Mindfulness Meditation: A Hellenic Experience - A Quantitative and Qualitative Study

Abstract

Mindfulness facilitates to accept with kindness and non-judgmentally the reality of the present moment andacknowledge the pleasant or unpleasant feelings caused by the present situation or by automatic negative thoughts.

Continued practice cultivates awareness, willingness, and a positive outlook on stressful events, thereby helping to fully experience moments with greater insight and wisdom while leading to a greater sense of meaning in life and a greater sense of control.

Below we present and discuss our quantitative and qualitative study of an 8-session mindfulness workshop, which was organised to study the compatibility and impact of mindfulness meditation on Greek participants and their cultural and social context. It we conducted in two groups with different durations. One group had sessions every week, and a second group met fortnightly. Results showed overall significant baseline differences with medium to large effect sizes across three of the five facets on the FFMQ (Baer et al., 2006, 2008) and the General Mindfulness Questionnaire (Duncan, 2007).

Furthermore, the fortnightly group showed clearly better results than the weekly group with larger effect sizes and higher significance differences. Potential effects of the workshop on members' behaviour and well being are discussed both qualitatively and quantitatively.

Keywords: mindfulness; meditation; FFMQ; physical pain; awareness; acceptance; patience; letting go; forgiveness

1.Introduction

1.1 The Definition

According to Kabat-Zinn (2017) Mindfulness is a mental state characterized by **"the awareness that arises from paying attention, on purpose, in the present moment and non-judgmentally**" The practice of Mindfulness enhances the human skill to acknowledge the reality of the present moment with kindness to one's self. It helps to accept reality and fully welcome it, whether it's about pleasant emotions like joy or relief or happiness, or unpleasant feelings caused by automatic negative thoughts (ANT), activating "negative" feelings (Kabat-Zinn, 1990). Such feelings are frustration, anger, insecurity and fear, stress and anxiety or even feelings of worthlessness.

Mindfulness meditation is somehow different from some other forms of meditation practice and works by focusing on sensations and distracting thoughts rather than paying attention to a phrase or "mantra" in order to ignore distracting thoughts and discomfort.

Mindfulness training offers the opportunity to cultivate awareness, increased willingness and positive outlook on stressful events and "threats". Continuous practice helps to fully experience the moments with greater insight and wisdom that lead to a better sense of meaning in life and a greater sense of control, which makes it easier to take decisions for change.

1.2 A presentation of the Mindful Qualities

Acceptance relieves us of the deep mental pain often caused by the arrow of blame, "the second arrow" as the Buddha says (Alidina, 2010). Through acceptance we can try to acknowledge the painful sensation, without the direct intention of turning it into a positive feeling. Once the experience is accepted as it is, breathing into this difficult sensation can help to approach it and soften it slowly, reducing the intensity.

To achieve the desired level of personal acceptance and overcome negative thoughts and difficult feelings that arise before, during or after meditation practice requires patience. The more the practice of meditation is cultivated, the more effective the mindful way of thinking, feeling and acting becomes. Impatience can be

cured through a sense of mindful curiosity about the origin, nature and emotional impact of emerging thoughts, ideas and observations during meditation. Healthy curiosity can donate to each of us the mindful look of a child, allowing us to observe afresh and with a beginner's mind the wonderful little things that happen around us in every moment of our lives (Alidina, 2010; Carmody & Baer, 2007; Carmody et al. 2009; Kabat-Zinn, 1990),
In our view, there is a close connection between the mindful attitudes of Kindness, Letting go and Forgiveness. Letting go is a meditation practice that gives a new way, a different perspective to see the events of life and slowly cultivates forgiveness. Forgiveness in turn is the essence of letting go from our mind, freeing our mind from a negative thought, a minor or major issue that bothers us. Kindness embraces both attitudes, as being deeply kind also means forgiving and overcoming small annoying things in our daily lives. Kindness and Compassion are also the way to be loved and love yourself. "Si vis amari, ama" (if you want to be loved, give love) writes Seneca the Roman philosopher (62 AD). Therefore, it is very important to speak with a soft voice even to unkind people, to apologize and offer, even if it is something small, a meaningful "nothing", to feel fulfilled, to be Kindful with a capital "K" (Alidina, 2010; Carmody& Baer, 2007; Kabat-Zinn, 1990)!

Biochemically, the good feeling we get with kindness is thought to be due to elevated levels of the brain's natural versions of morphine and heroin, which we know as endogenous opioids. These cause elevated levels of dopamine in the brain and so we get a natural high, often referred to as a "Helper's High". Kindness also triggers the release of the hormone oxytocin, which reduces the blood pressure by keeping arteries open. In addition, oxytocin reduces heart rate, increases relaxation, protects against inflammation and slows aging (Hamilton, 2017).

1.3 In mental and physical pain

A common response to our emotional or physical pain is to block it out or "brush it under the rug" and deny that feeling by (over) eating, drinking alcohol, taking medicine or even drugs. Another response would be to be overwhelmed, to crush and be swept away or drawn by the pain without having the mental and emotional resources to deal with it. It is obvious that both ways of dealing with the situation, although some of them seem to work immediately, have multiple side effects in the long run, such as repeated failures, generalized anxiety or depression, etc. (Palmer, 2018).

A mindful way to deal with both types of pain is to turn to that difficult feeling or emotion and fully accept its existence by perceiving the experience and acknowledging it without good or bad judgment (Palmer, 2018). In addition, clinical research has shown that mindfulness can work with psychopathological conditions such as anxiety, depression and hostility issues (see section 1.4).

1.4 In physical and mental clinical conditions

Mindfulness meditation can also enhance physical health by improving symptoms and working effectively with pain, which is due to acute or chronic physical illness.
Numerous papers have been presented on the effects of mindfulness and MBSR (Mindfulness Based Stress Reduction) on clinical entities such as asthma, chronic pain, hypertension, diabetes, fibromyalgia, HIV, cancer, as well as anxiety, stress disorders, sleep disorders, menopausal hot flashes, major depression, etc. (Andersen et. al., 2013; Carlson et al., 2013; Carmody et al., 2011; Chiesa & Serretti, 2011; Duncan et al., 2012; Hartmann et al., 2013. , 2012; Hofmann et al. , 2010; Hoge et al., 2011; Sullivan et al., 2009; Zernicke et al., 2013). Even chronic conditions such as serious heart disease can be reversed with the practice of meditation (Ornish, 2010).

1.5 Mindfulness and Focusing

Experiential therapies provide a safe environment and help develop skills to fulfill needs (Maslow, 1971), for our survival and development (Rogers, 1961). They help with proactive interventions to find ways to address internal resistance to grounding with the experience, which eventually helps clients become more accepting (Geller, 2004).

Focusing-oriented psychotherapy (Gendlin, 1978, 1996) focuses on how the body perceives the present moment and recognizes emerging bodily wisdom as a guide to important life decisions. According to Leijssen (1990: 228) Focusing therapy is not a technique or a skill, but a therapeutic position that helps to emerge and express the

"not yet" explicit meaning and knowledge. It is a therapeutic approach that facilitates the processing and discovery of the implicit meanings and beliefs that lie at the heart of our felt senses.

On the other hand, mindfulness practice, helps to open up the painful bodily experience with care, with a sense of self-compassion and without any judgment (Kabat-Zinn, 1990, 1994). Mindfulness training begins as a directive stress management technique and evolves into a lifestyle (Hahn, 1976; Kabat-Zinn, 1994).

For those who find it difficult to do Focusing experiential therapy, Mindfulness can be helpful. In fact, when there are communication difficulties and/or situations of significant mental tension, the patient's/client's previous practice of Mindfulness meditation often helps the psychotherapeutic relationship (Geller, 2004). To be specific, Mindfulness helps to soften internal defenses in order to allow Focusing experiential psychotherapy to work with the symbolisation of experience.

In addition, a new approach called Mindful Focusing (Rome, 2018) places greater emphasis on the personal development of meditators, through further and deeper therapeutic processing of the meanings offered by the bodily sensations. Thus, these two contemplative methods, Focusing and Mindfulness can act as complements and form the basis of Mindful
Focusing (Rome, 2018). As Rome argues, "Focusing practice helps one to recognize and engage buried emotions and unconscious misconceptions that may not surface during meditation practice" (2017).

1.6 On Mindfulness Research

Extensive clinical and laboratory research has been done in the field of Mindfulness during the past thirty five years. The number of papers published annually on Mindfulness subjects has increased from 1 paper in 1982 to 397 publications in 2011. Hölzel et al. (2011) suggest that Mindfulness practice is associated with neuroplastic changes in the anterior cingulate cortex, insula, temporoparietal junction, fronto-limbic network as well as default function structures.

Furthermore, Hölzel et al. (2009) found a link between changes in amygdala gray matter density and decreases in self-reported stress following stress-reduction training.

Pagoni and Cekic (2007) compared non-meditators to a group of Zen meditators and found that meditation practice had a "neuroprotective" effect on gray matter volume. In fact, while gray matter decreased with age in the non-meditators, it did not in the meditation group, thus protecting the meditators from some effects of aging. In addition, Vestergaard-Poulsen et al. (2009) compared brain MRI scans of meditators and non-meditators and showed that meditation causes gray matter to grow in the lower brainstem.

Sarah Lazar et al. (2005) found that when we focus our attention on our breath, on a candle, on a word or on a spiritual ideal, there is an increase in the thickness of the prefrontal cortex. In the same study, the authors argue that the right anterior insula remains thicker, thus allowing for a higher degree of interoception despite aging. As is well known, interoception is the fundamental skill of fully perceiving the interior of our body, and the insula belongs to the critical pathway of this bodily function that allows us to experience our emotions and subtle sensations.

Last but not least, a study from Harvard on the epigenetic effect of meditators showed significant effects on gene expression. Specifically, 2209 human genes were activated in long-term meditators and 1561 genes were affected in short-term (eight-week program) meditators compared to non-meditators. In their conclusion the authors argue that meditation can have long-term physiological changes, also slowing the rate of aging!
(Dusek et al., 2008)

1.7 Precautions

It is worth noting that the treatment of serious clinical conditions such as severe generalized anxiety disorder with panic disorder, or severe depression or even psychotic illnesses, is reserved for officially certified and registered psychotherapists and/or doctors who are trained in the practice of mindfulness and can choose an appropriate time to add this approach to each patient's treatment protocol. In terms of our experience, we have used meditation practice in clinical disorders and diseases such as panic disorder, obsessive compulsive disorder, depression, etc. with encouraging results.

2. Material and Methods

2.1 Participants

The group of meditators consisted of twentyfour members, twenty women and four men, living in Athens, Greece. The age of participants was 35 – 55 years old. In their large majority they were Level 7 (Master) or level 8 (PhD or MD) graduates. All but one had group experience having already participated in therapeutic groups (psychotherapy, anger management, self-esteem development) and/or parental skills groups for more than one years.
The group consisted of two subgroups according to the registration order of each member in the program: Subgroup A had weekly sessions and subgroup B worked with fortnightly sessions. This mindfulness workshop was conducted to study the compatibility and impact of mindfulness meditation on Greek participants and their cultural and social context.

2.2 Evaluation tools

The measurement of the effectiveness of the intervention was carried out with two quantitative quests.

The first is an assessment by self report and is called Five Facet Mindfulness Questionnaire (FFMQ, Baer et al.

(2006) that was developed on the basis of another measurement tool the Kentucky Inventory of Mindfulness Skills (KIMS, Baer et al., 2004).

The second scale to measure mindfulness was developed by Duncan (2007) who conducted a clinical study examining parents' mindful relationship with their children.

2.2.1 The Five Facet Mindfulness Questionnaire (FFMQ)

Baer et al. (2006) suggested that five distinct aspects are represented in the currently available mindfulness questionnaire, four of which correspond to the four KIMS skills (Baer et al., 2006), e.g. Observing, Describing, Acting with Awareness and Non-Judging Experience, while adding Non-reactivity to Inner Experience as a fifth facet.
Hierarchical confirmatory factor analyzes (CFA), however, supported only four of the identified factors as components of an overall mindfulness construct, while the fifth (Observing) failed to fit the hierarchical model in the full CFA sample, although it fit the hierarchical model well in a subsample having some meditation experience (see also Baer et al., 2008).

The FFMQ comprises 39 items and measures the five facets of Mindfulness:

- **non reacting** actually focuses on observing thoughts and sensations and also reduces emotional reactivity and avoidance behaviors (Kabat Zinn, 1982). Seven items.

- **observing** internal phenomena such as thoughts, body sensations as well as external stimuli such as images, sounds and smells (Dimidjian & Linehan, 2003b). Eight items

- **acting** with awareness and undivided attention to the current activity and focusing on one thing in the present moment (Hanh, 1976). Eight items.

- **describing** with a wealth of words non judgementally and without conceptualization (Linehan, 1993b; Segal et al., 2002). Eight items.

- **non judging** the experience of the present moment, acknowledging the present phenomena and allowing them to be as they are, without labeling and without attempts to escape (Dimidjian & Linehan, 2003a, 2003b; Marlatt & Kristeller, 1999). Eight items.

The rating of the 39 statements is effectuated on a five-point Likert scale ranging from “1 = never or very rarely true” to “5 = very often or always true”.

This inventory (FFMQ) is renown and widely used in bibliography during the last fifteen years in order to measure the above described qualities and characteristics of mindfulness. It is cited in more than 7000 (research articles. Moreover the inventory’s KIMS version has been standardized in Greek language (Psaraki et al. 2022).

2.2.2 The Duncan’s General Questionnaire

The second measurement tool is a twelve-item self-administered general scale based on the work of Baer (2006) and assesses the intrapersonal conscientious characteristics of parents. As described by the author, the instrument measures intrapersonal nonjudging/openness, intrapersonal present-centred attention, and intrapersonal emotional awareness. This tool is short and easy to administer and can be found online (Duncan, 2007).

2.3 A description of the session process

Some elements of our program were “borrowed” from Palousemindfulness.com offering some free resources as well as from Alidina (2010, 2015). In addition, we have added videos, texts and meditations, which are used in our stress and mindfulness workshops.

Participants in the first group were offered each week a new meditation recording – often presented in a short and a long version in Greek for their daily meditation practice, as well as a large selection of readings, also in Greek. The same material and tools were offered to the second group which had fortnightly meetings.

Below, we provide a brief summary of each session, including some interesting member comments made during the session process, while maintaining the confidentiality of the sessions.

3. The Qualitative Facet of The Study

3.1 The Sessions

In every one of the eight sessions comprised in the program the process started with a discussion concerning the meditation data sheets (logs) and their impressions on their compliance to the program during the past week. Then some topics concerning their questions were commented by the facilitator
.
In each of the eight sessions included in the program, the procedure began with a discussion about the meditation data sheets (logs) and their adherence to the program in the past week. Then some topics related to their questions were commented by the facilitator.

Various texts, books and videos were then presented and discussed according to the needs and requests of the members. Finally, the group practiced the next week's meditation after a brief introduction about its purpose and meaning.

3.1.1 First Session

During the experiential process of this welcome meeting members introduced themselves and shared their motivations for joining the program. After discussing some practical questions, they also signed a personal

contract with themselves, stating what they expected from the course, when they would do their meditations, etc.

Practice during the session included: a) The Raisin Meditation with a choice of black and blonde raisins, crisps, nuts or popcorn. Each participant was entitled to two pieces. b) a ten-minute Body Scan

This week's daily practice was the Body Scan Meditation which was available in two recordings, one 30 minutes long and the other 20 minutes long. A diary was also distributed and members were asked to keep daily notes on their experience of this practice as well as to be mindful during their daily meal.

3.1.2 Second Session

During the experiential process the most characteristic statements of the members were the following:

* ... I was snoring quite often at night and my husband usually woke up complaining about this impossible situation, but **from the first day I started meditating the snoring stopped.**

* ... I hesitate to say that **I often fell asleep** (while meditating).

* ... I often lost focus and my mind wandered and returned. Also, as **I suffer from frequent migraines, I noticed that I didn't have any in the first week.**

* ... It is difficult to do without the interruption of automatic thoughts

* ... It went wrong every time I did it...

* ... **I slept great at night** all the days I did this meditation.

Our discussion revolved around the topic of sleep. We talked about the t stage of alertness (β – beta waves > 14 cycles) and the REM and NON REM stages of sleep i.e. α - alpha waves 8 -13 cycles, θ – theta waves 57 cycles and δ – delta waves 1 -4 cycles (OpenStax College, 2021). It was emphasized that meditation leads to the frequency of α-waves, a state that can in turn lead to θ-waves representing light sleep and occasionally δwaves considered to be the state of deep sleep.

So, falling asleep during meditation is a very common occurrence, especially with beginner meditators, since they often go deeper passing into θ-waves and sometimes even δ-waves. Thus, when the organism sleeps, it is because it is satisfying its immediate need and nothing can be blamed.

Then we have tried to introduce the nature of Sitting Meditation and the reason why this meditation is so different and perhaps more difficult than Body Scan, which is a very structured meditation and therefore in some ways easier to follow. Sitting Meditation, represents for the meditator a hymn to the free mind and gives an opportunity to follow with curiosity and fresh interest the wanderings of the mind hither and thither. So, the point of this exercise is threefold: non striving, non judging, letting go and coming back.

Additionally, we thought it important to explain the different options one has for sitting during meditation, i.e. which zafu or cushion to use and how to sit, also showing the figures contained in Full Catastrophe Living (Kabat Zinn, 1990).

The practice during the Session was a twenty minute Sitting Meditation.

*The daily practice for this week was: three days **Body Scan** alternating with 3 days **Sitting Meditation** available in two distributed audio recordings, one 30 minutes long and the other 20 minutes long. A log was also distributed and the members were asked to keep daily notes about their practice experience and their pleasant events each day.*

3.1.3 Third Session

The discussion with members began with the following comments:

*... Sitting Meditation (SM) was ... **a real disaster** for me since I was
"flying away" with my thoughts all the time. I think Body Scan is definitely a better meditation... it's much better structured.

* ... I had a difficulty too at the beginning, I could not remain constantly focused, without letting new thoughts getting in my mind. But after three or four days it went much better.

* ... I realized that I don't know how to breath deeply. One or two members expressed the same concern.

More participants expressed their difficulty with SM. This is why many preferred to follow the twenty minute version.

We discussed about mind wandering and that the normal state of the mind is to fly around with new thoughts very often. Shapiro (2014) argues that according to an MIT study mind wandering accounts for about 47% of our time and that we exercise to reduce it. So our practice would be to acknowledge and welcome the new thoughts, let them go, and easily return to our awareness and breathing instead of getting upset. It would also be an appropriate reaction to rejoice whenever we perceive this comeback.

In addition, we showed how to practice abdominal breathing and explained that we can gradually learn to exhale longer, thus lowering the heart rate and reducing stress by activating the vagus nerve. Also we have described the physiology of parasympathetic activation and respiratory sinus arrhythmia (Callifronas, 2018;

Berntson et al., 1993) Practice during Session: Ten Mindfull Movements (Thich Nhat Hahn)

Meditations for next *week included****: The Ten mindful movements (****as presented by Thich Nhat Hahn) three times****, alternating with* ***the Sitting Meditation*** *twice and* ***Body scan meditation*** *once a week taking notes on their practice experience and unpleasant events each day****.*** *On the days when the mindful movements are practiced we added a* ***Meditation of Repeated Thoughts*** *(about 15 minutes) compiled from many different texts and ideas, containing visualization of a white wall and sailing ships.*

3.1.4 Fourth Session

The discussion process started again with some complaints about Sitting Meditation (SM):

* … this week **SM was like a torture, like a Golgotha (Calvary)** for me, my mind was distracted and flying away with thoughts, I criticized myself for this inability …

* … generally I was careful only for the 60% of the time, I even had to stop practising SM exercise.

Some positive statements:

* … for me it was ok till the end with SM …

* … it was helpful for me to gain the ability to let go of painful thoughts during the SM, also meditating on repetitive thoughts helped me a lot.

Regarding the practice of mindful movements during the week, the responses were mixed, most were good, but there were also many members who were hesitant to do it on their own twice a week.

We talked about our inner critic and the critical comments we make about ourselves. We often get caught in our conditional thinking, we often fall into the trap of negative thoughts that overwhelm our thinking and cause distress in our lives. Therefore, it is important to change the approach to our beliefs and values in life, since non-judging is one of the nine fundamental attitudes of mindfulness (Kabat Zinn, 2016). In our first steps of mindfulness training we often need to start by not judging our (negative) thoughts.

"What we practice, goes stronger" advocates Shapiro (2017). So, when we meditate with judgement, then judgement goes stronger! The practice of mindfulness can be both like a fight or like a mind cooperation. We stated that "if you want to keep something or somebody close to you , just let it free" and added that we can follow our mind with genuine curiosity and also become happy when our attention leads to the exit our thoughts and judgements and comes back to breath.

In a question about stress and the effect of mindfulness exercise, we tried to explain the benefits that come from reducing muscle tension, releasing endorphins, increasing a-wave activity, improving digestion and sleep, strengthening the heart and lungs, improving blood flow to the brain, promoting mental well-being, etc. A copy of the relevant text was distributed (Davis et al., 2008; CDC, 2021

Practice during Session: Mindful Yoga Videos with Lynn Rossy.

Meditations *of this week included****:*** *Choice of two practices:* ***Yoga 2*** *by Lynn Rossy or* ***Wheelchair Yoga*** *with Adrienne three times a week followed in the same day by a* ***Meditation of Sounds****. Every other day of the above Yoga gym will be followed by a short sitting meditation. Notes to be taken on the experience of their practice every day.*

3.1.5 Fifth Session

The discussion:

* *… I choose every day a different meditation to practice and I feel much much better now with myself, I often remember your advice (addressed to the facilitator), in particular, to* ***take a deep breath everytime the telephone rings*** *before responding* ***and everytime I touch the mouse*** *before using my computer.*

* *… as I said in the previous sessions, before this program I had very frequent migraines and headaches, but after starting this program* ***the headaches have disappeared,*** *except for one time when I had to do a short Sitting Meditation before boarding the plane to cope with a migraine at its onset …*

We then discussed this week's "unorthodox" meditation idea of moving toward the difficult feeling rather than escaping the emotional difficulty by "forgetting the painful thoughts!".

We also discussed about Focusing (presented in Chap 1.5) which is a therapeutic method that can be cooperative with Mindfulness meditation. In fact, mindfulness meditation on difficult emotions can ideally be complemented by practicing the therapeutic approach of Focusing and finding the inner meanings of the difficult situation that caused the painful emotions. In turn, Focusing can be assisted by Mindfulness. In fact we can use the meditation as a precursor but also as an afterrunner to the therapeutic process. More on this subject can be said in the next session.

Practice during Session: The Turning Toward Difficult Emotions meditation

The practice of next week included one meditation for ***emotional*** *and one for* ***physical pain*** *to be practiced two days a week and followed by a selection from any of the previous meditative practices. Notes should be taken on the experience of their practice and the painful moments of this week should be treated with one of the "turning toward to" meditations.*

We believe that these two meditations play a central fundamental role in mindfulness meditation training, as

they give us the opportunity to understand the transitory nature of our sensations and emotions, but also of some of our physical pains, such as headaches, muscle aches, pains during infections and others. Schellekens et al. (2016) who studied the course and results of MBSR training in women with breast cancer claim that by turning towards fear, sadness and loneliness participants started to acknowledge "the continually changing nature of life" and to experience that "one is not alone in pain and that suffering is inherent to life" .

3.1.6 Sixth Session

The discussion process:

* ... when I make the one minute breath meditation I feel butterflies in my belly as if I am in love, and that makes me feel really good, ... **it's like a reboot** during the day ....
* ... **I refrained from blaming** towards my son with one stop meditation ... on the other hand I tried twice this week the Sitting Meditation but stopped in both cases in 5 minutes since my thoughts were constantly running one after another ...
* ... I also stopped once the Sitting Meditation in 7 or 8 minutes
* ... I have a recurring thought that this mindfulness practice cannot last for a long time after the eight week course ... so this week I only meditated once...
* ... The meditations of the past weeks are boring me... with new meditations it is much easier for me ...
* ... I'd like to understand this relationship between Mindfulness and Focusing and discuss more on the subject

We discussed that by trying to avoid the passing thoughts we get catched up in a recurring game which often leads to self-rejection. It's useful to practice sometimes the repeated thoughts meditation (see session 3) in order to accept this situation, instead of denying it.

Then we continued our discussion about mindful Focusing by mentioning that the meditation practice cultivates a "spiritual bypassing" by letting go emotional reactions and thoughts, thus avoiding to get stuck in uncomfortable self-conflicts and offering relief from emotional distress. However, this practice can sometimes hinder emotional development and carrying forward in critical issues.

Focusing can build on mindful skills and complement meditation practice by acknowledging deeply buried fears, hidden wounds and blocks, thereby enhancing personal growth and offering long term softening of the inner critic and relief from personal pain. (Rome, 2017). As Weiser Cornell argues "Focusing is like being a friend to your own inner experience"

Some members asked to have several Focusing sessions the Mindfulness program ended.

Finally we introduced the new daily practice stating that the Mountain meditation is about the human pride while the Lake meditation is about peace of mind.

Practice during Session: The Mountain Meditation

*Meditative Daily Practices of next week **are** the **Mountain Meditation** and the **Lake Meditation**, once a week each along the previous meditations for the other five days of the week*

3.1.7 Seventh Session

The discussion this time concerned the preferences of the different meditations*:*

* ... I was **fascinated with the lake meditation**, I even invited my daughter to meditate together ...

* ... New meditations are rather difficult for me... I prefer the Body Scan ... I meditate in the evening, maybe after midnight ...

* ... I also like Body Scan, every time I find something new in it...

* ... Body Scan makes me a bit nervous... I think I prefer Sitting Meditation, of course I am very interested in new meditations ... I feel more focused ...

* .. I prefer Sitting Meditation, I am now aware of my breathing ... but I also do all meditations ... I would like to say that in the last two weeks **I have not had any crises or even incidents of tachycardia**, from which I suffered for such a long time.

* ... I also like the Sitting Meditation, **my insomnia is getting better**, I can now fall asleep earlier and I don't wake up as often. The other day I did the meditation for physical pain after a rather painful exam I had...

* ... me too, I did the one for physical pain **for my headache and it worked well**, although another time it did not work extremely well ...

* ... in the past I often cried and felt relief ... during this workshop, when I complete the body scan, **I feel as if I have cried and feel relief**, it is a good experience, it is like fluttering and a kind of discharge...

Our discussion continued on the meaning of the mountain and the lake meditations, the members have been practicing for the last week in the mountain and lake meditation.

In fact, the lake represents deep stillness. It symbolizes the liquid element which is fluid and changing but at the same time maintains its shape and remains at its deepest depth calm despite the occasional ripples of the surface while receiving each moment with fluid force. Thoughts and feelings come for a while, like the choppy surface of a lake, but they can go like a leaf floating on water and leave our being and personality to remain stable and focused. The ripples of our experience cannot affect the depth of our being.

On the other hand the mountains are proud, ready to accept the changes of the environment and remain stable, strong, immovable and natural, during the different seasons. Clouds, strong lightning cyclones and storms surrounding the mountain meet its resistance without losing its softness, even earthquakes can shake but not move it. By having the image of a mountain within us we can strengthen and strengthen ourselves.

A mountain is completely natural and comfortable with itself, no matter how strong the winds that beat against it, no matter how thick the dark clouds that swirl around its summit. So like a mountain, let your mind be steady, knowing that all things pass. Allowing your eyes to close if that is possible or appropriate at the moment, otherwise keeping them open and in either case resting in an awareness of our inner experience. Body sensation: the spine in a natural curve, the head lifted as if hanging from a golden cord, without any tension.

The meaning in this renowned guided meditation by Jon Kabat-Zinn, brought to us by Paola Bortini, is the pride of a mountain. The Mountain Meditation is designed to cultivate calmness and serenity and connect with our inner strength and steadfastness in the face of challenges. The image of the mountain that remains steadfast in the changing seasons is the symbol of our strength in the face of the everchanging situations of our lives and emphasizes the sense of its nonnegotiable and unshakable worth that is unaffected by the vicissitudes of life, letting them pass us by and let go of the emotional difficulties that do not represent us.

Then we introduced the Lovingkindness Meditation (for discussion see Session #8)

Although the general feeling about this meditation was good, some participants reported that they were not ready to forgive and feel tender towards their significant others and their wider social environment. So, when we talk about Lovingkindness Meditation, we are inevitably asked to deal with the issue of forgiveness. When we feel self-critical, have a conflict within ourselves, are hurt by something, or are angry with others, forgiveness and self-acceptance point the way to relief.

It is a way of healing our inner self from distress and pain. (Alidina, 2010). Self-blame due to higher expectations and a sense of perfectionism can give way to an attitude of modesty and self-acceptance when we practice loving-kindness meditation and discover one by one the things around us and within us that we can praise and be grateful for .

Feeling particularly harsh and self-critical can act as an antidote and create feelings of friendliness and affection. This meditation can be very helpful and even therapeutic as it is quite difficult to feel hatred and friendliness at the same time. It is a way of healing the inner mind and heart from suffering. (Alidina, 2010).

Someone has hurt us, done something wrong, has a conflict in our mind, we are irritated or angry with others or yourself. This harmful condition calls for greater prosperity. Being upset with someone, hurts us more than anyone else. So, we need to be compassionate with ourselves. If we've been thinking about a problem for a while, it might be time to let it go. We don't deserve all this hurt we carry with us. Obstacles and wounds created by a lack of forgiveness can be healed with loving-kindness meditation.

Below are sample statements of this meditation:
May I accept myself as I am?
May I find forgiveness for the inevitable hurt we bring to another?
May I love myself completely as I am now no matter what happens?
May I be free from the sufferings of fear and anger?
We can move away from self-criticism. We may be surprised to hear a harsh, self-critical inner voice criticizing us.
We may have higher expectations of ourselves. Try to let them go. Try to accept at least one aspect of ourself that we don't like.
Forgive ourself. Remember that we are not perfect. We can make mistakes.

Let us give our self permission to forgive us.

We can try to be grateful for all that we have and all that we can do. Can we see, hear, smell, taste, and touch? Can we think feel walk and run?

Practice during Session: The Love and Kindness meditation

Meditative Daily Practices *of this week concern: The* **Lovingkindness Meditation**, twice a week (13 min), completed by the **Breathing Space Meditation** on the same day. For the remaining four days, two days **Body Scan** and two days **Sitting Meditation**. The daily notes include also **STOP** practice.

3.1.8 Eighth and Closing Session

The discussion was about their impressions of the eight week trajectory . The original question was: "***What changes have you noticed since you started the workshop?" It was followed by a discussion of how to continue in daily life and meditation practice.***

*... I think I was good student **... I stopped bullying (and terrorizing) myself!**

* ... **my headaches continue to be absent** ... it's the first time in years that I don't even have a pain pill, "just in case", on my nightstand!!!

* ... **my (chronic psychosomatic) pain went to zero** and I stopped the medication!!!

* . ... I can more **easily accept and even welcome the negative thoughts** that cross my mind, **I even accepted, without any pressure, a very unpleasant person**

* … I started this journey with joy, because of my (long) experience with yoga, I had to fight my negative thoughts about giving up trying to meditate, now I practice daily.

* … the Body Scan is my favorite… **my insomnia has decreased a lot**… I also do the raisin meditation three times a week!

* … I find myself being more alert and doing a lot more different things during my work and at home as I can now perceive the onset of a stress episode and stop it much more easily.

* **… my sleep has improved a lot, I can sleep better**

* … **my life is much improved**, I use the mindful moments in my job…I prefer the mountain meditation.

Practice during Session: *A short meditation on the Practice of Letting Go (Alidina, 2010, p. 57-58) and The Breathing Space Meditation*

4. The quantitative facet of the study

4.1 Results

	FFMQ (BAER et al., 2006) nonreact	FFMQ (BAER et al., 2006) observe	FFMQ (BAER et al., 2006) act aware	FFMQ (BAER et al., 2006) describe	FFMQ (BAER et al., 2006) non judge	Duncan General Questionnaire (Duncan, 2007)
Start (mean+SD)	2,94 ± 1,08	3,39 ± 0,87	3,22 ± 0,73	3,63 ± 0,79	3.43 ± 0,79	2,43 ± 0,56
End (mean+SD)	3,22 ± 0,71	3,75 ± 0,68	3,49 ± 0,64	3,61 ± 0,77	3,72± 0,81	2,17 ± 0,45
t	-4,81	-2,91	1,72	0,24	-2,29	3,74
Significance	p<0,001	p<0.01	p<0,1	N.S	p<0.05	p<0,001
Cohen's d	**0,98**	**0,59**	0,35	0,32	**0,52**	**0,60**

Table 1 (n=24): Results of measurement on the FFMQ at the beginning and at the end of the eight-week program for all participants

	FFMQ (BAER et al., 2006) nonreact	FFMQ (BAER et al., 2006) observe	FFMQ (BAER et al., 2006) act aware	FFMQ (BAER et al., 2006) describe	FFMQ (BAER et al., 2006) non judge	Duncan General Questionnaire (Duncan, 2007)
Start (mean+SD)	2,75 ± 0,69	3,36 ± 0,77	3,34 ± 0,76	3,53 ± 0,99	3.38 ± 1,02	2,40 ± 0,66
End (mean+SD)	3,17 ± 0,81	3,69 ± 0,48	3,36 ± 0,73	3,47 ± 1,02	3,62 ± 0,87	2,21 ± 0,55
t*	-2,26	-1,97	-0,07	0,38	-1,11	2.17
Significance	p<0.04	p<0.06	N.S	N.S	N.S	p<0,03
Cohen's d	**0,65**	**0,57**	-	-	0,32	**0,60**

Table 2 (n=12): Results of the eight-week program for the participants in the first subgroup

	FFMQ (BAER et al., 2006) nonreact	FFMQ (BAER et al., 2006) observe	FFMQ (BAER et al., 2006) act aware	FFMQ (BAER et al., 2006) describe	FFMQ (BAER et al., 2006) non judge	Duncan General Questionnaire (Duncan, 2007)
Start (mean+SD)	2,75 ± 0,43	3,41 ± 1,00	3,09 ± 0,70	3,73 ± 0,56	3,49 ± 0,53	2,46±0,45
End (mean+SD)	3,27 ± 0,58	3,82 ± 0,84	3,63 ± 0,49	3,74 ±0,42	3,83 ± 0,72	2,13±0,31
t*	-7,49	-2,07	-3,03	-0,05	-2,48	3,14
Significance	p<0,001	p<0,06	p<0,02	N.S.	p<0,04	p<0,01

Cohen's d	**2,16**	**0,60**	**0,87**	**-**	**0,71**	**0,91**

Table 3 (n=12): Results of the eight-week program for the participants in the second subgroup

Table 1 shows the results of measurement on the FFMQ at the beginning and at the end of the eight-week program for all participants. There were significant differences start-end differences (increase) in the ' not react', 'observe' and 'non judge' facets of mindfulness with large and medium Cohen's d effect sizes (0.98, 0.59 and 0.62 respectively) while The "act aware" also had apparent baseline differences with a small effect size, but did not reach the threshold of statistical significance.

Tables 2 and 3 present the results of the eight-week program for the participants in the first and second subgroups consisting of twelve members each and show their start-end differences on the FFMQ. In the first group (Table 2) with weekly sessions a medium effect size (0.65) was found with a significant start-end difference (increase) in the 'nonreact' facet, while 'observe' also had a medium effect size, but it was at the limit of significance ($p<0.06$).On the other hand, in the second group (Table 3) with the fortnightly sessions we found a very large effect size in 'non react' (2.16) and 'act aware' (0.87) and a medium effect size (0.71) in "non-judge". All three had a significant start-end difference. Furthermore the "observe" facet had a medium effect size (0.60) and was very close to, but did not reach, the threshold for statistical significance.

Significant baseline changes overall (Table 1) as well as in each of the two groups (Tables 2 and 3) were observed with Duncan's general quest which in fact measures the distraction (non mindful) behaviours and attitudes of each workshop member. These changes had medium to large ($50<x<80$) effect sizes as measured by Cohen's d test.

5. Discussion

As mentioned earlier, our work included both qualitative and quantitative methods in order to gain a comprehensive and detailed picture of the participants' experiences. Moss et al (2015) argue for the importance of a mixed methods approach and demonstrate its value as quantitative methods may not fully capture the experience and benefits of participants. Furthermore, Grossman & Van Dam (2011) add that quantitative methods do not understand "**the complexity of the process of mindfulness practice**".

5.1 Discussion on the Qualitative Data

This qualitative study shows the evolution of members' thoughts throughout sessions one to eight with their shared feelings and impressions.

Qualitative studies of mindfulness in general are based in grounded theory and conducted through structured questionnaires (Glaser & Strauss, 2017). Our questionnaire included two questions asked during the sharing process in each session: a) How did your mindfulness meditation practice go in the last week, and b) Have you noticed a small or large change in your habits? Then followed other questions depending on the nature of each answer.

Below we discuss some statements from members of our groups. Similar statements to those shared by members in our study have been discussed in the literature by several authors (parentheses indicate the number of sessions reported).

- On **falling asleep and insomnia** (as mentioned in sessions no. 2,7,8)

In our second session some participants shared that sleep replaced their meditation effort, while in sessions seven and eight it was reported that "insomnia was greatly reduced". In fact, insomnia very often leads to the intake of low to high doses of drugs that can be addictive and harmful. Moss et al. (2015) report that mindfulness practice helped participants sleep better. Even with insomnia, a body scan meditation helped them sleep. In addition, they had qualitative findings on the improvement of concerns with a higher degree of acceptance and a reduction of the internal critic. Frank et al. (2015) note in relation to insomnia that 100% of MBSR participants in their group of school teachers treated with sleep medication, discontinued medication by the end of the intervention and reported significant changes in the quality of sleep. Furthermore Gross et al. (2011) have observed in patients with primary chronic insomnia a significant improvement in sleep which was on the same magnitude with the effect seen in their control group that was treated with medication.

- On **headache, migraine tachycardia, psychosomatic pain, medication habit, stress episode as the beginning of panic attack,** (as mentioned in Sessions no. 2, 5, 7, 8) (Carmody, J.,
& Baer, 2008)

Many authors have reported similar statements in their work. In fact, Garland et al. (2013) observed in their paper that the Non Judging facet of the FFMQ scale was related to mood change and the Acting with Awareness facet was associated with improvement in stress signs. Moss, et al. (2015) reported that mindfulness practice helped some participants cope with physical pain. Bakhshani et al. (2016) showed a significant reduction in the perception of pain intensity in patients with chronic headache, and these results are in agreement with the original trials by Kabat-Zinn (1982) and Kabat Zinn et al. (1985) who demonstrated a significant reduction in pain, anxiety, depression and improved selfconfidence in several clinical cases. In addition, Omidi & Zargar (2014, 2015) conducted randomized clinical trials with patients suffering from tension headache and found that MBSR significantly reduced pain and pain-related anxiety that interfered with daily activities and improved mental health of the participants.

- **On refraining from blaming the son, self-bullying and (on) accepting a negative person** (as stated in sessions 6 and 8)

Similar findings were reported by Franck et al. (2015) arguing that teachers who participated as team members in their MBSR trial reported significant gains in non-reactive and non-judgmental skills. Dundas et al. (2020) conducted a qualitative study to examine the effectiveness of mindfulness in members receiving long-term habit-forming medication.
Participant testimonies included statements such as "...(I've developed) a more receptive mind and greater tolerance... (for harmful events)", or "...I'm more accepting of myself now...before I was too self-judgmental I didn't like myself." The authors support the idea that observing thoughts and feelings from a distance appears to reduce self-blame, and that focusing on breathing in anger-provoking experiences offers the conscious choice of whether or not to use (sedative) medication at that particular moment.

- On **reactions for the sitting meditation** (as stated in session 3).

Our curriculum included the practice of sitting meditation starting after session no. 2. However, the reactions of the members who stated e.g. that (sitting meditation was) "... a real disaster for me..." led us to review the literature on the subject and find that this type of meditation has been suggested to be introduced and started after the fifth session of the mindfulness program, when members have gained some meditation experience. Moreover our members had a choice of two meditations for their daily practice, a 30-minute one and a shorter 20-minute one for very busy days, while Carmody & Baer suggested a 45-minute daily practice for sitting meditation (2008).

- On **improved quality of life** (as mentioned in session 8).

Similar statements were shared by participants in the qualitative/quantitative study of Moss et al. (2011) examining the effectiveness of a modified MBSR program for older adults. Members reported greater self-compassion and kindness and increased awareness of the present moment. Also, Dussault et al. (2020) agree that mindfulness-based practices are useful for improving quality of life. In addition, previous studies have shown the relationship of better life and well-being with improved scores of aspects of mindfulness (Baer et al., 2008; Carmody & Baer, 2008; Lau et al., 2006).

5.2 Discussion on the Quantitative Data

Davidson's team presented results that somewhat challenge the effectiveness of mindfulness skills training as measured by the FFMQ, arguing that many (more) psychological interventions increase this cognitive ability. (Goldberg et al., 2016). This means that the treatment group could have reported psychological improvements not only due to the specific mindfulness trainings received in MBSR, but also due to nonspecific factors associated with participation in an intervention of any kind, e.g. group intervention.

Moreover, despite what has been described above as qualitative gains, it is debated whether the practice of mindfulness is responsible for the tangible positive quantitative results or whether the care we show to team members is also responsible for the positive results. After all, the well known Hawthorn effect is produced because participants feel that they enter an improvement process with better care interest and enthusiasm and in the end show improved results (Levitt &. List, 2011, McCarney et al., 2007).

Furthermore medical studies have discussed a possible trial effect in clinical trials (*Braunholtz et al.,. 2001;* McCarney et al., 2007*,* Menezes et al., 2011*),* It is assumed that, beyond simple attention and observation, there may be other factors, such as better care and compliance that could be responsible for the changes.

However, beyond all these comments, mindfulness appears to have tangible effects and specific changes in brain structures with a plethora of neuropsychological and psychobiological research papers submitted to High Impact Factor journals to prove it (see Introduction). This is enough in our opinion to accept the effectiveness of the mindfulness meditations as a clear fact that proves the usefulness of the method.
In fact, mindfulness workshops appear to have numerous significant benefits for participants regarding the on purpose and nonjudgmental awareness of the present moment. There are many studies on the topic that use the FFMQ to quantitatively measure participants' mindful changes.

Actually, Shapiro et al. (2012) showed significant improvements from baseline to post-MBSR on all measures of mindfulness in a group of 22 graduate students. In a larger study with 309 participants who reported white collar and professional occupations.

Carmody et al. (2009) showed significant pre-post MBSR changes in all variables with moderate to large effect sizes. They concluded that testable mindfulness based interventions are important to study the rich and complex phenomenon of mindfulness and specifically the way that such programs lead to beneficial outcomes.

Additionally, in a study of 174 participants who had psychological symptoms and/or medical signs, Carmody and Baer (2008) confirmed some very significant pre-post MBSR changes in mindfulness and wellbeing including reductions in stress and symptoms with moderate to large effect sizes.

Robins et al. (2012) conducted a well-designed randomized clinical trial implementing the MBSR curriculum by highly experienced practitioners. They worked in two equally divided groups, the MBSR group and a notreatment control group. They found significant changes with large effect sizes in the MBSR intervention group. Of particular interest is the fact that members of the intervention group showed a significant reduction in

their anger suppression and expression. The authors advocate that this effect was partly due to the fact that participants may have realized that they could experience their emotional state with more self-compassion and less judgmental intent by better regulating and controlling their emotions.

Bohlmeijer et al. (2011) studied the Dutch version of the FFMQ in a large sample (N = 376) of adults with clinical symptoms of depression and anxiety. Participants attended a mindfulness-based workshop. Analysis of the results showed that the 'acting with awareness', 'non-judging' and 'non-reacting' facets were "highly sensitive to change" while 'observe' and 'describe' were "moderately sensitive" as the authors claim. These results are consistent with the findings of the aforementioned Carmody and Baer (2008) who found moderate to large effects on the facets in MBSR curricula.

Regarding the overall results of our study (Table 1), an increase in the 'non react' facet has been detected with a large effect size (Cohen's d=0.98) and a highly significant start-end difference (p< 0,001). Also, the 'observe' and 'non judge' facets showed an increase with a medium effect size (Cohen's d equal to 0.59 and 0.52 respectively) with significant start-end differences (p<0.01 and 0,05 respectively). The 'act aware' facet had an obvious start-end difference with a small effect size (Cohen's d=0,35) but not reaching the threshold of statistical significance in the overall results (Table 1). Nevertheless, in the second group with fortnightly sessions (Table 3) the 'act aware' facet presented a change with large effect size (0,87) and significant start-end difference (p<0,02)

These results show that our intervention had a satisfactory effect which was similar as compared to the results found in the literature. In addition, we found no papers that had a significant therapeutic effect on all five facets simultaneously.

For example Frank et al. (2015) have worked with high school educators and found significant changes in three facets: observing, nonjudgment, and nonreacting. Carmody & Baer (2008) have found large effect sizes for the two facets 'non reacting' and 'observe' while 'acting with awareness', and 'non-judging' had a moderate effect size. Garland et al. (2013) in their study of individuals with cancer found significant difference "Act Aware" facet with an overall 59% decrease in mood disturbance and the "Non Judge" facet followed by 29% reduction in stress symptoms. Frank et al. (2015) had non-significant pre-post changes in the 'observe' facet. On the contrary Moss et al. (2015) found significant change only in the "observe" facet of their quantitative measurements. Last but not least it was rather difficult for us to find in the literature some papers showing significant results in the 'describe' facet.
A highly significant decrease (p<0.001) with a medium effect size was also observed with Duncan's general questionnaire which actually measures the distracting (non-mindful) behaviours and attitudes that were reduced during our intervention. This result seems to be validating our results found by FFMQ.

Focusing more on the results of each of the groups that make up the whole, we can see that in the first weekly group (table 2) there is a medium effect size in one facet (non react) and one more (observe) is just a step outside the limit of significance. In the second fortnightly group (table 3) we have three facets (non react, act aware and non judge) with impressive results for Cohen's d test (0.71<x<2.16) and significant beginning-end differences (p<0.001, p< 0.02, p<0.04 respectively), while a fourth (observe) is again at the limits of significance. Therefore, there is an obvious superiority of the results of the 2nd (fortnightly) group over the first (weekly) group.

How can these differences between the two groups really be interpreted? Of course, we cannot ignore the fact that the members of each group have not been chosen randomly but based on the order of their enrollment in each group. Accordingly, the factor of large deviation of the idiosyncratic components of the members of the first group from the second cannot be excluded.

However, according to our own experience it seems obvious that **meditation becomes easier to master if the practice lasts longer**. Also in the middle of the eight sessions program – between the third and fifth session - a temporary fatigue can be often observed and it seems that in the fortnightly group there was more time for recovery. We were unable to find any other paper comparing results of weekly and fortnightly exercise in the literature. Therefore, we cannot have a more secure assessment of the causes of this difference in results between weekly and fortnightly sessions, but the best results with the latter group remain still a fact.

5.3 Limitations

Our work had a quasi-experimental design with some limitations. First of all, the sample size - although sufficient to detect medium to large effects and significant pre-post differences - was relatively small to draw secure results.
Our work had a quasi-experimental design with some limitations. First of all, the sample size—although sufficient to detect medium to large effects and significant pre-transmission differences—was relatively small to draw secure results.
In addition, most participants were Caucasians**,** had a higher education (Levels six to eight) and the resources to pay for this meditation-based program. It cannot be assumed to what extent our findings can be generalized to populations with different demographic characteristics, as well as for individuals with mood disorders.

As mentioned before, the members were predominantly female. To our knowledge gender differences in the effect of meditation practice have not been reported so far, but such a different response between them cannot be ruled out.

Another limitation was the absence of a randomised control group. The two treatment groups of this study could be considered to control each other, however they were not randomized. In adition the fortnightly group

finished eight weeks later than the weekly group, so the periods of treatment were not exactly the same. Of course, this trial was not about determining the efficacy of mindfulness in general, since it is a fact that has been shown in nonclinical and clinical cases in previous controlled trials (Shapiro et al. 1998; Speca et al. 2000; Grossman et al. 2004).

We also do not want to overlook the fact that the changes and psychological improvements we have already listed and discussed may also be due to undetermined factors outside of our intervention, e.g. their motivation to report positive changes, once they agreed to have their responses used for research purposes, although our facilitator tried to stay away of any such comment. Shapiro et al. (2006) mentions that participants' reports could have been influenced by their intention to avoid the perception of "no changes" after their effort on the program or even by the facilitators' expectations of positive outcomes.

5.4 Future Directions

Our study indicates the need to enrich the quantitative data with qualitative interviews to better assess the participants' experience.

Further assessment of changes in mindfulness would be to compare the results of the five facets in an RCT environment with a group the fortnightly sessions, a weekly MBSR group as designed by Kabat-Zinn (1982) and/or a control group. Also, our program could be compared with other stress reduction programs with clinical and non-clinical participants to further illuminate and elucidate the potential mechanisms for treating stress.

In addition, future studies will examine in depth the self-report results as well as the long-term impact of these mindfulness workshops on daily life, mindful living, momentary awareness, stress, emotion regulation, etc.

5.5 Conclusion

Our study compared the effects of an 8-session workshop on mindfulness practice conducted in two groups: One group had the traditional weekly session model, while a second group had fortnightly sessions. The results showed overall satisfactory medium to large effect sizes and significant differences in three facets, 'non-react', 'observe' and 'non-judge'. It is also worth noting that the fortnightly session group clearly showed better outcomes than the weekly sessions group. Regarding the qualitative data in our study, most if not all discomforts, irritations, psychosomatic pains and insomnia were reported to have disappeared or improved significantly. Also, the mindful perception of stress and adverse events has been considerably increased and the quality of life was improved. Concerning the results of fortnightly sessions more studies are needed to confirm them and discuss their place in therapeutic practice

6. References

Alidina, S. (2010). *Mindfulness for dummies*. John Wiley & Sons.

Alidina, S. (2015). *The mindful way through stress: the proven 8-week path to health, happiness, and well-being*. Guilford Publications.

Andersen, S. R., Würtzen, H., Steding-Jessen, M., Christensen, J., Andersen, K. K., Flyger, H., ... & Dalton, S. O. (2013). Effect of mindfulness-based stress reduction on sleep quality: results of a randomized trial among Danish breast cancer patients. *Acta Oncologica*, *52*(2), 336-344.

Baer, R. A., Smith, G. T., & Allen, K. B. (2004). Assessment of mindfulness by self-report: The Kentucky Inventory of Mindfulness Skills. *Assessment*, *11*(3), 191-206.

Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J., & Toney, L. (2006). Using self- report assessment methods to explore facets of mindfulness. *Assessment*, *13*(1), 27-45

Berntson GG, Cacioppo JT, Quigley KS (March 1993). "Respiratory sinus arrhythmia: autonomic origins, physiological mechanisms, and psychophysiological implications". *Psychophysiology*. 30 (2): 183–96.

Bohlmeijer, E., Ten Klooster, P. M., Fledderus, M., Veehof, M., & Baer, R. (2011). Psychometric properties of the five facet mindfulness questionnaire in depressed adults and development of a short form. *Assessment*, *18*(3), 308-320.

Braunholtz DA, Edwards SJ, Lilford RJ (2001), "Are randomized clinical trials good for us (in the short term)? Evidence for a "trial effect"", J Clin Epidemiol, ***54*** *(3): 217– 224, doi:10.1016/s0895-4356(00)00305-x, PMID 11223318.*

Callifronas, M.D., Kontou, G. (2016) A Psychoeducative Programme in Anger Management. *Journal of Psychology and Psychotherapy*, 6(237):2161-0487.

Callifronas, M. (2018) *The roots of psychotherapy. Psychobiology and neuroendocrinology (book),* Athens, Assimakis Press.

Carlson, L. E., Doll, R., Stephen, J., Faris, P., Tamagawa, R., Drysdale, E., & Speca, M. (2013). Randomized controlled trial of mindfulness-based cancer recovery versus supportive expressive group therapy for distressed survivors of breast cancer. *J Clin Oncol*, *31*(25), 3119-3126.

Carmody, J., & Baer, R. A. (2007). Relationships between mindfulness practice and levels of mindfulness, medical and psychological symptoms and well-being in a mindfulnessbased stress reduction program. *Journal of behavioral medicine*, *31*(1), 23-33

Carmody, J., Baer, R. A., LB Lykins, E., & Olendzki, N. (2009). An empirical study of the mechanisms of mindfulness in a mindfulness-based stress reduction program. *Journal of clinical psychology*, *65*(6), 613-626.

Carmody, J., Crawford, S., Salmoirago-Blotcher, E., Leung, K., Churchill, L., & Olendzki, N. (2011). Mindfulness training for coping with hot flashes: results of a randomized trial. *Menopause (New York, NY)*, *18*(6), 611.

Chiesa, A., & Serretti, A. (2011). Mindfulness based cognitive therapy for psychiatric disorders: a systematic review and metaanalysis. *Psychiatry research*, *187*(3), 441-453.

Davis, M., Robins, E. & McKay, M. (2008) *The relaxation and Stress Reduction Workbook (Sixth Ed.)*, Oakland, New Harbinger Publications

De Vibe, M., Bjørndal, A., Tipton, E., Hammerstrøm, K., & Kowalski, K. (2012). Mindfulness based stress reduction (MBSR) for improving health, quality of life, and social functioning in adults. *Campbell Systematic Reviews*, *8*(1), 1127.

Dimidjian, S., & Linehan, M. M. (2003a). Defining an agenda for future research on the clinical application of mindfulness practice. *Clinical Psychology: Science and Practice*, *10*, 166171.

Dimidjian, S., & Linehan, M. M. (2003b). Mindfulness practice. In W. O'Donohue, J. E. Fisher, & S. C. Hayes (Eds.), *Empirically sup- ported techniques of cognitive behavior therapy: A step-by-step guide for clinicians*. New York: John Wiley.

Duncan, L.G. (2007) Assessment of mindful parenting among parents of early adolescents: Development and validation of the
Interpersonal Mindfulness in Parenting scale.
etda.libraries.psu.edu

Duncan, L. G., Moskowitz, J. T., Neilands, T. B., Dilworth, S. E., Hecht, F. M., & Johnson, M. O. (2012). Mindfulness-based stress reduction for HIV treatment side effects: a randomized, wait-list controlled trial. *Journal of pain and symptom management*, *43*(2), 161-171.

Dundas, I., Ravnanger, K., Binder, P. E., & Stige, S. H. (2020). A Qualitative Study of Use of Mindfulness to Reduce LongTerm Use of Habit-Forming Prescription Drugs. *Frontiers in Psychiatry*, *11*.

Dusek, J. A., Otu, H. H., Wohlhueter, A. L., Bhasin, M., Zerbini, L. F., Joseph, M. G., ... & Libermann, T. A. (2008). Genomic counter-stress changes induced by the relaxation response. *PloS one*, *3*(7), e2576.

Frank, J. L., Reibel, D., Broderick, P., Cantrell, T., & Metz, S. (2015). The effectiveness of mindfulness-based stress reduction on educator stress and well-being: Results from a pilot study. *Mindfulness*, *6*, 208-216.

Fox NS, Brennan JS, Chasen ST (2008). "Clinical estimation of fetal weight and the Hawthorne effect". Eur. J. Obstet. Gynecol. Reprod.Biol. **141** (2):111-114. doi:10.1016/j.ejogrb.2008.07.023. PMID 18771841.

Garland, E. L, Manusov, E.G, Froeliger, B, Kelly, A, Williams, JM, Howard, M.O (2014) Mindfulness-oriented recovery enhancement for chronic pain and prescription opioid misuse: results from an early- stage randomized controlled trial. *J Consult Clin Psychol*. 82:448–59. doi: 10.1037/a0035798

Garland, S. N., Tamagawa, R., Todd, S. C., Speca, M., & Carlson, L. E. (2013). Increased mindfulness is related to improved stress and mood following participation in a mindfulness-based stress reduction program in individuals with cancer. *Integrative cancer therapies*, *12*(1), 31-40.

Goldberg, S. B., Wielgosz, J., Dahl, C., Schuyler, B., MacCoon,
D. S., Rosenkranz, M., Lutz, A., Sebranek, C. A., & Davidson, R. J. (2016). Does the Five Facet Mindfulness Questionnaire measure what we think it does? Construct validity evidence from an active controlled randomized clinical trial. *Psychological assessment*, *28*(8), 1009–1014. https://doi.org/10.1037/pas0000233

Grossman, P., & Van Dam, N. T. (2011). Mindfulness, by any other name...: trials and tribulations of sati in western psychology and science. *Contemporary buddhism*, *12*(1), 219239.

Grossman, P., Kappos, L., Gensicke, H., D'Souza, M., Mohr, D.C., Penner, I.K., & Steiner, C. (2010). MS quality of life, depression, and fatigue improve after mindfulness training: A randomized trial. Neurology, 75, 1141–1149.

Gendlin, ET. (1978). Focusing. new York: Everest House.

Glaser, Barney G & Strauss, Anselm L., 1967. The Discovery of Grounded Theory: Strategies for Qualitative Research, Chicago, Aldine Publishing Company

Glaser, B., & Strauss, A. (2017). Discovery of grounded theory: Strategies for qualitative research. Routledge.

Hamilton, D. R. (2010). How Meditation Affects the Gray Matter of the Brain. Palouse Mindfulness.com

Hamilton, D.R. (2017)*The Five Side Effects of Kindness*, Hay House.

Hanh, T. N. (1976). *The miracle of mindfulness: A manual on meditation*. Boston: Beacon.

Hartmann, M., Kopf, S., Kircher, C., Faude-Lang, V., Djuric, Z., Augstein, F., ... & Nawroth, P. P. (2012). Sustained effects of a mindfulness-based stress-reduction intervention in type 2 diabetic patients: design and first results of a randomized controlled trial (the Heidelberger Diabetes and Stressstudy). *Diabetes care*, *35*(5), 945-947.

Hoge, E. A., Bui, E., Marques, L., Metcalf, C. A., Morris, L. K., Robinaugh, D. J., ... & Simon, N. M. (2013). Randomized controlled trial of mindfulness meditation for generalized anxiety disorder: effects on anxiety and stress reactivity. *The Journal of clinical psychiatry*, *74*(8), 0-0.

Hofmann, S. G., Sawyer, A. T., Witt, A. A., & Oh, D. (2010). The effect of mindfulness-based therapy on anxiety and depression: A meta-analytic review. *Journal of consulting and clinical psychology*, *78*(2), 169.

Hölzel, B. K., Carmody, J., Evans, K. C., Hoge, E. A., Dusek, J. A., Morgan, L., ... & Lazar, S. W. (2009). Stress reduction correlates with structural changes in the amygdala. *Social cognitive and affective neuroscience*, *5*(1), 11-17.

Hölzel, B. K., Lazar, S. W., Gard, T., Schuman-Olivier, Vago, D. ., & Ott, U. (2011). How does mindfulness meditation work? Proposing mechanisms of action from a conceptual and neural perspective. *Perspectives on psychological science*, *6*(6), 537-559.

Hughes, J. W., Fresco, D. M., Myerscough, R., van Dulmen, M., Carlson, L. E., & Josephson, R. (2013). Randomized controlled trial of mindfulness-based stress reduction for prehypertension. *Psychosomatic medicine*, *75*(8).

Kabat-Zinn, J. (2017). ***Defining Mindfulness,*** Mindful magazine, January 11. https://www.mindful.org/jon-kabatzinn-defining-mindfulness

Kabat-Zinn, J. (1990). *Full catastrophe living: Using the wisdom of your body and mind to face stress, pain, and illness*. New York: Delacorte.

Kabat-Zinn, J. (1982). An outpatient program in behavioral medicine for chronic pain patients based on the practice of mindfulness meditation: Theoretical considerations and preliminary results. *General Hospital Psychiatry*, *4*, 33-47.

Kabat-Zinn, J. (1994). *Wherever you go, there you are: Mindfulness meditation in everyday life*. New York: Hyperion.

Kearney, D. J., McDermott, K., Malte, C., Martinez, M., & Simpson, T. L. (2012). Association of participation in a mindfulness program with measures of PTSD, depression and quality of life in a veteran sample. *Journal of clinical psychology*, *68*(1), 101-116.

Lazar, S. W., Kerr, C. E., Wasserman, R. H., Gray, J. R., Greve, D. N., Treadway, M. T., ... & Rauch, S. L. (2005). Meditation experience is associated with increased cortical thickness. *Neuroreport*, *16*(17), 1893.

Levitt, S. D.; List, J. A. (2011). "Was there really a Hawthorne effect at the Hawthorne plant? An analysis of the original illumination experiments" (PDF). *American Economic Journal: Applied Economics. **3**: 224–238. doi:10.1257/app.3.1.224.*

Linehan, M. M. (1993b). *Skills training manual for treating borderline personality disorder*. New York: Guildford.

Marlatt, G. A., & Kristeller, J. L. (1999). Mindfulness and meditation. In W. R. Miller (Ed.), *Integrating spirituality into treatment* (pp. 67-84). Washington, DC: American

Psychological Association.

McCarney R, Warner J, Iliffe S, van Haselen R, Griffin M, Fisher P (2007). "The Hawthorne Effect: a randomised, controlled trial". BMC Med Res Methodol. 7: 30. doi:10.1186/1471-2288-7-30. PMC 1936999. PMID 17608932.

Menezes P, Miller WC, Wohl DA, Adimora AA, Leone PA, Eron JJ (2011), "Does HAART efficacy translate to effectiveness? Evidence for a trial effect", *PLoS ONE,* **6** (7): e21824, Bibcode:2011PLoSO...621824M, doi:10.1371/journal .pone.0021824, PMC 3135599, PMID 21765918.

Moss, A. S., Reibel, D. K., Greeson, J. M., Thapar, A., Bubb, R., Salmon, J., & Newberg, A. B. (2015). An adapted mindfulness-based stress reduction program for elders in a continuing care retirement community: Quantitative and qualitative results from a pilot randomized controlled trial. *Journal of Applied Gerontology*, *34*(4), 518-538.

Ornish, D. (2010). *Dr. Dean Ornish's program for reversing heart disease: The only system scientifically proven to reverse heart disease without drugs or surgery*. Ivy Books.

Pagnoni, G., & Cekic, M. (2007). Age effects on gray matter volume and attentional performance in Zen meditation. *Neurobiology of aging*, *28*(10), 1623-1627.

Pbert, L., Madison, J. M., Druker, S., Olendzki, N., Magner, R., Reed, G., ... & Carmody, J. (2012). Effect of mindfulness training on asthma quality of life and lung function: a randomised controlled trial. *Thorax*, *67*(9), 769-776.

Psarraki, E. E., Bacopoulou, F., Vlachakis, D., Chrousos, G. P., Michou, M., Pelekasis, P., Stavrianou, N & Darviri, C. (2021). The Kentucky Inventory of Mindfulness Skills in Greek Undergraduate and Postgraduate Students. In *GeNeDis 2020: Genetics and Neurodegenerative Diseases* (pp. 227-238). Springer International Publishing.

Reiner, K., Tibi, L., & Lipsitz, J. D. (2013). Do mindfulnessbased interventions reduce pain intensity? A critical review of the literature. *Pain Medicine*, *14*(2), 230-242.

Robins, C. J., Keng, S. L., Ekblad, A. G., & Brantley, J. G. (2012). Effects of mindfulness-based stress reduction on emotional experience and expression: A randomized controlled trial. *Journal of clinical psychology*, *68*(1), 117-131.

Rome, D. (2018), https://mindfulfocusing.com/

Vestergaard-Poulsen, P., van Beek, M., Skewes, J., Bjarkam, C. R., Stubberup, M., Bertelsen, J., & Roepstorff, A. (2009). Longterm meditation is associated with increased gray matter density in the brain stem. *Neuroreport*, *20*(2), 170-174.

Seneca (62 A.D.) Sixth Letter to Lucillus

Shapiro (2017) What you practice grows stronger. Youtube:

https://www.youtube.com/watch?v=IeblJdB2-Vo

Shapiro, S.L., Carlson, L.E., Astin, J.A., & Freedman, B. (2006). Mechanisms of mindfulness. Journal of Clinical Psychology, 62, 373–386.

Shapiro, S.L., Oman, D., Thoresen, C.E., Plante, T.G., & Flinders, T. (2008). Cultivating mindfulness: Effects on wellbeing. Journal of Clinical Psychology, 64, 840–862.

Shapiro, S.L., Schwartz, G.E., & Bonner, G. (1998). Effects of mindfulness-based stress reduction on medical and premedical students. Journal of Behavioral Medicine, 21, 581–599.

Schellekens, M. P., Jansen, E. T., Willemse, H. H., van Laarhoven, H. W., Prins, J. B., & Speckens, A. E. (2016). A qualitative study on mindfulness-based stress reduction for breast cancer patients: how women experience participating with fellow patients. *Supportive Care in Cancer*, *24*(4), 18131820.

Schmidt, S., Grossman, P., Schwarzer, B., Jena, S., Naumann, J., & Walach, H. (2011). Treating fibromyalgia with mindfulness-based stress reduction: results from a 3-armed randomized controlled trial. *PAIN®*, *152*(2), 361-369.

Sullivan, M. J., Wood, L., Terry, J., Brantley, J., Charles, A., McGee, V., ... & Cuffe, M. S. (2009). The Support, Education, and Research in Chronic Heart Failure Study (SEARCH): a mindfulness-based psychoeducational intervention improves depression and clinical symptoms in patients with chronic heart failure. *American Heart Journal*, *157*(1), 84-90.

Speca, M., Carlson, L.E., Goodey, E., & Angen, M. (2000). A randomized, wait-list controlled clinical trial: The effect of a mindfulness meditation-based stress reduction program on mood and symptoms of stress in cancer outpatients. Psychosomatic Medicine, 62, 613–622.

Spielberger, C.D., Reheiser, E.C. (2009) Assessment of Emotions: Anxiety, Anger, Depression and Curiosity. Applied Psychology: Health and Well-Being 1: 271-302.

Zernicke, K. A., Campbell, T. S., Blustein, P. K., Fung, T. S., Johnson, J. A., Bacon, S. L., & Carlson, L. E. (2013). Mindfulness-based stress reduction for the treatment of irritable bowel syndrome symptoms: a randomized wait-list controlled trial. *International journal of behavioral medicine*, *20*(3), 385396.