Can Emotional Regulation and Contemplative Training Improve the

Emotional Regulation in a Group of Argentine Schoolteachers?

Senior Thesis

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Abstract

The purpose of the present study was to investigate the effects that a mixed-method intervention consisting of emotional regulation training and contemplative practices could have in a small group of Argentine teachers. The study used an exploratory quantitative, web-based survey method measuring positive and negative affect (PA and NA). Fifteen Argentinian schoolteachers completed the survey pre-and post a 20-hour intervention that used a program called Cultivating Emotional Balance (CEB). Results showed that more participants improved than deteriorated both in PA and NA. The Mean of the whole group improved for both PA and NA, with a reduction of SD in both cases. Based on this study's results, the implementation of an intervention of this type could be beneficial for schoolteachers' general well-being, teacher-student interaction, classroom climate, and reduction of teacher attrition levels, which would benefit schools' budgets

Keywords: schoolteachers, teacher attrition, emotional regulation, well-being, contemplative training, emotional psychoeducation

Dedication

With my deepest gratitude, I dedicate this work to all the people who helped me through these years to complete my degree: my husband, my sons, and all the teachers who taught me all that I know. And especially to my grandfather, an outstanding educator who ignited in me the joy and passion of learning and teaching.

Table of Contents

Chapter 1

Introduction

Due to the high impact of occupational risk factors on educators' health, teaching is considered a high-risk profession (Hakanen et al., 2006). When compared with other professions, teachers report some of the highest levels of occupational stress. Physical symptoms of stress, such as sleep disorders, and psychological symptoms like anxiety and depression, are common in schoolteachers (Emerson et al., 2017). Emotional stress in teachers is becoming a growing concern for the education system because of the adverse effects it has on the quality of education, student-teacher relationships, and school budgets (Jennings & Greenberg, 2009). Consequently, teacher burnout is increasing, and educators are leaving the profession. In the USA up to 25% of teachers leave their job before their third year, and almost 40% leave the profession within the first five years of teaching (Chang, 2009).

Schoolteachers face the stress of increasing workload and accountability, the demands of sometimes difficult students and parents, and a lack of time to meet administrative requirements. Furthermore, teachers are exposed to emotionally provocative situations daily, more so than other professions, and because of a lack of emotional training, their options for responding in a balanced way are limited (Jennings & Greenberg, 2009).

Background

All over the world, schoolteachers face the stressful and challenging task of regulating the expression of their own emotions while they help regulate the emotions of their students. Paul Ekman (2007) defines emotions as a process that occurs when we sense that something important to our welfare is happening or is about to happen. Our evolutionary and

personal past influences the way an event is perceived, and a set of physiological changes and psychological behaviors is set into motion with the purpose of dealing with the situation. The process and the expression of emotions can be regulated or not, and nearly all emotions can be expressed constructively or destructively. On the one hand, constructive emotions are conducive to our own and others' happiness and further our cooperation and collaboration. On the other hand, the destructive expression of emotions is incompatible with our own and others' happiness, creates disconnection, and can lead to depression (Dalai Lama & Ekman, 2008). Gross (1999) defines emotional regulation as "the process by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions" (p. 275).

The capacity to maintain and increase positive affect and decrease negative affect in order to regulate emotional reactivity can be trained, and includes the use of anticipatory or responsive strategies which can be conscious or unconscious (Gross & Thompson 2007). Watson et al. (1988) define positive and negative affect:

Briefly, positive affect (PA) reflects the extent to which a person feels enthusiastic, active, and alert. High PA is a state of high energy, full concentration, and pleasurable engagement, whereas low PA is characterized by sadness and lethargy. In contrast, negative affect (NA) is a general dimension of subjective distress and unpleasurable engagement that subsumes a variety of aversive mood states, including anger, contempt, disgust, guilt, fear, and nervousness, with low NA being a state of calmness and serenity (p. 1063).

The strategies for emotional regulation can be antecedent focused or response focused (Gross1999). Antecedent focused strategies are those that happen before the emotional response is fully underway. An example of this type of strategy is cognitive reappraisal, which is defined

as "construing a potentially emotion-eliciting situation in nonemotional terms" (Gross, 2002, p. 283). On the other hand, a response focused strategy, according to Gross (2002), is affective suppression, which is defined as "inhibiting ongoing emotion-expressive behavior" (p. 283). Gross (2002) notes that cognitive reappraisal decreases the experience and the expression of negative affect and has no impact on memory. Conversely, suppression increases the duration and intensity of the physiological response, does not reduce negative emotions and "consumes cognitive resources, impairing memory for information presented during the emotion regulation period" (Gross, 2002, p. 289).

Teachers' emotional regulation and mental balance are linked to a large variety of teaching-related outcomes like classroom effectiveness and students' motivation. An emotionally balanced teacher creates an optimal classroom environment that promotes learning, cooperation, and growth (Jennings & Greenberg, 2009). However, although teachers may have the motivation to help their students grow and learn, the job of an educator to reach this goal is far from easy especially when teachers lack strategies for efficient emotion regulation. Consequently, without emotion regulation, the result is an increase in negative affect, negative student-teacher interactions, stress, and emotional burnout (Emerson et al., 2017).

One of the most significant stresses of the educator's job is having to deal with dual regulation over a period that consists of many hours a day (Sutton, 2004). Teachers are expected to naturally know how to manage their student's emotional lives as well as their own while also creating a positive classroom climate and successfully teaching the school curricula (Jennings & Greenberg, 2009). Moreover, teachers also face difficult situations in school that could make them feel a variety of emotions like anger, sadness, disgust, and fear on a daily basis. As a result, teacher burnout is a common problem reported by educators. In the US, almost 51 percent of

educators report the experience of severe stress several days a week (MetLife, 2004). It follows that learning to manage their emotions in a way that does not lead to destructive episodes becomes crucial (Hargreaves, 2000).

However, emotional regulation in the school setting is not only important for teachers, it is also crucial for students. Melnick and Hinshaw (2000) found that emotional regulation enables the individual to have some control over his or her behavior, while at the same time remaining engaged with the environment and with the tasks at hand, which, in the classroom, is of utmost importance. Without emotional control, teachers would not be able to do their jobs accurately and efficiently, and students could not engage in all kinds of learning activities (Turner et al., 2003). Furthermore, studies show the negative correlation between depressive symptoms in teachers and the quality of their interactions with students (Braun et al., 2019). Studies have also found that teachers' emotional well-being has a direct impact on the atmosphere of the classroom, which directly impacts the development of students' socio-emotional capacities and contributes to their cognitive development (Turner et al., 2003).

The issues of emotion education, classroom climate, and the effects it has in communities have recently caught the attention of the United Nations Educational Scientific and Cultural Organization (UNESCO). In July 2020, the Mahatma Gandhi Institute of Education for Peace and Sustainable Development (MGIEP) at the United Nations released a publication on social-emotional learning for education systems, called *Rethinking Learning*. The publication reviews "the latest research on social and emotional learning (SEL), its impact on student health and school climate and its transformative role in building happier classrooms." The goal of the review is to "inform and impress upon the Member States the urgent need to mainstream social and emotional learning in education systems." (Chatterjee Singh & Duraiappah, 2020).

To improve the emotion regulation and thus, the well-being of teachers, the development and training of qualities like single-pointed attention, self-awareness, metacognition, and interoceptive awareness are of utmost importance. Contemplative practices have been proven to be beneficial to develop all those abilities in different areas, like health and education (Ekman et al., 2005). Although the contemplative practices have their roots in the Buddhist worldview that originated approximately 2,500 years ago, in the East, some of those ancient techniques are used nowadays in secular contexts. Of the myriad contemplative practices of the past, one that has become popular in modern times is mindfulness; an ancient practice which Buddhist texts define as "sustained, voluntary attention continuously focused on a familiar object, without forgetfulness or distraction" (Asanga, 2001, p. 9; Buddhaghosa, 1979, p. 524). Although there are many controversies on the modern definition of the term mindfulness, most emphasize that it means nonjudgmental awareness and acceptance of present-moment experience (Kabat-Zinn, 2003; Brown & Ryan, 2003). Secular programs such as Mindfulness-Based Stress Reduction (MBSR) have been used as an intervention both in the fields of health and education (Kabat-Zinn, 2003). There is also a growing interest in the effect that secular forms of contemplative practices could have for promoting mental capacities, developing empathy and compassion, enhancing mental and physical health, and treating mental disorders (Wallace & Shapiro, 2006).

Problem Statement

Studies show that schoolteachers work with high stress levels for many hours a day (Braun et al., 2019) and receive little or no support to help them cope with the tremendous emotional demands the profession entails (Jennings & Greenberg, 2009). It is no wonder that

society's high expectation of teachers to know how to be emotion regulators as well as efficient instructors may lead to burnout and exhaustion, and to many educators leaving the profession (Jennings & Greenberg, 2009).

Some researchers define burnout as a prolonged response to chronic emotional and interpersonal stressors on the job, "an erosion of engagement that what started out as important, meaningful, and challenging work becomes unpleasant, unfulfilling, and meaningless" (Maslach et al., 2001, p. 416). Burnout can be seen as the end of a downward spiral, starting with emotional stress, leading to exhaustion, cynicism, and ineffectiveness, which in turn lead to burnout (Chang, 2009). Teachers who begin the first years energized, hopeful, and involved with teaching find themselves lacking the support and knowledge they need to regulate their emotional well-being under challenging situations and find themselves overwhelmed by negative emotions and lack of enthusiasm. Three symptoms characterize burnout, according to Maslach et al. (2001):

- Emotional exhaustion, feeling physically and emotionally overextended.
- Depersonalization, which is having a distant attitude toward students and loss of self-confidence.
- Lack of personal accomplishment.

Burned-out teachers create a tense classroom climate that can have harmful effects on students, especially on those who come from unstable homes and are at risk of mental problems (Jennings & Greenberg, 2009). Furthermore, teachers' negative affect can have long-term effects on students' social and emotional learning as well as in their academic performance, and as the influence of teachers' burnout expands it negatively affects schools and communities (Jennings & Greenberg 2009).

When students lack a supportive relationship with their teachers, they can feel disengaged and alienated from school, which can lead to the development of academic failure and antisocial behavior (Dwyer et al., 1998). The unrestrained expression of destructive emotions in the classroom can impair the placement and stability of attention (Wallace, 2005), and reduce working memory, thus not permitting students to complete tasks (Fried, 2011). In contrast, regulating the expression of destructive emotions enhances cognitive processes like learning, attention, memory, motivation, and decision making (Fried, 2011).

In underdeveloped countries like Argentina, keeping young people in school is also a difficult and stressful challenge for educators. In 2018 only 65% of students finished primary school, and of those who entered high-school, only 50% finished, with 15% graduating in institutes for adult learners. The main reason for abandonment, 55% of Argentinean schoolteachers believe, is because students have no motivation to graduate (Cardini & D'Alessandre, 2019). After all, in a decaying economy there is no gain for them in graduating. Moreover, teachers in Argentina receive no specific training in emotional management and have no support networks to deal with the emotional demands of difficult students and parents.

From all the evidence provided by research studies on the adverse effects of poor emotional regulation, it is clear that teachers' well-being should become a priority for the education system. Diener, Oishi and Lukas define subjective well-being as "a person's cognitive and affective evaluations of his or her life" (2003, p. 63). The crucial components of well-being consist of a cognitive and an affective aspect. While cognitive well-being is the way an individual evaluates their life, affective well-being is the prevalence of positive affect over negative affect (Kahneman et al., 1999). Both aspects of subjective well-being are directly related to emotion regulation strategies and some authors argue that affective well-being is more

important (Diener & Chan, 2011). A study done by Diener and Chan (2011) indicates that the

perception of high subjective well-being, such as life satisfaction, reduces the levels of negative

emotions, contributes to higher levels of positive emotions and optimism, and brings as a result

better health and longevity.

Consequently, emotional training that helps increase positive affect and reduce negative

affect would be crucial to the teacher's well-being and to help them cope with the many demands

of their job, resulting in lower levels of stress and reactivity and a better classroom environment

(Wisner, 2014).

Research Rationale

Given that teacher burnout has adverse effects on students' performance and that poor

emotional management is the primary cause of teachers leaving the profession, with a high cost

for schools (Jennings & Greenberg, 2009), it is of great importance to identify interventions that

help support teachers to stay emotionally regulated and remain in the profession (Emerson et al.,

2017).

Until the year 2000, there had been no merging of the psychological sciences with the

ancient contemplative practices to tackle the problem of emotional regulation. However, in the

Mind and Life Institute in Dharamsala, India, in March 2000, behavioral scientists and the Dalai

Lama, Buddhist monks, and scholars met for a dialogue about Destructive Emotions (Ekman et

al., 2005; Goleman, 2003). At the culmination of this meeting, the Dalai Lama requested that the

essential ideas raised, specifically how to manage the everyday obstacles produced by our

destructive emotions and how to cultivate a wholesome way of being, be turned into a secular

training. Dr. Alan Wallace, Dr. Paul Ekman, Dr. Mark Greenberg, and Dr. Richard Davidson

took the challenge and began to work on what such a training program could look like and evaluate its impact (Paul Ekman Group, 2016). Before this meeting, there were no interventions to reduce the destructive enactment of emotions, consisting of both practices from contemplative traditions and behavioral science. In the year 2000, a program called Cultivating Emotional Balance (CEB) was born (Paul Ekman Group, 2016).

The program consists of forty-two hours of training in a combination of secular meditation, modern psychology and the scientific study of emotions. The goal of the program is to help reduce the manifestation of emotional experiences that can be destructive both for oneself and others and to promote abilities that lead to a constructive expression of emotions. For the present study, the participants completed a short twenty-hour version of the CEB program.

Evaluating a program that combines contemplative practices together with emotional training in schools is of particular importance for Argentina because of the significant impact it could have not only on teachers' well-being, but also on classroom climate, students' academic performance and social-emotional abilities. The regulation of the expression of emotions could also enable students and teachers to enhance positive emotions, have success in completing tasks, maintain individual wellbeing, improve interpersonal functioning and avert/avoid negative emotions (Fried, 2011). A study like this could help in understanding the impact that such interventions could have on teachers' general well-being and help in the effort to implement such programs in schools.

Research Question

With the purpose of benefiting the well-being of educators, as well as the school environment and academic learning, this study investigates the question, "Can emotional

education and contemplative training improve the emotional regulation in a group of Argentine

schoolteachers?"

More specifically, the present study investigates one of the components of emotion

regulation, which is positive and negative affect. The study surveys and trains a group of primary

and secondary schoolteachers in Buenos Aires, Argentina, as a first step in understanding the

efficacy of these types of interventions to promote positive affect and reduce negative affect in

educators.

Chapter 2

Review of the Literature

Introduction

The problems of teachers' stress, burnout, poor emotion regulation, classroom climate, and the direct negative impact it has in communities have been researched worldwide (Abenavoli et al., 2013). Nevertheless, schoolteachers' education continues to lack the appropriate training and support needed for the crucial work they do in educating children that will be the future of humanity (Jennings & Greenberg, 2009). In underdeveloped countries like Argentina, the problem is aggravated due to severe economic instability, government corruption, high levels of violence, illiteracy, poverty, and lack of essential educational resources, like proper school facilities (Cardini & D'Alessandre, 2019).

Based on this researcher's professional experience, in rural areas in Argentina, one elementary schoolteacher can be in charge of one classroom that includes children from first to seventh grade all packed together, the equivalent of the nineteenth-century "one-room schoolhouse." In addition, in many schools, teachers lack basic materials such as textbooks and have to manage with the scarce and outdated material available. Furthermore, in underdeveloped countries, even more than in developed ones, teachers face the daily challenge of interacting with students exposed to trauma, violence, and chronic stress (Chatterjee Singh & Duraiappah, 2020). Moreover, because of a lack of proper training, teachers may not know how to understand the situation empathically and respond in an effective way. Stressed and traumatized children who overreact in violent ways in school need special support and understanding from their teachers

(Chatterjee Singh & Duraiappah, 2020), who may be the only adults in their lives who can show them a new way of dealing with interpersonal conflicts, which does not include violence.

Understanding which types of training could best help schoolteachers manage the regulation of their emotional states as well as help co-regulate the emotions of their students is an important step that could lead to the implementation of such programs for teachers in Argentina.

This literature review first discusses emotion regulation strategies and reviews research studies done to investigate which strategies of emotion regulation teachers use the most. The section Interventions for Teachers is a review of the different types of programs (Mindfulness and Mixed-Methods) that exist nowadays to help teachers learn the tools to reach emotional balance.

Emotion Regulation Strategies

All over the world, studies confirm that the capacity to regulate emotions is associated with subjective well-being (Chang 2020; Gross & John, 2003; Lee et al., 2016; Li et al., 2017; Puente-Martínez et al., 2018). One of the most relevant referents in the study of the regulation of emotions is Gross, who is a professor at Stanford University and the director of the Stanford Psychophysiology Laboratory. In the process model of emotion regulation proposed by Gross, the strategies of suppression and cognitive reappraisal are categorized as response-focused and antecedent-focused (Gross, 1999; Gross & John, 2003). While cognitive reappraisal comes early in the emotional episode timeline, suppression comes late and is used as a brake to the expression of emotions (Gross & John, 2003). The authors conducted five studies with both self- and peer-rated measures in the US to determine the implications that reappraisal and suppression have for positive and negative affect, relationships, and well-being (Gross & John, 2003). Results show that reappraisers have higher levels of positive affect, and lower levels of negative

affect than suppressors. When analyzing the social aspect, the authors found that reappraisers have closer interpersonal relationships than subjects who tend to suppress the expression of their emotions as a strategy for self-regulation. In terms of subjective well-being, reappraisers had higher scores than suppressors. To study positive and negative affect, the authors used the Positive and Negative Affect Scale (PANAS) (Watson, et al., 1988) and found that reappraisal was directly correlated to a higher experience of positive affect (PA) and directly related to less negative affect (NA).

On the other hand, subjects who usually use suppression experienced less PA and had higher NA (Gross & John, 2003). When measuring the expression of positive and negative emotions, subjects who more frequently used reappraising as an emotion regulation strategy showed greater expression of positive emotions and less expression of negative emotions. In contrast, suppressors expressed less positive emotions and more negative emotions (Gross & John, 2003). The authors concluded that cognitive reappraisal (the ability to change the way the cause of an event is perceived) is a more adaptive regulation strategy than suppression (Gross & Jonn, 2003).

In a similar study done with 189 teachers in Germany, Lee et al. (2016) examined the relationship between teachers' usage of emotion regulation strategies and their emotional states while in the classroom. Again, they found that reappraisal was positively correlated to the enjoyment of teaching, while suppression was positively associated with negative emotions such as anxiety, anger, and frustration (Lee et al., 2016).

However, even though reappraisal is a more effective strategy, teachers do not often use it in the classroom. In a study with 56 teachers from the US utilizing the process model of emotion, Taxer and Gross (2018) found that the most frequently used strategy that teachers apply

for regulating both their own and their students' emotions is suppression. These results are surprising, considering that suppression has few desirable consequences compared to other antecedent-focused strategies (Gross, 2002; Gross & John, 2003) for teaching effectiveness.

In search of other variables that could have an effect on the emotional regulation strategies that teachers use to avoid burnout, a recent study by Chang (2020) investigated if emotion display rules could be an important factor in understanding why teachers suppress what they feel in the classroom and the subsequent feelings of burnout. Chang argues that teachers find themselves having to follow both cultural and school display norms combined with the high expectations that fall on educators to be moral examples for their students (2020). Moreover, display rules directly influence the suppression of emotions, which correlates with the three dimensions of burnout: emotional exhaustion, depersonalization, and inefficacy. For her study, Chang collected survey data from 561 teachers from a Midwestern state in the US. Participants answered questions on their beliefs about display rules in the classroom, emotion regulation, and burnout in its three dimensions. The findings indicate that strict adherence to display rules (not revealing true feelings to students) is highly associated with suppression as a strategy for emotion regulation and may cause burnout in all three dimensions (Chang, 2020). In fact, Chang found that depersonalization had the strongest correlation to the use of suppression as a strategy. Therefore, teachers who suppress their emotions and strictly adhere to display rules become distant and disengaged from their students, and as a result, lose the joy of teaching, and eventually suffer from burnout (Chang, 2020).

Studies done to understand the protective variables of affective well-being of educators were also done in Spain where 524 teachers from several public schools were measured in emotional clarity, mood repair, attention to their emotional state, and positive and negative affect

(Fernández-Berrocal et al., 2017). Their study results showed that longer teaching experience and high levels of attention to their feelings directly correlated to a decrease in PA and an increase in NA. Interestingly, this was true only for those participants who had low emotional clarity and mood repair levels. On the other hand, teachers with many years of teaching experience, but who had higher levels of the variables of emotional clarity and mood repair, showed higher levels of PA and lower levels of NA (Fernández-Berrocal et al., 2017). Furthermore, researchers in China investigated the mediating effects of positive and negative affect in teachers' innovative work behavior (Li et al., 2017). Their findings show that a proactive personality is positively associated with teachers' creative work behavior. Moreover, the association was mediated by positive affect and self-efficacy, both variables which are negatively correlated with burnout in all three dimensions (Li et al., 2017).

A meta-analysis of classroom management, found that teachers who can be aware of their mental processes (metacognition) and at the same time have an awareness of the classroom climate can remain calm in emotionally charged situations and respond constructively (Marzano et al., 2003). The authors found that teachers' conscious and calm response contributes to the reduction of disruptive behavior on the part of the students (Marzano et al., 2003). These results indicate teachers' need to learn other emotion regulation strategies conducive to their well-being and positive and empathic teacher-student relationships. "To promote teacher well-being, schools may provide mentoring or training through professional development on how to identify these display rules and help teachers understand how taxing these rules are in influencing teachers' emotion and emotion regulation in the classroom" (Chang 2020, p. 8).

Interventions for Teachers

Few studies have addressed how to enhance teachers' social and emotional competence and promote well-being as a possible means of reducing emotional distress as well as improving classroom climate (Jennings et al., 2013).

As several researchers mentioned above, educational institutions could provide specific emotion regulation programs for teachers to assist them in self-regulation, and as a result, they could better contribute to the emotional regulation of their students and to creating an optimal classroom climate (Chang, 2020; Fried, 2011; Jennings & Greenberg, 2009). Keeping that objective in mind, this section of the review will focus on the two types of interventions available for teachers nowadays. The review will first cover the interventions that use the mindfulness-based stress reduction (MBSR) course exclusively, and secondly, the interventions that include instruction in emotion psycho-education, compassion meditation, and mindfulness meditation.

Mindfulness Interventions that Do Not Measure Positive and Negative Affect

Mindfulness, defined in modernity as paying attention in the present moment, on purpose, and without judgment (Kabat-Zinn, 2003), has proved to be positively associated with higher levels of activity in the prefrontal cortex, an area of the brain associated with prosocial emotions such as empathy, compassion and emotion regulation (Davidson et al., 2003). Not only has mindfulness proved beneficial psychologically, but it also contributes to better immunological functioning (Davidson et al., 2003). When applying the faculty of mindfulness, individuals may become more aware of positive experience and less reactive to negative experiences (Davidson et al., 2003; Shapiro & Wallace, 2006) and thus become better at emotional regulation. Mindfulness and other self-regulatory skills such as introspection or "the

ability to monitor the state of the mind" (Shapiro & Wallace, 2006) can be trained. Through

systematic meditation practice, brain structure changes, and brain functions that support positive

emotions and self-regulation can arise (Davidson et al., 2012).

Several studies demonstrate the positive effects of mindfulness in overcoming the three

dimensions of burnout in schoolteachers (Abenavoli et al., 2013; Roeser et al., 2013).

Furthermore, mindfulness training contributes to the development of resilience among teachers;

especially, it proved to be beneficial among the most stressed and ambitious educators

(Abenavoli et al., 2013). For example, In Germany, a non-randomized, waitlist-controlled study

combining quantitative and qualitative data was done on a group of 32 schoolteachers who were

tested before and after an 8-week Mindfulness-Based Stress Reduction (MBSR) intervention

(Rupprecht et al., 2017) . Teachers' burnout, mindfulness, self-efficacy, well-being, occupational

stress, and emotional regulation were measured. Study participants who received the MBSR

training had higher positive results at the post-test and the 3-month follow-up than the control

group (Rupprecht et al., 2017). Effects researchers did not expect to find included reduced

professional engagement levels, willingness to work to exhaustion, and reduced level of

perfectionism in work performance (Rupprecht et al., 2017).

A similar study was done in the US with a slightly modified MBSR intervention with a

small group of 18 schoolteachers randomly assigned to a control or intervention group (Flook et

al., 2013). Teachers' burnout, mindfulness, self-compassion, attention, and emotion regulation

were measured pre- and post-intervention. After the 8-week MBSR course, teachers showed

higher levels of mindfulness and self-compassion, fewer psychological symptoms of burnout,

and attention deficit (Flook et al., 2013). That study by Flook et al. (2013) was replicated with 36

high school teachers in the US and obtained similar positive results in all areas with the addition

of an improvement in the area of sleep quality as a measure of well-being (Frank et al., 2015).

A more extensive study in the US with 113 teachers utilized a slightly adapted version of

MBSR. Researchers measured participants' physiological indicators like cortisol and blood

pressure and the identical psychological indicators of both stress and well-being seen before

(Roeser et al., 2013). Similar to the smaller studies mentioned above, results indicated

improvements in all psychological areas like self-compassion, occupational stress, mindfulness,

and symptoms of burnout, but no positive or negative changes were found in physiological

measures at post-test and neither at the three-month follow-up (Roeser et al., 2013).

The COVID-19 pandemic and the public health measures taken in Argentina have

negatively impacted mental health. A recent online survey done in May 2020 by the Argentine

Psychiatric Association (AAP) received 1380 responses. Results showed that 68% of the survey

participants were suffering from sleep impairment, 57.7% were experiencing attention deficit,

51.6% were experiencing angry feelings, and 68.8% were suffering from anxiety (Asociación

Argentina de Psiquiatras, 2020). Educators worldwide are not exempt from the effects of the

quarantine.

In Italy, a recent study was done during the Covid-19 lockdown with 66 female

schoolteachers. Participants received an eight-week long intervention of an adaptation of the

MBSR course, called Mindfulness-Oriented Meditation (MOM). Before and after the

intervention, participants completed self-reports measuring mindfulness skills, empathy,

personality profiles, interoceptive awareness, psychological well-being, emotional distress, and

burnout levels (Alessio et al., 2020). Similar to studies mentioned before, improvements were

found in all the areas tested, with no adverse effects found, and the authors concluded that MOM

mindfulness training could mitigate the adverse effects that the Covid-19 lockdown could have on the mental health of educators (Alessio et al., 2020).

Mindfulness Interventions Measuring Positive and Negative Affect

Few studies done with teachers and using MBSR interventions measure positive and negative affect. This section reviews two studies that do measure PA and NA using the PANAS survey (Watson, et al., 1988). First, in a university in Germany a study investigating the potential effects of MBSR on emotion regulation and mood was done with a group of 169 teacher trainees during a whole semester (Wimmer et al., 2019). The Wimmer study was organized following a nonrandomized pre–post design with an active group that received the intervention and a passive control group. On the one hand, the active group showed improvement in emotional regulation as seen by an increase in cognitive reappraisal, and reduction of mental rumination and depression (Wimmer et al., 2019). On the other hand, after the intervention, the teacher trainees showed no improvement in positive mood, and no reduction in expressive suppression, or anxious and negative mood (Wimmer et al., 2019). Although the results in positive and negative affect and suppression did not improve, the researchers concluded that MBSR training would be a beneficial implementation in the university to improve emotional regulation and lower depression (Wimmer et al, 2019).

Another randomized controlled study done by Benn et al. (2012) used self-report measures for positive and negative affect. The PANAS survey was completed by participants pre- and post-intervention and two months after a five-week MBSR course. The population consisted of a group of 38 educators of children with special needs (Benn et al., 2012). After the intervention the teachers showed an improvement in empathy, mindfulness and forgiveness. A slight increase of PA and a reduction in NA, as well as a reduction in stress and anxiety, was

found (Benn et al., 2012). The authors concluded that MBSR training could be beneficial in reducing stress and anxiety in teachers of children with special emotional, cognitive and behavioral needs (Benn et al., 2012).

Adverse Effects of Mindfulness Interventions. However, not all mindfulness studies proved to be positive or even beneficial (Burrows, 2017). Mindfulness meditation could have adverse effects, especially so in the case of vulnerable individuals with a history of trauma, addictions, and mental health disorders, as a study with college students who reported depersonalization, altered perception of the self, and dizziness, among other negative effects (Burrows, 2017). The adverse effects can be understood by the increase of activity in the prefrontal cortex produced by mindfulness meditation, which can be associated with emotion regulation, but also with dissociation and emotional numbness for some individuals (Briton, 2019). Since MBSR is a secular practice not connected or contained by a broader frame of reference such as the Buddhist tradition (Ekman et al., 2005), it is of utmost importance that mindfulness instructors are well trained. Moreover, they should have several years of study and practice before attempting to teach (Van Gordon et al., 2017) in order to not contribute to destabilizing vulnerable individuals (Burrows, 2017).

Mixed-Method Interventions Measuring Positive and Negative Affect

A key component of successful emotion regulation is that the individual develops the capacity to perceive and name emotions as they are experienced (Briere & Scott, 2015). Therefore, the sustainable application of efficient emotion regulation strategies over time may require not only the practice of mindfulness meditation. In fact, the level of emotional awareness required for emotional regulation would only come from the close observation of emotions,

together with what only hours of study and discerning intelligence could provide (Dalai Lama & Ekman, 2008; Shapiro & Wallace, 2006). In other words, an effective program for emotion regulation would include not only mindfulness meditation but also psycho-education to understand the nature, function and process of emotions. A few studies utilizing this type of mixed interventions for educators have been conducted over the last ten years (Jennings et al., 2013; Kemeny et al., 2011; Taylor et al., 2015). Furthermore, and keeping in mind the interest of the present study, in the mixed-method interventions described below, positive affect (PA) and negative affect (NA) are measured and PANAS is the chosen survey instrument. This is unlike MBSR, where few studies can be found measuring PA and NA.

The first mixed-methods intervention for educators that was put under test was conducted by a team of researchers that included experts in the science of emotions, experts in education, and an expert meditation instructor (Kemeny et al., 2011). The intervention used in the study was an intense training called Cultivating Emotional Balance (CEB). The intervention focused on meditation training (including focused attention, mindfulness, compassion, empathy, and equanimity) combined with emotional psycho-education for eight weeks for a total of 42 hours. The CEB program is designed to help individuals regulate their emotional reactivity even under stress. The regulation of emotional reactivity happens because of the combination of emotion education together with contemplative training, which results in mindful awareness of the emotional process (Kemeny et al., 2011). The CEB program includes a manual, a meditation diary, and an emotional episode diary that the teachers had to fill out each day to record their progress. Participants were 82 female schoolteachers who were randomly assigned to an intervention or wait-list control group.

The researchers administered several experimental tasks at baseline and post-test, including cortisol in saliva, blood pressure, micro-expressions, and social stress tests. The self-report questionnaires were collected at baseline, post-test, 5-month follow-up; they measured: burnout, attention, positive and negative affect, anxiety, depression, mindfulness, empathy, self-compassion, and rumination (Kemeny et al., 2011). After the 8-week CEB course, teachers showed lower levels of rumination, negative affect, depression, and anxiety, and higher levels of empathy, compassion, mindful attention, positive affect, and recognition of facial expressions (Kemeny et al., 2011). It is interesting to note that most of the effects were still present when the teachers were tested in the 5-month follow-up. Kemeny et al. (2011) comment on a particular quality of CEB which is crucial for well-being in general and particularly for teachers who work in highly stressful conditions, "the training appears capable of reducing destructive emotions and emotional behaviors, and the cognitive processes that provoke such responses, as well as increasing positive states of mind, such as positive affect, and prosocial responses, such as compassion" (p. 348).

While CEB was originally tested in a group of teachers, the program was created for the general public, and in fact, nowadays, it is taught all over the world to a variety of different populations (Cultivating Emotional Balance, 2020). On the other hand, the program Cultivating Awareness and Resilience in Education (CARE) was created specifically for educators (Jennings et al., 2013). The goal of CARE is to help promote teachers' social and emotional competence, well-being, classroom efficacy, and health while at the same time reduce their levels of stress (Jennings et al., 2013) and, as a result, prevent the downward spiral of burnout from occurring. CARE was tested in 2013 on a group of fifty teachers who were randomly assigned to an intervention or a wait-list control group. Similar to CEB, CARE included a combination of

emotion skills instruction, mindfulness/stress reduction, and compassion practices in its program. The program also offered a coach that the teachers could consult by phone to ask questions and review their progress. Teachers were surveyed at pre- and post-intervention, completing several surveys, while teachers in the intervention group also completed an evaluation of the program after it ended. PANAS was used to assess teachers' well-being and other surveys measured burnout, mindfulness, and efficacy. Teachers who took the CARE intervention showed improvements in all measures and evaluated the program as effective and feasible for reducing stress. Researchers concluded that the CARE program can help teachers who work in challenging settings to create healthy classroom environments (Jennings et al., 2013).

A more recent study in Canada used a mixed-method, pre/post/follow-up, randomized wait-list control design on a group of 59 elementary and secondary schoolteachers who had no prior experience with meditation (Taylor et al., 2015). Surveys were administered to measure compassion, occupational stress, forgiveness, and emotion regulation. Interviews were conducted post-program, which measured teachers' coping at work, compassion for challenging students, and teachers' primary appraisals of work stressors (Taylor et al., 2015). Similar to the CEB and CARE programs, the authors used an intervention that included mindfulness-based stress reduction, emotion skills training, and mindfulness-based compassion and forgiveness meditation (Taylor et al., 2015). At the study's conclusion, researchers found evidence that the intervention improved both the emotion regulation of teachers and their felt efficacy for emotion regulation. Self-efficacy is related to a decrease in the intensity with which the stressor is appraised (Taylor et al., 2015), and thus, reappraising the situation becomes more available as a strategy. Results also showed an increase in the level of prosocial tendencies such as forgiveness

and compassion. Teachers in the intervention group experienced a decrease in negative affect that the authors associate with higher compassion levels (Taylor et al., 2015).

Conclusion

Studies show that cognitive reappraisal is a more adaptive regulation strategy, having fewer negative consequences than the suppression of emotions (Gross & John, 2003) for teaching efficacy and preventing burnout (Lee et al., 2016). Moreover, reappraisal is positively associated with the joy of being an educator (Lee et al., 2016), an essential ingredient for teachers' self-efficacy and their capacity for creating healthy classroom environments (Jennings et al., 2013) conducive to learning (Fried, 2011). However, even though reappraisal has many positive qualities, teachers who strictly adhere to display rules do not often use it in the classroom and instead use suppression, which leads to creating distance from their students and eventually leads to burnout (Chang, 2020). Given the importance of teaching teachers to regulate their emotions using strategies conducive to their well-being and positive and empathic teacher-student relationships, several researchers have investigated which interventions would work best to obtain good results. Two models have been tested in the past years. The first training using MBSR showed promising results but lacked the necessary ingredient of emotion skills training that is essential for understanding emotions and increasing the capacity to choose which regulation strategy to apply. The second type of intervention used a model that included mindfulness meditation with emotion skills training, and results also included a higher level of compassion in the teachers who took the training (Jennings et al., 2013; Kemeny et al., 2011; Taylor et al., 2015).

Given the dire circumstances in which teachers work daily, it would be of great importance to conduct studies that analyze which are the best programs to help them. Thus, the

purpose of this study was to understand if an intervention that uses a model of meditation together with emotional psycho-education could bring about a higher level of positive affect and a lower level of negative affect in a group of teachers working in challenging circumstances.

CHAPTER 3

Methodology

The original version of the program of Cultivating Emotional Balance (CEB) consists of 42 hours of training for over eight weeks. The full version of the program was tested in 2011 on a group of 82 schoolteachers (Kemeny et al., 2011). For the present study, a short version of CEB was used and tested on a group of fifteen teachers in Buenos Aires, Argentina. The subjects were tested on positive and negative affect right before the beginning of the training, and on the same day the training ended. The CEB intervention taught in this study consisted of 20 hours of training over seven sessions, and the program included didactic presentations, the study of the science of emotions, study of the central elements of emotional balance, and the theory and practice of meditation techniques that are relevant to cultivating emotional regulation. For this short CEB intervention, an element was added which does not belong to the original CEB training. The added element was a short five-minute Braindance, a movement sequence based on developmental patterns, developed by Green-Gilbert (1992, 2006). Braindance prepares the brain for learning by integrating the body and mind. The instructor who gave the intervention is certified in both the CEB and Braindance methods.

Method

This study used an exploratory quantitative, online survey method. The online survey instrument used was the Spanish translation of the Positive and Negative Affect Scale (PANAS) (Watson et al., 1988). The 20-item inventory consists of 20 adjectives measuring negative and positive affect. Participants received an online link to access the survey and completed it online

before and after a two-week-long intervention, which consisted of emotional education and contemplative/meditation training.

Structure of the Intervention

The CEB intervention that was taught for this study consisted of seven sessions with a total of 20 hours. The instruction of emotional education and the theory of meditation was done with PowerPoint presentations. Guided meditations were done live and recorded for the participants' later practice at home. Discussions and sharing were done in the large group as well as in small groups.

The sessions were designed to bring awareness of body and mental processes, both personal and interpersonal, to develop the teachers' capacity to recognize their personal emotional processes and those of their students. Moreover, the focus on life values and the meaning of being an educator was discussed as a means to help teachers reconnect to their motivation for being an educator: to help their students flourish and learn even amid challenging teaching environments. The discussion groups were organized at different times in dyads, trios, and all the participants together. In all the groups, participants shared their personal experiences with the meditation practices and shared ideas on how to incorporate what they were learning into the classroom flow in school. Moreover, they shared emotional episodes and participated in role-playing within small groups. Enacting difficult emotional situations that life presents, both in and out of the classroom, offers the possibility of analyzing what happened and reappraising the situation in a new light, with the hope of bringing awareness and applying new antecedent emotion regulation strategies in the future.

For home practice, after each session, participants received the recorded meditations that were done in class. They also received a PDF with the material seen in class about emotion

education and meditation practice theory. Participants were encouraged to fill one entry per day in an emotional episode diary and a meditation diary given to them in PDF format at the beginning of the intervention.

During the intervention's length, a WhatsApp group was created, which included all the participants and the instructor, where they could ask questions referring to the practice and content of the course exclusively.

Meditation Component

- Training in concentration, including body scan, tactile sensations of the breath, focusing on the whole body, abdomen, and nostrils, respectively.

- Training in mindfulness and introspection.

- Awareness of physical and mental processes (thoughts, emotions, memories).

- Meditation to promote the natural flow of loving-kindness, compassion, empathy, and equanimity/impartiality.

- Conscious movement activities like yoga stretches and Braindance, as taught by Green-Gilbert (1992, 2006).

Emotion Education Component

- The characteristics and functions of emotions.

- The seven universal emotions; joy, sadness, anger, contempt, disgust, fear, and surprise, as taught by Ekman (2007).

- Moods, personality traits, and disorders.

- Universal and learned triggers of the seven universal emotions, automatic appraisals, and emotional database.

- Facial expressions of the seven universal emotions and how to recognize them in oneself and in others.

- Training in awareness and recognition of other's emotions to foster empathy, compassion and understanding.

- The emotion process timeline.

- Understanding one's own emotional patterns and propensities.

Population of Interest

This study was done with elementary, middle school, and high school teachers from two suburban schools in the province of Buenos Aires, Argentina. Fifteen teachers from two schools responded to the survey pre- and post-intervention and received the intervention for seven sessions. The participants were all females. Their age ranged from 22 to 60 years old and met the following criteria: no history of psychiatric disorders that could make it difficult to participate in the study, no problems with substance abuse, not taking psychotropic medication, and no prior meditation practice.

Recruitment

Recruitment was done via professional and personal networks using online flyers and online presentations in two schools matched on school-level demographics and in the same suburban district in Buenos Aires, Argentina. The minimum number of participants needed for this study was ten, with the optimal number being twenty. Fifteen participants were recruited, and all of them completed pre- and post-surveys and a two-week-long intervention.

Data Collection

All participants (N. 15) completed the pre- and post-survey and participated in the 20hs long CEB intervention. The study data was collected in a Google form that linked the participants' responses to an Excel spreadsheet, where the data was collected, stored, and analyzed. The survey instrument used was the Spanish translation of PANAS (Watson et al., 1988). Participants received an online link to access the survey and complete it at home before the intervention (pre-assessment) and immediately after (post-assessment). Participants were asked to rate how they "felt during the past week including the present day" about ten adjectives that measure negative affect (NA) (hostile, irritable, jittery, nervous, scared, afraid, ashamed, distressed, guilty, and upset) and ten adjectives that measure positive affect (PA) (excited, inspired, interested, proud, active, alert, attentive, determined, enthusiastic, and strong). The survey uses a 5-point Likert-type scale with 1 =Very slightly or not at all, 2 = A little, 3=Moderately, 4=Quite a bit, 5 = Extremely. Descriptive statistical analysis was used to gain insight into the effects the intervention had on the teachers.

To analyze whether the intervention of emotion education and meditation can improve schoolteachers' well-being in Argentina, Mean and Standard Deviation were calculated with an Excel spreadsheet. For the analysis, an increase of positive affect signified an improvement, and a reduction of negative affect signified an improvement. All the data from the positive emotions and the negative emotions of all the participants was grouped separately and the analysis was done separately to investigate the effects of the intervention on each of the 20 affect states included in the PANAS survey (Watson et al., 1988); interested, distressed, excited, upset, strong, guilty, scared, hostile, enthusiastic, proud, irritable, alert, ashamed, inspired, nervous, determined, attentive, jittery, active, afraid. Scoring was done according to the instructions included in the PANAS survey, which are as follows:

- Positive Affect score: Add the scores on items 1, 3, 5, 9, 10, 12, 14, 16, 17 and 19. Scores can range from 10 – 50, with higher scores representing higher levels of positive affect.

- Negative Affect Score: Add the scores on items 2, 4, 6, 7, 8, 11, 13, 15, 18, and 20. Scores can range from 10 – 50, with lower scores representing lower levels of negative affect. (Watson et al., 1988).

Data Analysis

- The results of PA and NA were calculated for each participant and analysed the percentage of general improvement, deterioration and no-change.

- The Mean and SD for all PA and NA were calculated to analyse the overall change of M and SD.

- The Mean and SD were calculated for each of the 20 adjectives (the 10 PA and the 10 NA) and analysed the change of M and SD of each adjective.

- Each of the twenty adjectives that measure PA and NA were analyzed individually to note the percentage of improvement, deterioration or no-change in the group of participants.

- Mean and SD for each of the adjectives (both positive and negative) were compared with the percentage of change of *M*.

- An additional analysis of PA and NA was conducted highlighting the affects which improved or deteriorated the most.

Chapter 4

Findings and Discussion

The hypothesis of this research study was that a mixed-method intervention called Cultivating Emotional Balance (CEB), consisting of contemplative practices in addition to emotional psychoeducation, could bring about an increase of positive affect and a decrease of negative affect in a group of schoolteachers in Buenos Aires, Argentina. The findings below support this hypothesis. Nevertheless, given the small sample size (15 N) and the absence of a control group, it was not possible to apply statistical tests and thus the descriptive statistics that follow apply only to the group of 15 teachers who participated in the study.

Results of Positive and Negative Affect for Each Participant

As seen in the results in Figure 1, nine participants (60% of total) improved their overall positive affect (PA) scores and six (40% of the total) deteriorated. Figure 2 shows that seven participants (46.66% of total) decreased their overall negative affect (NA) scores, which is an improvement, whereas 5 (33.33% of the total) increased their overall NA, which is a deterioration, and three (20% of the total) did not change their overall NA score.

Figure 1

Results of Positive Affect for each participant
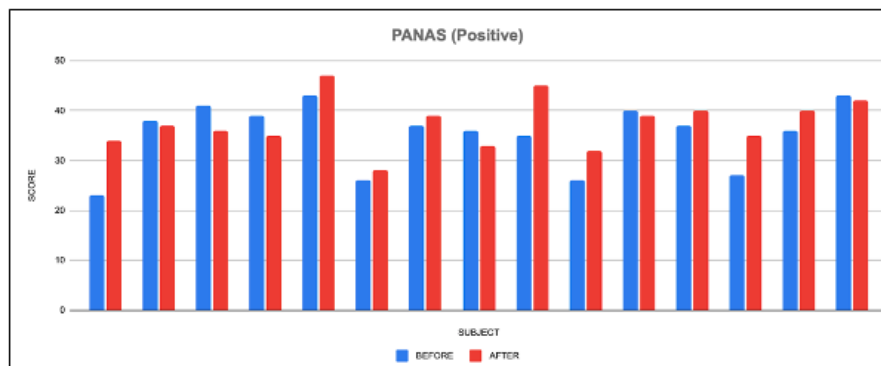
Figure 2

Results of Negative Affect for each participant
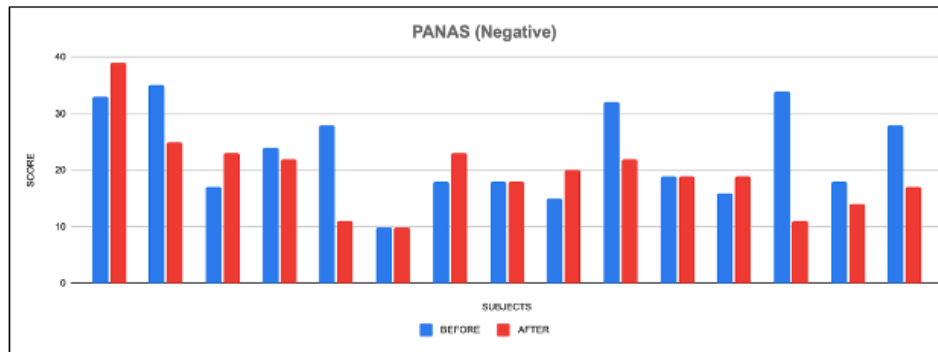
Results of the Mean (M) and Standard Deviation (SD) of PA and NA

The result was positive for both PA and NA (see Figure 3). In the case of PA, the level increased from pre-intervention *M* 3.51 to post-intervention *M* 3.75 which is an improvement of 6.84 percent. The NA decreased from *M* 2.3 to *M* 1.95, which is an improvement of 15.22 percent. Figure 3 shows that in both cases the Mean improved, in the case of PA 6.84% and in the case of NA 15.22%.

Figure 3

Panas Mean
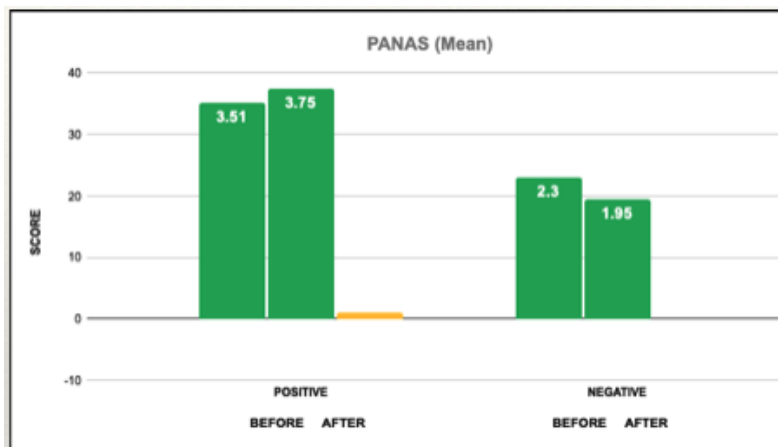
Figure 4 shows that in both cases the Standard Deviation (SD) was reduced, in the case of the PA from SD (6.5) to SD (5), which is a reduction of 23%, and in the case of the NA from SD (8) to SD (7.2) which indicates an improvement of 10.75%. This reduction may indicate that the intervention may help balance the emotions of the participants.

Figure 4

PANAS SD

PANAS (SV)
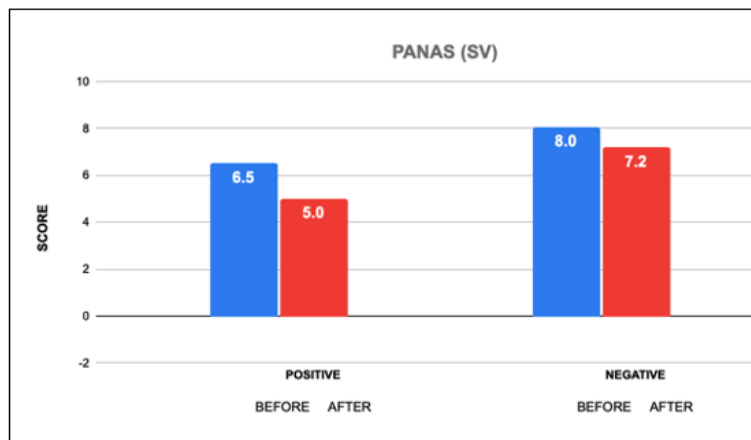
Table 1 summarizes the results *M* and SD for PA and NA.

Table 1

Summary

	M and (SD)	
	BEFORE	**AFTER**
Positive Affect	3.5 (6.5)	3.75 (5.0)
Negative Affect	2.3 (8.0)	1.95 (7.2)

Results of the Mean (M) and Standard Deviation (SD) of each affect pre-and post-Intervention

Table 2

Indicates M and SD for each of the adjectives (both positive and negative) and the percentage of change of M and the difference of SD.

| PA / NA	MEAN				SD		
	BEFORE	AFTER	Dif.	Change (%)	BEFORE	AFTER	Dif.
ACTIVE	3.9	4.2	0.33	9%	1.06	0.77	0.29
AFRAID	2.1	2.0	-0.07	-3%	1.28	1.07	0.21
ALERT	3.5	3.5	0.00	0%	0.92	0.52	0.40
ASHAMED	1.6	1.6	0.00	0%	1.06	0.74	0.32
ATTENTIVE	3.5	3.6	0.13	4%	0.83	0.63	0.20
DETERMINED	3.6	3.7	0.07	2%	1.12	0.82	0.30
DISTRESSED	2.4	1.9	-0.53	-22%	1.18	0.83	0.35
ENTHUSIASTIC	3.4	3.9	0.47	14%	1.18	0.83	0.35
EXCITED	3.3	3.5	0.13	4%	0.82	0.83	-0.02
GUILTY	1.9	1.7	-0.20	-11%	0.83	0.72	0.11
HOSTILE	1.9	1.6	-0.33	-17%	1.16	0.83	0.33
INSPIRED	3.0	3.9	0.87	29%	0.76	0.74	0.01
INTERESTED	3.7	3.8	0.07	2%	0.70	0.77	-0.07
IRRITABLE	2.8	2.2	-0.60	-21%	1.42	1.08	0.34
JITTERY	2.8	2.3	-0.47	-17%	1.26	1.29	-0.03
NERVOUS	3.0	2.1	-0.87	-29%	1.20	1.13	0.07
PROUD	3.3	3.7	0.33	10%	1.11	0.72	0.39
SCARED	1.7	1.8	0.07	4%	1.16	0.94	0.22
STRONG	3.9	3.8	-0.07	**-2%**	1.30	1.08	0.22
UPSET	2.8	2.3	-0.47	-17%	1.01	1.11	-0.10

Table 2 indicates:

- 80% (16 out 20) of the affects improved the *M* (either by increasing in the case of the PA or reducing in the case of the NA).

- 40% of the total improved 10% or more and 12 of the emotions that improved also had a reduction of the SD.

- 10% of the affects did not change the *M* but reduced the SD.

- 10% deteriorated the *M* (either by reducing in the case of the PA or increasing in

  the case of the NA) but in all cases the SD was reduced and in both cases the

  deterioration was below 5%.

Table 3

Positive Affect

	MEAN				SD		
	BEFORE	AFTER	Dif.	Change (%)	BEFORE	AFTER	Dif.
ACTIVE	3.9	4.2	0.33	9%	1.06	0.77	0.29
ALERT	3.5	3.5	0.00	0%	0.92	0.52	0.40
ATTENTIVE	3.5	3.6	0.13	4%	0.83	0.63	0.20
DETERMINED	3.6	3.7	0.07	2%	1.12	0.82	0.30
ENTHUSIASTIC	3.4	3.9	0.47	14%	1.18	0.83	0.35
EXCITED	3.3	3.5	0.13	4%	0.82	0.83	-0.02
INSPIRED	3.0	3.9	0.87	29%	0.76	0.74	0.01
INTERESTED	3.7	3.8	0.07	2%	0.70	0.77	-0.07
PROUD	3.3	3.7	0.33	10%	1.11	0.72	0.39
STRONG	3.9	3.8	-0.07	-2%	1.30	1.08	0.22

Table 3 indicates:

- 80% (8 out of 10) of the PA improved the *M*, however 30% of them improved

  10% or more, and 6 of them with a reduction of the SD.

- In 1 case (10% of the Total) the *M* did not change but the SD reduced.

- In 1 case (10% of the Total) the *M* deteriorated but the SD reduced and the

  deterioration was below 5%.

Table 4

Negative Affect

	MEAN				SD		
	BEFORE	AFTER	Dif.	Change (%)	BEFORE	AFTER	Dif.
AFRAID	2.1	2.0	-0.07	-3%	1.28	1.07	0.21
ASHAMED	1.6	1.6	0.00	0%	1.06	0.74	0.32
DISTRESSED	2.4	1.9	-0.53	-22%	1.18	0.83	0.35
GUILTY	1.9	1.7	-0.20	-11%	0.83	0.72	0.11
HOSTILE	1.9	1.6	-0.33	-17%	1.16	0.83	0.33
IRRITABLE	2.8	2.2	-0.60	-21%	1.42	1.08	0.34
JITTERY	2.8	2.3	-0.47	-17%	1.26	1.29	-0.03
NERVOUS	3.0	2.1	-0.87	-29%	1.20	1.13	0.07
SCARED	1.7	1.8	0.07	4%	1.16	0.94	0.22
UPSET	2.8	2.3	-0.47	-17%	1.01	1.11	-0.10

Table 4 indicates

- 80% (8 out of 10) of the NA improved the *M* (the value was reduced), however 50% of them improved 10% or more, and 6 of them show a reduction of the SD.

- In 1 case (10% of the Total) the *M* did not change but SD was reduced.

- In 1 case (10% of the Total) the *M* deteriorated (increased the value) but the SD reduced and the deterioration was below 5%.

The comparison of the changes of PA and NA indicate a similar pattern, in both cases:

- 80% improved the *M*, 10% did not improve but SD was reduced and only 10% decreased the *M* but less than 5%.

- The main difference was that in the case of the negative affect, 50% of them improved the *M* by 10% or more, whereas in the case of positive affect only 30% increased the *M* by 10% or more.

Analysis of the Effect of the Intervention for Each Adjective Pre-and Post-Intervention

Each of the ten adjectives that measure positive affect are analyzed individually to note the percentage of improvement, deterioration or no-change in the group of participants. For each Affect, it was analysed how many individuals improved, how many stayed the same and how many deteriorated the score after the intervention. See Table 5 for the percentage of individuals that improved, stayed the same or deteriorated in PA.

Table 5

Summary of percentages of PA

Positive Affect	IMPROVED	DETERIORATED	EQUAL	Difference
ACTIVE	47%	20%	33%	27%
ALERT	27%	27%	46%	0%
ATTENTIVE	40%	20%	40%	20%
DETERMINED	40%	27%	33%	13%
ENTHUSIASTIC	53%	20%	27%	33%
EXCITED	27%	20%	53%	7%
INSPIRED	67%	7%	26%	60%
INTERESTED	33%	27%	40%	6%
PROUD	40%	13%	47%	27%
STRONG	20%	40%	40%	-20%
TOTAL Avg.	**39%**	**22%**	**39%**	**17%**

From the summary shown in Table 5, it is seen that of the ten adjectives that measure positive affect, in 8 of the adjectives more participants improved than deteriorated, in *Alert* the number of participants that improved is equal to the number that deteriorated and only in *Strong* more participantes deteriorated than the ones that improved.

Overall 39% of participants improved their PA, whereas 22% showed a deterioration and 39% stayed the same.

Table 6

Summary of percentages of NA

Negative Affect	IMPROVED	DETERIORATED	EQUAL	Difference
AFRAID	20%	47%	33%	-27%
ASHAMED	20%	40%	40%	-20%
DISTRESSED	33%	7%	60%	26%
GUILTY	40%	27%	33%	13%
HOSTILE	33%	20%	47%	13%
IRRITABLE	40%	20%	40%	20%
JITTERY	47%	20%	33%	27%
NERVOUS	60%	7%	33%	53%
SCARED	27%	40%	33%	-13%
UPSET	47%	13%	40%	34%
TOTAL Avg.	37%	24%	39%	13%

From the summary shown in Table 6, it is observed that of the ten adjectives that measure negative affect, in 7 adjectives more participants improved than deteriorated and in 3 (*Afraid, Ashamed* and *Scared)* more participantes deteriorated than the ones that improved. Overall 37% of participants improved their NA, whereas 24% showed a deterioration and 39% stayed the same.

Table 7
Mean and Percentages for PA

PA	Mean				% Improvement		
	BEFORE	AFTER	DIFF	%	IMPROVED	DET	DIFF
ACTIVE	3,9	4,2	0,33	9%	47%	20%	27%
ALERT	**3,5**	**3,5**	**0,00**	**0%**	**27%**	**27%**	**0%**
ATTENTIVE	3,5	3,6	0,13	4%	40%	20%	20%
DETERMINED	3,6	3,7	0,07	2%	40%	27%	13%
ENTHUSIASTIC	3,4	3,9	0,47	14%	53%	20%	33%
EXCITED	3,3	3,5	0,13	4%	27%	20%	7%
INSPIRED	3,0	3,9	0,87	29%	67%	7%	60%
INTERESTED	3,7	3,8	0,07	2%	33%	27%	6%
PROUD	3,3	3,7	0,33	10%	40%	13%	27%
STRONG	3,9	3,8	-0,07	-2%	20%	40%	-20%
TOTAL	3,5	3,7	0,23	7%	39%	22%	17%

From analysing both the change in *M* and the percentage of participants that: *improved, stayed the same or deteriorated* for each PA and NA, an overall improvement is observed. Nevertheless, the NA showed a greater improvement than the PA. Even though the NA and PA had similar percentages of individuals who indicated an improvement (37% NA and 39% PA), the *M* in the NA showed an improvement of 13% compared to an improvement of the *M* of 7% in PA.

Table 8
Mean and Percentages for NA

	Mean				% Improvement		
	BEFORE	AFTER	DIFF	%	IMPROVED	DET	DIFF
AFRAID	2,1	2,0	0,07	3%	20%	47%	-27%
ASHAMED	1,6	1,6	0,00	0%	20%	40%	-20%
DISTRESSED	2,4	1,9	0,53	22%	33%	7%	26%
GUILTY	1,9	1,7	0,20	11%	40%	27%	13%
HOSTILE	1,9	1,6	0,33	17%	33%	20%	13%
IRRITABLE	2,8	2,2	0,60	21%	40%	20%	20%
JITTERY	2,8	2,3	0,47	17%	47%	20%	27%
NERVOUS	3,0	2,1	0,87	29%	60%	7%	53%
SCARED	1,7	1,8	-0,07	-4%	27%	40%	-13%
UPSET	2,8	2,3	0,47	17%	47%	13%	34%
TOTAL	2,3	2	0,35	13%	37%	24%	13%

In 17 out of 20 affects, the change in the *M* is associated with changes in the same direction in the majority of participants, an improvement in the *M* is in most cases (all except *Afraid*) correlated with more participants improving than the ones that deteriorate. The same happens when the *M* deteriorates; more participants deteriorate than improve. Moreover, the higher the improvement of the *M,* the greater the difference between the changes seen in the participants as seen in the cases of *Inspired* and *Nervous*.

Analysis and Discussion of Positive Affect

High positive affect is a state of concentration, joyous engagement, high levels of energy, enthusiasm and inspiration. On the other hand, low PA is characterised by lethargy, sadness (Watson et al., 1988) and depression. In this study, an overall improvement in PA is observed.

The positive affect (PA) adjectives that improved the *M* the most were *Inspired* and *Enthusiastic*. Also when analysing the individual improvement of participants, *Inspired* and *Enthusiastic* are the ones in which the difference between improvement and deterioration is higher. In *Inspired* 67% of participants showed an improvement and in *Enthusiastic* 53% of participants improved. *Enthusiastic: M* 3.4 SD (1.18) to *M* 3.9 SD (0.83). *Inspired: M* 3.0 SD (0.76) to *M* 3.9 SD (0.74), both being good indicators. The increase in PA could be explained by participants learning practical tools, which they did not have before, to regulate their emotions and to co-regulate the emotions of their students in the classroom. The integration of new strategies for effective regulation could have been the factor that gave teachers hope for their capacity to respond positively in future classroom situations.

The only PA adjective which had a lower *M* after the intervention is *Strong* and this is also the one in which the number of individuals who showed deterioration after the intervention is higher than the ones who improved. In *Strong* only 20% of participants show an improvement and 40% show a deterioration, although the *M* was only slightly reduced from *M* 3.9 SD (1.30) to *M* 3.8 SD (1.08). The unexpected deterioration of *Strong* could be explained by participants being at the end of the school year (in the Southern Hemisphere the school year ends in December). Introspection is one of the mental faculties included in the meditation techniques the teachers received in the program. An increase in introspection and relaxation due to the practices could have led to their noticing their exhaustion at the end of the course, making them feel less

strong. It would be interesting to know if the heightened awareness of their inner states could have led to different results at other times of the school year when there is less exhaustion among teachers.

Analysis and Discussion of Negative Affect

High negative affect (NA) encompasses destructive mood states including, disgust, guilt, anger, contempt, and fear. In contrast, low NA is a state of serenity and calmness (Watson et al., 1988). In this study, the NA showed a greater improvement than the PA, which is consistent with the design of the program Cultivating Emotional Balance that aims at reducing the cognitive processes that provoke negative affect and the consequent destructive emotions that follow.

The negative affect (NA) adjectives that improved the *M* the most are *Nervous, Distressed and Irritable*. In the case of *Nervous,* 60% of participants showed an improvement, and only 7% deteriorated while 33% stayed the same; the *M* 3.0 SD (1.20) to *M* 2.1 SD (1.13) (which in the case of NA less is an improvement). In the analysis of *Distressed*, 33% of participants showed an improvement, and only 7% deteriorated, while 60% stayed the same with a *M* 2.4 SD (1.18) to *M* 1.9 SD (0.83) in pre- and post-test. In the case of *Irritable,* 40% of participants showed an improvement, 20% showed a deterioration and 40% stayed the same. The *M* 2.8 SD (1.42) to *M* 2.2 SD (1.08). However, when analyzing the number of individuals who improved compared to the ones who stayed the same or deteriorated, the adjectives in which the improvement is higher were *Nervous* and *Upset*. In the case of *Nervous,* 60% of participants showed an improvement, 7% showed a deterioration and 33% stayed the same. The *M* 3.0 SD (1.20) to *M* 2.1 SD (1.13) in pre- and post-test. In the case of *Upset*; 47% of participants improved, 13% deteriorated and 40% stayed the same. The *M* 2.8 SD (1.01) to *M* 2.3 SD (1.11) in pre- and post- test. The only NA adjective that deteriorated showing a higher Mean after

intervention is *Scared*. However, looking at the percentage of participants who deteriorated compared to the ones who improved, the number of participants who deteriorated is higher in *Scared* and also in *Ashamed* and *Afraid*.

In the case of *Afraid*, the Mean improved from *M* 2.1 SD (1.28) to *M* 2 SD (1.07), and looking at the total responses 47% deteriorated and only 20% improved. However, the *M* improved because the level of improvement of a few cases was higher than the level of deterioration of a larger number of participants. In the case of *Ashamed,* 20% of participants improved, 40% deteriorated and 40% stayed the same while the Mean stayed the same *M* 1.6 SD (1.06) to *M* 1.6 SD (0.74). In S*cared* 40% of participants deteriorated, 27% improved and 33% stayed the same. The went from *M* 1.7 SD (1.16) to *M* 1.8 SD (0.94) in pre- and post-test.

A factor that could have contributed to the results found in A*fraid*, A*shamed* and S*cared* might be the effect of higher levels of emotional awareness in the participants. When an individual becomes more aware of their emotions they also become more aware of other people's emotions and more aware of the emotional environment in any given situation. With A*fraid* and S*cared*, it might be the case that higher levels of emotional awareness could lead to an increase in the feelings of fear, especially for teachers working in adverse environments. During the CEB intervention, in order to become more emotionally aware, participants had to keep a record in an emotions diary given to them by the instructor at the beginning of the intervention, which they later had the option of sharing with other participants. The increase observed in *Ashamed, Afraid and Scared* could be the result of an increase in the awareness of the individual's regrettable emotional episodes they recorded, as well as an increased awareness of life's problems in general and in particular the difficulty of working in challenging environments.

In conclusion, the emotional awareness that comes as a by-product of the intervention's emotional psychoeducation component could have a small percentage of adverse effects for some individuals. Nevertheless, for the participants in the present study, those adverse effects could be counterbalanced by the increase of positive affect with its general dimension of subjective well-being and pleasurable engagement that subsumes a variety of positive mood states such as those seen in this study's results.

Furthermore, considering the positive association between high PA and cognitive reappraisal (Gross & Jonn, 2003; Lee et al., 2016), it is possible that participants' increase in positive affect results in their capacity of changing the way the cause of an event is perceived (cognitive reappraisal) in a way that is conducive to their and other's well-being. Therefore, helping counteract the small percentage of adverse effects that higher emotional awareness could cause.

Comparison of Findings to the Literature

As seen in the literature review, only a few studies using Mindfulness or Mixed-method interventions and measuring positive and negative affect were done with teachers. Moreover, not all the studies discussed in the literature review show their results in a way that a quantitative comparison with the present study would be possible because of the present study's small sample size and lack of control group. In the case of the studies where quantitative comparison was not possible, a qualitative description of the results was done.

Table 9 shows the results of the present study and three other studies measuring positive and negative affect discussed in the literature review.

Table 9
Comparison of Research Studies

	PA			NA		
	M Pre	*M* Post	Improvement	*M* Pre	*M* Post	Improvement
This Study (15N) Mixed-Method	3.51	3.75	6.84%	2.3	1.95	15.22%
Wimmer (169N) MBSR	3.31	3.27	-1.21%	1.71	1.717	-0.41%
Benn (38N) MBSR	3.29	3.35	1.82%	1.89	1.48	21.69%
Jennings (50N) Mixed-Method	3.44	3.51	2.03%	2.05	1.94	5.37%

Comparison with MBSR Interventions

Of all the studies discussed in the review of the literature measuring positive and negative affect, Wimmer et al. (2019) is the only one that found a deterioration of PA and slight deterioration of NA after the mindfulness intervention:

- PA: Pre-intervention *M* 3.31 SD (5.69) Post-Intervention *M* 3.27, SD (7.70).

- NA: Pre-intervention *M* 1.71 SD (5.03) Post-Intervention *M* 1.717 SD (4.92)

- The results in Wimmer et al. (2019) indicate a -1.21% deterioration in PA (compared to the present study's 6.84% improvement), and a slight decrease in NA -0.41% (compared to the present study's 15.22% improvement)

In their study done on a group of 38 educators of children with special needs using a mindfulness intervention, Benn et al. (2012) found a slight improvement in PA and an improvement in NA.

- PA: Pre-intervention *M* 3.29 SD (0.73) Post-Intervention *M* 3.35 SD (0.77)

- NA: Pre-intervention *M* 1.89 SD (0.49) Post-Intervention *M* 1.48, SD (0.45).

- The results in Benn et al., (2012) indicate a 1.82% improvement in PA (compared to the present study's 6.84% improvement), and a improvement in NA 21.69% (compared to the present study's 15.22% improvement)

Comparison with Mixed-Method Interventions

Studies with the same population done using mixed type interventions that consist of both mindfulness meditation in addition to emotion psychoeducation and that used PANAS as one of the surveys that participants completed, have shown similar results to the study in this thesis.

Kemeny et al. (2011) who imparted the same mixed-method intervention as the present study (Cultivating Emotional Balance), with a sample of 82 teachers and a control group, show their results in a way that cannot be compared to the present study because of its limitations mentioned above. Nevertheless, the authors concluded that after the 8-week CEB course, teachers showed lower levels of negative affect, and higher levels of positive affect (Kemeny et al., 2011).

Jennings et al. (2013), who implemented the program Cultivating Awareness and Resilience in Education (CARE) created specifically for educators concluded that the program can reduce emotional reactivity and promote positive affect and general well-being.

- PA: M 3.44 (0.65) M 3.51 (0.71)
- NA: M 2.05 (0.60) M 1.94 (0.52)
- The results in Jennings et al. (2013) indicate a 2.03% improvement in PA (compared to the present study's 6.84% improvement), and a 5.37% improvement in NA (compared to the present study's 15.22% improvement).

The study by Taylor et al. (2015) cannot be compared to the present study because of the present study's limitations. Nevertheless, the authors describe the results commenting that teachers in the treatment group (who received a mixed-method intervention) used significantly fewer negative affect adjectives and more positive affect words post-program than did teachers in the control group.

Chapter 5

Conclusions, Limitations, Considerations

Conclusions

Research studies presented in this thesis indicate that when individuals lack strategies for efficient emotion regulation, suppression is the strategy they most frequently use both for regulating their emotions and co-regulating their student's emotions as well (Taxer & Gross, 2018). Moreover, because suppression is associated with an experience of less positive affect (PA) and higher negative affect (NA) (Gross & John, 2003), the result is a downward spiral which begins with an increase of NA, followed by negative student-teacher interactions, and acute stress, all of which results in emotional burnout (Emerson et al., 2017; Jennings & Greenberg, 2009).

The Cultivating Emotional Balance (CEB) program specifically focuses on reducing the cognitive processes that provoke negative affect and the consequent destructive emotions that follow high levels of NA. In addition, the program focuses on increasing positive affect and the positive states of mind that follow, such as compassion and other prosocial responses (Kemeny et al., 2011). When the individual experiences a reduction of NA and an increase of PA due to the CEB training, it is more probable that they would choose reappraisal as an efficient emotional regulation strategy (Gross & John, 2003). Furthermore, the association of high positive affect with a proactive personality could itself be a factor contributing to teachers' creativity in the classroom (Li et al., 2017). Moreover, low levels of negative affect reflect a state of serenity and calmness (Watson et al., 1988) which could lead to teachers' constructive responses when dealing with challenging students and school authorities.

The content of the CEB program gives teachers the tools for being mindfully aware of their emotional processes even in difficult and stressful situations, which often happens especially in underdeveloped countries. By noticing the physical sensations that are triggered by emotions and, at the same time, by being aware of the mental ideation that accompanies emotions, teachers can choose not to react, not to be driven by the force of the triggered emotion. Instead they can choose to pause, for example, by taking a few deep breaths before responding (now consciously and constructively).

To the knowledge of this researcher, it is the first time the CEB mixed-method program was tested in Argentina. The results reported in this study suggest that the short version of the CEB program had positive effects on teachers' general well-being, as seen by the incremental change in positive affect and the reduction of negative affect after the conclusion of the intervention. Based on this study's results, the implementation of an intervention of this type could be beneficial for schoolteachers' general well-being and reduction of teacher attrition levels, which would benefit schools' budgets. Besides, teachers' well-being could help create healthier classroom environments, and improve student performance (Jennings & Greenberg, 2009).

Furthermore, a mixed-method type intervention like CEB could contribute to the teachers' ongoing education and personal growth by helping develop positive states of mind and prosocial responses, such as compassion (Kemeny et al., 2011). The well-being of educators could be an important factor in encouraging experienced teachers to stay in their profession, which would benefit the education system as a whole. In addition, the well-being of teachers could positively affect their students, other teachers, and school authorities. All could be

positively influenced by a teacher who sets an example of emotion regulation, compassion and mental balance.

Limitations

The present study had several limitations. The sample size was small, and the results apply only to the small group of schoolteachers who voluntarily chose to participate in the CEB program; whether these results would translate to another group is a question that would require further investigation. An additional limitation is that the study lacked an active control group to compare to the intervention group. Without a control group, it is not possible to determine if the increase of positive affect and reduction of negative affect shown in this study came about from the tools teachers learned in the CEB intervention or from the special attention the teachers received. Also, statistical tests that could have been used to determine the findings' significance require a larger sample of participants and a control group.

Furthermore, the study relied on a self-report survey to determine program effects, and self-reports are not accurate for several reasons. When answering the questions, individuals can easily overstate or understate their affective experience depending on factors such as cultural or school norms and expectations. Moreover, self-reports depend on the individual's capacity for meta-cognition or introspection, which, in the case of the CEB intervention, is one of the mental faculties that teachers developed by way of the specific meditation practices in the program. Therefore, individuals in this study may have experienced an increase of introspective ability at the end of the intervention, making their answers more accurate at post-intervention than at pre-intervention.

Another limitation is that the data was collected pre-intervention and post-intervention only, with no follow-up survey after a few months. Therefore, it is not possible to know if the

tools and strategies teachers learned during the intervention are still being used and remain effective a few months after the program's conclusion.

Considerations for Future Research

Future research studies should use larger samples and apply other self-report measures to examine burnout, mindfulness, self-compassion, emotion regulation, interoceptive awareness, and attention. Moreover, rigorous non-self-report measures such as experimental tasks should also be present to support the validity of the findings. Another consideration for future studies could be one-on-one teacher interviews regarding teachers' perceptions of their job as educators both before and after the intervention. The interviews could give researchers a more holistic view of the teachers' situations and could bring about data regarding, on the one hand, if teachers could apply what they learned during the intervention or not. On the other hand, it could help researchers understand what teachers need in order to improve their well-being, positive mindset, and prosocial behavior.

Furthermore, because it is not clear if the present study results were from the techniques and strategies the teachers learned in the CEB intervention, or if the positive effects were the result of the attention the teachers received, future research could include an active control group. The control group could receive support and special attention (like support groups and meetings), but without any psychoeducation on emotions and without meditation instruction and no meditation practice, to determine the CEB program's effects.

Future research should also examine the CEB program's ongoing effects on the teachers' ability to manage challenging students and classroom climate, as it could prove beneficial to examine what happens in the classroom after the teachers return to their normal activities. This data could help researchers understand the best ways to further help schoolteachers implement

what they have learned during the CEB course. Moreover, longitudinal studies could be done to investigate if teachers who take the CEB program stay in the profession some years after its conclusion, and if they stay, researchers could compare the levels of general well-being and other measures like burnout, and self-compassion.

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"Never do anything by halves if you want to get away with it. Be outrageous.

Go the whole hog. Make sure everything you do is so completely crazy it's unbelievable…"

— Roald Dahl