



Barcelona, Spain

ISBN: 978-609-485-280-0

Date: 22nd April 2022

Category: Education, Teaching and Learning

<https://www.dpublication.com/proceeding/4th-icmetl>

Teaching children to manage stress and be happy through Mindfulness

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Abstract.

The Sars-CoV-2 pandemic - we have been experiencing for about two years - has provoked new forms of exclusion and marginalization, of psychological distress in children and adolescents. The health emergency has created a significant revolution in the way of expressing emotions, in managing stress, in interpersonal relationships and in lifestyle. The continuous transformations have mainly affected the school context and have led to stressful conditions in teachers and children.

It is, therefore, essential that the pedagogy and other human sciences in general aim to build self-training paths, that lead subjects to re-learn to dream, to hope, to plan a life projected towards tomorrow.

In line with the 2030 Agenda, LifeComp (2020) and GreenComp (2022), we find extremely useful mindfulness practice to work with children in classroom. Mindfulness is the interconnection between the ability to direct attention to the present moment (self-regulation of attention) and the attitude connected to this moment, characterized by curiosity, openness and acceptance.

Most of the research on mindfulness training was for adults. In this paper, we want to support the adaptation of mindfulness techniques to work with children. In fact, it is argued that mindfulness training has the potential to improve children's attention and concentration and improve memory.

Exercises for teaching children to be aware are presented in progression, starting with awareness of the external environment, then with awareness through meditation exercises that characterize participation in cognitive processes. This, especially in the transition from primary to middle school.

Keywords: emotional education, awareness, primary school, happiness, well-being

1. Introduction

Since 2020, the Sars-CoV-2 pandemic has had a very strong impact at the social level, producing psychological distress in children and adolescents, forms of exclusion and marginalization. It is possible to outline these changes as a significant revolution in the way of:

- expressing emotions;
- managing stress;
- interpersonal relationships;
- lifestyle.

Students and their families have faced major changes in lifestyles since the onset of the COVID-19 pandemic, many have faced negative emotions and have sought ways to self-regulate in the face of the pandemic, the threat of illness, and the resulting change in their daily lives (Ge et al., 2020). During this time, many students coped with school closures and learning from home through a distance learning model (Viner et al., 2020). School closures related to COVID-19 have impacted children's education, isolation, and child well-being (Crawley et al., 2020). Lawrence et al. (2019) state that, in order to improve school attendance, it may be important to prevent and manage mental health disorders.

The continuous transformations have led to stressful conditions in teachers and children. U.S. mental health experts, for example, recommend screening children as young as 8 years old for anxiety, and also emphasize the importance of screening for major depressive disorder and suicide risk in adolescents ages 12 to 18. New preliminary guidelines developed by the U.S. Preventive Services Task Force (USPSTF), an independent group of prevention and primary care specialists that develops reports for public health, indicate this¹.

A recent research (Jones et al., 2022) found that, in the U.S., 37% of school-age youth experienced mental health problems as of March 2020. A veritable wave of disorders that has also swept through mental health services. In toddlers, relevant clinical cases of mental health conditions such as anxiety and depression have doubled due to the virus, according to another study (Racine et al., 2021).

In Italy, the results of a study (Cusinato et al., 2020), shows that confinement measures and changes in daily routine negatively affect parents' psychological dimensions, thus exposing children to a significant risk for their well-being. These results also detect some risk factors for psychological maladjustments, such as parental stress, lower levels of resilience in children, changes in working conditions, and parental psychological, physical, or genetic problems.

Pedagogy and other human sciences can contribute for: build self-training paths, that lead subjects to re-learn to dream, to hope, to plan a life projected towards tomorrow. Mindfulness practice with children can improve this goals.

The aim of this research is teaching children to manage stress and be happy through mindfulness.

¹ U.S. Preventive Services Task Force Website: <https://www.uspreventiveservicestaskforce.org/uspstf/public-comments-and-nominations/opportunity-for-public-comment>

The general objective and the specific objectives that this research aims to achieve are shown below.

General:

- experiment with a Mindfulness-based stress reduction approach (MBSR) in order to teach children to be mindful, starting with awareness of the external environment, then with mindfulness through meditation exercise, that characterize participation in cognitive processes.

Specific:

- manage emotions and stress by adapting to life circumstances;
- promote an experience aimed at facilitating the educational transition of the students involved, from primary to middle school;

2. Literature review

There is no single universally accepted meaning or definition of mindfulness. The term is further confused with many other distinct but inter-related words: reflection, contemplation, prayer and meditation (Venkatesan, 2022).

Kabat-Zinn (the founder of Mindfulness-Based Stress Reduction - MBSR), defined it as “paying attention on purpose in the present moment, non-judgmentally [...]. A non-elaborative, non- judgmental, present-centered awareness in which each thought, feeling, or sensation that arises in the attentional field is acknowledged and accepted as it is”².

In the field of clinical psychology, mindfulness is interconnection between the ability to direct attention to the present moment (self-regulation of attention) and the attitude connected to this moment, characterized by curiosity, openness and acceptance (Bishop et. al., 2004). This is the reference definition to mindfulness that we chose, among others, for this study. Mindfulness, therefore, is a practice aimed at training people about “being present”; by accepting the reality of what they consciously experience. In recent decades, the clinical efficacy of mindfulness has been demonstrated through studies that have shown the reduction of stress symptoms even in subjects with serious diseases (Branstrom et al. 2012). The awareness of the experience, which unfolds in the present moment, creates an attunement with ourselves that activates specific brain circuits, inducing a wide range of beneficial effects, from emotional balance to improving the functioning of heart activity (Siegel, 2009).

In recent decades there has been a sharp increase in anxiety among young children (Gray, 2011). Teachers and students must quickly adapt to the new safety protocols put in place in schools to keep everyone safe from the pandemic (Zussman, 2020). Stress, anxiety, depression, and eating disorders have high prevalence in children and adolescents, and

² Both R., *Interview Master of mindfulness, Jon Kabat-Zinn: ‘People are losing their minds. That is what we need to wake up to’*. Available in: <https://www.theguardian.com/lifeandstyle/2017/oct/22/mindfulness-jon-kabat-zinn-depression-trump-grenfell#:~:text=Kabat%20Zinn%20has%20defined%20mindfulness,pain%2C%20both%20physical%20and%20emotional.>

mindfulness techniques, adapted for children with these symptoms, seem indicated for these populations.

Specific potential benefits are:

- may improve memory: children often forget things simply because they are not paying attention. Children will remember things better if they are: aware of them, attending to them, and focused, which may help with both learning and sports (Fontana & Slack, 1997);
- for children with concentration problems and those with ADHD: to use mindfulness as a practice to improve their attention and focus. May also be useful for children who are aggressive, as it promotes self-control and self-management. Furthermore, children, by becoming more self-aware and by focusing on themselves, will learn how their mind works and about their thinking process, promoting greater self-understanding of their own experiences of the world, which they do not typically experience (Fontana & Slack, 1997).

As Kabat-Zinn (2003) states, mindfulness “cannot be taught to others in an authentic way without the instructor’s practicing it in his or her own life” (p. 149). It is not something you learn about at a seminar or read about and then pass along. Children may also have the misperception that meditation is just used for relaxation. It is true that meditation produces a physiological state of deep relaxation, with slower metabolic rate and heartbeat (LeShan, 1974). But meditation is much more than relaxation, as it involves focus and awareness.

In recent years, mindfulness has become very popular (Van Dam et al., 2018) and believed to be a practice that can provide many benefits. Social-emotional learning (SEL) is now practiced worldwide, and these skills can not only predict a student's future success, but more importantly, can be taught and assessed (Schonert-Reichl, 2019). The increasing importance of artificial intelligence-which is replacing workers through automation-makes the development of strong SEL skills central to preparing students where collaboration and critical thinking will be increasingly in demand (Organization for Economic Cooperation and Development [OECD], 2018). In light of this, mindfulness has made its way into schools as a way to improve SEL skills, as well as increase attention and resilience (Mindful Schools).

Mindfulness improves emotion regulation, mood, coping/social skills, confidence and self-esteem, empathy, and attention (Coholic & Eys, 2016). Additionally, Dunning et al. (2019) found that MBIs (Mindfulness Based Interventions) are a beneficial tool in the treatment of anxiety, depression, and negative.

A study of Bauer et al. (2019), provides initial evidence that mindfulness training in children reduces stress and promotes functional brain changes and that such training can be integrated into the school curriculum for entire classes. The research also reveals first evidence that, a neurocognitive mechanism for both stress and its reduction by mindfulness training, is related specifically to reduced amygdala responses to negative stimuli.

3. Methodology

A Mindfulness-based stress reduction approach - MBSR (Kabat-Zinn, 2003) was chosen in this research, through a Workshop titled “Discovering and cultivating our inner garden to foster positive thoughts and manage stress in the classroom”.

The planning and conduction of the activities are attributed to Maria Buccolo PhD and Professor of Special Needs Design, Sapienza University of Rome. Two students from the University Course in Apprenticeship at School participated in the workshop as part of the research team. The participants to the MBSR Laboratory were 20 children of the class 5 (Section F) of the Primary School of the "I.C. Via del Calice" of Rome (Italy).

The specific objectives of the Workshop were:

- teach how to take care of themselves, manage emotions and stress by adapting to life circumstances;
- become aware of thoughts, emotions and sensations, observing them without judgment and elaborating conscious and appropriate responses, rather than automatic and chaotic reactions.

In terms of organization, eight meetings were planned, each meeting on a weekly basis lasting two hours, for an overall total of the MBSR path of 16 hours.

Each meeting was divided into moments of didactic activities related to emotional education and moments of meditative practice to explore the emotion discussed. Experiential training activities were carried out with individual, couple or group exercises. Each activity included a time to compare experiences with de-briefing.

The program also involved the students' families, because they were informed before the course began and shared the objectives with the trainer. Then, they engaged in daily meditative practice through homework assignments (e.g., compiling journals of pleasant or unpleasant events, reading stories, practicing mindfulness exercises about food), doing them together as a family to promote wellness and mindfulness at home, creating a connection with the work at school and building an educational community.

The structure of each meeting was organized into the following phases:

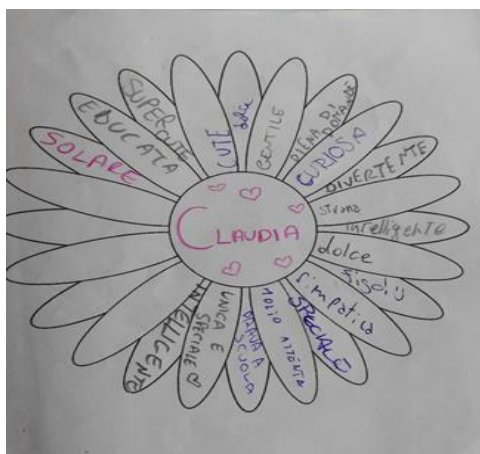
- opening meditation (game or group activity on a specific emotion: for example, happiness, sadness, anger, etc.);
- reading of assignments;
- class discussion and sharing of experiences;
- formal meditation;
- reading of fairy tales and nursery rhymes;
- closing meditation;
- homework;
- greeting game.

The structure includes: (a) a formal practice (three mindfulness meditation sessions; opening, middle, and closing) and (b) educational activities related to emotional education (story readings, experience sharing and guided discussions).

4. Results and discussion

The results of the MBSR Workshop, show the educational value of the experience conducted with children. In particular: (a) teaching to be responsible for one's own actions, (b) taking care of oneself (c) learning to manage emotions and improving communication at school and in life. Another fundamental aspect is that of the MBSR model's ability to emotionally support students in the moment of transition from elementary school to secondary school.

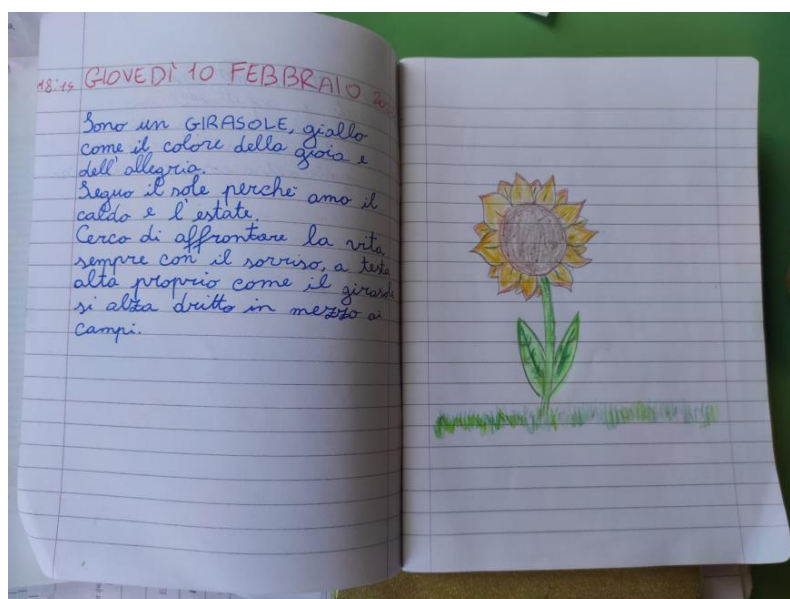
Figure 1: An example of self-reflection: each petal of the flower represents a personal characteristic of Claudia (sunny, nice, curious, funny, etc.).



Source: research material of Authors.

Through mindfulness it is possible to understand personal ways of reacting to life events. This understanding develops in practicing emotional intelligence, that is, the ability to recognize, use, understand and consciously manage one's own and others' emotions (Buccolo, 2019; Goleman, 1995).

Figure 2: An example of representing oneself through a type of flower. In this case, the sunflower because the student who drew it loves the heat and summer and tries to face life head-on, just like the sunflower that stands straight up in the middle of the fields.



Source: research material of Authors.

In addition, the MBSR Workshop, is in line with two important European documents:

The first is LifeComp 2020 - The European Framework for Personal, Social and Learning to Learn Key Competence. In particular, the following sub-points:

L1 - Growth Mindset: Belief in one's and others' potential to continuously learn and progress;

L2 - Critical Thinking: Assessment of information and arguments to support reasoned conclusions and develop innovative solutions³.

The second is GreenComp 2022 - The European sustainability competence framework. In particular, the Area n. 2 "Embracing complexity in sustainability", with the following competences:

2.2 Critical thinking: to assess information and arguments, identify assumptions, challenge the status quo, and reflect on how personal, social and cultural backgrounds influence thinking and conclusions.

2.3 Problem framing: to formulate current or potential challenges as a sustainability problem in terms of difficulty, people involved, time and geographical scope, in order to

³ Sala, A., Punie, Y., Garkov, V. and Cabrera Giraldez, M. (2020). *LifeComp: The European Framework for Personal, Social and Learning to Learn Key Competence*, EUR 30246 EN, Luxembourg: Publications Office of the European Union. URL: <https://publications.jrc.ec.europa.eu/repository/handle/JRC120911>.

identify suitable approaches to anticipating and preventing problems, and to mitigating and adapting to already existing problems⁴.

Figure 3: An example of a weekly routine self-observation sheet: each daily activity corresponds to a description of personal emotional experience.

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Handout n. 2.4 - Auto-osservazione delle routine

NOME: _____ DATA: _____

AUTO-OSSERVAZIONE DELLE ROUTINE

Scrivi cosa hai notato mentre prestavi attenzione alla routine che hai scelto. Come ti è sentito? Cosa hai pensato? Hai notato qualcosa di nuovo che non avessi mai notato prima?

Data	Attività di routine	Note
Lunedì	studio-compiti	mi sono sentita che andavo più spedito e che pensavo: "Se finisco presto, ho più tempo per me".
Martedì	Catechismo	mi sono sentita più tranquilla e ho pensato che Gesù fosse davanti a me.
Mercoledì	Nuoto	mi sono sentita energica e ho notato che nuoto più forte.
Giovedì	Gioco libero	mi sono sentita più concentrata sulle palline, mi concentro solo su ciò che sto facendo.
Venerdì	Ginnastica Ritmica	mi sono sentita elettrizzata e pensando a quello che sto facendo mi sento più forte.
Sabato	Gioco al parco	ho fatto molto più forte, ho sentito che ero molto forte a correre con la mamma.
Domenica	Gioco con Giulio	mi sono sentita rilanciata e penso che quel momento non finisce mai.

Source: research material of Authors.

From this research, furthermore, we can draw some indications for designing educational interventions through Mindfulness with children:

- is not dramatically different from that for adults;
- exercises and homework can be adapted to fit different ages and abilities.
- the experience of a child is like. Children's thinking is more concrete: activities should be clear, concrete, and descriptive in their instructions. Children are also imaginative and are able to use their creativity and imagination. They enjoy movies, cartoons, and fantasy books. The use of humor also helps.
- starting dimply is better (start trying to meditate with five minutes);

⁴ Bianchi, G., Pisiotis, U. and Cabrera Giraldez, M. (2022). *GreenComp. The European sustainability competence framework*, Punie, Y. and Bacigalupo, M. editor(s), EUR 30955 EN. Luxembourg: Publications Office of the European Union. URL: <https://publications.jrc.ec.europa.eu/repository/handle/JRC128040>.

- Beginning with the more concrete attention to the: a) external environment, b) experience of the body and c) introducing attention to the mind and meditation exercises.

Figure 4: An examples of an outdoor and indoor activity, in a circle.



Source: research materials of Authors.

5. Conclusion

This article aimed to test an MBSR Workshop for children. The activities are presented in progression, beginning with awareness of the external environment, then with awareness through meditation exercises that characterize participation in cognitive processes. A fundamental aspect is that of the MBSR model's ability to emotionally support students in the moment of transition from primary to secondary school. The MBSR Workshop also involved the students' families, because they were informed before the course began and shared the objectives with the trainer.

Mindfulness has been shown to contribute directly to the development of cognitive skills, such as paying more attention, being more focused, using existing knowledge more effectively, improving working memory, problem solving, and reasoning skills (Flook et al., 2010).

The daily practice of mindfulness activities improves the management of emotions, unexpected events and difficulties, offering children and families a relaxed climate based on the propensity to listen, useful both at home and at school. The school becomes a “school of life”, that trains the citizens of tomorrow in the skills useful for their future.

These are the foundations of a Pedagogy that supports the emotional intelligence of those who will govern the future of our planet (Morin, 2020).

Authorship attribution

This paper is the result of a common work. However, for scientific purposes only, the Abstract and Conclusions are attributed to both Authors. Paragraph 1, 2 are attributed to Valerio Ferro Allodola; Paragraphs 3 and 4 to Maria Buccolo.

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