mindfulness puede ayudar no solo entender los procesos asociados a la eficacia, sino también a mejorar los protocolos clínicos e intervenir de manera más eficiente y eficaz.

Palabras clave: Mindfulness, Embodiment, Terapia corporal, Prácticas contemplativas

## Introduction

Traditionally, the body has not been researched by academic psychology. It has been restricted almost exclusively to being the place where psychic somatic phenomena occur, or as Wilhelm Reich described it, the place where the emotional experiences and traumas set the personality<sup>1</sup>. However, throughout the history of psychology, significant authors have given great importance to the body, as Williams James<sup>2</sup> posed, as being closely related to the sense of self and the starting point of the individual psychological identity. Cognitive positions showed no interest, and for some time the body was not included in cognitive models, which were mainly focused on thinking and behavior. However, in recent years this situation has been changing, and we are witnessing the "return" of the body as a place worthy of research because it is critical to understanding psychological phenomena. In this regard, cognitive neuroscience is currently changing its conception of the mind. While it was previously understated, based on a computational perspective and detached from the body, it is now becoming embodied and multimodal.

Regarding the scope of mindfulness, research involving the body has special relevance. When carrying out the practice of mindfulness, the body is present at all times and regarded as a neutral observation place to deposit our attention, as either the physical phenomenon of breath or the impact of thoughts or emotions on the body. Moreover, the essence of the mindfulness pedagogy uses the body as a fundamental part of the process of achieving awareness<sup>3</sup>. In Buddha's early texts, he already described meditative practices that are aimed at the body, such as the *Satipattana Sutta*, when explaining to his monks how to draw their attention to the contemplation of the concept of the "body as a body", focused on both internal and external perceptions<sup>4</sup>. However, despite the clear importance of the body in mindfulness, systematic and rigorous investigation into its role is just beginning.

The aim of this article is to review the current state of the studies about the body and its relevance as an effective mechanism in mindfulness. To achieve this, first this relationship will be discussed from a theoretical perspective, summarizing two of the most relevant approaches that have integrated the body in their theoretical proposals. Then, the main results from both experimental and clinical research about the body's influence on the practice of Mindfulness-

Based Interventions (MBI) will be reviewed. Finally, some future lines of study will be suggested.

## The body in current cognitive theories

As mentioned above, there are very few theories and models that include the body as a relevant tool to explain psychological functionality. However, this situation is changing, and currently the body can be found in conceptual frameworks, models and theories that are driving the research in this area. Due to limited space, we would like to highlight two approaches: one that has had a more direct link to mindfulness, the Interacting Cognitive Subsystems model (ICS<sup>5</sup>), and the theories of Embodiment.

Over two decades ago, Teasdale and Barnard<sup>5</sup> developed one of the most influential multi-level cognitive models, the *Interacting Cognitive Subsystems model* (ICS), which is the origin of the Mindfulness-based Cognitive Therapy model (MBCT)<sup>6</sup>. This model assumes that when we represent knowledge and different aspects of experience, there are some subsystems, each of them specialized in processing different types of information or codes. On a first superficial level are the sensory codes that represent the visual, acoustic and proprioceptive information, at the next level the language, and at the deepest level the meanings. At this last level, we can find two types of codes. The first one is called propositional and refers to the concepts and the relationships between them. It implies a direct relationship with declarative language and a type of explicit meaning. The propositional code generates units of meaning that are subject to truth-values; they are analytic and defined by rules. The second level of meaning is called implicational. It is more generic, represents a holistic and implied type of meaning, and is connected to emotion. It includes aspects such as tone of voice, posture, etc. Each variable of the implicational code (state of the body, feelings, etc.) corresponds to a dimension related to past experiences, and its value cannot be related to what happens at each moment.

Thus, there are many informative non-verbal codes that can contribute to a person's emotional state in a very important way, according to the ICS model. Traditionally, the study of cognition in psychotherapies has been limited to verbal content elements (e.g., thoughts or memories) in general, which refer to the propositional code in the ICS model. By contrast, less attention has been paid to implication codes, which can be unconscious and are not easy to verbalize. However, Teasdale<sup>6</sup> suggested a type of intervention that included cognitive aspects and working with the body -the MBCT- following the theoretical assumptions of the ICS model. For this reason, the MBCT considers the body as a

central element in explaining the information process and emotions, as well as their treatment.

Additionally, increased attention has been paid to the body in recent decades in cognitive disciplines clearly represented by the "*Embodiment theories*" or embodied cognition. According to this approach, corporal states constitute cognition and, consequently, are connected to cognitive processes in a bidirectional way because they are mutually influenced. These theories propose that conceptual knowledge is formed through the storage of representations of sensorial, motor and introspective states. In other words, corporal and perceptive states that occur when interacting with stimuli are then simulated when these stimuli are again represented in sensory-motor areas of the brain (e.g., the simulation of a chair's image includes the act of sitting down, comfort and relaxation introspections). The same thing applies to emotions: emotional states are accompanied by a vast range of body experiences (physiological reactions, facial motor expressions, postures, etc.), which are the basis for the emotional conceptual representation<sup>7</sup>.

In sum, both theoretical approaches converge in the idea that a person's experience as a conscious being in the world comes not only from the neuronal activity in the brain, but instead involves a complex interaction between the brain, the body, the environment and the interoceptive, proprioceptive (including vestibular), kinesthetic, tactile and spacial information<sup>8</sup>. Both concepts serve as guides to control and understand the studies on the role of the body in the mind.

### *Mindfulness and body*

The body -and body awareness overall- is a key factor in mindfulness practice. Body awareness refers to the dynamic and interactive process through which states, processes and actions that occur in the body and can be observed by the individual are sensed in an interoceptive and proprioceptive way<sup>9</sup>. Holzel et al.<sup>10</sup> included body awareness as a key element of mindfulness practice. They identified five essential mechanisms to understand the efficacy of mindfulness training: attention changes, body awareness, emotional regulation (including reappraisal and exposure, extinction, and reconsolidation), and changes in perspectives of the self.

Curiously, body awareness has mainly been investigated as a dysfunctional aspect associated with somatosensory amplification and a worse prognosis in anxiety and hypochondria disorders<sup>9</sup>. Perhaps because of this, the resources developed to evaluate this variable have a bias toward the pathological. However, the body awareness that promotes mindfulness practice is different because it can be considered adaptive. This awareness is based on the present

and has a non-judging perspective<sup>11,12</sup>. Thus, body awareness training is recommended for patients who suffer from severe psychopathologies such as borderline personality disorder or eating disorders. Quezada et al.<sup>13</sup> found that this adaptive body awareness was related to fewer depressive symptoms, greater awareness, and less propensity to judge. Greater interoceptive awareness has also predicted a more empathic response<sup>14</sup>.

In the same vein, some studies have employed MBI in the treatment of corporal experience alteration disorders, such as somatization disorders (which are characterized by chronic symptoms that are resistant to change, combine physical pain and anxiety or depression symptomatology, and have no explanation), including chronic fatigue, irritable bowel syndrome or fibromyalgia. The results of the meta-analysis<sup>15</sup> showed that MBI was related to a reduction in pain, less symptom severity in depression, and an improvement in quality of life. Despite these promising results, there is still a need for more research because the sizes of the effects are small (depending on the different disorders), and the results are ambiguous.

Qualitative methodologies to analyze the effects of MBI also demonstrate the relationship between mindfulness and the body. For example, in the Hölzel, Ott, Hempel, and Stark study<sup>16</sup>, 7 of the 10 interviewed meditators spontaneously described having clearer and more differentiated sensorial experiences associated with increased emotional awareness. Meanwhile, the authors found that the meditators who participated in a study to analyze the efficacy of MBI in the treatment of non-explained medical symptoms<sup>17</sup> (somatic diffused symptomatology) "were more conscious of their body sensations", related different experiences to certain physical sensations, and increased their acceptance abilities. Finally, a recent meta-analysis of qualitative results<sup>18</sup> indicated that several participants in MBI talked about mindfulness as a "meeting" with themselves, feeling inside themselves again or being comfortable in their own skin.

The most accepted and frequent MBI<sup>19</sup> practice is a technique that specifically aims to observe the whole body, the *body scan*. According to Dreeben, Marnberg and Salmon<sup>20</sup>, the main objective of the *body scan* is to help establish the connection between physical sensations and emotional labels, identify somatic correlations with cognitive activity, and understand what it modifies, without paying attention to past and future thoughts but only to the here and now, and noticing and appreciating affective states using non-reactive and descriptive language.

This practice seems to have an important effect on body introspection. For instance, Fox et al.<sup>21</sup> examined the impact of mindfulness practice on introspective accuracy, that is, how being aware of our internal processes provides clearer

and more intense sensations. To do so, they analyzed the scores on a questionnaire that assessed the clarity or intensity of the sensations in 20 body regions after practicing *body scan*. Results showed that the introspective accuracy was significantly better in the expert group than in the novice group. Another study observed the influence of brief training in *body scan* on sensitivity, through a somatic signal detection task (to capture minimal vibrations presented to their fingertips), where the tactile misperception was reduced<sup>22</sup>, and through cardiac perception<sup>23</sup>.

Mindfulness practice also has a role in controlling the alpha rhythms in the somatosensory cortex, which is responsible for the cerebral regulation of body sensation processing. Kerr et al.<sup>24</sup> observed that, after *body scan* training, individuals not only learned to control bodily sensations, but they also learned to regulate their attention in such a way that it was not directed toward physical sensations or negative thoughts, as occurs in depression or chronic pain. This mechanism improves the "bootom-up" modulation, facilitating the filtrations of sensory information into the brain in a faster and more sensitive way. Therefore, interoceptive awareness improves cognitive regulation and metacognition.

Regarding other effects on the brain, mindfulness practice also seems to be related to changes in the insula, which is activated during interoceptive awareness tasks<sup>25</sup>. Additionally, mindfulness practice has been related to gray matter volume, a factor that correlates with interoceptive accuracy and awareness of visceral sensations<sup>26</sup>.

With regard to its influence on other important variables, *body scan* also seems to be an effective strategy to reduce rumination and increase the ability to put inner experiences into words ("Describing" factor in the *Five Facets of Mindfulness Questionnaire*; FFMQ<sup>27,28</sup>). In fact, a study comparing the effects of different techniques (sitting meditation, *body scan* and yoga) for two weeks showed that yoga was more effective in the facet of "Observing" (FFMQ factor), self-compassion and psychological well-being<sup>29</sup>.

Movement-based meditative practices (MBMP), such as Yoga (although this term encompasses a large number of different breathing practices, such as *pranayama*, body postures or *asanas* and meditation or *raja*, here we are going to focus exclusively on body movements) or Tai-chi, use movement in conjunction with meditative attention to body sensations, including proprioception, interoception and kinesthesia<sup>30</sup>. These practices, like mindfulness, come from Eastern spiritual traditions based on energetic models, but for now, there is much more evidence about mindfulness. Currently, there is a wide body of literature about the efficacy of mindfulness and its inclusion in different intervention protocols in mental health. However, there is

hardly any research about these aspects of MBMP. Along the same lines, a recent meta-analysis concluded that Yoga<sup>31</sup> and Tai-chi<sup>32</sup> require greater methodological effort to empirically validate their efficacy and change mechanisms.

Finally, it is important to highlight the studies that arise from the previously mentioned *embodiment* theories. In the first place, there are studies that analyze the effect of mindfulness training on the agency and localization of the body, that is the ability to distinguish our own actions and their sensory consequences, which are self-generated, from those produced by external agents, and the ability to situate each of one's body parts separately and as a whole. Thus, the study by Naranjo and Schmidt<sup>33</sup> investigated how mindfulness practice modulated visuomotor performance and self-agency. They compared the performance of three groups with different levels of practice (8 weeks, years of practice, and no experience) on a perceptual-motor task where individuals had to perform a movement based exclusively on their proprioception, without any visual reference to the body. Results showed that the mindfulness training significantly improved motor control. In addition, the speed and accuracy of their movements were much greater in the meditation group than in the control group.

Another area of work based on *embodiment theories* analyzes the relationship between body postures and cognitive and emotional processes. Some studies have shown that certain body postures (i.e. slouched) are related to (worse) mood, variations in autobiographical memory (people remember more positive aspects when they are upright) or more negative thoughts, and it has even been observed that negative thoughts produce changes in body posture<sup>34-38</sup>. Mindfulness teaching encourages an upright posture during meditations. In this regard, a study found that the supine position (like the one used in the *body scan*), compared to the stand-up position, was related to a tendency to decrease rationalizations for behavior and cognitive dissonance<sup>39</sup>.

## Conclusions

Although the body is included in the MBI models, such as the ICS model, more empirical research is needed to show the role of mindfulness practice and its effects or associated changes after an intervention. *Embodiment* theories are producing a suitable theoretical model on which to base the findings obtained from experimental and intervention studies. A clear example would be the studies about the effects of body posture on negative emotions<sup>37</sup>, where the implications for mindfulness education are evident. In mindfulness teaching, the upright or "dignity" posture is emphasized, which seems to be more than a mere metaphor, as this position has an effect on the basic psychological

processes that influence the practice. Studies of the effects of a "dignified" body posture on autobiographical memories or studies on the importance of body awareness make it possible to understand the role of body posture in mindfulness practice. This line of research might also help to understand the mechanisms associated with its effectiveness and improve clinical protocols and the efficacy of interventions. Nevertheless, more research is still needed to determine the effects of certain body postures on abilities, attitudes or processes.

What has occurred in recent years with regard to the level of research and preciseness in the mindfulness field should be translated to other MBMP, such as Yoga or Tai-chi, to demonstrate their effectiveness. The effects of certain Yoga *asanas* on the basic psychological processes or the effects of the awareness of certain body movements on attitudes are two areas that still have not been studied. This research would help to shape the field, which could be called "Evidence based Yoga or Tai-chi research". Research on Yoga or Tai-chi should follow the same path as MBI; a thorough and detailed analysis should be conducted to demonstrate their efficacy and efficiency in health contexts.

This line of work can provide a great opportunity to return value to body therapies, reviled for a long time due to a lack of scientific rigor and scientific evidence. Currently, thanks to the development of several well-founded theoretical models, body therapies have a unique opportunity to reclaim their relevance in the field of psychological treatments. However, to do so, adequate theoretical models have to be correctly developed and established to guide future research. Furthermore, there is a need for studies with high methodological quality to provide clear evidence about the way the body affects psychological functioning, the body's role in the configuration of several psychopathologies, and how the body can be modified to achieve significant changes during treatment. Specifically, regarding mindfulness, and beyond its relevance for certain specific practices, research will have to show how the body mediates or modulates the positive effects of mindfulness practice and whether it is the key mechanism that explains its efficacy, and if so, how to facilitate and strengthen it. This line of research is just beginning, but we predict that it will be very productive and heuristic in the field of mindfulness.

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## CLINICAL APPLICATIONS OF MINDFULNESS

### Compassion in clinical practice: a conceptual and empirical review

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In the last ten years there has been an increase in research on the nature and functions of compassion. More than ever, compassion is being studied and used as an ingredient in effective evidence-based psychotherapy. A growing body of research shows how cultivating a compassionate mind can help relieve and prevent a variety of transdiagnostic psychological problems, including anxiety and shame. Deliberately activating our compassion system can generate the courage and psychological flexibility we need to face life's challenges. Just recently the specific qualities of compassion and its clinical use have begun to receive more and more attention in the literature, and even to become an area of study in their own right. These methods can complement and strengthen our state of the art. The objective of this review is to highlight the current scientific evidence regarding the effectiveness of compassion as a psychotherapy model, as well as to provide recommendations that could inform the development of new research.

Keywords: Compassion, Psychotherapy, Mindfulness, Shame, Self-criticism

### La compasión en la práctica clínica: una revisión conceptual y empírica

En los últimos 10 años ha habido un crecimiento importante de la investigación sobre la naturaleza y funciones de la compasión. La compasión está siendo estudiada y utilizada como ingrediente en la psicoterapia efectiva basada en la evidencia más que nunca. Un creciente cuerpo de investigación demuestra cómo cultivar una mente compasiva puede ayudar a aliviar y prevenir una variedad de problemas psicológicos transdiagnósticos, incluyendo ansiedad y vergüenza. La activación deliberada de nuestro sistema de compasión puede generar el valor y la flexibilidad psicológica que necesitamos para enfrentar los desafíos de la vida. Sólo recientemente las cualidades específicas de la compasión y su uso clínico han comenzado a recibir cada vez más atención en la literatura, e incluso convertirse en un área de estudio de propio derecho. Estos métodos pueden complementar y reforzar nuestro estado del arte. El objetivo de esta revisión es poner de manifiesto la actual evidencia científica de la efi-

encia de la compasión entendida como un modelo de psicoterapia, así como proporcionar recomendaciones que pueden informar sobre el desarrollo de nuevas investigaciones.

Palabras clave: Compasión, Psicoterapia, Mindfulness, Vergüenza, Autocrítica

## Introduction

"Love and compassion are necessities, not luxuries. Without them, humanity cannot survive."

His Holiness the 14th Dalai Lama

What is compassion? Can it have therapeutic properties? If so, can mental health professionals be taught to practise it? Essentially, the term "compassion" means emotional openness to the presence of suffering, both in others as well as ourselves, along with a deep desire to alleviate our own suffering or that of others. As we can see, experiencing compassion is essential for our physical and psychological health and is a vital part of our common humanity that we share with all: the universal experience of suffering. In a very real sense, compassion is essential for the survival of our species.

Gilbert<sup>1</sup> defines compassion as a basic act of kindness, with "a profound awareness of one's own suffering and that of other human beings, along with the desire and effort to alleviate it".

Although compassion is relatively new as an approach to treatment in psychotherapy, in reality, its scholars combine both perennial wisdom and the most recent scientific discoveries. This may seem surprising, given that practising compassion has been the focus of emotional healing in wisdom traditions from around the world since at least 2,600 years ago. Empathy and emotional validation have been recognised as some of the most important components of psychotherapy for decades. It is difficult to think of a therapy that does not include the importance of practising compassion. We are all familiar with Rogers' work on the basic conditions for unconditional positive regard, empathy and congruence. Similarly, it is difficult to imagine a psychotherapist who is not motivated by care, kindness and sympathy for their patient's suffering. However, compassion as a process in and of itself and as the centre of attention of psychotherapeutic work is a recent concept.

The specific qualities, forms and approaches of compassion have been adopted during centuries, especially by Buddhism and Christianity, although in all traditional cultures the values of compassion have been cultivated as moral codes of conduct and as the best way of relating to others and with processes of suffering. However, current models of compassion in psychotherapy such as Compassion Focused Therapy (CFT), which we will discuss later, base their per-

spective on an evolutionary approach to psychological functioning. The latest advances in psychological research, theory and practice suggest that compassion can be an active process in psychotherapy which is highly effective, especially in transdiagnostic aspects such as shame and self-criticism, and also to help tackle a reduction in threats based on behaviour patterns, especially those of an avoidance nature. Research has begun to explore the attributes of compassion, such as motivation for caring, capacity for understanding and sympathy, the ability to tolerate unpleasant emotions, the capacity for empathetic understanding and not judging or condemning<sup>2</sup>.

## Compassion from an evolutionary approach: The CFT Model

Compassion Focused Therapy (CFT), which we referred to in the introduction, is one of the most highly developed clinical treatment models and even so, has still only just begun to address these issues. While its pioneers continue to gather data in order to widen its scope and their levels of understanding, it offers a valuable approach with immediate applications in psychotherapy.

Developed through decades of research and innovation, Compassion Focused Therapy is the most noteworthy example of the integration of evolutionary and developmental psychology, behavioural therapy, neurology and perennial wisdom in order to provide a systematic, scientifically solid approach to the problem of human suffering. This entire body of knowledge has taken the shape of a comprehensive experiential behavioural therapy model.

The peculiar and astonishing evolution of our species has provided us with a tendency to experience calm, safety and value through the warm, affectionate and protective presence of our care-givers. Data from research into compassion show: that the relationship of love, care and kindness that we establish with other human beings, from the day we are born until the day we die, will have an enormous impact upon how our brains mature and, therefore, on how our body, emotions and general well-being work.

Gilbert describes compassion as a multi-facet process that has evolved from the care-giver mentality during human parental care and child rearing. As such, compassion includes a series of complex emotional, cognitive and motivational elements involved in the ability to create opportunities for growth and change through warmth and loving attention. Compassion Focused Therapy consists of training and improving this ability, which is developed through compassion.

As a species, we have evolved to feel relief in the presence of care-givers who provide us with loving support.

Gilbert<sup>1</sup> explains that our brains evolved over millions of years and that due to the natural flow of life, we find ourselves with brains built "for us but not by us". He identifies two types of brain, the primitive brain with its basic physical and social desires and motivations, and the new brain, with its ability to use attention, imagination and capacity to fantasise, think and reason. Gilbert highlights the fact that our new abilities may be "hijacked" and directed by our old brain with its passions, desires, threats and fears. He suggests that learning to stop and observe what is happening in our minds (making clear reference to the processes involved in mindfulness practice) may be the first step in having greater control. Learning to be compassionate with our feelings instead of fighting them or avoiding them is the second step, making clear reference to compassion. The richness of recent research has indicated that we can train our minds to direct this kindness and desire to help within, deliberately training ourselves in compassion (what we denominate self-compassion). Therefore, compassion as a therapy is a research-based method that may help cultivate self-care and which provides the patient with a sense of bravery and courage in order to face the challenges in his or her life and overcome fears.

This definition involves the two main aspects of compassion. The first is known as **commitment psychology**, which is defined as the sensitivity to and awareness of the existence of suffering and its causes. The second aspect is known as the **psychology of relief or mitigation** and consists in the motivation to carry out specific actions in order to alleviate the suffering we face in our lives<sup>2</sup>.

Researchers have also discovered that treating ourselves with compassion, that is, self-compassion, has an enormous impact upon the quality of our lives and on how we deal with difficulties such as anxiety, fear, depression and relationships.

## Attachment and Compassion

Fricchione<sup>3</sup> theorises that the desperate cries for attachment made by seriously ill patients reflect an underlying evolutionary tenet that he denominates the process of the "separation challenge versus attachment solution". The pleadings of patients, he explains, are verbal expressions of the history of evolution itself. By exploring the roots of a patient's attachment needs, we come face to face with a critical component of natural selection and the evolutionary process. According to Fricchione, compassionate care promotes physical and emotional healing precisely because it is consonant with how life, the brain, and humanity have evolved. It is therefore not a luxury of modern medical care but an essential part of it.

Thus, Fricchione advocates an attachment-based medical system, one in which physicians evaluate stress and resiliency and prescribe an integrative treatment plan for the whole person designed to accentuate the propensity to health. He stresses that there is a wisdom or perennial philosophy based on compassionate love that the medical community must take advantage of in designing future health care. In fact, our brain has evolved to do just that. The law continues to be survival of the fittest, but the fittest are the individuals and groups that find inclusive solutions and improve connections in the face of separation challenges.

Along these lines, CFT highlights the importance of developing human beings' capability to both access, as well as tolerate and mindfully direct motivations and emotions in an affiliative manner for oneself and for others. It aims to cultivate internal compassion as a way of organising our complicated human brain in a prosocial and mentally healthy way.

The model upon which CFT is based, the three circles model, asserts that we have at least three types of emotional regulation systems: the threat detection and protection system; the incentive and resource-seeking system and the affiliative system focused on satisfaction, calm and security. Research has shown that the latter has developed significantly with the evolution of attachment behaviour, which is unique to mammals. Intuitively we know that kindness and supporting others helps calm the feeling of being threatened and return to feeling safe. As Gilbert<sup>1</sup> explains, the affiliative system was design as a threat regulator. We seek out our closest and most loved ones when we feel threatened, because we have an intuitive wisdom that tells us that kindness from others is what helps us and calms us down.

Research in neurobiology also suggests that our affiliative emotions operate through specific systems that produce endorphins and oxytocin and that kindness towards oneself and self-care can work in a similar way. Both systems are different from those activated by threats. In other words, feelings of security and calm do not come from the mere absence of a threat. Similarly, if we can reduce threats, this does not mean that the calming and reassuring properties of affiliative systems are automatically activated. These three systems also have significant effects on other abilities, such as our capacity for attention, ability to tolerate anguish and ability to be aware. They are also very powerful physiological organisers.

CFT organises its approach around these three systems and on how to balance them once again; however, it focuses on the importance of the affiliative system. Gilbert explains that "whatever you do in CFT, you have to get the affiliative system going as a key to regulate the others"<sup>1</sup>. CFT holds that this system is not easily accessed in people with high levels

of shame and self-criticism. For these people, the "threat" dominates their internal system and outside world.

Today, we know that the anxious attachment style is not simply due to fear of abandonment, but it may also be due to fear of affiliation<sup>4</sup>.

A study by Milkulincer and colleagues<sup>5</sup> shows that in a sample of students, the fear of compassion for oneself and of compassion received from others was significantly linked to the fear of feeling compassion for others. Additionally, in this sample the fear of being compassionate towards others was significantly associated with insecure attachment styles. These results fit with the literature on attachment that suggests that insecure attachment is related to problems with empathetically committing to others and with developing skills to effectively care for others.

Along these same lines, Neff<sup>6</sup>, creator along with Germer of the training programme to cultivate compassionate skills called Mindful Self Compassion (MSC), assures that at some time we all feel disconnected from our relationships given that we have different needs, history, DNA and we come from different families, groups, races, religions, etc. At the same time, we need connections or we do not feel good. Human beings need to feel connected to others. Without this connection called "common humanity", loneliness and depression appear as predominant moods in the human psyche.

Germer<sup>7</sup> highlights the fact that the importance of accepting emotional pain is being recognised in the field of mental health. He comments that there has been a clear, popular trend in therapy (that still exists) that the therapist should help the client 'identify' a problem in order to then help them 'fix it'. However, Germer argues that the healing mechanisms that underlie successful therapy are not what we thought they were; it is the process of establishing a new relationship with our thoughts and feelings, instead of continuing to directly defy them that makes the difference. This new relationship involves less avoidance, is less confusing, more accepting, more compassionate and more aware. Germer states that "the common healing element in both mindfulness and self-compassion is a gradual shift toward friendship with emotional pain".

## Compassion, Shame and Self-Criticism

Gilbert has worked with and researched processes related to shame in mood disorders for over three decades. In the last 15 years his work has considered compassion to be an antidote to shame and self-criticism and an approach to therapeutic intervention. Since then, CFT has appeared on the therapeutic map and, specifically, is connected to the approaches of Cognitive-Behavioural Therapy (CBT).

Gilbert's interest in compassion arose from a number of observations in his work with people with complex mental health difficulties, who often came from neglectful, abusive or emotionally insecure backgrounds, and who typically had high levels of shame and self-criticism. He found that when working with a CBT model, while some patients could engage well with the cognitive and behavioural tasks involved, the results in general were poor. A typical patient response was 'I understand the logic of the alternative thoughts suggested, but they don't help me feel better'. That is, there was a 'cognitive-emotional mismatch' in psychological terms.

This encouraged Gilbert to explore how we can feel calm and relieved by the "useful" cognitions suggested by CBT, but keeping in mind the emotional sources of comfort and trust, along with the importance of attachment and affiliation. More recently, his work has taken advantage of neuroscience and he recently described CFT as an "integrated and multimodal approach that draws on evolutionary, social, developmental and Buddhist ideas, along with the latest findings of neuroscience"<sup>2</sup>. Being multimodal, it builds on a range of cognitive behavioural and other therapies and interventions. However, Gilbert is passionate about the importance of integrating science. He argues that thanks to science of the mind we know that attachment, the therapeutic relationship and unconscious processes are absolutely crucial. He says: "If psychotherapy began today, we'd be in a far better position with it all"<sup>2</sup>.

A multiple regression was used to study the relationships between variables (in students and therapists) and it was found that the self-criticism variable was so powerful that there were no other significant variables that predicted depression. Indeed, in the correlations for both groups (students and therapists), it appeared that self-criticism (inadequate self and hate towards self) were significantly correlated with fear of compassion. These discoveries fit with other studies<sup>8,9</sup> that highlight the fact that self-criticism does not only revolve around negative attitudes towards oneself, but that it also contains an aspect based on fear of affiliation<sup>10</sup>.

## Compassion and Psychotherapy: Latest Advances in Research

In recent years, baseline research for the psychology of compassion and for CFT specifically has been growing at a remarkable rate, with a rapid increase in the number of studies and clinical publications on compassion. For example, in the last ten years there has been a significant increase in research on the benefits of cultivating compassion, especially through the practice of therapeutic imagery<sup>11</sup>.

CFT also shows increasing empirical support through results-oriented research. In a clinical trial with a group of

people with chronic mental health problems who were in an outpatient clinic<sup>12</sup>, it was found that CFT significantly reduced self-criticism, shame, feelings of inferiority, depression and anxiety. In another study<sup>13</sup>, CFT was shown to be highly effective for treating personality disorders, eating disorders<sup>14</sup>, psychosis<sup>15</sup> and in people who visit mental health community teams<sup>16</sup>.

Furthermore, neuroscience and research with neuroimaging has demonstrated that practices based on compassionate imagery towards others produce changes in the frontal cortex, the immune system and general well-being<sup>17</sup>. Particularly, one study<sup>18</sup> found that by simply performing a brief meditation on loving kindness, there was an increase in feelings of social connectivity and affiliation towards strangers.

An increase in self-compassion seems to be an action mechanism in several therapeutic approaches<sup>19</sup>, and may have significant implications for understanding the therapeutic process. Neff, Kirkpatrick and Rude<sup>20</sup> performed a study that monitored the changes experienced by patients in self-compassion in the period of one month. The therapists used the two-chair Gestalt technique designed to help patients decrease self-criticism and show higher compassion for themselves. The results showed that the increase in levels of self-compassion throughout the month (which were evaluated under the auspices of an independent study) was connected to a decrease in experiences of self-criticism, depression, rumination, suppression of thoughts and anxiety.

Schanche<sup>21</sup> examined individuals with various personality disorders and found that after brief psychodynamic psychotherapy, the highest levels of self-compassion were associated with a decrease in anxiety, shame and blame, and with an increase in the propensity to allow oneself to experience sadness and anger. In the same study, increases in self-compassion preceded a decrease in psychiatric symptoms and interpersonal problems. Neff and Germer<sup>22</sup> performed a randomised controlled study of the MSC programme that compared the results of 51 subject assigned randomly to the programme (24 participants; 78% women; average age: 51.21) or to a wait list control group (27 participants; 82% women; average age: 49.11). The great majority of participants (76%) reported having prior experience in the practice of mindfulness. The subjects in both groups were asked to complete a series of self-evaluation scales two weeks before and after doing the MSC programme, and additionally the participants in the programme were evaluated six months and one year after treatment. The questionnaires evaluated variables such as self-compassion (Self-Compassion Scale<sup>23</sup>), mindfulness (Cognitive and Affective Mindfulness Scale – Revised<sup>24</sup>), compassion towards others (Compassion Scale<sup>25</sup>), life satisfaction (Satisfaction with Life Scale<sup>26</sup>), depression (Beck Depression Inventory<sup>27</sup>), anxiety (STAI,

State-Trait Anxiety Inventory<sup>28</sup>), and stress (Perceived Stress Scale<sup>29</sup>).

There were no pre-test differences in any of these measurements. However, in the post-test analysis, participants in the MSC programme showed a significantly larger increase in their levels of self-compassion (up to 43%) compared to the control group subjects, indicating a large effect size. The MSC patients also showed significantly higher levels of mindfulness (19%), compassion towards others (7%) and satisfaction with life (24%), and decreases in depression (24%), anxiety (20%), stress (10%) and emotional avoidance (16%).

These results suggest that the self-compassion skills taught in MSC are learned gradually, and that once learned, they remain relatively stable. The participants were also asked how many times a week they practised formal meditation and how many times per week they practised informal self-compassion techniques in their daily lives. Self-compassion increased as participants practised it more often and the frequency of the practice predicted the degree to which this increase occurred (no significant differences were found between formal and informal practice when predicting benefits of self-compassion). Thus, it can be inferred that self-compassion is an ability that can be taught and that depends on the dosage. The more it is practised, the more is learned.

There is growing evidence that compassion is a powerful antidote for a wide range of mental health problems such as depression and anxiety. Shapiro and colleagues<sup>30</sup> found that in a context of mindfulness training, practices centred on loving kindness and compassion reduced depression.

Several components of compassion-based interventions have been found to improve results in psychotherapy and serve as variables for measuring results. In a study done by Schanche and colleagues<sup>21</sup> it was found that self-compassion was an important mediator in decreases in negative emotions associated with personality disorders. Furthermore, in a study on the effectiveness of mindfulness-based cognitive therapy for depression, or MBCT<sup>31</sup>, researchers found that self-compassion was an important mediator between mindfulness and recovery. In fact, in a meta-analysis of recent research in clinical and non-clinical contexts<sup>32</sup>, interventions based on compassion were highly effective.

As regards the flow, direction and meaning of compassion, different skills have been shown to have a positive therapeutic effect. We can have compassion for others, receive feelings of compassion from others, and we can have empathy and compassion for ourselves (self-compassion), especially in times of difficulty<sup>1,10,23</sup>. There is growing evidence that helping people to develop compassion for themselves and for others has a strong impact upon negative affects and promotes

positive affects<sup>33</sup>. Compassion is also linked to feelings of kindness, gentleness and warmth<sup>11</sup>.

Lutz, Brefczynski-Lewis, Johnstone, and Davidson<sup>17</sup> found that the regular practice of compassion meditation towards others has an impact upon responses to stress and the frontal cortex. The subjects who practised compassion also showed an increase in sensitivity for detecting and responding to anguish in others.

Pace et al.<sup>34</sup> also found that meditations focused on compassion reduced immune system responses and behavioural responses linked to stress.

Fredrickson, Cohn, Coffey, Pek, Finkel<sup>35</sup> taught six weekly 60-minute sessions (with practice at home) with a CD of loving kindness practices (compassion towards oneself, towards others that subjects knew and, finally, towards strangers). This training increased positive emotions, as well as mindfulness, feelings of social support and a vital feeling of existence, and decreased symptoms of disease. Numerous studies show that practices centred on compassion decrease negative affects and responses to stress, and increase positive affects and feelings of affiliation and kindness towards others.

## Keys to Being a Compassionate Psychotherapist

In a study performed by Vivino, Thompson, Hill and Ladany<sup>36</sup>, a group of therapists nominated as compassionate by their colleagues defined compassion in psychotherapy as "connecting with the client's and therapist's suffering and promoting change through action". The therapists formulated these observations in relation to compassion in psychotherapy: the ability to be compassionate seems to depend on the ability to see the client within their context of suffering, but also to maintain compassion for oneself. If the therapist could understand the reasons behind the client's behaviour, it was easier for them to feel compassion. This was also the case if the therapist had their own prior experience with suffering that resonated with the client's experience.

These authors summarise the transformational power of compassion in a therapeutic alliance, arguing that: "a therapist's compassionate attitude can be useful in helping clients to become non-judgemental observers of their thoughts, feelings and processes". When therapists are capable of experiencing compassion, they seem to accept their clients and themselves. This acceptance may allow clients to fully express and experience their emotions, thoughts and difficulties, as well as observe and accept themselves, creating a space between themselves and their difficult experience.

There are a number of specific attributes and competences for compassion that can (and should) be included by

the therapist when using interventions aimed at helping patients develop these same competences for themselves. This means that therapists must work on self-compassion as a foundation for working with the patient. These attributes including caring for one's own well-being, developing sensitivity, solidarity and tolerance for affliction, empathy, and a non-judgemental attitude. The skills related to compassion imply the ability to create feelings of warmth, kindness and support in therapeutic work. The psychotherapist's job is to guide the patient towards the construction of his or her own compassionate identity. Compassionate behaviour often implies courage, for example, in order to leave an abusive relationship or job. As psychotherapists, we often underestimate the importance of facilitating courage in our patients, but it is much more likely that courage will be produced in the context of a compassionate therapeutic relationship.

Compassionate psychotherapists will structure their work around three main areas of practice:

**Compassionate attention:** metaphorically we express this as using awareness as if we were caressing that which we are paying attention to, whatever it may be, and especially if it is ourselves.

**Compassionate thought:** This is worked on in many ways, but a very direct manner of working with compassion is imagining the presence of a wise, compassionate friend who cares for us with unconditional acceptance. This friend understands our problems and genuinely desires to be helpful and see us flourish. We imagine what this friend would say when we most need his or her warmth and wisdom.

**Self-compassionate action:** This involves treating oneself with kindness and goodness in specific actions of self-care. The key is that these actions arise from a genuine desire to alleviate an excess of stress, to connect with a feeling of vitality and to advance towards a life full of meaning, even in our darkest moments.

## Conclusions

When human beings find themselves in the presence of affiliative, warm emotions, they feel accepted and are predisposed to act in the healthiest way possible with receptive, flexible and empathetic responses. From the day a human being is born and throughout their life, the presence of kindness, support and emotional strength will have a very powerful impact upon all aspects of their health and behaviour, and are essential ingredients for experiencing well-being.

Research has identified an important area for future investigations and developments in therapy. If while working

with any psychological therapy, patients are not able to experience feelings of comfort, compassion and kindness, then it is possible that the therapy will have a limited effect. This is because over 120 million years, mammals' brains have evolved with very important emotional regulation systems that are linked to affiliative interactions<sup>37</sup>.

Until now, our understanding of fear and resistance to affiliative emotions and compassion was related to attachment theory<sup>4</sup> and to clinical observations, especially those made by Gilbert<sup>10</sup>. In order to advance in the research and understanding of the nature of fear of affiliative emotions and compassion, we require measurements of these processes.

It seems that fear of self-compassion and others' compassion toward oneself may reflect a difficulty in experiencing affiliative emotions in general from both internal and external sources. This confirms our clinical impressions, in the sense that self-critical subjects do indeed show fear when being kind and affiliative towards themselves.

These discoveries suggest that not only is the lack of compassion important, but also this fear of compassion, which could mean that subjects might actively resist participating in compassionate experiences or behaviours. From a therapeutic point of view, this active resistance to compassion may be caused by several fears that must be addressed within the therapeutic context. Therapy can go even further by improving ways of accessing and facilitating the development of different types of personal security and compassion and by addressing fears of compassion.

The research reviewed here suggests that teaching human beings to develop self-compassion may reduce shame and self-criticism, as well as produce improvements in other psychiatric symptoms. These include depression and anxiety in patients with chronic mental disorders.

From the review of the literature we also conclude that CFT (Compassion Focused Therapy) is a promising therapeutic approach as an intervention for mood disorders, particularly those that include a tendency towards high levels of self-criticism. However, more quality, long-term studies are needed before it can be considered an evidence-based treatment. It is important to note that CFT is not a therapeutic approach in and of itself, but rather an approach to be used by health professionals with any theoretical focus who want to deal with the transdiagnostic issue of shame and self-criticism.

The conclusions of these studies underline the importance of including self-care strategies in initial training and professional development for health care professionals. Mindfulness and compassion training is being used not only

as an effective method for teaching a state of therapeutic presence to professionals, but also as a well-researched and documented model for self-care, encouraging these professionals to become more aware, welcoming and compassionate therapists towards themselves, their patients, and to recognise the common nature of the human experience (concept of common humanity)<sup>38</sup>. In order for this to happen, mindfulness and compassion programmes should be brought to the health care professional's work environment as part of the curriculum for their ongoing professional training and they must be seen as priorities in the national health system, instead of being seen as a simple occurrence. This proactive approach to self-care should be seen as a positive step and not as stigmatised or blame-worthy, as if there was something wrong with caring for oneself. The deliberate and consistent practice of compassion towards ourselves and towards others may help us prevent empathy fatigue (before incorrectly called compassion fatigue) and provide us with greater emotional resilience. The result expected is that professionals would suffer less burn out and therefore have fewer leaves of absence.

The important thing when facing fears and building our life is to invest in our profound desire to love and be loved, and to learn to cultivate compassion and self-compassion as a daily practice and a way of life.

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## Mindfulness and Attention Deficit Hyperactivity Disorder (ADHD)

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Attention deficit hyperactivity Disorder (ADHD) is a complex and heterogeneous disease. It comprises a set of cognitive, emotional and behavioural alterations which are expressed as symptoms of inattention, hyperactivity and impulsiveness. ADHD is associated with significant dysfunction in educational, family and social settings.

In recent years there has been an increase in interest in non-pharmacological interventions targeting ADHD's core deficits while at the same time reducing the negative impact upon the patient's surroundings.

Mindfulness-based interventions have been shown to be effective in improving cognitive functions and emotional regulation and can change brain activity and structure.

This article provides insight into the deficits associated with the disorder, gives an overview of mindfulness interventions' effects on key functions altered in ADHD and provides a preliminary review of the current research on mind-

fulness-based treatment for children, adolescents and adults with ADHD.

This is an area of emerging research, with promising results. All the studies show positive effects on the disorder's core deficits and significant improvements in family interactions. However, methodological shortcomings prevent the generalization of results beyond the specific contexts where the treatment has been performed. A broader base of controlled and randomised studies is required to empirically validate the effectiveness of Mindfulness-based interventions for ADHD patients.

**Keywords:** Attention deficit hyperactivity Disorder (ADHD), Mindfulness, Treatment

## Mindfulness y Trastorno por Déficit de Atención con Hiperactividad (TDAH)

El trastorno por déficit de atención con hiperactividad (TDAH) es un trastorno complejo y heterogéneo que se caracteriza por un conjunto de alteraciones cognitivas, emocionales y conductuales y se manifiesta con síntomas de desatención, hiperactividad e impulsividad. El TDAH se asocia con una disfunción significativa en el ámbito educativo, familiar y social.

En los últimos años ha habido una expansión del interés en intervenciones no farmacológicas que incidan en los déficits centrales del TDAH y a la vez reduzcan las consecuencias negativas en su entorno. La evidencia indica que las intervenciones en Mindfulness mejoran las funciones cognitivas y la regulación emocional y pueden modificar el funcionamiento y estructura del cerebro.

Este artículo proporciona una visión de los déficits asociados al trastorno, repasa la evidencia de los efectos de intervenciones en Mindfulness sobre las funciones claves alteradas en el TDAH y revisa la investigación realizada hasta el momento sobre la efectividad del entrenamiento en Mindfulness en niños, adolescentes y adultos con TDAH.

Estamos ante un área de investigación emergente, con resultados prometedores. Todos los estudios revelan efectos positivos sobre los déficits nucleares del trastorno e importantes mejoras en las interacciones familiares. Carencias metodológicas, no obstante, impiden la generalización de resultados más allá de los contextos específicos donde se realiza el tratamiento. Para validar empíricamente las intervenciones basadas en Mindfulness para pacientes con TDAH es necesaria una base más amplia de estudios controlados y aleatorizados que corroboren su eficacia.

**Palabras clave:** Trastorno por déficit de atención con hiperactividad, Mindfulness, Tratamiento

## Attention Deficit Hyperactivity Disorder (ADHD)

Attention deficit hyperactivity disorder (ADHD) is one of the most common developmental disorders in children. It is highly hereditary (75%-80%) and has an approximate prevalence of 5% in childhood<sup>1</sup>, and its persistence into adulthood is increasingly recognised.

The mechanisms that underlie ADHD are not fully understood. Theories have evolved over time, from simple models based on a central cognitive deficit (decrease in executive control over behaviour or deficit in executive brain functions)<sup>2-3</sup>, to complex models that also include alterations in motivation (in the processes associated with reinforcement: reward, punishment and contingency presentation pattern)<sup>4-5</sup> and deficits in time processing<sup>6</sup>.

These multiple deficit models suggest that ADHD can be attributed to the additive or interactive effects of different alterations in multiple neuronal circuits<sup>7</sup> which project towards and from the prefrontal cortex and interact in such a way that alterations in one circuit or in a specific part of the circuit would lead to specific deficit profiles.

Research carried out using neuroimaging techniques confirms the existence of structural and functional alterations<sup>8-15</sup> in areas of the brain responsible for regulating behaviour, cognitive functions and the motivational system.<sup>16-18</sup>

This explains the large heterogeneity of the disorder, which goes beyond the traditional areas of clinical consideration (DSM-5, APA, 2013) of inattention, impulsiveness and hyperactivity and which manifests itself in a large variety of patient behaviours and characteristics and leads to a deficient self-regulation of behaviour.<sup>19,9</sup>

## Altered functions in ADHD

ADHD includes three types of deficits – cognitive, emotional and motor – which are responsible for the deficient self-regulation of behaviour<sup>19,9</sup>.

### 1. Deficits in Executive Functions (EF)

Executive functions are a multi-dimensional construct which include different components: attention management, impulse control, working memory, cognitive flexibility, planning and organisation.

ADHD is associated with weaknesses in several areas of executive functions<sup>20,1</sup>, especially *response inhibition* (responsible for suppressing or inhibiting strong, overbearing responses that are inappropriate based on the goal)<sup>2</sup>, *cognitive flexibility* (the ability to alternate between different tasks and behaviours, when the situa-

tion so requires)<sup>21</sup>, and *working memory* (responsible for temporarily storing information to process it, update it and manipulate it)<sup>21</sup>.

## 2. Attention Deficits

Attention is a complex concept that can be defined as a system that controls information processing with three interrelated attentional networks or systems.<sup>22,23</sup>

- **Alert network:** ability to achieve a state of activation in order to process information.
- **Orientation and selection network:** ability to disengage attention and re-direct it to a different location, selecting the relevant information.
- **Executive network or executive attention control:** Ability to manage attentional resources between two or more tasks (divided attention) and to maintain an appropriate level of attention for a long period of mental activity (sustained attention).

Children diagnosed with ADHD have different combinations of attention deficits<sup>24</sup>, but the problems that have most been reported to me are those related to the "alertness" ability, to attention control and sustained attention.<sup>25</sup>

## 3. Motivational dysfunctions

Compared to control children, children with ADHD have altered *reinforcement sensitivity*: they are more sensitive to a delay in reinforcements and they choose immediate rewards over deferred rewards, since they perceive waiting as something negative and unpleasant.<sup>15</sup> They also have greater *emotional reactivity*: impatience, low tolerance for frustration, quick to anger, emotional over-reactions, easily excited by activities going on around them, easily bothered by others and easily "lose their cool."<sup>26</sup>

## Family, academic and social difficulties

ADHD is associated with significant dysfunction in the educational, family and social environments. The presence of a child with ADHD in the home leads to greater conflicts and is much more stressful than in families without members with ADHD<sup>27,26</sup>. The increase in parental stress, in turn, leads to inefficient discipline strategies, the persistence and aggravation of symptoms and, frequently, the worsening of family relationships between parents and children<sup>28</sup>.

## Treatments for ADHD

to date, there are two main treatments for ADHD based on research: medication, mainly stimulants, and behavioural

therapy. Both have their limitations: low adherence and side effects in pharmacological treatment<sup>29,30</sup> and the difficulty for parents (who are usually stressed, or who have attention deficit problems themselves) of consistently applying contingencies in behavioural therapy<sup>31,32</sup>. Both treatments involve the use of external control techniques and children do not learn techniques for self-control.

Several studies have reported success in the use of strategies based on mindfulness techniques.

## Mindfulness – Effects on altered functions in ADHD

Mindfulness is a way of paying attention that comes from Buddhist meditation techniques. According to Kabat-Zinn's (1994) definition, it is "*the consciousness that emerges by paying attention in a particular way: on purpose, in the present moment and non-judgementally*".

In recent years, mindfulness-based interventions have increased spectacularly in both the clinical environment as well as in the general population.<sup>33</sup>

Several studies have shown that mindfulness training can improve the main functions altered by ADHD, with positive effects on *working memory*<sup>34,35</sup>, *cognitive flexibility*<sup>36</sup>, *response inhibition*<sup>37</sup>, *attentional control*<sup>38</sup> and *conflict monitoring*<sup>35,39</sup>.

Extensive literature in the last two decades has shown that mindfulness interventions are effective for reducing stress<sup>39</sup>, psychological well-being<sup>40,41</sup> and that they lead to emotional regulation, given that they emphasise accepting the experience<sup>33,42,43</sup>.

## Mindfulness and ADHD. – Review of the research

Research into the effectiveness of the practice of mindfulness for ADHD is still in the beginning stages. Mainly viability studies have been performed, with significant methodological gaps – small sample sizes, lack of a control group or a non-random control group, subjective measures of evaluation and non-blind participants. The protocols used are generally adaptations of the *Mindfulness-Based Stress Reduction programme (MBSR)*<sup>44</sup> and the *Mindfulness-Based Cognitive Therapy programme (MBCT)*<sup>45</sup>.

The following table lists the studies performed to date on children, adolescents and adults. Below each study is described and commented upon.

Table 1 Mindfulness-based interventions with ADHD populations

Study	N	Sample	Age	Design	Treatment group	Control group	Random assignment	Measurements	Results
Zylowska et al. (2007)	32; 8 adolescents 24 adults	ADHD	Adol: 15.6 Adults: 48.5	Pre-post participants	Mindfulness training 8 weeks/ weekly sessions	NO	NO	ADHD sym. Depression sym. Anxiety sym. Attention and EF	<u>Improvements in:</u> ADHD sym. Depression sym. Anxiety sym. EF: conflict attention and inhibitive control
Bogels et al. (2008)	14 adolescents and their parents	ADHD and behavioural disorders	11-17 years old	Pre-post participants/ control	Adapted MBCT 8 weeks/sessions	Wait list	Not reported	ADHD sym. Self-control Personal change Quality of life Attention tests	<u>Improvements in:</u> Behaviour sym. Attention tests Subjective happiness
Sing et al. (2009)	2 adolescents and their mothers	ADHD	10-12 years old	Multiple baseline	Mindfulness training 12 weeks/weekly sessions	NO	NO	Complying with instruction	<u>Improvements in:</u> Complying with instructions Mother-child interactions
Vander Oord et al. (2011)	22 adolescents and 22 parents	ADHD and behavioural disorders	8-12 years old	Pre-post participants/ control	Adapted MBCT 8 weeks/sessions	Wait list	NO	Parental stress Educational style Mindfulness ADHD sym. in adol. And parents Adol.'s disruptive behaviour	<u>Improvements in:</u> ADHD sym. in parents and adol. Reduction parental stress and over-reactions
Bogels et al. (2011)	10 adolescents and 19 parents	ADHD	11-15 years old	Pre-post participants/ control	Adapted MBCT 8 weeks/weekly sessions	Wait list	NO	Adol: Attention tests ADHD sym. Behavioural EF Daily fatigue Parents: Mindfulness Parental stress Parenting style Fatigue	<u>Improvements in:</u> Adol: Behaviour Attention tests Behavioural EF Parents: Reduction in stress and over-reactions
Mitchell et al. (2013)	22 adults	ADHD	Average age 38	Pre-post participants/ control	Mindfulness training 8 weeks/ weekly sessions	Wait list	YES	ADHD sym. Behavioural EF Emotional dysregulation Behavioural EF tests	<u>Improvements in:</u> ADHD sym. Behavioural EF Emotional regulation
Schoenberg et al. (2013)	50 adults	ADHD	18-65 years old	Pre-post participants/ control	Adapted MBCT 8 weeks/weekly sessions	Wait list	YES	ADHD sym. Potentials evoked Stress Mindfulness	<u>Improvements in:</u> ADHD sym. Increase in potentials related to executive control

**Zylowska et al. (2008)<sup>46</sup>**

Reports a viability study with 24 adults (average age 48.5 years old) and 8 adolescents (average age 15.6 years old) diagnosed with ADHD or *probable* ADHD. The intervention protocol was an adaptation of the MBSR and MBCT programmes, including psycho-educational components regarding ADHD in weekly 2.5 hours sessions over 8 weeks and with exercises to do at home every day.

*Dependent variables*

- Self-evaluation scales for **ADHD symptoms**.
- Self-evaluation scales for **depression symptoms**.
- Self-evaluation scales for **anxiety symptoms**.
- Neuropsychological tests for **attention**: alertness (maintaining a state of attentive preparation), orientation (selection of a stimulus from among multiple inputs) and attentional conflict (prioritising competing tasks).
- Neuropsychological tests for **executive functions (EF)**: attentional conflict, inhibitory control, planning and working memory.

*Results*

The study reports significant improvements in:

- Self-evaluation of ADHD symptoms.
- Self-evaluation of depression symptoms.
- Self-evaluation of anxiety symptoms.
- Neuropsychological tests that measure attentional conflict and inhibitory control of behaviour.

No significant improvements were found in tasks that required working memory.

*Limitations*

The limitations of this study arise from the small sample size, the lack of a control group and the use of self-evaluation measurements, which, however, are counteracted by the use of objective neuropsychological measurements.

These methodological limitations mean that the results cannot be generalised. However, the improvements shown in emotional regulation, inhibitory control and the attentional processes of orientation and conflict suggest that mindfulness training directly acts upon the altered functions in ADHD.

**Bogels et al. (2008)<sup>28</sup>**

Pilot study that uses a mindfulness protocol adapted from Mindfulness-Based Cognitive Therapy (MBCT). Uses a non-random wait list control group. The participants are 14 adolescents (between 11 and 17 years old), all of whom have behavioural problems and have been diagnosed with various disorders (ADHD, oppositional defiant disorder, and Autism spectrum disorders) and their parents. Instructors with training and ample experience in teaching the MBCT programme.

*Dependent variables*

- **ADHD symptomatology** evaluation scales completed by both the parents and the adolescents.
- **Self-control** evaluation scales, completed by the parents.
- **Goal achievement and personal change** scales.
- Self-evaluation scales for **quality of life**.
- Neuropsychological tests for **attention** (sustained and selective attention).

*Results*

The results indicate significant improvements after treatment in:

- Neuropsychological tests that measure attention, with results maintained in the follow-up evaluation (8 weeks after the end of treatment).
- The evaluation of behaviour symptomatology.
- The self-evaluation regarding achieving goals.
- The self-evaluation of subjective happiness.

*Limitations and considerations*

The results of this study are promising, especially with a clinical group that the authors considered to be "tough", with the effects maintained over a longer period of time.

However, the small sample size, the non-random assignment of the control group and the use of self-evaluation scales by the participants in the treatment (over measurements from "blind" third parties) limit our ability to generalise the study's results. That being said, the research supports the viability, acceptance by the population to be treated and effectiveness of mindfulness training to treat these symptoms.

**Singh et al. (2009)<sup>47</sup>**

Reports a mindfulness intervention with a multiple baseline design on two mothers and their children with ADHD (10 and 12 years old). After establishing a baseline in which information was collected on how the children complied with instructions (requests by the mother and compliance by the children) over four weeks in case one and seven weeks in case two, mindfulness training was undertaken for 12 weeks for the mothers and then another 12 weeks for the children.

Data collection continued during the intervention period and in the follow-up period for a total of 24 weeks.

*Dependent variables*

- **Compliance with instructions:** the mothers were asked to record the level of the children's compliance with instructions during the baseline period, the intervention and post-intervention.

*Results*

The records indicated significant increases in compliance with instructions during the intervention with the mothers; these levels increased even more during the children's training. The increases in compliance fluctuated between 262% during the treatment to 10% in the 24 week follow-up period.

The mothers reported a high level of satisfaction and an improvement in interactions with their children.

The children showed satisfaction with the training, considering it to be fun and useful, not only due to their own sense of calm and increase in attention, but especially due to the change they saw in their mothers.

*Limitations and scope*

In addition to the small sample size, the effects of the mindfulness training were only measured for behaviour, without taking into consideration any other core symptom of ADHD, such as inattention, impulsiveness or hyperactivity.

Despite these limitations, the study suggests that training mothers and children with ADHD improves their interactions and may provide an alternative approach to training parents.

**Bögels et al. (2011)<sup>48</sup>**

Study on the effectiveness of mindfulness training for adolescents (N=10) between 11 and 15 years old with ADHD

and parallel mindfulness training for their parents. The design included a wait list control group and follow-up measurements 8 weeks and 16 weeks after completing the intervention.

The training consisted of 1.5 hour sessions over 8 weeks, and a follow-up session 8 weeks after the end of the intervention.

*Dependent variables*

- Evaluation (parents and teachers) and self-evaluation of **ADHD symptomatology**.
- Evaluation performed by the parents of the adolescent's **behavioural executive functions: behaviour regulation and metacognition**.
- Self-evaluation of **mindfulness** (parents and adolescents).
- Self-evaluation of **parental stress**.
- Self-evaluation of **parenting style**.
- Self-evaluation of **level of fatigue** during the day (adolescent).
- Neuropsychological tests for **attention**: reaction time, visual and auditory sustained attention.

*Results*

After training, significant improvements were observed in:

- The evaluation of behavioural and attention problems in the adolescents according to self-evaluations and evaluations by parents and teachers.
- The evaluation of executive functions, both in metacognition and in behavioural regulation, but the results are not consistent in all participants.
- Neuropsychological tests for attention.
- Significant reduction in the fathers' stress level after training, but not for the mothers.
- Significant reduction in mothers' over-reactions, while the fathers showed an increase.
- No change in the self-evaluation of mindfulness for the parents or the adolescents.
- No change in fatigue or happiness reported by the adolescents during the training or follow-up.

The results improved at the 8 week follow-up, but were weaker at 16 weeks.

### *Limitations and scope*

The limitations of this study arise from its methodological design: sample size and non-random assignment of the control group. Additionally, objective measurement is limited to sustained attention; the study does not evaluate the effects that mindfulness training may have on other aspects of attention (selective, divided, attentional control). Furthermore, the study does not differentiate between which aspect of the mindfulness training is more effective: that of the parents or the children, as the training is done in parallel.

### **Van der Oord et al. (2011)<sup>32</sup>**

Study that evaluates the effectiveness of 8 weeks of mindfulness training for children with ADHD and their parents. The participants (N=22) are between 8 and 12 years of age and have been diagnosed with ADHD and their parents (N=22) simultaneously receive mindfulness training. The protocols for the children and parents are adaptations of the MBSR and MBCT programmes.

A pretest-posttest design with a wait list control group was used. A follow-up measurement was taken 8 weeks after finishing the treatment.

### *Dependent variables*

ADHD symptomatology evaluation of children (by parents).

- Self-evaluation of ADHD symptomatology in parents.
- Self-evaluation of parental stress.
- Self-evaluation of parenting style.
- Self-evaluation of mindfulness (parents).
- Evaluation of disruptive behaviour and ADHD symptoms in children (by teachers).

### *Results*

After training, it was found that there was:

- A significant decrease in inattention.
- A significant decrease in parents' hyperactivity/impulsiveness.

- A significant decrease in children's hyperactivity/impulsiveness.
- A significant decrease in parental stress and over-reactions.

There were no differences in the teachers' reports when evaluating the students' ADHD behaviour; however, there were improvements in terms of attention.

There were no pretest-posttest changes in the wait list control group; therefore, the general changes in the experimental group cannot be attributed to the effect of time.

### *Limitations and scope*

The limitations of this study arise from the sample size, the fact that the control group was not random, and that the parents were "non-blind" informants, as they were actively involved in the treatment.

It is not certain which element of the treatment was more effective: training the children or parents, given that both groups received the training simultaneously.

### **Mitchell et al. (2013)<sup>49</sup>**

This study reports a mindfulness intervention performed on a group of adults (N=22) with ADHD. The design included a random control group (wait list) and multiple variables were evaluated. The intervention was performed for 8 weeks in 2.5 hour weekly sessions, with daily practice at home.

### *Dependent variables*

- Self-evaluation of core ADHD symptoms (inattention, hyperactivity and impulsiveness).
- Self-evaluation of behavioural executive functions (EF) (self-regulation of behaviour, metacognition).
- Emotional dysregulation (evaluates the frequency of emotionally dysregulated behaviours).
- Momentary ecological self-assessment of ADHD symptoms.
- Neuropsychological tests of executive functions (EF): inhibitory control, planning and working memory.
- Neuropsychological tests for attention: alertness, orientation and attentional conflict.

## Results

Compared to the control group, the participants in mindfulness training showed significant improvements in:

- Decrease in core ADHD symptoms: inattention, hyperactivity and impulsiveness.
- They also reported significant decreases in the dysfunctions caused by these symptoms.
- Significant increases in multiple domains of behavioural executive functions (EF): self-control, self-organisation and self-discipline.
- Significant increases in their ability to regulate emotions and tolerate stress.
- No significant differences were found between the control group and the treatment group in the neuropsychological tests for cognitive executive functions.

All of these improvements were confirmed in the evaluation of pre-treatment and post-treatment clinical interviews.

Additionally, very high levels of satisfaction with the treatment were reported.

## Limitations and scope

Although these results are promising, the study has limitations arising from the relatively small sample size, the use of self-evaluation measurements and the use of non-blind clinical evaluations.

Finally, the control group was not an active group and it could be asked to what extent the additional attention or group effect contributed to the improvement of the results.

## Schoenberg et al. (2014)<sup>50</sup>

Study performed with an EEG technique while attention and conflict monitoring tasks were being carried out. Part of the hypothesis was that the mindfulness intervention would improve attention and self-regulation of behaviour, taking as measurements the evoked potentials following presentation of a stimulus.

The study was performed with 50 adults with ADHD, 26 of whom were randomly assigned to the MBCT adapted to ADHD protocol intervention group and the rest to the control group (wait list).

## Dependent variables

- EEG (Electroencephalography) of the evoked potentials (Pe, N2, P3) while the subjects performed a sustained attention and inhibitory control task.
- Self-evaluation of **ADHD symptomatology**.
- Self-evaluation of the dysfunctions in symptoms of **stress, personal relationships and social roles**.
- Self-evaluation of **mindfulness**.

## Results

The evoked potentials related to consciousness of errors, motivational implication and inhibitory control increased.

Additionally, there was an improvement in the symptoms of inattention, hyperactivity and impulsiveness.

The authors suggest that the regulating role of the MBCT programme in this sample was due to an increase in "top-down" control of the prefrontal areas (specifically the anterior cingulate cortex – ACC), increasing the flow of nor-epinephrine, a neurotransmitter associated with motivational processes.

## Limitations and scope

This study is limited by the lack of an active control group and the subjectivity of the self-evaluation measurements of ADHD symptoms.

However, this is the first study that has included electrophysiological measurements and reliable, objective parameters of brain activity associated with symptoms of inattention and inhibitory control, both core alterations in ADHD.

## Conclusions

There is a significant body of research that demonstrates the positive effects of mindfulness training on altered cognitive, emotional and behavioural functions in ADHD, especially on attention, inhibitory control, working memory and emotional regulation.

The results of the studies that have analysed the effectiveness of mindfulness treatments on patients diagnosed with ADHD are consistently positive and suggest the viability of this approach to treating the disorder's symptomatology and core deficits. Additionally, studies that include the family environment in treatment – training for parents –

show significant beneficial effects on family dysfunctions, correcting parenting style, reducing stress and improving parent-child interactions.

However, while promising, the positive effects found cannot be generalised, given that current research is scarce and is not sufficiently solid.

In general, the methodologies have their weak points: small sample sizes, lack of control group or control group not randomly assigned, a significant use of self-evaluation scales or non-blind informants, or a lack of long-term follow-up measurements. The trend in the most recent studies is to correct these weaknesses, with random control groups and objective measurements of cognitive functions.

In summary, this is an emerging, promising field of research in which the time has come to tackle larger-scale projects which overcome the methodological limitations of the studies performed up to now, with controlled, randomised trials. This will make it possible to rigorously collect empirical evidence in order to generalise the effectiveness of mindfulness interventions in treating ADHD.

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## Mindfulness and Compassion Therapy in Eating Disorders

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The psychotherapeutic intervention carried out in patients with eating disorders is only effective for a certain percentage of individuals, for whom symptoms are considerably reduced. However, patients still show difficulties both in regulating and facing emotional experiences and staying in contact with their own body. Existing interventions seem to be less effective, producing a high percentage of relapses.

Including mindfulness and self-compassion programmes in eating disorder treatments emphasizes acceptance and compassion as key concepts. This enhances the relationship between the patient and his or her body, eating habits, cognition management and emotional regulation, thus reducing relapse events.

Considering emotional aspects has opened a path of hope in eating disorder treatments, as including specific therapeutic interventions which help regulate emotions has improved the efficacy of current treatments.

Keywords: Mindfulness, Compassion, Eating disorder, Psychological therapy

## Terapia de Mindfulness y Compasión en los Trastornos de la Conducta Alimentaria

Las intervenciones psicoterapéuticas para los Trastornos de la Conducta Alimentaria (TCA) utilizadas son eficaces

para un porcentaje de los pacientes, logrando reducir significativamente los síntomas alimentarios. Sin embargo, los pacientes siguen presentando dificultades tanto a la hora de regular y afrontar sus experiencias emocionales, cómo a ponerse en contacto con el cuerpo, y las intervenciones existentes parecen ser menos eficaces, generando un alto porcentaje de recaídas.

Incorporando al tratamiento de los trastornos alimentarios programas de *mindfulness* y compasión, se logra una mejora clínica significativa tanto en la relación del paciente con su cuerpo, como en las conductas alimentarias, en el manejo de las cogniciones, la regulación emocional y en la relación hacia sí mismo del paciente. Y por consiguiente, reduciendo el porcentaje de recaídas.

La consideración de los aspectos emocionales ha abierto una vía de esperanza en el tratamiento de los pacientes con TCA ya que, al incluir intervenciones terapéuticas específicas que ayudan a regular sus emociones incrementan la eficacia de los tratamientos actuales.

**Palabras clave:** Mindfulness, Compasión, Trastorno de la conducta alimentaria, Terapia psicológica

## Introduction

Eating disorders are mental disorders that have serious consequences in terms of the patient's physical, mental and social health.

Patients who suffer from these disorders present high levels of anxiety and body dissatisfaction, self-criticism, social isolation and obsessive ideas, especially regarding the body, weight and food, as well as self-destructive thoughts and behaviours.

Additionally, patients with eating disorders have greater difficulty identifying and describing feelings and inadequate forms of emotional functioning (avoidance, escape, negation)<sup>1,2</sup>, as well as difficulty in recognising the body's interoceptive signals. For this reason they resort to multiple food-related symptoms (restrictive diets, binges and compensatory behaviours) as a maladapted, reactive and ineffective way of dealing with their negative emotions.

Thus, binges are used as a way to distract or relieve oneself from negative emotions and eating restrictions are used to diminish said emotions through a control mechanism that acquires properties of reinforcement<sup>3,4</sup>.

Therefore, it is essential to include emotional therapies from the beginning of treatment and for prevention programmes to facilitate the recognition, acceptance and regulation of emotions in at-risk individuals<sup>5</sup>.

New approaches to eating disorder treatments are focusing on a more comprehensive perspective, so that the

treatment's sole purpose is no longer to reduce and minimise the disease's physical consequences. Treatment is perceived as a learning process in which we must teach the patient to take care of their body, mind and spirit<sup>6</sup>.

Mindfulness and compassion programmes allow patients to become aware of the maladapted mechanisms used and to develop mindfulness attitudes. This helps them transform their experience little by little, promoting a relationship with themselves, with the people that surround them and with their environment.

Empirical evidence shows the important role of mindfulness and self-compassion as an emotional regulation strategy<sup>7</sup>. Therefore, using said therapies from the beginning of treatment will allow us to supplement other treatments for eating disorders.

## Mindfulness and Self-Compassion

Mindfulness is a scientifically-validated therapeutic tool which allows the patient to learn to relate to their emotions, getting in touch by developing a series of attitudes: remaining in the present, allowing themselves to open up to the experience and the facts, and encouraging acceptance without judgement of the experience, among others. In this way, mindfulness allows the patient with an eating disorder to get in touch with their body through the treatment, increasing awareness of their bodily sensations, being able to identify the emotion they are feeling, as well as accepting and adaptively regulating it.

The component of openness and acceptance of reality allows for a greater awareness of negative feelings and emotions, which facilitates their self-regulation, resulting in greater well-being<sup>8</sup>. Thus, mindfulness includes accepting the negative component of some experiences, without the urgent need to change them or use eating symptoms, promoting psychological flexibility, the ability to completely connect with the present and guide oneself towards an adaptive behaviour<sup>9</sup>.

The practise of formal meditation also allows the patient to interoceptively work through all types of body and emotional sensations. In this manner, the patient is able to integrate their thoughts, body and emotions into their experience, allowing them to accept themselves and their reality, and thus generate new mechanisms which are incompatible with an eating disorder.

**Mindfulness is the first step** for emotional healing, as the patient is able to recognise difficult thoughts and feelings (such as inadequacy, sadness, anger, confusion) with a spirit of openness and curiosity. **Secondly, self-compassion** implies responding to these difficult thoughts

and feelings with kindness, sympathy and understanding so we can calm and console ourselves when we are suffering.

The concept of self-compassion has existed for centuries in Eastern philosophical thought, but is new to the West. The word compassion comes from the Latin roots *com* (with) and *pati* (suffer), or suffer with.

It implies treating oneself with kindness, recognising through a sense of common humanity that our definition as human beings includes deficiencies and limitations. The person who develops self-compassion is able to accept them, actively cultivating his or her well-being and happiness.

Self-compassion is a value that fluctuates less than self-esteem<sup>10</sup>. Developing this potential has proven to offer greater protection from aspects that are common in eating disorders, such as criticism, self-comparisons, ruminations and cognitive severity. Unlike self-esteem, where one's own worth is derived from how one evaluates his or her own qualities and abilities, self-compassion is a feeling of unconditional validity that persists in moments of failure or disappointment.

Thus, in recent studies, self-compassion is considered to be a fundamental, key aspect to include in eating disorder treatments, given that the relationship between positive body image, self-compassion and healthy food behaviours has been demonstrated<sup>11-13</sup>.

Gilbert and his collaborators have developed a specific therapy for eating disorders. The programme applies to AN, BN, EDNOS and obesity. It is designed with specific stages to help the patient develop an understanding of the emotional regulation system, strategies for confrontation and also for developing self-compassion for the difficulties that they have faced in the past and for the challenges of recovery.

The results of the studies performed on said programme show that it significantly reduces symptomatology, especially in patients with bulimia nervosa and EDNOS, and to a lesser extent in patients with anorexia nervosa<sup>14-16</sup>.

Other studies show that there is an association between refusing to be self-compassionate and higher levels of eating-related symptoms, shame, and poorer responses to treatment<sup>17</sup>. It has also been shown that even though the patient is able to change their beliefs through therapy (CBT), they do not perform a real integration, as they lack their own system for calming themselves and feeling safe. Therefore, over time, patients once again use the pathological mechanism that helps them cope with this emotional dysregulation. Self-compassion activates and develops the relaxation and safety systems, as well as the oxytocin and opioid systems<sup>18</sup>. Therefore, this intervention will help us with said therapeutic deficiency.

Furthermore, Mindful Self-Compassion (MSC) combines the skills of attention and self-compassion, providing a powerful tool for emotional resilience. The MSC programme reduces dissatisfaction with and shame about the body, as well as the evaluation of appearance as the main source for feeling good about oneself<sup>19</sup>.

The objective of this article is to attempt to present the main characteristics of the group self-compassion treatment programme based on MSC and group mindfulness therapy applied to the treatment of eating disorders.

## Therapeutic interventions in Eating Disorders

Treatments for eating disorders are generally complex interventions, not only due to the seriousness and risk that the symptomatology implies, but also due to the psychiatric comorbidity that patients present in the majority of cases. This complexity is not only felt in dealing with these patients, but also can be noticed with the families.

The seriousness of the mental and physical situation makes it necessary for treatment to be performed in a multi-disciplinary manner<sup>20</sup>. This clinical team is made up of doctors, psychiatrists, psychologists and nutritionists who perform a progressive intervention from different approaches, thus enabling the real core of the problem to be dealt with once and for all.

The different therapeutic interventions used throughout the eating disorder treatment process are mainly cognitive-behavioural therapy (CBT), nutritional therapy (NT), psychopharmacological treatment (PT), systemic family therapy (SFT), parent group therapy (PGT) and group therapies (GT). Mindfulness and compassion interventions are used as a supplementary tool from the beginning and applied both individually and in group therapy format.

CBT is applied first as it is a therapy that focuses on reducing and eliminating the symptomatology of the eating disorder such as binges, dietary restrictions or vomiting, as well as restructuring irrational thoughts related to intake and self-image. Another main goal of this therapy is to deal with the different general psychological symptoms such as depression, anxiety and self-esteem<sup>21</sup>.

Although CBT is proposed as the therapy of choice to treat patients with eating disorders, the clinical reality indicates that it is insufficient; while a significant percentage of patients achieve recovery, a large number of patients abandon treatment early<sup>22-24</sup>. Others complete treatment but without achieving total recovery or end treatment before completing the therapeutic process, later showing high levels of relapse<sup>25</sup>. That is why different therapies are often applied at the same time as CBT, optimising the

intervention programme and adjusting it to the needs of each patient.

Nutritional therapy is essential for adjusting dietary guidelines according to the patient's needs<sup>25</sup>. Psychopharmacological treatment is sometimes an indispensable aid, which stabilises the patient so that the therapeutic process may proceed successfully. When the patient is more stable, SFT is included in the intervention, focused on working on the family system.

Parent group therapy attempts to provide parents with the skills to deal with problems of high emotional expressiveness, overprotection, incorrect attributions of the disease, and accommodation and personal incompetence with symptoms of the eating disorder<sup>26</sup>.

Lastly, group therapy strengthens the individual treatment that the patient is following. Here, patients work on fundamental components of the intervention and the therapy adapts to the therapeutic phase patients are experiencing and the characteristics that the group presents. Mindfulness and self-compassion fall within these group therapies.

### *Mindfulness and Self-Compassion Programmes in Treating Eating Disorders.*

Group mindfulness and self-compassion therapies are carried out in 60-minute sessions once a week. The sessions are run with a group of approximately 8 to 12 patients, who have all been diagnosed with an eating disorder and where most types of eating disorders are represented: from restrictive anorexia nervosa to purging bulimia nervosa.

#### *Group Mindfulness Therapy*

The programme's general objective (Table 1) is to help patients develop full awareness and assimilation of their person: body, mind and spirit. It aims to increase the patient's self-awareness and achieve change in the relationship with their internal experience.

During the initial phase of each of the 15 sessions that comprise the intervention programme, each patient has a space in which they can share their experiences from the week that they wish to meditate on with the group. All of the sessions are highly experiential. Additionally, a time is allowed after each meditation which promotes Socratic dialogue among the group members, with the idea that each patient share their own experiences and obtain conclusions through the practice.

The main methodology to be used is meditation. Through this technique, the patient tries to connect to the

**Table 1**

**Objectives to be developed during group mindfulness therapy**

**Main objectives of the Mindfulness Programme**

1. *Observe. Develop full awareness of the present moment.*
2. *Full attention on breathing and anxiety management.*
3. *Disidentification of thoughts.*
4. *Label emotions, through the observation of bodily sensations.*
5. *Accept. Increase awareness of undesired thoughts and feelings and accept them.*
6. *Accept the experience and allow the emotion. Learn to let it go.*

present in order to achieve full awareness through breathing and the perception of sounds and thoughts. The basic training consists of observing the present objectively, without judgement, and connecting with one's own breathing. Time dedicated to meditation is progressively increased as the sessions advance and the patient acquires greater experience in the practice.

Subsequently, the intervention will focus on developing awareness and acceptance of thoughts, with the aim of changing the relationship with the ruminating, obsessive thoughts common to eating disorders. With meditations of this type: *"From the position of the observant self, try to identify thoughts such as: a judgement, thoughts related to the eating disorder, the past or future... remember that you are not those thoughts, let them go and return to the present again with affection."* The patient receives the explanation that these are mental contents that will vary depending on the day.

This is why we urge them to remember that they are much more than the objects that their minds produce, and depending on how they relate to these thoughts, they will last for more or less time. If they cognitively avoid them, these thoughts will remain even longer as intruders. However, if they do not resist these thoughts and accept them, it will be easier to let them go, connecting once again to the present.

Once this point of the programme is reached, and in order to continue with the next phase, a series of objectives must have been successfully met. Firstly, the patient will have established a solid foundation in breathing and will maintain a continuous practice, whether through formal or informal meditation. They must also be able to disidentify themselves from their thoughts, accepting them and returning to the present once again. Once capable of assimilating this work, the intervention will focus on the body and emotions.

During this process, the patients must identify and progressively describe what they feel throughout their body

and accept these physical sensations. The identification of these feelings must be done without labelling them as pleasant or unpleasant, but rather accepting them as the reality of the moment and trying to openly embrace the experience.

At this point in the programme, an additional exercise is included that will allow the patients to identify these emotions prior to the group exchange exercise. This exercise consists of them asking what they feel and what bodily sensation they attribute that to. The answers to these questions will be written on the silhouette of a body, to be able to respond to the question *What emotion do I feel and in which part of the body?* at the end of the session.

Sometimes, carrying out these exercises can cause great emotional intensity in the patients. It is at these moments that we tell them to use breathing as a refuge, thus achieving the desired emotional regulation. When the patient feels ready, he again comes into contact with his own feelings, this time receiving them with a greater capacity for acceptance and tolerance. This will cause an increase of care for oneself and a decrease in the need to escape in one's own body.

### Group Self-Compassion Therapy

As with the above therapy, the mindfulness-based self-compassion programme (Mindful Self-Compassion or MSC) sets a series of general objectives which allow patients to cultivate the three components of compassion: kindness towards oneself, common humanity and mindfulness. During the 18 sessions comprising the programme, the main technique used which allows us to achieve these components is based on the meditations proposed by Simón and Alonso<sup>27</sup>. (Table 2).

In the first stage of the programme, the patients work with a series of resistances that arise in each one of them. One of the most frequent is automatically activated when, upon coming into contact with the word "self-compassion" itself, they associate it with terms related to passiveness, shame, impotence, weakness and/or the need for support. The programme proposes correctly defining the connotations of the word with the group, showing what self-compassion is and what it is not. In order to do so, different terms are used that help re-define the word, giving it a positive meaning, such as: *"self-care, kindness with yourself, treating yourself as a friend, etc."* To be compassionate with oneself, there needs to be acceptance, active care and awareness in the face of a passive or resigned attitude. The appearance of this type of resistance will be a constant throughout the programme. However, once it is overcome, self-compassion produces very positive effects for the patient.

Table 2

### Objectives for group self-compassion therapy

#### General objectives of the Self-Compassion Programme

1. *Regulate suffering through self-care, substituting this for the pathological mechanisms of the eating disorder.*
2. *Create a new relationship with oneself, based on respect and acceptance.*
3. *Increase levels of happiness by cultivating it.*

A fundamental task in the intervention is focused on showing the patient how to manage his or her negative emotions in order to calm them. As a general rule, the patients try to face these disturbing emotional states with the only tools they possess: self-injury, self-criticism and/or rumination. These self-destructive defence mechanisms inherent to eating disorders cause greater discomfort in the patients and distance them from the calm and relief desired. Thus, self-compassion encourages the creation of a new path that allows them to feel good about themselves. As the patients put this self-care into practice, mitigating their pain with positive behaviour, they notice that mitigating their pain does not generate greater suffering, and therefore this behaviour becomes generalised in their day-to-day, thus creating a more positive relationship with themselves. Therefore, it is imperative that the individual develop his or her own self-care plan in order to alleviate their suffering and completely eliminate self-punishment as a habit.

Later, patients work on using other regulation mechanisms that allow for self-care and providing care at difficult times, decreasing the use of other destructive mechanisms such as self-criticism. This allows them to develop another component of self-compassion: common humanity, which eliminates the need to compare their own person to the rest of society. To achieve this objective, so-called *Metta* meditations are used. This type of meditation has a compassionate nature, which is aimed at all humanity, and at our social and family relationships or difficult people. Thus, practices of the type *"I want them to be happy, I hope things go well for them and that they are freed from suffering, thus achieving the well-being they deserve"* are used. The application of this component during the intervention leads to the progressive disappearance of other defence mechanisms, such as being self-demanding and perfectionist. The patient then understands that we all have characteristics inherent to human beings and, therefore, we have weaknesses, strengths and we suffer.

Once the above objectives have been achieved, patients move on to the final, most complex part of the programme. Firstly, patients work on the emotion of shame by restructuring negative beliefs that they have about themselves and

their feeling of inferiority. In order to do so, so-called "shame meditation" is used. Here, the patients are urged to see themselves as something much more important than these negative beliefs, something that possess a value simply by being human. In order to achieve these objectives, acceptance and gratitude for their own body is encouraged. To do so, patients must come into contact with their body from a compassionate, thankful perspective. Through a body scan, starting at the feet and continuing up to the head, patients must be aware of all of their bodily sensations. If self-critical thoughts arise, they must place their hands over their heart, projecting kindness towards themselves, while at the same time their breathing allows them to return to their body, capable of perceiving sensations once again.

The intervention ends when the third general objective described above is achieved by making use of the three fundamental tools. Through dialogue with the patient, the first tool allows us to discover the person's core values and the ability they have to promote them. The second tool consists of keeping a diary in which they show their appreciation and gratitude for what they have in their everyday lives. Lastly, meditations focused solely on the desire to be happy are practised.

At the end of the programme, the patients will have assimilated the necessary tools to allow them to regulate their emotions in an adaptive manner, as well as a feeling of respect and acceptance for themselves. Said evolution will provide them with the capacity to end the relationship they had with the disorder, eliminating their dependence on the pathological functions of the eating disorder to regulate their own discomfort.

## Conclusions

The positive effect of using mindfulness practices in both physiological and psychological pathologies shows the mediating role that this technique plays between eating disorders and the patient. The results obtained from its application confirm its high level of utility and, therefore, the need to continue working with mindfulness as a supplement to treatment.

The main handicap of this type of study lies in the difficulty of scientifically quantifying the results observed after treatment. The majority of studies in this field have several limitations, such as the impossibility of randomly selecting participants or the small sample size. This generates statistical error when analysing the variables established by the study. Additionally, the fact that there are no "control" patients (for obvious reasons) impedes the comparison between someone who has not been treated and someone who has. In any case, our clinical experience shows the

effectiveness of applying mindfulness during intervention programmes for patients with eating disorders. Thus, in order to continue with the objective of optimising treatment programmes, a quality treatment must combine aspects of clinical activity and research, promoting the individualisation of therapies in order to adapt them to each patient's profile.

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## Mindfulness and grief

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Bereavement as a process that has to be experienced first-hand and that has a significant impact on the health of the mourners has been studied by science from different points of view and with different theoretical approaches.

The appearance of mindfulness in health sciences and its application through specific programmes is a major contribution that is benefiting people with different pathologies as well as people who just want to improve their physical and/or emotional health. Initially mindfulness skills programmes were designed to relieve people that were suffering from chronic pain and stress, although nowadays they are being applied to a much larger and varied population.

There are still very few studies that have implemented mindfulness programmes with mourning populations; nevertheless preliminary investigations are showing satisfactory results.

Keywords: Mindfulness, Grief, Compassion, Self-compassion

## Mindfulness y duelo

El duelo como proceso que tiene que ser vivido en primera persona y que tiene una repercusión importante para la salud de los dolientes, ha sido estudiado desde la ciencia desde distintos puntos de vista y con enfoques teóricos diferentes.

La aparición del *mindfulness* en las ciencias de la salud y su aplicación a través de programas específicos, está siendo de gran ayuda para personas con distintas patologías así como también para la población que quiere mejorar su salud física y emocional. Inicialmente los programas de habilidades en *mindfulness* fueron diseñados para aliviar a las personas que sufrían de dolor crónico y estrés, aunque hoy en día se están aplicando a grupos de población más diversos.

Son todavía pocos los trabajos que implementan programas de *mindfulness* a población en duelo, pero las investigaciones preliminares muestran resultados satisfactorios.

Palabras clave: Mindfulness, Duelo, Compasión, Autocompasión

## Introduction

There are several research projects that have been undertaken in recent years in the field of health sciences where mindfulness-based intervention programmes have been applied for different types of populations. If we review recent literature, we see that these programmes are showing satisfactory results, both for the clinical population as well as for the non-clinical population.

In the case of grief, there is still not a well-articulated body of research, nor specific programmes designed for this purpose. However, in recent years, several authors interested in this area of knowledge are beginning to create specific programmes that may benefit the bereaved.

This article aims to review and bring the reader up to date on the most recent work in this field. Thus, this paper is divided into three sections that refer to mindfulness, grief and the intersection of the two. The text reviews the concepts, benefits, programmes and their applications.

## Mindfulness

If we begin with the origin of the term, mindfulness is the English translation of the word "*sat*", which means

"consciousness, attention and memory" in the Pali language. There are several definitions proposed by different authors, although all include a common denominator: the ability to remain aware of the present moment, without judgement and with full acceptance. Below we will directly quote some of the most significant definitions.

Thera<sup>1</sup> speaks of mindfulness as "the clear and single-minded awareness of what actually happens to us and in us at the successive moments of perception". According to Thich Nhat Hanh<sup>2</sup> mindfulness is "keeping one's consciousness alive to the present reality". Kabat-Zinn<sup>3</sup> defines it as "bringing one's complete attention to the present experience, in a particular way, accepting it and without judgement". Germer<sup>4</sup> speaks of "moment to moment awareness of the present experience and with acceptance". Siegel<sup>5</sup> states that "mindfulness is curiosity, openness, acceptance and love" and, finally, Cardaciotto<sup>6</sup> explains it as "the tendency to be highly aware of one's internal and external experiences in the context of an accepting, non-judgemental stance toward those experiences".

There are many diverse benefits associated with the practice of mindfulness. There are benefits both for the general population and specific benefits for the clinical population. In terms of the general population, the benefits can be felt on different scales: physical, emotional, social life, self-control, brain function and productivity. In the clinical population, we find research regarding anxiety, depression, borderline personality disorder, eating disorders, addictive behaviours, hyperactivity and attention deficit, psychosis, chronic pain, fibromyalgia, cancer, etc. Below we cite the most significant research:

Physically, the practice of mindfulness improves the immunological system, reduces pain and decreases inflammation at the cellular level. Emotionally, the practice of mindfulness increases positive emotions, decreases depression, anxiety and stress. Socially, the practice of mindfulness increases the feeling of connection with others and emotional intelligence, makes you more compassionate and makes you feel less alone. In terms of self-control, the practice of mindfulness improves the ability to control emotions and improves capacity for introspection. With regard to the brain, the practice of mindfulness increases the amount of grey matter, increases the volume of grey matter in areas related to regulating emotions and self-control, and cortical thickness in areas related to attention. In terms of productivity, the practice of mindfulness increases and improves attention, the ability to perform multiple tasks, memory and the ability to be creative.

Given the interest awakened by mindfulness, there are currently several different treatment programmes. At first, we find programmes that use elements of mindfulness and

other specific elements that are created to work on specific mindfulness skills. The programmes that use elements of mindfulness include Acceptance and Commitment Therapy and Dialectical Behaviour Therapy. Acceptance and Commitment Therapy takes into consideration cognitive processes in order to understand behaviour. It is based on the acknowledgement that psychological problems are not caused by the presence of recurring negative thoughts, feelings of anxiety, sadness, apathy, etc., but rather when these feelings acquire a leading role in controlling behaviour. Dialectical Behaviour Therapy was initially designed for people at risk for committing suicide, although it ended up being used for borderline personality disorders. The creator of this therapy argues that there is a network of factors in an initial environment that incapacitate a person from regulating their emotions, developing their identity and relating to others.

In terms of more specific programmes, all are based on Kabat-Zinn's<sup>7</sup> Mindfulness-Based Stress Reduction programme to a greater or lesser extent. This programme has two main goals: provide training in mindfulness and mindful yoga, and improve people's health. MBSR enjoys wide popularity and is taught in countless hospitals around the world. There are seven key attitudes for practising mindfulness which are developed in the course. These attitudes are: non-judging, patience, beginner's mind, trust, non-striving, acceptance and letting go. The course is structured as a two and a half-hour weekly group class over a period of eight weeks. In addition to the eight sessions, there is a day of intensive practice at a silent retreat. This programme distinguishes between the practice of formal and informal meditation. Formal meditation is the time spent each day practising one or more of the skills learned in the course and informal practice refers to bringing mindfulness to everyday life. The participants commit to practising formal meditation for forty-five minutes every day during the programme.

Later, Mindfulness-Based Cognitive Therapy (MBCT) for depression was developed by Segal, Williams and Teasdale<sup>8</sup>. This therapy was designed specifically to prevent relapses in people with major depression. It shares all elements with its predecessor; however, unlike MBSR, a day of silent retreat is not carried out, and it includes some new features such as activity registers, three minute mini-meditation, classic cognitive therapy exercises and action plans for preventing relapses.

Another programme that has a solid theoretical basis and lots of confirmed research is Marlatt's<sup>9</sup> Mindfulness-Based Relapse Prevention for addictive behaviours (MBRP). In this programme, the author considers a relapse to be a complex, multi-dimensional system in which several elements interact: distal risk factors, cognitive processes, behaviour/confrontation, affective state and substance use

behaviour. The theoretical and conceptual framework for the MBRP manual is based on the MBSR programme and on MBCT.

Recently, a programme has been created that is being disseminated and used among a diverse population. This programme has a core structure similar to the above programmes, but adds a new construct known as "self-compassion". The programme is known as Mindfulness Self-Compassion (MSC) and was created by Neff and Germer<sup>10</sup>. In terms of structure, it is a hybrid programme, applicable to both the clinical population as well as the general public, similar to MBSR and MBCT. The programme includes mindfulness meditation, but puts the emphasis on meditations focused on self-compassion. These meditations are known as "unconditional love meditations", whose objective is to develop the participant's self-compassion. According to the authors themselves, self-compassion includes three fundamental elements: kindness (being kind and understanding with yourself instead of critical), recognise our common humanity (feel connected to others and not alienated by suffering) and full attention or mindfulness (live our experience mindfully and not ignore pain, but also not exaggerate it).

## Grief

Grief is a normal, universal psychological reaction that is experienced after the death of a loved one. When we speak of grief, we are only referring to the moment of loss and we relate it with the terms "sorrow" and "affliction". Grief usually lasts about two to three years after the death of a loved one<sup>11</sup>. In most cases it is resolved naturally and does not require any kind of psychological or psychiatric treatment. However, when grief is not resolved favourably and naturally, it is called "pathological grief".

The most common reactions usually take place in the first months after the death of a loved one and decrease in intensity until the second year. However, grief cannot be generalised and each person experiences it in a different way. Therefore, there is no singular, linear process; its duration and intensity vary depending on the personality of each subject and his or her circumstances. These normal manifestations of grief can be cognitive, emotional, physiological and behavioural<sup>12</sup>.

The most important authors on the grief process, while basing their work on different conceptual models, agree that it is a complex, multi-dimensional process influenced by physical, psychological, social and cultural factors. Researchers differentiate between explanatory and descriptive theories of grief. The former focus on theoretical explanations and the latter discuss the dynamics of the process and describe the most common stages or phases of grief.

The first references to explanatory theories began with Freud<sup>13</sup>. Freud argued that people have to make an effort to accept the things that happen in the outside world and, therefore, incorporate changes into their internal world. Later, Bowlby<sup>14</sup> developed attachment theory, where he considers that bonds are developed instinctively in many species. The purpose of attachment behaviour is to maintain this affective bond and when this bond is threatened or broken, strong emotional reactions appear. These bonds tend to last throughout our lives. Bowlby proposes a wider meaning of grief and includes all psychological processes, whether conscious or subconscious, that arise from a loss.

Bonano and Keltner<sup>15</sup> offer another interesting approach to the concept of grief. The authors believe that emotions play an essential role in maintaining social relationships and in adjusting to important life events. Managing emotions, especially positive emotions, can regulate and moderate the process.

Another classic author in grief research is Neimeyer<sup>16</sup>, whose proposal, known as the "construct theory", is based on the premise that the death of a loved one causes a breakdown in our personal constructs regarding the world, the deceased and our relationship with the deceased, and that this process demands the development of a new way of thinking about life's circumstances at that time. A complementary theory to the above is Tedeschi and Calhoun's<sup>17</sup> theory, known as the "stress theory". This theory states that growth in the face of a loss is a cognitive process that gives the stressor (grief) meaning, especially if it is traumatic. From a medical perspective, Engel<sup>18</sup> approaches the process of grief as a disease or a possible psychiatric dysfunction, that is, a deviation from a state of health. Recently, there is an emerging trend toward the medicalisation of the bereaved, which means that this theory is being talked about again. Lastly, we would like to mention the dual grief theory, which also has a very solid body of research. In this theory, Stroebe and Shut<sup>19</sup> argue that habituation to loss is fluctuating and dynamic, and that a constant oscillation between two different processes of functioning is necessary. The first process revolves around the loss and the second around reconstruction. This model indicates that each person gets through grief differently and that it is an alternating, oscillating process.

In descriptive theories, the most representative authors have tried to recognise and enumerate the stages or phases of grief through which the majority of people pass. However, people who have lost a loved one do not pass through these stages in a specific order; human nature carries with it a personal, non-transferable roadmap. Here we find Lindemann<sup>20</sup>, with his famous three stages: shock and disbelief, intense grief and resolution of the process. Similarly, Engel<sup>21</sup> extends this to six stages: shock and disbelief, developing

awareness, restitution, resolving the loss, idealization, outcome. Similarly, and much more famously, Kübler-Ross<sup>22</sup> describes her model as having five stages: denial, anger, bargaining, depression and acceptance. Very similar to this model is that of Parkes<sup>23</sup> with four phases: shock, yearning and searching, despair and disorganisation and reorganisation. Sanders<sup>24</sup>, in the vein of process resolution, describes five stages: shock, awareness of loss, conservation and the need to withdraw, healing and renewal. More recently, and with a constructivist view, Neimeyer<sup>25</sup> distinguishes three phases of grief: avoidance, assimilation and accommodation. The Neimeyer model gives more breadth to the processes that cause grief.

However, it is not until Rando<sup>26</sup> and Worden's<sup>27</sup> models that the experience of grief goes from being something one must overcome to something one must perform. These authors argue that the experience of grief should be an active experience, where the protagonists are the bereaved. They must take on a leading role and perform a series of tasks that will allow them to resolve the process and grow as people. Worden, one of the most cited authors in the field of grief, elaborates upon and lists the tasks to be performed. They are as follows: accept the reality of the loss, work through emotions and pain, adjust to an environment in which the deceased is absent, and relocate the deceased in order to continue living. In parallel to the tasks, the author speaks of grief mediators, which allow us to understand why each case of grief develops differently. These mediators are: the nature of the relationship, the nature of the attachment, how the death occurred, experience with prior grief, personal variables, social support and, finally, concurrent stress.

As has been said before, grief is a normal response to the loss of a loved one. However, in some cases grief is not resolved naturally or in an appropriate period of time. These exceptions are when grief is delayed or *gets stuck*. This grief is known as "complicated grief". Sometimes it is also called "abnormal", "traumatic" or "pathological" grief. With the recent publication of the new edition of the diagnostic manual of mental disorders (DSM-5) in 2013, complicated grief was recognised and appears as a new diagnostic category. This same edition excluded normal grief from the diagnosis for major depression.

In terms of treatment and therapy programmes for grief, they are classified in the following categories: preventative treatments, therapeutic treatments and maintenance treatments.

Preventative treatments are designed to mitigate the symptomatology in normal grief and, therefore, are aimed at the general population. They are also known as primary preventative treatments. Their use is not advised, as they show deceptive and even negative results in adults.

Fortunately, this is not the case in children, where the effectiveness of primary prevention has promising effects. In a recent meta-analysis, Wittouck et al.<sup>28</sup> found the same results cited above.

Therapeutic treatments are used in people who present complicated grief. They are also known as "tertiary preventative treatment". These therapeutic treatments have been shown to have beneficial results for survivors. However, sex differences are observed and, in general, it has been shown that different subjects react differently to the treatment (for example, men benefit from treatment focused on emotions and women from treatment based on problem-solving). We can find further information on this subject in Currier et al.<sup>29</sup>

Maintenance treatments are used to improve evolution and prevent the emergence of complications in at-risk grief. These maintenance treatments are useful and intend to rehabilitate the bereaved, increase their quality of life, help them live as well as possible with any residual disorder and decrease morbidity and disability. These treatments are more rooted in Anglo-Saxon culture, although in recent years they have also reached Spain.

## Mindfulness and Grief

In terms of the mindfulness/grief relationship, there are still not a significant number of articles in the scientific literature that combine or relate both areas of knowledge. The first work that attributes benefits to being present with full awareness in grief is done by Edwards<sup>30</sup>. His work is theoretical and does not analyse any type of variable. From the same approach, Wada and Park<sup>31</sup> include Buddhist psychology in the framework for the process of accompanying people in grief. These two works are also theoretical without any analysis of variables. Another person interested in studying situations of grief is Kumar. This author bases his clinical work on using different mindfulness techniques with the bereaved. In his work, Kumar<sup>32</sup> invites the bereaved to perform a series of tasks. These tasks are similar to other mindfulness skill programmes that we have cited in the mindfulness section. These tasks are as follows: practice mindfulness meditation, prepare for emotional highs and lows, manage time and tasks after the loss, eat with full awareness, exercise regularly, maintain an affective bond with the deceased through small rituals, maintain contact with family and friends and, lastly, set objectives within the grief process. The same author, in his latest work *Mindfulness for Prolonged Grief*<sup>33</sup>, adds to the above list the concepts of creativity, resilience and compassion, in such a way that they provide a positive perspective on the grief experience; you can not only overcome grief successfully, the author

says, but this process can even help us grow as people. This new book is also based on his clinical experience and, although it is not a programme structured in sessions, it does precisely describe the tasks to be performed, using many examples that include mindfulness meditation and compassion practices.

Cacciatore and Flint<sup>34</sup> have proposed an interdisciplinary theoretical model known as "ATTEND", which stands for attunement, trust, touch, egalitarianism, nuance and death education. This model represents a paradigm for caring for people and therapists who work with death experiences. Its application is complex, as it combines several concepts and practices from MBSR and MBCT. It is the first grief model based on mindfulness where self-compassion appears as an element to foster or develop. Again, there are similarities between Kumar and Cacciatore in terms of self-compassion practices. Cacciatore et al.<sup>35,36</sup> have published two articles where they put their model to the test. After treatment, the subjects have decreased symptoms of anxiety and depression and, at the same time, have lower scores on the post-traumatic stress scale.

On the other hand, there are studies that have used the mindfulness skills programmes MBSR and MBCT for bereaved people. Neither programme was designed for this population, but after their application, the authors indicate improvements in the scales for anxiety, depression and grief<sup>37-39</sup>.

To conclude this section, we would like to cite an author who has proposed a new, specific model for people in situations of grief. Stang, in her book *Mindfulness and Grief*, has developed a mindfulness skills programme that includes compassion meditations as one of the key new features of her proposal. This programme presents the classic eight-week structure, with weekly two and a half-hour sessions. As a new feature, Stang adds a day of silent retreat, as Kabat-Zinn did in MBSR. The programme consists of the following sessions: full awareness or mindfulness, conscious relaxation, compassion and forgiveness, skills for facing grief, learning to live after loss, the meaning of reconstruction, allowing reconstruction and incorporating mindfulness into daily life. This programme still must be tested in order to demonstrate its validity in the context of grief. Mindfulness skill techniques and compassion make up the majority of the treatment. This is the first theoretical-practical model that is designed for grief treatment. It contains the classic structure of mindfulness skills programmes, and also includes sessions aimed at working through the meaning of reconstruction and skills for confronting grief. These sessions have a theoretical framework based on an in-depth study of the classic authors that have worked in the field of grief.

## Conclusions

This research uses different mindfulness and compassion proposals in order to help the bereaved in their grief experience. As we have seen in the above sections, there are several models and theories; however the nuances between models and programmes are quite subtle. All of the programmes have a common denominator which is the practice of compassion and the use of mindfulness in everyday life.

These different theoretical proposals and their models must be used to give meaning to the experience of grief. The new developments offered by the mindfulness and compassion skills techniques are that they aim to use the same theoretical framework, but provide meaning for each stage that the bereaved pass through and for each one of the tasks that they perform. Mindfulness and compassion are not outside of grief, nor are they ancillary tools, they are part of the process. However, their purpose is to assimilate the experience and live it with more awareness. Mindfulness and compassion are present and are innate for human beings, simply due to their human nature. All of the programmes described here have a common objective and that is to discover these skills and put them into practice. Developing these skills over time helps to assimilate loss. These programmes have several aims: from reducing the isolation of the bereaved, to controlling and regulating emotions, and even cultivating compassion for themselves and others. Furthermore, in Stang's<sup>40</sup> programme, one session focuses on cultivating forgiveness. All of these aspects reduce the levels of anxiety and depression that we find as a result of this research. Perhaps the ultimate purpose may be that once grief has been assimilated and resolved, we will have achieved more resilient grievers for possible future grief experiences. Although in reality, the literature tells us that the theoretical body of mindfulness is based on full awareness of the experience, whatever that experience may be.

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## Compassion Focused Therapy for Psychoses

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This paper outlines the theoretical and empirical basis for a treatment of psychosis from an evolutionary model of emotional regulation: Compassion Focused Therapy (CFT) for recovery from psychosis. CFT was originally developed for people with high levels of shame and self-criticism. Along with stigma, these are common features in people who are recovering from psychosis, and who may also develop serious emotional regulation problems. Elements of attachment theory involved in the origin of these difficulties are explored and some empirical facts about the clinical utility and efficacy of this new treatment are presented. A brief description is given of a recent group protocol that has been subjected to randomized trial, obtaining promising results.

**Keywords:** Compassion, Psychosis, Psychotherapy, Group, Recovery

## Terapia Enfocada en la Compasión para las Psicosis

Este trabajo resume las bases teóricas y empíricas del tratamiento de las psicosis desde un modelo evolucionista de la regulación emocional: la Terapia Enfocada en la Compasión (CFT) para la recuperación de la psicosis. La CFT fue desarrollada inicialmente para personas con altos niveles de vergüenza y autocrítica, que junto con el estigma, es una característica frecuente en personas que se recuperan de la

psicosis, que además pueden desarrollar serios problemas de regulación emocional. Se exploran elementos de la teoría del apego que intervienen en la génesis de estas dificultades y se presentan algunos datos empíricos acerca de la utilidad clínica y eficacia de este novedoso tratamiento, junto con la descripción sucinta de un protocolo de intervención grupal reciente que se ha sometido a un ensayo aleatorizado con resultados prometedores.

Palabras clave: Compasión, Psicosis, Psicoterapia, Grupo, Recuperación

The emotional and functional recovery of a person with psychosis is a key dimension of patient treatment<sup>1</sup> which goes beyond merely reducing symptoms<sup>2</sup>, and which emphasizes social functioning, the ability to perform gratifying activities, self-care, achieving goals and leading a meaningful life that is worth living.<sup>3</sup>

However, in order to achieve this goal, several obstacles related to the levels of external suffering caused by the psychotic experience must be surmounted, which include depression, despair, suicidal thoughts<sup>4</sup>, shame and stigma<sup>5</sup>, feelings of being trapped and fear that the psychotic episode will recur<sup>6</sup>.

With regard to the effective treatments available, to the numerous limitations of pharmacological treatment<sup>7</sup>, we must add the difficulties of psychological therapy in preventing relapses<sup>8</sup>, which is the basis of a lasting recovery.

In this paper we outline the theoretical and empirical basis for a novel, promising approach for recovery from psychosis that has received much interest in clinical practice and undergone an intense empirical research effort in recent years, obtaining results that show considerable clinical improvements in a variety of problems and clinical environments: mental health units<sup>9</sup>, acute care units<sup>10</sup>, penitentiary psychiatric units<sup>11</sup> and outpatient clinics<sup>12</sup>.

### Concept of compassion and the origin of compassion-based therapies

There has been increasing interest in compassion-based interventions, and there is evidence that their regular use or intensive training in compassion produces beneficial effects in a range of mental health problems<sup>13</sup>. Additionally, this type of therapy has beneficial effects on the immune system and several areas of the brain<sup>14,15</sup>. There is robust evidence that self-compassion training is effective in reducing anxiety, depression, eating disorders<sup>16</sup>, personality disorders<sup>17</sup>, and that it is associated with lower psychopathology<sup>18</sup>, which suggests that it has transdiagnostic utility of interest to clinical practice.

Compassion Focused Therapy (CFT)<sup>19</sup> includes the concept of Buddhist compassion: "Sensitivity towards one's own suffering and the suffering of others, along with the commitment to try to alleviate it and prevent it"<sup>20</sup>.

CFT is considered to be a third-generation therapy within a cognitive-behavioural focus and shares several concepts and perspectives with mindfulness-based therapies and with acceptance and commitment therapy (see also the unifying practical work of Wright et al.<sup>21</sup> for the treatment of psychoses).

CFT is based on the clinical observation that many patients are capable of generating alternative thoughts when faced with distorted cognition, but this is not always helpful for them. This is partly due to the emotional texture of these thoughts and partly due to the high levels of threat and/or despair that they are experiencing. The use of traditional "cognitive restructuring" strategies is useful when the patient has sufficient cognitive flexibility and moderate levels of threat, activation or despair. It is common for a patient to express: "I see it clearly from a logical perspective, but I feel and I know that I'm being watched, I clearly feel like I'm being followed and that terrifies me". This is a difficulty known in cognitive therapy as rational-emotional dissociation<sup>22</sup>, which is why the therapist in CFT for psychosis works on combining the rational mentality with the compassionate mentality in a balanced way<sup>23</sup>.

At the beginnings of CFT, Paul Gilbert developed the therapy for patients with high levels of shame and self-criticism, which is why the first CFT treatments simply practised introducing a warm, compassionate inner voice, like talking with a friend, and trying to really existentially feel this affectionate inner voice.

According to Gilbert and Choden<sup>20</sup>, the concept of compassion can be broken down into two different psychologies:

1. The ability to approach suffering and difficulties in a non-judgemental way, increasing tolerance for discomfort, with an empathetic understanding of the causes of one's suffering and the suffering of others.
2. The development of knowledge and wisdom to try to prevent and alleviate suffering.

We see that this second psychology is aimed at compassionate action. Access to affiliative emotional processes is central to CFT, which in treating psychosis involves the development of courage in order to experience threatening voices, traumatic memories and paranoia. Thus, this therapy is training the ability to approach terrifying experiences from the perspective of validation, understanding, empathising with oneself and moderating the hostile voice and constant self-criticism.

The polar opposites of compassion are self-attacks and self-contempt. Hutton et al.<sup>24</sup> argue that people with persecutory delusions have a higher frequency and intensity of self attacks in the form of hate, feelings of inadequacy, negative self-concept, as well as lower self-correction of errors and self-respect than the general population and control subjects with clinical depression. These data provide support for a compassionate formulation<sup>4</sup> of the recovery from psychosis, which is articulated in a model that helps patients develop a different way of relating to themselves, identifying self-attacks without identifying with their content.

Despite their usefulness and effectiveness, it appears that approaches aimed at modifying self-deprecating thoughts, achieving meta-cognitive insights or doing away with negative ways of thinking may not be enough to help patients face inner experiences that are extremely difficult. Therefore, it may be of use to add strategies that develop greater self-acceptance, understanding and compassion.

### Attachment Theory, Recovery Narratives and Compassion in Psychosis

Attachment theory<sup>25</sup> provides a solid conceptual framework for understanding the history of human beings' development, and how life experience influences our ability to embrace ourselves and tune into our own mind and that of others, the empathetic commitment to our pain and that of others, and our expression of forgiveness and compassion in relation to these experiences.

A mental state of secure attachment is characterised by the ability to value the influence of inter-personal relationships with equanimity, with openness to both the positive and negative aspects of life's difficult experiences, distinguishing appearance from reality. In this way, we cultivate emotional regulation, maintaining relative objectivity, along with an attitude of reflection regarding experiences of discomfort without losing meta-cognitive awareness and the expression of compassion and forgiveness. These skills are reflected in coherent narratives of attachment experiences as told by patients. It has been shown that these experiences promote attachment and security, especially in children<sup>26</sup>.

This feeling of security is associated with our sensitivity toward suffering in ourselves and others through empathy, awareness (ability to interpret our own behaviour and that of others by assigning a series of mental states, which is developed in the context of early social relationships and attachment) and curiosity, along with the motivation and commitment to prevent and alleviate suffering, which are developed along with the capability for self-reflection that makes it possible to develop meta-cognition and emotional

regulation. These mental states are very similar to compassionate social mentality as described by Gilbert<sup>19</sup>.

In fact, Bowlby's<sup>25</sup> conceptualization of the affective attachment link is based on (a) providing a *safe refuge* in moments of threat or stress and (b) acting as a *secure base* from which the environment can be explored and new physical and mental abilities can be developed. A compassionate attitude is cultivated for the purpose of being in harmony with one's own needs, the needs of others, and a concern for their growth, development and autonomy. This cultivation makes it possible to see oneself in the mind of the other as a worthy, respected and valued individual, so that a developmental foundation of the person is laid, on which we can base psychological treatment<sup>27</sup>.

Developing meaningful, coherent recovery narratives is considered to be an important measure in dealing with psychosis<sup>28</sup>. Formulating a narrative corresponds to several experiential exercises that are performed in CFT which are focused on developing a comprehensive, coherent attitude of self-reflection, along with the articulation of a revised narrative that includes the subject's self-acceptance.<sup>23</sup>

Among the effects of CFT, an increase in compassionate narratives was found in the results of the first randomised study on CFT in psychosis<sup>29</sup>. In another recent study, Gumley and Macbeth<sup>30</sup> have studied the relationship between psychotic symptomatology and compassionate narratives. The results show that as the level of compassionate narratives increases, there is a decrease in negative symptoms, cognitive disorganisation and excitation. This same group<sup>31</sup>, in a recent pilot study on attachment and recovery after the first psychotic episode, observes that greater coherence in narratives, measured with the Adult Attachment Interview<sup>27</sup>, predicts a greater recovery from negative symptoms in a 12-month period. The authors argue that this way of understanding and conceptualising attachment has significant shared elements with compassion.

We have seen that the first component of compassion is sensitivity, the concern for and harmonising with the pain and suffering experienced by oneself and by others. Secondly, from this harmony arises courage and the motivation to approach, understand and alleviate suffering. In the basis for this understanding of compassion, there is a series of skills that are rooted in the development of a secure attachment.

The experiences of trauma, abuse and neglect, which are common to the development of psychosis, and which directly affect attachment systems, may require cultivating courage and tolerance for discomfort in order to facilitate exploratory behaviour towards this suffering, built on a secure base and a safe refuge. A deeper understanding of these processes may help us to clarify compassion's role in

the development of new approaches to recovery from psychosis.

### Formulation of a compassion-based recovery after psychosis

There are solid data that demonstrate the effectiveness of cognitive-behavioural therapy for psychosis (CBTp) in decreasing the severity and frequency of persistent psychotic experiences, including in patients who are resistant to conventional treatment. However, the evidence regarding CBTp in preventing relapses is scarce, according to a recent rigorous review<sup>8</sup>. Garety et al.<sup>32</sup> also did not find that CBTp reduces relapse rates or increases remission rates at 12 and 24 months, although it did improve delirium and social functioning in those people who lived with the support of family members or caretakers.

Patients who suffer relapses, in comparison with those who have not relapsed, experience a growing feeling of guilt and shame related to their psychosis in a period of 12 months. It is understandable that they have difficulty in asking for help, given that they may have experienced problems in earlier relationships or interactions with family members and therapists and may see them as critical, overwhelming, or as causing shame and rejection. Therefore, a therapeutic approach based on the first signs may create the expectation of having to seek help in a context of high levels of anguish, a context that for some people may overwhelm all of their internal and external resources. This may result in defensive avoidance or a delay in seeking help, which could cause more responses to the crisis driven by the threat of relapse, which confirms the person's negative expectations and increases the feeling of being trapped in the disease.

Following Gumley et al.<sup>4</sup> model of recovery, people with long-term psychosis usually experience various cycles of frustration, feelings of failure and episodes in which they call off or postpone seeking help until the relapse occurs. Given the traumatic, upsetting nature of psychosis, feelings of needing help and the perspective of seeking it by yourself can produce expectations of threat. Patients may fear an increase in medication, hospitalisation, or involuntary procedures. They may also experience feelings of shame and guilt related to the idea of disappointing their therapists or family members.

These emotional responses may appear in a context of diminishing psychotic experiences, as perceptive or cognitive anomalies or inter-personal mistrust. Although the majority of relapses are preceded by these experiences, their occurrence, along with emotional distress, does not necessarily lead to a relapse. The way in which a person responds

to this threat will determine the intensity of emotional anguish.

Psychosis can also cause feelings of loss (for example, interruption of relationships or friendships) or events that threaten social range, value or acceptance (for example, feeling inferior, ashamed or humiliated by a psychotic episode; subjected to the pity, fear or exclusion of others), experiences that may be depressogenic because of their impact on the perception of self-concept and social status.

All of these processes inform us of the vulnerability and problematic nature of recovering after psychosis and the importance of creating experiences of security and social confidence and of developing a calming, compassionate relationship with oneself that counteracts self-criticism and feelings of exclusion.

Gilbert<sup>33</sup> has described the compassionate attributes and skills needed to alleviate feelings that arise from internal or external threats and their unwanted consequences:

1. Motivation to be affectionate and sensitive with oneself and others that is reflected in the cultivation of a "desire to help and care".
2. Sensitivity towards one's own emotions and needs and those of others, with attention and openness to discomfort instead of avoidance.
3. Sympathy. Being open and capable of getting in touch and emotionally harmonising with our feelings, suffering, needs and those of others.
4. The ability to tolerate (instead of avoid) difficult feelings, memories or painful situations.
5. Empathetic understanding of how our mind works, why we feel what we feel, what our thoughts are like, and extend this understanding to others.
6. Accept, do not judge, do not condemn. Develop a non-judgemental, non-submissive approach to ourselves and others.

These attributes and skills can be included in individual, group and family psychological treatments. They may also serve as a basis for a contextual-compassionate approach to the organisation of health and social services<sup>4,34</sup>. This approach focuses on the importance of those services having the ability to provide a safe base to promote self-compassion and autonomy among service users, while also providing a secure context that facilitates assistance at times of relapse risk. All of this requires a self-reflective and open attitude between clinics and managers in order to analyse the response we provide for these people and how contexts and professionals may inadvertently increase suffering.

## Empirical Basis of Compassion-Based Interventions for Psychosis

The application of compassion-based therapies in psychosis is very recent and empirical research is scarce. There are still several issues to be resolved regarding its effectiveness, acceptability, therapist training and difficulties for patients.

Mayhew and Gilbert<sup>35</sup> conducted a series of case studies in which they applied CFT to three people who heard hostile voices. The purpose was to explore the degree to which the patients could access experiences of warmth and happiness with the aim of treating themselves with self-compassion. After 12 individual sessions, they explored the effect of CFT on the experience of hearing hostile voices, anxiety, depression, paranoia and self-criticism. The study found that CFT had a significant effect on the voices, which were perceived as less persecutory and malevolent, and the subjects responded in a less submissive way, achieving a more self-compassionate dialogue. The results showed a significant decrease in depression, inter-personal mistrust, anxiety and paranoia. However, despite significant improvement, one of the patients described serious difficulties with coexisting with compassion, saying that it caused rejection and a deep "pity and sadness" because he claimed "I don't deserve compassion". This is a phenomenon related to fear of positive emotions (and associated with insecure adult attachment styles) that may require an adjustment in treatment in certain patients in order to desensitise them from the fear of compassion.<sup>36</sup>

Laithwaite et al.<sup>11</sup> have developed the pilot programme Recovery After Psychosis (RAP), based on Compassionate Mind Training, which was carried out in a penitentiary psychiatric unit. The sessions were led by a team made up of three therapists (for security reasons). The programme was implemented with 18 inmates with psychosis over the course of 10 weeks (20 group sessions), with 2 sessions per week. The results showed a significant improvement in levels of depression, self-esteem and a moderate decrease in shame and social comparison. The changes were maintained through a 6-week follow-up.

Based on this programme, a group intervention protocol was developed that was used in the first randomised trial of CFT in psychosis, directed by Braehler et al.<sup>29</sup> with 40 patients in a community mental health unit distributed in two groups: 22 patients received 16 group CFT sessions and the usual treatment, and 18 patients received just the usual treatment. The CFT group had a significant increase in levels of compassion which was associated with a decrease in depression and social isolation. They also experienced a superior clinical improvement to the control group in all measurements, including a decrease in fear of relapse and in negative thoughts about psychosis.

Eicher et al.<sup>37</sup>, in a correlation study, found a clear negative association between self-compassion and psychopathology in a sample of 88 people with psychosis. From the multiple regression analysis, it can be seen that patients with high hostility and depression may be ideal recipients for compassion-based interventions. From this study, it is interesting to note that patients with greater "disease awareness" tend to show less self-compassion and more self-criticism, overidentification and social isolation.

Heriot-Maitland et al.<sup>10</sup> conducted a qualitative pilot study of CFT application in an open group with 82 patients in an acute care hospital unit. The pretest-posttest measurements showed a significant reduction in discomfort and the qualitative data showed that patients especially valued the compassion in imagery practices that evoke a safe refuge.

Lastly, of interest is the first-person account<sup>38</sup> of a participant in a CFT group who had suffered from schizophrenia for 20 years, in which the patient explains the effects of his group experience, the different experiential exercises and how it helped him maintain a compassionate dialogue with the voices.

### CFT group protocol for psychosis

Below we summarise the group CFT process performed by Braehler et al.<sup>39</sup>, which was developed to be applied in the community. In addition to the main psycho-educational concepts of CFT, it includes aspects of group mindfulness<sup>40</sup> and of group processes in psychosis<sup>41</sup>.

It consists of 16 sessions divided in 3 phases:

- Training Phase (sessions 1-5). In this phase, participants explore the impact of psychosis on their lives, making a recovery formulation in the evolutionary terms of the CFT model. Ideas inherent to the model are developed, as are the objectives of reducing shame, stigma, blame, and activating motivation to construct compassion skills. The group is established as a safe base, promoting shared motivation toward recovery. It is graphically illustrated how over-activation of the threat system obstructs recovery.
- Intermediate Phase (sessions 6-13). Focused on the gradual development of compassion towards oneself and others. The nature of compassion is explored, as are the ways in which it can be expressed in the group and how to internalise it for oneself. The patients experientially practise compassionate skills such as attention, appreciation, imagination, mindfulness, compassionate behaviour and these practised skills are re-framed by applying them to internal and external threats and difficulties related to the education received and life

experiences (for example, shame, vulnerability, stigmatisation, social anxiety, paranoia, self-attacks, hostile voices, lack of motivation, anhedonia). The protocol aims to create a group basis for the practices as a shared experience.

- Final phase (sessions 14-16). In this phase the security acquired is used to express difficult emotions in a compassionate way through expressive writing tasks that help to construct compassion-based narratives that can be shared with the group. Writing a compassionate letter to oneself, for example, may help participants to reflect upon and assimilate the changes towards recovery with a compassionate attitude, in order to integrate the impact of psychosis into their life and to look towards the future with confidence. In this phase, the transition towards the end of the group is facilitated, encouraging the continuance of shared activities.

Throughout all of the sessions, the group process is aimed at encouraging a compassionate care-giving group mentality, reinforcing interactions of support and the ability to relate with colleagues. The practice of compassionate skills between sessions is facilitated, through providing materials and audio files.

## Conclusions

There is growing interest<sup>42,43</sup> in cultivating and practising compassion as a component of psychological treatments for psychosis. Approaches such as CFT are new in that they explicitly focus on the evolution of human affiliative behaviour. CFT is a multi-modal, transdiagnostic therapy that includes aspects of other evidence-based therapies based for psychosis. Clinicians can use knowledge and understanding of the biological foundations of emotional regulation systems and how they are affected by early development in order to integrate this perspective into a framework of applying effective treatments.

Current evidence, based on a recent systematic review<sup>44</sup>, suggests that CFT is more effective than an absence of treatment or as effective as the usual treatment for various disorders, including psychosis. Specifically, CFT shows encouraging results as a treatment for people with a high self-criticism component. However, the evidence is insufficient to show that CFT is effective in comparison with well-established treatments such as TCC or family interventions.

CFT is a safe intervention accepted by patients with psychosis, which influences the validation of the person, has an evolutionary-functional vision of emotions, and which tries to create a formulation that gives meaning to the psychotic experience<sup>23</sup>, working on emotional regulation

and reducing the processing of threats. CFT also offers a general framework for promoting the emotional recovery of patients which may be helpful on an individual or group level, as well as in community mental health services.

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## Loving-Kindness and Compassion practices in Dialectical Behavioral Therapy for Borderline Personality Disorder

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In recent years many psychotherapeutic approaches have included Loving-kindness and compassion practices in their treatment agenda. Although empirical evidence is still scarce, these practices might lead to an amelioration of shame and self-invalidation, both related to borderline personality disorder (BPD). In the present article, we describe an intervention in loving-kindness and compassion developed for BPD subjects. The principal aim of these sessions is to help participants to develop a greater capacity for self-com-

passion. To this end, three sessions were added to the regular content of mindfulness and radical acceptance from dialectical behavioral therapy (DBT) skills training. These sessions are based on practices coming from DBT and exercises from compassion-based interventions such as the Mindful Self-Compassion program developed by Neff and Germer or the Compassion Focused Therapy developed by Gilbert. In this article we describe both the theoretical rationale and the exercises used in each session.

**Keywords:** Loving-kindness, Compassion, Dialectical behaviour therapy, Borderline personality disorder

## Loving-Kindness y Compasión en Terapia Dialéctica Conductual para pacientes con Trastorno Límite de Personalidad

Las prácticas de *Loving-Kindness* y compasión han comenzado a utilizarse recientemente en el ámbito de la psicoterapia. Aunque la evidencia empírica es aún incipiente, la inclusión de estas prácticas conllevaría beneficios a nivel emocional relacionados con la disminución de la vergüenza y la autoinvalidación, ambas prevalentes en pacientes con trastorno límite de la personalidad (TLP). En este trabajo describiremos una breve intervención de *Loving-Kindness* y compasión para pacientes con TLP, cuyo objetivo principal es disminuir la autoinvalidación potenciando la capacidad de auto-compasión. Esta intervención consta de 3 sesiones que se añaden a los contenidos de mindfulness y aceptación de la realidad de la terapia dialéctica conductual (TDC). La intervención se basa en prácticas y ejercicios propios de la TDC y otros provenientes de intervenciones específicas en compasión, como lo son el programa de Mindfulness y Auto-compasión de Neff y Germer o la Terapia Focalizada en la Compasión de Gilbert. En este artículo describiremos tanto el sustento teórico como las prácticas propuestas en cada una de estas sesiones.

**Palabras clave:** Loving-kindness, Compasión, Terapia dialéctica conductual, Trastorno límite de personalidad

## Introduction

The introduction of living-kindness (LK) and compassion (C) practices in the scientific field and particularly their psychotherapeutic use in the treatment of mental disorders is still recent and there is still little data to support it<sup>1-3</sup>. Up until now there are no studies in which LK and C meditation practices are used in Borderline Personality Disorder (BPD), although there is some interesting evidence for its potential efficiency in patients with a high degree of shame and self-criticism. Although these characteristics are considered transdiagnostic<sup>4</sup>, they are clearly applicable to BPD. Moreover, Gibert et al.<sup>3</sup> have pointed out the connection between shame and self-criticism with self-harm, a highly prevalent

behavior in BPD patients<sup>5</sup>. It has also been reported that the presence of shame in patients with BPD is associated with the appearance of suicidal and self-harming behaviors<sup>6</sup>.

According to the biosocial theory of Marsha Linehan<sup>7</sup>, a key aspect in the development of BPD is the presence of an invalidating developmental context; that is, invalidating environments where the expression of private emotional experiences, in particular emotions that are not supported by observable events is denied, ignored, minimized or punished. These contexts are also characterized by a lack of attention, and by neglectful, physical, emotional or sexual abuse, the presence of such events being highly prevalent in BPD<sup>8</sup>. In addition, the existence of neglectful and traumatic backgrounds where the individual has felt insecure is characteristic of patients who have a tendency to shame and self-criticism.

As we can see, self-criticism and self-invalidation are terms which, without having the same meaning, greatly overlap. The latter specifically refers to the adoption of invalidating characteristics of the environment<sup>7</sup> and involves the perception of oneself as flawed (e.g., with feelings of self-hate, self-disgust, shame about self, undeserving of kindness and respect)<sup>8</sup>. The facility for self-invalidation in BPD is, at the same time, both a cause and consequence of high emotional vulnerability, responsible for high sensitivity to emotional pain and loss of control. Although Linehan suggests that BPD patients have difficulties in regulating both positive and negative emotions<sup>9</sup>, shame is the emotion most strongly related to impulsivity, anger and parasuicidal behaviors<sup>6</sup>. Patients with BPD have an even greater tendency toward shame than patients with social phobia<sup>10</sup>, which is consistent with the findings of a study which showed that BPD patients exhibit greater reactivity and duration of shame only with stressors which bring negative evaluation, but show similar responses to control subjects to general stressors<sup>11</sup>.

From a psychotherapeutic approach, dialectical behavioral therapy (DBT)<sup>7</sup> "Opposite Action" skills for dealing with emotions such as shame. "Opposite Action" is a behavioral technique, which relies heavily on exposure<sup>12</sup>. The development of self-compassion would be a potential path to improvement in both shame and self-criticism<sup>1-3,13,15</sup>. Furthermore, self-compassion would be an emotion opposed to anger<sup>15</sup>.

Self-compassion entails being kind to and understanding with oneself, perceiving one's experiences as part of the larger human experience and holding painful thoughts and feelings in balanced awareness rather than over-reacting to and over-identifying with them. As Gilbert and Procter<sup>1</sup> point out, the acquisition of such abilities is relevant in DBT and is achieved over 4 modules of group therapy. In DBT, acceptance and compassion skills are taught mainly in the

Mindfulness Module, and reality acceptance skills in the Distress Tolerance Module. Mindfulness and self-compassion are strongly linked<sup>16</sup>, so it is not surprising that in self-compassion training programs for both clinical<sup>1,3,17</sup> and healthy populations<sup>18</sup>, mindfulness practice is also included. The inclusion of LK and C training in the skills training program for BPD would have the target of decreasing self-invalidation through the empowerment of self-compassion skill. Although LK meditations have only recently been included in the new review of DBT skills<sup>15</sup>, the original version of DBT skills included practices which –without being explicit– were expected to promote the ability to generate self-soothing, and to create love and kindness towards oneself and others, even towards a person who we are having difficulties with or are angry at.

In the latest review of DBT skill training, Linehan<sup>15</sup> explicitly introduces the practice of LK among mindfulness practices. The aim of LK practice is to increase love and kindness towards oneself, friends, enemies and every living being. It should be noted that in this review, LK meditation is optional, and its inclusion will not depend on group composition nor on its degree of spirituality. For groups with a particular interest in spirituality some mindfulness skills can be presented from a spiritual dimension (not a religious one), with the aim to help the patient to grow in wisdom, experience reality as it is, generate a feeling of being at one with the universe, free him/herself from attachments and increase love and compassion. In this sub-module, other meditation practices such as contemplative meditation or prayer are also included<sup>15</sup>. We should point out that the following description of exercises and sessions does not correspond to the full content of this module, which is more oriented to spiritual development.

The present application consists of 3 sessions and focuses on LK and C practices, and is designed to complement and add information to the usual practices of the original modules of mindfulness and acceptance of reality in DBT<sup>19</sup>. Some of the exercises come from other interventions, such as Mindfulness and Self-compassion Program<sup>16,20</sup> and Compassionate Mind Training<sup>20</sup>, which are designed to train self-compassion. We will describe in detail exercises whose content is specifically developed to foster LK and C, but for the sake of brevity, we will merely indicate the use of other techniques from other modules of DBT (e.g., Opposite action; for more information see Linehan<sup>15,19</sup>).

## Session 1: Introduction to compassion

*the session begins with the definition of compassion: "compassion could be defined as a basic kindness, with deep awareness of the suffering of oneself and of other living things, coupled with the wish and effort to relieve it."*<sup>21</sup>

We distinguish the concept of compassion from the concept of condescendence or pity. While in the latter there is verticality between the subject and the object of compassion, the former is based on a horizontal relationship between the person who is suffering and the person who shares that suffering and wishes to reduce it. Self-compassion does not mean self-indulgence; we as people try to do the best we can given the situation and the resources that we have, always trying to behave effectively. When discomfort and self-criticism appears, self-compassion is a tool for looking after ourselves. The benefits of applying self-compassion are also explained.

Self-compassionate people can cope better with daily life problems. Self-compassion produces an increase of well-being through deactivating the threat system<sup>4</sup>, which is responsible for self-criticism, shame and self-invalidation. It increases the sense of safety, and decreases the sensation of isolation and threat. High self-compassion is associated with low anxiety, stress and depression<sup>22</sup>.

We explain the 3 main emotion regulation systems proposed by Gilbert<sup>17,21</sup>. They are three interacting systems belonging to different physiological paths, the activation of one or another system explains our feelings and ways of thinking and acting:

1. Threat and protection system. It is focused on the search for safety (protection, activation, inhibition, attack, escape). Its function is to notice and respond to threatening situations, by giving us bursts of feelings such as anxiety, anger and disgust, and behavioral outputs such as fight, flight and submission.
2. Drive and excitement system. This directs us towards important rewards and resources (e.g., food, money, sex, social status), and its function is to give us positive feelings that energize and guide us to seek out rewarding things. It is a system of desires and it is associated with positive arousal, affect and energizing feelings.
3. Social safety/soothing system. This system is particularly sensitive to interpersonal cues of social safety, acceptance and being cared for. It allows animals to be inactive while resources are not needed and there are no threats. It is a system of calm, which is triggered by social stimuli such as affect, love and care. It allows us to give and receive help, transmit safety and feel safe, show kindness and offer reassurance. It is responsible for compassion.

Apart from explaining these systems, in the first session we highlight that the development, regulation and coordination of these three systems results from the interaction between genes and environment. Accordingly, some experiences will strengthen or weaken the activation

of one or other system. Another aspect to consider is that apart from the sensitization caused by early traumatic experiences, our culture values people who are strong, silent and stoical toward their suffering<sup>20</sup>. Both aspects – invalidating experiences and western culture – often cause us to apply the third system to others instead of to ourselves. Hence, we often see that BPD patients feel compassion toward others but not towards themselves. In order to help patients to realize this, we make them look for self invalidating statements made about themselves and help them see that they would have a very different response when judging others in the same situation (often more compassionate and less judgmental). We must specify that the reason why they are not so judgmental towards a third party is not that they wish to avoid hurting them, but because information related to others is not processed with the same system: in the case of others we are more capable of activating the compassion system, while towards ourselves we use a more punitive style. This being so, it would be useful to take into account the capacity of patients to act as good counselors or someone willing to help others, and at the same time, as someone who is tough and punitive with her/himself. Once again, we must stress that compassion and self-compassion do not mean indulgence or self-deception, pity or sorrow. In this sense, it is useful to explore examples where helping someone involves disappointing or harming them, for example when a friend of ours says that he/she is looking forward to something that we know will not happen. If we want to help them we must tell the truth even though we know it will disappoint them, the main idea being that compassion is a kind of help that prioritizes usefulness over avoiding distress. Being compassionate is a way of being effective.

Self-compassion does not erode motivation. This idea is based on the belief that being self-critical is a source of motivation. It is important here to restructure and exemplify how confusing such an assumption is. For example, do phrases such as "you are useless" or "you are a failure" increase motivation? Do they increase the desire to try again? When we address this topic, it is a good time to introduce the exercise of self-encouragement (which patients already know from the Distress Tolerance module and will start practicing it in this session).

It is also a good time to reintroduce the idea that trying to resist emotions, desires or thoughts is a way of making them chronic and producing secondary emotions, a key idea to do the "Mindfulness of Current Emotion" exercise. To exemplify this concept, we use two useful examples: (1) finger trap, used in Acceptance and Commitment Therapy, where the effort of trying to release your finger makes it get even more stuck in the trap; (2) the judo metaphor (unbalancing the adversary using their own inertia) as opposed to karate (confronting the adversary with strength)

when dealing with emotions, desire and thoughts, highlighting that the only area that we can choose to control is behavior, and not our internal events (for example trying "not to think of a pink kangaroo" vs. "taking or not taking an object"). Another relevant aspect in dealing with emotional pain is not projecting it into the future; the following exercise can easily exemplify this. We ask participants to raise and sustain his/her arm in a straight position for a few minutes trying to explore with acceptance and curiosity and moment by moment the sensations that arise. As times goes by, patients start to feel unpleasant sensations and then, the therapist gives a false instruction of holding the arm in this position for ten more minutes. Commonly, when receiving this instruction, individuals tend to feel a significative increase in pain, which makes the idea of having to stay that way longer almost unbearable. In Radical Acceptance sessions, patients have already used skills such as the island of pain, and they have already learnt that suffering is composed of pain and an opposite reaction. Accepting an emotion involves not reacting to an unpleasant experience, independently of its valence (equanimity). Acceptance and compassion can be related; though not actually a requirement of acceptance, compassion is easier when one accepts<sup>15</sup>. To accept someone, we don't need to love him or her. Compassion also involves generating something, a willingness to care, both for oneself and one's own emotional experiences, and for others. Rumi's poem "Guest house" is a perfect example of this attitude. Accepting pain doesn't make it disappear, but only helps remove the "secondary effects" caused by resistance to it. It is then when self-compassion involves an additional benefit<sup>23</sup>.

### *Practice in session*

**Mindfulness with present emotions (Emotion Regulation Module).** This exercise lasts 10 -15 minutes. The aim is to synchronize with a present emotion or if no emotion appears in the session, to recover an emotional episode – initially not a very intense one – to begin practicing the skill. We are looking to generate an emotion sufficiently intense to allow us to observe all its components. In addition, it must be long enough to enable us to pick up any oscillation based on our proneness to it and the extent to which it fades over time. When we practice acceptance of a negative emotion, it is useful to use our body to enhance our disposition to the emotion, something we can do by using skills such as "*half smile*"<sup>19</sup> or "*willing hands*"<sup>15</sup>, which we will describe afterwards. Both techniques come from Acceptance of Reality and are based on the loop between an emotion and its expression, which was described by authors such as James and Darwin<sup>24,25</sup>. In DBT, it is assumed that the expressive feedback from an emotion also influences its intensity (for example, if someone is angry and frowns, the anger will increase). For accepting an emotion, we teach

patients to act on all levels of the experience, both mentally and bodily. DBT influences emotions and its acceptance, acting on all levels of experience, both mentally and bodily. Therefore, accepting an emotion is both a mental act and a liberation of body tension. "Half smiling" and "willing hands" are two ways of accepting with our body. Their main aspect is to relax our face muscles (half smile) and to relax our shoulders, arms and hands (willing hands).

In Mindfulness with present emotion, we try to be with the emotion, without fighting it or escaping from it. We try to observe all its components: sensorial (where it is and what it is like physically), mental mind content (images, words), color of the emotion (anger, sadness...), desire associated with the emotion (what it is asking me to do). During the exercise, the patient is guided through different steps:

- "Observe your emotion: emotions are like waves. Imagine yourself surfing the wave of the emotion. Step back and notice it, do not join the emotion, take distance from your thoughts and desires. Try not to block or suppress the emotion. Do not try to be released or to move away from the emotion. Do not try to maintain it, do not hold it, and do not overfeel it.
- Practice mindfulness with physical sensations: Notice where you feel the emotion in your body. Feel emotions as fully as you can. Observe how long they last before they start decreasing.
- Practice loving your emotion: do not judge it. Respect it, radically accept its presence, and be willing to feel it. Treat your emotion as you would treat a crying baby.
- Remember, you are not your emotion: you do not have to act as your emotion says. Remember moments were you were feeling differently."

**Half Smile y Willing Hands.** In moments when we have difficulty in accepting, our body becomes tense and our facial expression changes. Accept reality with your body. Relax (directly or by tensing and relaxing every muscle) your face, your neck and shoulders and softly smile. Smiling peacefully is not grinning broadly (a forced smile tells our brain that we are hiding from something or that we are masking ourselves). A serene facial expression consists of gracefully arching our lips with a relaxed expression. Try to adopt a serene facial expression. Emotions are partially controlled by facial expressions; it is easier to accept them if our face expresses them. Willing Hands is another way of accepting with our body. It is about changing our position, opening our hands, palms up and with relaxed fingers. It is the opposite of anger, which often indicates opposition and non acceptance. Remember your body is communicating with your mind.

### Steps to do Half Smile<sup>15,26</sup>

1. *Relax your face, from the top of your head until your jaw and chin. Let your face, neck and shoulder muscles be relaxed and free (forehead, eyes and eyebrows, cheeks, mouth, tongue and tooth slightly separated). If you find it too difficult, try to first stretch them and then release the tension. A tense smile is a fake face (and it tells your brain that you are hiding your real feelings).*
2. *Slightly move both corners up. Just to feel it. It doesn't have to be noticed by others. A half smile is that slight elevation in a relaxed face.*
3. *Try to adopt a serene facial expression. Remember, your face communicates with your brain, your body connects with your mind."*

### Steps to do Willing Hands<sup>15</sup>

#### Standing up

*"Let your arms hang free from your shoulders, slightly bend your elbows. Leave your hands unclenched, palms up, fingers relaxed and thumbs slightly separated."*

#### Seated

*"Place your hands on your lap or thighs. Leave your hands unclenched, palms up, fingers relaxed and thumbs slightly separated."*

#### Lying down

*"Place your arms by your sides. Leave your hands unclenched, palms up, fingers relaxed and thumbs slightly separated." Remember, your face communicates with your brain, your body connects with your mind."*

**Encouraging yourself (Distress Tolerance Module)<sup>15</sup>.** *"This means telling yourself phrases which help to cope with the situation. It means speaking to yourself as you would speak to a friend who is in crisis. A key aspect is that the message acknowledges the difficulty and the suffering of the situation without invalidating it (e.g. "it is painful" vs. "it is nothing"). Acknowledging brings more tolerance and strength (e.g. "it is painful and you are bearing it effectively") and discourages throwing in the towel (e.g. "it is painful and I can't bear it"). You can give yourself messages such as: "I can deal with it", "I can cope with it", "I can do this" "I'll pull through this", "it won't last forever",*

*"I'm doing the best I can", etc. To make the technique work, we must: 1) use imperatives, don't use terms such as "maybe", "it might..." It is not the same to say "I may be able to handle it" as "I can handle it". 2) Use sentences based on reality. Don't say things you don't believe or that are not really true like "It doesn't affect me at all", "I don't care". Do not forget that if the same happened to your friend, you would ask him/her "What do you need to feel better? How can I help you?"*

#### Homework:

- Practice Mindfulness with present emotions with or without Half Smile and Willing Hands.
- Practice Encouraging yourself.

## Session 2

we start the session by reviewing last week's homework: practicing "Mindfulness with present emotions" and "Encouraging yourself". Normally, the most difficult thing for a patient is to adopt a permissive and kind attitude to a negative emotion, sometimes because of a fear that accepting such a negative emotion, unlike the customary attitude of opposition and desire to control, would lead to an increase in this emotion and discomfort. An example would be what normally happens with panic attacks, where trying to reject anxiety actually intensifies it. In this case, a good way to proceed would be to momentarily interrupt paying attention to the emotion, shifting the focus of our attention to another physical sensation which is not associated with anxiety, like the sensation of the feet touching the floor, and then once the anxiety has diminished, switching attention back to the emotion. It is also common for patients to be unwilling or to reject the idea of abandoning the feeling of anger and hate. In such situations, it is useful to clarify if they really want to decrease the emotion, the reason we are doing this exercise and finally, the consequences and usefulness of continuing feeling that way. In the case of wanting to change the emotion, it would be useful to remember radical acceptance principles from the distress tolerance module (i.e., Reality is what it is, whether I like it or not; everything happens for a reason; Life is worthwhile despite the pain). Trying to generate compassion in the face of emotions like anger is in itself an exercise of "Opposite Action"<sup>19</sup>. In the case of the "Encouraging yourself" exercise, it is common for the patient to say "I can't do it, it's too difficult". When this happens, we try to make the patient imagine she/he is encouraging a friend, who is in the same situation, and then apply the same phrases to him/herself, although sometimes they would not seem true or credible for them.

Once homework is checked, the main goal of this session is to introduce LK meditation. Here, we want the patient to understand compassion from an experiential perspective, and to do so mentally, emotionally and physically. In this first exercise we will focus on generating compassion towards one we love or like, trying to generate love towards him/her. From our experience, most patients find it easier to generate compassion for a loved one (or even a pet) than to feel affection for themselves or for a person they have trouble with. In any case, as we will see, in the LK exercise different compassion receptors are used, which we make appear in order of difficulty (loved one, difficult person, oneself). Due to self- invalidation, in BPD patients the "difficult person" is often oneself, so the biggest difficulty will be to generate affection for oneself.

It is useful to initiate the exercise with the metaphor of a baby's bath. To bath a baby, we need to pay a lot of attention and at the same time maintain a kind and careful attitude.

### *In-session practice: Loving Kindness*

Begin the session by doing Mindfulness with breathing or Mindfulness associated with a physical sensation in order to bring our attention to the present moment.

1. **LK with a benefactor or a loved one (5 min).** *"Bring to your mind a picture of a loved one (or a loved pet) who would make you smile, who will make you feel cared for and safe, someone who you unconditionally love."* Imagine a moment when you felt loved, cared for by a person or an animal, everyone should choose a person or an animal that they associate with goodness, kindness, acceptance, security and compassion. You have to choose the person who makes you feel this way most purely, someone who makes you smile immediately (we want to induce in ourselves the emotion of feeling loved and accepted). Realizing the emotion associated with that image, savoring it, observing if there is any change in your body (releasing tension in your face, shoulders, feeling of warmth in the body, arms).

Facilitating compassionate sentences (we suggest Vicente Simón's audio "*Meta dirigido hacia uno mismo*"), which are sentences expressing wishes we might have for others and ourselves. We teach the patient to use compassionate phrases only if they help to generate that emotion, everyone should choose their own sentences in order to feel the emotion. *"This person has a life like ours, he feels happiness and also sadness, he suffers like us, we wish him good luck in his life, good health, that he/she may be able to love, to find his way, to have the patience to find it, to be secure, to be*

safe, to be happy." It would even be useful to use his real name, for example "we wish X to be happy", "we wish X to be in peace", "we wish X to be healthy", etc.

2. **LK with others (5- min).** "We will now try to transfer or maintain the fondness emotion as we move on to the following images": (a) other loved ones (e.g., friends), (b) acquaintances (e.g., people from the group), (c) strangers (e.g., the baker, someone in the waiting room).

Finally, we shall generate LK towards someone with whom we have difficulty or towards ourselves, which in the case of BPD patients is even more complex.

- 2a. with a **difficult person (5- min) (Distress Tolerance Module)**<sup>26</sup>. "Now look for a person with whom you have had some problem (initially avoid choosing people associated with traumatic events), someone who generates negative emotions in you, a difficult person. Detect what emotions and thoughts are associated with this image, and also any change in your body.

*Consider the most despised and hated characteristics. Try to examine what makes this person happy or what makes this person upset. Imagine this person's perception; try to see what this person thinks. Consider if he/she viewpoints are open or narrow, if he has been influenced by any prejudice, any hate or any anger. Observe if this person can control him/herself. Note that he didn't have any other option to acting as she/he did, everything happened as it was supposed to, accept this situation; everything is perfect as it is. Keep on thinking about it until you notice a compassionate feeling towards that person and your rage and bitterness disappear.*

*If your emotions are too intense, apply Mindfulness of breathing; bring your attention to the part of your body which is feeling this difficult emotion, soften it, imagine that you are breathing from there, your inspiration goes there and your exhalation comes from there, focus your attention when you breathe in and allow it to be there. Permit the discomfort; give up the desire for this emotion to end. Give yourself encouragement (use kind words, what would a friend tell you if he wanted to help you?)."*

- 2b. **LK with oneself (5 min).** "Now try to maintain these feelings of kindness, appreciation and acceptance while you picture the image of yourself sitting here. Maintain the physical sensation of kindness while you think about this image. Now say the phrases that we have already used but this time in first

*person: I wish myself happiness, I wish myself health... Project kindness and fondness towards yourself. If you find it too difficult, you can use a picture from when you were a child and repeat the same phrases. If it is still too difficult, you can use a picture of someone who is similar to you physically, personality-wise, in background, with very similar family and friends, and wish him good luck, happiness, etc. You can have this image of someone who looks like you and slowly transform them until they are identical to you, until they really become you. It can also be useful to think that it is a friend who is saying these supportive and kind phrases to you, a friend who is fond of you and who loves you. Slowly try to become this friend and to be the one who is saying these phrases to you.*

*"Before ending, thank yourself for having tried and having made the effort to be at peace. Spread this care, wishing the best to everyone who you love, everyone from the group, everyone in general."*

In order to facilitate the practice of LK exercises, we can direct our body to explore emotions associated with positive affect and self-care. As we said in the description of the previous session, emotional responses need feedback from our body, so apart from using techniques such as "mindfulness with emotion", "half smile" and "willing hands" we can also use some of the following skills, which will be useful if some tension emerges during LK practice:

### *Softening, calming and allowing*<sup>27,28</sup>

Before starting, it is important to point out that "softening" takes place at a physical level (muscular), "calming" at an emotional level (affection and care) and "allowing" at a mental one (acceptance)

*"Sit down in a comfortable position, close your eyes and take three deep breaths. Focus your attention on your bodily sensations; observe them while also observing sensations associated with your breathing movements. Keep like that, following your breathing.*

*Softening: next focus your attention on the part of your body where you are feeling the most intense and difficult emotion. Try to soften that part of your body, the part where you are feeling tension, allow its muscles to relax, without demanding it, do not try to make the tension fade, try just to be with what you feel. Do it gently as if you were applying a soft and warm cloth on a painful and tense muscle. You can say to yourself "soften...soften...soften..." You can also try to soften the boundaries of that sensation; you don't need to do it at once.*

*Calm down: despite the effort you are making, try to calm down. Put your hand on your heart and feel how your body breathes. Provide yourself with understanding and affection for the suffering you are now experiencing. Put your hand on the part of your body which is feeling that emotion, breathe while you feel the calming touch, the light pressure and the temperature of your hand, caring and trying to soothe the pain. Do it with the same intention you would have toward someone who you care for and is suffering. It could be useful to think about your body as if it were a loved child. Talk and encourage yourself. For example, "This is painful, but it will go away". "I can be calm and at peace". Or just repeat "calm down... calm down... calm down..."*

*Allow: finally allow your discomfort to be there. Give up the desire of making the sensation disappear. Let the discomfort come and go as it pleases, like a guest at your house. Even though it is with you, it doesn't belong to you and it is not under your control, it is like a guest that you have taken in to your home. You can say: "allow...allow... allow..."*

*You can repeat "soften, calm, allow" to remember the steps, as if it were a mantra. If you experience too much discomfort, you can observe again the sensations associated with your breathing until you feel better."*

**Comforting contact.** Shift your attention to your breathing and then extend it to the part of your body which is feeling a difficult emotion. Let the muscles of that part relax, do not demand the situation to change, let the discomfort be there. Place your hand on that part, breathe and feel the sensation of your hand on that part of your body, its temperature and its intention to comfort you in the difficult situation you are now going through. You can think of your body as if it were a loved child, it can help you to feel the intention of caring.

**Body charm visualization.** Emotions related to positive affect, fondness and love are normally associated with an increase of your body temperature, especially the temperature of the torso<sup>29</sup>. Try to detect if any pleasant sensation appears, like a tickling sensation, like an increase of temperature in your chest or abdomen. Imagine a pleasant sensation of relaxation and warmth spreading through your torso while you are caring for yourself.

**Rhythmic breathing**<sup>15,30</sup>. Broken, fast and superficial breathing can make us feel more anxious, whereas slowing our breathing can help us balance our nervous system and help us feel calm and serene. A proposed rhythm is 5 seconds of inspiration and 5 seconds of exhalation, or 4 seconds of inspiration and 6 seconds of exhalation. If it is not possible to maintain that cycle (5/5 or 4/6) you can start with 4/4 or 3/5 for example. Increasing the length of exhalation has an

impact on our parasympathetic nervous system, prolonging the effect of relaxation. You can practice this exercise for 5 minutes. You can find audios with different breathing rhythms done by DBT- San Diego team, which is led by Milton Brown:

[http://www.dbtsandiego.com/current\\_clients.html](http://www.dbtsandiego.com/current_clients.html).

If you are experience excessively intense emotions to do this exercise, you can use feelings associated with your breathing or with a physical sensation as an anchor. Observe the sensations associated with discomfort (for 1 minute) while observing your breathing, then end the exercise. It can also be useful to do the comforting or compassionate touch during or just after the exercise. Remember the concept of wise mind, the idea is to do what you can given the circumstances; doing more doesn't mean doing it better, and it is a matter of progressing, respecting your own limits.

## Tasks

Practicing benefactor meditation every weekday

1. Practice compassion exercises with a difficult person or with oneself for at least 3 days. Apply skills of compassionate touch, visualization and coherent breathing before and/or after ending the exercises.
2. Look for an object, a color, some music, a memory, an image which you associate with tranquility, security and compassion. Repeat the image exercise that we have done in the group. It will be useful in helping us with self-care in difficult moments.
3. Identify personal sentences which generate judgment and are focused on negative consequences, and write down nice alternative sentences.
4. Practice self-encouragement.

Do not look for a specific and immediate result. You should do the exercise in a place where you feel comfortable and safe, and where you can not be interrupted. Switch the phone off. It is a great chance to look after yourself. Do not try to feel positive emotions, just enjoy this peaceful moment.

## Session 3

we start the session by reviewing homework. Whereas in session 2 the main goal was to truly experience the feeling of compassion, in session 3 the emphasis is to transfer the emotion of compassion toward difficult people and oneself. To do so, the aims of the session are to work with LK with a difficult person and with oneself, introducing the connection exercise and encouraging participants to write a

compassionate letter. Once again the LK exercises are performed, the components of compassion are discussed, and then the connection exercise is introduced. The program is concluded with a compassionate letter in which participants are asked to write about all the effort and all the achievements they have made and can be used in the future.

### Selfcompassion components<sup>18,20</sup>

- Self –Kindness: self –care, calming and comforting actively.
- Common Humanity: you are not alone, isolated, what you feel is part of a human being, there are more people that, like you, have and understand the same feelings.
- Mindfulness: we can be with what we feel without avoiding or escaping from it, we can see our thoughts and our negative emotions pass by as events of the mind.

Mindfulness and kindness aspects have been directly addressed in previous sessions. We can practice the aspect of shared humanity while doing the previous exercises, realizing that pain and discomfort are feelings shared with other people, everyone has them in their life. In the exercise of wishing good luck to others, we can add to the phrases "I want you to be happy, good luck in your life (...)" a consideration such as "he is also someone who is suffering, who experiences worry, pain". The Connection meditation proposed in DBT can facilitate the sensation of shared humanity, of continuity and absence of isolation:

**Connection exercise (Distress Tolerance Module)<sup>19</sup>.** *Be aware of your connection with the universe:* it can be practiced anywhere and anytime. Focus your attention on a part of your body which is in contact with something (floor or soil, air molecules, the backrest of the chair, the armchair, your sheets, your clothing, etc.). Try to see every single contact point with these objects. Consider the function of these objects related to you. Consider what these objects are doing for you, how they help you do what you do, their kindness in doing it. Experience the sensations of touching the object and focus your attention on such kindness, until a feeling of connection appears, a sensation of being loved. Examples: Focus your attention on the contact of your foot with the floor. Let us think how kind the floor is to support us, to enable us to get from one place to another. Shift your attention to your body touching the chair. Think about the chair accepting us completely. It holds our back, it gives us rest, and it prevents us from falling. Look at the sheets that cover your bed. Feel the contact of the linen with our body, they cover us, and they keep us warm and comfortable. Look at the walls that surround the room, they protect us from

the outside; they prevent us being cold or wet in case of rain. Think of the way the walls are connected with the floor and with the air of the room. Experience the connection between us and the walls through the floor and the air, the walls that protect us. Hug a tree. Think about the connection between the tree and us, both of us alive, both of us receiving energy from the sun, oxygen from the air and sustenance from the soil. Let us experience how the tree loves us, how it provides us with a place to lean on, to rest in the shade.

To develop shared humanity, it could be useful to explain the skill of "contribution" taken from the Distress Tolerance module from DBT.

**Contribution (Distress Tolerance Module)<sup>19</sup>.** This skill involves feeling better about ourselves while helping others, we are social beings so it is beneficial for us in the short and long term (e.g. caring for relationships, getting new activities and new sources of pleasure). Helping others is also a way of boosting our compassion system. It helps us feel closer to others, feeling more useful and nicer, shifting the focus of our attention from ourselves to others, and decreasing our ruminative thoughts and our distress spiral.

### Tasks

1. Link self –compassion meditation with your habitual Mindfulness practice (doing it at the beginning or at the end for 5-10 minutes).
2. Practice contribution.
3. Write a "Compassionate letter to yourself" –*"write yourself a letter from the perspective of an imaginary friend, realizing the lack of sympathy with which you tend to judge yourself. What would a good friend who wishes the best for you tell you?"*
4. Continue with the practice exercises from sessions 1 and 2.

### Letter to a compassionate friend<sup>18</sup>

1. We all have something that we don't like, something that makes us feel uncomfortable or ashamed, feeling that "we aren't good enough". It is only human not to be perfect and it is also human to feel maladjusted, to feel like a failure or to feel incomplete.
2. We often try to confront or avoid these areas about ourselves that we don't like, we get angry about it, and it makes us feel upset, insecure and ashamed.

3. What emotions do you have when thinking about an aspect of yourself that you would like to be different?
4. What do you tell yourself about it? Do you encourage yourself? Do you attack yourself? Do you try to make it different? Do you blame yourself? Do you blame others?
5. Imagine yourself saying all these things to someone else. How do you feel about it? Do you think you are being hard on that person? Does any compassionate emotion emerge?
6. Now imagine a good friend, someone who appreciates and accepts you as you are. He/she writes you a letter after one day having a conversation with you about this aspect that makes you uncomfortable.
  - a. What phrases would someone who appreciates and accepts you say about this aspect of yourself which you reject?
  - b. How would he/she show her/his compassion, her/his affection for you, on seeing how hard you judge this aspect of yourself?
  - c. What would he/she say to remind you that you are human and so have both strengths and weaknesses?
  - d. Do you think that this friend could suggest how you could relate more kindly to this aspect of yourself?

Try to build the letter with feelings of acceptance, care and wish for the health and happiness that your friend would wish you.

7. Once the letter is written, keep it for some days and then read it as if you had found it by chance, like something new. Feel the compassionate feelings that it has, the willingness to help and soothe you, comforting you like a fire would on a cold night.
8. Remember that this friend is there for you whenever you need her/him, you also have it in you to care for yourself, accept yourself and give yourself some love.

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## Mindfulness applied to high performance athletes: a case report

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The present case study reports the experience of offering a mindfulness-based program to a high performance male Brazilian athlete, 26 years old, with a history of diminished performance following repeated injuries, and severe sleep disturbance. The intervention consisted in an adaptation of the *Mindfulness Based Stress Reduction* (MBSR) program, created by Jon Kabat-Zinn. The athlete was followed during 23 weeks, with collection of physiological (heart rate variability - HRV) and psychological data (perceived stress, trace and state anxiety, and mindfulness), added to quality of life and sleep assessments. At the end of the program, an in-depth interview was conducted to identify qualitative aspects of his experience with the program (expectations, perceived results and difficulties). The analysis of quantitative and qualitative data suggests that the athlete has shown improvements in physiological and psychological parameters,

even while facing several setbacks during the development of the mindfulness program. We can conclude that the implementation of a mindfulness programs addressing high performance athletes may be feasible, with great potential benefits for this type of public, especially for managing physical and psychological demands related to the particularities of the life of a professional athlete. To increase the feasibility of using this type of intervention in high-performance athletes, adapting programs to specific routines and demands (daily agenda and seasonal training and competitions; and potential missed sessions due to injury, commitments with sponsors, etc.) is recommended. It also seems important to maintain the monitoring of athletes for longer periods, to ensure learning and incorporating techniques into the routine of life and training as well as providing integration of other team members when necessary, for instance, in case of the diagnosis of sleep disorders, common in this type of audience.

**Keywords:** High performance athletes, Mindfulness, Quality of life, Perceived stress, Quality of sleep, Heart rate variability

## Mindfulness en deportistas de alto rendimiento: estudio de caso

Este caso clínico describe la experiencia de administrar un programa de mindfulness a un atleta de alto rendimiento, brasileño, de 26 años, con una historia de disminución del rendimiento deportivo y trastorno del sueño grave. La intervención consistió en una adaptación del programa *Mindfulness Based Stress Reduction* (MBSR), creado por Jon Kabat-Zinn. El atleta fue seguido durante 23 semanas, recolectando datos fisiológicos (variabilidad de la frecuencia cardíaca) y psicológicos (estrés percibido, ansiedad rasgo y estado, y mindfulness), además de sueño y calidad de vida. Al final del programa, fue realizada una entrevista en profundidad para identificar aspectos cualitativos de su experiencia con el programa (expectativas, resultados percibidos y dificultades). El análisis de los datos cuantitativos y cualitativos sugiere que el atleta mejoró en los parámetros fisiológicos y psicológicos, incluso pese a haber tenido que afrontar dificultades importantes durante el programa de mindfulness.

Podemos concluir que la implementación de un programa de mindfulness dirigido a atletas de alto rendimiento es factible, con gran potencial para beneficiar a este tipo de atletas, especialmente para trabajar con las demandas físicas y psicológicas específicas de este grupo de población. Para aumentar la factibilidad se recomienda adaptar el programa a sus demandas específicas (agenda diaria con entrenamiento periódico y competiciones, sesiones perdidas por lesiones, compromisos con los sponsors, etc.). También es impor-

tante mantener la monitorización de los atletas durante largos períodos, para asegurar el aprendizaje y la incorporación de las técnicas en la vida diaria y en los entrenamientos así como integrar a los otros miembros del equipo si es necesario, por ejemplo, en el caso de alteraciones del sueño, frecuentes en este tipo de población.

**Palabras clave:** Atletas de alto rendimiento, Mindfulness, Calidad de vida, Estrés percibido, Calidad del sueño, Variabilidad de la frecuencia cardíaca

## Introduction

The word "mindfulness" can be used to describe a mental state or trait characterized by a particular quality of attention, focused on the present moment, with an open and non-judgmental attitude. In addition, mindfulness can refer to practices and exercises to train that special mental state, many of such meditative techniques deriving from Eastern traditions such as Buddhism<sup>1</sup>. Mindfulness-Based Interventions (MBI) appear in the late 1970s in the US, and are highly structured programs where mindfulness practices for cultivating that particular type of attention are applied, and they have been extensively researched and progressively integrated into contemporary clinical practice in psychology and medicine<sup>2-4</sup>.

More recently, different MBI programs have been adapted for specific target audiences, including athletes, in this case in order to improve psychological well-being, attention, concentration, and sports performance<sup>5,6</sup>. Some studies also begin to discuss the relationship and the application of mindfulness programs to certain sports practices, such as Aikido<sup>7</sup>, as well as the development of social skills in team sports<sup>8</sup>.

On the other hand, there are still few studies and experiences on the use of mindfulness in professional sports; thus, this case study<sup>9</sup> aims to report an experience of application of MBI tailored to a high performance Latin American athlete, in order to observe in depth its feasibility and transcultural and cultural adaptability, as well as its psycho-physiological effects and impact on the quality of life and sleep.

## Athlete's Profile

In the time of this study (second half of 2011), he was an expert in one of the modalities of athletics, an internationally recognized and rewarded Brazilian Olympian. Born in the 1980s, he was 26, 104 kg and 2.02 meters tall, and since his teens, he has excelled in his modality. In the 2000s, he reached the peak of his career, beating international records and winning awards in several competitions. At the end of the same decade, he presented a

decrease in performance and happened to have recurring physical problems, added to psychological complaints related to stress and sleep disorders, and anxiety.

## Entering the Program, Monitoring and Evaluation

The athlete was contacted through their head coach, which previously approved their participation in the program of mindfulness. After the athlete's consent, he was followed and evaluated for 23 weeks (Table 1), being collected quantitative and qualitative data. The mindfulness program sessions were conducted from 8.30 to 10.00 am, and the data always collected before the scheduled start of the session (at 8:00), or in the same time when there were no meetings. Psychological and quality of life assessments were made only before and after the application of the full program of mindfulness, and the following instruments were applied: 14-item Perceived Stress Scale - *PSS*<sup>10</sup>; short-form of the WHO Quality of Life (*WHOQOL-BREF*)<sup>11</sup>; the Brazilian version (IDATE) of the State-Trait Anxiety Inventory (STAI)<sup>12</sup>; and the Mindful Attention Awareness Scale (MAAS)<sup>13</sup>. For serial assessment of the sleep quality, the Pittsburgh Sleep Quality Index<sup>14</sup> (Table 1) was applied. The physiological assessment was carried out in 14 steps, from the analysis of physiographic data on heart rate variability (HRV), collected through a Polar RS800CX watch<sup>15</sup>, both at rest and during the mindfulness of breathing practice (Table 1). At the end of the program, the athlete was in-depth interviewed for the qualitative evaluation of the program and to identify and deepen meanings related to expectations, perceived outcomes, fears and difficulties experienced in the program.

## Mindfulness-based Program

The applied intervention consisted of an adaptation of the Mindfulness-based Stress Reduction (MBSR) program, originally proposed by Jon Kabat-Zinn<sup>16</sup>, of which the following practices were used: "raisin" exercise, mindfulness of breathing, body scan, mindful movements and mindful walking (see details in Table 1), plus a psycho-education about stress in high performance sports and competition and its management. The main adaptations were: 1) instead of a retreat, a session was made entirely in silence (silent practices sequence - Session 6); and 2) a technique of compassion or kindly awareness, originally from the Breathworks Foundation (UK) program, was introduced. The program has been applied face-to-face by a certified instructor in MBI (one of the authors of this report - MMPD). Eight weekly sessions were initially planned (1 and a half hour each session, each including mindfulness practices, "inquiry" about the experiences, and psycho-education), but

**Table 1** Details of the mindfulness program, evaluations and interurrences during the follow-up of the athlete (per week)

Week (W)	Activity and General Content
W0	- Initial data collection (baseline - pre-intervention)
W1	- HRV data collection (rest) and sleep quality - Presentation and general information about the mindfulness program for the athlete and his head coach - Stressing the commitment necessary and checking the motivation to the proposed program
W2	- HRV data collection (rest) and sleep quality - Session 1: <ul style="list-style-type: none"> <li>• Raisin exercise</li> <li>• Discussion about "what is mindfulness" and its application in everyday life and sports</li> <li>• General orientation for mindfulness practices (posture, aspects to be careful about, etc.)</li> </ul>
W3	- HRV data collection (rest) and sleep quality - Session 2: <ul style="list-style-type: none"> <li>• Introduction to mindfulness of breathing (MoB)</li> <li>• Managing distractions and other challenges in mindfulness practice</li> </ul>
W4	- No activities due to sports competition
W5	- HRV data collection (rest) and sleep quality - Session 3: <ul style="list-style-type: none"> <li>• Introduction to body scan</li> <li>• Awareness, suffering, discomfort, curiosity and acceptance (how mindfulness works)</li> </ul>
W6	- HRV data collection (rest) and sleep quality - Session 4: <ul style="list-style-type: none"> <li>• Introduction to mindful walking</li> </ul>
W7-8	- No activities due to sports competition
W9	- HRV data collection (rest) and sleep quality - Session 5: <ul style="list-style-type: none"> <li>• Introduction to mindful movements</li> </ul>
W10-18	- No activities due to surgery and recovery period.
W19(M)	- HRV data collection (rest plus one measure during mindfulness of breathing, lying down - W19M) and sleep quality - Reactivation of the mindfulness program
W20	- HRV data collection (rest) and sleep quality - Session 6: <ul style="list-style-type: none"> <li>• Sequence of mindfulness practices in silence (MoB - body scan - MoB. No walking or mindful movements were performed due to the surgery)</li> </ul>
W21	- No activities due to unjustified absence.
W22	- HRV data collection (rest) and sleep quality - Session 7: <ul style="list-style-type: none"> <li>• Introduction to the kindly awareness practice</li> <li>• Mindfulness in daily life</li> </ul>
W23 (M/P)	- Final data collection (post-intervention), including HRV (rest plus one measure during mindfulness of breathing, lying down - W23M, plus one post-practice rest measure - W23P) - Session 8: <ul style="list-style-type: none"> <li>• How to incorporate mindfulness in daily life (formal and informal practices)</li> <li>• Evidence-based benefits of mindfulness</li> <li>• Doubt about the practices</li> </ul> - In-depth Interview

the program had to be adapted due to interferences experienced by the athlete during the intervention period (see Table 1).

## Results and Discussion

As mentioned before, the program proposed initially had to be adapted to the schedule of the athlete (see Table 1) due to two sporting competitions (weeks 4, 7 and 8) and, particularly, to an unexpected interruption between weeks 10 and 18, when the athlete was submitted to a lower limb surgery, followed by a recovery period.

Besides the surgery being an important factor contributing to physical and emotional stress, this interval of several weeks should be regarded as potentially significant, possibly representing a partial loss of program benefits obtained so far, since the athlete reported not maintaining a regular practice of mindfulness during the period.

### Pre and post Measures

Figures 1 and 2 show a trend of increases in psychological, social and environmental quality of life dimensions, and improvement in the perception of stress after 23 weeks of follow-up, which may be related to the practice of mindfulness<sup>4</sup>.

On the other hand, there was a loss in the "physical" dimension of quality of life (down 12 points to 6.85), and an increased state of anxiety, possibly attributed to the surgery the athlete suffered when he was halfway into the program, with consequent perceived loss of physical capacity and performance<sup>17</sup>. Interestingly, mindfulness levels fall slightly after 23 weeks of follow-up, probably related to increased state of anxiety, as well as the improvement in self-perception of the psychological state, as reported in previous studies<sup>18</sup>.

### Follow-up Measures

In the pre-intervention assessment of sleep quality a pattern of 3-5 hours of sleep per night was observed, coupled with a poor perception of sleep quality, corresponding to severe sleep disorder, a condition usually found in high performance athletes, with harmful physical, psychological and performance consequences<sup>19,20</sup>. However, during the study, the athlete showed a trend of improvement in the perception of the quality of sleep, especially after the first two weeks of the program, and after his return from the rest period due to surgery (Figure 3), which may be related to the practice of mindfulness<sup>21</sup>.

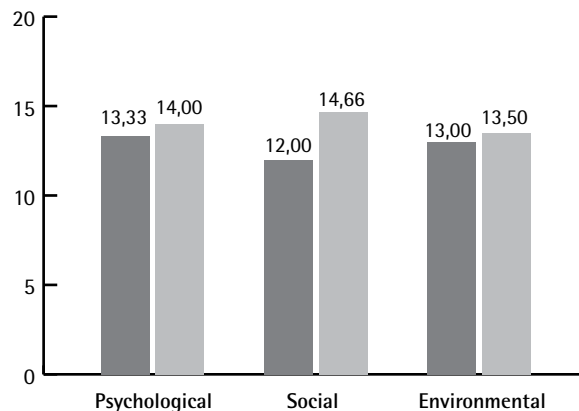


Figure 1

Effects of the mindfulness program in psychological, social and environmental domains of the quality of life after 23 weeks of follow-up (blue = pre / red = post)

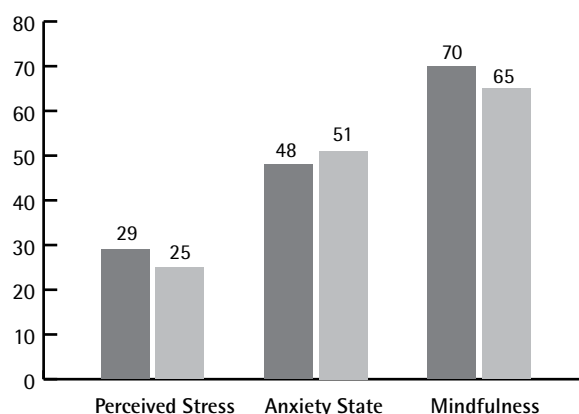


Figure 2

Effects of the mindfulness program in Perceived stress, state of anxiety and mindfulness levels, after 23 weeks of follow-up (blue = pre / red = post).

For the evaluation of HRV, the frequency domain (linear method) was used, breaking HRV in two frequency components: High Frequency (HF), an indicator of the prevalence of vagal activation (parasympathetic), and Low Frequency (LF), associated with increased activation of the sympathetic system, related to chronic stress situations<sup>15</sup>. Thus, it was possible to verify a progressive increase in the HF component from the start of the regular practice of

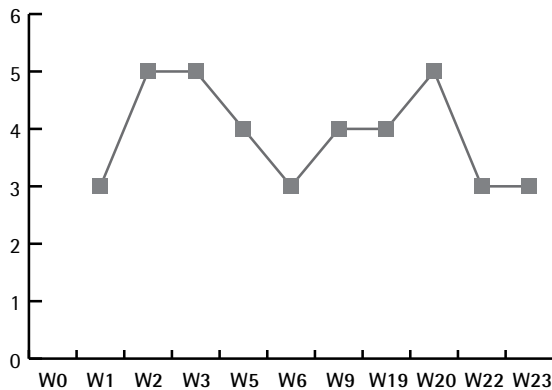


Figure 3

Evolution of the perception of the sleep quality during follow-up, being "1" the worst perception and "7" the best.

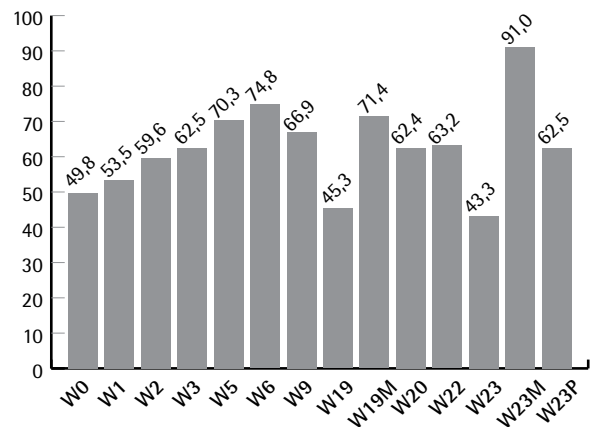


Figure 4

Evolution of the High Frequency domain (HF) of the HRV during follow-up.

mindfulness (W2), prone to loss of this pattern after the main program interruptions due to sports competitions (weeks 7 and 8) and surgery (weeks 10 to 18) (Figure 4). Moreover, a sharp increase in HF component records was observed where the athlete was asked to engage in the practice of mindfulness of breathing (W23M and W19M). However, these data may be biased due to changes in respiratory rate<sup>15</sup>, which usually falls during practice mindfulness, and this finding should be seen with caution. LF components had an inversely proportional pattern to the HF, reinforcing the results observed for the high frequency component of the HRV.

### Qualitative data

Qualitative data suggested the importance of relativizing mindfulness program results from a biographical perspective of the athlete. By the time of this study, his promising career had apparently entered its decline after a series of injuries, with consequent diminishment of performance and success in competitions. In addition, the fact of still being young enough to compete at a high level put over him an enormous pressure (personal and external) to achieve good results, and possibly, this fact has created a situation of chronic stress, which may partially explain his poor sleep quality<sup>19</sup>. Moreover, the very poor quality of sleep can be a cause of his poorer performance<sup>19,20</sup>, creating a vicious circle. Everything together makes the athlete's case handling complex, probably requiring a more comprehensive intervention, also engaging with other team members (doctors, psychologists, coaches, sponsors, etc.)<sup>20</sup>.

On the other hand, he revealed that the mindfulness program was helpful and brought benefits in all aspects of

his life, becoming calmer and increasing his capacity for reflection. In addition, he expressed the desire to continue practicing mindfulness and doing it more consistently and in a more disciplined way, feeling sorry for the interruptions that generated discontinuity in the program sessions. Moreover, he recognized the difficulty of establishing a regular mindfulness practice at home, and identified his personal life problems as a main barrier for adherence and compliance to the mindfulness program; especially after surgery (he repeatedly used the word "chaos" to describe his current personal life situation at that time). He also noted that the improvements have not been as potent as they could in his sleep patterns, and attributed this fact to the lack of a regular practice of mindfulness. As for the athletic performance, the athlete referred an overall improvement in the quality of life and ability to concentrate, and, above all, greater ability to regulate his emotional state during training periods to avoid being negatively affected by the worries and ruminations of daily life. These results are aligned with previous studies involving athletes<sup>5,6</sup>.

### Study Limitations

The main limitation of this case report is related to the own type of the study, limiting the analysis to one athlete only, limiting the possibility of generalizing of its findings. The fact that the physiological data (HRV) were collected with a Polar type apparatus also configures a limitation, since it only allows the analysis of a single electrocardiographic derivation. In addition, the standard mindfulness program was hampered by disruptions caused by the participation of the athlete in competitions and by the surgical event.

Furthermore, the fact that the initial contact has not been directly with the athlete, but with his head coach, may have affected the athlete's commitment and motivation to the mindfulness program, and consequently, its full benefits.

## Conclusion and Future Implications

The analysis of quantitative and qualitative data suggested that the athlete showed positive changes in several physiological and psychological parameters, as well as in some aspects of his personal and professional life. Those improvements were obtained even in the face of several professional interferences during the development of the mindfulness program, and into the complex reality of his personal life at that moment. Thus, it may be concluded that the implementation of a mindfulness-based program for high performance athletes may be feasible, with great potential for personal and professional benefits, especially for managing the physical and psychological demands related to long-term training routine and competitions stressors, as well as regarding the difficulties and typical characteristics of the personal life of a high performance athlete.

To increase the feasibility of the application of this type of intervention for high-performance athletes, a more flexible mindfulness program content, adapted to specific training routines and professional demands (daily and seasonal agenda of trainings and competitions, with potential missed sessions due to injury, commitments with sponsors, etc.), is recommended. It also seems important to maintain the monitoring of athlete for longer periods, to ensure the learning and incorporation of mindfulness techniques into training and life routines, as well as enabling the inclusion of other team members in the process when necessary, for example, when physical and psychological disorders are detected, including sleep disorders.

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