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# Effects of a mindfulness training on self-regulation and social-emotional skills in basic education: perceptions of teachers, family members, and students

## *Efeitos de um treinamento em Mindfulness na autorregulação e em habilidades socioemocionais na educação básica: percepções dos docentes, familiares e estudantes*

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### Abstract

#### Objective

This study evaluated the effects of Mindfulness-Based Interventions on students' social-emotional skills, as perceived by teachers, families, and students themselves.

#### Method

Twelve teachers, 50 family members, and 28 students aged 8-9 from two public schools participated in the study. They responded to a semi-structured interview, and the content was analyzed using the MAXQDA software, version 18.2.0 (<https://www.maxqda.com>), which generated a map with categories and subcategories of analysis. The central axis of the study was Perception of Mindfulness-Based Interventions.

#### Results

Results indicated that, according to participants' perceptions, this strategy brought about significant changes in behavior, particularly related to self-regulation, social-emotional skills, and promotion of well-being.

## Conclusion

Thus, we recommend that education managers establish norms and conditions for implementing such interventions to benefit elementary school students.

**Keywords:** Mindfulness; Self-regulation; Social skills; Student; Psychological well-being.

## Resumo

### Objetivo

*Este estudo avaliou os efeitos da Intervenção Baseada em Mindfulness realizada em estudantes da educação básica, na percepção de docentes, familiares e estudantes.*

### Método

*Participaram do estudo 12 docentes, 50 familiares e 28 estudantes entre 8-9 anos de duas escolas públicas. Eles responderam a uma entrevista semiestruturada e o conteúdo foi analisado com a utilização do software MAXQDA, versão 18.2.0 (<https://www.maxqda.com>), que gerou um mapa com categorias e subcategorias de análise. O eixo central do estudo foi a Percepção sobre Mindfulness-Based Interventions.*

### Resultados

*Mostraram que, na percepção dos participantes, essa estratégia apresentou mudanças significativas no comportamento, relacionadas à autorregulação, a habilidades socioemocionais e à promoção do próprio bem-estar.*

### Conclusão

*Desse modo, recomendamos que gestores da educação criem normas e condições para que esse tipo de intervenção possa ser implementada e favorecer alunos de educação básica.*

**Palavras-chave:** Mindfulness; Autorregulação; Habilidades socioemocionais; Estudante; Bem-estar psicológico.

There is a growing body of research showing that a significant number of children and adolescents in schools are experiencing emotional, behavioral, and mental health problems in today's society. Epidemiology indicates that mental health issues typically begin in childhood and adolescence, often following a chronic trajectory (Kim-Cohen et al., 2003). In this context, scholars such as Fatori et al. (2018) indicate that the prevalence of mental health problems in children, both internalizing and externalizing, is 30.7% and 18.3%, respectively, in primary care.

Therefore, according to Zelazo et al. (2018), there is a need to expand the reflection that childhood is an important period to promote interventions aimed at preventing psychopathologies and assisting in coping with various difficulties that are essential for academic performance. The development of self-regulation skills related to controlling thoughts, actions, and emotions during this phase of life is predictive of significant developmental outcomes (Lertladaluck et al., 2021; Zelazo et al., 2012). As noted by Ortiz and Sibinga (2017), well-structured Mindfulness interventions improve mental, behavioral, and physical outcomes in children, potentially benefiting both short- and long-term results and reducing poor health outcomes in adulthood.

For Leyland et al. (2019), self-regulation is the control of aspects of the self to enable the pursuit of long-term goals and is proposed as a central pathway through which Mindfulness can exert benefits on well-being. Opalinski and Martinez (2021) reported in their study that the Mindfulness program from Mindful Schools provided self-regulation in a school population, showing a decrease in emotional distress.

When children are helped to acquire the ability to persevere in a task, exercising skills to sustain and focus attention and the ability to hold information in mind long enough to relate one idea or piece of information to another, they can acquire academic content knowledge with fundamental impact on developmental outcomes, including social and emotional well-being and academic functioning (Blair & Diamond, 2008).

According to Lo et al. (2018), there is an increase in self-awareness and self-regulation, highlighted by Robinson et al. (2023) as an important domain of child development not only in promoting well-being but also in emotional adjustment, social functioning, and educational performance. Considering that higher levels of self-regulation are associated with improved well-being, including better mental health, the ability to maintain effective social relationships, and comprehensive adaptive functioning, not only in family life but also in school (Amundsen et al., 2020; Cheung et al., 2021).

Renshaw and Cook (2016) advocate for the implementation of techniques like Mindfulness to support students in self-regulation and self-awareness processes. These techniques involve practices such as mindful breathing to enhance well-being and cultivating the ability to engage with present experiences purposefully and positively.

To achieve the experience of an authentic life, Seligman (2019) advocates that well-being should be taught in schools so that young people learn to place greater importance on healthy aspects of life, and this learning can spread to other spheres of society.

Programs addressing a spectrum of student needs, encompassing cognitive, emotional, social, and physical aspects, have been implemented with notable success. Rather than focusing solely on isolated elements, these programs comprehensively address children's needs, offering educational and psychosocial support to navigate conflicts more effectively (Fenwick-Smith et al., 2018; Forsberg & Schultz, 2023).

According to McClelland et al. (2017), it is important not to leave out Social-Emotional Skills (SEL) in interventions for children, which, according to Djamnezhad et al. (2021), is the process by which children and adults learn to understand and manage emotions, maintain positive relationships, make responsible decisions, set and achieve positive goals, feel and show empathy for others, as well as improve their ability to solve problems effectively.

As Halliday et al. (2021) state, for the well-being of school-aged children, school engagement is important. Confirmed by Greenberg et al. (2017), in the long term, children with higher social-emotional competence are more likely to be mentally healthy and have positive relationships.

Considering these student needs, Mindfulness-based interventions implemented in school settings have emerged as noteworthy. Britton et al. (2014) introduce simple techniques designed to enhance self-awareness and aid in regulating attention, emotions, and behavior among children and adolescents. Vickery & Dorjee (2015) point to a significant improvement in metacognition and academic performance, a decrease in negative feelings, and the potential for improved self-regulation and emotional well-being. According to Dunning et al. (2019) and Dunning et al. (2022), there are significant positive effects on executive functioning, attention, depression, anxiety/stress, and negative behaviors. Making a significant contribution, Phan et al. (2022) reported increased pro-social behavior, resilience, executive function, attention, and mindfulness, along with decreased anxiety, Attention Deficit/Hyperactivity Disorder (ADHD) symptoms, and conduct behaviors.

In schools, Mindfulness can facilitate the educational process. Students are taught how to direct their minds when wandering and how to regulate attention and emotions, deal with feelings of frustration, self-motivate, as well as develop prosocial dispositions, such as empathy and compassion, self-representations, ethical sensitivity, creativity, and problem-solving skills (Zenner et al., 2014), and reduce negative affectivity (Schumer et al., 2018). Improvements in emotional and behavioral regulation, pro-social behaviors, and stress and anxiety reduction (Monsillion et al., 2023).

The development of pro-social behavior among children contributes to fostering peer support relationships (Mitic et al., 2021), thereby positively impacting their psychological well-being,

self-esteem, and social skills in this specific population (Cheang et al., 2019). As Halliday et al. (2021) state, school engagement is important for the well-being of school-aged children.

It is worth mentioning that, for the care of students' self-regulation and emotional well-being, being present in the here and now, directing attention to bodily sensations, sounds, breathing, smell, taste, touch, observing the environment, movements, walking, empathy, among others, can be considered. Given these procedures to develop Mindfulness, as there are few studies that cover the teacher/student/family triad aimed at understanding how they perceive the Mindfulness experience, our interest arose to verify how this strategy is applied in this context and what the repercussions are. Is it a feasible proposition, and what are its implications? This gap inspired the present study.

Thus, the objective of this paper was to investigate the effects of Mindfulness-Based Interventions (MBIs) on the perception of teachers, students, and family members, carried out with Brazilian public-school students aged 8 to 9 years old.

Our hypothesis was that MBIs could influence emotional health due to its focus on self-regulation and social-emotional skills.

## Method

A qualitative approach conducted using the semi-structured interview technique, which is guided and based on a central question and a thematic script of interest to the study.

### Participants

This study is the qualitative part of a larger study (Milaré et al., 2021) that originated it, with semi-structured interviews to participants, including 28 students aged between 8-9 years old and 12 teachers with a college degree, aged between 26-50 years old. There were 50 family members of the respective students aged between 25-40 years old who agreed to participate in the study, including 44 mothers, five fathers, and one grandmother, from two public schools in the Southeastern region of the city of São Paulo (SP, Brazil). It is important to highlight that the interviews were conducted separately with each group (students, teachers, and family members).

To be eligible for participation, students were required to have taken part in the K5 program of the Mindful Schools (Milaré et al., 2021) Mindfulness Intervention, with their parents or legal guardians having signed the Informed Consent Form (ICF) and the students themselves having signed the Assent Form. Additionally, students needed to express willingness to participate in the interview and have no mental disorders that would hinder their involvement. Teachers were eligible if they were responsible for the classes involved in the Intervention and had signed the ICF. Family members were required to reside with the student and also sign the ICF.

### Procedures

This study complied with national and international ethics standards in research involving human subjects, following resolution 466/12-510/16, approved by the Research Ethics Committee of the Universidade Federal de São Paulo (Unifesp, Federal University of São Paulo), opinion No. 3460707.

After the Mindfulness Intervention, interviews were conducted with students, teachers, and family members using the semi-structured interview technique, with some guiding questions aimed at obtaining the maximum information related to the object of study, with the theme being the impact of Mindfulness Intervention in the school context.

The intervention was structured around the K5 Program developed by Mindful Schools (Milaré et al., 2021), as detailed in Table 1. This curriculum is specifically tailored for elementary

school children and requires specialized training in mindfulness as well as successful completion to qualify individuals to work with children in educational settings. To adapt the program for our study, certain modifications were implemented to enhance comprehension. These adaptations included the integration of props such as hula hoops for movement exercises, a ball to symbolize gratitude, an anchor to aid in breathing exercises, buttons to represent acts of generosity, and a rainstick to explore different sounds. The intervention comprised 16 mindfulness sessions, each lasting 30 minutes, conducted over an eight-week period (twice a week). These sessions were led by the researcher, who was a qualified instructor of the program. Training sessions were conducted in a dedicated room specifically arranged for mindfulness practices.

To achieve the objective of this study, interviews were conducted with students, teachers, and family members using the semi-structured interview technique, with some guiding questions aimed at obtaining the maximum information related to the object of study, with the theme being the impact of Mindfulness Intervention in the school context.

**Table 1***Mindfulness Intervention (main contents)*

Week	Session Themes	Session Contents	Instructions for Diary Completion
1	<i>1st Session</i> Mindfulness of Body and Listening <i>2nd Session</i> Mindfulness of Breathing	Conscious bodies and focusing attention on the sound of the Tibetan bell, from the beginning to the end of the sound; careful listening to environmental sounds, in the classroom; following their breath.	Listen to the sounds in different places, listen to the sound of water in the shower. Breathe and observe where you feel it in the body.
2	<i>3rd Session</i> Kindness: sending kind thoughts <i>4th Session</i> Body awareness	Sending kind and loving thoughts to other people they chose. Whole-body scanning while observing feelings and sensations.	Send kind thoughts to someone and observe what you felt. What sensations did you notice in your body and color them in the drawing of the doll.
3	<i>5th Session</i> Mindfulness of Breathing <i>6th Session</i> Generosity	Teach the “anchor word” to help stay connected with breathing; (received the anchor pin) discuss and visualize ways to be generous: at recess sharing lunch, observe what you feel (received the heart pin).	How did you feel when learning the anchor word and how can conscious breathing help you? Paint this beautiful flower and write the name of the person you would like to give it to.
4	<i>7th Session</i> Thoughts <i>8th Session</i> Mindfully observing	Talk about thoughts and how thoughts dictate feelings and actions; practice mindful breathing and observe when there are thoughts; Look around to find things with our eyes that we had not noticed before.	How many thoughts does a person have every day? Draw something you saw in the room while using eyes of mindful attention, that you had never noticed before.
5	<i>9th Session</i> Generosity: type and care at recess <i>10th Session</i> Emotions: creating space	Careful observation of an object; discussion and visualization of various requests and feelings at recess. Discuss emotions; identifying where various emotions are felt in the body.	Is it good to be kind to someone, how do you feel? Draw yourself and put colors where you feel anger, fear, happiness, peace, and other emotions you have.
6	<i>11th Session</i> Slow Motion: observing and feeling movements <i>12th Session</i> Gratitude: practicing kindness	Awareness of movements with slow arms and slowly standing up; Talk and visualize how to be grateful (with the gratitude ball) to speak about how gratitude relates to feelings.	Write your name consciously several times and pay attention to how your hand moves. Make a list of things you feel grateful for.
7	<i>13th Session</i> Conscious walking <i>14th Session</i> Mindful eating	Slow and conscious walking (with a hula hoop) helping in the perception of sensations. Eating mindfully with the exercise of raisins.	If everyone practiced Mindfulness in your school, in the playground, would the world be different? Did you notice anything when eating mindfully that you had never noticed before?
8	<i>15th Session</i> Mindfulness during tests <i>16th Session</i> Finishing: Mindfulness for life	Talk and visualize the feelings that arise before, during, and after tests: how to apply mindfulness to these feelings during tests; How to be aware of anything, you learned and will never forget (retrospective of practices in video).	Can calmness help you do well on tests? How would the world be if everyone practiced Mindfulness?

Note: In the 8 thematic sessions based on the K5 curriculum, conducted with students in 16 meetings, the content of the sessions and diaries were presented. Practices carried out in the 8 weeks: in the first week: Mindfulness of Body and Listening and Mindfulness of Breathing. In the second week: Kindness: sending kind thoughts and Body Awareness. In the third week: Mindfulness of Breathing and Generosity. In the fourth week: Thoughts and Mindfully observing. In the fifth week: Generosity: type and care at recess and Emotions: creating space. In the sixth week: Slow Motion: observing and feeling movements and Gratitude: practicing kindness. In the seventh week: Conscious Walking and Mindful Eating. In the eighth week: Mindfulness during tests and Finishing: Mindfulness for Life.

## Interviews

Interviews with students, teachers, and family members were conducted after the Mindfulness Intervention, led by the researcher and a psychologist with experience in the semi-structured interview technique. Some guiding questions were elaborated with the aim of obtaining the maximum information related to the object of study, with the theme being the impact of Mindfulness Intervention in the school context, as shown in Table 2.

With students, semi-structured interviews had a guiding question about the impact of learning Mindfulness and a thematic script with questions related to the family and school context.

**Table 2**

*Semi-structured Interviews with teachers, students, and family members*

Interview with Teachers
How was the experience of Mindfulness for you? (Guiding Question)
How do you evaluate the importance of Mindfulness practices for students in promoting well-being?
Do you think it is possible to introduce the practice of Mindfulness in public education, and how?
In your opinion, did teachers dedicate sufficient time and commitment to the mindfulness practices?
What suggestions does this group have for organizing and implementing Mindfulness in schools?
Interview with Students
They made a directed drawing about the practice of Mindfulness and explained:
How was it for you to practice Mindfulness? (Guiding Question)
Thematic script:
Learning
Changes at school
Differences for you in your families
Use at home with your families
What do you think about other children learning Mindfulness?
Interview with Family Members
What are your thoughts on the Mindfulness program implemented with your children? (Guiding Question)
What have your children shared with the family and what have they learned from Mindfulness?

Note: Semi-structured interviews with questions for collecting information on the perceptions of students and family members about the Mindfulness Intervention carried out with the students, with guiding questions and the thematic script. The interviews were conducted by the researcher, recorded, and transcribed.

## Data Analysis

The analysis was carried out with the recorded interviews of students, teachers, and family members. All transcribed files from the semi-structured interviews were organized in the MAXQDA software, version 18.2.0 (<https://www.maxqda.com>). It was possible to coordinate the entire process of coding, analysis, and discussion of results (Kuckartz, 2014).

For data analysis, the categorical content analysis framework proposed by Guerra (2006) was used. That is, all themes addressed in the interviews were grouped into codes and subcodes, and after content analysis, they were reorganized to elaborate on the categories and subcategories of analysis.

## Data Coding and Categorization System

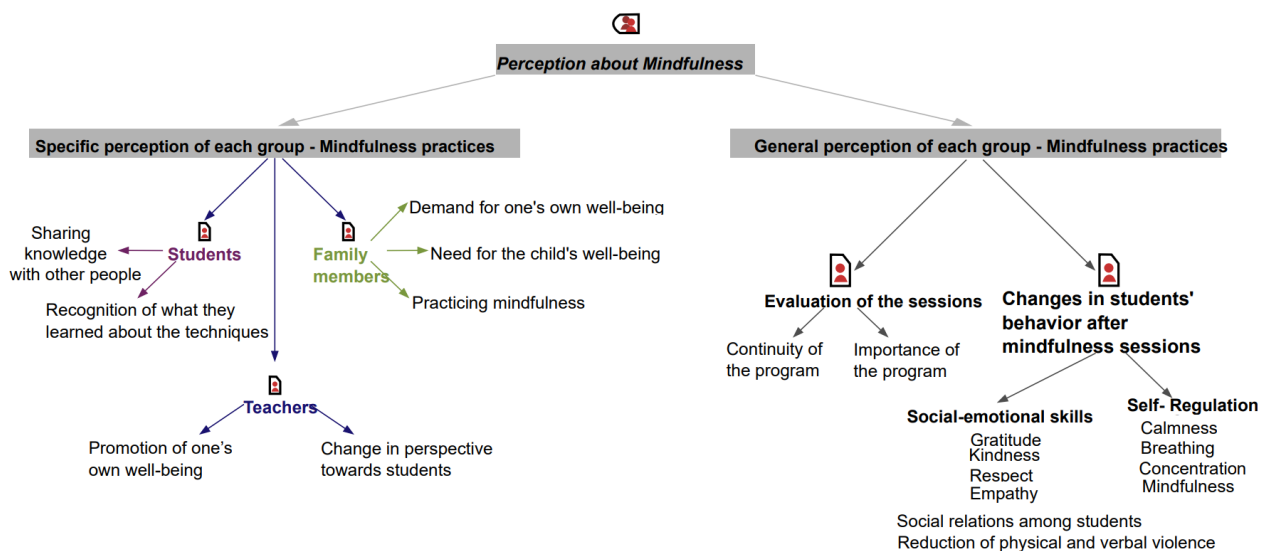
For the elaboration of categories and subcategories, the data-driven coding framework presented by Gibbs (2009) was used. Thus, firstly, open coding was elaborated; in this stage, all

themes addressed by the participants were highlighted, and their speech segments were coded. After this process, axial and selective pieces of coding were executed (stages performed using the MAXQDA code management tool), where it was possible to group, exclude, or include new speech segments for the elaboration of analysis categories, according to the study's objective (central axis of analysis of the perception of students, teachers, and family members about Mindfulness Meditative Practices).

## Results

The analysis of the semi-structured interviews revealed the central axis of investigation, focusing on Perception of Mindfulness, delineated into two categories: The 1st Category encompasses the General Perception of Mindfulness practices among each group (teachers, students, and family members), while the 2nd Category explores the Specific Perception of Mindfulness practices within each group. These categories are illustrated in the map presented in Figure 1, followed by its complete development.

**Figure 1**  
Map of categories and subcategories



Note: Map illustrating two analytical categories, centered around the thematic axis of Perception about Mindfulness. The first category is the Overall Perception of each group about Mindfulness practices, comprising two subdivisions. The first subdivision explores Changes in students' behavior post-Mindfulness sessions, encompassing Socioemotional Skills and Self-regulation. The second subdivision scrutinizes the Evaluation of Mindfulness sessions. The second category is the Specific Perception of each group about Mindfulness practices, further segmented into three groups: students, teachers, and family members.

The 1st Category comprises two divisions: the first delineates Changes in student behavior following Mindfulness sessions, encapsulating Socioemotional Skills and Self-regulation, as illustrated in Figure 1. The second division delves into the Evaluation of Mindfulness Intervention sessions, revealing the collective perspective of students, teachers, and family members regarding the students' progress after their participation in the Mindfulness Intervention.

The 2nd Category is subdivided into three sections: Students, Teachers, and Family members, each offering specific insights from their respective perspectives. To provide clarity on the findings, participants' perspectives will be presented according to their statements, followed by their corresponding categories.

## 1st Category – General Perception of Each Group – Mindfulness Practices

The 1st Category shows the perception about the Mindfulness Intervention of students, teachers, and family members in general, that is, the results are the analysis of the three groups together, supported as follows:

### 1st Division: Changes in Student Behavior After Mindfulness Sessions

The general perception of family members, teachers, and students about the change in student behavior after Mindfulness Intervention was classified into two themes: Self-regulation and Socioemotional Skills.

The narratives underscore improvements in self-regulation following the Mindfulness Intervention, with notable enhancements such as increased calmness, utilization of the breathing anchor technique, enhanced concentration, and improved attention.

For students, Mindfulness helped them become calmer, focus on the present, improve restlessness, and pay attention.

Mindfulness was a very good experience because it helped me *to get calmer since I used to be very restless and couldn't stand still anywhere. It helped me to rest, breathe, be more attentive, and pay more attention to my surroundings* [emphasis added]. (Student Interview – S2)

When I was nervous, like, about something, *someone hit me, or took something of mine without asking, I would get mad, and I would do Mindfulness. It calmed me down* [emphasis added]. (Student Interview – S27)

These things we learned: *to observe the movements of our body, to listen to the noises happening around us, to think about now, not to think about the past or the future, to think about the present* [emphasis added]. (Student Interview – S25)

Learning Mindfulness was very good because before *I used to be restless* [emphasis added], I didn't know how to stay calm, and now I do because *Mindfulness tells us to inhale* [emphasis added] and exhale three times, and then I calm down now because before I used to knock things over a lot. I was restless, and now I don't knock things over anymore, *I pay attention, I have the eyes of a hawk* [emphasis added]. (Student Interview – S15)

For teachers, the emphasis lies in observing students exhibiting greater calmness, improved concentration, enhanced self-control, and heightened awareness of their own bodies.

With the mindfulness practices, they were able to conduct the class more easily, *with more calmness* [emphasis added]. I think they began to *notice things in their daily lives that they couldn't really notice before* [emphasis added], in terms of their *body, breathing, concentration* [emphasis added]. (Teacher Interview – T11)

*They improved a lot in terms of concentration* [emphasis added]. I often catch them saying, watch the anchor". Or like this: *"breathe, breathe, calm down, you can do it"* [emphasis added]. (Teacher Interview – T10)

Before, they used to run around, they weren't aware of their own bodies. Not anymore, they move freely. I do a lot of group activities, and I say, "Guys, get organized", and they know how to organize themselves, they form groups. There's no euphoria. I think they control themselves. *They can control themselves, limit themselves, not talk too loudly, know their own bodies. I think it has improved a lot* [emphasis added]. (Teacher Interview – T9)

For the families, there was an improvement in concentration and attitude.

My son really enjoyed it, his *concentration* improved, and wherever he went, he mentioned that he was taking classes in *full breathing* [emphasis added]. Full attention. (Family Interview – F44)

I noticed that his *concentration improved* a lot, stopping to do something, if he's doing origami *he sits down he concentrates* [emphasis added] to do it. And he didn't have that, everything he did he started and didn't finish. (Family Interview – F32)

And so, then I began to notice the *change in attitude. She didn't clench her fists anymore, she breathed, looked one way, looked the other way, and took a deep breath* [emphasis added]. Then the other, younger one, who is six years old, says: – “But don't you want to play with me?” She answers: – “Can you wait a bit? When I finish, I promise I'll play with you”. (Family Interview – F23)

In *Socioemotional Skills*: the improvement effect after the Mindfulness Intervention was the development of skills such as gratitude, kindness, respect, empathy, and improvement in social relationships among students, and, most importantly, the decrease in physical and verbal violence.

For the students, the improvement occurred because there were fewer fights, without the use of aggression, respect for others, kindness, forgiveness, and accepting differences.

The mindfulness practice helped me a lot *because before I used to fight a lot* [emphasis added], and when someone insulted me or knocked something down in front of me and it was mine, *I would resort to aggression, and now it's different* [emphasis added]. (Student Interview – S4)

It taught me that I can now *respect others, sit properly, pay attention. Mindfulness helped me to stay calm, before I used to be very angry and quarrelsome*, and now I am calm and don't fight anymore [emphasis added]. (Student Interview – S6)

“Friends” used to mean people to give me things, do things for me. But now with Mindfulness, *I learned that kindness is not what people have, it's what people are and what they offer you, and it helped me a lot* [emphasis added] because now I can see my true friends because it wasn't easy for me to make friends. (Student Interview – S8)

For the teachers, the students perceived themselves, perceived themselves and others in the sense of being more concerned about their friend and wanting to see them well.

I believe that, as they begin to look at their own attitudes and reflect on them before taking action, it already brings well-being. *Just the fact of stopping and thinking: “what am I going to do?”, “how can I do it?” is already a moment of well-being* [emphasis added]. And every Friday I hold an assembly in the classroom, where we discuss the problems that happen during the week. And during this assembly, they can't mention names. And what do we feel? *With the practice of mindfulness, especially at the beginning, they stopped a lot to talk about other peoples' attitudes* [emphasis added], it was incredible how we stopped to observe, and they stopped before speaking, afraid of judging others. (Teacher Interview – T7)

I found it excellent. I continue to practice with them every day. I believe that the class as a whole has become more united; *I noticed that they are more concerned about other people* [emphasis added]. Respect as well; for me, it was already there. It's not that it wasn't, but always a look, like, different, when I'm absent – because I was sick – ‘Teacher, are you okay?’ when I'm upset, they notice my look: “Teacher, what's going on with you?” And among them as well. *Worrying about their friend, wanting to see the other well* [emphasis added], that the environment of our school, of our classroom is good. (Teacher Interview – T9)

For the families, besides thanking for the intervention, they highlight their children's help in socialization and caring for others.

[...] *They talk a lot about gratitude* [emphasis added], both Lara and Pedro. Sometimes they wake up: – “I'm grateful for everything, gratitude for everything” [emphasis added]. These days I said: “Wow, Ana Lara! Are you learning this from someone?” And she: – “Oh, mom, it's from the course I'm taking.” I said: – “Okay then”. (Family Interview – F37)

Everyone also noticed the difference in him, before he didn't play with other children at parties, *today he goes out and already gets along with the other children* [emphasis added], before he was just playing with his phone. And for us, it was great. (Family Interview – F24)

He is a glutton [...] he doesn't leave any food for his sister. And these days I noticed that he was eating things, said: – "Mom, I'll leave some for Raquel"; "Mom, do you want it?" and "I'll leave some for my dad" [emphasis added]. So, I noticed that, but I didn't imagine it was the school's task. But it was very good. (Family Interview – F13)

## 2nd Division: Evaluation of Mindfulness Intervention Sessions

The general perception of family members, teachers, and students on how they evaluated the Mindfulness Intervention with the students during the 16 sessions allowed for the classification of two themes:

*On the Importance of the work developed:* the improvement effect after the Mindfulness Intervention led to reflections on the importance of the work done in helping to move away from autopilot mode and into being mode.

As for the students, they emphasize the importance of Mindfulness practices for everyone, facilitating self-awareness and awareness of others.

*I think this is very good for the whole world [emphasis added] because people are rushing and only think about themselves... they don't pay attention to you, you can hurt someone else's heart. I think everyone will appreciate this, and I think people will notice it, how they are, how they speak, and not hurt each other [emphasis added].* (Student Interview – S12)

The teachers positively evaluated it.

*I thought it was great. I believe it had a good result [emphasis added].* (Teacher Interview – T1)

For family members, it provided a pause to focus on what matters.

*This pause is for like focusing and concentrating on what really matters [emphasis added], not just being connected to the internet, but on what's happening. It's a lot of information for an eight-year-old. I think she needs that break [emphasis added]* (Family Member Interview – F 24)

*On the Continuation of the study:* the improvement effect after the Mindfulness Intervention triggered the groups' need for continuity, both for students and for teachers and family members.

*It's good to teach other people, especially people who are very aggressive [emphasis added], those who don't have much love in their hearts [...] when you taught us, things changed, we got calmer, when we are nervous, we take a breath, and we can calm down.* (Student Interview – S4).

*Maybe it would be good if we had a project to continue [emphasis added], if not with the students, then with the teachers, other experiences, so we could continue sharing with them, doing with the students. I loved it, I thought it was great [emphasis added].* (Teacher Interview – T3)

*Well, I loved it. For me, it would be in every grade [emphasis added], from the first to the ninth year. Because starting from the first year, the next generations would already be much better, calmer, able to pay more attention in class, learn more [emphasis added].* (Family Member Interview – F 48)

## 2nd Category – Specific Perception of Each Group – Mindfulness Practices

This category is related to the specific perception of students, teachers, and family members about Mindfulness practices. The students' perception was supported by sharing knowledge with others and by recognizing their own learning about the techniques.

### a) Students

The specific perception of students about how they received the Mindfulness Intervention

was divided into two significant themes in family relationships:

*Sharing knowledge with others:* the improvement that students observed in themselves through Mindfulness practices sparked a desire within them to share what they had learned with other family members.

This practice *helped my family a lot because my mom and dad used to complain a lot, and now my mom is calm* [emphasis added], she used to get very angry and say a lot of things, and now she doesn't. (Family Member Interview – F28)

Before my dad and mom used to argue a lot, now, I did it with my mom... I told her that when he starts talking, you: "*breathe three times, or more if you need*", [emphasis added] then you let him talk and pay attention to your life. (Family Member Interview – F4)

My uncle is very clumsy, once he dropped a dish and almost set his own house on fire. But now I showed *him Mindfulness, and he pays more attention in a calm manner*, he doesn't get all restless because he is very restless. It also helped my mom because *she is very nervous, and I told her to try to breathe three times* [emphasis added] to see if it calms her down a bit. (Family Member Interview – F8)

*Recognition of their own learning about the techniques:* utilization and understanding of the effect that Mindfulness practices provided, not only in the school environment but also in the family.

Mindfulness helped a lot *because before my family used to be restless, unlike me, and now that I taught them this practice, a lot has improved because* [emphasis added] before they got stressed very quickly, and now a lot has changed, and, thus, my behavior changed along with theirs. (Family Member Interview – F23)

It was good because *now I can do things better* [emphasis added]. (Family Member Interview - F12)

It was very cool because *I learned more things* [emphasis added]. (Family Member Interview – F21)

These things *we learned: to see the movements of our body, to hear the sounds happening around us* [emphasis added] – to think about now, not to think about the past or the future, to think about the present. (Family Member Interview – F2)

Some drawings, in Figure 2 below, demonstrate before and after, indicating that Mindfulness helped in encounter, generosity, and attention.

**Figure 2**

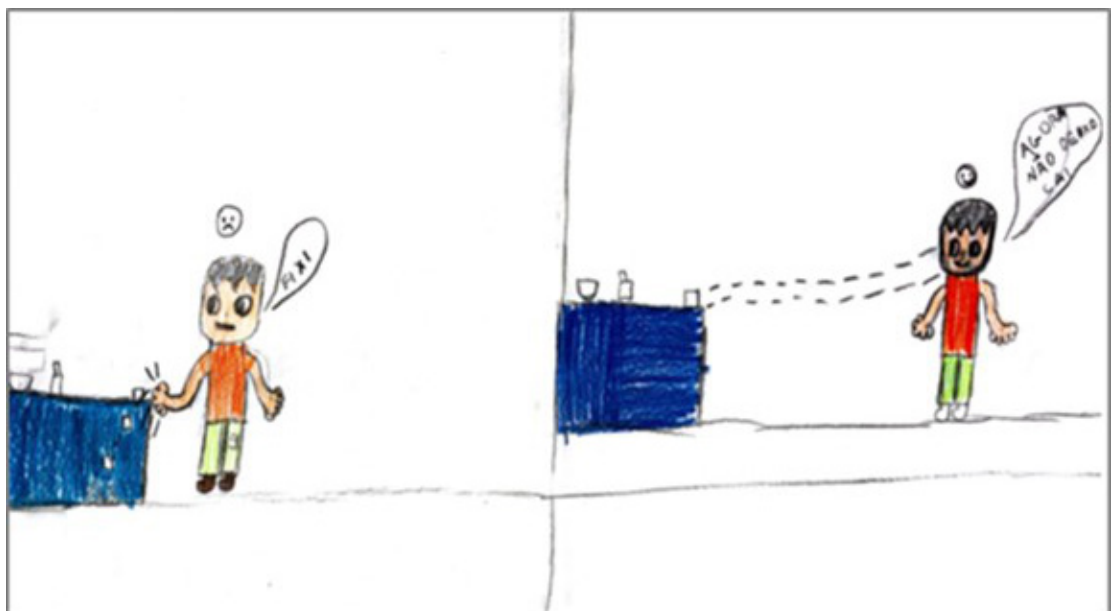
Students' drawing after Mindfulness sessions



Legend: We cannot say things that hurt others.



Legend: Before & after generosity. Help those in need.



Legend: Now I won't drop it.

Note: Drawings depicting acquired insights following Mindfulness sessions. Rendered by students post-Mindfulness sessions, these drawings illustrate what was meaningful for them from what they practiced and experienced.

### b) Teachers

For teachers, Mindfulness practices involved promoting well-being and changing their perspective regarding students.

*In Promoting their own well-being:* the teachers mentioned bodily self-awareness, perception of their sensations, better understanding themselves, and perception of peace and tranquility.

I think that, in fact, *this bodily self-awareness, and even the perception of your sensations* [emphasis added], of what you are doing, how you are doing it, makes you understand yourself better, *understand*

*yourself better, and thus lead a much healthier life – not only in biological terms but also emotional and social relations [emphasis added]. (Teacher Interview – T3)*

*It was very good. There's a transformation that calms you down, gives you a lot of peace and tranquility [emphasis added], when you do it and it ends. You feel this pleasure. (Teacher Interview – T10)*

*In changing their perspective regarding students:* teachers highlight the improvement in interrelationship, welcoming students, and changing the bond.

*I thought it was pretty cool because I saw the children in a different way than looking at children one after the other in the desk [emphasis added]. They behaved differently even for me, who was participating with them. So, I thought it was cool because it was a way for me to see them differently, besides being students [emphasis added]. Even on the soccer court, as I have observed, they are behaving totally differently. So, I found it very rewarding because they were under someone else's command. I was participating with them, as equals, and I thought that was cool. I participated, and they welcomed me [emphasis added], as if I were part of them too. They welcomed me as if I were part of them. (Teacher Interview – T5)*

*“You end up spending more time putting out fires... Whether you like it or not, you have a different bond with these students with Mindfulness practice. I think my bond has changed a lot with them [emphasis added]. (Teacher Interview – T9)*

### c) Family Members

For family members, the perception of the Mindfulness practices experienced by their children reflected on the demand for their own well-being, on the need for the child's well-being, and on the practice of Mindfulness.

*In Demanding their own Well-Being:* The practice of Mindfulness raised awareness among them that they also need to acquire Mindfulness skills.

*I am very nervous, very stressed, and I used to pass a little of that on to them before, but not anymore. Now, he tells me, “Mom, calm down, that's not how we solve things, calm down” [emphasis added]. (Family Member Interview - F2)*

*Fernando is very focused, he is shy. I think I am the one who needs mindfulness [emphasis added]. (Family Member Interview - F28)*

*And they are putting it into practice, because if they are saying that we are stressed [emphasis added], it's because they learned to stop in that class to breathe, relax, and think about the present. (Family Member Interview - F24)*

*The need for the child's well-being – looking after the child:* is perceived by family members because they are more attentive to their children's needs.

*I think I need to pay more attention to him [emphasis added], to what he says. Sometimes, we are running around, cooking dinner, doing something, and we don't pay much attention to what they have to say. I think now I will think more, pay more attention to him [emphasis added], and talk more with him. (Family Member Interview - F10)*

*Nice, because it brings calmness to the child [emphasis added], through you working with them, the child becomes calmer. Nowadays, children are very restless [emphasis added]. (Family Member Interview - F32)*

*Regarding practicing Mindfulness [emphasis added]:* family members still emphasize the need to practice Mindfulness with their children.

*Exercising breathing before taking the test. Because she gets very nervous. What you are doing, I think it's wonderful. Overall, it's doing very well for Luana. Slowly, I'm noticing her improvement [emphasis added]. She came from a very stressful situation at the other school, and here she is calmer, less nervous. Nice work you're doing. (Family Member Interview - F42)*

My daughter *practices Mindfulness with me before going to sleep, she teaches me Mindfulness* [emphasis added]. And her concentration has improved a lot, this part of attention, breathing, she also told me. (Family Member Interview - F22)

## Discussion

The analysis of the general perception of students, teachers, and family members about Mindfulness practices establishes a connection between various aspects and themes that define the needs of students at this developmental stage. Across the groups' perceptions, the behavioral changes observed in students following Mindfulness sessions were highlighted. These changes include improved self-regulation, increased calmness, mindful breathing, improved concentration, and heightened mindfulness, which are important skills to be developed in childhood, as they are linked to the management of thoughts, actions, and emotions, all of which are predictive of significant developmental outcomes.

The information collected in the investigated groups through speech, such as "improved concentration", "not speaking loudly", "knowledge of my own body", "I pay attention", "I am attentive", "being calmer because I used to be very restless", refers to skills that sustain focus on attention and the ability to hold information in mind long enough to relate one idea or information to another, favoring the acquisition of knowledge with academic content.

In the first division, the changes in students' behavior after Mindfulness sessions, according to the analysis in the MAXQDA software, showed an improvement in socioemotional skills as perceived by the groups, such as gratitude, kindness, respect, empathy, improved social relationships, and perhaps the most important, the decrease in physical and verbal violence. Our study corroborates with what (Mena et al., 2021) presented, stating that most interventions analyzed in their study were effective in reducing behaviors associated with school violence and, in general, promoting positive behaviors such as socioemotional skills. Controlling violence is a challenge for educators in the school context, so it is necessary to consider what researchers say (McClelland et al., 2017): interventions cannot overlook socioemotional skills.

In this context, based on the perceptions of the study participants, the importance of continuing Mindfulness education in schools was emphasized, aiming to continue the improvement achieved, not only in self-regulation and attention but also in the development of socioemotional skills. This result corroborates the findings in the studies of Felver and Jennings (2016); Tan (2015); Zenner et al. (2014), and Zoogman et al. (2014), which indicate that, in schools, Mindfulness serves as a fundamental pillar in education, guiding students in focusing their wandering minds and regulating their attention and emotions. It empowers individuals to effectively navigate feelings of frustration, fosters self-motivation, cultivates pro-social attitudes, and significantly contributes to mental health and overall well-being.

The specific perception of students emphasized how they perceived the changes with Mindfulness practices. According to Britton et al. (2014), Mindfulness programs increase self-awareness and self-regulation of attention, emotions, and behaviors in children and adolescents. In the students' it became evident how they extended their learning to family members, demonstrating increased attention and care. This extension may have been facilitated by the enhanced self-regulation skills acquired through Mindfulness, which are associated with improved well-being. As highlighted in studies by Amundsen et al. (2020) and Cheung et al. (2021), Mindfulness fosters the development of effective social relationships and overall adaptive functioning, benefiting not only their families but also the school environment.

In the perspectives shared by the interviewed teachers, a notable reflection emerges regarding how Mindfulness practices contributed to their personal well-being. They expressed profound insights, noting that through the practice, they became more attuned to their bodily sensations, fostering a heightened sense of self-awareness. This transformative experience instilled a sense of calmness, enabling them to see their students as fellow participants in the same experience, engaging with them on equal footing. This mutual engagement can be seen as fostering subjective well-being, characterized by individuals' cognitive and emotional evaluations of their own existence (Diener et al., 2009). Moreover, such experiences have the potential to elevate levels of happiness, as noted by Brown and Rohrer (2019), and life satisfaction. Achieving well-being, as perceived by teachers, may have influenced a shift in perspective towards their students, fostering a more compassionate recognition of their presence. As suggested by Cheung and Lau (2021), with a full heart, cultivating compassion and gratitude from a place of emotional abundance can deepen personal connections, while the findings of Lau et al. (2023) underscore the correlation between mindfulness practices and increased life satisfaction.

Family members acknowledged the importance of Mindfulness practices for their own well-being based on the perceptions they had with their children. And, according to Coatsworth et al. (2015), when they are able to replace self-judgment with a compassionate approach to their difficulties, they are more capable of being present with their children and repairing relationship disconnections. In the account of a mother who shared the experience lived with her child at home, saying that she spent much of the time restless, tense, stressed out, and that this no longer happens because her own child corrects her by showing that things can be solved calmly. This aligns with the perspective of Siegel and Hartzell (2020), who suggests that through the cultivation of present-moment awareness, parents enhance their capacity to release concerns about the past or future, diminish judgmental tendencies, and attune more deeply to their own experiences as well as those of their children. This heightened awareness fosters the potential for improved parent-child relationships.

From this perspective, family members recognized the significance of becoming more attuned to their children's needs, embracing conscious parenting as an alternative form of Mindfulness-based intervention. Conscious parenting is delineated as the deliberate, non-judgmental attention to one's child and parenting practices in the present moment, as articulated by Kabat-Zinn and Kabat-Zinn (2017).

The findings of this study confirm the necessity of adopting a systemic approach to understand the phenomenon comprehensively. It is imperative to consider the perceptions of all participants within the school environment, with a broader scope that includes the family. Inclusion of the family broadens the potential for enhancing both child and family dynamics, as engaged parents in mindfulness tend to experience lower parental stress (Burgdorf et al., 2019). Therefore, the evaluation of the Mindfulness practice experience was adequately conducted, considering the various stakeholders and potential impacts across different contexts and their interrelations. This underscores the continuous relational process, which is influenced by and influences all involved parties.

## Conclusion

The findings of this study demonstrate that Mindfulness practices developed within the school context contributed to positive changes in students' behavior, particularly in the development

of self-regulation and socioemotional skills, while also influencing teachers and family members. The literature underscores the necessity for regular engagement in Mindfulness practices. Therefore, the importance of continuing the program and integrating these practices into the school curriculum is emphasized, along with the need for caring for teachers and family members. Moreover, there is a call for educators and other professionals in the field of education to engage in personal Mindfulness practices, with opportunities for specialized training to facilitate the implementation of these practices with students.

## Limitation and Future Research

The limitation of the study arises from inability to interview other members of the same family. It is suggested that, for future studies, a context be created where family members can experience Mindfulness practices.

## References

- Amundsen, R., Riby, L. M., Hamilton, C., Hope, M., & McGann, D. (2020). Mindfulness in primary school children as a route to enhanced life satisfaction, positive outlook and effective emotion regulation. *BMC Psychology*, 8(1), e71. <https://doi.org/10.1186/s40359-020-00428-y>
- Blair, C., & Diamond, A. (2008). Biological processes in prevention and intervention: the promotion of self-regulation as a means of preventing school failure. *Development and Psychopathology*, 20, 899-911. <https://doi.org/10.1017/S0954579408000436>
- Britton, W. B., Lepp, N. E., Niles, H. F., Rocha, T., Fisher, N. E., & Gold, J. S. (2014). A randomized controlled pilot trial of classroom-based mindfulness meditation compared to an active control condition in sixth-grade children. *Journal of School Psychology*, 52(3), 263-278. <https://doi.org/10.1016/j.jsp.2014.03.002>
- Brown, N. J. L., & Rohrer, J. M. (2019). Easy as (happiness) pie? A critical evaluation of a popular model of the determinants of well-being. *Journal of Happiness Studies*, 21(4), 1285-1301. <https://doi.org/10.1007/s10902-019-00128-4>
- Burgdorf, V., Szabó, M., & Abbott, M. J. (2019). The Effect of mindfulness interventions for parents on parenting stress and youth psychological outcomes: a systematic review and meta-analysis. *Frontiers in Psychology*, 10, 1336. <https://doi.org/10.3389/fpsyg.2019.01336>
- Cheang, R., Gillions, A., & Sparkes, E. (2019). Do mindfulness-based interventions increase empathy and compassion in children and adolescents: a systematic review. *Journal of Child and Family Studies*, 28, 1-15. <https://doi.org/10.1007/s10826-019-01413-9>
- Cheung, R. Y. M., Cheng, W. Y., Li, J.-B., Lam, C. B., & Chung, K. K. H. (2021). Parents' depressive symptoms and child adjustment: the mediating role of mindful parenting and children's self-regulation. *Mindfulness*, 12, 2729-2742. <https://doi.org/10.1007/s12671-021-01735-0>
- Cheung, R., & Lau, E. N. (2021). Is mindfulness linked to life satisfaction? Testing savoring positive experiences and gratitude as mediators. *Frontiers in Psychology*, 12, 591103. <https://doi.org/10.3389/fpsyg.2021.591103>
- Coatsworth, J. D., Duncan, L. G., Nix, R. L., Greenberg, M. T., Gayles, J. G., Bamberger, K. T., Berrena, E., & Demi, M. A. (2015). Integrating mindfulness with parent training: effects of the mindfulness-enhanced strengthening family's program. *Developmental Psychology*, 51(1), 26-35. <https://doi.org/10.1037/a0038212>
- Diener, E., Scollon, C. N., & Lucas, R. E. (2009). The evolving concept of subjective well-being: the multifaceted nature of happiness. *Advances in Cell Aging and Gerontology*, 15, 67-100. [https://doi.org/10.1007/978-90-481-2354-4\\_4](https://doi.org/10.1007/978-90-481-2354-4_4)
- Djamnezhad, D., Koltcheva N., Dizdarevic A., Mujezinovic A., Peixoto C., Coelho V., Achten M., Kolumbán E., Machado F., & Hofvander B. (2021). Social and emotional learning in preschool settings: a systematic map of systematic reviews. *Journal Frontiers in Education*, 6, 1-11. <https://doi.org/10.3389/feduc.2021.691670>

- Dunning, D. L., Griffiths, K., Kuyken, W., Crane, C., Foulkes, L., Parker, J., & Dalgleish, T. (2019). Research review: the effects of mindfulness-based interventions on cognition and mental health in children and adolescents: a meta-analysis of randomized controlled trials. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, 60(3), 244-258. <https://doi.org/10.1111/jcpp.12980>
- Dunning, D., Tudor, K., Radley, L., Dalrymple, N., Funk, J., Vainre, M., Ford, T., Montero-Marin, J., Kuyken, W., & Dalgleish, T. (2022). Do mindfulness-based programmes improve the cognitive skills, behaviour and mental health of children and adolescents? An updated meta-analysis of randomised controlled trials. *Evidence-Based Mental Health*, 25(3), 135-142. <https://doi.org/10.1136/ebmental-2022-300464>
- Fatori, D., Brentani, A., Crisi, S. J. F. E., Constantino Miguel, E. C., & Graeff-Martins, A. S. (2018). Prevalência de problemas de saúde mental na infância na atenção primária. *Ciência & Saúde Coletiva*, 23(9), 3013-320. <https://doi.org/10.1590/1413-81232018239.25332016>
- Felver, J. C., & Jennings, P. A. (2016). Applications of mindfulness-based interventions in school settings: an introduction. *Mindfulness*, 7(1), 1-4. <https://doi.org/10.1007/s12671-015-0478-4>
- Forsberg J. T., & Schultz J.-H. (2023). Educational and psychosocial support for conflict-affected youths: the effectiveness of a school-based intervention targeting academic underachievement. *International Journal of School & Educational Psychology*, 11, 145-166. <https://doi.org/10.1080/21683603.2022.2043209>
- Gibbs, G. (2009). *Análise de dados qualitativos: coleção pesquisa qualitativa*. Bookman Editora.
- Greenberg, M. T., Domitrovich, C. E., Weissberg, R. P., & Durlak, J. A. (2017). Social and emotional learning as a public health approach to education. *The Future of Children*, 27(1), 13- 32. <https://doi.org/10.1353/foc.2017.0001>
- Guerra, I. C. (2006). *Pesquisa qualitativa e análise de conteúdo: sentidos e formas de uso*. Princípiã.
- Halliday, S., Gregory, T., Taylor, A., Digenis, C., & Turnbull, D. (2021). O impacto da vitimização por bullying no início da adolescência nos resultados psicossociais e acadêmicos subsequentes ao longo do período adolescente. uma revisão sistemática. *Journal of School Violence*, 20, 351-373. <https://doi.org/10.1080/15388220.2021.1913598>
- Kabat-Zinn, M., & Kabat-Zinn, J. (2017). *Padres conscientes, hijos felices*. Faro Editorial.
- Kim-Cohen, J., Caspi, A., Moffitt, T. E., Harrington, H., Milne, B. J., & Poulton, R. (2003). Prior juvenile diagnoses in adults with mental disorder: developmental follow-back of a prospective-longitudinal cohort. *Archives of General Psychiatry*, 60(7), 709-717. <http://doi:10.1001/archpsyc.60.7.709>
- Kuckartz, U. (2014). *Qualitative text analysis: a guide to methods, practice & using software*. Sage Publications Ltd. <https://www.doi.org/10.4135/9781446288719>
- Lau, N., Cheung, R. Y. M., Lai, C. K. S., Lau, A. Y. T., & Fung, M. C. (2023). Effects of mindfulness on stress, life satisfaction, and savoring beliefs among Hong Kong Chinese adolescents during the COVID-19 pandemic. *Positive Psychology*, 14, 1-8. <https://doi.org/10.3389/fpsyg.2023.1118288>
- Lertlaldaluck, K., Suppalarkbunlue, W., Moriguchi, Y., & Chutabhakdikul, N. (2021). School-based mindfulness intervention improves executive functions and self-regulation in preschoolers at risk. *Journal of Behavioral Science*, 16(2), 58-72.
- Leyland, A., Rowse, G., & Emerson, L. M. (2019). Experimental effects of mindfulness inductions on self-regulation: systematic review and meta-analysis. *Emotion*, 19(1), 108-122. <https://doi.org/10.1037/emo0000425>
- Lo, H. H. M., Wong, J. Y. H., Wong, S. W. L., Wong, S. Y. S., Choi, C. W., Ho, R. T. H., Fong, R. W. T., & Snel, E. (2018). Applying mindfulness to benefit economically disadvantaged families: a randomized controlled trial. *Research on Social Work Practice*, 29(7), 753-765. <https://doi.org/10.1177/1049731518817142>
- McClelland, M. M., Tominey, S. L., Schmitt, S. A., & Duncan, R. (2017). SEL interventions in early childhood. *Future of Children*, 27(1), 33-47. <https://doi.org/10.1353/foc.2017.0002>
- Mena, A., Moret-Tatay, C., Xavier, C. E., & De Lima Argimon, I. I. (2021). Programas de intervenção para a prevenção da violência escolar: uma revisão sistemática e meta-análise. *Jornal de Psicologia e Educação*, 19(1), 106-127. <https://doi.org/10.57087/edupsykhe.v19i1.4380>

- Milaré, A. R., Kozasa, E. H., Lacerda, S., Barrichello, C., Tobo, P. R., & Horta, A. L. D. (2021). Mindfulness-Based Versus story reading intervention in public elementary schools: effects on executive functions and emotional health. *Frontiers in Psychology, 12*, e10.3389. <https://doi.org/10.3389/fpsyg.2021.576311>
- Mitic, M., Woodcock, K. A., Amering, M., Krammer, I., Stiehl, K. A. M., Zehetmayer, S., & Schrank, B. (2021). Toward an integrated model of supportive peer relationships in early adolescence: a systematic review and exploratory meta-analysis. *Frontiers in Psychology, 12*, 589403. <https://doi.org/10.3389/fpsyg.2021.589403>
- Monsillion, J., Zebdi, R., & Romo-Desprez, L. (2023). School mindfulness-based interventions for youth, and considerations for anxiety, depression, and a positive school climate: a systematic literature review. *Children, 10*(5), 861. <https://doi.org/10.3390/children10050861>
- Opalinski, A. S., & Martinez, L. A. (2021). Mindfulness and self-regulation in a summer camp setting: an EBP project. *Journal of Pediatric Nursing, 57*, 73-78. <https://doi.org/10.1016/j.pedn.2020.10.023>
- Ortiz, R., & Sibinga, E. (2017). The role of mindfulness in reducing the adverse effects of childhood stress and trauma. *Children, 4*(3), 16. <https://doi.org/10.3390/children4030016>
- Phan, M. L., Renshaw, T. L., Caramanico, J., Greeson, J. M., MacKenzie, E., Atkinson-Diaz, Z., Doppelt, N., Tai, H., Mandell, D. S., & Nuske, H. J. (2022). Mindfulness-based school interventions: a systematic review of outcome evidence quality by study design. *Mindfulness, 13*(7), 1591-1613. <https://doi.org/10.1007/s12671-022-01885-9>
- Renshaw, T. L., & Cook, C. R. (2016). Introduction to the special issue: mindfulness in the schools-historical roots, current status, and future directions. *Psychology in the Schools, 54*(1), 5-12. <https://doi.org/10.1002/pits.21978>
- Robinson, L. E., Palmer, K. K., Wang, L., Scott-Andrews, K. Q., Chinn, K. M., Sur, I., Wengrovius, C., Meng, E., Veldman, S. L. C., & Miller, A. L. (2023). Protocol for a cluster randomized clinical trial of a mastery-climate motor skills intervention, Children's Health Activity and Motor Program (CHAMP), on self-regulation in preschoolers. *Plos One, 18*(3), e0282199. <https://doi.org/10.1371/journal.pone.0282199>
- Schumer, M. C., Lindsay, E. K., & Creswell, J. D. (2018). Brief mindfulness training for negative affectivity: a systematic review and meta-analysis. *Journal of Consulting and Clinical Psychology, 86*(7), 569-583. <https://doi.org/10.1037/ccp0000324>
- Seligman, M. E. P. (2019). Positive psychology: a personal history. *Annual Review of Clinical Psychology, 15*, 1-23. <https://doi.org/10.1146/annurev-clinpsy-050718-095653>
- Siegel, D. J., & Hartzell, M. (2020). *Parentalidade consciente, como o autoconhecimento nos ajuda a criar nossos filhos*. nVersos Editora.
- Tan, L. B. (2015). A critical review of adolescent mindfulness-based programmes. *Clinical Child Psychology and Psychiatry, 21*(2), 193-207. <https://doi.org/10.1177/1359104515577486>
- Vickery, C. E., & Dorjee, D. (2015). Mindfulness training in primary schools decreases negative affect and increases meta-cognition in children. *Frontiers in Psychology, 6*, 2025. <https://doi.org/10.3389/fpsyg.2015.02025>
- Zelazo, P. D., & Lyons, K. E. (2012). The potential benefits of mindfulness training in early childhood: a developmental social cognitive neuroscience perspective. *Child Development Perspectives, 6*(2), 154-160. <https://doi.org/10.1111/j.1750-8606.2012.00241.x>
- Zelazo, P. D., Forston, J. L., Masten, A. S., & Carlson, S. M. (2018). Mindfulness plus reflection training: effects on executive function in early childhood. *Frontiers in Psychology, 9*, 208. <https://doi.org/10.3389/fpsyg.2018.00208>
- Zenner, C., Herrnleben-Kurz, S., & Walach, H. (2014). Mindfulness-based interventions in schools: a systematic review and meta-analysis. *Frontiers Psychology, 5*, 1-20. <http://dx.doi.org/10.3389/fpsyg.2014.00603>
- Zoogman, S., Goldberg, S. B., Hoyt, W. T., & Miller, L. (2014). Mindfulness interventions with youth: a meta-analysis. *Mindfulness, 6*(2), 290-302. <https://doi.org/10.1007/s12671-013-0260-4>

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